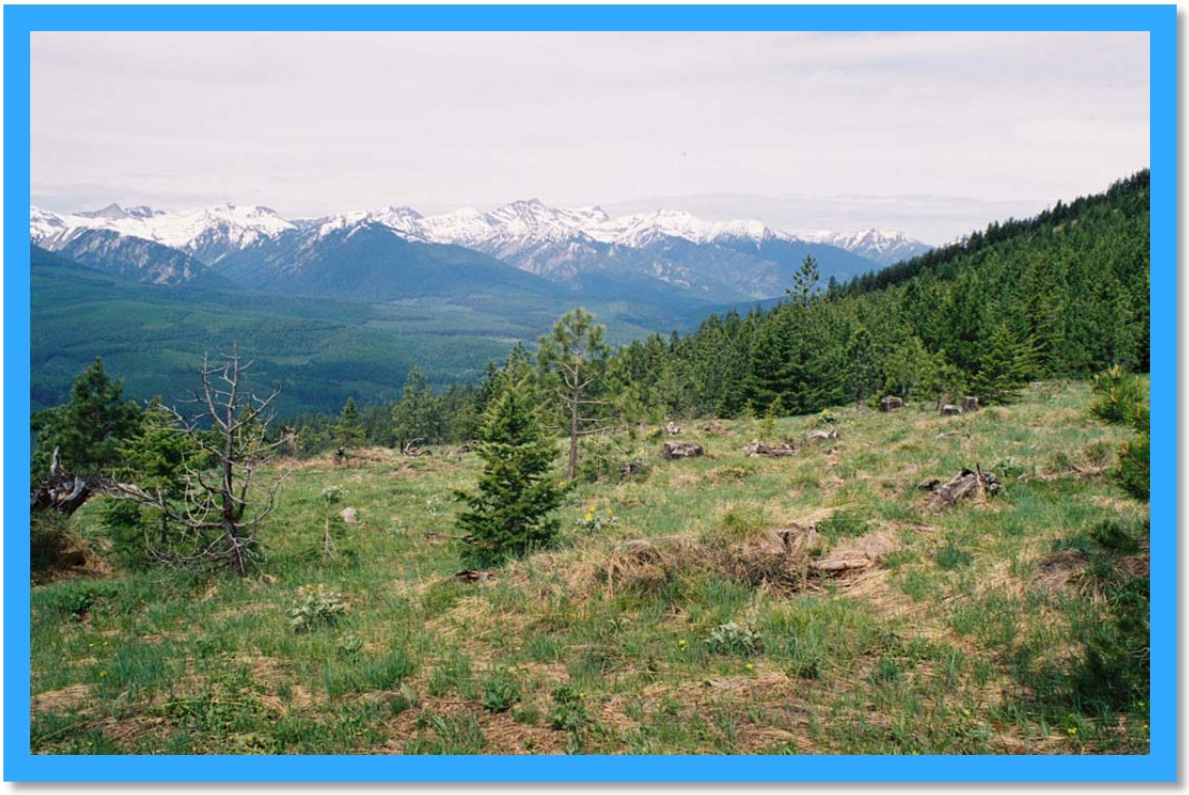
Joint Final Environmental Impact Statement

Montanore Project

December 2015



Cabinet Mountains *Photo by M. Holdeman*

Volume 5

Appendix M Response to Comment on the Draft and Supplemental Draft EISs

United States Department of Agriculture
Forest Service
Northern Region
Kootenai National Forest

Montana Department of
Environmental Quality

1.1 Introduction

This appendix contains the comments received on the Draft and the Supplemental Draft EIS documents and the agencies' responses to those comments.

1.1.1 DEIS Comments

Issuance of the DEIS was announced in the Federal Register (74 FR 8939; correction in 74 FR 9817) and made available to the public for a 90-day comment period from February 27, 2009 to May 28, 2009. Requests made to extend the 90-day comment period were granted, extending the comment period an additional 60 days until July 27, 2009 (74 FR 24006). A public hearing, where members of the public had the opportunity to submit written and oral comments, was held in Libby, Montana on April 16, 2009. The agencies received 40,097 letters, comment sheets, and transcripts, including 39,923 form letters, during the public comment period for the DEIS. Comments were provided in three formats: 1) letters received either by e-mail or standard mail; 2) comment sheets provided at the public hearing held in Libby, Montana (119 members of the public attended the public hearing); and 3) transcripts taken by a court reporter provided at the public hearing. Comments came from private individuals (39,922 form letters and 97 other letters, comment sheets, or transcripts); federal or state agencies (8 letters); tribal governments (3 letters); local government (5 letters or transcripts); businesses (38 letters or transcripts, including 1 form letter); and other organizations (24 letters, transcripts, or comment sheets)

1.1.2 SDEIS Comments

Issuance of the SDEIS was announced in the Federal Register (76 FR 62405) and made available to the public for a 45-day comment period from October 7, 2011 to November 21, 2011. The agencies granted requests to extend the 45-day comment period, extending the comment period an additional 30 days until December 21, 2011. A public hearing, where members of the public had the opportunity to submit written and oral comments, was held on October 25, 2011.

The agencies received 44,759 letters, comment sheets, and transcripts, including 44,641 form letters, during the public comment period for the SDEIS. Comments were provided in three formats: 1) letters received either by e-mail or standard mail; 2) comment sheets provided at the public hearing held in Libby, Montana (127 members of the public attended the public hearing); and 3) transcripts taken by a court reporter provided at the public hearing. Comments came from private individuals (44,641 form letters and 72 other letters, comment sheets, or transcripts); federal or state agencies (8 letters or transcripts); tribal governments (1 letter); local government (6 letters or transcripts); businesses (8 letters); and other organizations (23 letters or transcripts).

1.1.3 Comment Coding

Each letter, email, or recorded public hearing comment was given a unique document identification number. All submitted documents were systematically reviewed for content. Substantive comments were coded hierarchically according to sections in the DEIS and SDEIS. Substantive comments were:

- Questioned the accuracy of the information in the document;
- Questioned the adequacy of the environmental analysis;
- Proposed other alternatives;
- Suggested the need for changes in the Draft EIS or revisions to one of the alternatives considered in detail; or
- Provided new or additional information relevant to the analysis.

Comment numbers 1000 to 1999 were assigned to issues in Chapter 1, Purpose and Need. Comment numbers 2000 to 2999 were assigned to issues in Chapter 2, Alternatives in the DEIS and SDEIS.

Comment codes 3000 to 4999 were assigned to issues in Chapter 3, Affected Environment, Environmental Consequences, and Mitigation. Comments outside the scope of the SDEIS were coded in category 5000. Miscellaneous or general comments were coded in category 6000.

1.1.4 Comment Response

Comment letters received from Native American Tribes, federal, state, and local agencies on the DEIS and SDEIS were reproduced and are included in this appendix (Table M-1). The agencies' responses are presented alongside each comment (See Section 1.2). The applicant's comments on the DEIS and SDEIS (Table M-2) were also reproduced and responded to in the same manner (See Section 1.3).

Substantive comments received by individuals and organizations on the DEIS and SDEIS were organized for response according to issue codes. To reduce repetition, similar comments were grouped together and responded to collectively. Responses to comments from individuals and organizations begin page M-213. An alphabetical list of individuals and organizations that provided comments along with associated issue codes can be found in Table M-3 (See Section 1.4). Responses to substantive comments are organized by issue codes and can be found in Section 1.4 Where appropriate, the text of the Final EIS was revised and the section where the change was made is noted in the response to comments.

The agencies are not required to respond to every comment made by every person. According to NEPA regulations, "all substantive comments received on the draft statement (or summaries thereof where the response has been exceptionally voluminous), should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement" (40 CFR 1503.5(b)). Under MEPA regulations, a Final EIS must include "responses to substantive comments received on the draft EIS" (ARM 17.4.619(1)). If the comment resulted in changes to the EIS text, then it is usually so stated in the response, but not all responses required that the text in the EIS be modified. All of the original comments on the DEIS and SDEIS that the agencies received are available for public inspection at the addresses listed in the abstract at the front of the Final EIS.

The agencies' appreciates the public's interest in the proposed project and their participation in the EIS.

1.2 Comments from Federal, State, and Local Agencies and Native American Tribes

Comment letters received from Native American Tribes, federal, state, and local agencies (Table M-1) on the DEIS and SDEIS were reproduced and are included in this section. The agencies' responses are presented alongside each comment.

Table M-1. Alphabetical list of agency commenters.

DocID	Commenter
323	Army Corps of Engineers
15	City of Libby—City Council Members
244	Confederated Salish and Kootenai Tribes of the Flathead Nation
265	Confederated Salish and Kootenai Tribes of the Flathead Nation
320	Environmental Protection Agency
196	Environmental Protection Agency
262	Kootenai Tribe of Idaho
118	Libby School District #4 Board of Trustees
314	Lincoln County
135	Lincoln County Board of Commissioners
375	Lincoln County Board of Commissioners

63	Lincoln County Commissioner Anthony Berget
307	Mineral County Board of Commissioners
296	MT Department of Transportation
185	MT Fish Wildlife and Parks
315	MT Fish Wildlife and Parks
316	MT Fish Wildlife and Parks
25	MT State Representative Jerry Bennett
326	MT State Representative Jerry Bennett
363	MT State Representative Mike Cuffe
20	MT State Historic Preservation Office
326	MT State Senator Chas Vincent
25	MT State Senator Senators Curtiss, Bennett, and Vincent
116	Sanders County Board of Commissioners
49	U.S. Department of the Interior
305	U.S. Department of the Interior

1.3 Comments from the Applicant (MMC)

Comment letters received from the applicant, MMC, or from others on MMC's behalf (Table M-2) on the DEIS and SDEIS were reproduced and are included in this section. The agencies' responses are presented alongside each comment.

Table M-2. Alphabetical list of MMC commenters.

DocID	Commenter
337	Carter Lake Consulting, LLC
134	Klepfer Mining Services, LLC
157	Klepfer Mining Services, LLC
263	Klepfer Mining Services, LLC
338	Klepfer Mining Services, LLC
339	Klepfer Mining Services, LLC
346	Poore, Roth, & Robinson

1.4 Comments from Individuals and Organizations

An alphabetical list of individuals and organizations that provided substantive comments on the DEIS and/or the SDEIS along with associated issue codes is provided in Table M-3. Individuals who submitted form letters are not included in this list. A complete list of commenters, including those who submitted form letters, is included in the project record and available for public inspection at the addresses listed in the abstract at the front of the Final EIS.

Substantive comments received by individuals and organizations on the DEIS and SDEIS were organized for response according to issue codes (see the Index below for a list of codes and the page numbers where responses can be found). To reduce repetition, similar comments were grouped together and responded to collectively. Where similar comments are grouped, the agencies' response follows the last comment in that group. To find all responses to comments by a particular topic, please use the index of issue codes below to find the beginning page number for each response section.

To find responses to comments by a particular individual or organization, please use the alphabetical list in Table M-3. There, one can find each commenter's document ID(s) and associated issue code(s). Use the index below to find the beginning page number for the responses to a particular issue code. Once in the appropriate issue code section, one can find the response to a particular individual's comment by the document ID number that appears before each comment. As noted above, similar comments are grouped together and responded to collectively, so one may have to look below several comments to find the agencies' response.

Table M-3. Alphabetical list of commenters.

Commenter	DocID	Issue Code
Alliance for the Wild Rockies/ Sedler, Liz	200, 310	2216, 3110, 3205, 3223, 3245, 3283, 3285, 3290, 3292, 3299, 3505, 3553, 3605, 3730, 3763, 3765, 3800, 3803, 3817, 3865, 3903, 3913, 4400, 4504, 4523, 4525, 4537, 4703, 4705, 4710, 4825, 4837, 4839, 4841, 4843, 4844, 4850, 4857, 4859, 4860, 4863, 4864, 4865, 4870, 4877, 4879, 4885, 4890
Alternative One, Inc./ Haley Rose, Sam	279	4105
Alternative One/ Haley Rose, Lynne and Sam	327, 373	2033, 2039, 2051, 2052, 2071, 3245, 3285, 3303, 3406, 3554, 3603.3, 3663, 3779, 3805, 3902, 3903, 3925, 3990, 3995, 4047, 4070, 4077, 4112, 4310, 4312, 4334, 4504, 4603, 4703, 4705, 4865, 4877, 4879, 4883, 4897, 5000
Ameritech/ Hollingsworth, Matt	201	4010
Avista Corp./ DosSantos, Joe	153, 392	3217, 3241, 3242, 3243, 3254, 3263, 3269, 3283, 3297, 3617
Bakie, Rocky	120	6001
Bakke, Howard	162	3051, 3299, 3603.2, 3804, 4870, 4877
Bigelow, Phillip K.	54	4035
Bischoff, Bill	314	3602, 3603.2, 3617, 4877
Brooks, Talasi	62, 74	2033, 2185, 2186, 3100, 3225, 3240, 3280, 3283, 3297, 3303, 3450, 3503, 3505, 3603.1, 3603.2, 3604, 3605, 3633, 3833, 3902, 3903, 3910, 4103, 4105, 4703, 4705, 4710, 4823, 4863, 4877, 4879
Cabinet Resource Group/ Hernandez, Cesar	182, 393	1501, 2033, 2037, 2052, 2054, 2185, 2216, 2219, 2220, 2221, 2315, 2410, 3100, 3102, 3103, 3110, 3254, 3500, 3553, 3567, 3600, 3603.1, 3603.2, 3603.3, 3617, 3635, 3763, 3803, 3805, 3817, 3833, 3865, 3903, 3912, 3913, 3916, 3923, 3943, 4705, 4805, 4860, 4861, 4863, 4877, 4879, 5000, 6001
Cabinet Resource Group/ Martin, Bill	72, 186, 347	2037, 3100, 3101, 3103, 3117, 3450, 3503, 3600, 3603.1, 3603.2, 3603.3, 3605, 3617, 3903, 3993, 4100, 4617, 4710, 4755, 4857, 6000
Center for Science in Public Participation/ Chambers, Dave	98	1510, 3400, 3415, 3553
Clark Fork Coalition/ Brick, Christine	328	3285, 3600, 3602, 3603.1, 3603.3, 3617, 3803, 3817, 3902, 3913
Cotton, Ronald and Kathleen	235	2185, 3100, 3101, 3102, 3103
Davis, Stanley	291	4705
Deevy, David A.	236	2071, 4072, 4512, 4821, 4832

Commenter	DocID	Issue Code
Earthworks/ Gestring, Bonnie	202, 335	1100, 1500, 1501, 1502, 2033, 2054, 2056, 2185, 2216, 2316, 3051, 3100, 3103, 3105, 3110, 3205, 3223, 3240, 3243, 3245, 3280, 3283, 3284, 3285, 3290, 3299, 3406, 3503, 3505, 3553, 3554, 3600, 3603.1, 3617, 3763, 3765, 3800, 3803, 3804, 3810, 3817, 3833, 3865, 3903, 3912, 3913, 3915, 3916, 3917, 3925, 3943, 3963, 3970, 4019, 4523, 4525, 4537, 4619, 4703, 4705, 4710, 4755, 4804, 4805, 4825, 4830, 4850, 4861, 4863, 4864, 4865, 4870, 4872, 4877, 4879, 4885, 4890, 4925, 6001
ECO Star Energy Systems/ Wall, Frank	60, 97	2037, 2185, 4101, 6001
Fus, Tracie	124	6001
Garcia, Sherrie	297	3603.1, 3805, 4035, 4505
Ginnaty, Joseph and Shannan	12, 100, 102, 103, 127, 145, 147, 238, 240, 241, 290	2071, 4112, 4334, 4861
Gunderson, Steve	366	4035, 4047
Hamel-Snell, Kendra	142	4061, 4180, 4317, 4845, 4863, 4920, 4940
Hann, Desiree	132	6001
Harvey, Geoffrey W.	29	2037
Hydra Project/ Skinner, Dave	245	4877
Kootenai Environmental Alliance/ Mihelich, Mike	260	3803, 3963
Lampton, Jared	105, 312	3201, 3243, 3285, 3297, 3553, 3833, 4065
Libby Creek Ventures, LLC/ Bakie, Arnold	119	6001
Libby Placer Mining Company/ Cleveland, John	248, 342	1100, 1500, 2033, 2034, 2037, 2219, 3102, 3285, 3297, 3415, 3503, 3553, 3603.1, 3603.2, 3603.3, 3633, 3635, 3779, 3865, 3902, 3903, 3915, 3990, 3993, 3995, 4000, 4003, 4305, 4400, 4401, 4840, 4861, 6001
Lindsey, Walter	136	1100
Lyman, Dave and Debbie	264	3102, 3503, 3902, 4830
Mannchen, Brandt	106	4705, 4755
Miller, Martin	275	4840
Montana Env. Info. Center/ Jensen, Jim	243, 311	2033, 2034, 2037, 3110, 3285, 3912, 3913, 3915, 3993, 4003, 4705
Montana Native Plant Society/ Hutchins, Judith	158	4540, 4545, 4560, 4600
MT Wilderness Association/ Lundstrum, Sarah	390	3913
Natural Resources Defense Council/ Peck, Brian	34, 35, 150, 322	4403, 4860, 4861, 4863, 4864, 4865, 4870, 4872, 4877, 4878, 4879
Oedekoven, Amanda	17	4031

Commenter	DocID	Issue Code
Pacific Rivers Council/ Frissell, Christopher A.	334	3260, 3297, 3600, 3603.3, 3617, 3800
Plum Creek Timber Co./ Parker, Rett	108	2071
Proescholdt, Kevin	57	3110, 3903
Revett Silver Company/ Rife, Carson	109, 330	1100, 1500, 1501, 3051, 3103, 3297, 3600, 3603.1, 3603.2, 3603.3, 3604, 3617, 3902, 3912, 4705, 4870, 4877, 4879, 5000, 6000, 6001
Rosalee Braaten/ Guches, Roger and Jeannie	360	2071, 4334
Rose, Lynne Haley	110	4072, 4112, 4312, 4334
Save our Cabinets/ Clifford, Matthew	122	3223, 3243, 3817, 3833, 3900, 3912, 3913, 3914, 3915, 3916, 3917, 3943
Save Our Cabinets/ Costello, Jim	331	1510, 2052, 2056, 2185, 2216, 3103, 3105, 3205, 3217, 3219, 3223, 3240, 3245, 3285, 3290, 3299, 3367, 3405, 3406, 3503, 3553, 3603.1, 3604, 3605, 3610, 3617, 3763, 3800, 3803, 3804, 3805, 3865, 3903, 3912, 3913, 3915, 3916, 3917, 3963, 4310, 4537, 4603, 4604, 4605, 4617, 4804, 4830, 4850, 4859, 4861, 4863, 4865, 4870, 4877, 4885, 4930, 6001
Save Our Cabinets/ Costello, Mary	202, 331	1500, 1501, 1502, 1510, 2033, 2052, 2054, 2056, 2185, 2216, 3051, 3100, 3103, 3105, 3110, 3205, 3217, 3219, 3223, 3240, 3245, 3285, 3290, 3299, 3367, 3405, 3406, 3503, 3505, 3553, 3603.1, 3604, 3605, 3610, 3617, 3763, 3765, 3800, 3803, 3804, 3805, 3817, 3833, 3865, 3903, 3912, 3913, 3915, 3916, 3917, 3925, 3963, 3970, 4019, 4310, 4523, 4525, 4537, 4603, 4604, 4605, 4617, 4619, 4705, 4710, 4755, 4804, 4825, 4830, 4850, 4859, 4861, 4863, 4865, 4870, 4877, 4879, 4885, 4890, 4925, 4930, 6001
Save Our Cabinets/ Maest, Ann	332	2316, 3402, 3403, 3406, 3762, 3804, 3902, 3903, 3913, 3923
Save our Cabinets/ Myers, PhD, Tom	152, 333	2216, 2316, 3400, 3405, 3406, 3407, 3503, 3554, 3602, 3603.1, 3603.2, 3603.3, 3604, 3617, 3633, 3662, 3763, 3800, 3801, 3803, 3804, 3805, 3903, 3920, 3943
Shotzberger, John and Deena	19	2071, 4000, 4010, 4031, 4561, 4565, 4861
Sierra Club-Montana/ Phillips, Raina	111	2185, 3603.2, 3912, 4830, 4865
Snell, Dan	48, 52, 141, 344	1000, 1002, 1500, 1501, 2185, 2216, 2219, 2315, 2711, 3100, 3103, 3269, 3407, 3553, 3603.1, 3900, 3903, 3910, 3911, 3912, 4033, 4035, 4060, 4061, 4064, 4078, 4180, 4182, 4537, 4538, 4837, 4838, 4845, 4861, 4864, 4877
Speelman, Edwin	53, 143, 354	2039, 4703
Steitz, Jim	194	4879
Trout Unlimited/ Roberts, Rob	340	3245, 3269, 3285, 3290, 3605, 3617, 3804
Voves, Louise	144	6001

Commenter	DocID	Issue Code
Wilderness Watch/ Brooks, Talasi	389	1002, 2185, 3100, 3205, 3223, 3245, 3265, 3290, 3403, 3406, 3610, 3817, 3903, 3910, 3923, 3970, 4033, 4035, 4065, 4305, 4523, 4530, 4537, 4667, 4703, 4705, 4805, 4823, 4830, 4861, 4865, 4870, 4877, 4879, 4885
Wilderness Watch/ MacFarlane, Gary	183	4703, 4705

Federal, State, and Local Agencies and Representatives

MMC Representatives

Comment	Document #15-City of Libby—City Council Members	Response

MNTR 15

April 15, 2009

Bonnie Lovelace
Dept. of Environmental Quality
PO Box 200901
Helena, MT 59620

Bobbie Lacklen
Kootenai National Forest Supervisor's Office
31374 US Highway 2
Libby, MT 59923

Dear Ms. Lovelace and Ms. Lacklen:

The undersigned members of the Libby City Council wholeheartedly support the Montanore Project and offer the following comments on the recently released draft EIS.

15–1 The draft Environmental Impact Statement is very thorough and complete. The project as proposed by Mines Management, Inc. adequately addresses all pertinent concerns including environmental issues, wildlife mitigation, and transmission line alignment. The proposal for the project as submitted by MMI should be considered the most appropriate and be adopted by your agencies.

15–2 We would also encourage that talks continue in a collaborative manner to discuss all alternatives for wildlife mitigation, especially for the grizzly bear population. MMI has proposed alternatives better suited to increasing the bear population and seem more viable than the alternatives being proposed by the US Fish and Wildlife Service.

15-3 This project is important to the City of Libby and all of Lincoln County. As you are aware, our economy is suffering and good jobs are declining. A project such as this, being totally environmentally sound, should be given the strongest agency consideration for approval as proposed. MMI is also committed to our community and dedicated to local hiring and supporting local businesses.

15-4 There have been numerous agency delays in the development of this draft EIS. Now that it is complete, we strongly encourage you to take action in a timely manner and issue the final EIS, a Record of Decision and the necessary operating permits within 2009. A delay of another year for this project that has been reviewed for years would be devastating to our local workers and unfair to the project developers.

Sincerely,

Mayor Libby

Comment Response 15–1

In the SDEIS and FEIS, the KNF identified mine Alternative 3, Agency Mitigated Poorman Impoundment Alternative as its preferred alternative. The mine is currently covered by an existing state operating permit. Therefore, the DEQ did not identify a preferred mine alternative. The DEQ and the KNF selected Alternative D-R, Miller Creek Transmission Line Alternative, as the preferred transmission line alternative. The selected alternative will be identified in a ROD.

Comment Response 15–2

The KNF consulted informally with the USFWS between 2006 and 2013 regarding effects of the project on threatened and endangered species. The KNF submitted Biological Assessments for terrestrial wildlife and aquatic species in 2013, initiating formal consultation. The assessments included mitigation necessary to minimize or avoid adverse effects on threatened and endangered species. MMC was considered an applicant as defined in 50 CFR 402 in the formal consultations.

Comment Response 15–3

Thank you for your comment.

Comment Response 15–4

The agencies issued a Supplemental Draft EIS in 2011 to provide an opportunity for public comment on additional information relevant to the decision. A Final EIS was issued in 2015.

Com-ment	Document #20-MT State Historic Preservation Office	Response

MNTR 20

Big Sky. Big Land. Big History.
Montana
Historical Society

Historic Preservation
Museum
Outreach & Interpretation
Publications
Research Center

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Friday, February 27, 2009

BOBBIE LACKLEN
KNF
31374 US HIGHWAY 2
LIBBY MT 59923

RE: DEIS Montanore Project

Dear Ms. Lacklen:

20–1 Thank you for requesting our comments concerning the above referenced *draft* EIS. Our comments at this point are procedural rather than substantive. The implementing regulations (36 CFR 800) of the NHPA require formal notification to SHPOs, THPOs and the ACHP in advance of the proposed use of NEPA documents for consideration of and documentation of cultural resource consultation and effect decisions for the purposes of Section 106 of the NHPA. It is unclear whether or not this EIS will be intended to meet those purposes in place of Section 106 of the NHPA and 36 CFR800.

20-2 We do not believe that the document as written could likely meet those consultation or documentary standards since there are parcels within the APE which have not yet been inventoried, there are apparently inventory reports which have yet to be submitted to SHPO (and which are not in the DEIS), and there are remaining eligibility determinations and an effect finding to be made which would require the former. In addition it appears that Tribal consultation has identified Tribal preservation concerns not yet fully addressed.

20-3 In our experience the appropriate means to address the requirements of the NHPA and 36 CFR 800 in undertakings where a NEPA decision is to be made, which may have un-assessed effects on as of yet unknown historic properties, is a Programmatic Agreement which gives the ACHP and Tribes an opportunity to comment on the proposed identification, assessment and treatment of any eligible properties which might subsequently be identified in an adequate management plan. We do not believe that a ROD should be issued which might lead to irretrievable, irreparable or irreversible adverse effects to non-renewable cultural resources or restrict the agency to an irreversible and irretrievable commitment of resources and an approval of an undertaking prior to a reasonable consideration under Section 106. To do so might otherwise constrain agency avoidance options, eliminate the opportunity for the ACHP to comment on those potential adverse effects and in the end then, not meet the intent and purpose of the National Historic Preservation Act.

20-4 Therefore we recommend 1) either the KNF and SHPO complete a standard section 106 finding of effect (and possibly an MOA) prior to a ROD or 2) that a Programmatic Agreement addressing the need for further identification efforts as well as completion of eligibility assessments and a treatment or management plan be implemented prior to an ROD. In either case we believe the CSKT THPO should be consulted further and invited to participate in those further considerations.

Sincerely,

Stan Wilmoth, Ph.D.
State Archaeologist/Deputy, SHPO

225 North Roberts Street
P.O. Box 201201
Helena, MT 59620-1201
(406) 444-2694
(406) 444-2696 FAX
montanahistoricalsociety.org

Comment Response 20-1

The intention of the Final EIS is to document the effects of the proposed Montanore Project and the agencies' alternatives on cultural resources. The KNF and the Montana SHPO entered into a Programmatic Agreement for the protection of historic properties within the Montanore Project area in 2010. The DEQ, MMI, Confederated Salish Kootenai Tribes, and the Kootenai Tribe of Idaho were invited signatories. The agreement addressed the inventory and eligibility assessments of historic properties, and mitigation of adverse effects on historic properties eligible for listing on the National Register of Historic Places.

Comment Response 20-2

The KNF coordinated with the MT SHPO to ensure that all inventory reports prepared to date were made available to the SHPO. The agencies assessed effects on all Tribal-identified resources.

Comment Response 20-3

See comment response 20-1.

Comment Response 20-4

See comment response 20-3.

Comment	Document #25-MT State Senators Curtiss, Bennett, and Vincent	Response

MNTR 25 PB
Debbie

Montana State Senate

HELENA ADDRESS
PO BOX 200500
HELENA, MONTANA 59620-0500
PHONE (406) 444-4800

HOME ADDRESS
PO BOX 216
FORTINE, MONTANA 59918
PHONE (406) 882-4448

The Big Sky Country

SENATOR AUBYN CURTISS
SENATE DISTRICT 1

COMMITTEES
ENERGY, VICE CHAIR
JUDICIARY
NATURAL RESOURCES
LEGISLATIVE ADMINISTRATION - CHAIR

April 8, 2009

APR 20 2009
RECEIVED

Mr. Paul Bradford, Supervisor
Kootenai National Forest
31374 U.S. Highway 2
Libby, MT 59923

Dear Supervisor Bradford:

25–1 As the comment period draws to a close on the Draft Environmental Statement on the Montanore Project we urge that your agency make every effort to move forward as rapidly as possible in its evaluation. Since extensive analysis has already resulted in the DEQ's approval of the existing operating permit, we are confident that any contingencies arising from dual agency review may easily be addressed by good faith collaboration between the parties involved.

25–2 Loss of so many jobs related to forest industry and the promise of hundreds of new jobs to be created by opening of this mine has pushed this issue to the top of our priority list.

25-3 We believe that it is critical to the well being of Lincoln County and Montana that this process be completed yet in "09 and wish to express our appreciation in advance for anything you can do to achieve this goal.

Sincerely,

Aubyn Curtiss
Senate District 1

Gerald Bennett
House District 1

Chas Vincent
House District 2

Comment Response 25-1

Thank you for your comment. The DEQ's approval of the operating permit came in the early 1990s when the project was proposed by Noranda Minerals Corp.

Comment Response 25-2 and 25-3

Thank you for your comment.

Com-ment	Document #49-U.S. Department of the Interior	Response
49–1	MNTR 49 United States Department of the Interior OFFICE OF THE SECRETARY Office of Environmental Policy and Compliance Denver Federal Center, Building 56, Room 1003 Post Office Box 25007 (D-108) Denver, Colorado 80225-0007 TAKE PRIDE IN AMERICA May 8, 2009 9043.1 ER 09/238 Mr. Paul Bradford, Forest Supervisor Kootenai National Forest 1101 U.S. Highway 2 West Libby, MT 59923 Dear Mr. Bradford: The Department of the Interior has reviewed the *Draft Environmental Impact Statement for the Montanore Project* (DEIS), jointly submitted by the Kootenai National Forest (Forest) and the Montana Department of Environmental Quality (MDEQ). Montanore Minerals Corporation's (MMC) proposes to construct and operate an underground copper and silver mine and associated transmission line located about 18 miles south of Libby near the Cabinet Mountains of northwestern Montana. The DEIS analyzes several alternatives that include options addressing the following components: underground mine, plant site and adits, tailings disposal methods and impoundment location, land application disposal areas, access road, and transmission line. Our review and comments are focused on the impacts of the proposed action on Endangered Species Act (ESA) listed species, including: grizzly bears, Canada lynx, and bull trout. Below are our comments: Grizzly bear The mine would occur within occupied grizzly bear habitat within the Cabinet-Yaak Ecosystem (CYE). We are concerned that the proposed alternative may adversely affect grizzly bears in a manner that could rise to the level of "take" (DEIS, page 880). We recognize that this conclusion is based on a draft proposal and incomplete mitigation package and could change when the project details are finalized. The grizzly bear population in the Cabinet-Yaak Ecosystem (CYE) is one of six populations essential to the conservation of the grizzly bear in the United States. Its geographic location is key for providing connectivity between other grizzly bear populations and Canada. As you are aware, the grizzly population in the CYE is threatened by small population size and increasing human demands on its habitat (FR 64:26725-26733). An estimated 45 bears occurred within	**Comment Response 49-1** The KNF submitted a final Biological Assessment for effects on federally listed terrestrial species to the FWS in 2013. The assessment indicated the agencies' preferred mine alternative, Alternative 3, and preferred transmission line alternative, Alternative D-R, may affect and are likely to adversely affect the grizzly bear. In its March 2014 Biological Opinion, the FWS determined that Alternative 3D-R is not likely to jeopardize the continued existence of the listed entity of grizzly bears and that since no critical habitat has been designated for this species, none would be affected. The reasonable and prudent measures necessary and appropriate to minimize incidental take of grizzly bears included in the incidental take statement in the BO were incorporated into the agencies' grizzly bear mitigation plan.

Com-ment	Document #49-U.S. Department of the Interior	Response

the CYE recovery zone in 2007 (*Kasworm et al, 2008*). Although the population trend has been variable during the history of grizzly bear monitoring in the CYE, estimates since 1999 indicate a high probability of decline (*Kasworm et al. 1999 through 2008*) due to relatively high levels of human-caused mortality.

Our comments are provided in light of the essential nature of the CYE grizzly bear population and its existing poor baseline concerning population status and trend. Our remaining comments focus on the content of the DEIS and the preliminary mitigation package.

49–2

- The opening sentence of the grizzly bear section (DEIS 3.24.5.3.1) incorporates a body of information by reference. We caution that additional scientific information is available to inform your decision (and in fact the DEIS goes on to reference some of that material). Focusing on specific conclusions or important facts from the reference material is more useful than blanket citations that do not focus on specific issues.

49–3

- The second paragraph of the grizzly bear section identified the cumulative effects area as Bear Management Units (BMUs) 2, 5, and 6 and the Cabinet Face Bear Outside Recovery Zone (BORZ) polygon. The Montanore project may have long term, landscape-level effects that should be examined in a broader context than the directly affected BMUs and BORZ polygon(s). Therefore, we recommend that the cumulative effects area be expanded to encompass at least the Cabinet portion of the recovery zone and the surrounding non-recovery occupied habitats, if not the entire CYE.

49–4

- With regards to the term "cumulative effects," we recommend the Forest and the Service work together to reconcile the differences in the treatment of the term in the National Environmental Protection Act versus the biological assessment prepared for ESA compliance.

49–5

- In general, the grizzly bear analysis focuses on the traditional methods of examining Open Motorized Route Density (OMRD), Total Motorized Route Density (TMRD), Core, Habitat Effectiveness, and other measures. The U.S Fish and Wildlife Service (USFWS) and the Forest have a long history of relying on these measures. However, the typical project examined using these measures is a timber sale and associated road system. The timber harvest portion of such a project usually has transitory effects on grizzly bears, with bears being able to use the affected habitats within a decade. Road effects can, of course, be more chronic. The Montanore project would last for decades, affecting several generations of grizzly bears, and could result in the permanent conversion of hundreds, if not thousands of acres of current habitat to non-habitat (e.g., the tailings impoundments). Therefore, the USFWS recommends a more comprehensive examination of the underlying habitat effects.

49–6

- Specifically, rather than reporting only the raw percentages of BMUs affected by OMRD, TMRD, etc., it would be useful to understand how much seasonal habitat is affected by baseline conditions; how this would change under the alternatives; and what the implications are in terms of landscape-level effects among BMUs. We recommend that you quantify the amount of spring range that has been compromised by baseline conditions and how much more would be affected by the proposed action. We also recommend an analysis of the

Comment Response 49-2

The opening paragraph of section 3.25.5.2.1 was revised in the SDEIS and FEIS and refers to the BA for the Montanore Project for detailed pertinent information on grizzly bear biology and status. The BA is based on the best information about grizzly bears currently available. The analysis of effects to grizzly bear in section 3.25.5.2 of the FEIS is based on the most recent information available at the time it was prepared.

Comment Response 49-3

Section 3.25.5.2 was revised in the FEIS to define a larger cumulative effects analysis area. As described in section 3.25.5.2.1 of the FEIS, the boundary for cumulative effects and making the effects determination is the Cabinet portion of the Cabinet-Yaak Ecosystem grizzly bear recovery zone (BMUs 1, 2, 4, 5, 6, 7, 8, and 22) and the Cabinet Face BORZ.

Comment Response 49-4

The cumulative effects analysis in the EISs and BAs followed regulations and guidance applicable to both types of documents. The cumulative effects analysis in the DEIS, SDEIS, and FEIS disclosed the incremental effect of the mine and transmission line alternatives when added to the effects of other past, present, and reasonably foreseeable future actions (40 CFR 1508.7). The cumulative effects analysis in the BAs disclosed the incremental effect of the mine and transmission line alternatives when added to the effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02). Current and future federal actions unrelated to the preferred alternative were not considered in cumulative effects analysis in the BAs because they require separate consultation under ESA section 7. Federal actions that underwent Section 7 consultation were considered as part of the baseline for the cumulative effects analysis in the BAs.

Comment Response 49-5

The analysis of effects on grizzly bears in section 3.24.5.3.3 of the DEIS included an evaluation the effects of habitat displacement and physical habitat loss, in additional to an analysis of effects on road densities, core habitat, and HE. Section 3.25.5.2 of the SDEIS and FEIS were revised to include a more detailed analysis of displacement effects and an evaluation of effects in spring and denning habitat, and to more clearly show the basis for the mitigation plan. The analysis of effects on grizzly bear movement and habitat use in the Cabinet Mountains and the BORZ was expanded in the FEIS. The FEIS was also revised to include a discussion of the effects on grizzly bear of road access changes by project phase.

Com-ment	Document #49-U.S. Department of the Interior	Response
49–7 49–8 49–9 49–10	Mr. Paul Bradford, Forest Supervisor 3 impacts to other seasonally important habitats and important areas for movement or linkage. An analysis that examines the specific habitat effects will be useful in disclosing the baseline conditions and the direct, indirect, and cumulative effects associated with the project. • The Forest and the USFWS agree that the mitigation package is incomplete. The USFWS looks forward to working with the Forest in the coming weeks to refine the mitigation package so that it proposes measures to respond to direct and indirect effects the Montanore project would have on grizzly bears. The USFWS will not require independent research and monitoring of grizzly bears by MMC or their agents and, in fact, they discourage any such proposal that duplicates USFWS recovery activities, interferes with recovery activities, or expends resources that may be better spent on other endeavors. The USFWS would like the opportunity to review and comment on any grizzly bear research or monitoring that is proposed by third parties during this process. Canada lynx The Montanore project may result in the permanent conversion of suitable Canada lynx habitat to non-suitable. We recommend the Forest and the USFWS work together during interagency consultation to address the habitat changes that would occur and how those changes affect the status and availability of suitable lynx habitat in the affected Lynx Analysis Units. The permanent conversion of suitable lynx habitat may have implications on the habitat ratios required by the Northern Rockies Lynx Management Direction in the affected area. Other Wildlife We support comments expressed by Montana Fish, Wildlife, and Parks (MTFWP) at the April 16, 2009, interagency meeting with regard to the project's impacts on various other wildlife species, particularly moose, mountain goats, and other big game. Healthy populations of these animals are beneficial to the ecosystem and are a food source for grizzly bears, gray wolves, bald eagles, and other species for which the USFWS has responsibility. Bull trout • While the DEIS provides a comprehensive analysis of the potential impacts from the proposed action to the aquatic and fisheries resources, it was difficult to get an overall understanding of the how much impact would occur under each alternative and how adverse impacts would be mitigated. We suggest providing a summary table that displays the anticipated primary impacts to bull trout (sediment, habitat loss, water quantity, water quality, temperature, passage, etc.) and the corresponding offsetting mitigation, by alternative and primary bull trout drainage (i.e., Libby Creek drainage or Bull River drainage). • The proposed action, regardless of alternative, may have significant adverse effects to bull trout in both the Libby Creek and the Bull River drainages. We encourage the Forest to ensure that all potential impacts to listed species and aquatic resources are adequately addressed through minimization and mitigation. The DEIS describes adverse impacts (e.g., reductions in stream base flows [corresponding to a loss of aquatic habitat and impacts to	**Comment Response 49-6** See response to comment 49-5. **Comment Response 49-7** See comment response 339-16 regarding MMC's grizzly bear research and USFWS involvement in the Oversight Committee. **Comment Response 49-8** The agencies added mitigation for effects on the Canada lynx in Section 2.5.7.4.2 of the SDEIS. The mitigation requires MMC to fund habitat enhancement on lynx stem exclusion habitat to mitigate for the physical loss of suitable lynx habitat. In addition, Forest Service personnel would monitor new snow compaction activities (such as snowmobiling) in the project area and take appropriate action if compaction monitoring identifies increased predator access to new areas. **Comment Response 49-9** A summary of the potential effects on fish and other aquatic life was presented in the Summary section under Issue 3 in the DEIS, SDEIS, and FEIS. The discussion was revised in the FEIS to better link the mitigation with anticipated effects. **Comment Response 49-10** During informal consultation with the USFWS, the KNF prepared a BA that described all potential effects on listed species and a mitigation plan to minimize or avoid significant adverse effects. The KNF initiated formal consultation in February 2013 to satisfy sections 7 and 9 of the Endangered Species Act. The comment refers to direct bull trout habitat loss in Little Cherry Creek. Little Cherry Creek is not a bull trout occupied stream.

Com-ment	Document #49-U.S. Department of the Interior	Response
	Mr. Paul Bradford, Forest Supervisor 4 altered hydrology], direct loss of aquatic habitat [e.g., Little Cherry Creek], reduction in Riparian Habitat Conservation Area function, etc.) without mention of the corresponding mitigation. Finally, mitigation plans should be sufficient to address adverse effects to listed species, as well as the Forest Section 7(a)(1) responsibilities to conserve ESA listed species.	**Comment Response 49-11** See comment response 49-10 regarding development of a mitigation plan for bull trout. Section 2.4.6.2 in the DEIS and FEIS was MMC's proposed mitigation plan for its proposed action (Alternatives 2 and B). The agencies' mitigation plan for the agencies' preferred Alternatives 3 and D-R was revised in the SDEIS and again in the FEIS. Section 2.5.7.1 of the SDEIS and sections 2.5.7.1 and 2.5.7.2 of the FEIS was revised to disclose the agencies' mitigation for wetlands and other waters of the U.S.; Section 2.5.7.3 of the FEIS was revised to disclose the agencies' mitigation for bull trout.
49–11	• The fisheries mitigation plans presented in the alternatives section of the DEIS (section 2.4.6.2, section 2.5.7.2, and section 2.6.6.2) are ambiguous in terms of how much mitigation work will actually be completed under the plans. To adequately assess the environmental consequences of the proposed action relative to the reported benefits of the mitigation plan, the final EIS should present the level of mitigation that is anticipated to be implemented (e.g., number of acres/tons of sediment reduction work, number or miles of habitat restoration projects, fix all identified sediment sources, bring all habitat features up to Riparian Management Objective standards within the action area, etc.).	**Comment Response 49-12** Section 3.13.4 of the FEIS was revised to disclose the anticipated effect on stream temperatures and Section 3.6.4 of the FEIS was revised to disclose the anticipated effect on aquatic life.
49–12	• The environmental consequences section of the DEIS (Section 3.6.4) suggests that the proposed action may increase water temperatures. You should be aware that water temperature is already functioning at risk or at unacceptable risk in Libby Creek. Drainage and stream temperatures may increasingly be a limiting factor for the bull trout local population. We recommend this issue receive more attention in the analysis section for each alternative and be adequately addressed in the mitigation and monitoring plans for this project.	**Comment Response 49-13** Section 3.6.4 of the DEIS and SDEIS discussed anticipated effects to bull trout populations based on their susceptibility to hybridization and continuing competition with brook trout. This section was revised in the FEIS, and the cited reference on the Libby Mitigation project (Dunnigan *et al.* 2007) was reviewed prior to these revisions, as well as the more recent report for this project (Dunnigan *et al*. 2011). The revisions to this section also include further discussion on the effects predicted to occur to bull trout populations under Alternative 4. Section 2.5.7.3 of the FEIS described the agencies' proposed mitigation for bull trout. The eradication of non-native fish species, specifically brook trout, is included as a proposed mitigation action in the FEIS, but the feasibility of these actions would be assessed as part of the mitigation planning. Further discussion of the proposed mitigation actions is described in the bull trout mitigation plan (see comment response 49-10). Mitigation included as part of Alternative 3 would also be conducted under Alternative 4, and success would be based on long term trend monitoring of the bull trout populations in these streams.
49–13	• The environmental consequences section of the DEIS (Section 3.6.4) suggests that the proposed action may increase the competitive advantage of brook trout in the action area stream systems. Impacts from non-native species are becoming the preeminent threat to bull trout survival and recovery in these systems. We recommend you review *Dunnigan et al 2007,* which provides data on the expansion of the brook trout population relative to bull trout in the Libby Creek drainage. We recommend the analysis section for each alternative address this issue in greater detail and be adequately addressed in the mitigation and monitoring plans for this project. The Avista Corporation (AC) is implementing an innovative and comprehensive non-native suppression project in the East Fork Bull River drainage and a similar approach should be considered for addressing the impacts from the proposed action. The USFWS can provide you with more information on their approach at your request.	
49–14	• The analysis of threatened and endangered species under alternative 3 (Section 3.6.4.3.5) and alterative 4 (Section 3.6.4.4.6) does not indicate which alternative would be better for reducing overall impacts to bull trout. It appears that alternative 4 (Forest preferred alterative) may have greater impacts to sediment, temperature, and nutrients/contaminants. All of these indicators are currently functioning at unacceptable risk in the Libby Creek drainage according to the 2000 Forest Middle Kootenai River Section 7 Consultation Watershed Baseline report. Additional information should be included to demonstrate how the additional impacts under alternative 4 are adequately addressed by the mitigation plan.	**Comment Response 49-14** See comment responses 49-10, 49-11, and 49-13.
49–15	• A primary component of the mitigation plan in the Libby Creek drainage appears to be habitat surveys and implementation of in-stream habitat improvement projects. Section	**Comment Response 49-15** See comment response 49-11.

Com-ment	Document #49-U.S. Department of the Interior	Response
	Mr. Paul Bradford, Forest Supervisor 5 3.6.3.1.1 describes several habitat restoration projects that were implemented in Libby Creek and destroyed in subsequent rain-on-snow events. The DEIS describes a habitat restoration project in the East Fork Bull River that also seems to have been unsuccessful. Preliminary data from the AC *(Horn and Tholl 2008)* shows that non-native fish appear to be benefitting more than native salmonids from their habitat restoration projects. Data from MTFWP efforts in Libby Creek *(Dunnigan et al 2007)* could suggest similar conclusions from the Libby Creek restoration projects. The final EIS should consider the adequacy of the proposed mitigation plan and anticipated outcomes in the context of this information. Perhaps a mitigation strategy that includes habitat projects in concert with non-native suppression efforts (or partnering with the existing AC suppression effort) should be considered.	
49–16	• The primary component of the mitigation plan in the Bull River drainage (East Fork Bull River, East Fork Rock Creek) appears to be habitat surveys and implementation of in-stream habitat improvement projects. The East Fork Bull River is the most important rearing tributary for migratory bull trout in the Cabinet Gorge Reservoir reach of the lower Clark Fork River (MBTSG 1998). Based on the relatively intact nature of the existing habitat conditions and the potential impact of reduced stream flow to bull trout in this system, it is unclear that the proposed mitigation will be sufficient.	**Comment Response 49-16** See comment response 49-11.
49–17	• We suggest more analysis of the potential impacts of increased vehicle use along Libby Creek, what activities and impacts will occur under the road maintenance program (e.g., snow plowing, sanding, blading, road narrowing/widening, etc.), and what the minimization and mitigation plans would include for all road related impacts. Sufficient information should be available on the proposed road closures/obliterations, road use, existing road condition, and culverts, to provide some level of quantitative sediment analysis. Analysis results should be used to determine/justify adequate sediment mitigation levels. The final EIS should include a list and description for any BMPs that are cited as minimization measures for the proposed action.	**Comment Response 49-17** Section 3.13.4 was revised in the SDEIS and again in the FEIS to disclose the anticipated effect of the mine and transmission line alternatives on sediment yield from roads and other disturbances. Section 3.6.4 was revised in the SDEIS and again in the FEIS to reflect the revised sediment analysis.
49–18	• Throughout the mitigation and monitoring plans presented in the DEIS, the document explains that reports, assessments, and future decisions on mitigation measures would be provided to the Forest, MDEQ, and sometimes MTFWP. For example, Section 2.5.7.2.3 explains that sediment "inventory and proposed measures would be submitted to the KNF and FWP for approval prior to implementation." The FWS should be included as a primary resource agency on all components of the proposed action that may affect ESA listed and federal trust species.	**Comment Response 49-18** See comment response 49-11 and 49-13.
49–19	• The aquatic and fisheries related mitigation and monitoring plans for all alternatives should include an adaptive management commitment whereby if monitoring shows the initial level of project mitigation are insufficient in accomplishing the specified objectives, additional corrective actions would be developed and implemented.	**Comment Response 49-19** See comment response 49-11.
	We appreciate the opportunity to review and comment on this DEIS. Please send both an electronic and hard copy of the final EIS and signed Record of Decision to the FWS office in Helena, MT. They look forward to working with the Forest through the ESA consultation	

Com-ment	Document #49-U.S. Department of the Interior	Response
	Mr. Paul Bradford, Forest Supervisor 6 process once a final alternative has been selected. If you have any questions, please contact Tim Bodurtha (406) 758-6882 or tim_bodurtha@fws.gov). Sincerely, Robert F. Stewart Regional Environmental Officer	

Com-ment	Document #63-Lincoln County Commission Anthony Berget	Response
	MNTR 63 14 Anthony Berget. I hope I'm -- Commissioner. And then after that, Mr. Cesar Hernandez. COMMISSIONER BERGET: Anthony J. Berget, County Commissioner, Lincoln County.	**Comment Response 63-1** Thank you for your comment. **Comment Response 63-2** Thank you for your comment.
63-1	Lincoln County has a long history of mining, well over 150 years of mining in one aspect or another. And the group policy we've been working on speaks to the socioeconomic history and future of Lincoln County. And it includes mining. All of us government agencies, whether it's EPA, DEQ, Forest Service, federal, state, and local government, as well as environmentalists, receive our jobs and livelihood from the taxes of work of miners.	
63-2	And speaking on behalf of the Lincoln County Board of County Commissioners, and Marianne Roose is here with me, we are very much in support of this project and think you guys have done an excellent job on the EIS and the work that you've done; thank you.	

Comment	Document #116-Sanders County Board of Commissioners	Response

SANDERS COUNTY
BOARD OF COMMISSIONERS

MNTR 116

RECEIVED
MAY 26 2009
DEQ
DIRECTOR'S OFFICE

Bonnie Lovelace
Dept. of Environmental Quality
PO Box 200901
Helena, MT 59620

E-mail: DEQMontanoreEIS@mt.gov

RE: Montanore Project DEIS

Dear Ms. Lovelace:

Thank you for the opportunity for Sanders County to comment on plans for the above referenced project. Although facilities and activities resultant from this project will be primarily located within adjacent Lincoln County, there is potential for significant impact to Sanders County both directly and indirectly because of the location of the ore body and subsequent hard rock mining tax revenues, and because of the proximity of the project to us.

116–1 We join our neighbors in Lincoln County in support of this project, and hereby endorse, for the record, their more detailed comments as our own. We understand the need to utilize our natural resources, are firm believers in the multiple-use concept, and are confident that this project can be carried out with a minimum of changes in land use, and that appropriate, yet not excessive, planning and monitoring will assure that associated activities be carried out in an environmentally acceptable fashion with positive socio-economic effects. We reiterate our belief that our communities and their economies are at least as important as the grizzly bear and bulltrout.

116-2 We would add a note of urgency in expediting this decision so that MMI can commence further exploration in 2010. Exploration results are key to securing investors for financing such a large project, and the current market provides some encouragement for successfully enabling this project.

Sincerely,

Board of County Commissioners
Sanders County, Montana

Carol Brooker, Chairman

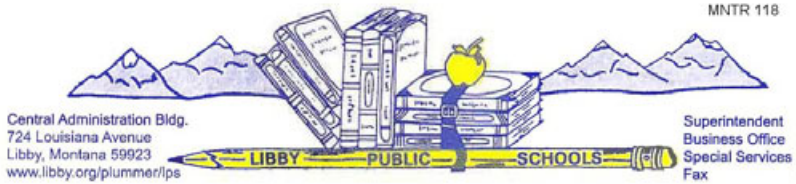
J. Gail Patton, Commissioner

Anthony B. Cox, Commissioner

P.O. BOX 519, 1111 MAIN ST., THOMPSON FALLS, MT. 59873 • (406) 827-6942, FAX: (406) 827-4388

Comment Response 116-1
Section 1.6 discusses the agencies' decision-making and each agencies consideration of environmental resources and socio-economic conditions.

Comment Response 116-2
Thank you for your comment.

Comment	Document #118-Libby School District	Response
118–1 118-2	MNTR 118  Central Administration Bldg. 724 Louisiana Avenue Libby, Montana 59923 www.libby.org/plummer/lps Superintendent 293-8811 Business Office 293-8813 Special Services 293-8815 Fax 293-8812 **Memo** RECEIVED MAY 2 2 2009 DEQ DIRECTOR'S OFFICE **To:** Bonnie Lovelace Department of Environmental Quality **From:** Libby School District #4 Board of Trustees **Date:** May 21, 2009 **Re:** Montanore Project – Environmental Impact Statement Libby School District #4 supports environmentally friendly logging and mining. The Montanore Mining Project proposes this type of mine in Lincoln County. Our community's economic stability has been severely compromised over the last twenty years. A mining operation of this magnitude would considerably enhance our current and future economic status. Libby School District #4 will support the Montanore Project as long as it meets the environmental and associated criteria required for such an undertaking. Please contact me if you have any questions (406)293-8811. Thank you, K.W. Maki K.W. Maki, Superintendent of Schools	**Comment Response 118-1** Section 3.17 of the DEIS, and Section 3.18 of the SDEIS and FEIS discussed the effects of the alternatives on the area's economy. **Comment Response 118-2** Section 1.6 of the DEIS, SDEIS and FEIS discussed the agencies' decision-making and each agencies consideration of environmental resources and socio-economic conditions.

Comment	Document #135-Lincoln County Board of Commissioners	Response
135–1 135-2	MNTR 135 MAY 27 2009 RECEIVED BOARD OF COUNTY COMMISSIONERS LINCOLN COUNTY STATE OF MONTANA ANTHONY J. BERGET, Commissioner DISTRICT NO. 1, LIBBY JOHN C. KONZEN, Commissioner DISTRICT NO. 2, TROY MARIANNE B. ROOSE, Commissioner DISTRICT NO. 3, EUREKA TAMMY D. LAUER CLERK OF THE BOARD AND COUNTY RECORDER May 21, 2009 Bobbie Lacklen Kootenai National Forest Supervisor's Office 31374 US Hwy 2 Libby, MT 59923 E-mail: rl_montanore@fs.fed.us Bonnie Lovelace Dept. of Environmental Quality PO Box 200901 Helena, MT 59620 E-mail: DEQMontanoreEIS@mt.gov FAX: (406) 283-7709 RE: Montanore Project DEIS Dear Ms. Lacklen & Ms. Lovelace: Thank you for the opportunity to comment on plans for the above referenced project. As chief elected representatives of the people of Lincoln County, we are hugely cognizant of the importance of this project with respect to its potential for providing additional economic vitality and stability for our communities. We are also hugely cognizant of the need to assure that environmental protection and impact mitigation looms large in the planning and implementation of such a project. It is with a desire to realize an acceptable balance, and to see this project move forward that we offer our comments. First of all, we want to assure you of our confidence in the knowledge that the majority of our constituents do, indeed, want the Montanore Mine project to proceed with diligent speed. It seems that a key problem has been differences in opinions and procedures among the involved agencies, and these should be resolved forthwith – period – agree to agree and get on with it. The positive socio-economic impacts related to this project weighed against the minimal changes in current land use in the overall geographic area, and the inordinate amount of time already required by regulatory and oversight agencies, call for resolution, so that our perceived need for the development of our natural resources on our public lands, which enjoys widespread acceptance and encouragement in Lincoln County, can, at least in this instance, proceed within our multiple use mandate. Without long-term industry such as envisioned in this project, we cannot maintain opportunities for our citizens and their families to continue the traditional cultural pathways so long a part of our county's history. We are assured that this project's development will be accompanied by a strong commitment to local hiring, and will provide high wages, attractive benefits, and other opportunities. As well, from a governance 512 CALIFORNIA AVENUE LIBBY, MONTANA 59923 (406) 293-7781 • (406) 293-7057 Fax E-mail: lccomms@libby.org	**Comment Response 135-1** Thank you for your comment. **Comment Response 135-2** Thank you for your comment.

Com-ment	Document #135-Lincoln County Board of Commissioners	Response
135-3	perspective, this kind of impetus helps us provide needed assistance to those less fortunate in our communities. Mitigation for potential grizzly bear impacts is a large, contentious, and expensive component of this development. As we have commented in the past, we believe that deference should be given to our communities and local economies when considering related assessments for this project. Without a viable local economy that provides quality opportunities for employment in our communities, you will continue to struggle in your efforts to gain community support for overall recovery programs. Mitigation and habitat management that could result from this project has the potential to actually benefit the recovery program, provide that it is not so excessive as to, instead, kill the project. For example, the DEIS seems to identify reduction of "mortalities" as the primary objective, and "mitigates" primarily by the acquisition of private lands, with no strong evidence that this measure would succeed in its objective. Perhaps a better approach would be to shift resources toward additional research and monitoring, adding empirical data to the currently limited collection, which could better result in a pro-active and adaptive management approach over the life of the project which may result in a more accurate assessment of the need to purchase additional lands. Removal of private lands from the tax rolls of a county made up of largely public lands should only occur on very sound basis. It appears that overall environmental impact mitigation suggested for this project is extensive, and in some cases seems more an agency wish list rather than justifiable offsets: • Is it reasonable to require the monitoring of all springs, seeps, and streams in the Wilderness Area and headwaters of Libby Creek weekly between July and October, since, not only does this seem impractical, if not impossible, particularly given that the hydrological assessment indicates that impacts would not be measureable from natural variability?	**Comment Response 135-3** The grizzly bear mitigation plan in the DEIS, SDEIS and FEIS had two primary components: measures to reduce grizzly bear mortalities and measures to increase suitable habitat. Increased human-caused mortality is a risk of the project. The measures to reduce the human-caused mortality risk did not include any land acquisition, but included measures such as removing and monitoring vehicular-killed big game animals, funding of a FWP law enforcement position, and developing a transportation plan to minimize mine-related traffic. Land acquisition was designed to offset the physical and displacement effects of the project.
135-4		**Comment Response 135-4** Section C.10.3.3.3 was revised in the SDIES to require biweekly surface water monitoring between July 1 and mid-October of select streams and other GDEs as needed to establish long term trends, which is how impacts would be separable from natural variability.
135–5		**Comment Response 135-5** Section 2.5.2.3.2 of the FEIS indicated BMPs for the Libby Creek Road would be implemented during the Evaluation Phase and continue until the Bear Creek Road was chip-sealed and MMC no longer used the Libby Creek Road for mine-related traffic.
135-6	• Is it reasonable to request maintenance of the Libby Creek mitigation measures for the life of the project when MMI will be using that road for only a short period of time? • Is it necessary, or even realistic, to require pre-treatment for weeds on all planned disturbance areas given that MMI must manage for weeds in these areas continuously through the life of the project, as the surrounding USFS lands have a significant weed problem and will be a continual source of weed seeds?	**Comment Response 135-6** The potential spread of noxious weeds was addressed by a weed survey and treatment before ground disturbance occurred.
135-7	• Is it reasonable to require monitoring of Libby Lakes and St. Paul Lake levels for the entire life of the project when hydrologic analysis indicates there will be no measurable impact from natural variability? Might more intermittent monitoring be as appropriate?	**Comment Response 135-7** Monitoring of St. Paul Lake was eliminated in the Water Resources Monitoring Plan presented in the SDEIS and FEIS. The KNF currently is monitoring Lower Libby Lake electronically and MMC would continue the once-a-year collection of the electronic data.
135–8	• Is it reasonable and necessary to request MMI to monitor and report on all "road-kill" mortalities, even those not associated with mine vehicles, contractors, vendors, etc., and at the same time, provide additional funding for a full-time MFWP law enforcement officer?	**Comment Response 135-8** Traffic on the Bear Creek Road, including the Bear Creek Bridge, is expected to increase substantially due to the project. Monitoring roadkill mortalities would allow for implementation of adaptive management measures should such mortalities increase with the project.
135-9	• Is it really necessary to require the replacement of the Bear Creek Bridge, or might other traffic control mechanisms suffice? Situations of two lane roads narrowing to a single lane bridge are exceedingly common throughout the USFS road system.	**Comment Response 135-9** See next page.

Comment	Document #135-Lincoln County Board of Commissioners	Response
135–10 135-11 136-12	These are just some examples of listed mitigation measures that seem to exceed need relative to real impact. We encourage you to use caution in requiring nebulous, yet nevertheless not inexpensive, measures that, taken cumulatively, could simply and unnecessarily make the project too expensive for further development. Also, we heard clearly and loudly at the April 16th public hearing that the transmission line alternatives were a significant issue. Although Alternative C seemed to have the most merit , there does seem to be a need to further minimize impacts to private land owners in the area. We request that additional options be developed to provide more mutually agreeable solutions to these legitimate concerns. Finally, we want to re-emphasize our support for this project and re-state our view that its implementation would provide a "stimulus package" for Lincoln County far beyond that which might be realized through current Congressional direction. At the same time, we realize that care must be taken to, as Bill Martin so eloquently stated at the public hearing, "insist that it be done the very best that it can be done – use regulation and technology to provide a 'world – class' development." Sincerely, John C. Konzen, Chairman Marianne B. Roose, Member Anthony J. Berget	**Comment Response 135-9** Because traffic on the Bear Creek Road, including the Bear Creek Bridge, is expected to increase substantially, it would be necessary to replace the Bear Creek Bridge. Having a bridge width consistent with the roadway width would decrease congestion and provide for a safer road. **Comment Response 135-10** The agencies' mitigation measures are designed to minimize or avoid significant adverse effects. **Comment Response 135-11** The alignments of Transmission Line Alternatives C, D, and E (called C-R, D-R, and E-R in the SDEIS and FEIS) were revised in the SDEIS and again in the FEIS to minimize effects on private land owners. **Comment Response 135-12** Thank you for your comment.

Comment	Document #185-Montana Fish Wildlife & Parks	Response
	 MNTR 185 Region One 490 N. Meridian Rd. Kalispell, MT. 59901 Jim: 406-751-4566 Fax: 406-257-0349 REF: JS061-09 June 22, 2009 JUN 25 2009 REGEIVED Paul Bradford Kootenai National Forest Supervisor 1101 US Highway 2 West Libby, MT 59923	**Comment Response 185-1** The agencies appreciate FWP's acknowledgement that changes were made in the DEIS to address FWP's comments on the preliminary DEIS. New information provided by FWP, such as deer and elk winter range mapping, fisher and wolverine sighting data, and clarification about elk and deer populations was incorporated in the DEIS. The agencies carefully considered FWP's comments on the DEIS in the development of modifications to the agencies' alternatives as described in Chapter 2 of the SDEIS. Avoidance of impacts to big game and other wildlife species was among the criteria used to determine the preferred transmission line alternative, Alternative D-R.(refer to Appendix J of the SDEIS). Other modifications to agencies' alternatives, such as the elimination of the LAD Areas, would also reduce impacts to wildlife.
185–1	Montana Fish, Wildlife & Parks' (MFWP) concerns and comments pertaining to mitigation regarding the Montanore Mine have changed very little from our previous comments on the PDEIS, although we see that some of our comments have been addressed relative to how and where we do our wildlife trend surveys. Originally, there were some errors about the survey sample results being the total populations of elk, moose, goats, deer, etc., for HDs 104, 105, or 100.	**Comment Response 185-2** The agencies disagree with FWP's comment that the DEIS is inadequate in scope and depth relative to big game species and carnivores. The agencies believe that impacts to big game species and carnivores, such as fisher, wolverine, and wolf, as described in sections 3.25.3, 3.25.4, and 3.25.5 of the SDEIS and FEIS, are adequately evaluated and disclosed. For example, numerous indicators were used to evaluate potential effects to deer, elk, and moose including habitat removal, cover/forage ratio, forage openings, habitat effectiveness, habitat security, and the presence and quality of key habitat features. In general, a conservative approach was used to evaluate potential impacts on wildlife, using the best data available. For example, as described in Sections 3.25.3, 3.25.4 and 3.25.5, distances that wildlife species are displaced due to human activity vary, but in general, impacts for most species may occur up to 0.33 mile or the nearest ridgeline from the source of disturbance (Christensen and Madel 1982; Schirato 1989; Frederick 1991; Grant *et al.* 1998; Austin 1998), and may extend up to 1 mile, depending on type of disturbance (Bury 1983; USDA Forest Service *et al.* 1988; USDA Forest Service *et al.* 1990). In absence of species-specific data, an influence zone extending one mile on each side of the helicopter flight path was used to estimate the displacement effects of disturbances associated with mine construction and operations on wolverines and mountain goats, based on influence zones suggested in the grizzly bear Cumulative Effects Model (USDA Forest Service 1988; USDA Forest Service *et al.* 1990).
185-2	**General Comments:** The DEIS is inadequate in its scope and depth relative to big game species and forest carnivores. Moose, mountain goats, elk, etc., live year round in the proposed impact area. Aside from grizzly bears, inadequate mitigation measures are offered for permanent impacts to popular big game species and to other nongame/native species, except old-growth-dependent birds. MFWP notes that there are roughly 16 pages of discussion of possible mitigation measures for grizzly bears and about one page for all the other big game species. MFWP does note that mountain goat surveys are now recommended three times per year for a couple of years, and blasting is restricted during the mountain goat kidding period (they mention the month of June; MFWP suggests May 15-June 15 as being more effective). The DEIS also notes that there should be no construction activity for the power line on crucial big game winter range during the winter period (unless it is a mild winter and ungulates are not concentrated in these areas). We assume that the authors were under the impression that mitigation measures for grizzly bears would also accommodate most other popular big game species. MFWP disagrees with this idea. At the core of the habitat security mitigation is the closure of five roads in the vicinity of the mine or access route. The DEIS focuses on some minimal habitat loss calculations for various species and fails to address the real long-term issues of public land habitat security, wildlife displacement, hunting access on popular public lands, and increased human industrial activity in these drainages (mining and ancillary activities are scheduled 24/7 all year long for 20-30 years). Overall, MFWP feels that the wildlife section of the DEIS emphasizes grizzly bears and a few avian species of concern and falls short of addressing the loss of big game, and furbearer habitat as well as recreational hunting areas on public lands. MFWP also notes that there are cumulative impacts to all wildlife species when this proposal is taken in context with the Rock Creek Mine proposal by Revette Minerals just west of the Montanore proposal on the other side of the Cabinet Divide. MFWP believes that the cumulative impact of both of these mines on wildlife species and loss of public lands need to be addressed in this public process.	The agencies disagree that mitigation measures for wildlife other than grizzly bears are inadequate. While the agencies agree that the grizzly bear mitigation described in Section 2.5.9.2 of the SDEIS and Section 2.5.7.4 of the FEIS was more detailed than the mitigation measures developed for other species, most of the grizzly bear (continued next page)

Com-ment	Document #185-Montana Fish Wildlife & Parks	Response
185-3	**Transmission Line Issues**: Several power line corridor alternatives are mentioned, all of which originate near Sedlack Park at an existing BPA substation site. This site is within the MFWP/Plum Creek Conservation Easement. This area of the Fisher River, along US Hwy 2, is a known crossing area for big game animals migrating to and from winter and summer ranges in the Salish and Cabinet Mountain Ranges. It has also been identified as the most probable corridor or linkage zone for grizzly bears moving between the Cabinet Mountains and the Whitefish Range in the Northern Continental Divide Ecosystem (NCDE) (a grizzly from the Cabinet population was captured in route from the Cabinets to the Whitefish Range three years ago). At the April 16 meeting at the Kootenai National Forest (KNF) supervisor's office, with all the agencies working in the process (probably about 50 people present), some expressed surprise at the comment we made about the Sedlack Park area being a major crossing area for many species of big game, including grizzly bears. This comment, as stated above, was made in the first review. MFWP, in cooperation with American Wildlands, has identified this corridor in our most recent mapping endeavor, and it will be identified in our upcoming crucial areas project. The alternative power line routes up and over the top of Miller Creek require several miles of new and temporary road construction and much helicopter assistance. The West Fisher alternative would be less impacting to wildlife, especially if it were modified to use only the existing main USFS Road 231 to the Libby Creek facility site. At the meeting MDOT staff expressed concerns about our proposal to route the power line right along the main US Hwy 2 corridor up to West Fisher, then using the USFS Road 231 all the way over to Howard Lake and on into the Libby Creek facility site. Bald eagles and wetlands were the issues. It is our understanding that the MDOT prefers to take the line uphill across the MFWP Fisher River Conservation Easement lands and cross-country to Miller Creek, then over the top to Howard Lake, with more roads, disturbed country, and wildlife habitat impacts. MFWP's preference is to use Alternative E with modifications. **Multiple Drainage Issues**: Montanore Minerals Corporation's (MMC) preferred alternative as proposed will have wildlife impacts on several currently intact and important drainages from West Fisher to Bear Creek, and then on out the Bear Creek Road, USFS Road 278, for the proposed ore truck haul route and delivery truck and mine employee transportation route. MFWP questions why MMC is using the Libby Creek Road, USFS Road 231, to access all their mine activities currently, but want to switch to the Bear Creek Road, USFS Road 278, for future mining and ore hauling activities. MFWP believes that it would be in the best interest for all wildlife if they were restricted to the Libby Creek drainage and the existing road (Road 231) for mine access into the Libby Creek Facility site. Developing the Bear Creek Road to access the mine will still cross Ramsey, Poorman, Cable, Bear, and Big Cherry Creeks as opposed to Libby Creek. The MMC proposal to have facility sites in Libby and Ramsey Creeks poses significant wildlife and fisheries impacts, as it will hinder displacement opportunity for big game ungulates such as moose and mountain goats, which occur at seasonal high density in these drainages, and elk and mule deer, which are at moderate seasonal densities in these drainages. Libby and Ramsey Creek provide crucial wildlife habitat. The proposed additional facility site in Ramsey Creek would also require the power line extension up to near the head of the drainage, impacting important moose and mountain goat habitat. Due to permanent impacts to crucial wildlife habitat on public land, MFWP does not support additional mine facilities or activities in Ramsey Creek. **Grizzly Bear Impacts**: Undoubtedly, the USFWS will conduct a thorough review of the cumulative impacts of the proposed Rock Creek Mine and the proposed Libby Creek Montanore Mine to assess "Take" issues for a grizzly bear population that is being discussed for endangered status. The Libby Creek drainage is a known grizzly bear crucial area. Individual grizzly bears have been trapped in Libby Creek as part of the ongoing Cabinet/Yaak Grizzly Bear Recovery and Monitoring Project. Grizzly bears, at the current time, are quite rare in the Cabinets versus other	**Comment Response 185-2 (cont'd)** mitigation measures would also benefit other wildlife. The acquisition of over 6,000 acres of grizzly bear habitat would prevent private development of these parcels, many of which provide suitable habitat for other species. Habitat parcels identified as potential replacement habitat for mitigating effects to grizzly bear are prioritized based primarily on their value as grizzly bear habitat. The value of these parcels to other wildlife was not considered in the ranking process and any importance of the parcel to other species was incidental and secondary. Parcels important to grizzly bears are often important to other species due to movement corridors and linkages used by big game and carnivores, as well as similar requirements (i.e., space free from human development, wetlands, etc.). Also, overall, road densities would likely improve through the agencies' proposed land acquisition requirement for grizzly bear mitigation, as described in section 2.5.7.4.1 of the SDEIS and Section 2.5.7.4.1 of the FEIS, thereby benefitting elk, white-tailed deer, moose, and other wildlife. As described in the agencies' Wildlife Mitigation Plan, many other measures would minimize impacts to wildlife, such as the development and implementation of a wildlife awareness plan; funding of a Habitat Conservation Specialist and Law Enforcement Officer; monitoring of wildlife mortalities due to vehicle collisions, and if appropriate based on monitoring, mitigation of vehicle-related wildlife mortality. Mitigation for impacts to other resources, such as wetlands, (described in Section 2.5.7.1 of the SDEIS and FEIS) would also benefit wildlife, such as moose and western toad. Mitigation for impacts to mountain goats described in Section 2.5.9.2.5 of the SDEIS and Section 2.5.7.4.5 of the FEIS was modified based on FWP comments on the DEIS. In the agencies' alternatives, blasting would not occur at the entrance to any adit portals during May 15 to June 15. Cumulative effects on wildlife species from the proposed Montanore Project and other reasonably foreseeable actions, including the Rock Creek Project, are described for each wildlife species evaluated in Chapter 3. For example, cumulative effects analyses for white-tailed deer, mountain goat, and pileated woodpecker are provided at the end of Sections 3.25 of the FEIS. **Comment Response 185-3** In response to FWP's comments on the Preliminary DEIS, a description of a wildlife linkage zone in the Fisher River Valley between the Barren Peak and Teeters Peak areas to the west of US 2 and the Kenelty Mountains and Fritz Mountain areas to the east of US 2 was provided in the analysis of impacts on elk on p. 731 of Section 3.24.3.2.2 of the DEIS and was referenced in the analysis of numerous other species, including mule deer, moose, and grizzly bear.

Com-ment	Document #185-Montana Fish Wildlife & Parks	Response
185-3 185-4	**Transmission Line Issues**: Several power line corridor alternatives are mentioned, all of which originate near Sedlack Park at an existing BPA substation site. This site is within the MFWP/Plum Creek Conservation Easement. This area of the Fisher River, along US Hwy 2, is a known crossing area for big game animals migrating to and from winter and summer ranges in the Salish and Cabinet Mountain Ranges. It has also been identified as the most probable corridor or linkage zone for grizzly bears moving between the Cabinet Mountains and the Whitefish Range in the Northern Continental Divide Ecosystem (NCDE) (a grizzly from the Cabinet population was captured in route from the Cabinets to the Whitefish Range three years ago). At the April 16 meeting at the Kootenai National Forest (KNF) supervisor's office, with all the agencies working in the process (probably about 50 people present), some expressed surprise at the comment we made about the Sedlack Park area being a major crossing area for many species of big game, including grizzly bears. This comment, as stated above, was made in the first review. MFWP, in cooperation with American Wildlands, has identified this corridor in our most recent mapping endeavor, and it will be identified in our upcoming crucial areas project. The alternative power line routes up and over the top of Miller Creek require several miles of new and temporary road construction and much helicopter assistance. The West Fisher alternative would be less impacting to wildlife, especially if it were modified to use only the existing main USFS Road 231 to the Libby Creek facility site. At the meeting MDOT staff expressed concerns about our proposal to route the power line right along the main US Hwy 2 corridor up to West Fisher, then using the USFS Road 231 all the way over to Howard Lake and on into the Libby Creek facility site. Bald eagles and wetlands were the issues. It is our understanding that the MDOT prefers to take the line uphill across the MFWP Fisher River Conservation Easement lands and cross-country to Miller Creek, then over the top to Howard Lake, with more roads, disturbed country, and wildlife habitat impacts. MFWP's preference is to use Alternative E with modifications. **Multiple Drainage Issues**: Montanore Minerals Corporation's (MMC) preferred alternative as proposed will have wildlife impacts on several currently intact and important drainages from West Fisher to Bear Creek, and then on out the Bear Creek Road, USFS Road 278, for the proposed ore truck haul route and delivery truck and mine employee transportation route. MFWP questions why MMC is using the Libby Creek Road, USFS Road 231, to access all their mine activities currently, but want to switch to the Bear Creek Road, USFS Road 278, for future mining and ore hauling activities. MFWP believes that it would be in the best interest for all wildlife if they were restricted to the Libby Creek drainage and the existing road (Road 231) for mine access into the Libby Creek Facility site. Developing the Bear Creek Road to access the mine will still cross Ramsey, Poorman, Cable, Bear, and Big Cherry Creeks as opposed to Libby Creek. The MMC proposal to have facility sites in Libby and Ramsey Creeks poses significant wildlife and fisheries impacts, as it will hinder displacement opportunity for big game ungulates such as moose and mountain goats, which occur at seasonal high density in these drainages, and elk and mule deer, which are at moderate seasonal densities in these drainages. Libby and Ramsey Creek provide crucial wildlife habitat. The proposed additional facility site in Ramsey Creek would also require the power line extension up to near the head of the drainage, impacting important moose and mountain goat habitat. Due to permanent impacts to crucial wildlife habitat on public land, MFWP does not support additional mine facilities or activities in Ramsey Creek. **Grizzly Bear Impacts**: Undoubtedly, the USFWS will conduct a thorough review of the cumulative impacts of the proposed Rock Creek Mine and the proposed Libby Creek Montanore Mine to assess "Take" issues for a grizzly bear population that is being discussed for endangered status. The Libby Creek drainage is a known grizzly bear crucial area. Individual grizzly bears have been trapped in Libby Creek as part of the ongoing Cabinet/Yaak Grizzly Bear Recovery and Monitoring Project. Grizzly bears, at the current time, are quite rare in the Cabinets versus other	The significance of this area to grizzly bears was clarified in Section 3.25.5.3.2 of the FEIS. In the FEIS grizzly bear analysis, the linkage areas described by Servheen *et al* (2003), Brunden and Johnson (2008), and American Wildlands (2008) are referred to collectively as the US 2 linkage zone. Your preference for the use of a modified Alternative E is noted. **Comment Response 185-4** The agencies developed two primary alignment modifications to MMC's proposed North Miller Creek alignment (Alternative B). All of the agencies' transmission line alternatives include a modification that would route the line on an east-facing ridge immediately north of the Sedlak Park Substation instead of following the Fisher River. This modification would reduce impacts to nesting bald eagles, the crossing of soils that are highly erosive and subject to high sediment delivery, and the visibility of the line from US 2, and fewer residences would be within 0.5 mile of the line. The agencies' transmission line alternatives were modified in the SDEIS and FEIS to further reduce environmental impacts. The agencies' preferred alternative, Alternative D-R-Miller Creek Transmission Line Alternative, would have greater new temporary displacement effects on grizzly bear, would affect more elk and moose winter range, and would require more new access roads for transmission line construction than Alternative E-R West Fisher Creek Transmission Line Alternative, but would impact less white-tailed deer winter range and have fewer total grizzly bear displacement effects. Effects on elk security habitat would be the same for both alternatives. SDEIS Table 206 and the comparable table in the FEIS shows that Alternative E-R would require opening more closed roads in the grizzly bear recovery zone during construction than any other alternative. As shown in FEIS Figure 44, a currently gated road in Sections 25, 26, and 27 would be temporarily opened for access during construction of Alternative D-R. For the analysis of impacts to core grizzly bear habitat, gated roads are considered as open roads and are assigned a 0.31-mile disturbance buffer. Both Alternative D-R and Alternative E-R would result in the temporary loss of 18 acres of core grizzly bear habitat during construction and decommissioning, which would be replaced at a 2:1 ratio prior to construction activity. Overall, the agencies' preferred alternative, Alternative D-R-Miller Creek Transmission Line Alternative, provides the best balance among the preferred location criteria listed in DEQ Circular MFSA-2, Section 3.1 and provides for mitigation of significant impacts to affected wildlife species as required by ARM 17.20.1607. (continued next page)

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185-4	**Transmission Line Issues**: Several power line corridor alternatives are mentioned, all of which originate near Sedlack Park at an existing BPA substation site. This site is within the MFWP/Plum Creek Conservation Easement. This area of the Fisher River, along US Hwy 2, is a known crossing area for big game animals migrating to and from winter and summer ranges in the Salish and Cabinet Mountain Ranges. It has also been identified as the most probable corridor or linkage zone for grizzly bears moving between the Cabinet Mountains and the Whitefish Range in the Northern Continental Divide Ecosystem (NCDE) (a grizzly from the Cabinet population was captured in route from the Cabinets to the Whitefish Range three years ago). At the April 16 meeting at the Kootenai National Forest (KNF) supervisor's office, with all the agencies working in the process (probably about 50 people present), some expressed surprise at the comment we made about the Sedlack Park area being a major crossing area for many species of big game, including grizzly bears. This comment, as stated above, was made in the first review. MFWP, in cooperation with American Wildlands, has identified this corridor in our most recent mapping endeavor, and it will be identified in our upcoming crucial areas project. The alternative power line routes up and over the top of Miller Creek require several miles of new and temporary road construction and much helicopter assistance. The West Fisher alternative would be less impacting to wildlife, especially if it were modified to use only the existing main USFS Road 231 to the Libby Creek facility site. At the meeting MDOT staff expressed concerns about our proposal to route the power line right along the main US Hwy 2 corridor up to West Fisher, then using the USFS Road 231 all the way over to Howard Lake and on into the Libby Creek facility site. Bald eagles and wetlands were the issues. It is our understanding that the MDOT prefers to take the line uphill across the MFWP Fisher River Conservation Easement lands and cross-country to Miller Creek, then over the top to Howard Lake, with more roads, disturbed country, and wildlife habitat impacts. MFWP's preference is to use Alternative E with modifications.	**Comment Response 185-4 (cont'd)** Among the preferred location criteria listed in DEQ Circular MFSA-2, Section 3.1 are: • Locations with the greatest potential for general local acceptance of the facility • Locations in logged areas rather than undisturbed forest • Locations in geologically stable areas with nonerosive soils in flat or gently rolling terrain • Locations where the facility will create the least visual impact • Locations a safe distance from residences and other areas of human concentration • Locations that are in accordance with applicable local, state, or federal management plans when public lands are crossed
185-5	**Multiple Drainage Issues**: Montanore Minerals Corporation's (MMC) preferred alternative as proposed will have wildlife impacts on several currently intact and important drainages from West Fisher to Bear Creek, and then on out the Bear Creek Road, USFS Road 278, for the proposed ore truck haul route and delivery truck and mine employee transportation route. MFWP questions why MMC is using the Libby Creek Road, USFS Road 231, to access all their mine activities currently, but want to switch to the Bear Creek Road, USFS Road 278, for future mining and ore hauling activities. MFWP believes that it would be in the best interest for all wildlife if they were restricted to the Libby Creek drainage and the existing road (Road 231) for mine access into the Libby Creek Facility site. Developing the Bear Creek Road to access the mine will still cross Ramsey, Poorman, Cable, Bear, and Big Cherry Creeks as opposed to Libby Creek.	**Comment Response 185-5** The agencies' rationale for eliminating the use of NFS road 231 (Libby Creek road) for access was discussed in Section 2.13.2.7 of the DEIS and in Section 2.13.8 of the SDEIS and FEIS. The USFWS' BO included a term and condition to use the Libby Creek Road for access.
185-6	The MMC proposal to have facility sites in Libby and Ramsey Creeks poses significant wildlife and fisheries impacts, as it will hinder displacement opportunity for big game ungulates such as moose and mountain goats, which occur at seasonal high density in these drainages, and elk and mule deer, which are at moderate seasonal densities in these drainages. Libby and Ramsey Creek provide crucial wildlife habitat. The proposed additional facility site in Ramsey Creek would also require the power line extension up to near the head of the drainage, impacting important moose and mountain goat habitat. Due to permanent impacts to crucial wildlife habitat on public land, MFWP does not support additional mine facilities or activities in Ramsey Creek.	**Comment Response 185-6** The agencies' modification to the plant site location out of Ramsey Creek and elimination of LAD Areas in Alternatives 3 and 4 were designed to reduce effects on wildlife discussed in this comment.
185-7	**Grizzly Bear Impacts**: Undoubtedly, the USFWS will conduct a thorough review of the cumulative impacts of the proposed Rock Creek Mine and the proposed Libby Creek Montanore Mine to assess "Take" issues for a grizzly bear population that is being discussed for endangered status. The Libby Creek drainage is a known grizzly bear crucial area. Individual grizzly bears have been trapped in Libby Creek as part of the ongoing Cabinet/Yaak Grizzly Bear Recovery and Monitoring Project. Grizzly bears, at the current time, are quite rare in the Cabinets versus other	**Comment Response 185-7** The KNF submitted a final BA in 2013. The agencies' wildlife mitigation plan (see Section 2.5.7.4 of the FEIS) includes grizzly bear mitigation similar to mitigation measures proposed for the Rock Creek Mine. The KNF believes the wildlife mitigation would be adequate to minimize or avoid adverse effects to the grizzly bear and the Canada lynx. The FWS issued a BO on effects to grizzly bears from the Montanore Project in 2014. In its BO, the FWS determined that the preferred alternative, Alternative 3D-R, is not likely to jeopardize the continued existence of the grizzly bears and that since no critical habitat has been designated for this species, none would be affected. The FWS also identified reasonable and prudent measures necessary and appropriate to minimize incidental take of grizzly bears, and terms and conditions that implement them.

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	areas in Montana, and the Libby Creek/West Fisher/Rock Creek area is a relatively high crucial habitat and use area. Grizzly bears and/or their sign are observed by MFWP/USFWS staff in Libby Creek nearly every year. The proposed site is right in the heart of Cabinet Mountain grizzly bear habitat. Due to the proposed project, it is MFWP's position that grizzly bears will be impacted directly and will likely have to change their activity and habitat use patterns to avoid conflicts with the mining operation. MFWP notes that Revette Minerals has already purchased land and contributed funding on a temporary basis for an additional warden and bear conflict specialist as preliminary mitigation for the proposed Rock Creek Mine, just over the Cabinet Divide from Libby Creek. Similar mitigation measures should be included in the MMC proposal.	**Comment Response 185-8** Effects on big game other than mosse, including elk security, is described in Section 3.25.3.of the FEIS. Moose activity in Libby Creek is described in Section 3.25.7.1
185-8	**Rocky Mountain Elk**: Rocky Mountain elk are an important and popular wildlife species in the Libby Creek drainage, as they spend summer and fall there annually. Elk also use the drainage bottom as a migratory route to winter range on Miller Creek and Horse Mountain to the east. The Silverbutte/West Fisher/Libby Creek/Miller Creek/Horse Mountain complex represents important elk habitat in HD 104 that would be disrupted by the proposed project.	**Comment Response 185-9** See comment response 185-2.
185–9	**White-tailed Deer**: Inadequate analysis of impacts and proposed mitigation measures for white-tailed deer are discussed. The act of closing roads will only reduce mortality from hunters and improve habitat security without replacing the loss of seasonal habitats used by deer for fawning, rearing, and fall foraging habitat due the construction of this mine and associated loss of habitats on public lands.	**Comment Response 185-10** Based on FWP's comments on the PDEIS, additional detail about mountain goats in the analysis area was provided in Section 3.24.3.2 of the DEIS. In the DEIS and FEIS Libby, Ramsey, West Fisher, Poorman, and Rock creeks were described as representing "a population epicenter for mountain goats in the southern Cabinet Mountains."
185–10	**Mountain Goats**: MFWP believes that the discussion of impacts on native mountain goats in the proposed impact area in the DEIS is also inadequate. Notations were made to reference Gayle Joslin's 1980 MFWP research in the West Cabinets, which is a good starting point. We note a reference to goat observation data from the KNF district wildlife biologist, but have not been provided this data. MFWP staff spends considerable time in these drainages on the ground and rarely go into these areas without seeing mountain goats. MFWP believes that comments in the DEIS relative to few goats in Ramsey Creek area and only an occasional billy goat in Poorman Creek are erroneous. Long-term MFWP flight data and observations indicate that Libby Creek, Ramsey Creek, West Fisher, Poorman Creek, and Rock Creek represent crucial habitat or a population epicenter/concentration area for mountain goats in the southern Cabinets.	**Comment Response 185-11** Section 3.25.3.3 was updated to reflect research on distances at which goats may be displaced and have physiological reactions to human disturbances, including helicopter use. Côte *et al*. (2013) and Cadsand (2012) suggest a minimum separation distance of 1,500 meters between helicopter flights and goat range, thus, the influence zones (1 mile or about 1,600 meters) suggested for grizzly bear in the Cumulative Effects Model were used to estimate the displacement effects of disturbances associated with mine and transmission line construction and operations on mountain goats. To minimize disturbance to mountain goats, mitigation for impacts to mountain goats described in Section 2.5.9.2.5 of the SDEIS and Section 2.5.7.4 of the FEIS includes prohibiting blasting at the entrance to any adit portals from May 15 to June 15. Because little data are available to predict the impacts of human disturbance on mountain goats, the agencies' alternatives also would include funding for monitoring of mountain goat responses to mine-related impacts. If, in consultation with the FWP, mine disturbance were found to have a substantial impact on goat populations, mitigation measures would be developed to reduce the impacts of mine disturbance. Land acquisition for grizzly bear mitigation may also benefit mountain goats, as described in the comment response 185-2. With implementation of mitigation measures, the agencies maintain that the agencies' alternatives are not anticipated to result in the loss of goat herd occurrence or abundance in the southern Cabinet Mountains. See next page for comment responses 185-12 and 185-13.
185–11	The formula used to calculate habitat loss for mountain goats fails to address the issue of disturbance of mine activities on mountain goats in the Libby/Ramsey/Rock Creek drainages for the next 20-30 years. The conclusions that are stated, that adequate goat habitat will remain, do not adequately disclose impacts to native mountain goat populations in the area. Mountain goats are a focal species for MFWP, both as a popular big game hunting opportunity and potential climate change impacts to their habitat, and we would like to see more measures offered to mitigate the potential impacts.	
185-12	**Fisher/Wolverine**: Fisher were recently petitioned for federal listing under the Endangered Species Act, and the USFWS recently agreed to re-do the status review for wolverine. The revised DEIS refers to the most recent fisher research conducted in the Cabinet Mountains by MFWP's Ray Vinkey. Impacts on wolverines are also not fully evaluated. We have record of wolverine tracks in the project area and wolverine sightings and photographs in both Libby Creek and just over the divide in Rock Creek. Given the mine's close proximity to the roadless areas and wilderness boundary, there is the potential for displacement of wolverines and fisher, at least seasonally.	
185–13	**Canada Lynx**: Canada lynx are listed under ESA. MFWP historical records show Miller Creek and around Howard Lake as detection sites in the proposed project area. However, we are not familiar with any USFWS or USFS observations and do not believe they have any monitoring	

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185–14 185-15	program for lynx in the area to compare with in the future. The entire project area is Canada lynx habitat. Activities from the mine and direct habitat loss on public lands due to settling ponds, etc., have the potential to significantly impact Canada lynx within the proposed project area. **Wolves**: MFWP notes that wolves are active in the project area and that wolf sign is common in the following areas: West Fisher, Howard Lake, Libby Creek, Miller Creek, Horse Mountain, Ramsey Creek, Poorman Creek, and Little Cherry Creek. Wolves are well distributed across public lands on the Kootenai National Forest now. MFWP notes that the Fishtrap pack is only one of many packs and individual wolves utilizing this corner of Montana (see MFWP annual wolf report). Although we do not have a pack identified yet, wolves are currently active along the Cabinet Face from West Fisher to Cedar Creek in the north. The DEIS implies that wolves are not an issue in the project area. MFWP notes that the impacts to white-tailed deer and elk from proposed mine activities and loss of public lands will impact the wolves and mountain lions that prey on these ungulates. **Moose**: Moose will experience the greatest direct habitat loss on public lands from the proposed project. The entire proposed project area represents crucial moose habitat and moose hunting opportunities on public land in northwest Montana. The tailings impoundment sites at either public land location (Little Cherry Creek or Poorman Creek) would remove 1200 to 1800 acres of crucial moose habitat due to the overall "footprint" of the actual settling pond and the immediate area surrounding it (disposal sites and ancillary developments surrounding the settling pond area). Facility sites in Libby Creek and/or Ramsey Creek would remove additional moose habitat on public lands. Winter snow plowing of facility access and haul roads will increase moose use of these roads as travel routes, with increased mortality due to collisions with vehicles and possible illegal killing. Disturbance impacts from mine activities will cause some moose to displace to other areas. Moose distribution in winter is not a function of calendar dates, but rather a function of snow depth and consistency. Moose prefer to live up the Libby and Ramsey Creek drainages as well as the other drainages along the east face of the Cabinets. They migrate out of these areas to the east and down the drainage only when forced to do so by increasing snow depth and/or density. Moose migrate back to the upper portions of these drainages in the late winter/early spring as soon as snow conditions allow. During some years, moose will remain high in the drainages into late January and early February. Moose would normally be expected to occupy areas around proposed mine impact sites for 8-10 months of the year depending on winter severity. MFWP notes that during Noranda Company's adit development activities in Libby Creek in the early 1990s, individuals working for the mine were arrested for illegal killing of moose around the development site. MFWP recommends that the mine and/or the Forest Service mitigate for moose habitat loss on public lands from all site disturbance on an acre-per-acre basis or greater. Moose hunting represents a popular limited entry opportunity, and many sportsmen and moose enthusiasts alike place a high value on moose. Overall, proposed mitigation measures for popular big game species on public land open to hunting are inadequate to conserve Montana's resources and maintain recreational opportunity in the proposed project area. **FISHERIES SECTION** **General Comments:** MFWP Fisheries agrees with Wildlife on the power line issue. Using existing roadways is preferable to new construction. Our recommendation is to keep power pole construction upslope of the road and not between road and streams. From a fisheries perspective, the action alternative with the least detrimental impacts to the aquatic resources within the upper Libby Creek watershed (including associated tributaries) would be Alternative 3. The proposed alternative does not include diversion of Little Cherry Creek, and the project mill	**Comment Response 185-12** On June 30, 2011 the USFWS determined that fishers in the United States Northern Rocky Mountain Range Distinct Population Segment do not warrant federal protection under the ESA. The status of the wolverine was updated in Section 3.25.4.9 of the FEIS. On August 13, 2014, the USFWS withdrew its proposal to list wolverine under the Endangered Species Act, and as a result of this action the wolverine returned to the R1 Sensitive Species list. The wolverine tracks and sightings described in this comment were described in Section 3.24.4 of the SDEIS and Section 3.25.4.9 of the FEIS. Impacts on wolverines were evaluated based on available data, and were revised in the FEIS to reflect the most recent information about the wolverine's strong association with areas where snow cover persists in the spring. The action alternatives are consistent with the proposed rule which indicated that land management activities, including mining, do not pose a threat to wolverine populations and that wolverines appear to be tolerant of human activities. Potential displacement effects on fisher were disclosed in sections 3.24.4 of the DEIS and in section 3.25.4.5 of the FEIS. While not highly sensitive to human activity, the fisher is a species that generally avoids humans (Powell 1993). Disturbance effects may occur due to the presence of people and machines during construction and operations, potentially displacing fishers from nearby suitable habitat. Displacement effects would probably be the greatest during the construction phase, but would continue at lower levels during operations. **Comment Response 185-13** See comment response 185-8. As stated in Section 3.24.5.4.1 of the DEIS and 3.25.5.3.1, lynx occurrence data come from KNF historical records (NRIS Wildlife), KNF data (USDA Forest Service 2005c), and other agencies (MNHP, FWP, and USFWS). **Comment Response 185-14** Updated information about the gray wolf, including its status, distribution, and use of the analysis area is provided in Section 3.25.4.7 of the SDEIS and FEIS. The analysis of impacts to wolves in the FEIS includes an evaluation of the condition of the prey base, including deer and elk populations. Impacts to white-tailed deer and elk are disclosed in Section 3.25.3. The effects analysis indicates that for all alternatives, deer and elk populations would continue to provide a good year-round prey base for wolves. Mitigation measures to minimize impacts to wolves were incorporated into the agencies' alternatives, as indicated in Section 2.5.9.2.3 of the SDEIS and Section 2.5.7.4.3 of the FEIS.

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185–16 185–17	program for lynx in the area to compare with in the future. The entire project area is Canada lynx habitat. Activities from the mine and direct habitat loss on public lands due to settling ponds, etc., have the potential to significantly impact Canada lynx within the proposed project area. **Wolves**: MFWP notes that wolves are active in the project area and that wolf sign is common in the following areas: West Fisher, Howard Lake, Libby Creek, Miller Creek, Horse Mountain, Ramsey Creek, Poorman Creek, and Little Cherry Creek. Wolves are well distributed across public lands on the Kootenai National Forest now. MFWP notes that the Fishtrap pack is only one of many packs and individual wolves utilizing this corner of Montana (see MFWP annual wolf report). Although we do not have a pack identified yet, wolves are currently active along the Cabinet Face from West Fisher to Cedar Creek in the north. The DEIS implies that wolves are not an issue in the project area. MFWP notes that the impacts to white-tailed deer and elk from proposed mine activities and loss of public lands will impact the wolves and mountain lions that prey on these ungulates. **Moose**: Moose will experience the greatest direct habitat loss on public lands from the proposed project. The entire proposed project area represents crucial moose habitat and moose hunting opportunities on public land in northwest Montana. The tailings impoundment sites at either public land location (Little Cherry Creek or Poorman Creek) would remove 1200 to 1800 acres of crucial moose habitat due to the overall "footprint" of the actual settling pond and the immediate area surrounding it (disposal sites and ancillary developments surrounding the settling pond area). Facility sites in Libby Creek and/or Ramsey Creek would remove additional moose habitat on public lands. Winter snow plowing of facility access and haul roads will increase moose use of these roads as travel routes, with increased mortality due to collisions with vehicles and possible illegal killing. Disturbance impacts from mine activities will cause some moose to displace to other areas. Moose distribution in winter is not a function of calendar dates, but rather a function of snow depth and consistency. Moose prefer to live up the Libby and Ramsey Creek drainages as well as the other drainages along the east face of the Cabinets. They migrate out of these areas to the east and down the drainage only when forced to do so by increasing snow depth and/or density. Moose migrate back to the upper portions of these drainages in the late winter/early spring as soon as snow conditions allow. During some years, moose will remain high in the drainages into late January and early February. Moose would normally be expected to occupy areas around proposed mine impact sites for 8-10 months of the year depending on winter severity. MFWP notes that during Noranda Company's adit development activities in Libby Creek in the early 1990s, individuals working for the mine were arrested for illegal killing of moose around the development site. MFWP recommends that the mine and/or the Forest Service mitigate for moose habitat loss on public lands from all site disturbance on an acre-per-acre basis or greater. Moose hunting represents a popular limited entry opportunity, and many sportsmen and moose enthusiasts alike place a high value on moose. Overall, proposed mitigation measures for popular big game species on public land open to hunting are inadequate to conserve Montana's resources and maintain recreational opportunity in the proposed project area. **FISHERIES SECTION** **General Comments:** MFWP Fisheries agrees with Wildlife on the power line issue. Using existing roadways is preferable to new construction. Our recommendation is to keep power pole construction upslope of the road and not between road and streams. From a fisheries perspective, the action alternative with the least detrimental impacts to the aquatic resources within the upper Libby Creek watershed (including associated tributaries) would be Alternative 3. The proposed alternative does not include diversion of Little Cherry Creek, and the project mill	**Comment Response 185-15** The impacts to moose described by the FWP were disclosed in Section 3.24.7of the DEIS and in Section 3.25.7 of the FEIS. Updated information about the use of the analysis area by moose was provided in Section 3.25.7 of the FEIS. Mitigation measures that would reduce impacts to moose and their habitat are described above in comment response 185-2. **Comment Response 185-16** As stated in comment response 185-2, the agencies believe that the wildlife mitigation would adequately minimize or avoid adverse impacts to big game. **Comment Response 185-17** The agencies' preferred alternative, Alternative D-R-Miller Creek Transmission Line Alternative, provides the best balance among the preferred location criteria listed in DEQ Circular MFSA-2, Section 3.1 and provides for mitigation of significant impacts to affected fish habitat as required by ARM 17.20.1607. Use of existing corridors is one of the preferred location criteria. To the extent feasible, the centerline would be upslope of existing roads and away from streams. In response to the concerns identified by FWP and others on the KNF's preferred mine alternative identified in the DEIS, the KNF revised its analysis and identified Alternative 3 (Agency Mitigated Poorman Creek Impoundment Alternative) as its preferred mine alternative in the SDEIS and FEIS. Alternative 3 would not require diversion of Little Cherry Creek and the plant site would be located between Libby and Ramsey creeks, and not up Ramsey Creek.

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	site would be located between Libby and Ramsey Creeks and, therefore, have fewer disturbances to existing waterways and aquatic life.	
185–18	**Water Use and Management:** There is uncertainty within the document regarding the water balance for activities under each alternative. MFWP suggests providing additional detail to better understand changes from the current conditions and evaluation of potential impacts.	
185–19	All alternatives include either increasing or decreasing flows in some drainages. Alternative 2 adds an expected 8 percent increase to Bear Creek flows. Bear Creek is the one tributary to the Libby Creek drainage where bull trout consistently spawn and rear. It should be considered critical habitat in the Libby Creek drainage. Increasing flows could have a damaging effect on spawning and rearing habitat in this drainage.	
185–20	Note that the native species of fish in the project area have evolved in very low productivity conditions. More analysis on the potential impacts of increased productivity in streams is advised.	
185–21	**Proposed Mitigation Activities:** It was unclear if the scope of this document is intended to address the environmental impacts associated with any and all of the mitigation activities. MFWP believes that additional detail relevant to those impacts needs to be addressed. In addition, the document lacks sufficient detail under Alternatives 2 and 4 for the diversion of Little Cherry Creek to adequately evaluate the efficacy of the proposed mitigation activities. MFWP recommends that additional design specifications and details for the diversion of Little Cherry Creek be included in the final document.	
	MFWP is concerned about proposed changes to flows in streams for all drainages and in particular for East Fork Bull River and Rock Creek. The proposed mitigation (habitat structures) associated with the predicted decreases in base flow for the East Fork Bull River and Rock Creek does not address the effect of less water flowing in these drainages due to mine operations. Fall spawning fish currently face intermittent and low water areas in these tributaries that can impede spawning migrations. Additional decreased base flows could block spawning migrations to existing quality habitat. Mitigation for this impact should focus on facilitating connectivity or maintaining appropriate water levels for bull trout to migrate in and out of these tributaries. There also should be discussion about increased water temperatures potentially caused by decreased base flows. The use of habitat structures in general may be good mitigation, but this document does not disclose enough detail to determine the probability of success for these structures in dealing with reduced streamflows.	
	Alternative 3 Road Improvements: Road improvements should include best management practices for road building and improvement and should be standard operating procedure, not mitigation.	
	The mitigation activities proposed for the three action alternatives are mostly for the life of the mine. Is there any contingency for mitigation if impacts extend beyond that time frame? The habitat enhancement mitigation measures presented for the three action alternatives rely heavily on the assumption that Montanore can mitigate for any and all impacts. Contingency plans should also be offered if monitoring indicates that the mitigation is not effective. MFWP believes that the document would be greatly improved by the development of such a contingency correction plan. This plan should be included as part of the final document and provide sufficient detail to evaluate the efficacy of mitigating for any potential detected impacts beyond those anticipated.	
		Comment Response 185-18 The agencies acknowledge that the proposed water balance at Montanore is difficult to follow, due to the complexity of changing conditions throughout the mine life cycle. Updated detailed water balances for each alternative were presented in Chapter 2 of the SDEIS and FEIS. In Section 3.8.2 of the SDEIS and FEIS, the agencies discussed the water balance by phase and provided a simplified graphical representation of water movement by mine phase to clarify the associated discussion. Contingencies for excess water management were discussed in Section 2.4.2.4.3 of the DEIS, SDEIS, and FEIS. **Comment Response 185-19** The effects of Alternative 2's increased flow in Bear Creek on fisheries are discussed in Section 3.6.4.2.2 of the SDEIS and FEIS. The agencies' modifications to post-closure water management in Alternative 4 would minimize effects on Bear Creek streamflow. Bear Creek streamflow would not be affected by the KNF's preferred mine alternative (Alternative 3). The effect of Bear Creek streamflow on aquatic life is discussed by alternative and mine phase in Section 3.6.4. **Comment Response 185-20** Section 3.6.4.2.3 of the SDEIS and FEIS was revised to provide additional information regarding increased nutrient concentrations in Libby Creek below the Libby Adit. To address the uncertainty regarding the response of area streams to increased nutrient concentrations, MMC would implement the water quality and aquatic biology monitoring described in Appendix C, including monitoring for periphyton and chlorophyll-*a* monthly between July and September. **Comment Response 185-21** The environmental effects associated with all of the proposed mitigation was described in the DEIS, SDEIS, and FEIS. For example, Section 3.6.4.2.8 in the SDEIS and FEIS discusses that MMC's proposed mitigation in Alternative 2 includes the removal of all trout inhabiting Little Cherry Creek and their subsequent transfer to the diversion drainage. The loss of available habitat in the diverted Little Cherry Creek would adversely affect the redband trout population in the diverted creek because the remaining habitat would not support the population at its current numbers.

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	site would be located between Libby and Ramsey Creeks and, therefore, have fewer disturbances to existing waterways and aquatic life. **Water Use and Management:** There is uncertainty within the document regarding the water balance for activities under each alternative. MFWP suggests providing additional detail to better understand changes from the current conditions and evaluation of potential impacts. All alternatives include either increasing or decreasing flows in some drainages. Alternative 2 adds an expected 8 percent increase to Bear Creek flows. Bear Creek is the one tributary to the Libby Creek drainage where bull trout consistently spawn and rear. It should be considered critical habitat in the Libby Creek drainage. Increasing flows could have a damaging effect on spawning and rearing habitat in this drainage. Note that the native species of fish in the project area have evolved in very low productivity conditions. More analysis on the potential impacts of increased productivity in streams is advised. **Proposed Mitigation Activities:** It was unclear if the scope of this document is intended to address the environmental impacts associated with any and all of the mitigation activities. MFWP believes that additional detail relevant to those impacts needs to be addressed. In addition, the document lacks sufficient detail under Alternatives 2 and 4 for the diversion of Little Cherry Creek to adequately evaluate the efficacy of the proposed mitigation activities. MFWP recommends that additional design specifications and details for the diversion of Little Cherry Creek be included in the final document.	**Comment Response 185-22** The proposed habitat structures in the East Fork Bull River and Rock Creek were eliminated in the SDEIS. Section 3.6.4 of the FEIS was revised to expand the effects analysis on fisheries from changes in fish passage, streamflow reductions, and temperature changes. The FEIS also included the bull trout mitigation plan submitted to the USFWS in the BA. **Comment Response 185-23** All alternatives include the implementation of best management practices for road construction and reconstruction. Erosion control for Alternative 2 was discussed in Section 2.4.2.5.2 of the DEIS and discussed for Alternative 3 in Section 2.5.3.2.6 of the FEIS. **Comment Response 185-24** The agencies' proposed monitoring plans were revised in the SDEIS and again in the FEIS. Section C.10.6 indicated that surface water and groundwater monitoring conducted during the Construction and Operational phases would continue into the Closure Phase. A closure and post-closure monitoring plan would be submitted to the agencies for approval before the Evaluation Phase began. A final closure and post-closure monitoring plan would be submitted 3 to 4 years before mine closure. The plan would incorporate monitoring information obtained during the mining period in the design of monitoring locations and sampling frequency. The monitoring plans for wetlands, water resources, fisheries and bull trout were revised in the FEIS to include more specific information about adaptive mitigation in response to monitoring information.
185-22	MFWP is concerned about proposed changes to flows in streams for all drainages and in particular for East Fork Bull River and Rock Creek. The proposed mitigation (habitat structures) associated with the predicted decreases in base flow for the East Fork Bull River and Rock Creek does not address the effect of less water flowing in these drainages due to mine operations. Fall spawning fish currently face intermittent and low water areas in these tributaries that can impede spawning migrations. Additional decreased base flows could block spawning migrations to existing quality habitat. Mitigation for this impact should focus on facilitating connectivity or maintaining appropriate water levels for bull trout to migrate in and out of these tributaries. There also should be discussion about increased water temperatures potentially caused by decreased base flows. The use of habitat structures in general may be good mitigation, but this document does not disclose enough detail to determine the probability of success for these structures in dealing with reduced streamflows.	
185–23	Alternative 3 Road Improvements: Road improvements should include best management practices for road building and improvement and should be standard operating procedure, not mitigation.	
185–24	The mitigation activities proposed for the three action alternatives are mostly for the life of the mine. Is there any contingency for mitigation if impacts extend beyond that time frame? The habitat enhancement mitigation measures presented for the three action alternatives rely heavily on the assumption that Montanore can mitigate for any and all impacts. Contingency plans should also be offered if monitoring indicates that the mitigation is not effective. MFWP believes that the document would be greatly improved by the development of such a contingency correction plan. This plan should be included as part of the final document and provide sufficient detail to evaluate the efficacy of mitigating for any potential detected impacts beyond those anticipated.	

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185–25	The three action alternatives include mitigation measures that propose stocking hatchery-raised fish in several of the streams within the upper Libby Creek watershed. MFWP's policy is that native trout will be stocked in streams only for restoration and range expansion purposes. Trout are not stocked in streams on a regular basis except under strict guidelines to avoid impacting wild populations. Regular stocking of hatchery fish does not constitute valid resource mitigation. The fish populations subject to impact are redband trout, and at this time a hatchery broodstock is not in place, although a redband brood is being developed for species restoration purposes. Stocking of fish would be considered only after all other strategies dealing with habitat protection and restoration have failed.	**Comment Response 185-25** It is not clear why the FWP believes the three mine alternatives include proposed stocking hatchery-raised fish in area streams. MMC's proposed mitigation, which was developed by jointly by the KNF and the FWP for the 1992 Record of Decision (see Appendix B of the KNF's 1992 Record of Decision) does not include stocking of hatchery-raised fish. The agencies' fisheries mitigation, discussed in Sections 2.5.7.1.2 and 2.5.7.2 of the SDEIS and section 2.5.7.3 of the FEIS, also does not include stocking of hatchery-raised fish. See comment response 185-22.
185–26	**Monitoring:** The DEIS devotes substantial effort to describing existing conditions and baseline datasets for the aquatic resources (i.e., fine sediment, macroinvertebrates, and fish populations) throughout the upper Libby Creek watershed. However, substantial within-stream and across-year variability exists within these datasets. MFWP recommends that the final document should acknowledge and state the minimum detectable differences over the baseline conditions that the proposed monitoring plans (for each alternative) will be capable of significantly detecting. It is MFWP's opinion that these levels of impact may be large and could potentially negatively impact aquatic resources prior to detection.	**Comment Response 185-26** The FWP is correct in asserting that substantial variation exists within and across streams. They are also correct that the large natural variability may make it difficult to immediately detect differences in any one parameter from one year to the next. It is believed that a weight-of-evidence approach is more appropriate to this project when examining data on a year-by-year basis. In other words, if adverse responses are observed in multiple levels of biological organization without corresponding natural physical disturbances (rain on snow events, other flood events, etc.), then the weight-of-evidence would suggest that potential mining impacts should be considered. Secondly, while changes from year to year may be difficult to detect, annual monitoring would allow trends over time to be evident.
185–27	It is important to understand the context for use of McNeil core samples. The percent fines less than 6.35 mm is discussed in several places in this document. Core sampling for use in description of sediment effects to bull trout must be accomplished in areas of known bull trout spawning or at the very least in areas of historic spawning or suspected spawning. In addition, the monitoring must be accomplished near the most critical time when fine sediments will impact bull trout (just prior to emergence). Without that context, the core samples should not be used to describe impacts to bull trout.	**Comment Response 185-27** The agencies disagree with FWP that core sampling must be conducted during the most critical time when fine sediments would affect bull trout. The agencies believe that collecting samples in gravel when eggs are not present is more than adequate to determine the relative amount of sediment in important bull trout spawning areas without the risk of destroying bull trout redds, especially with the limited reproduction that already occurs within Libby Creek. Coring in occupied redds would violate section 9 of the ESA and unnecessarily reduce bull trout survival.
185–28	Many of the average existing aquatic conditions (i.e., pool frequency, LWD counts, and width-to-depth ratios) within the upper Libby Creek watershed may have substantially changed after the rain-on-snow event that occurred in the watershed in November of 2006. Therefore, MFWP recommends additional details that clarify when data presented was collected and acknowledges the potential for change as a result of this weather event. Sincerely, James R. Satterfield, Jr., Ph.D. Regional Supervisor	**Comment Response 185-28** The FEIS discusses habitat data collected and potential changes that may have occurred as a result of this event in 2006.

Comment	Document #196-U.S. Environmental Protection Agency	Response
196–1	MNTR 196 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8 1595 Wynkoop Street DENVER, CO 80202-1129 Phone 800-227-8917 http://www.epa.gov/region08 JUN 2 9 2009 Ref: EPR-N Mr. Paul Bradford, Supervisor Kootenai National Forest 31374 U.S. Highway 2 West Libby, Montana 59923-3022 Mr. Richard Opper, Director Montana Department of Environmental Quality Post Office Box 20091 Helena, Montana 59620-0901 James I. Winters United States Army Corps of Engineers Bismarck Regulatory Office 1513 South 12th Street Bismarck, North Dakota 58504 Re: Draft Environmental Impact Statement for the Montanore Project (CEQ #20090048) Dear Mssrs. Bradford, Opper, and Winters: In accordance with Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(C), Section 309 of the Clean Air Act, 42 U.S.C. § 7609, and the Council on Environmental Quality (CEQ) regulations, 40 CFR Parts 1500-1508, the United States Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Montanore Project (a proposed copper and silver mine in the Kootenai National Forest (KNF)) and offers the following comments. EPA's review has identified potential adverse environmental impacts from the KNF's preferred mine alternative (Alternative 4, Agency Mitigated Little Cherry Creek Impoundment Alternative) that are of sufficient magnitude that EPA believes the preferred mine alternative must not proceed as proposed. Our principle objections are that Alternative 4 may have unsatisfactory and unacceptable impacts to wetlands, water quality, groundwater and stream flows. In particular, we believe the analyses of water quality impacts and potential mitigation measures are inadequate. In addition, the analysis of potential financial assurance measures for mine closure and remediation is also inadequate. Our primary issues are summarized below.	**Comment Response 196-1** In response to the concerns identified by EPA and others on the KNF's preferred mine alternative identified in the DEIS, the KNF revised its analysis and identified Alternative 3 (Agency Mitigated Poorman Impoundment Alternative) as its preferred mine alternative in the SDEIS and FEIS. Sections 3.8 through 3.13 in the SDEIS and FEIS provided revised analyses of water quality effects. Alternatives 3 and 4 in the SDEIS and FEIS were revised to indicate the LAD Areas would not be used and all excess water would be treated at the Water Treatment Plant before discharge. Section 1.6.3 was added to the SDEIS and FEIS to describe the agencies' bonding authorities and approach to estimating a bond amount. Section 1.6.3.2.3 was added to the SDEIS and FEIS to describe the agencies' approach to estimating a bond amount for long-term site monitoring and maintenance. Following an interagency meeting in September 2009 to discuss the comments of EPA and other agencies on the DEIS, the KNF and the DEQ, with the EPA and Corps, established several working groups in 2009 and worked collaboratively between 2009 and 2011 to resolve the concerns raised in this letter.

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196–2 196–3 196–4	Impacts to Aquatic Resources The DEIS's impact assessment leads EPA to conclude that Alternative 4 would likely not comply with the requirements of the Clean Water Act (CWA) Section 404(b)(1) Guidelines (Guidelines). In general, these Guidelines do not allow for issuance of a CWA Section 404 permit when there are other practicable alternatives to the proposed discharge that would have less adverse effects on the aquatic ecosystem (40 C.F.R. § 230.10 (a)), when the proposed discharge would violate state water quality standards (40 C.F.R. § 230.10 (b)), or when the proposed discharge will cause or contribute to significant degradation of waters of the United States (40 C.F.R. 230.10 (c)). As discussed below, EPA has significant concerns regarding the alternatives analysis, which includes other alternatives that may reflect less environmentally damaging practicable alternatives, as well as the impacts of the project to the aquatic ecosystem, including impacts to water quality, high quality wetland, riparian and aquatic communities, and threatened species under the Endangered Species Act. If these issues remain unresolved, we believe the issuance of a CWA Section 404 permit would be a candidate for elevation under the 1992 CWA Section 404(q) Memorandum of Agreement between EPA and the Department of the Army regarding dispute resolution. Alternative 4's impacts to aquatic resources in the project area include the diversion of approximately 1.7 miles of the perennially flowing Little Cherry Creek, as well as the loss of approximately 34 acres of jurisdictional wetlands, 3 acres of other waters of the U.S., and 1 acre of non-jurisdictional wetlands. As noted in the DEIS, most of the impacts to wetlands would be at the Little Cherry Creek Impoundment Site. According to the DEIS, these wetlands were characterized using the Montana Department of Transportation's Montana Wetland Assessment Method (MWAM). Category I, II, and III wetland types were found at the impoundment site[1]. Moreover, the DEIS indicates that the riparian habitat condition index for Little Cherry Creek (which would be diverted under Alternative 4) is considered excellent (DEIS, p. 263) and supports many trout species, including bull trout (which are listed as "threatened" under the Endangered Species Act), directly downstream (DEIS, p. 274). We reviewed the proposed impacts to aquatic resources, using information contained in the DEIS and obtained during our June 11, 2009 field trip to the project site with representatives of the KNF, the U.S. Army Corps of Engineers (USACE), Montana Department of Environmental Quality (MDEQ), and Montanore Mineral Corporation (MMC). EPA believes that based on the high functions and values of the resources observed and the extent of the direct and indirect impacts associated with Alternative 4, Alternative 4 may result in significant degradation to these important aquatic resources (40 C.F.R. 230.10 (c)). [1] The MWAM considers Category I wetlands as exceptionally high quality wetlands and are generally rare to uncommon; Category II wetlands as more common then Category I wetlands, and provide habitat for sensitive plants and animals; and Category III wetlands as more common than Category II or I wetlands, generally less diverse, and are often smaller than Category II or I wetlands (DEIS, p. 692). 2	**Comment Response 196-2** The agencies prepared a *Tailings Disposal Alternatives Analysis* that was summarized in Section 2.13 of the SDEIS and FEIS. The analysis examined alternatives to minimize the effects of the project on the aquatic ecosystem. The agencies provided EPA the opportunity to review two drafts of the report and participated in conference calls to discuss their comments on the drafts. The agencies also prepared a *Draft 404(b)(1) Analysis* presented in Appendix L of the SDEIS that discussed compliance of Alternative 3, the KNF's preferred alternative, with the Clean Water Act Section 404(b)(1) Guidelines. A *Final Lead Agencies' 404(b)(1) Analysis* was presented in Appendix L of the FEIS. During the 404 permitting process, the Corps of Engineers and the EPA will make the necessary factual determinations relative to compliance with the Guidelines. **Comment Response 196-3** Alternative 3, the KNF's preferred alternative, would have less effect on wetlands and other aquatic resources than Alternatives 2 and 4 (see Sections 3.6.4 and 3.23.4). Bull trout do not occupy Little Cherry Creek and bull trout habitat would not be affected by the diversion of Little Cherry Creek proposed in Alternatives 2 and 4 (see Section 3.6.2.9). **Comment Response 196-4** The lead agencies' *Final Lead Agencies' 404(b)(1) Analysis* (Appendix L, FEIS) discussed potential effects on aquatic resources. During the 404 permitting process, the Corps of Engineers and the EPA will make the necessary factual determinations regarding significant degradation.

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196–5	In contrast, Alternative 3 (Agency Mitigated Poorman Creek Impoundment Alternative) presents considerably fewer impacts by not requiring a diversion of a perennial stream, and would result in less impacts to wetlands and other waters (i.e., the loss of approximately 10 acres of jurisdictional wetlands, 0.5 acres of other waters of the U.S., and 3.5 acres of non-jurisdictional wetlands). In addition, there are no Category I wetlands impacted under Alternative 3 (the wetlands impacted under this alternative are characterized as Category II and III wetlands). Consequently, it appears that there are practicable alternatives with fewer impacts to aquatic resources than Alternative 4, making it unlikely that the discharges associated with Alternative 4 could be considered as meeting the requirements of the Guidelines (40 C.F.R. 230.10(a)). EPA also notes that although Alternative 3 may have fewer impacts to aquatic resources than Alternative 4, Alternative 3 may also result in significant degradation to important aquatic resources (40 C.F.R. 230.10(c)).	**Comment Response 196-5** See comment responses 196-2, 196-3, and 196-4.
196–6	Additionally, Executive Order (EO) 11990 - Protection of Wetlands (May 24, 1977) states that each Federal agency shall take actions to minimize the destruction, loss or degradation of wetlands. The DEIS does not contain any information regarding consideration of EO 11990 by the Federal agencies involved in the Montanore project. The revised or supplemental draft needs to address how the Federal agencies will address EO 11990.	**Comment Response 196-6** Section 3.23.1 and 3.23.4.12 were revised in the SDEIS and FEIS to discuss Executive Order 11990.
196–7	Analysis of Water Quality Impacts and Water Treatment Systems The DEIS contains insufficient information to assure that beneficial uses of surface and ground water will be protected. Groundwater drawdown due to mine inflows and pumping may result in lake dewatering and reduction of stream baseflow negatively impacting water quality. The limited water quality data presented suggests water quality standards will be exceeded in East Fork Rock Creek, East Fork Bull River, Little Cherry Creek and Libby Creek. Further uncertainty in the geochemical characterization of wastes, water management and treatment, all contribute to outstanding concerns with all of the alternatives presented. Limited mitigation measures and lack of contingencies worsen the potential for detrimental environmental impacts.	**Comment Response 196-7** Sections 3.8 through 3.13 of the SDEIS and FEIS provided additional analysis of water quality impacts. There are no data to suggest that water quality standards would be exceeded in the East Fork Rock Creek, East Fork Bull River, or Libby Creek by preferred Alternative 3. Uncertainty of the geochemical characterization of various materials was addressed in Sections 3.8.4 and 3.9.4 and the geochemistry sampling and analysis plan (Section C.9) of Appendix C of the SDEIS and FEIS.
196–8	We are also concerned that the DEIS appears to inappropriately rely primarily on the water quality standards set in the Montana Board of Health and Environmental Sciences ("BHES") 1992 Order (and confirmed in subsequent permit renewals) for the Montanore Mine's Libby Adit discharges to the Libby Creek drainage. The current project proposal includes several additions to the original project design, including three additional adits and a tailings impoundment. These new project features will likely result in point source discharges to three additional drainages, i.e., Ramsey Creek, Poorman Creek, and Little Cherry Creek. Given these new project features, we suggest that the proposed Montanore project, as presented in the DEIS, should be considered a "new or increased source" (ARM 17.30.702(18)). Consequently, we believe that the DEIS should use current State water quality standards to assess the water quality impacts of the alternative mine proposals, rather than the standards outlined in the original 1992 Order. 3	**Comment Response 196-8** In 1989, Noranda Minerals Corp. (NMC) and the Montana Reserves Company filed a Petition for Change in Quality of Ambient Waters. In 1992, the BHES issued its Final Decision and Order (Order) granting the petition. The Order stated that it was "applicable to surface water and groundwater affected by the Montanore Mine Project located in Sanders and Lincoln County, Montana, and shall remain in effect during the operational life of this mine and for so long thereafter as necessary." In the Order, the BHES set allowable changes in ambient concentrations for chromium, copper, iron, manganese, zinc, and total dissolved solids in both surface water and groundwater, and for total inorganic nitrogen in surface water only and for nitrate plus nitrite in groundwater only. The Order set a limit of 1.0 mg/l for inorganic nitrogen in "surface water," and states that the BHES "accepts 1.0 mg/l as the maximum allowable concentration of inorganic nitrogen in Libby, Ramsey, and Poorman Creeks..." Order, p. 9. With regard to groundwater, the Order provides that nitrate plus nitrite cannot exceed 10 mg/l and that concentrations of inorganic nitrogen in groundwater "shall not cause exceedances of 1.0 mg/l total inorganic nitrogen in Libby, Ramsey, or Poorman Creeks." Order, p.5. Discharges to Poorman and Ramsey Creeks are covered by the Order. No adit discharge water or seepage from the tailing impoundment is projected to enter Little Cherry Creek under any current alternative. Therefore, the question of whether the Order applies to Little Cherry Creek is moot. For water quality parameters not listed in the BHES Order, current State water quality standards are appropriate and applicable and have been used to assess the water quality impacts of the alternatives.

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196–9	The DEIS does not adequately describe the proposed water treatment systems or assesses the potential for elevated metals to occur in runoff, leachate from ore and waste rock, and in seepage from mill tailings. An understanding of the geochemistry of the ore, waste rock, and mill tailings is critical to predicting the proposed action's potential environmental impacts and determining appropriate alternatives and measures to avoid those impacts. Uncertainty regarding future water quality impacts is further exacerbated by the lack of information on water treatment and lack of clarity in the water balance for all conditions that may be encountered. EPA cannot determine whether the mine systems and procedures will prevent groundwater or surface water contamination, and consequently, the proposed action could result in unmitigated exceedances of the water quality standards on a long-term basis.	**Comment Response 196-9** As discussed in the interagency hydrogeochemistry working group, the risk of water quality exceedances resulting from the described uncertainty is low. Following review of the water quality in response to this comment, Section 2.5.4.3.2 of the SDEIS and FEIS was revised to provide additional information about the existing Water Treatment Plant and modifications that may be needed to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits. Water balance tables were revised and Section 3.8.2 was added to the SDEIS and FEIS to clarify the water balance. See comment response 197-7 regarding geochemistry, and in particular, the sampling and analysis plan (Appendix C) that provided guidance for further evaluation of water quality impacts as additional data became available.
	Mitigation Measures	
196–10	The proposed mitigation measures do not appear to be sufficient to address the environmental impacts of this project. In regard to the tailings impoundment, we believe there are additional mitigation measures and/or engineering controls that have been implemented at other mines throughout the western U.S. that should be included for this proposal. For example, EPA recommends that the mitigation and design measures that were included in the nearby Rock Creek Mine Project be examined as potential means to reduce the environmental risks presented by the Montanore Project. In developing these measures, we recommend that a more detailed water balance analysis be conducted. We also recommend the development of a water treatment plan sufficient to ensure that water quality standards will be met, and inclusion of alert levels and detailed contingency/corrective action plans sufficient to protect water quality. These plans should include water treatment to remove dissolved contaminants-metals (e.g., lime treatment and clarification, reverse osmosis); and a year by year and closure/post-closure detailed water balance. In regard to aquatic resource mitigation, EPA believes the proposed mitigation measures are not sufficient to compensate for lost ecosystem functions and do not meet the requirements of the CWA Section 404 Guidelines. EPA recommends that you review the recent publication by EPA/U.S. Army Corps of Engineers of regulations addressing compensatory mitigation for losses of aquatic resources (73 Fed. Reg. 19594 (April 10, 2008)) and revise the proposed mitigation measures to be consistent with these regulations.	**Comment Response 196-10** See comment response 197-9 regarding water treatment. See comment response 196-18 regarding the water balance. At the outset of the Montanore Project EIS process, the agencies carefully reviewed all mitigation and design measures that were included in the nearby Rock Creek Project to assess their applicability for the Montanore Project. Mitigation and design measures proposed for the Montanore Project are responsive to the issues identified during scoping, the environmental risks presented by the Montanore Project, and the hydrologic and geologic setting of the Montanore Project facilities. The mitigation plan for aquatic resources in Alternatives 3 and 4 (Section 2.5.7), which addressed requirements of the 2008 compensatory mitigation for losses of aquatic resources, was revised in the SDEIS and further modified in the FEIS.
	Inadequate Information on Financial Assurance	
196–11	Financial assurance information for mine closure and remediation is not provided in the DEIS. Long-term post-closure monitoring, water treatment, and other remedial actions may be necessary to protect water quality, and specific assurances are needed that a sufficient financial instrument will be maintained to ensure adequate funds are available as long as they may be needed for this purpose. Given the history of adverse environmental effects resulting from some hard rock mines, and the expenditure of public funds used in some cases to address environmental problems caused by mining, EPA believes it is necessary to analyze these factors in the DEIS. Financial assurance could make the difference between a project sufficiently managed over the long-term by the site operator and an unfunded/under-funded post-closure site that becomes an unreclaimed liability for expenditure of public funds. We believe that a 4	**Comment Response 196-11** Section 1.6.3 was added to the SDEIS and FEIS to describe the agencies' bonding authorities and approach to estimating a bond amount. Section 1.6.3.2.3 was added to the SDEIS and FEIS to describe the agencies' approach to estimating a bond amount for long-term site monitoring and maintenance.

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	sufficient financial assurance mechanism needs to be in place to ensure that the necessary funds are available as long as they may be needed for long-term monitoring and mitigation of potential environmental impacts. Additional Comments	**Comment Response 196-12** See comment responses 196-38 through 196-44 regarding comments on air quality impacts.
196–12	EPA believes that additional information is necessary regarding air quality impacts, including the potential need for a Clean Air Act general conformity analysis in the Libby, Montana $PM_{2.5}$ and PM_{10} nonattainment areas. EPA's additional comments on water resources and air quality are provided in the enclosure to this letter.	**Comment Response 196-13** The agencies issued a SDEIS in October 2011 that provided additional analyses of the project and its alternatives.
	Conclusion	
196–13	For the reasons discussed above, EPA has rated this DEIS as "Environmentally Unsatisfactory - Inadequate Information" (EU-3) in accordance with EPA's national rating system. It is our recommendation that a supplemental or revised DEIS be prepared to address the gaps in analysis identified and to assess the project's unsatisfactory environmental impacts. We would be glad to assist you in completing the NEPA and CWA processes and identifying a project alternative that is environmentally acceptable. If we are unable to resolve our concerns, this matter would be a candidate for referral to the Council on Environmental Quality for resolution. EPA's additional comments on the DEIS and a full description of EPA's EIS rating system is enclosed.	**Comment Response 196-14** The KNF and the DEQ, with the EPA and Corps, established several working groups in 2009 and worked collaboratively between 2009 and 2011 to resolve the concerns raised in this letter.
196–14	We appreciate the opportunity to review this DEIS and will be contacting you to continue working with you to resolve these significant concerns. If you have any questions, please contact me or your staff may contact John Wardell, Director of the EPA Region 8 Montana Office at (406)457-5001, or Larry Svoboda, Region 8 NEPA Program Director, at (303) 312-6004. Sincerely,  Carol Rushin Acting Regional Administrator Enclosures cc: Gene Lynard Bonneville Power Administration Sedlak Park substation and Loop line Post Office Box 14428 Portland, Oregon 97293-4428 5	

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196–15 196–16 196–17 196–18	**EPA Additional Comments on the Montanore Project DEIS** **Water Resources** **1. Wetland Impacts** The DEIS does not adequately address the potential indirect impacts to wetlands and other aquatic resources, and recommends that a more complete analysis be completed. EPA recommends that more detailed information be provided to describe the wetland functional assessment methods and results. This information should allow reviewers to understand the rationale and assumptions used, as well as the specific data for each assessed wetland area. In addition, we recommend that specific information be provided as to the number of acres of wetlands impacted by each functional category, along with a detailed map showing, with an appropriate scale, wetland locations. **2. Geochemistry-Acid Rock Drainage-Metals Leaching** Based on our review of the DEIS and references, we believe that some waste rock lithologies may have the potential to generate acid or release metals. EPA believes there is uncertainty regarding the potential for elevated metals levels to occur in runoff and leachate from ore and waste rock, and in seepage from mine tailings. EPA recommends a detailed acid rock drainage and metal leaching testing plan be included in the supplemental or revised DEIS for implementation during the Libby Adit evaluation phase, and that selective waste rock handling criteria be defined. Furthermore, the plan should clarify which fraction of the waste rock would be brought to the surface, and when more information about waste rock is available along with updated predictions of metal loading for tailings, these sources needed to be incorporated into mass load calculations. ***3.* Water Quantity/Management** ***Water Balance*** EPA believes that the water balance evaluation presented in the DEIS is inadequate and information was not provided in the DEIS regarding changes in water flow patterns for surface water basin modifications, mine/adit inflow, groundwater aquifer dewatering, surface water dewatering, water use, land application and discharge (LAD) systems, pond storage and discharge, (especially during winter operations), including backup options, as needed, to address water management concerns from mine start-up through all years of operation and closure and post-closure. The evaluation is merely a rough estimate, rather than a prediction, of the possible water flows (projected as inflows and outflows) at each of the facilities during the full mining life cycle. The water balance discussion in the DEIS (DEIS pages 58-65, 112-115, 153) is difficult to follow, and there are gaps in the information. Lack of information is affirmed by numerous references in the DEIS to: lack of information to model, inadequate data and the need to develop "excess water contingency plans" in the future (DEIS page C-25). 1	**Comment Response 196-15** Indirect effects on wetlands were discussed by in the DEIS in Section 3.22.4. The indirect effects analysis was revised in Section 3.23.4 of the SDEIS and FEIS. MMC revised the wetland functional assessment to reflect recent changes to the assessment method. The DEIS, SDEIS, and FEIS presented a map showing wetland locations. More detailed information about wetland effects of Alternative 3, including the number of acres affected by each functional category, is found in MMC's 404 permit application, which was incorporated by reference into the SDEIS and FEIS. **Comment Response 196-16** The agencies used the best available data from the Montanore, Rock Creek and Troy projects to assess the quality of wastewater discharges. The estimated quality of wastewater discharges was revised in the FEIS to include data available through 2012. The agencies agree that there is some uncertainty regarding metal concentrations in runoff or discharges from the project, but recognize the generally low risk associated with those uncertainties. The uncertainties with the water quality impact assessment were disclosed in an extensive discussion (see Section 3.12.2.4 of the DEIS and Section 3.13.4.5 of the SDEIS and FEIS). A geochemistry sampling and analysis plan (Section C.9 in Appendix C) disclosed the uncertainty of the geochemical characterization and the sampling and analyses that would be implemented during the Evaluation Phase to reduce it. See comment response 196-17. **Comment Response 196-17** A detailed geochemistry sampling and analysis plan (Section C.9 in Appendix C) was prepared for the SDEIS and revised for the FEIS to address the need for additional geochemical characterization. The geochemistry sampling and analysis plan addressed the potential for acid rock drainage and metal release, as well as the merit of selective handling options. The plan clarified waste rock management, described sampling and analysis that would be completed during the Evaluation Phase, based on specific elements of uncertainty agreed upon by the interagency working group, and discussed the use of additional data to revise mass balance calculations found in Appendix G. **Comment Response 196-18** Updated detailed water balances for each alternative were presented in Chapter 2 of the SDEIS and FEIS. In Section 3.8.2 of the SDEIS and FEIS, the agencies discussed the water balance by phase and provided a simplified graphical representation of water movement by mine phase to clarify the associated discussion. Contingencies for excess water management were discussed in Section 2.4.2.4.3 of the DEIS and FEIS.

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		Comment Response 196-19 See comment response 196-18.
196–19	EPA recommends that water balance calculations be presented in the supplemental or revised DEIS for each phase of the mining operation for both steady state and for possible peak flow rates, and for closure and post-closure periods, and including the steady state flows to be calculated for pumping and discharge prior to the mill and tailings pile being constructed. ***Subsidence, Groundwater Depression and /Stream Flow Reduction*** The DEIS contains inadequate information regarding subsidence and/or hydrologic effects from underground mining. EPA is concerned about the adequacy of the proposed 500-foot vertical and horizontal buffer zone and 100-foot buffer at the Rock Lake Fault in preventing surface subsidence, and hydrologic effects to the wilderness lakes and streams over the long term. The DEIS does not provide sufficient information in regard to the configuration, depth and volume, or volume of sediments in the bottoms of Rock Lake, St. Paul Lake and the Libby Lakes, or relationship to faults for the lakes in the Cabinet Mountains Wilderness Area. The DEIS also does not explain how lake and other surface and ground water leakage into the mine would be managed or potentially treated, and how review and evaluation of study results and final mine design decisions will be made following the issuance of the Record of Decision for this NEPA document.	**Comment Response 196-20** Potential subsidence effects were discussed in detail in Section 3.9.3.1 of the DEIS and updated in Section 3.14.3.1 of the FEIS. For the 2009 DEIS, the agencies completed another independent analysis of the potential for subsidence (Agapito Associates, Inc. 2007b). The analysis was consistent with the agencies' independent analysis completed for the 1992 Final EIS, as well as the analysis submitted by MMC as part of its Plan of Operations. The agencies' 2007 independent analysis identified additional measures that were incorporated into the agencies' mitigation required in Alternatives 3 and 4. The KNF completed a Failure Modes Effects Analysis (FMEA) for the underground mine component of the Rock Creek Project in 2014. Based on the FMEA, the agencies identified additional measures that were incorporated into the agencies' mitigation required in Alternatives 3 and 4 (Section 2.5.2.6.4 of the FEIS).
196–20		
196–21	After pumping stops at mine closure it would take 50 years for the mine void to be filled, and an additional estimated 20 years would be required for the drawdown cone above the mine void to recover to near pre-mining conditions, water collected in the mine void would flow toward the East Fork Bull River (DEIS page 434). It is predicted that metals levels in the mine pool would be "relatively low" (DEIS page 434), but it is also stated that the fate and transport of dissolved metals within the flooded mine void cannot be predicted without significant uncertainty, particularly considering the relatively low surface water quality standards (DEIS pages S-31, 435). EPA is concerned about potential degraded water quality in the underground mine pool and the potential for seepage of contaminated mine pool water to seep to surface water or ground waters, especially if the mine adits are plugged after mine closure.	In response to this concern, the potential effects on Rock Lake were discussed by phase and by alternative in Section 3.11.4 of the SDEIS and FEIS. Potential effects on other area lakes are discussed in Section 3.11.2.3.2 of the SDEIS and FEIS. No mining beneath Rock Lake is proposed because the mineralized zone does not exist under the lake. The bottom of Rock Lake is mostly rock with few sediments. The agencies do not believe the volume of sediments in area lakes is relevant to describe potential effects to the lakes.
196–22	EPA recommends that the supplemental or revised DEIS identify and describe in detail the mitigation measures and/or contingency actions that would be considered if exceedances of surface water quality standards occurred due to seepage from the underground mine reservoir. Additional information is needed regarding long-term water quality compliance monitoring for the underground mine pool to assure that it meets applicable ground-water quality standards. **4. Water Quality/Water Treatment** ***Water Quality***	The DEIS, SDEIS, and FEIS explained how mine inflows would be managed and treated. During all mine phases (until the adits were plugged), mine inflows would be collected, pumped to the surface and either used in the mill or treated at the Water Treatment Plant (in Alternatives 3 and 4). The agencies would require evaluation of the adequacy of the buffer zone through hydrologic and geotechnical studies conducted during the Libby Adit evaluation program.
196–23	The existing water quality in project area streams and lakes is good to excellent, providing important montane headwater habitat for aquatic life. Area waters are particularly sensitive to metals and pH disturbances due to very low ambient hardness and alkalinity and low buffering capacity. Further, those waters within the Cabinet Mountains Wilderness Area are Tier 3 waters (Outstanding Resource Waters) under Montana water quality standards for antidegradation, receiving stringent protection against degradation of existing water quality. The 2	**Comment Response 196-21** The agencies' assessment regarding post-mining water quality was based on data from the Troy Mine, which is a geochemical analogue to the proposed Montanore Mine. This is the best information available regarding post-mining water quality. Section 3.13.4.2.3 of the SDEIS was revised to provide additional discussion regarding post-mining water quality. Without mitigation, flow at a predicted rate of 0.05 cfs (22 gpm) as baseflow toward the East Fork Bull River. With mitigation, the flow, at a predicted rate of 0.01 cfs, would be toward Rock Lake via a 500-foot or (continued next page)

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	DEIS fails to adequately describe the value and ambient conditions of these waters, and does not adequately disclose potential water quality impacts of the proposed project.	greater flow path. The flow to either drainage is unlikely to adversely affect the water quality of the East Fork Bull River or Rock Lake. Section C.10.6 in Appendix C discussed post-closure monitoring.
196–24	EPA recommends that the supplemental or revised DEIS provide a more detailed discussion of potential adverse impacts to the existing high water quality in project area streams. This discussion should include contingency actions to address the possibility of elevated metals levels in mine site waters that could impact aquatic life, as well as a description of potential water treatment systems that may be needed to remove nitrogen and metals. The water quality monitoring program should adequately evaluate potential impacts of elevated metals and nutrient levels on aquatic life given the sensitivity of area streams. Mitigation measures must be designed in recognition of the sensitivity of receiving waters, particularly in terms of hardness-corrected water quality standards and waters designated as "Outstanding Resource Waters" within the Cabinet Mountains Wilderness Area.	**Comment Response 196-22** Closure and post-closure monitoring was discussed in Section C.10.6 of the SDEIS and FEIS. One of the objectives of monitoring during the Closure and Post-Closure are to assess effects of refilling of the mine void and adits on surface water and groundwater resources in upper Libby Creek, East Fork Rock Creek, and East Fork Bull River drainages. The monitoring would include measuring water levels in the mine void through the Rock Lake Ventilation Adit. Mine water quality and geochemical analysis of rock surrounding the mine void would be made during the Evaluation and Operations phases. Hydrologic data would be collected in all phases and would be integrated into the groundwater model. The need for continued monitoring beyond the Closure Phase would be based on these data and predictive models of underground water quality. Section 1.6 described the mechanisms available to the agencies for ensuring funds would be available should continued monitoring beyond the Closure Phase be required.
	Clean Water Act Section 303(d) listed streams and TMDL consistency	
196–25	The DEIS shows three streams in the analysis area on Montana's Clean Water Act (CWA) § 303(d) list of water quality impaired waters, i.e., segments of Libby Creek, Fisher River, Rock Creek (DEIS page 483). There is no information in the DEIS regarding how MDEQ intends to ensure that issuance of National Pollutant Discharge Elimination System (NPDES) permits for a new or increased discharges to these three water quality-limited segments will be done in a manner consistent with those segments' status as impaired waters.	**Comment Response 196-23** The purpose of the *Baseline Surface Water Quality Technical Report* (ERO Resources Corp. 2011c) was to provide detailed information on the baseline water quality of the analysis area for streams, springs, lakes and the Libby Adit. The agencies provided EPA the opportunity to review two drafts of the report and participated in conference calls to discuss their comments on the drafts. The report's data were used in describing ambient conditions of surface waters in the analysis area and in assessing effects.
	Water Treatment	
196–26	The DEIS includes many references to potential construction of additional water treatment facilities "if needed" to treat adit discharges, waste rock runoff and leachate and/or tailings seepage of other mine site waters (DEIS pages S-35, 61, 74, 100, 114, 437, 510). The existing water treatment plant at the Libby Adit site currently only includes filtration treatment systems for sediment removal (DEIS page 114), and does not include treatment systems capable of removing nitrate/nitrogen or metals. Few details are provided regarding potential treatment systems that would be used for nitrate/nitrogen and/or metals removal. EPA is concerned that there is potential that additional water treatment and long-term water treatment may be needed and inadequate information is provided.	**Comment Response 196-24** See comment responses 196-9 regarding water treatment and 196-22 regarding prediction of impacts to surface water. The proposed monitoring was discussed in Appendix C of the SDEIS and FEIS.
196–27	EPA recommends that detailed information regarding the potential additional water treatment and long-term treatment (particularly for nitrogen and metals) be provided in a supplemental or revised DEIS. Likely water management and treatment methodologies that would be utilized should be identified. A more detailed schematic diagram(s) showing the proposed water handling and treatment schemes through mine start-up, operations, closure and post-closure is also needed. Effectiveness of the proposed treatment methodology for removal of specific potential contaminants addressing challenges due to seasonal or additional flows should be discussed (i.e., particularly nitrate and metals removal).	**Comment Response 196-25** No discharges would occur in the Rock Creek drainage, and only discharges of stormwater during transmission line construction would occur in the Fisher River drainage. MMC has an existing MPDES permit to discharge only to Libby Creek or groundwater adjacent to Libby Creek. The mine proposes to only discharge to Libby Creek. DEQ would address the issue of increased discharged when MMC applied for an increase in the discharge rate.
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196–28 196–29 196–30	***Land Application Discharge (LAD) Operations*** Various DEIS discussions regarding Land Application Discharge (LAD) application rates are confusing and appear to include multiple and inconsistent rates (DEIS pages 61, 62, 63, 107, 439, 444, 471, 487, Appendix G). Rain-on-snow events are common in the area causing high streamflows, unstable hill slopes, leading to bank erosion and landslides, and such effects could be exacerbated by overloading of LAD areas that can cause groundwater levels to rise, and likely result in surface water runoff or increased spring and seep flow on the downhill flanks of the LAD areas. The DEIS states that "slow rate land application treatment" of wastewater would be used so that discharged water can receive "significant treatment" as it flows through the plant root/soil matrix (DEIS pages 464, 502). Yet treatment is not identified as a basic consideration for the LAD areas on DEIS page 438, and there are concerns about nitrogen removal efficiencies with proposed LAD application rates. EPA recommends that the supplemental or revised DEIS include a detailed description of LAD operations using consistent application rates throughout the document. Additional information is also needed to explain contingencies that would be used to manage higher volumes of water than anticipated, particularly during winter operations and during rain-on-snow events. In addition, we recommend that the supplemental or revised DEIS include a discussion of the adequacy of the proposed LAD sites to avoid surface runoff and springs/seeps downgradient of the LAD areas and the erosion and sediment transport associated with increased runoff. EPA also recommends that the supplemental or revised DEIS include additional analysis and discussion regarding to the ability of the proposed LAD areas to accept nitrogen and metal loadings and remove nitrogen and metals adequately to allow water quality standards to be met. Treatment efficiency should be included among the basic considerations in LAD area design discussion, and treatment efficiency under varying LAD application rates should be further discussed (i.e., nitrogen and metals removal efficiency). **5. Monitoring and Contingency/Corrective Actions** EPA recommends that a Monitoring Alert Levels and Contingency/Corrective Action Plan be included in the monitoring plan, as was done for the Rock Creek Mine (See Appendix K of Rock Creek Mine ROD, page 13). Such a Plan identifies alert or trigger levels for particular monitoring parameters, which when exceeded would trigger more intense follow-up monitoring and/or investigation, and/or contingency or corrective or remedial actions that would correct or avoid worsening of a developing problem. EPA recommends that the water resources monitoring plan include provisions for long-term monitoring of levels of Rock Lake, St. Paul Lake and the Libby Lakes. This monitoring should include appropriate water quality stations to evaluate the effect of reduced groundwater flows on water quality/dilution capacity of streams, and after mine closure, the potential for seeps from the underground mine pool to contaminate surface water and groundwater. EPA also recommends that the supplemental or revised DEIS provide more detailed information regarding the quantity of the "relatively large" reductions in base flow of the upper reaches of Rock Creek drainages and the East Fork Bull River that are likely to occur from combined mining, pumping and dewatering activities associated with 4	**Comment Response 196-26** Alternatives 3 and 4 in the SDEIS and FEIS were revised to indicate the LAD Areas would not be used and all excess water would be treated at the Water Treatment Plant before discharge. See comment response 196-9 regarding water treatment. **Comment Response 196-27** See comment response 196-9 regarding water treatment. See comment response 196-18 regarding proposed water management. **Comment Response 196-28** Some of the described difference in application rates in the DEIS can be attributed to the rate estimated by MMC in its Proposed Action, and the rate estimated independently by the agencies. See comment response 196-26 regarding the elimination of the LAD Areas in Alternatives 3 and 4. For purposes of comparison within the MEPA/NEPA analysis, the potential for surface water runoff and emergence of springs/seeps at the LAD Areas in Alternative 2 at the rates proposed by MMC was discussed in Section 3.10.4.2.1 of the SDEIS and FEIS. The agencies' estimated maximum application rate of wastewater to the LAD Areas was more restrictive than what was calculated using the EPA and Corps guidelines and would avoid the issues EPA discusses, such as groundwater mounding, spring development, or surface water runoff at the LAD Areas. The application rate would vary and would be based on compliance with water quality standards, BHES Order limits, and MPDES permitted effluent limits. **Comment Response 196-29** The ability of the LAD Areas in Alternative 2 to adequately treat discharges was discussed by phase in Section 3.13.4.2 of the SDEIS and FEIS. Treatment efficiency would be a basic consideration during final design should Alternative 2 be selected for implementation. **Comment Response 196-30** Section C.10.7.3 of the SDEIS and C.10.8.3 of the FEIS discussed action levels was added to the water resources monitoring plan in the SDEIS and FEIS. The water resources monitoring plan includes provisions for monitoring levels of Rock and Libby lakes. The potential effect by alternative and mine phase of mine inflows on baseflow was revised for the SDEIS and FEIS (Section 3.10.4). The water resources monitoring plan was revised for the SDEIS and FEIS to describe monitoring by mine phase. As additional hydrology and geochemistry data were collected and modeled to refine predictions, the alert levels and action plan would be modified accordingly.

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	operation of both the Rock Creek Mine and Montanore Mine. In addition, the process for ensuring that surface water discharges, runoff and mine site seepage/leakage to groundwater meet all applicable water quality criteria should be more clearly described (e.g., location of monitoring wells for points of compliance, sampling and analysis program, and a clear understanding of what constitutes compliance with water quality criteria.) **6. Bonding/Financial Assurances**	**Comment Response 196-31** Section 1.6.3 was added to the SDEIS and FEIS to describe the agencies' bonding authorities and approach to estimating a bond amount. The section also discussed the agencies' authority to modify a bond.
196–31	EPA recommends that the supplemental or revised DEIS identify the estimated bond amounts needed for each closure and reclamation activity for the proposed project facilities including: identification of the responsible party for any post-closure cleanup actions should they be necessary; projected long-term engineering and monitoring costs of each activity, as well as the financial assumptions used to estimate the funding level; projected trust fund growth rate; and mechanics of the trust fund. All of the requirements that KNF and MDEQ would impose on the mine operator to establish a trust fund to ensure post-closure care should be described. Financial assurances must be kept current as conditions change at the mine, and KNF and MDEQ should ensure that the form of the financial assurance does not depend on the continued financial health of the mine operator or its parent corporation. The supplemental or revised DEIS should discuss whether and how the KNF and MDEQ can modify the bond during the course of operations if temporary, long-term, or perpetual treatment and/or remediation needs are discovered during operations.	**Comment Response 196-32** Section 1.6.3.2.3 was added to the SDEIS and FEIS to describe the agencies' approach to estimating a bond amount for long-term site monitoring and maintenance.
196-32	If a long-term treatment plan is needed, a long-term trust fund or other funding mechanism should be established to ensure adequate funding will be available to implement the post-closure plan. EPA has expertise in this area and would like to work with the KNF and MDEQ to develop appropriate cost estimates and fund criteria should the need arise.	**Comment Response 196-33** As discussed in Section 2.5.3.5.2, thickened tailings deposition in Alternatives 2 and 4 would only increase impoundment storage capacity if the drainage area above the diversion dam on Little Cherry Creek were used. Using thickened tailings at the Little Cherry Creek site would not change the effect on wetlands at the site.
	7. Tailings Impoundment Design/Operations	**Comment Response 196-34** In response to this comment, the addition of amendments to the tailings to address potential metal leaching, stability, or reclamation issues was discussed in the *Tailings Disposal Alternatives Analysis* (ERO Resources Corp. 2011a), incorporated by reference into the SDEIS and FEIS. The agencies provided EPA the opportunity to review two drafts of the report and participated in conference calls to discuss their comments on the drafts. The analysis was summarized in Sections 2.13.3 and 2.13.6 of the SDEIS and FEIS.
196–33	The DEIS states that the Poorman Impoundment Site is amenable to high-density tailings deposition from the upstream perimeter slopes, whereas the Little Cherry Creek site has limited capacity for high density tailings deposition from slopes upstream of the impoundment (DEIS page 102). As a result, a smaller footprint for the Little Cherry Creek Impoundment site was not considered. Despite this brief explanation, it is not clear to EPA why the slopes upstream of the Little Cherry Creek Impoundment site will not allow deposition of high density tailings, especially since slopes can be modified with site grading. EPA believes that if tailings can be thickened for application at the Poorman Creek site, thickened paste tailings could also be used at the Little Cherry Creek site to reduce the footprint for the tailings disposal and to reduce seepage volumes. EPA recommends that the supplemental or revised DEIS include more information to demonstrate why placement of high density tailings would not be a viable option at the Little Cherry Creek site.	
196–34	In addition, EPA recommends that the feasibility of adding amendments to the tailings to address potential metal leaching, stability or reclamation issues be considered in the supplemental or revised DEIS.	
	5	

Com-ment	Document #196-U.S. Environmental Protection Agency	Response
196–35	EPA recommends that the supplemental or revised DEIS consider tailings disposal mitigation measures to reduce the potential for development of tailings seepage or leachate containing elevated metals levels (e.g., adding lime to the tailings during final operations to enhance the neutralization potential of the final lift of tailings). Placement of a thicker, denser impoundment cap would also both reduce oxygen flux to slow down oxidation of the tailings, and reduce hydraulic conductivity and water movement down through the tailings.	**Comment Response 196-35** As discussed by the interagency working group, and recognized in the geochemistry sampling and analysis plan (Appendix C-9), there is need for additional analysis of acid rock drainage risk of the tailings to confirm the low risk indicated by the Troy and Rock Creek data (see Section 3.9.4.3.2). Available data do not confirm any potential for acid generation, and thus do not justify the use of cement for neutralization of tailings. Some data characterizing metal mobility suggest that increased pH may enhance the mobility of elements such as arsenic and antimony.
196–36	EPA recommends that the supplemental or revised DEIS re-examine the feasibility and economics of using paste backfill and paste tailings deposition with cement addition, especially given the acceptance of the use of paste tailings deposition in the Rock Creek Mine EIS. **8. Single Stage Evaluation and Mine Design Process**	**Comment Response 196-36** The agencies prepared a *Tailings Disposal Alternatives Analysis* that was summarized in the SDEIS and FEIS. The analysis re-examined the feasibility and economics of using paste backfill and paste tailings deposition with cement; the feasibility of adding amendments to address potential metal leaching, stability, or reclamation issues; and mitigation measures to reduce the potential of tailings seepage. Tailings backfill options were discussed in Section 2.13.3 of the SDEIS and FEIS; surface tailings disposal method options were discussed in Section 2.13.6. The factors which lead to the use of paste tailings deposition for the proposed Rock Creek Project are different from those at Montanore.
196–37	EPA recommends that there be an opportunity for the public and other agencies to review and evaluate data and information collected during the Libby Adit evaluation program. We recommend that the supplemental or revised DEIS describe a conceptual public participation process associated with the evaluation program and modifications to the final mine plan and design. **Air Quality** **1. Clean Air Act General Conformity Analysis**	**Comment Response 196-37** The agencies agree that review of data and information collected during the Libby Adit Evaluation Phase would be important. As Section 2.5.2.1 of the SDEIS and FEIS discussed, the evaluation program is needed to develop additional information about the geologic and hydrologic characteristics of the deposit and the nearby Rock Lake fault. Final design would begin after completion of the evaluation program. As discussed in Section 3.8.2 of the FEIS, the Construction Phase would begin after MMC analyzed the data from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase. All information associated with the Montanore Project is public record and available for public review at the agencies.
196–38	The DEIS does not address General Conformity requirements pursuant to the Clean Air Act (CAA or Act). While not a part of the NEPA requirements that must be included in the EIS, before finalizing an approval of this project, the CAA requires that the USFS conduct a general conformity analysis for any project emissions occurring in an area designated as nonattainment or maintenance for the NAAQS. The CAA states that in such areas, a determination must be made that the emissions (either direct or indirect) from a federal action will not exceed a *de minimis* threshold level measured in tons per year for the criteria pollutant of concern. If the action exceeds the *de minimis* level, then a conformity determination is required to document how the federal action will affect implementation of the applicable implementation plan to reach attainment. The proposed project includes the Libby Loadout, which would be located within the Libby PM_{10} and $PM_{2.5}$ non-attainment areas at the Kootenai Business Park (which is in close proximity to a residential area). (DEIS pages 223-224). The loadout facility would be used for concentration storage and shipping (DEIS page 45). Activities within the non-attainment areas that could result in $PM_{2.5}$ and PM_{10} air emissions include: relocating the concentrate loadout facility to the Kootenai Business Park (DEIS page 7); initial construction traffic (DEIS page 636); truck traffic carrying the concentrated ore truck traffic to the Libby Loadout (21 trucks each way per day, DEIS page 56); rail yard loadout activities; and any additional rail service. EPA recommends that the revised or supplemental DEIS describe whether general conformity analysis is required (i.e., whether the relevant emissions exceed *de minimis* 6	**Comment Response 196-38** Section 3.4.4.2.2 was added to the SDEIS and FEIS to address Clean Air Act general conformity analysis. The agencies completed an assessment of all potential PM air emissions within the PM_{10} and the $PM_{2.5}$ nonattainment areas to determine if a general conformity analysis required by 40 CFR 93.153 would be required. Emissions would not exceed conformity analysis *de minimis* thresholds, and a Clean Air Act general conformity analysis is not required.

Com-ment	Document #196-U.S. Environmental Protection Agency	Response
196–39 196–40 196–41	thresholds) and how the proposed action would comply with the applicable implementation plan. If a general conformity analysis is necessary, EPA recommends it be included in the supplemental or revised DEIS. **2. Criteria and Hazardous Air Pollutants** Based on the presented emission inventory, the proposed project is determined not to be a major source (less than 100 tpy) of any criteria pollutant. However, fugitive PM10 emissions are 138 tpy and mobile source emissions for NOx are 163 tpy. Hazardous air pollutant (HAP) modeling results are not fully presented in the DEIS. The DEIS presents results of updated near field modeling conducted for various pollutants. For detailed information, the reader is directed to previous modeling conducted during 2006 for the existing Montana Department of Environmental Quality Air Permit. We recommend that the supplemental or revised DEIS include, as an appendix, the 2006 modeling referenced in the current DEIS. We also recommend that information be provided as to which point sources may be subject to the requirements of 40 CFR Part 60, Subpart LL, Standards of Performance for Metallic Mineral Processing Plants, which contains source emission testing and reporting requirements (and seek a determination from EPA on the applicability of Subpart LL as necessary). In addition, we recommend that a more detailed presentation of the modeled HAPs, similar to Criteria pollutant Table 46 of the DEIS, that incorporates the HAPs modeled results with the applicable acute and reference standards of the tables at http://www.epa.gov/ttn/atw/toxsource/table1.pdf and http://www.epa.gov/ttn/atw/toxsource/table2.pdf be included in the supplemental or revised DEIS. **3. Visibility** The visibility analysis conducted for the project refers the reader to the previous modeling conducted during 2006 for the existing Montana Department of Environmental Quality Air Permit. Very little information is supplied in the DEIS to substantiate the presented results of 3-hours of plume impairment from the project. The information supporting the DEIS conclusion is based on 2006 modeling conducted on three point sources from the project (Ramsey, Libby portals and emergency generator sources). It is unclear to EPA which model was used and which scenarios were applied to reach these conclusions. In particular, we are concerned with how project emission fugitive PM10 and mobile source NOx emissions were modeled. In addition to these sources, we are concerned with how project emission fugitive PM10, PM2.5 and mobile source NOx will impact the nearby Class I areas of the Cabinet Mountains Wilderness (CMW) Area (0.25 miles). We recommend that the supplemental or revised DEIS include a more detailed discussion of the models used, emission inventory sources included and the modeled results. Further, we recommend that additional modeling be conducted that incorporates fugitive emissions and any other additional impacts for the project. Modeling should be performed that predicts maximum impacts to the Class I area from the project including cumulative emissions. 7	**Comment Response 196-39** The mine and mill (plant) facility would be considered a minor source under the Title V and Prevention of Significant Deterioration (PSD) regulations because total potential emissions from point sources underground and on the surface would be less than 250 tpy for any criteria pollutants (see Section 3.4.3.2). The Montanore Project would not meet the definition of a major source. The project would be considered a minor source and would not require a Title V operating permit under ARM 17.8.1204 because the potential emissions are less than 100 tpy for any pollutant, less than 10 tpy for any single hazardous air pollutant (HAP), and less than 25 tpy for total HAPs. **Comment Response 196-40** The detailed analysis was not included in the DEIS, SDEIS, or FEIS in compliance with NEPA regulations. 40 CFR 1502.21 requires agencies to incorporate information by reference to cut down on bulk. The incorporated information was cited in the EISs and available for review by the public during the public comment period. The agencies revised sections 3.4.4.2.1 and 3.4.4.3.1 of the SDEIS and FEIS to document which point sources may be subject to 40 CFR Part 60, Subpart LL, Standards of Performance for Metallic Mineral. The agencies revised the hazardous air pollutant (HAP) impact assessment (Section 3.4.4.2.4 of the SDEIS and FEIS) to provide the results of the HAPs modeling. Modeled concentrations were compared to the concentrations in the tables suggested by the EPA. **Comment Response 196-41** Information on modeling methods was incorporated into the DEIS, SDEIS, and FEIS in compliance with 40 CFR 1502.21. The agencies revised the CMW impact assessment in section 3.4.4.2.7 of the SDEIS and FEIS to provide additional detail on the visibility analyses performed for the Montanore Project and summarized the modeling results. The visibility analysis was completed in accordance with applicable guidance, and found that potential impacts from plume impairment would be well below threshold values, thus making further analysis unnecessary. The modeling analysis indicated that impacts to visibility at the CMW from the largest mine emission sources that have the potential to form discrete plumes would be insignificant thus precluding the need for any further analyses.

Com-ment	Document #196-U.S. Environmental Protection Agency	Response
196–42 196–43 196–44	**4. Greenhouse Gas Emissions/Climate Change** We recommend the supplemental DEIS include an analysis and disclosure regarding climate change. We suggest a four step approach: 1. Consider the future needs and capacity of the proposed mine to adapt to projected climate change effects. 2. Characterize and quantify the expected annual cumulative emissions attributable to the mine operations, and use CO2-equivalent as a metric for comparing the different types of greenhouse gases (GHGs) emitted. 3. Briefly discuss the link between GHGs and climate change, and the potential impacts of climate change. 4. Discuss potential means to mitigate project-related emissions. **5. Libby Loadout Facility** The proposed Montanore Project loadout facility appears in an area where asbestos contamination has been found. EPA's Libby Asbestos Superfund Site Team has been working with the Kootenai Development Corporation to allow for development of this property while addressing asbestos issues. We also note that the location of the proposed loadout facility may be in the area of contaminated groundwater at the Libby Groundwater Superfund Site, which is a separate site. The KNF, MDEQ, and MMC should contact the EPA Libby Asbestos Superfund Site Team to address asbestos issues/concerns that may be associated with the loadout facility (contact Mr. Victor Ketellapper in Denver at 303-312-6578, and see Libby Asbestos Superfund Site information at, http://www.epa.gov/region08/superfund/libby/index.html). There may also be a need to coordinate with the EPA Libby Groundwater Superfund Site Team to assure Libby groundwater contamination issues are addressed (contact Ms. Kathy Hernandez in Denver at 303-312-6101, and see Libby Groundwater Superfund Site information at, http://www.epa.gov/region08/superfund/mt/libby_groundwater/index.html). 8	**Comment Response 196-42** Section 3.4.4.2.1 was revised in the SDEIS and FEIS to address greenhouse gas emissions using EPA's suggested four-step approach. **Comment Response 196-43** The Libby Groundwater Superfund Site is located in southeast Libby at the former Stimson Lumber and Plywood Mill where groundwater and soil contamination consisting of creosote and pentachlorophenol was discovered. The proposed loadout facility is about 1,500 feet away from the contaminated groundwater associated with the superfund site. The proposed loadout facility does not overlie the contaminated groundwater plume. **Comment Response 196-44** The agencies contacted Victor Ketellapper of the EPA on October 15, 2009 and he indicated that the concern is in regard to the potential of asbestos fibers in the ore rock being transported to the loadout facility and released to the environment. The ore rock has been sampled and analyzed for the presence of asbestos. No asbestos fibers were detected in the 11 samples collected and analyzed. Section 3.8.2.1.3 of the DEIS and FEIS summarized this information and referenced the report that details the findings.

Comment	Document #244-Confederated Salish and Kootenai Tribes	Response

Jun 29 09 05:16p Stu Levit 406-585-4589 p.1
JUN.29.2009 5:38PM

MNTR 244

THE CONFEDERATED SALISH AND KOOTENAI TRIBES
OF THE FLATHEAD NATION
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A Confederation of the Salish, Upper Pend d'Oreilles and Kootenai Tribes

JUN 29 2009
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TRIBAL COUNCIL MEMBERS:
James Steele Jr. – Chairman
E.T. "Bud" Moran – Vice Chair
Steve Lozar – Secretary
Jim Malatare – Treasurer
Joe Durglo
Carole Lankford
Michel Kenmille
Reuben A. Mathias
Charles L. Morigeau
Terry L. Pitts

June 29, 2009

Bobbie Lacklen,
Kootenai National Forest
Mr. Paul Bradford, Forest Supervisor
31374 U.S. 2
Libby, Montana 59923-3022

Emily Corsi,
MT DEQ
PO Box 200901
Helena, MT 59620

Sent by Mail and **Fax: (406) 283-7709**

RE: Montanore Mine DEIS

Dear Ms Lacklen and Ms Corsi,

244–1 I am writing in response to the May 28, 2009 letter requesting comments on the Draft Environmental Impact Statement (DEIS) for Montanore Minerals Corp.'s proposed copper and silver underground mine near the Cabinet Mountain Wilderness. Following are the general concerns of the Confederated Salish and Kootenai Tribes of the Flathead Reservation (CSKT) with regard to the DEIS.

244–2 When they signed the 1855 Hell Gate Treaty, the Salish, Pend 'Oreille and Kootenai Tribes ceded over 22 million acres of land to the United States in what is now western Montana. Under the treaty, the Tribes reserved the right to access and use the aboriginal lands that were part of the ceded territory. These lands are the source of Tribal creation stories, and contain ancestral cultural areas that Tribal members still utilize today. Traditional camping, hunting, fishing, and gathering sites exist alongside significant sacred places, all of which are inseparably bound together to form the Tribes' "cultural landscape."

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Comment Response 244-1
Thank you for your comment.

Comment Response 244-2
The KNF acknowledges federal responsibility under the Hellgate Treaty.

Comment	Document #244-Confederated Salish and Kootenai Tribes	Response
	Jun 29 09 05:16p Stu Levit 406-585-4589 p.2	**Comment Response 244-3**
244–3	The expansion of the Montanore Mine has the potential to significantly impact Tribal ancestral sites, including trails, fishing and gathering areas, as well as occupation sites. The DEIS identifies significant potential likelihood that the mine will degrade water quality, thus impacting aquatic habitats that provide Tribal members with traditional plants and medicines. The degradation of the surrounding watershed would have far-reaching impacts on culturally significant fish and wildlife, including the threatened bull trout and endangered white sturgeon.	The KNF and MMC's surveys have found no material remains from aboriginal occupation, or trail sites in the project area. If there are sites that the KNF is not aware of, the KNF would appreciate notification, so that they can be properly recorded. In previous consultation with the CSKT, the KNF asked for identification of gathering areas so that the impacts could be assessed, but have not heard any response.
	General issues of concern include, but are not limited to, the following.	**Comment Response 244-4**
	The Mine Should Not Be Permitted to Degrade Fisheries	Section 3.13.1 of the SDEIS and FEIS discussed that the Montana BHES issued an order in 1992, authorizing degradation and establishing limits in surface water and groundwater adjacent to the Montanore Project for discharges from the project. The Order remains in effect for the operational life of the project and for as long as necessary thereafter. For the parameters not covered by the authorization to degrade, the applicable nonsignificance criteria established by the 1994 nondegradation rules, and any subsequent amendments, apply, unless MMC obtained an authorization to degrade under current statute.
244–4	Eleven streams will be impacted by the proposed Montanore mine -- nine of them have bull trout; the other two have inland redband trout or westslope cutthroat trout. All of these species are important to the CSKT and their degradation should not be permitted.	
244–5	For example, mine dewatering is likely to have significant impacts on the East Fork Bull River, Rock Lake, and St. Paul Lake (see e.g. DEIS p.28 and V2 p.429). The East Fork Bull River is probably the most important bull trout stream in the lower Clark Fork watershed in Montana. As fall-spawners, bull trout are very vulnerable to low flow conditions. If the mine causes further reductions in fall flows it will almost certainly reduce bull trout spawning habitat, increase stream temperatures, and possibly impede access to spawning habitat from migratory bull trout. These impacts could damage both the local and regional populations (see DEIS at p.39). Impacts would likely be felt within and without the Wilderness Area (see DEIS p. 28).	**Comment Response 244-5**
		The effects analysis for bull trout was revised in the SDEIS and again in the FEIS in response to revision in the hydrology analysis and the agencies' mitigation plans for bull trout. The KNF's 2013 Biological Assessment concluded implementing the agencies' preferred alternatives may affect, and is likely to adversely affect threatened bull trout, and may affect, and is likely to adversely affect designated bull trout critical habitat. The USFWS' Biological Opinion concluded the Forest Service's preferred Mine Alternative 3 and the agencies' preferred Transmission Line Alternative D-R is not likely to jeopardize the bull trout, and is not likely to destroy or adversely modify bull trout critical habitat (USFWS 2014c).
244–6	Similarly, the DEIS proposes that after mine closure, water diverted into the mine's cavity will flow untreated into the East Fork of Bull River. The DEIS does not reasonably predict this water quality but also does not propose any water treatment which may be reasonably expected to be needed (as has happened at most major Montana mines). Without such water treatment alternative and plan there is no way to reasonably protect water quality and determine an appropriate bond that protects water quality.	**Comment Response 244-6**
		Section 3.13.4.2.3 of the SDEIS was revised to clarify post-mining water quality in either East Fork Bull River or East Fork Rock Creek. The agencies anticipate the quality of the post-closure mine water would be similar to the Troy Mine water quality when it was not operating. The flow to either drainage is unlikely to adversely affect the water quality of the East Fork Bull River or Rock Lake. Section 1.6.3 was added to the SDEIS to discuss bonding for long-term water treatment.
244–7	These impacts would significantly impact bull trout (and likely westslope cutthroat trout) fisheries and thereby are of great concern to the CSKT. Mining should not be permitted to impact surface or ground water such that it can degrade these important fisheries.	**Comment Response 244-7**
		See comment response 244-5.
	The Mine Should Not Be Permitted to Degrade Water Quality	(continued next page).
244–8	The Mine's tailings impoundment will rise behind a 310 foot dam and will bury wetlands, springs, streams, etc, and will be a significant visual impediment to cultural uses of the area. Further, such a large tailings impoundment will have significant impacts to surface and ground water quality if it leaks - and almost all major tailings impoundments leak at some point during operations or after closure.	
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Com-ment	Document #244-Confederated Salish and Kootenai Tribes	Response
	Jun 29 09 05:17p Stu Levit 406-585-4589 p.3	
244–9	To make the situation worse, the DEIS proposes disposing mine wastewater from the tailings by land application disposal - which would impact surface water quality (such as creeks) and ground water quality (see DEIS at V1, p.27). The DEIS acknowledges that this land application disposal would be required in perpetuity.	
	The Mine Should Not Be Permitted to Degrade Wildlife	
244–10	In addition to Bull Trout, the proposal will also degrade grizzly bear and lynx and their habitat. This should not be permitted.	
244-11	There are only 30-35 grizzly bears in the Cabinet-Yaak ecosystem and only 10-15 grizzly bears in the Cabinet Mountain Wilderness area. The Montanore proposal will impact about 27,000 acres of grizzly habitat, and likely could not be mitigated. (see DEIS V1, P136). Mitigation measures such as acquiring alternative habitat are not guaranteed but should be.	
244-12	Further, the proposal would diminish lynx habitat (lynx is a threatened species). Additionally, the mine would diminish moose winter habitat among other degraded habitat (such as that of mountain goat and wolverine).	
	The Mine Should Not Be Permitted to Degrade Cultural or Treaty Uses of the Land	
244-13	The DEIS acknowledges that there would be significant noise, light, and aesthetic impacts. The mine will produce intrusive noise (see e.g. DEIS V2, P.636 and 637), light pollution (see e.g. DEIS V2, P. 708), and dramatic and potentially permanent visual impacts (see e.g. DEIS at p.41).	
	These intrusions have a significant potential to reduce opportunities for CSKT tribal members to conduct cultural and hunting/gathering activities. Similarly, proposed monitoring wells and other activities in the Cabinet Mountain Wilderness go against wilderness values and purposes.	
	For these reasons, the CSKT strongly recommends that before the DEIS is finalized it is expanded to fully consider and fully mitigate against these issues and concerns.	
	Thank you for considering the CSKT's comments. If you or your staff have any questions, or would like to discuss the matter further, please feel free to contact me at (406) 585-4589.	
	Sincerely,	
		
	Stuart M. Levit	
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		Comment Response 244-8 Section 3.17.4 of the FEIS discussed the effects of the impoundment on scenic integrity. Because of the impoundment's relatively large size, it would create noticeable contrasts in landscape character and substantial alterations in scenic integrity. Following mine closure, revegetation of the tailings impoundment would partially reduce color and texture contrasts between the tailings impoundment and surrounding landscape. All tailings seepage not intercepted by the Seepage Collection System that reached groundwater would be intercepted by the pumpback well system. MMC would continue to operate the seepage collection and pumpback well facilities until water quality standards, BHES Order limits, and MPDES permitted effluent limits were met without treatment. As a result, long-term water treatment and surface water and groundwater quality monitoring may be required. **Comment Response 244-9** The use of the LAD Areas in Alternatives 3 and 4 was eliminated in the SDEIS and FEIS. MMC would treat all water, if necessary to meet MPDES permitted effluent limits, at the water treatment plant at the Libby Adit. **Comment Response 244-10** In its BA, for Alternative 3D-R, the KNF concluded the project may affect, is likely to adversely affect the grizzly bear, and may affect, is not likely to adversely affect, the Canada lynx. As all the agency combined mine-transmission line alternatives incorporate the same mitigation plan as Alternative 3D-R, the agencies expect similar effects for grizzly bear and lynx from their other alternatives. The agencies' mitigation described in Section 2.5.7.4 of the SDEIS and FEIS is designed to mitigate significant effects of the project on threatened and endangered species. **Comment Response 244-11** Section 2.5.9.2.1 of the SDEIS (2.5.7.4 of the FEIS) was revised to clarify potential effects on the grizzly bear and to relate the proposed mitigation to anticipated effects. **Comment Response 244-12** See comment response 244-10. Updated information about the use of the analysis area by moose was provided in Section 3.25.7 of the FEIS. Mitigation measures that would reduce impacts to moose and their habitat are described above in comment response 185-2. **Comment Response 244-13** The FEIS includes feasible and practicable measures to minimize noise, light and aesthetic effects.

Comment	Document #244-Confederated Salish and Kootenai Tribes	Response
	Jun 29 09 05:17p Stu Levit 406-585-4589 p.3	**Comment Response 244-14**
	To make the situation worse, the DEIS proposes disposing mine wastewater from the tailings by land application disposal - which would impact surface water quality (such as creeks) and ground water quality (see DEIS at V1, p.27). The DEIS acknowledges that this land application disposal would be required in perpetuity.	If there are locations within the proposed project that have traditional cultural specific hunting and gathering areas, the agencies would need those locations, so that impacts could be assessed. To date, there has been no Tribal response to requests for such information.
	The Mine Should Not Be Permitted to Degrade Wildlife	**Comment Response 244-15**
	In addition to Bull Trout, the proposal will also degrade grizzly bear and lynx and their habitat. This should not be permitted.	The agencies' mitigation measures, which were revised in the SDEIS and FEIS, are designed to mitigate significant effects of the project.
	There are only 30-35 grizzly bears in the Cabinet-Yaak ecosystem and only 10-15 grizzly bears in the Cabinet Mountain Wilderness area. The Montanore proposal will impact about 27,000 acres of grizzly habitat, and likely could not be mitigated. (see DEIS V1, P136). Mitigation measures such as acquiring alternative habitat are not guaranteed but should be.	**Comment Response 244-16**
	Further, the proposal would diminish lynx habitat (lynx is a threatened species). Additionally, the mine would diminish moose winter habitat among other degraded habitat (such as that of mountain goat and wolverine).	Thank you for your comment.
	The Mine Should Not Be Permitted to Degrade Cultural or Treaty Uses of the Land	
	The DEIS acknowledges that there would be significant noise, light, and aesthetic impacts. The mine will produce intrusive noise (see e.g. DEIS V2, P.636 and 637), light pollution (see e.g. DEIS V2, P. 708), and dramatic and potentially permanent visual impacts (see e.g. DEIS at p.41).	
244-14	These intrusions have a significant potential to reduce opportunities for CSKT tribal members to conduct cultural and hunting/gathering activities. Similarly, proposed monitoring wells and other activities in the Cabinet Mountain Wilderness go against wilderness values and purposes.	
245-15	For these reasons, the CSKT strongly recommends that before the DEIS is finalized it is expanded to fully consider and fully mitigate against these issues and concerns.	
245-16	Thank you for considering the CSKT's comments. If you or your staff have any questions, or would like to discuss the matter further, please feel free to contact me at (406) 585-4589.	
	Sincerely,	
		
	Stuart M. Levit	
	3	

Comment	Document #262-Kootenai Tribe of Idaho	Response
262–1	MNTR 262 Kootenai Tribe of Idaho P.O. Box 1269 Bonners Ferry, ID 83805 Ph# (208) 267-3519 Fax (208) 267-2960 RECEIVED JUL 0 1 2009 DEQ DIRECTOR'S OFFICE June 29, 2009 Bobbie Lacklen Kootenai National Forest 31374 US Highway 2 Libby, MT 59923 Emily Corsi Montana DEQ P.O. Box 200901 Helena, MT 59620 RE: Draft Environmental Impact Statement for the Montanore Project Dear Ms. Lacklen and Corsi: The Kootenai Tribe of Idaho has received the DEIS and related letter from the Kootenai National Forest (KNF) and the Montana Department of Environmental Quality (MDEQ) seeking public comment on the DEIS prepared for Montanore Minerals Corp.'s proposed underground copper and silver mine near the Cabinet Mountains Wilderness of Northwestern Montana. While the Tribe appreciates the opportunity to comment, our technical review has not been completed. There are specific concerns related to project activities occurring in Kootenai Aboriginal Territory that include potential impacts to the high elevation watersheds and related Tribal resources. The Tribe requests additional meetings between the DEIS Staff and our technical staff members to properly evaluate the scientific details contained in the DEIS. The Tribe is confident that with this added information, the details will be more clearly outlined with regard to the project activities, desired outcomes and intent. At this time the Tribe believes technical staff member meetings will be sufficient. The Tribe reserves the right, however, to request policy-level government-to-government	**Comment Response 262-1** The KNF and the DEQ held a meeting with Kootenai Tribal technical staff on September 10, 2009 to discuss wildlife and hydrology issues. **Comment Response 262-2** The Kootenai Tribe of Idaho was included on the mailing list for the SDEIS and FEIS. The KNF and the DEQ did not receive any other written comments.

Com-ment	Document #262-Kootenai Tribe of Idaho	Response
262-2	meetings with the KNF pursuant to Executive Order 13175 and the federal government's trust responsibility. Given MDEQ's important role in this project, we may also request meetings with the agency as part of the collaborative working relationship we enjoy with the State of Montana. The Tribe wishes to be included in future project-specific mailings and will provide specific DEIS comments at a later date. Sincerely,  Kym Cooper, Vice Chairperson Kootenai Tribe of Idaho	

Comment	Document #265-Confederated Salish and Kootenai Tribes	Response

THE CONFEDERATED SALISH AND KOOTENAI TRIBES
OF THE FLATHEAD NATION
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A Confederation of the Salish, Upper Pend d'Oreilles and Kootenai Tribes

MNTR 265

June 29, 2009

Bobbie Lacklen,
Kootenai National Forest
Mr. Paul Bradford, Forest Supervisor
31374 U.S. 2
Libby, Montana 59923-3022

RECEIVED
JUL 0 1 2009
DEQ
DIRECTOR'S OFFICE

Emily Corsi,
MT DEQ
PO Box 200901
Helena, MT 59620

Sent by Mail and Fax: (406) 283-7709

RE: Montanore Mine DEIS

Dear Ms Lacklen and Ms Corsi,

265–1 I am writing in response to the May 28, 2009 letter requesting comments on the Draft Environmental Impact Statement (DEIS) for Montanore Minerals Corp.'s proposed copper and silver underground mine near the Cabinet Mountain Wilderness. Following are the general concerns of the Confederated Salish and Kootenai Tribes of the Flathead Reservation (CSKT) with regard to the DEIS.

265–2 When they signed the 1855 Hell Gate Treaty, the Salish, Pend 'Oreille and Kootenai Tribes ceded over 22 million acres of land to the United States in what is now western Montana. Under the treaty, the Tribes reserved the right to access and use the aboriginal lands that were part of the ceded territory. These lands are the source of Tribal creation stories, and contain ancestral cultural areas that Tribal members still utilize today. Traditional camping, hunting, fishing, and gathering sites exist alongside significant sacred places, all of which are inseparably bound together to form the Tribes' "cultural landscape."

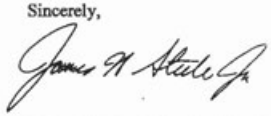
265–3 The expansion of the Montanore Mine has the potential to significantly impact Tribal ancestral sites, including trails, fishing and gathering areas, as well as occupation sites. The DEIS identifies significant potential likelihood that the mine will degrade water quality, thus impacting aquatic habitats that provide Tribal members with traditional

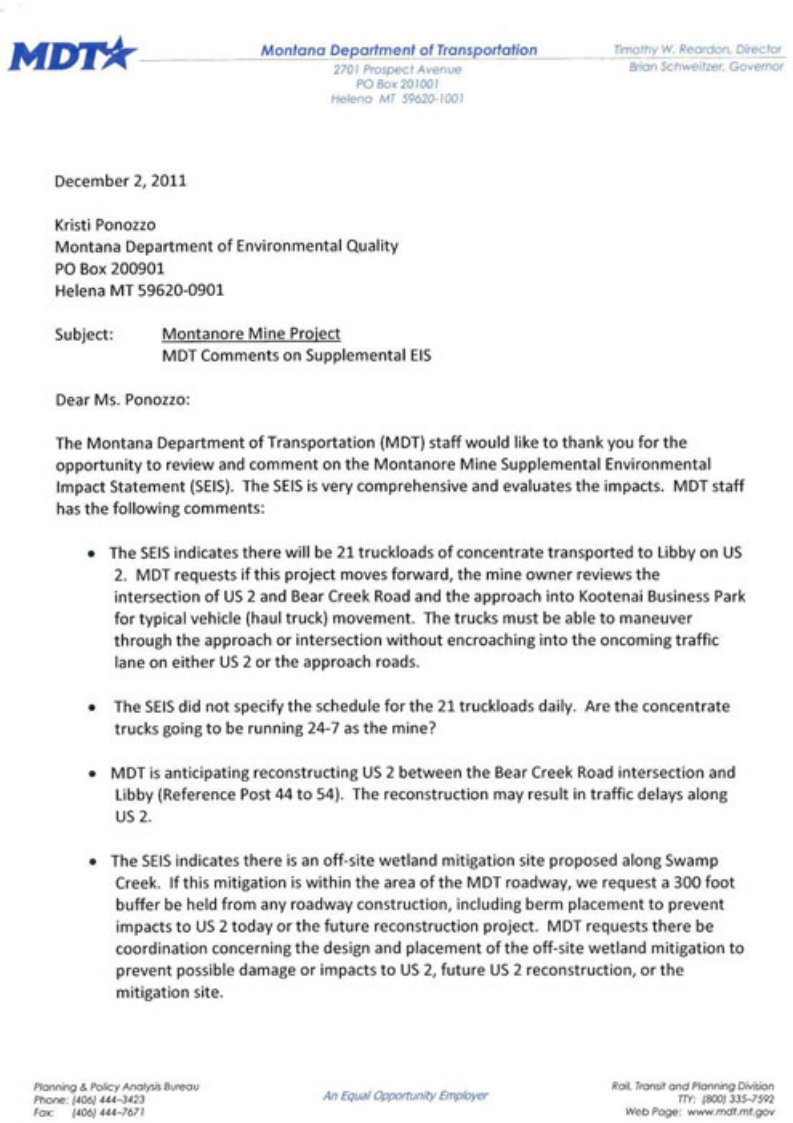
1

Comment Response 265-1
See comment response 244-1.

Comment Response 265-2
See comment response 244-2.

Comment	Document #265-Confederated Salish and Kootenai Tribes	Response
	plants and medicines. The degradation of the surrounding watershed would have far-reaching impacts on culturally significant fish and wildlife, including the threatened bull trout and endangered white sturgeon. General issues of concern include, but are not limited to, the following. **The Mine Should Not Be Permitted to Degrade Fisheries**	**Comment Response 265-3** See comment response 244-3. **Comment Response 265-4** See comment response 244-4. **Comment Response 265-5** See comment response 244-5. **Comment Response 265-6** See comment response 244-6. **Comment Response 265-7** See comment response 244-7. **Comment Response 265-8** See comment response 244-8.
265–4	Eleven streams will be impacted by the proposed Montanore mine -- nine of them have bull trout; the other two have inland redband trout or westslope cutthroat trout. All of these species are important to the CSKT and their degradation should not be permitted.	
265–5	For example, mine dewatering is likely to have significant impacts on the East Fork Bull River, Rock Lake, and St. Paul Lake (see e.g. DEIS p.28 and V2 p.429). The East Fork Bull River is probably the most important bull trout stream in the lower Clark Fork watershed in Montana. As fall-spawners, bull trout are very vulnerable to low flow conditions. If the mine causes further reductions in fall flows it will almost certainly reduce bull trout spawning habitat, increase stream temperatures, and possibly impede access to spawning habitat from migratory bull trout. These impacts could damage both the local and regional populations (see DEIS at p.39). Impacts would likely be felt within and without the Wilderness Area (see DEIS p. 28).	
265–6	Similarly, the DEIS proposes that after mine closure, water diverted into the mine's cavity will flow untreated into the East Fork of Bull River. The DEIS does not reasonably predict this water quality but also does not propose any water treatment which may be reasonably expected to be needed (as has happened at most major Montana mines). Without such water treatment alternative and plan there is no way to reasonably protect water quality and determine an appropriate bond that protects water quality.	
265–7	These impacts would significantly impact bull trout (and likely westslope cutthroat trout) fisheries and thereby are of great concern to the CSKT. Mining should not be permitted to impact surface or ground water such that it can degrade these important fisheries.	
	The Mine Should Not Be Permitted to Degrade Water Quality	
265–8	The Mine's tailings impoundment will rise behind a 310 foot dam and will bury wetlands, springs, streams, etc, and will be a significant visual impediment to cultural uses of the area. Further, such a large tailings impoundment will have significant impacts to surface and ground water quality if it leaks - and almost all major tailings impoundments leak at some point during operations or after closure.	
265-9	To make the situation worse, the DEIS proposes disposing mine wastewater from the tailings by land application disposal - which would impact surface water quality (such as creeks) and ground water quality (see DEIS at V1, p.27). The DEIS acknowledges that this land application disposal would be required in perpetuity.	
	2	

Com-ment	Document #265-Confederated Salish and Kootenai Tribes	Response
265–10	**The Mine Should Not Be Permitted to Degrade Wildlife** In addition to Bull Trout, the proposal will also degrade grizzly bear and lynx and their habitat. This should not be permitted.	**Comment Response 265-9** See comment response 244-9. **Comment Response 265-10** See comment response 244-10.
265-11	There are only 30-35 grizzly bears in the Cabinet-Yaak ecosystem and only 10-15 grizzly bears in the Cabinet Mountain Wilderness area. The Montanore proposal will impact about 27,000 acres of grizzly habitat, and likely could not be mitigated. (see DEIS V1, P136). Mitigation measures such as acquiring alternative habitat are not guaranteed but should be.	**Comment Response 265-11** See comment response 244-11.
265-12	Further, the proposal would diminish lynx habitat (lynx is a threatened species). Additionally, the mine would diminish moose winter habitat among other degraded habitat (such as that of mountain goat and wolverine). **The Mine Should Not Be Permitted to Degrade Cultural or Treaty Uses of the Land**	**Comment Response 265-12** See comment response 244-12. **Comment Response 265-13** See comment response 244-13.
265-13	The DEIS acknowledges that there would be significant noise, light, and aesthetic impacts. The mine will produce intrusive noise (see e.g. DEIS V2, P.636 and 637), light pollution (see e.g. DEIS V2, P. 708), and dramatic and potentially permanent visual impacts (see e.g. DEIS at p.41).	**Comment Response 265-14** See comment response 244-14.
265-14	These intrusions have a significant potential to reduce opportunities for CSKT tribal members to conduct cultural and hunting/gathering activities. Similarly, proposed monitoring wells and other activities in the Cabinet Mountain Wilderness go against wilderness values and purposes.	**Comment Response 265-15** See comment response 244-15.
265-15	For these reasons, the CSKT strongly recommends that before the DEIS is finalized it is expanded to fully consider and fully mitigate against these issues and concerns.	**Comment Response 265-16** See comment response 244-16.
265-16	Thank you for considering the CSKT's comments. If you or your staff have any questions, or would like to discuss the matter further, please feel free to contact me at (406) 675-2700 or to contact Tribal Attorney Stu Levit at (406) 585-4589. Sincerely,  JAMES H. STEELE JR., CHAIRMAN Confederated Salish and Kootenai Tribal Council 3	

Com-ment	Document #296-Montana Department of Transportation	Response
		**Comment Response 296–1** Thank you for your comment. **Comment Response 296–2** Section 3.20.4.2.2 disclosed that during final design, MMC would evaluate the Bear Creek Road approach onto US 2 for the largest design vehicle and modify to the intersections if the approach of either intersection did not meet the design requirements for that vehicle. A similar discussion was added to Section 2.5.2.6.6 in Chapter 2. Section 2.5.2.6.6 also discussed that any modification to US 2 would require the approval of the Montana Department of Transportation. **Comment Response 296–3** Section 2.4.2.2.2 was clarified to indicate that MMC would limit concentrate haulage to daylight hours and not during major shift changes. **Comment Response 296–4** Reconstruction of US 2 along Swamp Creek was added as a reasonably foreseeable action in Section 3.3.4.2 and discussed in the cumulative effects section under Transportation (Section 3.21.4.3). **Comment Response 296–5** MMC's restoration of the wetlands at the Swamp Creek mitigation site is unlikely to affect MDT's proposed reconstruction of US 2. During mitigation plan development in 2012, MMC coordinated with the MDT on MMC's wetland mitigation plans and MDT's proposed improvements to US 2 adjacent to the Swamp Creek mitigation site. The agencies modified the mitigation plan in Section 2.5.7.1 to require MMC to coordinate with the MDT during final mitigation plan development.
296–1		
296-2		
296-3		
296-4		
296-5		

Com-ment	Document #296-Montana Department of Transportation	Response

If you have any questions concerning these comments, please contact Jean Riley at (406)444-9456 or email at jriley@mt.gov. Again, thank you for the opportunity to comment on the SEIS.

Sincerely,

Jean A. Riley, P.E.
Transportation Planning Engineer
Planning & Policy Analysis Bureau

Copies: Shane Stack – Acting Missoula Division Administrator
Kyle Demars – Kalispell Maintenance Chief
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Com-ment	Document #305-U.S. Department of the Interior	Response
	United States Department of the Interior OFFICE OF THE SECRETARY Office of Environmental Policy and Compliance Denver Federal Center, Building 67, Room 118 Post Office Box 25007 (D-108) Denver, Colorado 80225-0007 November 15, 2011 9043.1 ER 11/917 Mr. Paul Bradford, Forest Supervisor Kootenai National Forest 31374 U.S. Hwy 2 Libby, MT 59923-3022 Dear Mr. Bradford: The U.S. Department of Interior (DOI) has reviewed the *Supplemental Draft Environmental Impact Statement for the Montanore Project* (SDEIS), jointly submitted by the Kootenai National Forest (Forest) and the Montana Department of Environmental Quality (MDEQ), and offers the following comments. Our comments are focused on the impacts of the proposed action on Endangered Species Act (ESA) listed species, including: grizzly bears, Canada lynx, and bull trout. We also reiterate our comments submitted (letter dated May 8, 2009) on the Draft Environmental Impact Statement that remain relevant. Bull Trout We appreciate that the SDEIS includes results from modeling groundwater and surface hydrologic effects. Most of our new comments pertain to the documentation of those modeling studies. We recognize that much uncertainty still exists in the analysis of these impacts, but we nonetheless commend the agencies for undertaking such analyses. • We agree with substituting Alternative 3 (Agency Mitigated Poorman Impoundment Alternative) as the agency preferred alternative in place of Alternative 2. Treating all waste water in a treatment plant instead of by land application is expected to reduce the potential for negative impacts on water resources in general and bull trout in particular in the Libby Creek drainage. However, we still have concerns for effects to bull trout and bull trout critical habitat from rapidly fluctuating stream flows in Libby Creek that will alter the natural hydrologic regime. More detail regarding the effects is needed to adequately assess the impacts to bull trout.	**Comment Response 305–1 and 305–2** Thank you for your comment. **Comment Response 305–3** Thank you for your comment. **Comment Response 305–4** During informal consultation with the USFWS, the KNF prepared a BA that described all potential effects on listed species and a conceptual mitigation plan to minimize or avoid significant adverse effects. Section 3.11.4 of the FEIS was revised to reflect the anticipated increases in Libby Creek flows downstream of the Water Treatment Plant in Libby Creek as a result of the water treatment plant discharges during some phases under Alternative 3. Section 3.6.4 of the FEIS was revised to disclose the anticipated effects of these increases on bull trout populations and other aquatic life.

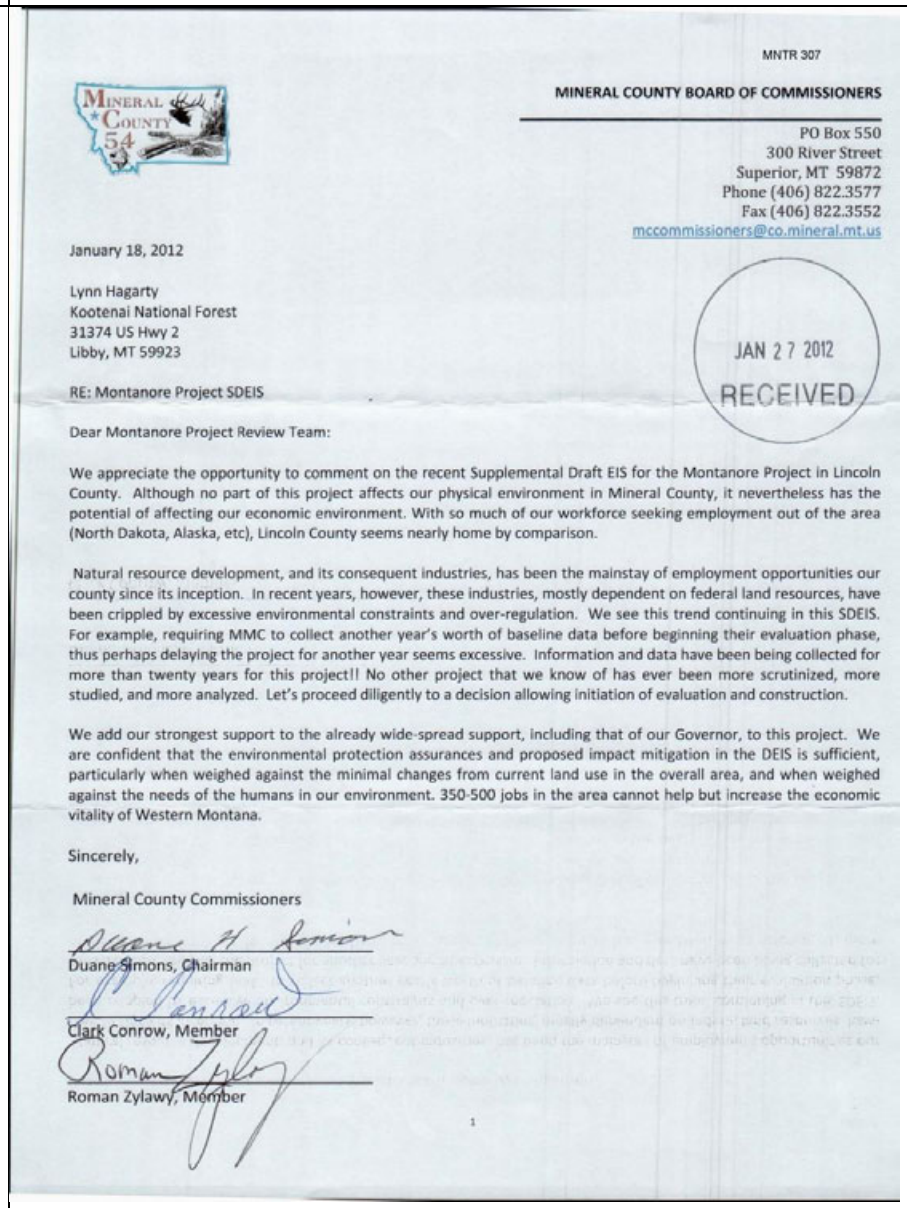
Comment	Document #305-U.S. Department of the Interior	Response
305–5	Mr. Paul Bradford, Forest Supervisor 2 • Substituting the Poorman tailings impoundment site for the site on Little Cherry Creek is expected to reduce direct impacts to perennial surface waters and indirect effects to downstream bull trout and critical habitat.	**Comment Response 305–5** The agencies agree.
305–6	• Regarding detailed impacts that are newly documented in the SDEIS, our greatest concern is with indirect effects of mining on groundwater drawdown and the reduction in base flows that are predicted to occur in East Fork Bull River and East Fork Rock Creek, the extent of which will be unknown until many years after mining is completed.	**Comment Response 305–6** Section 3.13.4 was revised in the SDEIS and again in the FEIS to disclose the effects of reduction in baseflow and water appropriations on streamflow. Section 3.6.4 was revised in the SDEIS and again in the FEIS to reflect anticipated impacts on aquatic resources based on the revised streamflow analysis.
305-7	**The East Fork Bull River is the single-most important bull trout spawning and rearing stream in the Lower Clark Fork bull trout core area.** The modeling analysis projects base flows to be reduced by 11 percent at the Cabinet Mountains Wilderness boundary and by 97 percent within the wilderness at Year 52, and to potentially persist for more than 1000 years. When combined with expected climate change impacts of higher stream temperatures, earlier spring run-off, and the increased frequency of rain-on-snow events, such impacts would adversely impact the value of the upper East Fork Bull River for spawning and rearing habitat, including the possibility of serious population reductions or even extirpation of bull trout from the East Fork Bull River. Currently, 80 percent of observed bull trout redds in the East Fork Bull river occur upstream of the wilderness boundary. The potential impacts upon the Lower Clark Fork core area and implications for range-wide recovery of bull trout will need to be carefully evaluated in the Forest Service/Fish and Wildlife Service Section 7 (ESA) analysis.	**Comment Response 305–7** See comment response 305-6. Section 3.6.4 of the FEIS was revised to discuss the potential for climate change to have an effect on aquatic resources. The KNF's 2013 BA discussed the effect of the agencies' preferred alternatives on the Lower Clark Fork bull trout core area.
305–8	The analysis for East Fork Rock Creek is similar to East Fork Bull River, with base flows projected to be reduced by 59 percent at the wilderness boundary and by 100 percent within the wilderness. Although flows in the lower end of this stream (near its confluence with the Clark Fork River) go subsurface for part of the year creating a seasonal barrier to fish passage, it is an important drainage for bull trout recovery in the Clark Fork River basin.	**Comment Response 305–8** See comment response 305-7.
305–9	• Our comments of May 8, 2009 regarding adequacy of the fisheries mitigation plan still apply and are reiterated below. We further emphasize that, as described in the SDEIS, significant potential impacts to bull trout and bull trout critical habitat are reasonably expected. Mitigation for direct impacts from the mine operation are not clearly specified as commitments regarding what projects will be implemented. We found no mention of mitigation for the expected groundwater table draw down or reductions in base stream flows and potential related impacts to bull trout populations and critical habitat. We recommend that proposed mitigation commitments be clearly specified in the final EIS.	**Comment Response 305–9** During informal consultation with the USFWS, the KNF prepared a BA that described all potential effects on listed species and a conceptual mitigation plan to minimize or avoid significant adverse effects. The KNF requested and the USFWS began formal consultation in February 2013. Section 2.5.7.1 of the SDEIS and FEIS was revised to disclose the agencies' mitigation for wetlands and other waters of the U.S.; Section 2.5.7.3 of the FEIS was revised to disclose the agencies' mitigation for bull trout.
305–10	• In many different areas (e.g., waste rock management, tailings management, mining, water use and management, etc.) the SDEIS specifies final design and monitoring that would occur during the evaluation and operation phases of mining. Sometimes a potential response to non-attainment of standards or indication of the need for additional mitigation is suggested, but the technical feasibility and effectiveness of such responses appears uncertain, at best. In light of specifications and uncertainties contained in *Section 2.5.3.5.2 Final Design Process,* complete ESA consultation on effects to bull trout and bull trout critical habitat may not be	**Comment Response 305–10** See comment response 305-9.

Com-ment	Document #305-U.S. Department of the Interior	Response
305–11 305–12 305–13 305-14 305-15	Mr. Paul Bradford, Forest Supervisor 3 possible until numerous studies mentioned in the SDEIS are completed and the final design approved. • A statement is made in *Section 3.6.4.3.6 Threatened and Endangered Species* under Effects to Critical Habitat that "reduced flows would affect designated bull trout critical habitat with direct effects to springs, seeps, groundwater sources, and subsurface water connectivity… such that normal reproduction, growth, and survival are **not** inhibited" [emphasis added], citing the Kootenai National Forests *Biological Assessment for Threatened and Endangered Aquatic Species on the Montanore Minerals Corp. Montanore Project.* The biological assessment does not support this statement as written and, in fact, contradicts the statement. This discrepancy should be corrected. The following comments from our letter of May 8, 2009, also still apply: • While the DEIS provides a comprehensive analysis of the potential impacts from the proposed action to the aquatic and fisheries resources, it was difficult to get an overall understanding of the how much impact would occur under each alternative and how adverse impacts would be mitigated. We suggest a summary table be provided to display the anticipated primary impacts to bull trout (sediment, habitat loss, water quantity, water quality, temperature, passage, etc.) and the corresponding offsetting mitigation, for each alternative and primary bull trout drainage (i.e., Libby Creek drainage or Bull River drainage). • The proposed action, regardless of alternative, may have significant adverse effects to bull trout in both the Libby Creek and the Bull River drainages. We encourage the Forest to ensure that all potential impacts to listed species and aquatic resources are adequately addressed through minimization and mitigation. The DEIS describes adverse impacts (e.g., reductions in stream base flows [corresponding to a loss of aquatic habitat and impacts to altered hydrology], direct loss of aquatic habitat [e.g., Little Cherry Creek], reduction in Riparian Habitat Conservation Area function, etc.) without mention of the corresponding mitigation. Finally, mitigation plans should be sufficient to address adverse effects to listed species, as well as the Forest Section 7(a)(1) responsibilities to conserve ESA listed species. • The fisheries mitigation plans presented in the alternatives section of the DEIS (section 2.4.6.2, section 2.5.7.2, and section 2.6.6.2) are ambiguous in terms of how much mitigation work will actually be completed under the plans. To adequately assess the environmental consequences of the proposed action relative to the reported benefits of the mitigation plan, the final EIS should present the level of mitigation that is expected to be implemented (e.g., number of acres/tons of sediment reduction work, number or miles of habitat restoration projects, fix all identified sediment sources, bring all habitat features up to Riparian Management Objective standards within the action area, etc.). • The environmental consequences section of the DEIS (Section 3.6.4) suggests that the proposed action may increase water temperatures. Water temperature is already functioning near, or at unacceptable risk in Libby Creek Drainage and stream temperatures may increasingly become a limiting factor for the bull trout local population. We recommend this	**Comment Response 305–11** Section 3.6.4.3.6 was revised in the FEIS. **Comment Response 305–12** See comment response 49-9. **Comment Response 305–13** See comment response 49-10. **Comment Response 305–14** See comment response 49-11. **Comment Response 305–15** See comment response 49-12.

Com-ment	Document #305-U.S. Department of the Interior	Response
305–16 305–17 305-18 305-19	Mr. Paul Bradford, Forest Supervisor 4 issue receive more attention in the analysis section for each alternative and be adequately addressed in the mitigation and monitoring plans for this project. • The environmental consequences section of the DEIS (Section 3.6.4) suggests that the proposed action may increase the competitive advantage of brook trout in the action area stream systems. Impacts from non-native species are becoming the preeminent threat to bull trout survival and recovery in these Montana stream systems. We recommend you review Dunnigan et al 2007, which provides data on the expansion of the brook trout population relative to bull trout in the Libby Creek drainage. We recommend the analysis section for each alternative address this issue in greater detail and be adequately addressed in the mitigation and monitoring plans for this project. The Avista Utilities Corporation is implementing an innovative and comprehensive non-native suppression project in the East Fork Bull River drainage and a similar approach should be considered for addressing the impacts from the proposed action. The U.S. Fish and Wildlife Service (USFWS) can provide more information on this approach at your request. • A primary component of the mitigation plan in the Libby Creek drainage appears to be habitat surveys and implementation of in-stream habitat improvement projects. Section 3.6.3.1.1 describes several habitat restoration projects that were implemented in Libby Creek and destroyed in subsequent rain-on-snow events. The DEIS describes a habitat restoration project in the East Fork Bull River that also seems to have been unsuccessful. Preliminary data from the AC (Horn and Tholl 2008) shows that non-native fish appear to be benefitting more than native salmonids from their habitat restoration projects. Data from MTFWP efforts in Libby Creek (Dunnigan et al 2007) could suggest similar conclusions from the Libby Creek restoration projects. The final EIS should consider the adequacy of the proposed mitigation plan and anticipated outcomes in the context of this information. Perhaps a mitigation strategy that includes habitat projects in concert with non-native suppression efforts (e.g., partnering with the existing Avista Utilities Corporation nonnative fish suppression effort) should be considered. • We suggest more analysis of the potential impacts of increased vehicle use along Libby Creek, what activities and impacts will occur under the road maintenance program (e.g., snow plowing, sanding, blading, road narrowing/widening, etc.), and what the minimization and mitigation plans would include for all road related impacts. Sufficient information should be available on the proposed road closures/obliterations, road use, existing road condition, and culverts, to provide some level of quantitative sediment analysis. Analysis results should be used to determine/justify adequate sediment mitigation levels. The final EIS should include a list and description for any BMPs that are cited as minimization measures for the proposed action. • The aquatic and fisheries related mitigation and monitoring plans for all alternatives should include an adaptive management commitment whereby if monitoring shows the initial level of project mitigation are insufficient in accomplishing the specified objectives, additional corrective actions would be developed and implemented.	**Comment Response 305–16** See comment response 49-13. **Comment Response 305–17** See comment response 49-15. **Comment Response 305–18** See comment response 49-17. **Comment Response 305–19** See comment response 49-19.

Com-ment	Document #305-U.S. Department of the Interior	Response
	Mr. Paul Bradford, Forest Supervisor 5 Grizzly bear	**Comment Response 305–20** Thank you for your comment.
305–20	The mitigation plan for grizzly bears is an improvement over the DEIS. We appreciate the specificity provided in the SDEIS version. The USFWS will analyze the mitigation plan in detail during the preparation of their biological opinion for grizzly bears.	**Comment Response 305–21** See comment response 49-1.
	Most of our May 8, 2009 comments on the DEIS still apply and are reiterated below.	**Comment Response 305–22** The KNF's 2013 Biological Assessment concluded implementing Alternative 3D-R, the agencies' preferred alternative, may affect, is likely to adversely affect the threatened grizzly bear.
305–21	The mine would occur within occupied grizzly bear habitat within the Cabinet-Yaak Ecosystem (CYE). We are concerned that the proposed alternative may adversely affect grizzly bears in a manner that could rise to the level of "take" (DEIS, page 880). We recognize that this conclusion is based on a draft proposal and could change when the project details are finalized.	**Comment Response 305–23** Thank you for your comment.
305–22	The grizzly bear population in the Cabinet-Yaak Ecosystem (CYE) is one of six populations essential to the conservation of the grizzly bear in the United States. Its geographic location is key for providing connectivity between other grizzly bear populations and Canada. As you are aware, the grizzly population in the CYE is threatened by small population size and increasing human demands on its habitat (FR 64:26725-26733). An estimated 45 bears occurred within the CYE recovery zone in 2007 (*Kasworm et al, 2008*). The population trend has been variable during the history of grizzly bear monitoring in the CYE. Earlier grizzly bear population estimates (between 1999 and 2006) indicated a high probability of decline (*Kasworm et al. 1999 through 2008*) due to relatively high levels of human-caused mortality. However, this trend has moderated somewhat in recent years and since 2006, has shown some slight improvement. The CYE population of bears is vulnerable to shocks however, just because of the low overall numbers of bears that exist there, causing small perturbations to have large impacts.	**Comment Response 305–24** See comment response 49-2.
305–23	The previous comments pertained to the population status and trend of the CYE grizzly bear population. The subsequent comments concerning grizzly bears focus on the content of the DEIS and the preliminary mitigation package.	**Comment Response 305–25** See comment response 49-4.
305-24	• The opening sentence of the grizzly bear section (DEIS 3.24.5.3.1) incorporates a body of information by reference. We caution that additional scientific information is available to inform your decision (and in fact the DEIS goes on to reference some of that material). Focusing on specific conclusions or important facts from the reference material is more useful than blanket citations that do not focus on specific issues.	**Comment Response 305–26** **See comment response 49-5.**
305–25	• With regards to the term "cumulative effects," we recommend the Forest and the USFWS work together to reconcile the differences in the treatment of the term under the National Environmental Protection Act versus the Endangered Species Act as it pertains to the analysis of the effects of this project.	
305–26	• In general, the grizzly bear analysis focuses on the traditional methods of examining Open Motorized Route Density (OMRD), Total Motorized Route Density (TMRD), Core, Habitat Effectiveness, and other measures. The USFWS and the Forest have a long history of relying on these measures. However, the typical project examined using these measures is a timber sale and associated road system. The timber harvest portion of such a project usually has	

Comment	Document #305-U.S. Department of the Interior	Response
305–27 305–28 305–29	Mr. Paul Bradford, Forest Supervisor 6 temporary effects on grizzly bears, with the negative effects to grizzly bears diminishing within a decade. Road effects can, of course, be more chronic. The Montanore project would last for decades, affecting two to three generations of grizzly bears, and could result in the permanent adverse conversion (e.g., from forest to tailings impoundments) of significant quantities of habitat (varies with the alternatives analyzed in the SDEIS) currently used by grizzly bears. Therefore, we recommend a more comprehensive examination of the underlying habitat effects. • Specifically, rather than reporting only the raw percentages of BMUs affected by OMRD, TMRD, etc., it would be useful to understand how much seasonal habitat is affected by baseline conditions; how this would change under the alternatives; and what the implications are in terms of landscape-level effects among BMUs. We recommend that the amount of spring range that has been compromised by baseline conditions be quantified, and the additional amount, if any, that would be affected by the proposed action. We also recommend an analysis of the impacts to other seasonally important habitats and important areas for movement or linkage. An analysis that examines the specific habitat effects will be useful in disclosing the baseline conditions and the direct, indirect, and cumulative effects associated with the project. Canada lynx The Montanore Mine project may result in the permanent conversion of suitable Canada lynx habitat to non-suitable. We recommend the Forest and the USFWS work together during interagency consultation to address the habitat changes that would occur and how those changes affect the status and availability of suitable lynx habitat in the affected Lynx Analysis Units. The mitigation plan for the permanent conversion of suitable lynx habitat appears to adequately address the habitat ratios required by the Northern Rockies Lynx Management Direction in the affected area. We appreciate the opportunity to review and comment on this SDEIS. In addition to your customary distribution, please send both an electronic and hard copy of the final EIS and signed Record of Decision to the USFWS office in Helena, MT. They look forward to working with the Forest through the ESA consultation process once a final alternative has been selected. If you have any questions, please contact Tim Bodurtha (406) 758-6882 or Anne Vandehey (406) 449-5225, ext. 212. Sincerely, Robert F. Stewart Regional Environmental Officer cc: Lynn Hagarty	**Comment Response 305–27** See comment response 49-6. **Comment Response 305–28** Thank you for your comment. **Comment Response 305–29** Thank you for your comment. Electronic and hard copy of the Final EIS was sent to the USFWS' Helena office. A signed copy of the ROD also will be sent when issued.

Comment	Document #307-Mineral County Board of Commissioners	Response
307–1 307–2 307-3		**Comment Response 307–1** Thank you for your comment. **Comment Response 307–2** Some of the required monitoring listed in Appendix C would be completed 1 year before the dewatering and extension of the Libby Adit to avoid the modeled effects during the Evaluation Phase. Section 2.5.6.2.1 and Section 1.3.1 of Appendix C of the 2009 DEIS indicated the GDE inventory was to be completed early enough for 1 year of baseline data to be collected before mining began. The pre-Evaluation Phase monitoring was clarified in Section C.10 of the SDEIS and in a 8/1/12 letter to MMC. In 2009, MMC completed a GDE inventory focusing on areas at or below about 5,600 feet on the north side of the Libby Creek watershed. Additional inventory in the Libby Creek drainage was completed in 2010. The additional inventory consisted of inventorying GDEs identified in 2009 and the threatened, endangered, and Region 1 sensitive species lists. MMC partially completed an inventory of other mine areas, such as the Ramsey Creek, East Fork Rock Creek and East Fork Bull River drainages, in 2012, 2013 and 2014. **Comment Response 307–3** Thank you for your comment.

MNTR 307

MINERAL COUNTY BOARD OF COMMISSIONERS

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300 River Street
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Phone (406) 822.3577
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January 18, 2012

Lynn Hagarty
Kootenai National Forest
31374 US Hwy 2
Libby, MT 59923

JAN 27 2012
RECEIVED

RE: Montanore Project SDEIS

Dear Montanore Project Review Team:

We appreciate the opportunity to comment on the recent Supplemental Draft EIS for the Montanore Project in Lincoln County. Although no part of this project affects our physical environment in Mineral County, it nevertheless has the potential of affecting our economic environment. With so much of our workforce seeking employment out of the area (North Dakota, Alaska, etc), Lincoln County seems nearly home by comparison.

Natural resource development, and its consequent industries, has been the mainstay of employment opportunities our county since its inception. In recent years, however, these industries, mostly dependent on federal land resources, have been crippled by excessive environmental constraints and over-regulation. We see this trend continuing in this SDEIS. For example, requiring MMC to collect another year's worth of baseline data before beginning their evaluation phase, thus perhaps delaying the project for another year seems excessive. Information and data have been being collected for more than twenty years for this project!! No other project that we know of has ever been more scrutinized, more studied, and more analyzed. Let's proceed diligently to a decision allowing initiation of evaluation and construction.

We add our strongest support to the already wide-spread support, including that of our Governor, to this project. We are confident that the environmental protection assurances and proposed impact mitigation in the DEIS is sufficient, particularly when weighed against the minimal changes from current land use in the overall area, and when weighed against the needs of the humans in our environment. 350-500 jobs in the area cannot help but increase the economic vitality of Western Montana.

Sincerely,

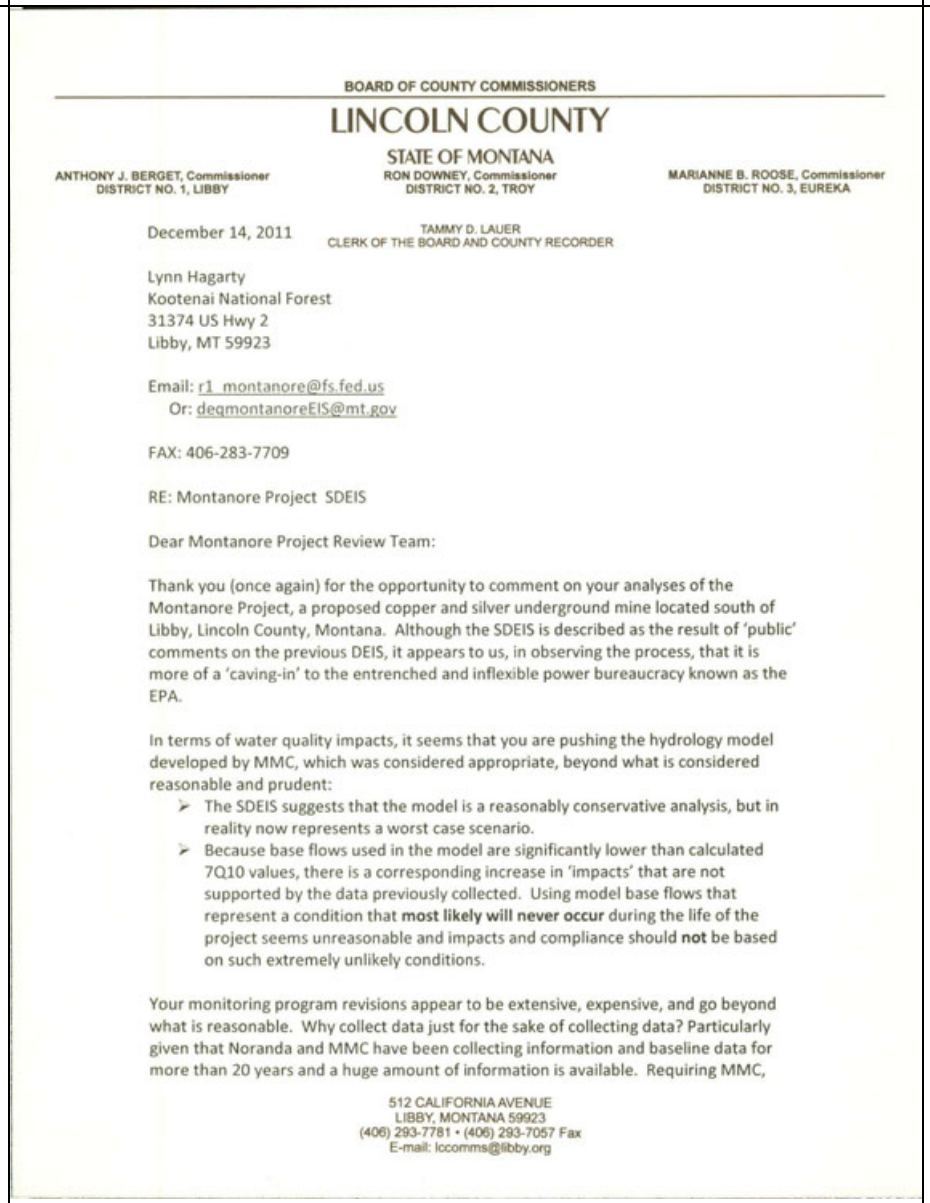
Mineral County Commissioners

Duane Simons, Chairman

Clark Conrow, Member

Roman Zylawy, Member

1

Comment	Document #314-Lincoln County Board of Commissioners	Response
314–1 314-2 314-3		**Comment Response 314–1** Thank you for your comment. The agencies issued a SDEIS to public comment on the revised mine and transmission line alternatives, and new or updated information. **Comment Response 314–2** The agencies disagree that the 3D model represents worst case conditions. Geomatrix (2011) indicated in the "results from the model runs described herein [in MMC's 3D model report] capture a feasible range of impacts and dewatering rates. With the data currently available, these are the best estimates of impacts and associated uncertainty that can be obtained using the FEFLOW model." The agencies agree and included similar language in the discussion of model results. The model uses average precipitation based on a simulation calibrated against observed conditions in the adit and elsewhere in the model domain. The agencies agree that with limited data, the model does have uncertainty, which was discussed in detail in Section 3.10.4.3.3. The agencies disclosed that the predicted baseflows and changes to baseflow may not occur every year nor would they necessarily be measurable in any one year. The monitoring plan presented in Appendix C is designed to obtain sufficient data to establish when a stream is at baseflow and determine if reductions in baseflow have occurred. **Comment Response 314–3** See comment response 314-2. The agencies do not believe that the changes in streamflow described in the SDEIS and FEIS are extremely unlikely conditions and mostly likely will never occur. The model primarily predicted baseflow at various locations during various phases of mining. The extent that the model used baseflow was to compare model-predicted baseflow to measured baseflow at the end of the model domain during the calibration process. The agencies calculated 7Q10 and 7Q2 flow using a USGS method to predict changes in streamflow. The 7Q10 flow is the low flow expected to occur for 7 days every 10 years or, on average, three times over the 30-year evaluation, construction and operation phases. The DEQ uses the effect on 7Q10 flow to determine significance of flow changes (see discussion in Section 3.11.1.1.1) and to determine MPDES permitted effluent limits. The 7Q2 flow is the low flow expected to occur for 7 days every other year or, on average, fifteen times over the 30-year evaluation, construction and operation phases. Section 3.8.3.1 discussed the basis for using modeled baseflow in upper analysis area streams instead of calculated 7Q10 flow. Modeled baseflow in upper analysis area streams was lower than the calculated 7Q10 flow, and the USGS method may not yield reliable results for sites with characteristics outside the range of equation variables.

BOARD OF COUNTY COMMISSIONERS

LINCOLN COUNTY

STATE OF MONTANA

ANTHONY J. BERGET, Commissioner
DISTRICT NO. 1, LIBBY

RON DOWNEY, Commissioner
DISTRICT NO. 2, TROY

MARIANNE B. ROOSE, Commissioner
DISTRICT NO. 3, EUREKA

December 14, 2011

TAMMY D. LAUER
CLERK OF THE BOARD AND COUNTY RECORDER

Lynn Hagarty
Kootenai National Forest
31374 US Hwy 2
Libby, MT 59923

Email: r1_montanore@fs.fed.us
Or: deqmontanoreEIS@mt.gov

FAX: 406-283-7709

RE: Montanore Project SDEIS

Dear Montanore Project Review Team:

Thank you (once again) for the opportunity to comment on your analyses of the Montanore Project, a proposed copper and silver underground mine located south of Libby, Lincoln County, Montana. Although the SDEIS is described as the result of 'public' comments on the previous DEIS, it appears to us, in observing the process, that it is more of a 'caving-in' to the entrenched and inflexible power bureaucracy known as the EPA.

In terms of water quality impacts, it seems that you are pushing the hydrology model developed by MMC, which was considered appropriate, beyond what is considered reasonable and prudent:

- The SDEIS suggests that the model is a reasonably conservative analysis, but in reality now represents a worst case scenario.
- Because base flows used in the model are significantly lower than calculated 7Q10 values, there is a corresponding increase in 'impacts' that are not supported by the data previously collected. Using model base flows that represent a condition that **most likely will never occur** during the life of the project seems unreasonable and impacts and compliance should **not** be based on such extremely unlikely conditions.

Your monitoring program revisions appear to be extensive, expensive, and go beyond what is reasonable. Why collect data just for the sake of collecting data? Particularly given that Noranda and MMC have been collecting information and baseline data for more than 20 years and a huge amount of information is available. Requiring MMC,

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Com-ment	Document #314-Lincoln County Board of Commissioners	Response
314-4	now, to collect another year of data before starting their evaluation activities is preposterous, and would unnecessarily delay the project and the subsequent economic activity **(JOBS!!).** The SDEIS predicts little or no impact during MMC's evaluation phase, so why can't any data that is missing be collected concurrently without risking a mine caused impact?	**Comment Response 314–4** The agencies' conceptual monitoring plans in Appendix C were designed to meet three objectives: 1) to supplement available information in areas where it was insufficient; 2) to assess if the alternative selected in the KNF's ROD is adversely affecting the environment; 3) to monitor the effectiveness of the agencies' mitigation measures described in EIS and ROD. Data collection by Noranda and MCC spanned a 20-year period, but data were not collected continuously. For example, Noranda made stream flow measurements between 1988 and 1993. MMC began measuring stream flow in 2007.
314-5	Further, what purpose is served by requiring the monitoring of the Wanless Lake area when the SDEIS indicates this drainage to be very different from the project area? Very little, it seems.	Drawdown during the Evaluation Phase was predicted by the 3D model to be between 100 and 500 feet in some areas. Given the uncertainty, the effect could be more or less than predicted by the model.
314-6	Relative to the grizzly bear issues, it appears you have simply discounted MMC's research and efforts to provide innovative grizzly integration activities, and land purchase, with its subsequent reduction of our tax base, continues to the primary mitigation method. Additionally, we believe your grizzly impact assessments are excessive, particularly where the impacts are temporary (i.e., transmission line construction).	**Comment Response 314–5** See comment response 339-64.
314-7	As chief elected officials of Lincoln County, we are highly aware of the importance of this project with respect to its potential for providing additional economic vitality and stability for our communities – 500 construction jobs, 350-400 permanent jobs for the life of the mine – and at the same time, we are highly aware of the need for environmental protection assurances and impact mitigation. This project, the most highly scrutinized and most thoroughly analyzed in the history of the Kootenai National Forest, needs to be relieved of some of the more innocuous requirements and move diligently to decision.	**Comment Response 314–6** See comment response 339-16 regarding MMC's grizzly bear research. In document 49, the USFWS indicated "the USFWS will not require independent research and monitoring of grizzly bears by MMC or their agents and, in fact, they discourage any such proposal that duplicates USFWS recovery activities, interferes with recovery activities, or expends resources that may be better spent on other endeavors." The KNF, in collaboration with the USFWS, concluded that MMC's grizzly integration activities would not adequately mitigate for adverse effects on the grizzly bear. Land acquisition is one component of the agencies' grizzly bear mitigation plan. The agencies' assessment of the effects of the project on the grizzly bear followed methods required by the USFWS.
314-8	There is no question of the widespread support of this project. When we weigh the positive socio-economic impact of this project against the minimal changes wrought in current land use in the overall geographic area, we cannot but agree with this support. It is important that you not allow any further unnecessary delays. We are in the middle of a natural resource utopia, yet have watched associated industries virtually disappear because of excessive restrictions and regulations. We need long-term industry as envisioned in this project; without it we cannot maintain opportunities for our citizens and their families to continue the traditional cultural pathways so long a part of our county's history; without it we cannot maintain the needed social institutions and services expected of local governance; without it we cannot maintain the needed assistance to the less fortunate among us. Sincerely, Marianne B. Roose, Chairman Anthony J. Berget, Member Ron Downey, Member	**Comment Response 314–7** Thank you for your comment. The agencies disclosed the economic effects of the project in Section 3.18.4 of the SDEIS and FEIS. **Comment Response 314–8** Thank you for your comment.

Com-ment	Document #315-Montana Fish Wildlife & Parks	Response
315–1 315–2 315-3	Montana Fish, Wildlife & Parks MNTR 315 Region One 490 N. Meridian Rd. Kalispell, MT. 59901 Jim: 406-751-4566 Fax: 406-257-0349 REF: JS052-11 December 20, 2011 Lynn Hagarty, via email: r1_montanore@fs.fed.us Kristi Ponozzo, via email: deqmontanoreEIS@mt.gov Thank you for the opportunity to provide comments from Montana Fish, Wildlife & Parks pertaining to Fisheries that are specific to the Montanore SDEIS: Chapter 2 Alternatives, Including the Proposed Action: 2.5.6 2.5.6.3 Fisheries and Aquatic Life Appendix C.2.0 Aquatic Biological Monitoring 2.2 Monitoring locations and times No issues with timing of monitoring except that any fall fisheries monitoring should not include any electrofishing where bull trout congregate (this will be re-iterated in any collection permit). 2.4 Habitat Any mitigation measures proposed for non-wetland waters (2.5.9.1.1) should have monitoring plans tailored for the specific mitigation: All projects should include pre- and post-monitoring to determine the effectiveness; in the case of streamside/instream structures that may change pattern, profile and dimensions of streams that should include at least cross-sectional, longitudinal profiles and photo-points of the structures and an appropriate length of affected channel. 2.9 Bioaccumulation of Metals in Fish Tissue In a previous meeting, MMC suggested that they would expand the testing to include Selenium. 2.5.9 Off-site Wetland Mitigation Swamp Creek has good potential for improved wetland features. As we discussed on-site, MMC should use caution in expanding the existing wetlands. Swamp Creek at the proposed site has very flat slope and any increase in water elevation has potential to impact upstream landowners and US Highway 2 (slated for reconstruction in the near future). Because of the underlying geology of this area, Montana Department of Transportation (MDT) considers this a difficult project and any wetland considerations should include discussion with MDT. Sincerely, James R. Satterfield, Jr., Ph.D. Regional Supervisor	**Comment Response 315–1** In Table C-17 of the SDEIS and Table C-18 of the FEIS, fish surveys would be completed in the summer. Only summer fisheries monitoring was proposed in Section C.11.9; no fall fisheries monitoring was proposed. **Comment Response 315–2** The FEIS was revised to include a stream mitigation plan and a bull trout mitigation plan. Both plans provided additional details on monitoring and adaptive management. **Comment Response 315–3** In Table C-17 of the SDEIS and Table C-18 of the FEIS, fish surveys would be completed in the summer. Section C.11.9 was revised in the FEIS to indicate that any fall fisheries monitoring would not include any electrofishing where bull trout congregated. **Comment Response 315–3** The FEIS was revised to include a revised non-wetland waters of the U.S. and fisheries mitigation plan, including more detailed plans for the Swamp Creek mitigation site. MMC coordinated with MDT during the plan refinement.

Com-ment	Document #316-Montana Fish Wildlife & Parks	Response
	Montana Fish, Wildlife & Parks Region One 490 N. Meridian Rd. Kalispell, MT. 59901 Jim: 406-751-4566 Fax: 406-257-0349 REF: JS053-11 December 20, 2011 Lynn Hagarty, via email: r1_montanore@fs.fed.us Kristi Ponozzo, via email: deqmontanoreEIS@mt.gov	
316–1	Thank you for this opportunity to comment on the Montanore Mine (MMC) DEIS. I have perused the DEIS, have been in contact with the former Montana Fish, Wildlife, & Parks (MFWP) Biologist for this area (Jerry Brown) as well as a local USFS Biologist (Jenni Hollifield), and have toured (via hiking and by vehicle) some of the site locations. In addition, I have surveyed this area using a helicopter. Overall, I have spent some time in the project area. As the current Libby Area Wildlife Biologist, I am limiting my comments to wildlife.	**Comment Response 316–1** The agencies appreciate your comments.
316–2	Dating back to 1990, historic surveys for moose in this area show high use from north of Big Cherry Creek to the West Fisher drainage, particularly during winter and spring periods. These surveys show the highest number of moose observations relative to other nearby hunting districts, thus the highest numbers of moose hunting permits are issued for this hunting district (HD 105). Disturbance from the increased activity, as well as greater vehicle use, could result in a population decline for moose, which may impact moose hunting in the area.	**Comment Response 316–2** Moose habitat quality and moose habitat use in the analysis area was described in Section 3.24.7 of the DEIS and FEIS. Section 3.25 of the SDEIS only included updated sub-sections and focused mainly on impacts of the revised transmission line alternatives. The description of the affected environment for moose was omitted from the SDEIS because it did not change from the DEIS. Section 3.25.7 of the FEIS includes a complete description of the affected environment for moose and discloses potential effects of the mine and transmission line alternatives, including the effects of increased human activity. The importance of the Libby Creek, Ramsey Creek, and other analysis area drainages to moose is disclosed in this section of the FEIS.
316–3	In the project area, elk use the Libby Creek drainage bottom as a migratory route to winter range on Miller Creek and Horse Mountain. Winter range is a known, limiting factor for big game ungulates. MMC's DEIS now proposes no transmission line construction between 1 December and 30 April. I would suggest delaying the latter date until 15 May, to coincide with the date that MFWP has selected to open its winter range areas (on Wildlife Management Areas).	**Comment Response 316–3** Elk habitat quality and elk habitat use in the analysis area was described in Section 3.24.3 of the DEIS. As discussed in Section 1.1 of the SDEIS, Section 3.25 of the SDEIS, with the exception of the grizzly bear impacts analysis (section 3.25.5.2), which is presented in its entirety, disclosed the effects on various resources from the modified transmission line only. Sections of the DEIS that did not change were not repeated in the SDEIS. Except for the wildlife approach area near US 2, the description of the affected environment for elk was omitted from the SDEIS because it did not change from the DEIS. Section 3.25.3 of the FEIS includes a complete description of the affected environment for elk, including elk winter range, and discloses potential effects of the mine and transmission line alternatives.
316–4	According to surveys dating back to 1979, mountain goats also occur in good numbers between Libby Creek, through Rock Creek and south to the West Fisher. MMC's DEIS now offers help to survey goats three times per year for the 2 years before construction, then once/year during construction. In addition, blasting would be restricted during kidding times, 15 May-15 June, on Shaw Mountain. Since kidding is not restricted to just Shaw Mountain, I suggest extending the blasting restriction to include all areas of mining activity, not just around Shaw Mountain.	The transmission line alternatives are discussed in Sections 2.8 through 2.11 of the FEIS. In the agencies' transmission line alternatives, transmission line construction and decommissioning activities on National Forest System lands in the Recovery Zone and BORZ, and State trust lands would occur between June 16 and October 14. In the agencies alternatives, on other private lands outside of the Cabinet-Yaak Recovery Zone and BORZ no transmission line construction or decommissioning would occur in elk, white-tailed deer, goat, or moose winter range between December 1 and April 30, unless approved by the agencies. The Sedlak Park Substation would have no restrictions on construction timing.
316–5	I see that the DEIS has 14 pages of comments relative to grizzly bear management, so I will keep my comments short relative to bears. I strongly suggest that MMC require food storage orders on their property (and/or leased lands), equal to the latest USFS Food Storage Orders for the Kootenai National Forest. I see this option as especially relevant because so much of these lands are on or border USFS property. Otherwise, I am deferring other comments to Wayne Kasworm (USFWS) for grizzly management in the project area.	
316–6	Regarding wolves, according to our Wolf Management Specialist, there is a wolf 'homesite' near the project area in Little Cherry Creek (it is unknown whether it is a rendevouz site or a densite). Otherwise, we are aware of no other homesites in or near the project area. So far as the DEIS proposal to "implement adversive conditioning before wolves concentrate activity around a (possible) densite" (DEIS, p. 75), prior approval will be required by MFWP's Wildlife Supervisor	

Com-ment	Document #316-Montana Fish Wildlife & Parks	Response
316–4 316–5 316–6	Montana Fish, Wildlife & Parks Region One 490 N. Meridian Rd. Kalispell, MT. 59901 Jim: 406-751-4566 Fax: 406-257-0349 REF: JS053-11 December 20, 2011 Lynn Hagarty, via email: r1_montanore@fs.fed.us Kristi Ponozzo, via email: deqmontanoreEIS@mt.gov Thank you for this opportunity to comment on the Montanore Mine (MMC) DEIS. I have perused the DEIS, have been in contact with the former Montana Fish, Wildlife, & Parks (MFWP) Biologist for this area (Jerry Brown) as well as a local USFS Biologist (Jenni Hollifield), and have toured (via hiking and by vehicle) some of the site locations. In addition, I have surveyed this area using a helicopter. Overall, I have spent some time in the project area. As the current Libby Area Wildlife Biologist, I am limiting my comments to wildlife. Dating back to 1990, historic surveys for moose in this area show high use from north of Big Cherry Creek to the West Fisher drainage, particularly during winter and spring periods. These surveys show the highest number of moose observations relative to other nearby hunting districts, thus the highest numbers of moose hunting permits are issued for this hunting district (HD 105). Disturbance from the increased activity, as well as greater vehicle use, could result in a population decline for moose, which may impact moose hunting in the area. In the project area, elk use the Libby Creek drainage bottom as a migratory route to winter range on Miller Creek and Horse Mountain. Winter range is a known, limiting factor for big game ungulates. MMC's DEIS now proposes no transmission line construction between 1 December and 30 April. I would suggest delaying the latter date until 15 May, to coincide with the date that MFWP has selected to open its winter range areas (on Wildlife Management Areas). According to surveys dating back to 1979, mountain goats also occur in good numbers between Libby Creek, through Rock Creek and south to the West Fisher. MMC's DEIS now offers help to survey goats three times per year for the 2 years before construction, then once/year during construction. In addition, blasting would be restricted during kidding times, 15 May-15 June, on Shaw Mountain. Since kidding is not restricted to just Shaw Mountain, I suggest extending the blasting restriction to include all areas of mining activity, not just around Shaw Mountain. I see that the DEIS has 14 pages of comments relative to grizzly bear management, so I will keep my comments short relative to bears. I strongly suggest that MMC require food storage orders on their property (and/or leased lands), equal to the latest USFS Food Storage Orders for the Kootenai National Forest. I see this option as especially relevant because so much of these lands are on or border USFS property. Otherwise, I am deferring other comments to Wayne Kasworm (USFWS) for grizzly management in the project area. Regarding wolves, according to our Wolf Management Specialist, there is a wolf 'homesite' near the project area in Little Cherry Creek (it is unknown whether it is a rendevouz site or a densite). Otherwise, we are aware of no other homesites in or near the project area. So far as the DEIS proposal to "implement adversive conditioning before wolves concentrate activity around a (possible) densite" (DEIS, p. 75), prior approval will be required by MFWP's Wildlife Supervisor	**Comment Response 316–4** As discussed in the agencies' wildlife mitigation plan in Section 2.5.9 of the SDEIS and Section 2.5.7.4 of the FEIS, MMC would not conduct any blasting at the entrance to any adit portals during May 15 to June 15. Blasting would possibly be used to excavate transmission line pole foundations where rocky conditions were encountered, but the agencies' transmission line alternative routes are generally not in proximity to mountain goat habitat. In the agencies' alternatives, transmission line construction activities on National Forest System and State lands would occur between June 16 and October 14 and would not overlap with the mountain goat kidding season. Blasting would not be used for other activities. **Comment Response 316–5** The agencies' mitigation plan would require MMC to implement or fund the implementation of several measures to reduce the availability of food attractants and minimize the risks of mortality for grizzly bears. For example, MMC would fund the purchase of 135 bear-resistant refuse containers, plus an additional 20 per year after the first year of Construction Phase, for use at Montanore Project mine facilities and for distribution to mine employees and the community at large. MMC would also provide funding for fencing and electrification of garbage transfer stations in grizzly habitat in and adjacent to the Cabinet-Yaak Ecosystem. Other measures included in the agencies' wildlife mitigation plan to reduce the availability of food attractants and minimize the risks of mortality for grizzly bears are described in detail in Section 2.5.7.4 of the FEIS. **Comment Response 316–6** The agencies' wildlife mitigation plan described in Section 2.5.9.2 of the SDEIS and Section 2.5.7.4 of the FEIS specifies that MMC would provide funding for FWP personnel to implement adverse conditioning techniques. The agencies assume that FWP personnel would require the appropriate FWP approval before implementing this measure. Based on information from FWP (K. Laudon, pers. comm. 2010), the agencies proposed adverse condition to minimize potential effects on wolves. The agencies agree that if a wolf den or rendezvous site was not identified prior to construction of the tailings impoundment, the mitigation would not be necessary.

Com-ment	Document #316-Montana Fish Wildlife & Parks	Response
316-7 316–8 316–9	(Jim Williams), on a case-by-case basis. In addition, we anticipate that this could be especially difficult to carryout, given that some prior knowledge of an existing den or rendevouz site would be necessary. Although consideration is given to lynx in the project area, I see no consideration given to fisher and/or marten. For example, there is no mention of the relatively recent fisher research conducted by MFWP's Ray Vinkey. I also suggest that consideration once again be given to the West Fisher Transmission Line route (Alt. E-R). Brown's notes suggest that this was once the preferred (agency-) alternative, but that the Alt. D-R is now preferred - for reasons including concerns over bald eagles and wetlands. However, I maintain that *both* alternatives (D and E) are within bald eagle buffer zones. Additionally, Alt E-R necessitates the building of fewer roads than Alt. D and therefore would be less impactful to other wildlife also present in the project area. The alternative that limits the footprint of mining structures and activities would be the preferred alternative, in order to provide for the best possible outcomes for wildlife within the project area. In my professional opinion, that is alternative E-R. As for the Mine Facilities and Permit Areas, Alternative 3 is preferred, as the alternative in the best interest of all wildlife. As Brown wrote in his memo dated 7/31/08, "The MMC proposal to have plant sites in Libby and Ramsey Creeks is not acceptable, as it will hinder displacement opportunity for big game ungulates which are at high density in these drainages". In conclusion, I concur with Brown's comment (memo, 2008) that, "Overall, mitigation measures for big game species are inadequate to protect Montana's resources in the project area". However, if an alternative must be selected, my preference is to use Alt. E-R West Fisher Creek for the transmission line, and Alt. 3 for the Mine Facilities and Permit Areas. Sincerely, James R. Satterfield, Jr., Ph.D. Regional Supervisor	**Comment Response 316–7** Potential impacts to the fisher, a Forest Service sensitive species, were discussed in Section 3.24.4 of the DEIS, Section 3.25.4 of the SDEIS and the FEIS. The analysis of effects to fisher incorporates information studies conducted by Vinkey (2003) and Vinkey *et al.* (2006). The marten is not a Forest Service sensitive species or a Montana species of concern. Effects on the marten can be interpreted by effects on habitat described in section 3.22, Vegetation. **Comment Response 316–8** Please see responses to comments 185-4 and 185-17. **Comment Response 316–9** Please see response to comment 185-17. In addition, the agencies' wildlife mitigation measures have been further developed and substantially revised since 2008 and are described in detail in Chapter 2.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
	MNTR 320 UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 8 1595 Wynkoop Street DENVER, CO 80202-1129 Phone 800-227-8917 http://www.epa.gov/region08 Ref: EPR-N December 20, 2011 Mr. Paul Bradford, Supervisor Kootenai National Forest 31374 U.S. Highway 2 West Libby, Montana 59923-3022 Mr. Richard Opper, Director Montana Department of Environmental Quality P.O. Box 20091 Helena, Montana 59620-0901 Re: Supplemental Draft Environmental Impact Statement for the Montanore Project (CEQ #20110332) Dear Mr. Bradford and Mr. Opper:	**Comment Response 320-1** Thank you for your comment. **Comment Response 320-2** Thank you for your comment.
320-1	This letter is written in response to the U.S. Forest Service Kootenai National Forest (KNF) and Montana Department of Environmental Quality (MDEQ) Supplemental Draft Environmental Impact Statement (SDEIS) for the Montanore Project (Project). The U.S. Environmental Protection Agency, Region 8 (EPA) is committed to working with you in the coming months, while the U.S. Fish and Wildlife Service (FWS) prepares the Biological Opinion for the Project, to address the concerns we have identified regarding the impacts of the Project and the analysis of those impacts, before issuance of the Final Environmental Impact Statement (FEIS) and the Record of Decision (ROD).	
320-2	The KNF and MDEQ have made significant improvements to the analyses since the DEIS and we appreciate the workgroup discussions that have resolved many of our concerns on the DEIS. The new information included in the SDEIS better characterizes potential impacts of the project. For example, the SDEIS includes results from modeling groundwater and surface hydrologic effects that were not previously disclosed in the DEIS. The EPA appreciates the opportunity we have had to participate on several technical workgroups with KNF and MDEQ to develop some of this additional information. Since release of the SDEIS, we have spoken a number of times with the KNF, MDEQ, the FWS, and the U.S. Army Corps of Engineers (Corps) about concerns that have arisen from disclosure of the additional, improved impact analyses in the SDEIS. As recently discussed, given our mutual concerns for the protection of environmental resources in this area, we would like to work together to explore options for reducing significant project impacts and identify the additional information necessary to ensure complete disclosure in the FEIS. The EPA has a number of concrete suggestions that may avoid or reduce many of the impacts associated with the project. We are committed to working together to develop a mitigation plan that will reduce and offset impacts to resources, including surface water, aquatic resources, groundwater and wetlands.	

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
320-3 320-4 320-5 320-6	MNTR 320 The EPA provides its review of the SDEIS in accordance with our responsibilities and authority under Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(C), Section 309 of the Clean Air Act (CAA), 42 U.S.C. Section 7609, and Clean Water Act (CWA) §404. The level of detail in this letter is intended to clearly articulate our concerns, identify options that may reduce and mitigate impacts relative to our concerns, and facilitate future dialogue to resolve outstanding issues as we work through the CWA §404 regulatory requirements with Montanore Mineral Corporation (MMC) and the Corps. **Background** The Project is an underground copper and silver mine proposed underneath the Cabinet Mountains Wilderness Area in the Kootenai National Forest in northwestern Montana. The SDEIS evaluates three action alternatives and a no action alternative. KNF and MDEQ have identified Alternative 3, the Agency Mitigated Poorman Impoundment Alternative as their preferred alternative. The KNF and MDEQ have made a positive step by selecting a less environmentally damaging preferred alternative than was identified in the DEIS. The Project as proposed by the proponent, MMC, is Alternative 2. **Major Comments and Recommendations** Based on our review of the SDEIS and the new information provided therein, we are concerned about predicted alteration of water quantity and its consequent impacts on aquatic life and wetlands. The SDEIS also projects adverse impacts to surface water quality and groundwater quality about which we are concerned. Along with an explanation of the nature of EPA's concerns, we offer recommendations on how KNF and MDEQ might reduce or avoid impacts. The enclosed "Detailed Comments" provide additional specifics regarding these issues as well as recommendations (see Attachment). A. Water Quantity & Aquatic Life *1. Streams - Incomplete Disclosure of Impacts and Mitigation* The 3D groundwater modeling that was added to the SDEIS predicts large reductions in groundwater levels resulting from mine construction and operation that will lead to substantial reductions in stream baseflow. The EPA is concerned that the drawdown will have significant and potentially irreversible or irretrievable impacts on aquatic ecosystems that are not fully characterized or mitigated in the SDEIS. The SDEIS predicts the Project will reduce stream baseflow within the Cabinet Mountains Wilderness Area, resulting in up to 1,300 years of seasonal stream dry-up in streams that contain designated critical habitat for a threatened species, the bull trout. Changes to streamflow, water quality and sediment loading outside of the wilderness area will also adversely affect aquatic life in Poorman Creek, Little Cherry Creek and Libby Creek. The SDEIS discloses for the first time that the Project may cause long-term and permanent flow reductions in East Fork Bull River and East Fork Rock Creek in the Wilderness area, both of which are high-quality CWA §404 jurisdictional streams afforded the highest level of protection under Montana 2	**Comment Response 320-3** Thank you for your identifying options to mitigate effects and to work with the agencies in resolving outstanding issues. **Comment Response 320-4** Thank you for your comment. **Comment Response 320-5** Thank you for your comment. **Comment Response 320-6** The effects on streamflow were revised in SDEIS to reflect MMC's 3D model and again in the FEIS to reflect changes in water management of Alternatives 3 and 4. With the data currently available, the model results provide a potential range of dewatering and streamflow impacts. The 3D model results are the best currently available estimates of where changes in streamflow would most likely occur as well as the relative distribution of those effects within the drainages surrounding the mine. They are the best estimates of impacts and associated uncertainty that can be obtained using groundwater models with currently available data. Because of model uncertainty, the agencies increased the buffers between the mine void and the Rock Lake Fault and Rock Lake to 300 and 1,000 feet, respectively, in the FEIS. The FEIS also was revised to include the requirement for MMC to leave one or more barrier pillar within mine, if needed to minimize post-mining changes in East Fork Rock Creek and East Fork Bull River streamflow and water quality during Operations Phase. The 3D groundwater flow model for the mine area would be refined and rerun after data from the Evaluation Phase were incorporated, and the 3D model for the Poorman area would be refined and rerun with additional site characterization information during final design of the Poorman impoundment site (see section C.10.4, Evaluation Phase in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including more precise simulation of the effectiveness of mitigation measures, may change and the model uncertainty would decrease. The model-predicted effects during the Evaluation Phase are minor. The model used in the SDEIS and FEIS did not predict the seasonal dry-up of any stream reach that supported fisheries. The greatest modeled effects on stream baseflow were predicted to occur in the upper reaches of streams on the west side of the Cabinet Mountains during the Closure and Post-Closure Phases of the mine. Additional data collected during the Evaluation Phase would be used to refine the model predicted effects, refine mitigation measures and validate the impact assessment.

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320-7 320-8 320-9 320-10 320-11	MNTR 320 water quality regulations per their designation as Outstanding Resource Waters. However, there is very limited analysis in the SDEIS regarding the impacts of these reductions on aquatic life. EPA recommends including this analysis in the FEIS for several reasons: 1) these two streams and Libby Creek contain federally designated critical habitat for the threatened bull trout; 2) populations of pure westslope cutthroat trout and interior redband trout, Montana and Forest Service species of concern, reside in these streams and others affected by the mine; and 3) the reductions to baseflow, and consequent reductions to habitat connectivity, availability, and suitability for spawning bull trout or their redds, will likely be most acute during low-flow periods, generally mid-July through March, when bull trout spawn and fish passage is already at its lowest. As the FWS notes in its November 15, 2011 SDEIS comment letter, "the East Fork of Bull River is the single-most important bull trout spawning and rearing stream in the Lower Clark Fork bull trout core area" and "80% of observed bull trout redds in the East Fork of Bull River occur upstream of the wilderness boundary." Our concerns regarding potential impacts to bull trout are consistent with those expressed by the FWS in its letter, which highlights the possibility of serious reductions or extirpation of bull trout populations from the East Fork of Bull River. The SDEIS does not evaluate several potentially effective measures that could address the adverse or unavoidable impacts associated with the large reductions to stream baseflow. This information will likely be needed during the CWA §404 permit review stage. *Recommendations for the FEIS:* • Quantify the amount of aquatic habitat loss for streams predicted to lose flow due to the project. This analysis could include a physical habitat simulation model (PHABSIM) that quantifies weighted usable habitat area under the various alternatives at a daily or monthly time step. We recommend the analysis include a selection of reaches that represent a range of flow depletions across seasons and discuss impacts to fish passage and fish loss associated with dewatering. • Identify opportunities to minimize impacts to streamflow in the mine void area, an area where reductions are predicted to be especially severe. Increasing the buffer around the Rock Lake fault beyond 100 feet may help reduce impacts. • Explore the availability of stream restoration or enhancement as a means to compensate for unavoidable impacts to aquatic life. 2. *Rock Lake - Incomplete Characterization of Impacts and Disclosure of Mitigation* The SDEIS contains new predictions of impacts to Rock Lake that were not disclosed in the 2009 DEIS. Rock Lake is a 58-acre high mountain lake with a mean depth of 30 ft., a maximum depth of 70 ft. and a 1.1 square mile watershed located in the wilderness area. Rock Lake is unique in the area because of its size and groundwater dependence. The basis for the predicted reductions to lake levels and volume (Tables 99 and 100) is unclear, given that both the December 2010 *Final Groundwater Model Development, Calibrations and Predictions Report* (Groundwater Report) and the SDEIS state that the hydraulic characteristics of the major geologic structures which control the groundwater flow system(s) that support Rock Lake and Spring SP-31, a significant source of water to Rock Lake, have not been investigated. Because lake levels are predicted to decrease in Rock Lake within the Cabinet Mountains Wilderness 3	**Comment Response 320-7** The potential effects on baseflow in the East Fork Rock Creek and East Fork Bull River were discussed in Section 3.10.4.2.1 of the DEIS. The effects on streamflow were revised in SDEIS and FEIS to reflect MMC's 3D model and revised water management in Alternative 3 and 4. See comment response 320-8. **Comment Response 320-8** Section 3.6.4 of the FEIS was revised to quantify and better describe the potential effects of aquatic life, including bull trout and westslope cutthroat trout. Impacts on habitat availability for adult, juvenile, and spawning bull trout were also evaluated using relationships developed from these USGS studies, which assessed habitat availability for the various bull trout life stages using Physical Habitat Simulation System (PHABSIM) model data. The use of PHABSIM to evaluate habitat availability for fish is based on the preferences of a species and life stage for water depth, velocity, substrate, and cover, which can vary at different flows. **Comment Response 320-9** See comment response 320-6. **Comment Response 320-10** The agencies' wetlands and fisheries mitigation plans in Section 2.5.7 of the FEIS was revised to compensate for unavoidable adverse effects on aquatic life. A new section 2.5.7.3 was added to discuss the agencies' bull trout mitigation plan. The BA identified Copper Gulch, West Fork Rock Creek, Rock Creek, Flower Creek, or Poorman Creek as potential bull trout mitigation sites. MMC would develop final mitigation plans in cooperation with the KNF, USFWS, and FWP. The USFWS concluded in its Biological Opinion that the project as proposed in the Forest Service's preferred Mine Alternative 3 and the agencies' preferred Transmission Line Alternative D-R is not likely to jeopardize the bull trout, and is not likely to destroy or adversely modify bull trout critical habitat (USFWS 2014c). **Comment Response 320-11** The effect analysis for Rock Lake was revised in Section 3.11.4.4.4 of the SDEIS and again in the FEIS. The agencies assessed two time periods to evaluate effects on the lake. The watershed of Rock Lake receives a large amount of precipitation, primarily during the winter and spring, and during a rainy period in late fall. There is enough water even in a very dry year to refill the lake many times during both the snowmelt runoff period and the fall rainy period after drawdown periods when outflows exceed inflows. The water level in Rock Lake would "reset" to full capacity each spring and each fall even during a very dry period (ERO Resources Corp. 2012c).

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320-12 320-13 320-14 320-15	MNTR 320 Area, the baseline conditions to which littoral zone plants and animals are adapted will likely be affected. The littoral flora and fauna that occupy the perennially inundated nearshore area may no longer receive the same duration of inundation, and it is likely that habitat will be at least seasonally lost. The SDEIS does not identify potential mitigation for these impacts. *Recommendations for the FEIS:* • Include more information on groundwater modeling assumptions, uncertainties and data gaps; address the potential for seasonal dry-up of Rock Lake; and refine the model based upon additional data collection prior to the FEIS or during the Evaluation Period. We provide specific comments and recommendations on monitoring in our detailed comments. • Include a discussion of how the water balance was estimated in order to accurately assess impacts from groundwater drawdown, as well as quantification of the sources of water and seasonal variations in inflow to Rock Lake during operations and post-closure. The 3D modeling incorporates sources of water other than deep groundwater (Table 8, Groundwater Report), but does not provide citations for these values or explain how the water balance was estimated. • Address the likelihood of and potential impacts associated with dry-up of Spring SP-31. • Analyze the effects on the lake if there is a groundwater outflow, which would likely be via rock fractures associated with the Rock Lake fault, as concluded and quantified by Gurrieri (2001). • Quantify the projected lake area lost due to the decrease in the baseline lake level and identify potential mitigation or compensation. *3. Expansion of Groundwater Dependent Ecosystems Study Area* Because of the magnitude, duration, and extent of the newly predicted reductions in groundwater level, the Pre-Evaluation and Evaluation phase study of impacts to Groundwater Dependent Ecosystems (GDE) outlined in the SDEIS is especially important. Based on Figure 32, the map of the GDE Study Area, it appears that the GDE Study Area may not have captured all potentially groundwater-dependent areas impacted by the Project, including areas further south and east such as Rock Creek Meadows, the headwaters of the East Fork of Bull River and the East Fork of Rock Creek, as well as springs and wetlands within the study area. It is also unclear to EPA if Rock Lake is entirely captured within this area of study (Figure 32). Evidence suggests that Rock Lake is dependent upon groundwater during periods of the year. *Recommendation for Pre-Evaluation and Evaluation Phase:* Analyze an expanded GDE Study Area that captures additional potentially groundwater-dependent areas impacted by the Project, including areas further south and east such as Rock Creek Meadows, the headwaters of East Fork of Bull River and East Fork of Rock Creek, springs and wetlands within the study area, and Rock Lake. *4. Limited Contingency Planning for Water Management* The SDEIS includes a water balance for average flow conditions; however, flow conditions can reasonably be expected to regularly exceed average conditions. It is important to address how above-average flows from the mine and adit will be handled to ensure protection of soils, surface water and 4	**Comment Response 320-12** Due to the steep, rocky shoreline, Rock Lake has a narrow, rocky littoral zone with very little littoral zone vegetation, based on the agencies' September 2007 site visit and review of aerial photographs. Rock Lake is included in the GDE inventory area described in Appendix C. Littoral vegetation, if present in shallow areas of Rock Lake, may experience drier conditions late in the growing season. In addition, any reductions in lake level due to mining would be temporary, as the lake would refill every year during snowmelt runoff and fall rains. Because Rock Lake has very little littoral zone vegetation, the agencies do not anticipate the need for mitigation. **Comment Response 320-13** See response to comment response 320-11. **Comment Response 320-14** The agencies did not use Geomatrix' water balance for the Rock Lake effects analysis, but rather developed their own water balance for Rock Lake. Additional information was added to Section 3.11.4.4.4 of the FEIS that described the agencies' Rock Lake water balance. See also ERO Resources Corp. (2012c) memorandum. **Comment Response 320-15** The following is a qualitative discussion of the quantitative model analysis and results presented in the FEIS. Additional information was added to Section 3.11.4.4.4 of the FEIS that explained the effect on Rock Lake if SP-31 (renumbered to SP-41 in the FEIS) were to dry up. During each mine phase and after mining, reductions in the flow of SP-41 (considered to be groundwater because the spring originates from the Rock Lake fault) would reduce groundwater inflow to Rock Lake, as discussed in Section 3.11.4.4.4. In addition, without mitigation, at maximum groundwater table reduction post-closure, when the potentiometric surface decreased below the lake surface, the groundwater flow direction would reverse. As a result, water would flow out of the lake toward the mine void, resulting in a loss of lake storage. The maximum change in lake volume/lake level would be due to both reduced groundwater inflow into the lake, and a loss in water stored in Rock Lake. During the other mine phases, and at steady-state post-mining, the lake volume/level changes would be due only to reduced groundwater inflow. With mitigation (partial grouting and bulkheads), there would be less of a reduction in the flow of SP-41, no loss of water from lake storage, and a smaller reduction in lake volume.

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	MNTR 320 Area, the baseline conditions to which littoral zone plants and animals are adapted will likely be affected. The littoral flora and fauna that occupy the perennially inundated nearshore area may no longer receive the same duration of inundation, and it is likely that habitat will be at least seasonally lost. The SDEIS does not identify potential mitigation for these impacts. *Recommendations for the FEIS:* • Include more information on groundwater modeling assumptions, uncertainties and data gaps; address the potential for seasonal dry-up of Rock Lake; and refine the model based upon additional data collection prior to the FEIS or during the Evaluation Period. We provide specific comments and recommendations on monitoring in our detailed comments. • Include a discussion of how the water balance was estimated in order to accurately assess impacts from groundwater drawdown, as well as quantification of the sources of water and seasonal variations in inflow to Rock Lake during operations and post-closure. The 3D modeling incorporates sources of water other than deep groundwater (Table 8, Groundwater Report), but does not provide citations for these values or explain how the water balance was estimated. • Address the likelihood of and potential impacts associated with dry-up of Spring SP-31. • Analyze the effects on the lake if there is a groundwater outflow, which would likely be via rock fractures associated with the Rock Lake fault, as concluded and quantified by Gurrieri (2001). • Quantify the projected lake area lost due to the decrease in the baseline lake level and identify potential mitigation or compensation. *3. Expansion of Groundwater Dependent Ecosystems Study Area* Because of the magnitude, duration, and extent of the newly predicted reductions in groundwater level, the Pre-Evaluation and Evaluation phase study of impacts to Groundwater Dependent Ecosystems (GDE) outlined in the SDEIS is especially important. Based on Figure 32, the map of the GDE Study Area, it appears that the GDE Study Area may not have captured all potentially groundwater-dependent areas impacted by the Project, including areas further south and east such as Rock Creek Meadows, the headwaters of the East Fork of Bull River and the East Fork of Rock Creek, as well as springs and wetlands within the study area. It is also unclear to EPA if Rock Lake is entirely captured within this area of study (Figure 32). Evidence suggests that Rock Lake is dependent upon groundwater during periods of the year. *Recommendation for Pre-Evaluation and Evaluation Phase:* Analyze an expanded GDE Study Area that captures additional potentially groundwater-dependent areas impacted by the Project, including areas further south and east such as Rock Creek Meadows, the headwaters of East Fork of Bull River and East Fork of Rock Creek, springs and wetlands within the study area, and Rock Lake. *4. Limited Contingency Planning for Water Management* The SDEIS includes a water balance for average flow conditions; however, flow conditions can reasonably be expected to regularly exceed average conditions. It is important to address how above-average flows from the mine and adit will be handled to ensure protection of soils, surface water and 4	
320-16		**Comment Response 320-16** Section 3.11.2.3.2 of the FEIS was revised. A previous investigation (Gurrieri 2001) of Rock Lake used a different approach to develop a water balance for the lake. Using measured surface water inflow and outflow and water chemistry, Gurrieri developed a water balance that had an estimated groundwater outflow component. Using this water balance, Gurrieri analyzed the effects to Rock Lake of mine dewatering. The effects of the Gurrieri analysis were slightly greater, but within the range of model-predicted effects in the FEIS.
320-17		**Comment Response 320-17** The effect on Rock Lake was revised in Section 3.11.4.4.4 of the FEIS. Effects were shown in terms of change in lake level and volume, and surface area changes (in the FEIS) that reflect the loss of baseflow to the stream flowing into Rock Lake, loss of deep bedrock groundwater flow into the lake, and loss in storage from the lake. Because Rock Lake has a narrow, rocky littoral zone with very little littoral zone vegetation, the agencies do not anticipate the need for mitigation. The maximum effect to Rock Lake would occur during the Post-Closure phase and the predicted effect during operations may not be measurable. Section 3.11.4.4.4 of the FEIS provides a summary of the predicted effects.
320-18		**Comment Response 320-18** Due to the uncertainty of the 3D model results, and to provide a buffer to include areas where possibly measurable effects to groundwater dependent ecosystems might occur due to mining, the GDE inventory area shown on Figure C-3 was expanded in the FEIS to include the west shore of Rock Lake. The headwaters of the East Fork Rock Creek and East Fork Bull River were included in the GDE inventory area in the SDEIS and FEIS. See comment response 320-19 regarding Rock Creek Meadows.
320-19		**Comment Response 320-19** See response to comment response 320-18. Section 3.10.4 was revised in the FEIS to better describe effects on Rock Creek Meadows. The 3D model predicted a decrease of 0.01 cfs in East Fork Rock Creek where it enters Rock Creek Meadows. Observations made during an agency field review in a very dry period (September 2007) indicated that a high water table supported the wetlands. A reduction of 0.01 cfs from an estimated baseflow of 2 cfs in the East Fork Rock Creek at the Meadows would result in a less than 1 percent flow reduction. The watershed area for Rock Creek Meadows is about 1,070 acres for the East Fork Rock Creek and 2,970 acres for the other tributaries to Rock Creek Meadows that would not be affected by mining. Based on watershed size and the fact that watershed characteristics are similar to the East Fork Rock Creek
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320-21	MNTR 320 groundwater. In our June 29, 2009 comments on the DEIS, the EPA stated that a water balance for peak flow rates is necessary to support development of an excess water management contingency plan. Based upon the new information included in the SDEIS pertaining to the water balance, the EPA has identified three potential areas associated with the Project that should be addressed with greater detail regarding high-flow contingency planning. *Recommendation for the FEIS:* Discuss in more detail how the following parameters will be managed when conditions such as increased inflow due to fracture encounter, or high precipitation and associated infiltration, necessitate their management: 1. Flow to the tailings pond (include a calculation of water storage volume and an emergency overflow design and, if insufficient storage is available for peak flow, discuss the likely impacts should the pond overflow), 2. Flow to and from the treatment plant at varying production rates (include design calculations for the volume of storage in the percolation pond or design for overflow or storage, and discuss whether the treatment effectiveness could be affected by high flow and the associated changes to concentrations of metals in the inflow), and 3. Monitoring and mitigation for flow not captured by the pumpback system (seepage is anticipated although the system has been designed for 100% capture). B. Wetlands The SDEIS refines the predicted magnitude and extent of groundwater drawdown in the tailings impoundment area, affecting areas where wetlands are present (Figure 72). The SDEIS does not disclose the potential indirect impacts of this drawdown to 14.7 acres of CWA jurisdictional wetlands and 0.31 acres of non-jurisdictional wetlands in the Little Cherry Creek area, north of the Poorman Tailings Impoundment. It also does not address the potential effects of groundwater depletion to wetland and spring systems on the west side of the Cabinet Mountains, particularly the 60-acre Rock Creek Meadow wetland complex. Because all of these wetlands likely depend upon groundwater for a portion of the water that sustains wetland conditions, these groundwater reductions in combination with periods of low precipitation may decrease wetland quality and functional values due to changes in the type of vegetation present and the reduction in the size of the wetland. Mitigation sites of sufficient quality and quantity to offset both direct (12.2 total acres) and indirect impacts to wetlands may not be available in the Libby Creek watershed where the Project is located. The proposed on-site mitigation sites, the 4-acre "South Little Cherry Creek" site and the 2-acre "Gravel Pit" site, are located within the area of predicted groundwater drawdown. Drawdown is likely to prevent the perpetual establishment of wetland conditions even if additional surface water is provided. Groundwater levels in the Gravel Pit site are predicted to reduce by 20 feet and levels in the South Little Cherry Creek site are predicted to reduce up to 3 feet; pumping, and the associated reductions, could last for decades or more (p. 191). 5	watershed, the surface inflow to Rock Creek Meadows from the other tributaries is likely to be about three times greater than that from the East Fork Rock Creek. The hydrology support for the wetland vegetation in Rock Creek Meadows is not expected to be affected. Consequently, the GDE inventory and monitoring area did not include Rock Creek Meadows. **Comment Response 320-20** See comment response 320-21, 320-22, and 320-23. Contingencies for excess water management were discussed in Section 2.4.2.4.3 of the DEIS and FEIS. **Comment Response 320-21** The design criteria for the Little Cherry Creek tailings impoundment is described in the 2005 Klohn Crippen Tailings Technical Design Report, starting on p. 70. The same criteria would be used for the Poorman impoundment site. Section 5.5.1 of that report indicates "the impoundment freeboard during operations will include the following: storage of 20 days of tailings discharge; storage of the design flood, which is the runoff from the two week Probable Maximum Precipitation (PMP) plus snowmelt; and freeboard of 3 feet above peak flood water surface." Section 6.6 of the report indicates the design flood was determined in the following manner. Morrison Knudsen Engineers (1990) estimated the 24-hour probable maximum precipitation at the Little Cherry Creek impoundment site to be 11.9 inches, with an associated 3.9 inches of snowmelt. The Poorman impoundment site has the same precipitation as the Little Cherry Creek site. Applying a factor of safety of 2 to these values provides an estimated value of 32 inches, which is estimated to be equivalent to at least a two week PMP, plus snowmelt. The required flood storage is therefore estimated as 32 inches over the total impoundment area or 1,170 acre-feet, which is equivalent to 15 feet of storage for the Starter Dam and 3 feet of storage for the Final Dam. The agencies' review of the design criteria proposed for the Little Cherry Creek Site and applicable to the Poorman Site were appropriate and could be met at each site. Because of these design criteria, an emergency overflow structure in the impoundment was not included in the impoundment design of any alternative. Excess water management for Alternative 2 was discussed in Section 2.4.2.4.3 of the DEIS and FEIS. With the exception of the use of LAD Areas, (continued next page)

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320-22 320-23	MNTR 320 groundwater. In our June 29, 2009 comments on the DEIS, the EPA stated that a water balance for peak flow rates is necessary to support development of an excess water management contingency plan. Based upon the new information included in the SDEIS pertaining to the water balance, the EPA has identified three potential areas associated with the Project that should be addressed with greater detail regarding high-flow contingency planning. *Recommendation for the FEIS:* Discuss in more detail how the following parameters will be managed when conditions such as increased inflow due to fracture encounter, or high precipitation and associated infiltration, necessitate their management: 1. Flow to the tailings pond (include a calculation of water storage volume and an emergency overflow design and, if insufficient storage is available for peak flow, discuss the likely impacts should the pond overflow), 2. 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Drawdown is likely to prevent the perpetual establishment of wetland conditions even if additional surface water is provided. Groundwater levels in the Gravel Pit site are predicted to reduce by 20 feet and levels in the South Little Cherry Creek site are predicted to reduce up to 3 feet; pumping, and the associated reductions, could last for decades or more (p. 191). 5	Alternatives 3and 4 would use the same management techniques. The agencies' analysis concluded anticipated storage and the excess water management techniques would be adequate to manage peak flows. The agencies carefully reviewed the water balance developed by MMC for Alternative 2. Similarly, the agencies developed the water balance for Alternative 3. Section 2.5.4.3 of the DEIS discussed water management of Alternative 3. In response to EPA's comments on the DEIS, a more detailed water balance was presented in the SDEIS. At EPA's request, the agencies provided in the SDEIS a water balance for each of the five phases of the project: Evaluation, Construction, three different Operation periods representing varying production rates, Closure and Post-Closure. The SDEIS and FEIS indicated using thickened tailings may affect the ability to use the impoundment as a reservoir to maintain a water balance. In final design, MMC would re-evaluate the water balance and the tailings deposition plan. Several options for water storage would be available. **Comment Response 320-22** See comment response 320-21. Section 2.4.2.4.3 of the FEIS was revised to indicate the percolation pond has an estimated capacity of 25 acre-feet (8.1 million gallons). If the pond reaches capacity, an overflow pipe routes water to a direct discharge to Libby Creek (outfall 003). Since MMC began dewatering of the Libby Adit, it has only discharged water to outfall 001. The pond was designed by NMC in the late 1980s and design calculations are not available. Section 2.5.4.3.3 of the FEIS was revised to require MMC to estimate the maximum discharge rate during the estimated wettest year in 20-year period using best available precipitation data and modify the Water Treatment Plant and percolation pond such that they would have adequate capacity to treat discharges during a 20-year wet year. Effluent limits set in the MPDES permit would have to be met regardless of the flow rate or influent water quality. **Comment Response 320-23** The agencies' monitoring plans were described, by phase, in Section C.10 of the SDEIS and FEIS. These plans included monitoring performance of the pumpback well system, monitoring of groundwater quality downgradient of the pumpback well system, and actions levels and adaptive management associated with the monitoring.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
320-24 320-25	MNTR 320 groundwater. In our June 29, 2009 comments on the DEIS, the EPA stated that a water balance for peak flow rates is necessary to support development of an excess water management contingency plan. Based upon the new information included in the SDEIS pertaining to the water balance, the EPA has identified three potential areas associated with the Project that should be addressed with greater detail regarding high-flow contingency planning. *Recommendation for the FEIS:* Discuss in more detail how the following parameters will be managed when conditions such as increased inflow due to fracture encounter, or high precipitation and associated infiltration, necessitate their management: 1. Flow to the tailings pond (include a calculation of water storage volume and an emergency overflow design and, if insufficient storage is available for peak flow, discuss the likely impacts should the pond overflow), 2. Flow to and from the treatment plant at varying production rates (include design calculations for the volume of storage in the percolation pond or design for overflow or storage, and discuss whether the treatment effectiveness could be affected by high flow and the associated changes to concentrations of metals in the inflow), and 3. Monitoring and mitigation for flow not captured by the pumpback system (seepage is anticipated although the system has been designed for 100% capture). B. Wetlands The SDEIS refines the predicted magnitude and extent of groundwater drawdown in the tailings impoundment area, affecting areas where wetlands are present (Figure 72). The SDEIS does not disclose the potential indirect impacts of this drawdown to 14.7 acres of CWA jurisdictional wetlands and 0.31 acres of non-jurisdictional wetlands in the Little Cherry Creek area, north of the Poorman Tailings Impoundment. It also does not address the potential effects of groundwater depletion to wetland and spring systems on the west side of the Cabinet Mountains, particularly the 60-acre Rock Creek Meadow wetland complex. Because all of these wetlands likely depend upon groundwater for a portion of the water that sustains wetland conditions, these groundwater reductions in combination with periods of low precipitation may decrease wetland quality and functional values due to changes in the type of vegetation present and the reduction in the size of the wetland. Mitigation sites of sufficient quality and quantity to offset both direct (12.2 total acres) and indirect impacts to wetlands may not be available in the Libby Creek watershed where the Project is located. The proposed on-site mitigation sites, the 4-acre "South Little Cherry Creek" site and the 2-acre "Gravel Pit" site, are located within the area of predicted groundwater drawdown. Drawdown is likely to prevent the perpetual establishment of wetland conditions even if additional surface water is provided. Groundwater levels in the Gravel Pit site are predicted to reduce by 20 feet and levels in the South Little Cherry Creek site are predicted to reduce up to 3 feet; pumping, and the associated reductions, could last for decades or more (p. 191). 5	**Comment Response 320-24** The SDEIS and FEIS disclosed the potential indirect effects of each mine alternative in the *Indirect Effects* subsections in Section 3.23.4. The agencies revised the *Indirect Effects* subsections in Section 3.23.4 in the FEIS to quantify the potential effects of the pumpback well system. The Corps concluded that the pumpback well operation was not a secondary effect of the discharge of fill material and was not within their scope of analysis. The same sections were revised in the FEIS to discuss the effect on the 60-acre Rock Creek Meadow wetland (see comment response 320-19). **Comment Response 320-25** The KNF anticipates the Swamp Creek mitigation site would provide adequate credit for mitigation of unavoidable effects on jurisdictional wetlands. The Corps will decide if MMC's proposed mitigation complies with the Corp's mitigation requirements for jurisdictional wetlands. The decision will be documented in the Corps' decision document on MMC's 404 permit application. The KNF retained the three Little Cherry Creek sites and the Gravel Pit site as mitigation for isolated wetlands. The KNF recognizes that the proposed sites are within the drawdown area of the pumpback wells as predicted by the 3D tailings impoundment groundwater model. Section 3.10.4.2 of the FEIS indicated operation of a pumpback well system may not affect water levels and five of the springs south of Little Cherry Creek because of an apparent subsurface bedrock ridge that separates groundwater flow between the watershed of Little Cherry Creek from those of Drainages 5 and 10 in the Poorman Impoundment Site (Chen Northern 1989). As the SDEIS and FEIS discussed (FEIS section 2.5.2.6.5), the model would be rerun after MMC collects additional data in the Poorman Impoundment Site. The KNF also retained the three Little Cherry Creek sites and the Gravel Pit site as mitigation for isolated wetlands because many of the isolated wetlands are supported by surface water and not groundwater. Developing the three Little Cherry Creek sites and the Gravel Pit site as wetland mitigation sites concurrent with impoundment construction would allow soils from wetlands to be filled to be used at the mitigation sites, further enhancing their mitigation success. After the 3D model has been rerun, MMC would reevaluate the feasibility of the three Little Cherry Creek sites and the Gravel Pit site as mitigation for isolated wetlands. Should one or more of the sites be determined to infeasible, MMC could develop similar sites north of Little Cherry Creek where groundwater drawdown would not occur.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
320-26 320-27 320-28 320-29	MNTR 320 *Recommendations for the FEIS:* • Identify and characterize the potential indirect impacts of groundwater drawdown to the 14.7 acres of jurisdictional wetlands and the 0.31 acres of non-jurisdictional wetlands north of the Poorman Tailings Impoundment and the potential effects of groundwater depletion to wetland and spring systems on the west side of the Cabinet Mountains, including the Rock Creek Meadow wetland complex. • Describe the potential to avoid or minimize the newly identified, potential indirect impacts and the direct impacts to wetlands through the use of paste tailings with surface deposition or dry "stack" tailings with backfill into the mine void. The lower moisture content and reduced impoundment footprint associated with these tailings management options may reduce impacts to wetlands and the amount of groundwater pumping necessary. C. Surface Water Quality We are pleased that the aquatic monitoring plan in Appendix K is more detailed and improved over the Appendix C water resources/aquatics monitoring plan included in the 2009 DEIS, but we do identify two recommendations for the plan below. The SDEIS discloses new flow reduction impacts of the Project that appear to be inconsistent with the State of Montana's Water Quality Act nondegradation provisions. According to ARM 17.30.705(1), the State's nondegradation provisions apply "to any activity of man resulting in a new or increased source which may cause degradation." The SDEIS does not discuss whether the baseflow reductions in the Cabinet Mountains Wilderness from mining activities would meet these applicability criteria. We continue to have the concern expressed in our DEIS comment letter that the 1992 BHES Order in-stream limit for total inorganic nitrogen (TIN) of 1 mg/l may not be protective of beneficial uses, since the limit is less stringent than MDEQ's draft numeric nutrient criterion of 0.3 mg/L, which identifies a level to protect against aquatic effects of nitrogen in streams. The SDEIS suggests that it is unknown whether TIN concentrations greater than 0.233 mg/L, and less than 1 mg/L, would increase algal growth to the extent that it would be considered "nuisance" algae. *Recommendations for the FEIS and ROD:* • Identify alert levels for particular monitoring parameters, which would trigger follow-up monitoring, investigation, contingency, corrective and/or remedial actions to correct or avoid worsening of a developing environmental problem. • Include in the FEIS and ROD a similar commitment regarding aquatic monitoring to that in the Rock Creek Mine FEIS and ROD (see p. 13 of Appendix K in Rock Creek Mine FEIS). • Include a discussion regarding the applicability of the State's nondegradation policy to the reductions in water quantity in the Cabinet Mountains Wilderness. • Analyze whether the predicted changes in baseflow, 7Q10 flows, 7Q2 flows, and lake levels may cause degradation. • Identify which levels of protection would be afforded to waters of the state that lie within the Cabinet Mountains Wilderness. 6	**Comment Response 320-26** See comment response s 320-19 and 320-24. **Comment Response 320-27** The agencies' analysis of alternatives to avoid or minimize effects on wetlands was disclosed in the SDEIS and FEIS. The analysis included paste tailings and dry stack tailings. Paste tailings deposition into the Poorman tailings facility would likely reduce potential seepage from the impoundment. The reduction in seepage would reduce the volume of water reporting to the seepage collection system, which would consist of an underdrain, pond and pumps. Seepage would be collected and pumped from this system back to the mill for re-use. Seepage from the tailings impoundment that would bypass the underdrains of the seepage collection system is predicted to be 25 gpm during mining with the use of either paste tailings or thickened slurry tailings. Similar to the Montanore impoundment with thickened slurry tailings, the seepage rate to groundwater estimated for the Rock Creek Project impoundment with paste tailings is in the 20 to 30 gpm range. Paste tailings would therefore not reduce the amount of seepage reaching groundwater. Reducing the moisture content of the tailings would have no effect on groundwater pumping necessary because the rate of tailings seepage reaching groundwater would be independent of the tailings moisture content. **Comment Response 320-28** Thank you for your comment. The aquatic monitoring plan was in Appendix C. **Comment Response 320-29** The effect on streamflow disclosed in the SDEIS was based on MMC's 3D groundwater model, which had similar predictions as the 2D groundwater model used for the DEIS analysis. Section 3.13.1.1.1 of the SDEIS and FEIS disclosed that for parameters not covered by the BHES authorization to degrade (including flow), the applicable nonsignificance criteria established by Montana's 1994 nondegradation rules, and any subsequent amendments, apply, unless MMC obtains an authorization to degrade under current statute. The purpose of the EIS is not to determine whether water quality changes meet the applicable nonsignificance criteria; DEQ would make such a determination.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
	MNTR 320 *Recommendations for the FEIS:* • Identify and characterize the potential indirect impacts of groundwater drawdown to the 14.7 acres of jurisdictional wetlands and the 0.31 acres of non-jurisdictional wetlands north of the Poorman Tailings Impoundment and the potential effects of groundwater depletion to wetland and spring systems on the west side of the Cabinet Mountains, including the Rock Creek Meadow wetland complex. • Describe the potential to avoid or minimize the newly identified, potential indirect impacts and the direct impacts to wetlands through the use of paste tailings with surface deposition or dry "stack" tailings with backfill into the mine void. The lower moisture content and reduced impoundment footprint associated with these tailings management options may reduce impacts to wetlands and the amount of groundwater pumping necessary. C. Surface Water Quality We are pleased that the aquatic monitoring plan in Appendix K is more detailed and improved over the Appendix C water resources/aquatics monitoring plan included in the 2009 DEIS, but we do identify two recommendations for the plan below. The SDEIS discloses new flow reduction impacts of the Project that appear to be inconsistent with the State of Montana's Water Quality Act nondegradation provisions. According to ARM 17.30.705(1), the State's nondegradation provisions apply "to any activity of man resulting in a new or increased source which may cause degradation." The SDEIS does not discuss whether the baseflow reductions in the Cabinet Mountains Wilderness from mining activities would meet these applicability criteria. **320-30** We continue to have the concern expressed in our DEIS comment letter that the 1992 BHES Order in-stream limit for total inorganic nitrogen (TIN) of 1 mg/l may not be protective of beneficial uses, since the limit is less stringent than MDEQ's draft numeric nutrient criterion of 0.3 mg/L, which identifies a level to protect against aquatic effects of nitrogen in streams. The SDEIS suggests that it is unknown whether TIN concentrations greater than 0.233 mg/L, and less than 1 mg/L, would increase algal growth to the extent that it would be considered "nuisance" algae. *Recommendations for the FEIS and ROD:* **320-31** • Identify alert levels for particular monitoring parameters, which would trigger follow-up monitoring, investigation, contingency, corrective and/or remedial actions to correct or avoid worsening of a developing environmental problem. **320-32** • Include in the FEIS and ROD a similar commitment regarding aquatic monitoring to that in the Rock Creek Mine FEIS and ROD (see p. 13 of Appendix K in Rock Creek Mine FEIS). **320-33** • Include a discussion regarding the applicability of the State's nondegradation policy to the reductions in water quantity in the Cabinet Mountains Wilderness. **320-34** • Analyze whether the predicted changes in baseflow, 7Q10 flows, 7Q2 flows, and lake levels may cause degradation. **320-35** • Identify which levels of protection would be afforded to waters of the state that lie within the Cabinet Mountains Wilderness. 6	**Comment Response 320-30** Section 3.6.4.2.3 of the SDEIS and FEIS addressed this concern, which EPA raised during the DEIS comment period. In 2014, the DEQ developed total nitrogen and total phosphorus standards that protect beneficial uses, and prevent nuisance levels of bottom-attached algae. The total nitrogen standard is 0.275 mg/L. In 2015, MMC requested that the general variance for both total nitrogen and total phosphorus be incorporated into the MPDES permit and indicated that the facility design flow is less than 1.0 million gallons per day (mgd). In the draft renewal MPDES permit, the DEQ preliminarily granted the variance request for total nitrogen of 15 mg/L, and preliminarily determined that a variance for total phosphorus was not necessary because the facility did not show reasonable potential to violate this nutrient standard. MMC would have to comply with the BHES Order limit of 1 mg/L for total inorganic nitrogen. The final MPDES permit will contain DEQ's final determination regarding the variance. **Comment Response 320-31** "Alert levels" or "Action levels" that would require MMC action due to a measurable change in surface water quality, groundwater quality, groundwater flow or wetland or riparian areas were described in Section C.10.7 of the SDEIS and revised in Section C.10.8.3 of the FEIS. **Comment Response 320-32** See comment response 320-31. The monitoring, action levels, and corrective actions proposed for Montanore are similar to those proposed for the Rock Creek Project. **Comment Response 320-33** See response to comment response 320-29. **Comment Response 320-34** See comment response 320-29. **Comment Response 320-35** The requested information for outstanding resource waters such as those in the CMW for surface water hydrology and water quality was provided in Sections 3.11.1 and 3.13.1 of the SDEIS and FEIS.

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320-36 320-37 320-38 320-39 320-40 320-41	MNTR 320 • In order to enable accurate assessment of beneficial uses, MMC should follow MDEQ's reach-wide sampling method for macroinvertebrates and benthic chlorophyll-*a* samples.[1] This approach ensures the State can evaluate the sites using their existing macroinvertebrate model and correctly compare the data to their thresholds. In addition, we also recommend analysis for increasing chlorophyll-*a* concentrations that may suggest impacts prior to exceedance of the threshold. D. Groundwater Quality The SDEIS predicts that groundwater quality beneath the tailings impoundment will exceed MDEQ standards and the BHES Order limits for antimony and manganese, and that concentrations of nitrate, metals, and total dissolved solids will increase (p. S-32). It is not clear if any mitigation measures are proposed to address these changes in quality. *Recommendations for the FEIS:* • Identify the mitigation that has been developed to prevent the predicted exceedances of groundwater quality standards. • Give further consideration to paste or dry "stack" tailings, which have lower water content than thickened tailings, and would reduce seepage of water into the underlying groundwater (Final Tailings Disposal Alternatives Analysis Report, p. 77), minimizing potential exceedances of groundwater standards and changes to existing quality. • Describe what impact discharges to groundwater from the tailings pond will have on surface water quality under low-, average- and high-flow monthly conditions. E. Tailings Impoundment Design and Operations As noted above, the limited mitigation opportunities for the Project highlight the importance of minimizing and avoiding impacts through design and operation changes. *1. Paste Tailings* The *Final Tailings Disposal Alternatives Analysis Report* indicates that, compared to the tailings management plan in the DSEIS, the use of paste tailings could provide additional environmental benefits beyond the reduction of direct impacts to wetlands, including reduction of the tailings seepage volume. Surface disposal of paste tailings, which is in use elsewhere in the industry, involves removal of more water from the tailings than what is currently proposed prior to storage in a tailings impoundment. It offers potentially significant benefits to surface water quantity and groundwater quality and warrants consideration in the FEIS. Less seepage from paste tailings could represent a significant benefit given the predicted exceedances of groundwater quality due to seepage from the tailings impoundment. Additionally, less seepage may reduce the amount of groundwater pumping and subsequent drawdown around the Poorman tailings disposal site, alleviating predicted streamflow reductions in Poorman, Little Cherry and Libby Creeks and wetlands impacts within the area (p. S-24). [1] http://deq.mt.gov/wqinfo/qaprogram/sops.mcpx 7	**Comment Response 320-36** Sections C.11.6 and C.11.7 of the SDEIS and FEIS discussed that MMC would follow DEQ sampling methods for macroinvertebrates and benthic chlorophyll-*a*. **Comment Response 320-37** Section 3.13.4.2.2 of the SDEIS disclosed that based on the mass balance calculations, predicted concentrations of antimony and manganese in groundwater after mixing beneath the tailings impoundment, without attenuation, may exceed the human health standard for antimony and the BHES Order limit for manganese. The predicted manganese concentration in groundwater may be lower than predicted due to oxygenation of the water stored in the impoundment causing precipitation of manganese oxide. Section 3.13.4 of the FEIS was revised to provide additional information about attenuation. Mitigation measures are not needed because all seepage reaching groundwater would be collected by the pumpback system and not discharged to surface water in Alternatives 3 and 4. In Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. Seepage pumpback wells could be installed along the downstream toe of the tailings dam. As discussed in Section 3.13.4.2.2 of the FEIS, the discharge of seepage to groundwater beneath the impoundment would be authorized by a DEQ Operating Permit and a seepage recovery zone would encompass the impoundment footprint and extend to the pumpback wells. Section 2.5.3.5.4 of the FEIS discussed that MMC requested a groundwater mixing zone beneath and downgradient of the Poorman impoundment for changes in water quality. The requested mixing zone extended from all areas beneath the impoundment to compliance monitoring wells downgradient of the pumpback wells. A mixing zone a limited area of a surface water body or a portion of an aquifer, where initial dilution of a discharge takes place and where water quality changes may occur and where certain water quality standards may be exceeded (ARM 17.30.502(6)). The goal of a pumpback system would be to establish and maintain complete hydraulic capture of all groundwater moving downgradient from the impoundment, as confirmed by measuring water levels at strategically located monitoring wells. The actual performance of the capture system would be determined by monitoring water quality downgradient of the capture zone. **Comment Response 320-38** See comment response 320-37. (Continued next page)

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320-42	MNTR 320 2. *Dry Stack Tailings* The use of dry stack tailings management, in which tailings are dewatered to a lower moisture content than typical paste tailings and then returned to the mine void, could provide more environmental benefits than use of paste tailings. This technology would further reduce the footprint of the impoundment, seepage into groundwater and the need to pump and recapture groundwater. Because this option would eliminate or reduce the size of the surface tailings impoundment, it would necessitate change to water management. Dry stack tailings management is in use elsewhere in the mining industry.	**Comment Response 320-39** Seepage from the tailings impoundment that would bypass the underdrain system is predicted to be 25 gpm during mining without the use of paste or dry "stack" tailings. See comment response 320-27 and 320-37.
320-43	A belt conveyer could introduce dry stack tailings into the mine. Underground space could be excavated near these conveyors for storage of the dry tailings until they could be distributed into the mined-out rooms with trucks and front-end loaders. The belt conveyor could be designed to be reversible, enabling it to transport dry tailings back underground. This technology would avoid the high costs of pumping and pipelines. It would require an additional filtration plant and equipment on the surface to dewater the mill tailings to a lower moisture content than typical paste tailings. This additional surface plant and equipment cost could be offset by eliminating paste tailings pumping costs.	**Comment Response 320-40** See comment response 320-37. Tailings seepage would not discharge to surface water and would not affect surface water quality under any flow condition.
320-44	*Recommendation for the FEIS:* More fully evaluate and disclose the potential environmental benefits and feasibility of paste tailings surface deposition and dry "stack" tailings with backfilling and consider these measures as potential components of the preferred alternative.	**Comment Response 320-41** See comment response 320-27 and 320-37.
320-45	**Conclusion and Rating** EPA's official comments on this EIS include the comments provided above, as well as the enclosed Detailed Comments document. We have provided comments on water quantity, water management, aquatic life, wetlands, water quality, groundwater quality, air quality, tailings impoundment design and operations, monitoring and adaptive management, mitigation and additional information for disclosure.	**Comment Response 320-42** See comment response 320-27 and 320-37.
320-46	Based on the information presented in the SDEIS, the EPA is concerned that Alternative 3, the Agency Mitigated Poorman Impoundment Alternative, is projected to cause significant direct and indirect impacts on aquatic resources regulated by CWA §404. Specifically, this preferred alternative may cause or contribute to significant degradation of waters of the U.S., including significant adverse effects on aquatic ecosystems diversity, productivity and stability (40 CFR 230.10(c)(3)). The extent of these impacts has not been fully evaluated at this time. It is possible that additional studies could be completed to provide information for full evaluation during the Section 404 permit compliance process.	**Comment Response 320-43** See comment response 320-27 and 320-37.
320-47	Consistent with Section 309 of the Clean Air Act, it is the EPA's responsibility to provide an independent review and evaluation of the potential environmental impacts of this Project. The EPA's rating is for the preferred action alternative only. Based on the procedures the EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action, the EPA is rating this DEIS as "EO-2" (Environmental Objections-Insufficient Information). The "EO" rating means the EPA identified environmental impacts to aquatic life, streamflow, groundwater, wetlands, and water quality that should be avoided or minimized in order to adequately protect the environment. The 8	**Comment Response 320-44** See comment response 320-27 and 320-37. **Comment Response 320-45** Thank you for your comment. **Comment Response 320-46** The agencies prepared a *Draft 404(b)(1) Analysis* presented in Appendix L of the SDEIS that discussed compliance of Alternative 3, the KNF's preferred alternative, with the Clean Water Act Section 404(b)(1) Guidelines. A *Final Lead Agencies' 404(b)(1) Analysis* was presented in Appendix L of the FEIS. During the 404 permitting process, the Corps of Engineers and the EPA will make the necessary factual determinations relative to compliance with the Guidelines. **Comment Response 320-47** Thank you for your comment.

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"2" rating signifies that the SDEIS does not contain sufficient information for the EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment. A full description of the EPA's EIS rating system is enclosed. As we have communicated above, the EPA is committed to working with you in the coming months, while the FWS prepares the Biological Opinion for the Project, to better understand the flow-related issues and identify potential measures to avoid, minimize or reduce impacts, before issuance of the FEIS and ROD.

The EPA appreciates the opportunity to provide comments. If we may provide further explanation of our comments, please contact Suzanne Bohan at (303) 312-6925.

Sincerely,

// osb CLC //

Carol L. Campbell
Assistant Regional Administrator
Office of Ecosystems Protection
and Remediation

Enclosures

cc: Lynn Hagarty, Kootenai National Forest
Kristi Ponozzo, Montana Department of Environmental Quality
Martha Chieply, U.S. Army Corps of Engineers, Omaha District
Jim Winters, U.S. Army Corps of Engineers, Omaha District

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	MNTR 320 **ATTACHMENT** **EPA's Detailed Comments** **Water Quantity, Aquatic Life, Wetlands, Surface Water Quality,** **Air Quality and Additional Comments** **Montanore Project Supplemental Draft EIS** **Water Quantity** ***Groundwater modeling*** Given the magnitude of predicted groundwater and baseflow reductions disclosed in the SDEIS and the incomplete characterization of hydrology, the EPA is providing the following recommendations for collecting additional field data and supplementing the hydrologic assessment of the site. *Recommendations:* *Mine Void Area* - The EPA recommends the FEIS and ROD reflect the intent of the DEIS to refine the groundwater model during the Pre-Evaluation and Evaluation Phase to confirm the 3D model's predictions and reduce uncertainty. We also recommend collection of the following data during the Pre-Evaluation Phase: • Flow data and head data for springs SP-31, SP-32 and SP-16 • Data to characterize the hydraulic characteristics of the Rock Lake fault where it outcrops • At least one piezometer should be installed in the fault above Rock Lake • Water samples 3 to 4 times over the annual hydrograph for stable water isotopes (oxygen-18, deuterium) and tritium analysis from: East Fork Bull River, East Fork Rock Creek, Rock Lake, St. Paul Lake and Rock Creek meadows. ○ These data, along with flow and head data, would be useful for determining the source(s) of water to the streams, lakes, and wetlands. *Tailings Impoundment Area* - We understand that nested piezometers were installed in 2011 and recommend that the water level and isotopic data from the nested piezometers be incorporated into the hydrologic assessment of the site either at the FEIS stage or during the Evaluation Phase. To fully characterize the tailings impoundment area hydrology, we recommend the following: • Determine vertical gradients around the impoundment as it appears to be a groundwater discharge area. • Verify possible existence and extent of the high hydraulic conductivity alluvial valley beneath the impoundment footprint (p. 244). If present, contaminated groundwater could discharge from this channel into Libby Creek. It is important to understand if this buried channel exists and if it is connected to Libby Creek for post-closure monitoring of the impoundment. • Develop a water table map for the Poorman tailings impoundment area. 1	**Comment Response 320-48** Thank you for your comment and recommendations. **Comment Response 320-49** Section 2.5.2.6.5 and C.10.3.2.2 of the SDEIS and FEIS discussed using the updated model to refine the GDE inventory area and buffer thicknesses. Sections 2.5.2.6.5 and C.10.4.5 of the FEIS discussed that before the Construction Phase MMC would update both 3D groundwater models for the mine area and the Poorman Impoundment Site, incorporating the hydrologic and geologic information collected during the Evaluation Phase. **Comment Response 320-50** Measurement of the flow rate (stage) using a continuous electronic recording of SP-31 and SP-32 (renumbered to SP-41 and SP-42 in FEIS) was required in the agencies' monitoring plan in the SDEIS and FEIS. The agencies would consider including SP-16 in the monitoring plan after completion of the GDE inventory described in Section C.10.3.2. **Comment Response 320-51** The agencies' requirement to characterize the Rock Lake Fault was discussed in Section C.10.4.4.1 of the SDEIS and FEIS. **Comment Response 320-52** The area above Rock Lake is in the CMW and the agencies do not believe installation of a piezometer in the wilderness was warranted because of effect on the grizzly bear. The surface water and groundwater monitoring in the vicinity of Rock Lake discussed in Section C.10 of the SDEIS and FEIS would be adequate to meet the monitoring plans' objectives. Because of the limitations on installing piezometers at the surface above the proposed mine void, the agencies required that numerous piezometers be installed from within the mine void and continuously monitored for groundwater pressure as the mine progressed. **Comment Response 320-53** The agencies' monitoring plan (C.10 of the SDEIS and FEIS) included using a comparison of isotopes results of samples from various locations collected in the late-summer/early-fall baseflow period to those from the Libby Adit or mine void to assist in determining water source. Sample sites and sampling frequencies for isotope sampling would be based on the GDE inventory. **Comment Response 320-54** Thank you for your comment and recommendations. The data collected in 2011 and 2012 were incorporated into the FEIS analysis. (continued next page)

Comment	Document #320-U.S. Environmental Protection Agency	Response
320-58 320-59 320-60 320-61 320-62	MNTR 320 *Other Recommendations:* • Page 252: Address in the FEIS and ROD the intent to conduct monitoring of springs on Rock Lake fault two times per year instead of one time per year. Monitoring twice per year (once as soon as the site is accessible in the early summer and once in late summer/early fall) allows for evaluation of seasonal differences. • Page 298: Provide the total uncertainties in estimated percentage change for 7Q10 and 7Q2 flows in Table 102 to characterize the range of possible flows. • Section 3.10: Use the term "regional potentiometric surface" or "saturated zone" instead of "water table" to more accurately represent this hydrogeologic situation. • Page 232: Provide the hydrostratigraphic unit for the hydraulic conductivity values. • Page 232: Explain infiltration of 14% if there is an upward gradient. **Aquatic Life** ***Dewatering*** The SDEIS states: "Without mitigation, the effects on habitat in upper East Fork Rock Creek would be substantial and last for hundreds of years (p. 139)." However, the SDEIS states "Implementation of this mitigation [grouting] during the Operations Phase would result in minimal improvement in the predicted baseflow changes." Moreover, the SDEIS describes mitigation effectiveness as decreasing and then becoming highly uncertain over 50 to 100 years (p. 253), a fraction of the 1,172 to 1,322 year period over which stream baseflow will be impacted (footnote to Table 89). *Recommendation for the FEIS:* Clarify that even with mitigation, temporary and permanent baseflow reductions are large and long-lasting enough that substantial adverse impacts to aquatic life will occur. ***Flow Fluctuation*** The SDEIS states that Libby Creek flows below the adit site will increase and decrease depending upon the mining phase (i.e., 79% increase in the construction phase, 18% decline in the operations phase, 75% increase in the closure phase and 34% increase in the post-closure phase). While the SDEIS states that the additional flows will provide more thermal refuge areas as well as deeper pool areas, the document does not address the potential adverse impacts on aquatic life of these types of flow fluctuations. These types of successive flow changes can affect the structure and composition of aquatic communities in numerous ways, including increasing macroinvertebrate drift and altering the relative abundance of sensitive and tolerant species. Increases in Libby Creek flows can affect channel and bank stability and increase channel and bank erosion. Mitigation for these effects could include discharge/flow management to mimic a more natural flow regime or stream restoration and enhancement. The FWS also mentioned these concerns in its November 15, 2011 letter. *Recommendation for the FEIS:* Include a discussion of potential effects of Libby Creek's fluctuating flows on aquatic life. 2	The agencies' requirement to characterize wetlands in the impoundment sites is described in Section C.10.3.2.1. The data collected in 2011, 2012 and 2013from the impoundment area were incorporated into the FEIS analysis. **Comment Response 320-56** Section 3.10.3.2.2 of the SDEIS and FEIS discussed that, based on available data, the Poorman site does not appear to have a buried channel, as does the Little Cherry Creek site. Section 2.5.2.6.3 of the FEIS discussed that the final design process for the Poorman Impoundment Site would include geotechnical field studies during final design to characterize the Poorman site with respect to possible preferential pathways and the specific nature of the bedrock between the Poorman and Little Cherry Creek watersheds. **Comment Response 320-57** A water table map (potentiometric surface) was presented on Figure 72 in the DEIS and on Figure 70 in the SDEIS and FEIS. Groundwater levels in the Poorman Impoundment Site would be collected during the final design process, described in Section 2.5.2.6.3 of the SDEIS and FEIS and in Section C.10. **Comment Response 320-58** Section C.10.3.2.3 of the SDEIS and FEIS discussed that springs selected for GDE monitoring would be measured twice per year (first in late summer/early fall, then again as soon as the site is accessible in the early summer on). **Comment Response 320-59** Section 3.8.3.1 of the FEIS was revised to provide the standard error of prediction for the estimated $7Q_{10}$ and $7Q_2$ flow values. The $7Q_{10}$ and $7Q_2$ flows used in the analysis were the average $7Q_{10}$ and $7Q_2$ flows. **Comment Response 320-60** The term "water table" was replaced with "potentiometric surface" in the SDEIA and FEIS. **Comment Response 320-61** The impoundment area stratigraphy was not subdivided into specific hydro-stratigraphic units. As stated in the SDEIS and FEIS, the hydraulic conductivities are assigned to undifferentiated glaciofluvial deposits and glaciolacustrine deposits, similar to what was used in the impoundment area 3D model. **Comment Response 320-62** See next page.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
320-62 320-63 320-64 320-65 320-66	MNTR 320 *Other Recommendations:* • Page 252: Address in the FEIS and ROD the intent to conduct monitoring of springs on Rock Lake fault two times per year instead of one time per year. Monitoring twice per year (once as soon as the site is accessible in the early summer and once in late summer/early fall) allows for evaluation of seasonal differences. • Page 298: Provide the total uncertainties in estimated percentage change for 7Q10 and 7Q2 flows in Table 102 to characterize the range of possible flows. • Section 3.10: Use the term "regional potentiometric surface" or "saturated zone" instead of "water table" to more accurately represent this hydrogeologic situation. • Page 232: Provide the hydrostratigraphic unit for the hydraulic conductivity values. • Page 232: Explain infiltration of 14% if there is an upward gradient. **Aquatic Life** ***Dewatering*** The SDEIS states: "Without mitigation, the effects on habitat in upper East Fork Rock Creek would be substantial and last for hundreds of years (p. 139)." However, the SDEIS states "Implementation of this mitigation [grouting] during the Operations Phase would result in minimal improvement in the predicted baseflow changes." Moreover, the SDEIS describes mitigation effectiveness as decreasing and then becoming highly uncertain over 50 to 100 years (p. 253), a fraction of the 1,172 to 1,322 year period over which stream baseflow will be impacted (footnote to Table 89). *Recommendation for the FEIS:* Clarify that even with mitigation, temporary and permanent baseflow reductions are large and long-lasting enough that substantial adverse impacts to aquatic life will occur. ***Flow Fluctuation*** The SDEIS states that Libby Creek flows below the adit site will increase and decrease depending upon the mining phase (i.e., 79% increase in the construction phase, 18% decline in the operations phase, 75% increase in the closure phase and 34% increase in the post-closure phase). While the SDEIS states that the additional flows will provide more thermal refuge areas as well as deeper pool areas, the document does not address the potential adverse impacts on aquatic life of these types of flow fluctuations. These types of successive flow changes can affect the structure and composition of aquatic communities in numerous ways, including increasing macroinvertebrate drift and altering the relative abundance of sensitive and tolerant species. Increases in Libby Creek flows can affect channel and bank stability and increase channel and bank erosion. Mitigation for these effects could include discharge/flow management to mimic a more natural flow regime or stream restoration and enhancement. The FWS also mentioned these concerns in its November 15, 2011 letter. *Recommendation for the FEIS:* Include a discussion of potential effects of Libby Creek's fluctuating flows on aquatic life. 2	**Comment Response 320-62** The vertical gradient in both impoundment areas varies from downward in the middle and upper portions of the area and upward in the lower portion of the area. The reported infiltration rate is based on the results of the two 3D models (mine-area and impoundment area) for areas of relatively low relief with relatively thick sequences of surficial material. The agencies agree that in the areas of upward vertical gradient (such as in the spring areas), there would not likely be a *net* infiltration rate. However, because the springs are due to infiltration farther up the slope that results in groundwater flow beneath a confining layer, there may be infiltration of precipitation into shallow material above the confining layer that may produce perched zones of saturation. If the perched zones exist, they may or may not be contributing water to the springs located in the lower portion of the slope. **Comment Response 320-63** Additional information was added to Section 3.6.4.2.2 of the FEIS to more thoroughly describe the effects on aquatic life other than fisheries to changes in streamflows. Macroinvertebrate populations are present throughout the reaches potentially affected by mine dewatering, and would be affected by the reduction or elimination of flow that would occur during low flow periods. Headwater streams also perform important ecological functions in terms of transport of organic matter, invertebrates, nutrients, and woody debris to downstream waters (Kline and NewFields 2012). Reductions in flow could adversely impact the ability of these headwater reaches to perform such functions. **Comment Response 320-64** See comment response 320-63. **Comment Response 320-65** Water management in Alternatives 3 and 4 was revised in the FEIS to indicate that MMC would either cease diversions from Libby Creek or would augment the total amount of Libby Creek diversions any time flow at LB-2000 above the Libby Creek/Bear Creek confluence was less than 40 cfs. With the revised water balance presented in the FEIS, the amount of flow fluctuations would be less than described in the SDEIS. The agencies do not believe mitigation was necessary for the flow fluctuations disclosed in the FEIS. **Comment Response 320-66** See comment response 320-65.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
320-67 320-68 320-69 320-70 320-71	MNTR 320 ***Sediment*** Impacts from sediment could exacerbate impacts to aquatic life especially when considered in combination with the newly disclosed changes to flow in Libby Creek. As stated in the SDEIS, many of the streams in the Libby Creek watershed will experience increases in sediment, which will likely adversely affect aquatic biota, including macroinvertebrates, bull trout and other fish species (pp. 135, 152). Increases in sediment can lead to substantial adverse physical habitat effects, including fine sediment deposition in spawning and incubation areas and filling of interstitial habitats for macroinvertebrates. Because Libby Creek and Little Cherry Creek are approaching or exceeding the 30% threshold for fine sediments in spawning and incubation areas (p. 135), it is likely that any additional sedimentation will have deleterious effects on physical habitat for the threatened bull trout and other salmonids. The SDEIS indicates that increased sediment loading would be greatest during the construction phase when trees, vegetation, or soils will be removed for mine facilities, roads and the transmission line. Roads will likely be a relatively large, ongoing source of sediment post-construction. The FWS also mentioned these concerns in its November 15, 2011 letter. *Recommendation for the FEIS:* Include a discussion on location of roads, the timing of construction and the associated potential effects on spawning and incubation periods of the resident or migratory fish species. ***Threatened and Endangered Species*** The EPA concurs with the FWS November 15, 2011 comments, and defers to FWS regarding the impacts of the Project on Endangered Species Act listed species and on additional opportunities to avoid, minimize, and compensate for these impacts. **Wetlands** ***Indirect Impacts*** Based on the new information provided in the SDEIS, EPA has identified wetlands in the Little Cherry Creek area likely to be affected by reductions in groundwater levels (see Table 1 below). *Recommendation for the FEIS:* Evaluate the effects of groundwater level reductions associated with pumpback wells on the wetlands in the Little Cherry Creek area, as well as other waters of the U.S. **Table 1. Wetlands Impacted by Poorman Creek Groundwater drawdown** | Wetlands--Jurisdictional | Acres | Rating | | --- | --- | --- | | LCC-39A | 5.27 | III | | LCC-36 | 2.47 | III | | LCC-38 | 0.05 | III | | LCC-35A | 1.63 | III | | LCC-35B | 1.62 | III | | LCC-35C | 0.08 | III | 3	**Comment Response 320-67** Under Alternatives 3 and 4, MMC would implement additional BMPs and road closure mitigation, with some of the road closures completed before the Evaluation and Construction phases, and others completed at the end of the Operations Phase. Section 3.13.4.3.5 disclosed that with road closure mitigation and BMP implementation, sediment delivery to streams from roads would be minimized. Within the mine permit area boundary, all stormwater runoff from roads would be captured by ditches and sediment ponds and any discharges from the ponds routed toward MPDES permitted outfalls. Outside the mine permit area boundary, the movement of sediment from Alternative 3 roads to RHCAs would be minimized through the use of BMPs. Various studies have shown that BMPs implemented to reduce sediment movement from roads, cutslopes and fillslopes to drainages are effective in reducing sediment by 70 to 100 percent. Appropriate BMPs would be determined on a site-specific basis and would be monitored to determine their effectiveness. The discussion of sediment in Sections 3.6.4 was modified to make it clear that aquatic life are likely to benefit from the project due to road closure mitigation and BMP implementation. **Comment Response 320-68** See comment response 320-67. **Comment Response 320-69** Thank you for your comment. The mitigation plan in Alternatives 3 and 4 (Section 2.5.7) was revised in the FEIS to avoid, minimize, and compensate for effects on aquatic resources. **Comment Response 320-70 and 320-71** The potential indirect effects on wetlands south of Little Cherry Creek were revised in the FEIS to describe the potential effects of the pumpback wells. A possible subsurface bedrock ridge and hydrologic divide may occur south of Little Cherry Creek. This bedrock ridge may create a hydrologic divide between the impoundment sites and wetlands on the other side of the bedrock ridge. If a subsurface bedrock ridge and hydrologic divide at this location were confirmed, the pumpback wells would not affect the wetlands between the bedrock ridge and Little Cherry Creek. Additional subsurface data would be collected during the final design process of the Poorman Impoundment to assess the bedrock ridge and the 3D model would be rerun to evaluate the site conditions with the new data. Any areas within the modeled drawdown area not surveyed for wetlands would be surveyed.

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LCC-29	2.65	III
LCC-30	0.05	III
LCC-33	0.22	III
LCC-21	0.09	III
LCC-26	0.36	IV
LCC-27	0.08	IV
LCC-28B	0.07	IV
LCC-28A	0.06	IV
Sub-total, jurisdictional	14.70 acres	--
Wetlands--Non-Jurisdictional	**Acres**	**Rating**
I-13	0.05	--
I-07	0.05	--
I-08	0.21	--
Sub-total, non-jurisdictional	0.31 acres	--
Total wetland acres	15.01 acre	--

Wetland Mitigation and Executive Order 11990 Protection of Wetlands

320-72 The SDEIS states "In compliance with [Executive Order] 11990, the KNF finds that there is no practicable alternative to new construction located in wetlands, and that Alternative 3 includes all practicable measures to minimize harm to wetlands (p. 414)." The EPA does not agree that all measures have been incorporated into Alternative 3 that would reduce the direct and indirect impacts to wetlands. There are significant benefits associated with use of paste tailings with surface deposition or dry "stack" tailings backfill and/or surface deposition. In addition, indirect impacts to wetland systems adjacent to the Poorman Waste Disposal site, in the East Rock Creek watershed and in the East Fork Bull River watershed were excluded from consideration for compliance with this executive order.

320-73 *Recommendation for the FEIS*: Address all potential indirect impacts to wetlands and explain how the KNF will comply with Executive Order 11990.

Surface Water Quality

320-74 Table 106, Section 3.13.4.2.1 (p. 323) presents the predicted water quality concentrations for Alternative 2, but there is not a comparable table for the preferred alternative, Alternative 3. Without a table documenting the predicted water quality changes, it is difficult to evaluate whether or not the predicted impacts to Libby Creek would be significant for the preferred alternative.

320-75 *Recommendation for the FEIS:* Include a table that presents the predicted water quality concentrations for Alternative 3 so the predicted water quality impacts associated with the preferred alternative are clear.

Water Treatment

The SDEIS acknowledges the possible addition of a wastewater treatment unit for nitrogen and that,

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Comment Response 320-72

Section 3.23.4 of the SDEIS and FEIS indicated that the KNF determined that there is no practicable alternative to new construction located in wetlands, and that the proposed action includes all practicable measures to minimize harm to wetlands. Although the finding did not change, Sections 2.5.7.2 and 3.24.4 of the FEIS describes additional mitigation to minimize harm to wetlands. Section 3.24.4 was also revised to address all potential indirect effects on wetlands. Comment response 320-27 discussed that reducing the moisture content of the tailings, such as with the use of paste tailings or dry stack tailings would have no effect on groundwater pumping necessary because the rate of tailings seepage reaching groundwater would be independent of the tailings moisture content. Any indirect effects on wetlands from pumpback wells would be an unavoidable effect. In the agencies' monitoring plans (Appendix C.4), MMC would monitor springs and wetlands potentially affected by the pumpback well system, and develop appropriate mitigation should adverse effects be attributed to the pumpback wells.

Mine backfill was evaluated in the *Tailings Disposal Alternatives Analysis* report and was considered primarily to determine the potential for reduction of the surface tailings disposal area. Paste backfill was determined as the only technically feasible method of underground tailings disposal (see subsequent discussion on tailings disposal methods). Paste backfill would reduce the impact to 1.5 acres of wetlands by reducing the volume of tailings disposed of on the surface. An economic assessment of paste backfill determined it would result in greater capital and operating costs than normally would be associated with room-and-pillar mining projects, and backfilling was eliminated from detailed analysis.

Appendix C of the SDEIS and FEIS discussed the monitoring that would be conducted in the mine and tailings impoundment area to assess potential indirect effects on wetlands.

Comment Response 320-73

See comment response 320-72.

Comment Response 320-74

A table was added to Section 3.13.4.3 of the FEIS providing water quality changes for Alternative 3 estimated from a mass balance analysis. These results were provided in Appendix G of the FEIS, and were summarized in the new table in the FEIS.

Comment Response 320-75

See response to comment 320-74.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
320-76 320-77	MNTR 320 dependent upon monitoring results and under certain conditions, water treatment may be necessary for all water discharged from the mine site. *Recommendation for the FEIS:* Address whether the proposed water treatment processes (a biological nitrification-denitrification treatment system, ultrafiltration and perhaps chelation or reverse osmosis) can meet the more stringent nitrogen limits (i.e., 0.3 mg/L TN), if periphyton and chlorophyll-*a* monitoring provide evidence that effluent limits for nitrogen need to be tightened. If the proposed water treatment process cannot meet the tighter nitrogen limits, we recommend the FEIS propose alternative treatment options that will meet the lower nitrogen limits. ***Clean Water Act Section 303(d)-Listed Streams and TMDL Consistency*** Project activities have potential to aggravate habitat alternations and sedimentation/siltation CWA §303(d) impairments in Libby Creek (p. 306), further adversely affecting the aquatic life and cold water fishery uses that are already impaired in the downstream Libby Creek segment. The SDEIS identifies some best management practices (BMPs) that could offset sediment impacts of the project, but does not relate these to the sediment-related CWA §303(d) impairments in Libby Creek. *Recommendation for the FEIS and ROD:* Identify mitigation measures to ensure the Project will avoid further degradation of Libby Creek and be consistent with total maximum daily loads (TMDLs) and water quality improvement activities to restore full support for beneficial uses in Libby Creek. Monitoring and adaptive management may be necessary to prevent further degradation and demonstrate consistency with TMDLs once developed. **Air Quality** ***Criteria and Hazardous Air Pollutants (HAPs)*** The EPA is pleased that the Supplemental Appendix C, Agencies' Conceptual Monitoring Plans, C.2 Air Quality contains provisions for air monitoring at three air monitoring stations for PM2.5, PM10, and related HAPs. The SDEIS also contains information on compliance with the New Source Performance Standard (NSPS) 40 C.F.R Part 60, Subpart LL; more complete HAPs modeled results with comparisons to HAP reference thresholds; and, a modeled demonstration of compliance with the new 1-hour NO_2 and SO_2 National Ambient Air Quality Standards. The SDEIS compares HAP air impacts from the mine to HAP thresholds. The total combined cancer risk from arsenic, cadmium, and chromium associated with the loadout facility is 1 in 1,000,000 using a 20-year exposure period. The total lifetime exposure risk of 1.3 (Table 51) is very near the acceptable risk of one in a million. *Recommendation for the FEIS*: Include a discussion to better explain the modeled results, lifetime risk associated with this risk assessment, and how HAP related PM10 air monitoring may provide data to better understand this risk. 5	**Comment Response 320-76** Section 3.6.1.2.2 of the FEIS was revised to indicate that in 2014 the DEQ developed numeric standards for total phosphorus and total nitrogen for wadeable streams, which includes all streams in the analysis area. The seasonal total phosphorus standard is 0.025 mg/L and seasonal total nitrogen standard is 0.275 mg/L between July 1 to September 30. Section 3.6.4.2.3 of the SDEIS and FEIS disclosed that the TIN limit for ambient surface waters set in the BHES Order could be modified in the MPDES permit issued by DEQ at any time if nuisance algal growth caused by MMC's discharge was observed. MMC would be required to demonstrate the ability to meet these standards during final design of the water treatment plant. In 2015, MMC requested that the general variance for both total nitrogen and total phosphorus be incorporated into the MPDES permit and indicated that the facility design flow is less than 1.0 million gallons per day (mgd). In the draft renewal MPDES permit, the DEQ preliminarily granted the variance request for total nitrogen of 15 mg/L, and preliminarily determined that a variance for total phosphorus was not necessary because the facility did not show reasonable potential to violate this nutrient standard. The lowest applicable limit, such as the BHES Order limit of 1 mg/L for TIN, would apply. **Comment Response 320-77** Libby Creek beginning at the US 2 bridge, which is outside of the analysis area, is impaired for sediment and siltation. The DEQ and EPA established a sediment TMDL of 4,234 tons/year average annual load for Libby Creek from the US 2 bridge to the confluence with the Kootenai River. As part of this TMDL, the Montanore facility was assigned a sediment wasteload allocation of 24 tons/year. This wasteload allocation, applied as a wasteload allocation for total suspended solids applicable to all permitted outfalls at the facility, including any future permitted outfalls, will be implemented in the final renewal MPDES permit. The estimated sediment delivery from roads under existing conditions and sediment delivery reductions for the alternatives were disclosed in Section 3.13.4.2.1 of the SDEIS and Sections 3.13.3.1.4, 3.13.4.2.1, 3.13.4.3.5, 3.13.4.4.2, and 3.13.4.6.2 of the FEIS. Road closures and BMPs would be implemented to reduce sediment delivery from roads to project area streams, many of which are in the Libby Creek watershed upstream of US 2. Discussion was added to Section 3.13.4.3.5 of the FEIS that related the sediment reductions to the sediment impairment for Libby Creek. Changes in sediment delivery from the Montanore project would be small compared to the estimated existing sediment load of 1,621 tons/year and the estimated future sediment load of 1,102 tons/year in the upper Libby Creek watershed.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response

MNTR 320

dependent upon monitoring results and under certain conditions, water treatment may be necessary for all water discharged from the mine site.

Recommendation for the FEIS: Address whether the proposed water treatment processes (a biological nitrification-denitrification treatment system, ultrafiltration and perhaps chelation or reverse osmosis) can meet the more stringent nitrogen limits (i.e., 0.3 mg/L TN), if periphyton and chlorophyll-*a* monitoring provide evidence that effluent limits for nitrogen need to be tightened. If the proposed water treatment process cannot meet the tighter nitrogen limits, we recommend the FEIS propose alternative treatment options that will meet the lower nitrogen limits.

Clean Water Act Section 303(d)-Listed Streams and TMDL Consistency

Project activities have potential to aggravate habitat alternations and sedimentation/siltation CWA §303(d) impairments in Libby Creek (p. 306), further adversely affecting the aquatic life and cold water fishery uses that are already impaired in the downstream Libby Creek segment. The SDEIS identifies some best management practices (BMPs) that could offset sediment impacts of the project, but does not relate these to the sediment-related CWA §303(d) impairments in Libby Creek.

320-78 *Recommendation for the FEIS and ROD:* Identify mitigation measures to ensure the Project will avoid further degradation of Libby Creek and be consistent with total maximum daily loads (TMDLs) and water quality improvement activities to restore full support for beneficial uses in Libby Creek. Monitoring and adaptive management may be necessary to prevent further degradation and demonstrate consistency with TMDLs once developed.

<u>**Air Quality**</u>

Criteria and Hazardous Air Pollutants (HAPs)

320-79 The EPA is pleased that the Supplemental Appendix C, Agencies' Conceptual Monitoring Plans, C.2 Air Quality contains provisions for air monitoring at three air monitoring stations for PM2.5, PM10, and related HAPs. The SDEIS also contains information on compliance with the New Source Performance Standard (NSPS) 40 C.F.R Part 60, Subpart LL; more complete HAPs modeled results with comparisons to HAP reference thresholds; and, a modeled demonstration of compliance with the new 1-hour NO_2 and SO_2 National Ambient Air Quality Standards.

320-80 The SDEIS compares HAP air impacts from the mine to HAP thresholds. The total combined cancer risk from arsenic, cadmium, and chromium associated with the loadout facility is 1 in 1,000,000 using a 20-year exposure period. The total lifetime exposure risk of 1.3 (Table 51) is very near the acceptable risk of one in a million.

320-81 *Recommendation for the FEIS*: Include a discussion to better explain the modeled results, lifetime risk associated with this risk assessment, and how HAP related PM10 air monitoring may provide data to better understand this risk.

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Comment Response 320-78

See comment response 320-77. Sediment delivery from roads to Libby Creek in all mine alternatives would be reduced substantially due to road mitigation and implementation of BMPs. Changes in sediment delivery to streams would be small in comparison to the estimated existing sediment load of 1,621 tons/year and the estimated future sediment load of 1,102 tons/year in the upper Libby Creek watershed.

Comment Response 320-79

Thank you for your comment.

Comment Response 320-80

Thank you for your comment.

Comment Response 320-81

Section 3.4.4.2.4 was revised in the FEIS to explain the modeled results, lifetime risk, and required monitoring for arsenic, cadmium, chromium, and lead.

Com-ment	Document #320-U.S. Environmental Protection Agency	Response
	MNTR 320	**Comment Response 320-82**
	Additional Comments and Recommendations	Thank you for your comment and support of the agencies' use of the Troy Mine and the proposed Rock Creek Mine as a geological analogs.
	Monitoring and Adaptive Management	**Comment Response 320-83**
	1. Pre-Evaluation & Evaluation Phase Data	Thank you for your comment and support of the agencies' mitigation and monitoring.
320-82	Because available information on the potential for metals release specifically for the Montanore Project is limited, the interagency workgroup on geochemistry agreed to the use of geological analogs of the Troy Mine and the Rock Creek Mine with validation through site-specific monitoring during the evaluation phase of the Project.	**Comment Response 320-84**
320-83	The SDEIS and the EPA acknowledge that data to support the hydrologic modeling are limited and also acknowledge the need to collect additional data. The EPA supports additional hydrologic data collection efforts.	Thank you for your interest in being part of the technical review process for the final design of the tailings impoundment. The discussion of the final design process was moved to the Evaluation Phase (Section 2.5.2.6.3) in the FEIS. The section was revised in the FEIS to indicate the technical review of the final tailings facility design would be made by a technical advisory group established by the lead agencies. Possible members of the TAG include the KNF, the DEQ, the EPA, U.S. Army Corps of Engineers, Confederated Salish Kootenai Tribe, and Lincoln County.
320-84	The EPA requests to be part of the technical review process for final design review for the Poorman disposal site (p. 48).	
	Recommendations for the FEIS and ROD:	**Comment Response 320-85**
320-85	• Include more detail on how site-specific monitoring data from the waste rock test pad and waste rock column test will be used to decide if the waste rock stockpile at the Poorman tailings site will be lined to ensure that water quality standards will be met.	In cooperation with the EPA, the agencies developed a geochemical sampling and analysis plan that was presented in the Appendix C.9 of the SDEIS and FEIS. Section C.9.7 of the SDEIS and FEIS indicated that following completion of the Evaluation Phase, the need to handle material selectively would be reevaluated and criteria for material placement would be established. Where possible, trigger values that would enable mining personnel to identify rock for selective handling or to determine the need for mitigation would be identified.
320-86	• Include more detail on how hydrologic information gathered during the Pre-Evaluation and Evaluation Phases will be used to refine predicted impacts.	
320-87	• Discuss how the geochemical and hydrologic information assembled at the end of the Evaluation Phase will be reevaluated and shared with the public and the EPA to provide the opportunity to assess potential impacts and recommend revisions to mitigation if necessary.	**Comment Response 320-86**
	Additional Information for Disclosure	See comment responses 320-6, 320-70 and 320-71
320-88	We note that the Final 3D Groundwater Model dated April, 2011; the 2011 Final Surface Water Quality Report; and the Response to EPA Comments, Attachment A – Response to Montanore DEIS Comments Regarding Visibility dated June 30, 2009 were not provided as appendices to the SDEIS.	**Comment Response 320-87**
	Recommendation for the FEIS: Make these reports available as appendices or provide links to on-line availability.	The agencies agree that review of data and information collected during the Libby Adit Evaluation Phase would be important. As Section 2.5.2.1 of the SDEIS and FEIS discussed, the evaluation program is needed to develop additional information about the geologic and hydrologic characteristics of the deposit and the nearby Rock Lake fault. Final design would begin after completion of the evaluation program. As discussed in Section 3.8.2 of the FEIS, the Construction Phase would (continued next page)
	Production Rate Implications	
320-89	The Final Tailings Disposal Alternatives Analysis recognizes that the predicted 20,000 tons per day, 16-year full production rate is optimistic but does not explain the implications of an optimistic production rate for environmental impacts, including waste and water management (p. 239).	
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Com-ment	Document #320-U.S. Environmental Protection Agency	Response
	MNTR 320 *Recommendation for the FEIS:* Describe why the predicted rate may be optimistic and discuss its implications. 7	begin after MMC analyzed the data from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase. All information associated with the Montanore Project is public record and available for public review at the agencies in accordance with the provisions of the Freedom of Information Act and Montana's Constitutional and statutory "right to know" provisions. **Comment Response 320-88** These documents were provided to the EPA before SDEIS issuance and to any person requesting them after SDEIS issuance. **Comment Response 320-89** Section 3.1.1 of the FEIS was revised to discuss lower production rates. Because the recoverable resource and production rate are estimates, the agencies used a 20-year duration for operations in their analyses. The duration of any particular phase may vary and be longer or shorter from that analyzed. A change in production rate would reduce mill water requirements, water appropriations, and wastewater discharges and associated effects on surface water and aquatic resources. A change in project duration would not affect the severity or geographical scope of other effects.

Comment	Document #323-Army Corps of Engineers	Response
	MNTR 323 **DEPARTMENT OF THE ARMY** CORPS OF ENGINEERS, OMAHA DISTRICT HELENA REGULATORY OFFICE 10 WEST 15TH STREET, SUITE 2200 HELENA MT 59626 December 21, 2011 Helena Regulatory Office Phone: (406) 441-1375 Fax: (406) 441-1380 Re: SDEIS Comments - Montanore Mine – Corps File Number NWO-2011-01063-MTH Mr. Paul Bradford, Supervisor Kootenai National Forest 31374 U.S. Highway 2 West Libby, Montana 59923-3022 Dear Mr. Bradford:	
323-1	This letter provides the official comments of the U.S. Army Corps of Engineers (Corps) in conjunction with the U.S. Forest Service (FS) Supplemental Draft Environmental Impact Statement (SDEIS) that was released in September 2011 for the Montanore Mine Project. The Corps acknowledges that the period for providing comments was extended until December 21, 2011. The proposed project is located in a mountainous area approximately 18 miles south of the community of Libby, Montana within USGS Hydrologic Unit Code 17010101 – Upper Kootenai River watershed, in numerous Sections of Township 28 North, Range 31 West, in Lincoln County, Montana.	**Comment Response 323–1** Thank you for your comment.
323-2	The Montanore Mineral Corporation (MMC) project will result in the discharge of fill material in waters of the U.S., which is subject to regulation under Section 404 of the Clean Water Act (CWA) and triggers our review under the National Environmental Policy Act (NEPA). MMC anticipates mining ore to recover copper and silver from underground deposits and has applied for a Section 404 permit in conjunction with the ongoing NEPA process. The ancillary surface facilities would result in the discharge of fill material into waters of the United States. The road access, tailing storage facility (TSF), and road improvements would be located just outside of the Cabinet Mountain Wilderness Area (CMWA) within the Kootenai National Forest. The project consists of mine-related components, including an evaluation adit, underground mine, mill, three Libby adits and portals, the TSF, access roads and a power transmission line. The mine would be developed in phases, and after completion of mining, by year 24, closure would occur and include work supporting decommissioning of the mine and mine facilities and reclamation of the affected areas.	**Comment Response 323–2** Thank you for your comment.
323–3	Under Section 404, the Corps is authorized to issue permits for the discharge of dredged or fill material into waters of the U.S. Under the Section 404(b)(1) Guidelines (Guidelines), the U.S. Environmental Protection Agency (EPA) and Corps must ensure that CWA goals are met. Printed on Recycled Paper	**Comment Response 323–3** Thank you for your comment. The agencies presented a draft 404(b)(1) analysis in the SDEIS to assist the EPA and the Corps in making the factual determinations regarding compliance with the Guidelines. The analysis was revised and included in the FEIS.

Comment	Document #323-Army Corps of Engineers	Response
	MNTR 323	**Comment Response 323–4** Thank you for your comment.
		Comment Response 323–5 Thank you for your comment.
323-4	The Corps issues permits after evaluating fill and/or dredge material discharges for consistency with the Guidelines and its implementing regulations. The Guidelines focus on aquatic ecosystem impacts on a range of Public Interest Factors. In contrast to NEPA, the CWA requires that the permitted work represent the least environmental damaging practicable alternative (LEDPA). The EPA ensures that water quality standards are met and makes independent judgments concerning threats to water quality.	**Comment Response 323–6** Thank you for your comment.
323–5	Note that MMC submitted a permit application for the proposed work to this office earlier this year and has requested a Department of Army Permit from the Corps for development of the proposed Montanore Mine Project. This application is being reviewed under our standard (individual) permit process and a Public Notice was issued by the Corps on December 16, 2011. The comment period for that Public Notice closes on February 14, 2012.	**Comment Response 323–7** Thank you for your comment. The agencies agree with the Corp's assessment of the agencies' tailings disposal alternatives analysis.
323–6	This letter provides comments on the SDEIS with a focus on Section 404 and the associated 404(b)(1) Guidelines, including the portion of the guidelines found at 40 CFR 230.10, parts a. through d. We will also identify areas of concern regarding adverse and unaddressed secondary impacts, indirect impacts, and cumulative impacts.	**Comment Response 323–8** The KNF identified Alternative 3 as the preferred alternative and the alternative that best balances the requirements under the 2015 Kootenai Forest Plan with the project's environmental impacts. The Corps will identify an alternative as a LEDPA in its decision document.
323-7	Initially, the agencies analyzed 22 sites for surface tailings disposal under three levels of screening to narrow the range of TSF options analyzed in the NEPA review. Criteria included logistical and environmental considerations, and sites were eliminated because they were unavailable, did not provide adequate capacity, or had more adverse environmental effects. The agencies retained two sites for further analysis.	**Comment Response 323–9** Thank you for your comment.
323–8	In 2009, the Draft Environmental Impact Statement (DEIS) included an alternatives analysis that identified Alternative 4, the Mitigated Little Cherry Creek area, as the preferred disposal site for the mine tailings. After further consideration and while targeting additional avoidance and minimization of wetland impacts and other waters of the U.S., the alternatives analysis was subsequently revised. In the current (2011) SDEIS, Alternative 3, the Agency Mitigated Poorman Impoundment (the Poorman Creek area) was identified as a disposal site having less adverse aquatic impacts than Alternative 4. Under Alternative 4, about 8,000 feet of Little Cherry Creek, a large and important perennial tributary of Libby Creek, would be directly affected by fill; by contrast, Alternative 3 would have no effect on such a perennial stream. Alternative 4 would fill approximately 36 acres of jurisdictional wetlands and other waters of the U.S.; Alternative 3 would fill approximately 9 acres. In terms of total acres impacted (aquatic plus non-aquatic), Alternative 4 would affect 2,254 acres and Alternative 3 would affect 2,011 acres. The 2011 SDEIS identifies Alternative 3 as the LEDPA. The preferred power transmission line alternative in the SDEIS is D-R, Miller Creek, and has also been identified as the LEDPA when compared to other power transmission line alternatives for the project.	
323–9	The Poorman TSF is an earthen dam covering 608 acres and the final resting place for the mill tailings waste. The dam would be 10,300 feet long and 360 feet high. The TSF berm,	
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Com-ment	Document #323-Army Corps of Engineers	Response
	MNTR 323	**Comment Response 323–10**
	starter dam and saddle dam would consist of 2.7, 1.7, and 0.7 million cubic yards of fill. No tailings would be deposited into waters of the U.S., because clean fill would be discharged before depositing mine tailings. When work is completed, the tailings dam and impounded tailings would remain. The seepage collection pond would have a 50 million gallon capacity and the TSF is designed with an under-drain system.	In 2013, the Corps issued an updated preliminary jurisdictional determination of wetlands and non-wetland waters within the Poorman Impoundment Site (Corps 2013b). As a result of the updated channel mapping and the 2013 Corps determination, short reaches of four tributaries in the Poorman Impoundment Site were determined by the Corps to lack a defined channel and to be non-jurisdictional. The FEIS analysis of wetland impacts (Section 3.23.4) was revised to reflect the Corps' preliminary jurisdictional determination.
323–10	At the TSF, the aquatic resources impacted would include 11,949 feet of jurisdictional stream channel and 12.2 acres of wetlands. Approximately 8.8 acres of jurisdictional wetlands would be filled, about 8.6 acres within the TSF footprint and about 0.2 acre along Bear Creek Road. The remaining 3.4 acres are not regulated under the CWA. The streams within the TSF are not fish-bearing, but nearby streams are fish-bearing. The wetlands are a mix of palustrine emergent, scrub-shrub, and forested types. Within the Poorman TSF the wetlands occur along drainages that flow to Libby Creek and as isolated wetlands within the area. A few non-wetland waters of the U.S flow to Libby Creek. Six springs associated with wetlands and waters of the U.S. occur in the TSF, and one spring is located south of the Libby Plant Site. Wetlands occur at road crossings on both Ramsey and Poorman creeks. Using the widely-accepted Montana Department of Transportation (MDT) Wetland Assessment Method, wetlands are classified as Category I, II, III or IV. Category I wetlands are exceptionally high quality wetlands and are rare to uncommon. Category II wetlands are more common than Category I wetlands, and provide habitat for sensitive plants and animals. Category III wetlands are more common than Category II or I wetlands, less diverse, and are often smaller than Category II or I wetlands. Category IV wetlands are small, isolated, and lack vegetative diversity. These wetlands provide minor wildlife habitat. Both Category II and III wetlands occur within the area that would be filled by the TSF.	**Comment Response 323–11**
323–11	The secondary effects on wetlands, springs, and seeps would occur during dewatering and drawdown. Wetlands are found adjacent to a channel below the dam and three intermittent channels without wetlands are found below the dam. No springs or seeps are below the TSF. The pump-back wells would reduce groundwater levels and eliminate the hydrologic support for the aquatic resources, and flow in the intermittent channels would be eliminated. The secondary impacts would be related to reduced stream flows, declining water levels from the TSF pump-back wells, and reduced ground and surface water flows. Down-gradient channels identified as waters of the U.S. 1, 3, 5, and 14 would be impacted due to decreased flows. The impacts would be persistent, detrimental, and permanent. The SDEIS identifies that if the volume of tailings was reduced by up to 40 percent at the TSF, the adverse effects on wetlands and other waters would also be reduced.	The analysis of the effects of the pumpback wells was revised in the FEIS (Section 3.23.4.2.2) to reflect additional analysis. The agencies' *Tailings Disposal Alternatives Analysis* determined that it was not possible to reduce the volume of tailings that required surface disposal by 40 percent. Based on a preliminary, assessment-level economic analysis, which could vary by more than 30 percent, the agencies' analysis found that backfilling would result in significantly greater capital and operating costs than would normally be associated with room-pillar mining projects.
323-12	According to the SDEIS, the proposed discharges would not significantly adversely affect life stages of aquatic life and other wildlife dependent on aquatic ecosystems. The waters of the U.S. in the TSF do not provide habitat for fish. The wetlands in the TSF are seasonally saturated and do not provide year-round aquatic habitat, but they do provide seasonal habitat for amphibians and year-round habitat for terrestrial wildlife. A groundwater dependent ecosystem	**Comment Response 323–12**
	3	MMC has completed a full GDE inventory of the Poorman Impoundment Site and a partial GDE inventory of the mine area. The use of "trigger" plants was revised in the SDEIS and FEIS. The GDE inventory would include a vegetation survey to describe and document existing vegetation characteristics and establish a prevalence index used by the Corps to determine wetland vegetation (Corps 2008d). The prevalence index would be used to assess changes in vegetation composition as described in the GDE inventory and monitoring plan.

Com-ment	Document #323-Army Corps of Engineers	Response
323–13 323-14 323–15 323–16	MNTR 323 inventory has not been completed at this time, but one would need to be performed to determine the secondary impacts to aquatic systems. The inventory would need to include a vegetation survey to describe and document existing vegetation characteristics and establish "trigger" species. Trigger species would then be used to assess vegetation composition and determine appropriate mitigation. The SDEIS addresses environmental consequences and commitments, including integrated compensatory mitigation, but additional clarification of avoidance and compensatory mitigation is needed. MMC's project is a large and complex undertaking in highly sensitive environments. Predicting how the mine with a TSF above ground would affect the environment during its active life and following closure is difficult, given the nature of the project. Given the variety of environments within the region, the FS needs to further assess the long-term direct and indirect risks to water-based systems and how the expected adverse impacts on the aquatic environment can be further avoided, reduced, and offset to meet federal regulatory requirements. Under the Section 404(b)(1) Guidelines, secondary effects are the effects to the aquatic resources that are associated with the project, but do not result from the direct placement of dredged or fill material. Cumulative impacts are the collective changes to aquatic resources that are due to the effect of a number of discharges of fill material and can result in a major impairment to the aquatic resources and interfere with the productivity of the resources. The two major components of the project addressed throughout our comments include 1) the Poorman TSF component, and 2) the mine's indirect, secondary, and cumulative adverse impacts to aquatic ecosystems in the area. Our review to date has identified Alternative 3 Poorman TSF as the likely LEDPA. However, the Corps continues to question the construction and long-term operation of the facility and the anticipated long-term post-mining impacts, particularly in light of the Guidelines "other environmental consequences assessment". Consistent with the Guidelines, the analysis targets the potential to cause and/or contribute to significant degradation of waters in light of the secondary, indirect, and cumulative effects that are identified in the SDEIS. The significant degradation evaluation is important in determining whether the project does or does not comply with the Guidelines. It is possible that an alternative such as Alternative 3 Poorman TSF may be the LEDPA, and the project may be granted Section 401 Water Quality Certification from the State of Montana, and may also comply with the Endangered Species Act, but still cause, contribute to, or result in significant degradation of waters. Unresolved water quality and quantity concerns may affect our significant degradation determination. According to the 2011 SDEIS, there would be short-term and long-term adverse impacts on water quantity. The project would adversely affect wetland hydrology, stream flows, and drainage patterns, resulting in adverse changes to the aquatic ecosystem including aquatic habitat loss and the loss of interdependent and interrelated plant and animal biota. The SDEIS and its ancillary documents identify water balance impacts and identify some compensatory mitigation 4	**Comment Response 323–13** Various sections of DEIS, SDEIS and FEIS address the short- and long-term direct and indirect effects of all project components of all alternatives. Sections 3.11.4 and 3.23.4 of the FEIS were revised to disclose additional analysis of direct and indirect effects on wetlands and aquatic resources at Rock Creek Meadows, along the banks of Libby Creek, East Fork Rock Creek, and East Fork Bull River, and within the predicted drawdown area of the pumpback wells. All appropriate avoidance and minimize measures were incorporated into the agencies' alternative, as discussed in Subpart H of the lead agencies' 404(b)(1) analysis (FEIS Appendix L). Any additional avoidance or minimization measures that the Corps feels necessary for any 404-permitted facility could be added to the Corps' 404 permit. **Comment Response 323–14** Thank you for your comment. **Comment Response 323–15** Thank you for your comment. **Comment Response 323–16** See comment response 323-13. The level of design for all project facilities was appropriate for an environmental analysis under NEPA and MEPA. Section 2.5.2.6 of the FEIS discussed the final design process for the preferred mine alternative (Alternative 3). The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate level of MEPA review on the application.

Comment	Document #323-Army Corps of Engineers	Response
323–17 323-18	MNTR 323 to offset the adverse effects, but additional information, review and avoidance is needed because of the secondary, indirect, and cumulative effects and to address uncertainty associated with the tailings storage facility. The effects are identified as persistent and permanent. The concern is amplified because the design for the Poorman TSF remains conceptually based, and the conceptual design is further based on limited geotechnical information. Because the waste would be perpetually stored in the TSF, the TSF would need to be constructed to permanently prevent leakage into the ground and surface water; it would need to be immune from catastrophic failure; and it would need to prevent wind-blown dust from mobilizing. There is low risk in the short-term that the dam would leak or fail initially, but the likelihood that a failure or leak would eventually occur increases over time. Structures deteriorate over time, and the liners and drains necessary to control or focus leakage under the TSF and maintain the stability of the 360-foot dam could eventually degrade and possibly fail due to natural and normal environmental forces while under the weight of millions of tons of mine tailings. Control structures placed under the TSF and the dam would be expensive or impossible to repair. It is difficult to predict how site and climate conditions may change over the 1,300-year period identified as the duration of adverse hydrologic impacts in order for the TSF to remain intact and exist without further adverse effect. To address these concerns, we recommend that design features be included in the project that would minimize or eliminate those risks, and that maintenance and monitoring plans be developed and implemented that would allow the identification, assessment, and rectification of future adverse effects. The wetlands, small perched aquatic resources, streams, artesian water, flowing springs, drainages, and riparian corridors within the project area are essential elements for functions and habitats down-gradient in this watershed. What occurs in the project area affects the Kootenai River watershed and its associated habitat and biota. Pollution can invade the surface and groundwater through TSF leaks and pipeline breaks, and drainage water would eventually seep into the surface and groundwater system and impact the aquatic resources. The milling process does not remove all copper metal and would leave behind some metals in the tailings, including arsenic, chromium, copper, iron, lead, manganese and zinc. Copper, in particular, may cause harm to aquatic life at even slightly elevated concentrations. Fish, including rainbow trout and the listed bull trout, are especially sensitive to copper mortality. As identified in the 2011 SDEIS, acid conditions are not anticipated in the tailings or mine void. Pollution would occur over time and leaching and seepage are possible long after mining has ceased. After mine closure, the surface and ground water that is no longer captured during mining operations would discharge to the watershed. Much uncertainty still exists without additional avoidance and compensatory mitigation measures. It is unclear if the impacted wetland and stream complexes could eventually achieve a self-sustaining, high valued environment appropriate for the landscape that does not require long-term maintenance following closure. Again, to address these concerns we recommend that design features be included in the project that would minimize or eliminate those risks, and that maintenance and monitoring plans be developed and implemented that would allow the identification, assessment, and rectification of future adverse effects. These 5	**Comment Response 323–17** The agencies do not agree that the tailings impoundment would need to be constructed to permanently prevent leakage into the ground and surface water. The impoundment in all alternatives would be designed with a seepage collection system. The collection system would consist of a Seepage Collection Dam and pond, underdrains beneath the dams and impoundment, and blanket drains beneath the dams. The amount of seepage not intercepted by the seepage collection system is estimated to be 25 gpm. A pumpback well system, if required in Alternative 2 and as a requirement in Alternatives 3 and 4, would be designed to maintain capture of groundwater downgradient of the impoundment, intercepting the 25 gpm of seepage that reached groundwater. Section 3.9.3 of the DEIS (Section 3.14.3 of the FEIS) disclosed a qualitative risk assessment of the Little Cherry Creek and Poorman impoundment using a modified Failure Mode and Effects Analysis (FMEA) process. An assessment of likelihood and consequences of failure for construction, operations, and closure was made for each of the design and operational components. A level of risk was assigned to each failure mode. The level of risk ranged from Level 5 (completely unacceptable) to Level <1 (lowest level of risk). Of the failure modes evaluated for the Little Cherry Creek impoundment, three were judged to have a risk level of 2, and the other modes had a risk level of 1 or less. Of the failure modes evaluated for the Poorman impoundment, six were judged to have a risk level of 2, and the other modes had a risk level of 1 or less. The DEQ's draft air quality permit (DEQ 2011) has specific requirements for tailings dust management. Section 2.5.4.2.2 of the FEIS was revised to incorporate these requirements. All appropriate design features and maintenance and monitoring plans have been incorporated into the agencies' alternatives (Alternative 3 and 4) to minimize environmental impact. Additional features would be developed during final design. For example, MMC would finalize the impoundment design using geologic and hydrologic data collected as part of geotechnical field studies, with a focus on minimizing effects on wetlands. Any additional design features or monitoring that the Corps feels necessary for its permit decision could be added to the Corps' 404 permit. **Comment Response 323–18** See next page

Comment	Document #323-Army Corps of Engineers	Response
323-19 323–20	MNTR 323 adaptive management provisions need to be sufficiently flexible to allow necessary remedial actions to take place. The National Research Council identified certain wetland types that cannot be effectively mitigated and recommends impact avoidance. Ephemeral, intermittent and permanent streams provide high levels of water quality and quantity, sediment control and nutrients. Headwater streams are, in part, responsible for maintaining the high quality of the Nation's river system. Though ephemeral and intermittent streams may go dry during a portion of any given year, the period during which they do flow is essential for the plants and animals using those resources. These aquatic resources would continue to provide habitat and biological integrity for benthic macro-invertebrates and amphibians that utilize water flows within the substrate. Mitigation of headwater streams is technically difficult when attempting to create their lost functions and services. Compensatory mitigation for stream impacts would be difficult and may, in fact, be infeasible when attempting to offset aquatic and special aquatic losses. Additional clarity in this area is needed because it is not clear from the SDEIS that the TSF with its tailings waste would not present a long-term threat to the aquatic resources and special aquatic sites identified in the paragraphs above and below. The CMWA would not be directly affected by the discharge of fill material, but the CMWA and its streams and lakes would be indirectly affected by the project. If not for the discharge of fill material necessary to establish the TSF and other mine components, the mine could not be developed and there would be no reduction in surface flows or lake levels in the CMWA. Collectively, the Montanore Mine Project, when combined with other proposed projects in the area, would collectively reduce flows in Rock Creek and the East Fork Bull River, both of which are Outstanding Resources Waters. These adverse effects would result in habitat loss downstream of Rock Lake and St. Paul Lake, including during the bull trout spawning. Reductions in stream flow in Libby Creek, East Fork Rock Creek, Rock Creek, and East Fork Bull River during mining would also decrease aquatic habitat. Ramsey Lake may be affected by mining activities, but Libby Lakes and Howard Lake would not be affected. As identified in the SDEIS, the adverse impacts are certain to occur over the long-term (for approximately 1,300 years) and cannot be avoided if the project is commenced. Appropriate mitigation must be developed, disclosed and offered to offset these substantial adverse hydrologic and aquatic impacts. Other issues that the Corps believes should be further addressed in the Final EIS include the following: • Describe the mitigation for the temporal losses to stream and wetland function. • Describe the functional and areal replacement for all affected streams and wetlands, including those indirectly affected by the work. • Identify the changes or losses of headwater stream channels on the landscape. • Identify the loss or impairment of headwater streams, lakes, and wetlands, and describe the effects of those impacts on the function and structure of the aquatic areas throughout the 6	**Comment Response 323–18** The agencies do not agree that seepage from the tailings impoundment would eventually seep into surface water and affect aquatic resources. See comment response 323-17. Regarding pipeline leaks, the KNF's BA concluded there would be no risk of release of tailings along the vast majority of the pipeline because it would be buried, be double-walled, and have a leak detection system. The only sections where tailings could potentially be released to streams would be at the Ramsey Creek and Poorman Creek crossings. The most likely scenario of a complete failure of the system would be vandalism or equipment accidentally damaging the pipe. The pipe would be covered over the bridges to reduce this possibility and would include a containment system. The final designs for the tailings pipeline, leak detection system, and stream crossing protection and containment would be submitted to the agencies for approval. In Section 3.1.1 and other sections of the SDEIS and FEIS, the agencies disclosed that MMC would maintain and operate the Water Treatment Plant and the seepage collection system until water quality standards were met in all receiving waters from the specific discharge. MMC's 2014 waters of the U.S. mitigation plan identified adaptive management measures for each mitigation project. Any additional mitigation, design features, or monitoring that the Corps feels necessary for any 404-permitted facility could be added to the Corps' 404 permit. **Comment Response 323–19** The types of wetlands that the National Research Council recommended for avoidance were difficult or impossible to restore, such as fens or bogs (National Research Council 2001, p. 4). Fens or bogs have not been identified in the Montanore wetlands analysis area. The Corps' 2013 Montana Stream Mitigation Procedure (MTSMP) indicates that the procedure can be used to evaluate impacts and mitigation to ephemeral, intermittent, and perennial streams. Based on Corps recommendations, MMC evaluated mitigation for streams impacted by Alternative 3 based on functions and services, rather than the MTSMP. Compensatory mitigation for streams included a combination of in-stream and riparian restoration or improvement, and other watershed-related improvements. See comment response 323-17 regarding the long-term threat of the tailings impoundment. **Comment Response 323–20** Segments of any stream in the CMW, such as the East Fork Rock Creek or East Fork Bull River, are considered outstanding resource waters. Main stem Rock Creek, which originates at the confluence of the west and east forks, is outside of the CMW and is not an outstanding resource water. Section 3.6.4 of the FEIS was (continued next page)

Com-ment	Document #323-Army Corps of Engineers	Response
323–21 323–22 323–23 323-24	MNTR 323 adaptive management provisions need to be sufficiently flexible to allow necessary remedial actions to take place. The National Research Council identified certain wetland types that cannot be effectively mitigated and recommends impact avoidance. Ephemeral, intermittent and permanent streams provide high levels of water quality and quantity, sediment control and nutrients. Headwater streams are, in part, responsible for maintaining the high quality of the Nation's river system. Though ephemeral and intermittent streams may go dry during a portion of any given year, the period during which they do flow is essential for the plants and animals using those resources. These aquatic resources would continue to provide habitat and biological integrity for benthic macro-invertebrates and amphibians that utilize water flows within the substrate. Mitigation of headwater streams is technically difficult when attempting to create their lost functions and services. Compensatory mitigation for stream impacts would be difficult and may, in fact, be infeasible when attempting to offset aquatic and special aquatic losses. Additional clarity in this area is needed because it is not clear from the SDEIS that the TSF with its tailings waste would not present a long-term threat to the aquatic resources and special aquatic sites identified in the paragraphs above and below. The CMWA would not be directly affected by the discharge of fill material, but the CMWA and its streams and lakes would be indirectly affected by the project. If not for the discharge of fill material necessary to establish the TSF and other mine components, the mine could not be developed and there would be no reduction in surface flows or lake levels in the CMWA. Collectively, the Montanore Mine Project, when combined with other proposed projects in the area, would collectively reduce flows in Rock Creek and the East Fork Bull River, both of which are Outstanding Resources Waters. These adverse effects would result in habitat loss downstream of Rock Lake and St. Paul Lake, including during the bull trout spawning. Reductions in stream flow in Libby Creek, East Fork Rock Creek, Rock Creek, and East Fork Bull River during mining would also decrease aquatic habitat. Ramsey Lake may be affected by mining activities, but Libby Lakes and Howard Lake would not be affected. As identified in the SDEIS, the adverse impacts are certain to occur over the long-term (for approximately 1,300 years) and cannot be avoided if the project is commenced. Appropriate mitigation must be developed, disclosed and offered to offset these substantial adverse hydrologic and aquatic impacts. Other issues that the Corps believes should be further addressed in the Final EIS include the following: • Describe the mitigation for the temporal losses to stream and wetland function. • Describe the functional and areal replacement for all affected streams and wetlands, including those indirectly affected by the work. • Identify the changes or losses of headwater stream channels on the landscape. • Identify the loss or impairment of headwater streams, lakes, and wetlands, and describe the effects of those impacts on the function and structure of the aquatic areas throughout the 6	revised to disclose the potential changes in habitat availability for three life forms of bull trout (spawning, juvenile, adult). Section 3.6.4 of the FEIS also was revised to incorporate the conceptual mitigation developed as part of the KNF's Biological Assessment for aquatic resources. **Comment Response 323–21** Compensatory wetland and stream mitigation would be constructed prior to project impacts or concurrent with the first phases of mining construction to avoid or minimize temporal losses to stream and wetland functions and services. If the mitigation was constructed concurrently with project impacts, there would be a 2- to 5-year period with diminished wetland functions and services. A higher mitigation ratio subject to Corps approval would be used if wetlands were constructed concurrently with project impacts to account for the temporal losses of wetland functions and services. **Comment Response 323–22** Section 3.23.4.10.2 of the FEIS included a discussion on the replacement of functional and area replacement for all affected streams and wetlands, including those indirectly affected. **Comment Response 323–23** Section 3.23.4 of the SDEIS and FEIS disclosed the loss of non-wetland waters of the U.S. Section 3.23.4 of the FEIS was revised to incorporate the preliminary mitigation designs developed as part of MMC's 2014 waters of the U.S. mitigation plan for Alternative 3. **Comment Response 323–24** See comment response 323-23. Section 3.23.4 of the FEIS was revised to disclose the potential effect on Rock Creek Meadows, a large wetland downstream of Rock Lake. Due to the lack of soil and dominance of species that have a wide moisture tolerance, wetlands that meet the criteria of the Corps are likely absent from the banks of the Libby Creek, East Fork Bull River, and East Fork Rock Creek. Section 3.22.4 of the FEIS was revised to disclose the potential effect of reduced streamflow on riparian areas along Libby Creek, East Fork Bull River, and East Fork Rock Creek.

Comment	Document #323-Army Corps of Engineers	Response
323–25 323-26 323–27 323–28	MNTR 323 watersheds, including the portion of the watersheds below the affected headwater areas of the Kootenai River watershed and the Clark Fork River watershed. • Describe functional and areal replacement of adversely affected headwater streams. • Describe in specific terms how the expected reduction in streamflow and lake levels resulting from indirect and secondary effects will be offset or compensated. Finally, the Corps recognizes a need for adaptive management provisions that must be included with the development of the mine plan, so that any unforeseen changes in project configuration and associated effects on aquatic resources would continue to be successfully accommodated in accordance with the requirements of the Clean Water Act. The Corps appreciates this opportunity to comment on the SDEIS and to work with your agency during this ongoing NEPA review. We continue to look forward to additional coordination on this project in the near future. If you have questions or require further clarification regarding the content of this letter or our review of the proposed Montanore Mine Project, please contact myself at (406) 441-1375 or Mr. James Winters at (701) 220-6152. Sincerely, Todd N. Tillinger, P.E. Montana Program Manager Copies Furnished: Ms. Lynn Hagarty Kootenai National Forest 31374 U.S. Highway 2 West Libby, Montana 59923-3022 Ms. Kristi Ponozzo Montana DEQ MEPA Coordinator PO Box 200901 Helena, Montana 59620-0901 Mr. James L. Winters Omaha District, U.S. Army Corps of Engineers 304 East Broadway Avenue, Room 334 Bismarck, North Dakota 58501 7	**Comment Response 323–25** See comment response 323-22. **Comment Response 323–26** See comment responses 323-21 through 323-25. Due to the steep, rocky shoreline, Rock Lake has a narrow, rocky littoral zone with very little littoral zone vegetation. In addition, any reductions in lake level due to mining would be temporary, as the lake would refill every year during snowmelt runoff and fall rains. Because Rock Lake has very little littoral zone vegetation, the agencies do not anticipate the need for mitigation. **Comment Response 323–27** See comment response 323-18. **Comment Response 323–28** Thank you for your comment

Comment	Document #363-State Representative Mike Cuff	Response
363–1	Our first speaker is Representative Mike Cuff. And the person that we have after him, just so you're ready, is Roger Guches. REPRESENTATIVE MIKE CUFF: My name is Mike Cuff, State Representative House District 2. And the spelling does throw a few people off on the name, once in a while. But I like to tell people it's Rough Tough Cuff. I've seen the project go on for a long time. This particular project since 2004, the proposal began. Seven years later we're still wondering. We are still dragging. Dollars are being spent on the studies. My son helped blast the existing tunnel up there some twenty-plus years ago. I'm trying to think just which year it was, but I think around '90 or '91 he was employed there. Hundreds of jobs, hopes and dreams of what happens in the area, whether people have good tax-paying jobs, whether the county has a tax base, a lot of things hang in the balance. I'm not a technical specialist. I'm not going to try to comment on those things today. I will be submitting written comments. But what I'd like to say is, let's get on with the process. Don't change the rules, don't move the goalposts, no more delays, no more extensions. Let's get the thing done; thank you.	**Comment Response 363–1** Thank you for your comment. **Comment Response 363–2** Issuance of the SDEIS was announced in the Federal Register and made available to the public for a 45-day comment period from October 7, 2011 to November 21, 2011. The agencies granted requests to extend the 45-day comment period, extending the comment period an additional 30 days until December 21, 2011.

Com-ment	Document #375-Lincoln County Commissioner Tony Berget	Response
375-1 375-2	MR. TONY BERGET: Tony Berget, Lincoln County Commissioner. And on behalf of Lincoln County Commissioners, we would encourage the DEQ, as well as the Forest Service, to stick with the time frame and not add additional time. The original EIS come out in -- April of 2004 was the start of the supplemental. And I think that Bobbie Lacklen and Lynn Hagarty and the whole team has done a wonderful job of putting this together. And I would say, you know, it is very technical, especially the Supplemental EIS. But that's what everybody wanted was supplement. And they wanted technical information, and it's there. And it's in there in depth. And I would also like to add that Montana and Lincoln County have a long history of mining and providing the raw materials to help this country survive and prosper. The customs and culture of the area; we have learned and made mistakes, but we have learned in advance and we -- and if raw materials are not mined here environmentally responsible, then they are mined in countries without safeguards. I spent a year in Brazil, and I can tell you I saw a river that ran through that community and it was black and bubbling. It was Coca-Cola River is what they called it. So if you don't mine things here, they're going to be mined somewhere else. At least here we have some controls. We can learn from the mistakes we've made in the past and do things a little better. And when I looked out in the parking lot here, I didn't see a single horse. So everybody drove here, and all of that material is mined. I'll give you there may be some leather seats out there for some of people the people like, you know, Paul Bradford who has a little bit of money who can afford leather seats. For the rest of us, all the material in that car was mined. So it's got to come from somewhere. So it's kind of foolish to think that we can provide and use these items throughout the	**Comment Response 375–1** The agencies issued a Draft EIS in 2009 and, in response to public comment, a Supplemental Draft EIS in 2011. **Comment Response 375–2** Thank you for your comment.

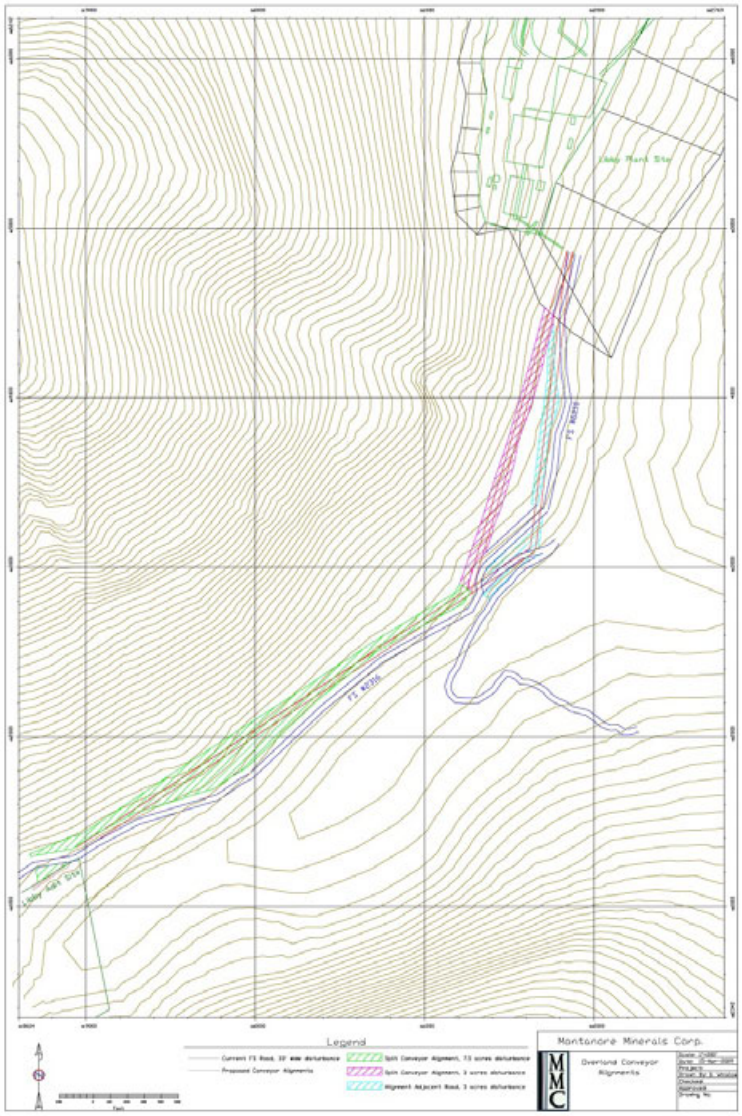
Com-ment	Document #375-Lincoln County Commissioner Tony Berget	Response
375-3	country and not expect to mine it, not in my backyard, not where I live. But this community -- you know, there was some talk about Native Americans. At what point are we not Native Americans as well? At what point do we not have a part of what happens in our community? You know, I can go back lineage quite a few years, and everybody in -- for I don't know how many years, has been born in America. At some point, this is a part of our country as well. And I love this community. And you know, I'm not willing to see this place decimated. And yes, there have been mistakes, but some things you learn every year, and you get a little better. We will also be submitting some written comments. And again, I'd like to thank everybody and encourage you to not extend the comment period. I think we've had quite a bit of time, almost two years; so thank you.	**Comment Response 375–2** Issuance of the SDEIS was announced in the Federal Register and made available to the public for a 45-day comment period from October 7, 2011 to November 21, 2011. The agencies granted requests to extend the 45-day comment period, extending the comment period an additional 30 days until December 21, 2011.

Com-ment	Document #134-Klepfer Mining Services, LLC	Response
	MNTR 134 **From:** Eric Klepfer [mailto:eric@klepfermining.com] **Sent:** Wednesday, May 27, 2009 3:00 PM **To:** 'Bobbie Lacklen'; 'Rolfes, Herb'; 'Corsi, Emily' **Cc:** Richard Trenholme; 'Jessica Conrad' **Subject:** Conveyor Alignment	**Comment Response 134-1** Thank you for your comment. **Comment Response 134-2** Thank you for your submittal.
134–1	We have initiated some conceptual level engineering on the different alternatives and found that the road corridor from the Libby Adit to the Libby Plant site probably needs to be modified slightly.	
134–2	I have included a memo and drawing showing the different options. I have also included an autocad file for your use. Any questions, please give me a call. Eric **KMS** **Klepfer Mining Services, LLC** Project Management, Engineering, and Environmental Services 13058 Sherwood Court Hayden Lake, ID 83835 208-772-6998 208-772-3480 Fax 208-771-1472 Cell	

Com-ment	Document #134-Klepfer Mining Services, LLC	Response
134–3 134–4 134–5	KMS KLEPFER MINING SERVICE LLC PROJECT MANAGEMENT, ENGINEERING, AND ENVIRONMENTAL SERVICES **MEMORANDUM** **DATE:** May 26, 2009 **TO:** Bobby Lacklen (USFS), Herb Rolfes (DEQ) **FROM:** E. Klepfer **CC:** Emily Corsi (DEQ), MMC (file) **SUBJECT: Conceptual Conveyor Alignment Re-Design** This memo is sent on behalf of Montanore Minerals Corporation (MMC) with respect to the conveyor system. After reviewing conceptual designs for Alternative 3 and 4, we believe the acreage should be adjusted slightly. There are design criteria for conveyors that will influence this alignment. The current alignment has several alignment directions based on the current road prism which are slightly problematic for conveyor systems. A straighter alignment would be more efficient and eliminate several transfer points and drive motors in the system between the plant and the adit. To achieve this, a slight variation from the alignment in the DEIS will be required. Also, to facilitate public access to the USFS Gate on #2316, the conveyor must go overhead or underneath the road near the Libby Adit entrance gate; and finally, additional acreage is required for the Upper Libby Adit. In Alternative 3 and 4, nine acres were allocated for access road from the Libby Plant Site to Libby Adit Site and Upper Libby Adit Site (NFS roads #6210 and #2316) to accommodate the conveyor along this route. This area excludes the 33' of existing disturbance along the current roads. The distance from the Libby Plant site to the Upper Libby adit is 10,380', with the addition of the eight road acres generally equates to an average additional road disturbance width of 38 feet. This would allow approximately 70 to 71 feet of disturbance for the road, conveyor, and cut/fill disturbance. As you can see from the drawing, this is not sufficient to meet conceptual design specifications. Just the road prism for the mine traffic, public access, and 13058 Sherwood Court, Hayden Lake, Idaho 83835, PH: 208.772.6993, FAX: 208.772.3480	**Comment Response 134-3** Thank you for your comment. **Comment Response 134-4** The agencies' incorporated the alignment changes based on this comment and subsequent refinement into Alternatives 3 and 4 in the FEIS. **Comment Response 134-5** See comment response 134-4.

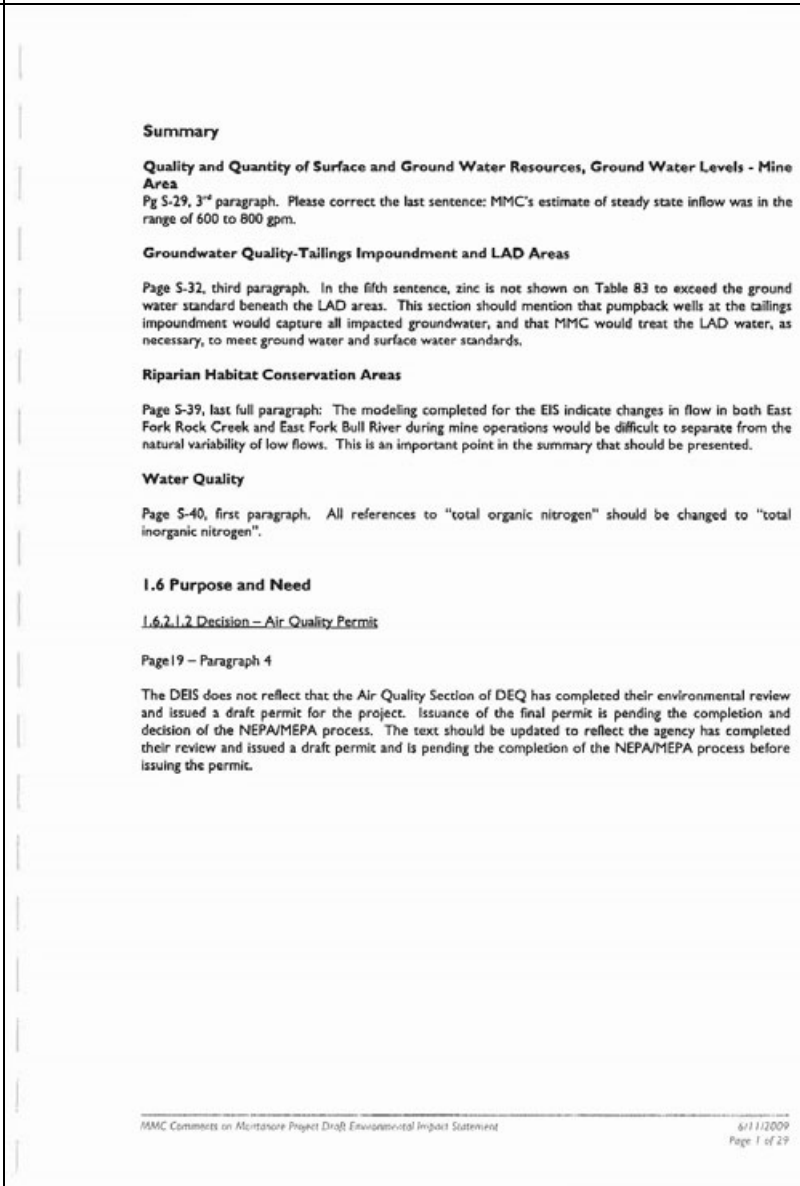
Com-ment	Document #134-Klepfer Mining Services, LLC	Response
134–6 134–7 134-8 134-9 134-10	B. Lacklen/H. Rolfes Conceptual Conveyor Re-Design May 26, 2009 Page 2 conveyor will conceptually require approximately 60 feet running width. This does not include the cut/fill segments for the road corridor. West of the #6210 intersection, the conveyor would be separated from the existing road in order to achieve a straighter alignment. The current #2316 road would still be widened to allow for mine and public traffic as outlined in the DEIS. North of the #6210 intersection, there are two options. A split conveyor corridor would place the transfer point near the current #6210 intersection. The current #6210 road would still be widened for mine traffic. The other option would move the transfer point to the northeast and the conveyor would follow an alignment next to the mine road. A larger road cut would be made to allow for the straight conveyor and additional fill work would be needed for the transfer point. Both options require nearly the same additional disturbance (10.5 acres). Either option works, as a transfer point would be required. Separation would allow the conveyor to following the contour a bit more (overland) and could reduce the overall cut/fill aspect of this section but it is expected to be minimal. The attached drawing shows the alignment alternatives and approximately disturbance boundaries along the route based on an average of 60 feet of running width on the road platform. Finally, in Alternatives 3 & 4, one acre was allocated for disturbance at the Upper Libby Adit. The Upper Libby Adit will serve as a secondary escape way, emergency egress, and primary ventilation area. Considering the area needed in the event of a mine emergency, one additional acre will be needed for this site to properly accommodate a small/efficient staging area for an emergency situation. **Disturbance Summary:** **Alternative 3 & 4 Acres** DEIS Acreage Libby Plant to Adit Corridor 8.0 Upper Libby Adit 1.0 **Total Acres 9.0** Additional Road Corridor Acres (Either Option) 10.5 Additional Upper Libby Adit 1.0 **Revised Total Acres 20.5**	**Comment Response 134-6** See comment response 134-4. **Comment Response 134-7** The alignment option was revised in the FEIS based on more detailed topographic mapping. **Comment Response 134-8** See comment response 134-7. **Comment Response 134-9** The disturbance area was left as 1 acre. The access road disturbance area of 100 feet wide should provide adequate room for the site's needs. Final disturbance and permit area boundaries can be finalized during final design. **Comment Response 134-10** See comment responses 134-4, 134-7 and 134-10.

Com-ment	**Document #134-Klepfer Mining Services, LLC**	Response
	B. Lacklen/H. Rolfes Conceptual Conveyor Re-Design May 26, 2009 Page 3 Should you have any questions on these comments or the attached figure, you can contact me at (208) 772-6993 or by cell (208) 771-1472.	

Com-ment	**Document #134-Klepfer Mining Services, LLC**	Response
		

Comment	Document #157-Klepfer Mining Services, LLC	Response
	MNTR 157 KMS KLEPFER MINING SERVICE LLC PROJECT MANAGEMENT, ENGINEERING, AND ENVIRONMENTAL SERVICES RECEIVED JUN 15 2009 June 11, 2009 Paul Bradford, Forest Supervisor Kootenai National Forest 31374 US Hwy 2 Libby, MT 59923 Warren McCullough Montana Department of Environmental Quality 1520 E. Sixth Ave. P.O. Box 200901 Helena, MT 59620-0901 Re: MMC Comments on Montanore Project Draft Environmental Impact Statement Dear Mr. Bradford and Mr. McCullough,	**Comment Response 157-1** Thank you for your comment.
157-1	This letter has been written on behalf of Montanore Minerals Corp and contains comments on the recently published Draft Environmental Impact Statement for the Montanore Project. MMC would like to take this time to thank the agencies for allowing us to work closely with your specialists over the past several years while developing this project.	
	Key Issues:	
157-2	Working collaboratively with your staff has enabled MMC to review this vast document with relatively few issues. However, there are a few issues remaining that MMC has a strong desire to continue to discuss, as well as a few minor editorial comments that we'd like to provide for your review. Our major areas of comment concern the use of the agencies' 2-D Hydrologic Model; the scale of the Groundwater Dependent Ecosystem (GDE) surveys; and the approach used by the agencies to determine affects and mitigation for the grizzly bear.	**Comment Response 157-2** Reponses to the comments on the hydrology model, GDE inventory, and grizzly bear mitigation are presented in the subsequent detailed responses.
157-3	We will be submitting specific comments on grizzly bear issues separately and expect those will be available in a week or two.	**Comment Response 157-3** Thank you for your comment.
157-4	Our comments list those items that MMC thinks should be discussed or analyzed in further detail. As a part of those comments, MMC will be including a draft Water Resources Monitoring Plan that includes our suggestions to revise the GDE surveys mentioned in the DEIS.	**Comment Response 157-4** The agencies did not receive a draft Water Resources Monitoring Plan that included MMC's suggestions for revising the GDE inventory and monitoring. The GDE inventory and monitoring in Alternatives 3 and 4 was substantially revised for the SDEIS and minor modifications were made for the FEIS.
157-5	We have submitted the 3-Dimensional Hydrologic Model developed by AMEC/Geomatrix which incorporates several key areas of hydrologic study that MMC feels should be incorporated into effects analysis for this document, and will adapt to suit the needs of the project over time. We appreciate the comments received on the model and will continue to work with your staff on the model.	**Comment Response 157-5** The results of MMC's 3D groundwater model were presented in the SDEIS and FEIS.
	13058 Sherwood Ct., Hayden Lake, ID 83835 (208)-772-6993 (208) -772-3480 (fax) email: cklepfer@roadrunner.com	

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-6 157-7	MMC Comments, Montanore DEIS, June 11, 2009 Page 2 of 2 **MMC Preferred Alternative:** After thorough review of the DEIS document, MMC has reviewed the different alternatives and believe Alternative 4 (Modified L. Cherry Impoundment) is a workable scenario that we can support. As for the transmission line, we believe our proposed action, which has been modified to address specific issues can address many of the public comments already received concerning private land impacts. Further, we understand that Plum Creek has submitted comments and has proposed a slight modification to the currently proposed alternatives. We believe their comments are similar to an idea we brought forward in the PDEIS process and suggested it be considered. Unfortunately, DEQ decided it would not include it as an alternative unless MMC formally modified our application to replace our proposed action. Obviously, that would have seriously delayed the EIS process and declined making this proposed change. We hope that the agencies will consider the suggestion by Plum Creek as a slight modification to the North Miller Creek alignment. We are prepared to continue to work on these issues. Because of the extension of the public comment period, it is hoped that we can initiate discussions on these issues soon to help recover some of the time lost in the process. If you have any concerns or questions, please contact me. Sincerely, Jessica Leonard for Eric Klepfer *Enclosures: Comments* cc: Richard Trenholme (ERO) Montanore Minerals Corporation (MMC)	**Comment Response 157-6** Thank you for your comment. In the SDEIS and FEIS, the KNF identified Alternative 3, Agency-Mitigated Poorman Impoundment Alternative as its preferred mine alternative. In the SDEIS and FEIS, the KNF and the DEQ identified Alternative D-R, Modified Miller Creek Transmission Line Alternative as their preferred transmission line alternative. The agencies modified transmission line alternatives C, D, and E in the SDEIS to address Plum Creek Timber Company's comments. **Comment Response 157-7** Thank you for your comment.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-8 157-9 157-10 157-11 157-12		**Comment Response 157-8** MMC's and the agencies' estimate of mine and adit inflows were revised in SDEIS to reflect MMC's 3D model. The model predicted steady state inflows of 350 to 400 gpm. **Comment Response 157-9** The discussion that zinc concentrations would exceed the groundwater standard was eliminated in the SDEIS and FEIS. A discussion of the pumpback wells at the tailings impoundment site was added in the SDEIS Summary. The predicted concentrations in groundwater beneath the LAD Areas and in surface water adjacent to the LAD Areas are based on flow rates considerably less than proposed by MMC. The text mentioned that MMC would treat wastewater, if necessary, to meet applicable standards. The use of the LAD Areas in Alternatives 3 and 4 was eliminated in the SDEIS and FEIS. **Comment Response 157-10** The effects on streamflow were revised in SDEIS to reflect MMC's 3D model. The effects were further modified for the FEIS to reflect revised water management plans in Alternatives 3 and 4. **Comment Response 157-11** The references to total organic nitrogen were changed to total inorganic nitrogen in the SDEIS. **Comment Response 157-12** The discussion of the status of the air quality permit was revised in the SDEIS and in the FEIS. In 2006, the DEQ issued a Preliminary Determination on MMC's air quality permit application, which remained as preliminary pending a Final EIS. The DEQ issued a Supplemental Preliminary Determination in 2011 on MMC's updated air quality permit application that primarily addressed the new National Ambient Air Quality Standards (NAAQS) for oxides of nitrogen (NO_x) and sulfur dioxide (SO_2). DEQ issued a revised Preliminary Determination on the permit application on August 28, 2015 that incorporated off-site emissions from the Rock Creek and Troy Mines (to evaluate cumulative effects) and addressed diesel generators that would be used for power in Alternative 2 during the Evaluation Phase under an existing portable permit.

Summary

Quality and Quantity of Surface and Ground Water Resources, Ground Water Levels - Mine Area

Pg S-29, 3rd paragraph. Please correct the last sentence: MMC's estimate of steady state inflow was in the range of 600 to 800 gpm.

Groundwater Quality-Tailings Impoundment and LAD Areas

Page S-32, third paragraph. In the fifth sentence, zinc is not shown on Table 83 to exceed the ground water standard beneath the LAD areas. This section should mention that pumpback wells at the tailings impoundment would capture all impacted groundwater, and that MMC would treat the LAD water, as necessary, to meet ground water and surface water standards.

Riparian Habitat Conservation Areas

Page S-39, last full paragraph: The modeling completed for the EIS indicate changes in flow in both East Fork Rock Creek and East Fork Bull River during mine operations would be difficult to separate from the natural variability of low flows. This is an important point in the summary that should be presented.

Water Quality

Page S-40, first paragraph. All references to "total organic nitrogen" should be changed to "total inorganic nitrogen".

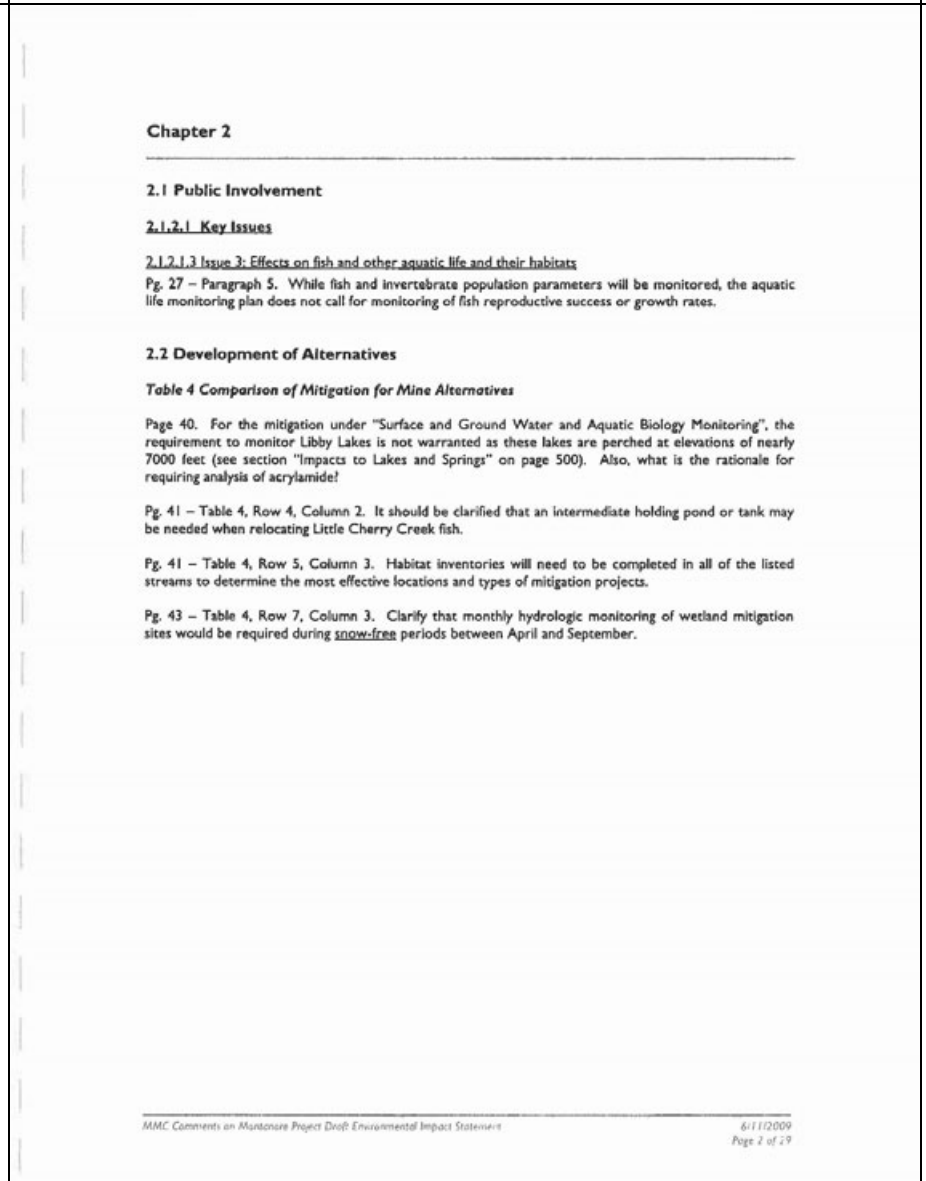
1.6 Purpose and Need

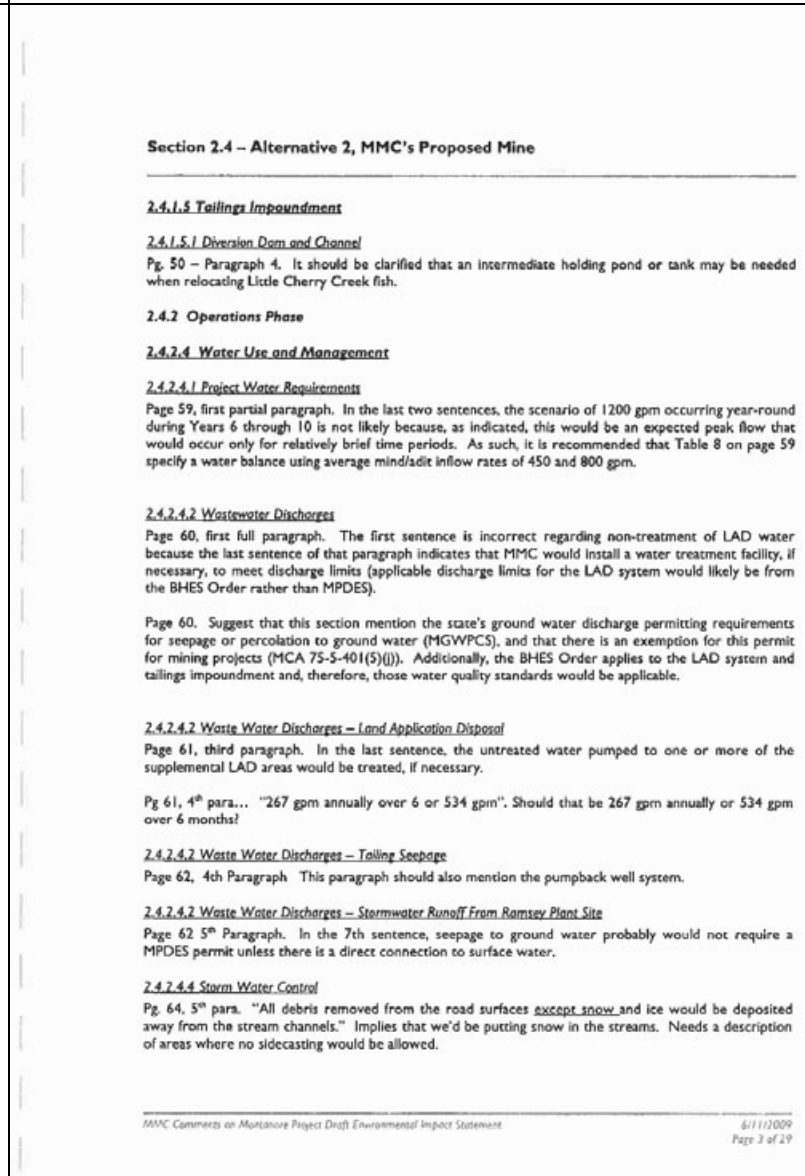
1.6.2.1.2 Decision – Air Quality Permit

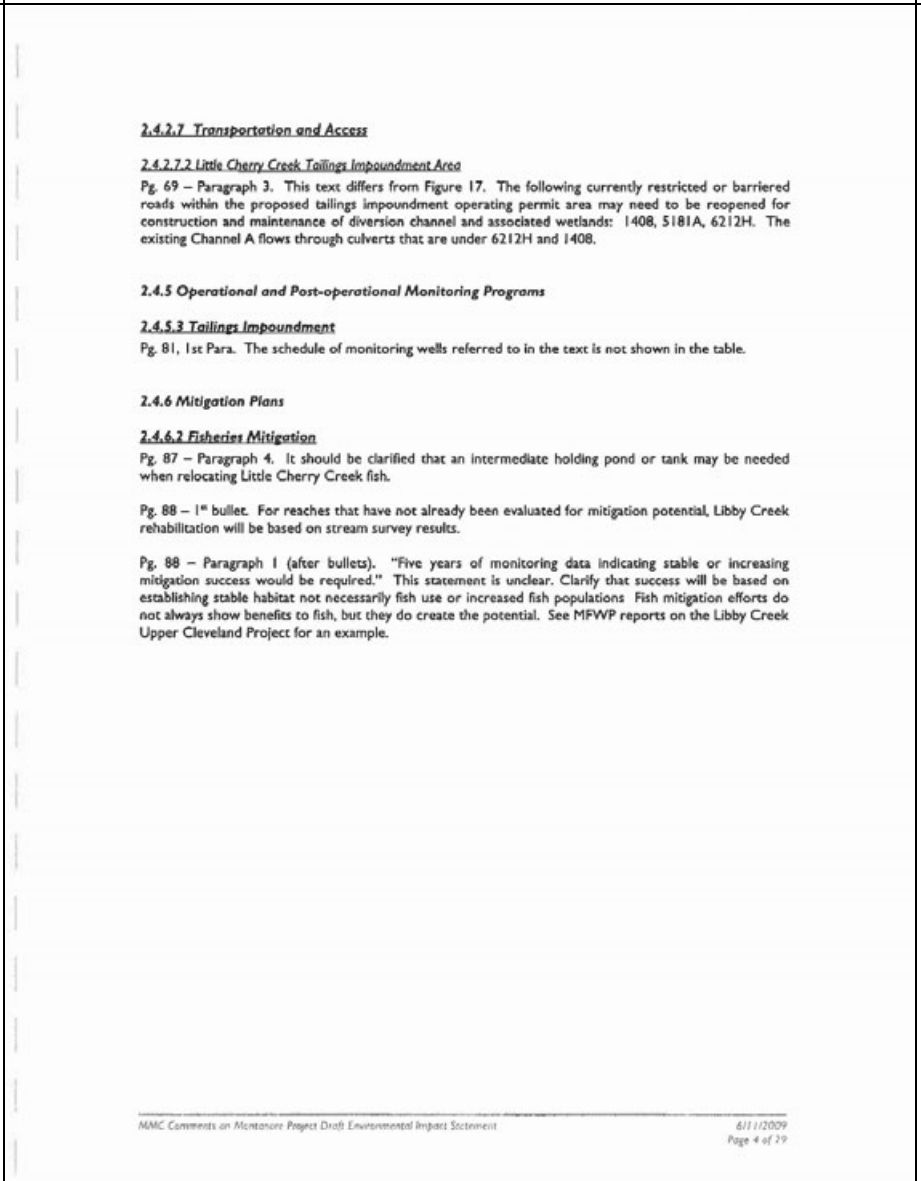
Page19 – Paragraph 4

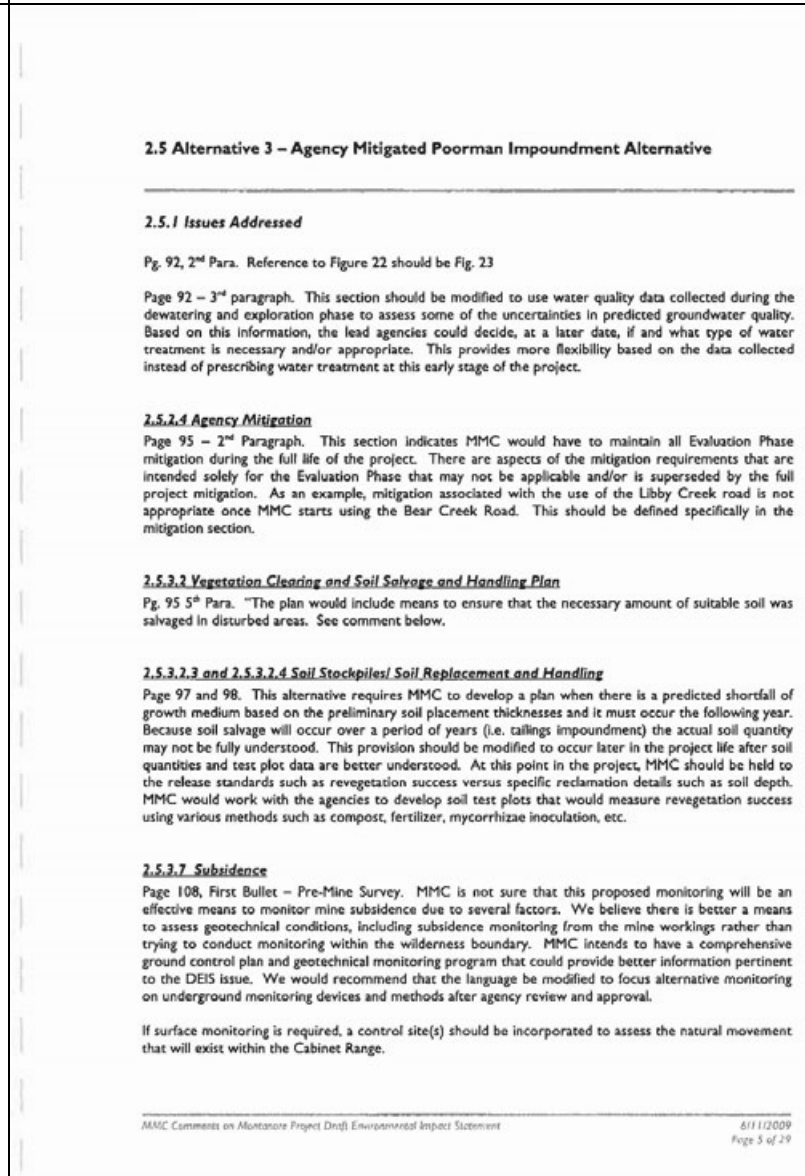
The DEIS does not reflect that the Air Quality Section of DEQ has completed their environmental review and issued a draft permit for the project. Issuance of the final permit is pending the completion and decision of the NEPA/MEPA process. The text should be updated to reflect the agency has completed their review and issued a draft permit and is pending the completion of the NEPA/MEPA process before issuing the permit.

MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 1 of 29

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-13 157-14 157-15 157-16 157-17	 Chapter 2 2.1 Public Involvement 2.1.2.1 Key Issues 2.1.2.1.3 Issue 3: Effects on fish and other aquatic life and their habitats Pg. 27 – Paragraph 5. While fish and invertebrate population parameters will be monitored, the aquatic life monitoring plan does not call for monitoring of fish reproductive success or growth rates. 2.2 Development of Alternatives *Table 4 Comparison of Mitigation for Mine Alternatives* Page 40. For the mitigation under "Surface and Ground Water and Aquatic Biology Monitoring", the requirement to monitor Libby Lakes is not warranted as these lakes are perched at elevations of nearly 7000 feet (see section "Impacts to Lakes and Springs" on page 500). Also, what is the rationale for requiring analysis of acrylamide? Pg. 41 – Table 4, Row 4, Column 2. It should be clarified that an intermediate holding pond or tank may be needed when relocating Little Cherry Creek fish. Pg. 41 – Table 4, Row 5, Column 3. Habitat inventories will need to be completed in all of the listed streams to determine the most effective locations and types of mitigation projects. Pg. 43 – Table 4, Row 7, Column 3. Clarify that monthly hydrologic monitoring of wetland mitigation sites would be required during snow-free periods between April and September. MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 2 of 19	**Comment Response 157-13** The methods of analysis associated with Issue 3 were revised in the FEIS. **Comment Response 157-14** The KNF installed a pressure transducer and temperature sensor programmed to take measurements every 6 hours in lower Libby Lake in October 2010 and downloaded the data in 2011 and 2012. The KNF's monitoring of lower Libby Lake is on-going. MMC would be responsible for monitoring after the ROD was issued. The agencies included acrylamide in the parameters to be monitored based on MMC's analysis. In MMC's January 2007 Supporting Water Resources Information for MPDES Permit Application (Geomatrix 2007), MMC indicated "acrylamide could be detectable in the tailing slurry water which would accumulate in the tailing impoundment." Water from the tailings impoundment would be discharged during Operations, Closure, and Post-Closure Phases. In the same report, MMC indicated "the water monitoring program would include acrylamide concentrations in tailing impoundment water and groundwater downgradient of the impoundment site." **Comment Response 157-15** The FEIS was revised to indicate an intermediate hold pond or tank may be needed for Alternatives 2 and 4. **Comment Response 157-16** The fisheries mitigation plan in Alternatives 3 and 4 was revised in the SDEIS and again in the FEIS in response to agency and public comment. A bull trout mitigation plan was submitted as part of the KNF's Biological Assessment and was included in the FEIS **Comment Response 157-17** Collecting water level information at the potential wetland mitigation sites should be possible in April and September with some snow by using well casings with the top of the casing above the ground surface.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-18 157-19 157-20 157-21 157-22 157-23 157-24 157-25 157-26	 **Section 2.4 – Alternative 2, MMC's Proposed Mine** *2.4.1.5 Tailings Impoundment* *2.4.1.5.1 Diversion Dam and Channel* Pg. 50 – Paragraph 4. It should be clarified that an intermediate holding pond or tank may be needed when relocating Little Cherry Creek fish. *2.4.2 Operations Phase* *2.4.2.4 Water Use and Management* *2.4.2.4.1 Project Water Requirements* Page 59, first partial paragraph. In the last two sentences, the scenario of 1200 gpm occurring year-round during Years 6 through 10 is not likely because, as indicated, this would be an expected peak flow that would occur only for relatively brief time periods. As such, it is recommended that Table 8 on page 59 specify a water balance using average mind/adit inflow rates of 450 and 800 gpm. *2.4.2.4.2 Wastewater Discharges* Page 60, first full paragraph. The first sentence is incorrect regarding non-treatment of LAD water because the last sentence of that paragraph indicates that MMC would install a water treatment facility, if necessary, to meet discharge limits (applicable discharge limits for the LAD system would likely be from the BHES Order rather than MPDES). Page 60. Suggest that this section mention the state's ground water discharge permitting requirements for seepage or percolation to ground water (MGWPCS), and that there is an exemption for this permit for mining projects (MCA 75-5-401(5)(j)). Additionally, the BHES Order applies to the LAD system and tailings impoundment and, therefore, those water quality standards would be applicable. *2.4.2.4.2 Waste Water Discharges – Land Application Disposal* Page 61, third paragraph. In the last sentence, the untreated water pumped to one or more of the supplemental LAD areas would be treated, if necessary. Pg 61, 4th para… "267 gpm annually over 6 or 534 gpm". Should that be 267 gpm annually or 534 gpm over 6 months? *2.4.2.4.2 Waste Water Discharges – Tailing Seepage* Page 62, 4th Paragraph This paragraph should also mention the pumpback well system. *2.4.2.4.2 Waste Water Discharges – Stormwater Runoff From Ramsey Plant Site* Page 62 5th Paragraph. In the 7th sentence, seepage to ground water probably would not require a MPDES permit unless there is a direct connection to surface water. *2.4.2.4.4 Storm Water Control* Pg. 64, 5th para. "All debris removed from the road surfaces except snow and ice would be deposited away from the stream channels." Implies that we'd be putting snow in the streams. Needs a description of areas where no sidecasting would be allowed. *MMC Comments on Montanore Project Draft Environmental Impact Statement* *6/11/2009* *Page 3 of 29*	**Comment Response 157-18** See comment response 157-15. **Comment Response 157-19** The project water balance was revised in the SDEIS to reflect mine and adit inflows predicted by MMC's 3D groundwater model. **Comment Response 157-20** The FEIS was revised to clarify that MMC would use the Water Treatment Plant at the Libby Adit Site or install a new water treatment facility at the Ramsey Plant Site if necessary to meet MPDES permitted effluent limits. The MPDES would set effluent limits; the BHES Order describes limits in surface water and groundwater for parameters identified in the Order. **Comment Response 157-21** The DEQ's groundwater permit is applicable to discharges to groundwater not directly connected hydrologically to surface water. Because groundwater at the LAD Areas is hydrologically connected to surface water, discharges at the LAD Areas would be subject to MPDES permitted effluent limits. The FEIS was revised to indicate that tailings seepage that did not reach surface water would be considered a discharge to groundwater. Discharges to groundwater by projects covered by a Hard Rock Operating Permit are exempted from Montana's groundwater discharge permitting requirements. **Comment Response 157-22** See comment response 157-20. **Comment Response 157-23** The FEIS was revised to indicate the monthly discharge rate of 534 gpm over 6 months. **Comment Response 157-24** The FEIS was revised to mention the pumpback well system. **Comment Response 157-25** The discussion of stormwater runoff was moved to Section 2.4.2.4.5 in the FEIS. The discussion was revised in the FEIS to indicate that seepage to groundwater may be considered a discharge to surface water and subject to MPDES permitting requirements if it has a direct connection to surface water. **Comment Response 157-26** (See next page)

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-27 157-28 157-29 157-30 157-31	 2.4.2.7 Transportation and Access 2.4.2.7.2 Little Cherry Creek Tailings Impoundment Area Pg. 69 – Paragraph 3. This text differs from Figure 17. The following currently restricted or barriered roads within the proposed tailings impoundment operating permit area may need to be reopened for construction and maintenance of diversion channel and associated wetlands: 1408, 5181A, 6212H. The existing Channel A flows through culverts that are under 6212H and 1408. 2.4.5 Operational and Post-operational Monitoring Programs 2.4.5.3 Tailings Impoundment Pg. 81, 1st Para. The schedule of monitoring wells referred to in the text is not shown in the table. 2.4.6 Mitigation Plans 2.4.6.2 Fisheries Mitigation Pg. 87 – Paragraph 4. It should be clarified that an intermediate holding pond or tank may be needed when relocating Little Cherry Creek fish. Pg. 88 – 1st bullet. For reaches that have not already been evaluated for mitigation potential, Libby Creek rehabilitation will be based on stream survey results. Pg. 88 – Paragraph 1 (after bullets). "Five years of monitoring data indicating stable or increasing mitigation success would be required." This statement is unclear. Clarify that success will be based on establishing stable habitat not necessarily fish use or increased fish populations Fish mitigation efforts do not always show benefits to fish, but they do create the potential. See MFWP reports on the Libby Creek Upper Cleveland Project for an example. MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 4 of 19	The sentence is from MMC's Plan of Operations (p. 88). Section 2.5.4.5.1 discussed in Alternatives 3 and 4 that sidecasting of snow mixed with soil would be avoided. Sidecasting of road material would be prohibited on road segments within or abutting RHCAs in priority watersheds. MMC would install or fund the installation of signage where sidecasting would be avoided. **Comment Response 157-27** The discussion on road use in the Little Cherry Creek Impoundment Site in Alternative 2 was revised in the FEIS. **Comment Response 157-28** The description of monitoring wells in Section 2.4.5.3 of the SDEIS and FEIS adequately described MMC's proposal. The agencies' conceptual monitoring plans were presented in Appendix C of the SDEIS and FEIS. **Comment Response 157-29** See comment response 157-15. **Comment Response 157-30** The fisheries mitigation plan in Alternative 2 is based on MMC's Plan of Operations/Application for Hard Rock Operating Permit. **Comment Response 157-31** To reflect MMC's Plan of Operations, the sentence was revised to indicate 5 consecutive years of data showing a positive response by fish would be required.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-32 157-33 157-34 157-35 157-36 157-37		**Comment Response 157-32** The agencies eliminated the use of LAD Areas for water treatment in Alternatives 3 and 4 in the SDEIS and FEIS because of the uncertainties associated with water quality. **Comment Response 157-33** The FEIS was revised to indicate that most mitigation measures would remain in place after the Evaluation Phase and specifically noted that mitigation measures associated with the Libby Creek Road would not continue after the Bear Creek Road was reconstructed. **Comment Response 157-34** See comment response 157-35. **Comment Response 157-35** The agencies believe an annual soil reconciliation report would be appropriate to ensure adequate soils were available for reclamation. **Comment Response 157-36** The agencies' proposed subsidence mitigation and monitoring was revised in the FEIS to eliminate the requirement for surface elevation monitoring. The agencies' proposed underground monitoring would be more effective than surface monitoring. **Comment Response 157-37** See comment response 157-36.

2.5 Alternative 3 – Agency Mitigated Poorman Impoundment Alternative

2.5.1 Issues Addressed

Pg. 92, 2nd Para. Reference to Figure 22 should be Fig. 23

Page 92 – 3rd paragraph. This section should be modified to use water quality data collected during the dewatering and exploration phase to assess some of the uncertainties in predicted groundwater quality. Based on this information, the lead agencies could decide, at a later date, if and what type of water treatment is necessary and/or appropriate. This provides more flexibility based on the data collected instead of prescribing water treatment at this early stage of the project.

2.5.2.4 Agency Mitigation

Page 95 – 2nd Paragraph. This section indicates MMC would have to maintain all Evaluation Phase mitigation during the full life of the project. There are aspects of the mitigation requirements that are intended solely for the Evaluation Phase that may not be applicable and/or is superseded by the full project mitigation. As an example, mitigation associated with the use of the Libby Creek road is not appropriate once MMC starts using the Bear Creek Road. This should be defined specifically in the mitigation section.

2.5.3.2 Vegetation Clearing and Soil Salvage and Handling Plan

Pg. 95 5th Para. "The plan would include means to ensure that the necessary amount of suitable soil was salvaged in disturbed areas. See comment below.

2.5.3.2.3 and 2.5.3.2.4 Soil Stockpiles/ Soil Replacement and Handling

Page 97 and 98. This alternative requires MMC to develop a plan when there is a predicted shortfall of growth medium based on the preliminary soil placement thicknesses and it must occur the following year. Because soil salvage will occur over a period of years (i.e. tailings impoundment) the actual soil quantity may not be fully understood. This provision should be modified to occur later in the project life after soil quantities and test plot data are better understood. At this point in the project, MMC should be held to the release standards such as revegetation success versus specific reclamation details such as soil depth. MMC would work with the agencies to develop soil test plots that would measure revegetation success using various methods such as compost, fertilizer, mycorrhizae inoculation, etc.

2.5.3.7 Subsidence

Page 108, First Bullet – Pre-Mine Survey. MMC is not sure that this proposed monitoring will be an effective means to monitor mine subsidence due to several factors. We believe there is better a means to assess geotechnical conditions, including subsidence monitoring from the mine workings rather than trying to conduct monitoring within the wilderness boundary. MMC intends to have a comprehensive ground control plan and geotechnical monitoring program that could provide better information pertinent to the DEIS issue. We would recommend that the language be modified to focus alternative monitoring on underground monitoring devices and methods after agency review and approval.

If surface monitoring is required, a control site(s) should be incorporated to assess the natural movement that will exist within the Cabinet Range.

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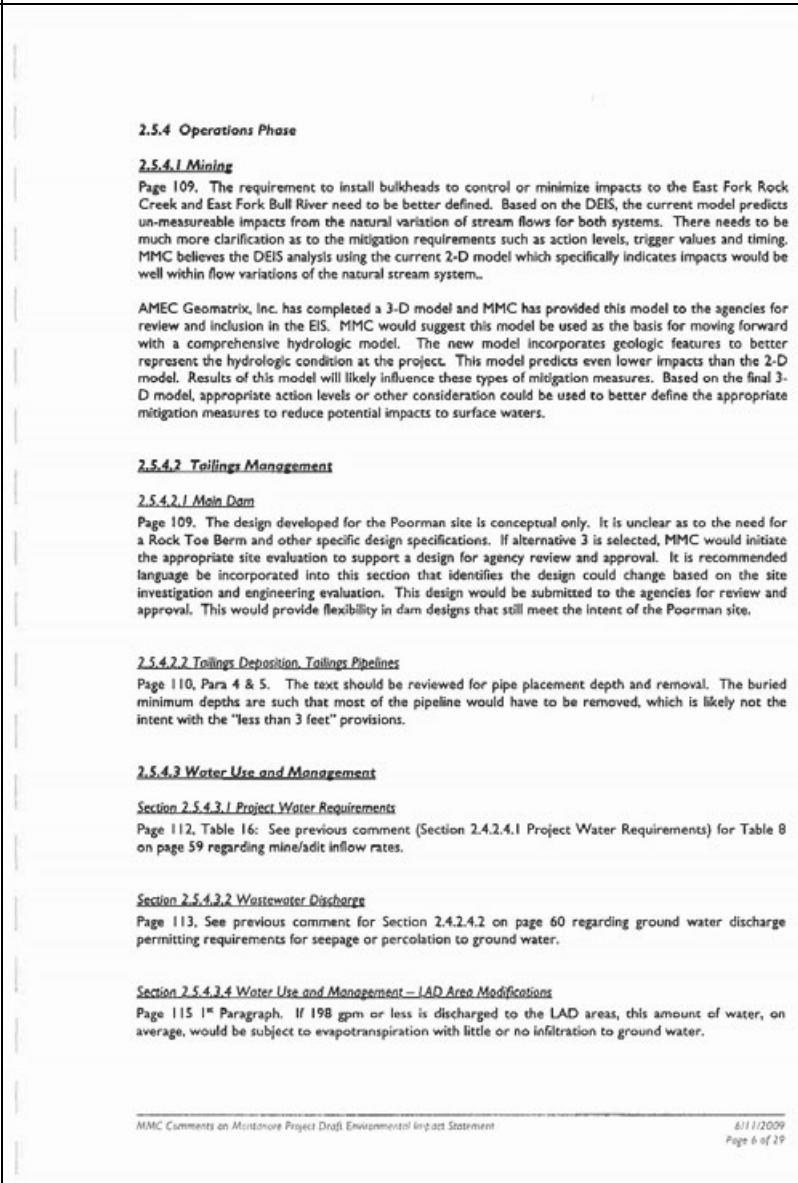
Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-38 157-39 157-40 157-41 157-42 157-43 157-44		**Comment Response 157-38** The agencies' mitigation was updated in Sections 2.5.2.6.5 and 2.5.4.1 of the FEIS. By the fifth year of operations, MMC would use updated hydrology modeling to assess the need for barrier pillars and/or bulkheads to minimize post-mining changes in East Fork Rock Creek and East Fork Bull River streamflow and water quality. If needed, MMC would submit a revised mine plan with one or more barrier pillars with constructed bulkheads at access openings to the agencies for approval. One or more barriers would be maintained underground, if necessary based on the hydrologic monitoring, after the plan's approval. The underground barriers are described in section 2.5.2.6.5 of the FEIS. **Comment Response 157-39** The SDEIS and FEIS used MMC's 3D groundwater models to describe potential effects on surface water and groundwater resources. The agencies' mitigation plans and their water and aquatic resources plans (Appendix C) were developed, in part, on the 3D model results. The agencies characterized the 3D model predictions as the best currently available estimates of impacts and associated uncertainty that can be obtained using the currently available data in the groundwater models. **Comment Response 157-40** Section 2.5.2.6.3 was revised to indicate the design developed for the Poorman site is conceptual only and is based on limited geotechnical investigations. The need for the specific design features (*e.g.*, Rock Toe Berm) described for a Poorman Impoundment was uncertain. The tailings facility design would be based on additional site information obtained during the design process, which likely would include a preliminary design phase and a final design phase. Section 2.5.2.6.3 of the FEIS discussed the final design process for the tailings impoundment. **Comment Response 157-41** Section 2.5.4.2.2 was revised in the FEIS to clarify pipeline burial depth. **Comment Response 157-42** See comment response 157-19. **Comment Response 157-43** See comment response 157-21. **Comment Response 157-44** The agencies eliminated the use of LAD Areas for water treatment in Alternatives 3 and 4 because of the uncertainties associated with water quality.

2.5.4 Operations Phase

2.5.4.1 Mining

Page 109. The requirement to install bulkheads to control or minimize impacts to the East Fork Rock Creek and East Fork Bull River need to be better defined. Based on the DEIS, the current model predicts un-measureable impacts from the natural variation of stream flows for both systems. There needs to be much more clarification as to the mitigation requirements such as action levels, trigger values and timing. MMC believes the DEIS analysis using the current 2-D model which specifically indicates impacts would be well within flow variations of the natural stream system..

AMEC Geomatrix, Inc. has completed a 3-D model and MMC has provided this model to the agencies for review and inclusion in the EIS. MMC would suggest this model be used as the basis for moving forward with a comprehensive hydrologic model. The new model incorporates geologic features to better represent the hydrologic condition at the project. This model predicts even lower impacts than the 2-D model. Results of this model will likely influence these types of mitigation measures. Based on the final 3-D model, appropriate action levels or other consideration could be used to better define the appropriate mitigation measures to reduce potential impacts to surface waters.

2.5.4.2 Tailings Management

2.5.4.2.1 Main Dam

Page 109. The design developed for the Poorman site is conceptual only. It is unclear as to the need for a Rock Toe Berm and other specific design specifications. If alternative 3 is selected, MMC would initiate the appropriate site evaluation to support a design for agency review and approval. It is recommended language be incorporated into this section that identifies the design could change based on the site investigation and engineering evaluation. This design would be submitted to the agencies for review and approval. This would provide flexibility in dam designs that still meet the intent of the Poorman site.

2.5.4.2.2 Tailings Deposition, Tailings Pipelines

Page 110, Para 4 & 5. The text should be reviewed for pipe placement depth and removal. The buried minimum depths are such that most of the pipeline would have to be removed, which is likely not the intent with the "less than 3 feet" provisions.

2.5.4.3 Water Use and Management

Section 2.5.4.3.1 Project Water Requirements

Page 112, Table 16: See previous comment (Section 2.4.2.4.1 Project Water Requirements) for Table 8 on page 59 regarding mine/adit inflow rates.

Section 2.5.4.3.2 Wastewater Discharge

Page 113. See previous comment for Section 2.4.2.4.2 on page 60 regarding ground water discharge permitting requirements for seepage or percolation to ground water.

Section 2.5.4.3.4 Water Use and Management – LAD Area Modifications

Page 115 1st Paragraph. If 198 gpm or less is discharged to the LAD areas, this amount of water, on average, would be subject to evapotranspiration with little or no infiltration to ground water.

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157-45	Page 115, 1st Paragraph. In the last sentence, storm water from the LAD areas that collects in a lined retention pond could be pumped to the tailings impoundment or to the Libby Adit water treatment plant to prevent discharge to Poorman Creek, thus avoiding a new MPDES permitted outfall.	**Comment Response 157-45** See comment response 157-44.
157-46	***2.5.4.4 Solid Waste Management*** Page 115, 2nd Paragraph. The last sentence states that sanitary wastes would be recycled to the mill or discharged as wastewater to the LAD areas. Text should be changed to show that the sanitary wastes would be treated and disposed of using a conventional public subsurface wastewater treatment system at the Libby Plant site (in accordance with state and local requirements). It would not be prudent to put septic wastewater onto the LAD areas due to potential overloading of nitrogen compounds. By combining mine and sanitary waste water, MMC appears to be held to a higher standard than other industrial facilities with similar sanitary waste disposal systems. This comment also applies to Section 3.12.4.3 on page 508.	**Comment Response 157-46** The agencies revised sewage treatment and management in the SDEIS for Alternatives 3 and 4 to have a septic system consisting of septic tanks for primary treatment, followed by discharge to the tailings impoundment for final disposal. The effluent from the septic tanks would be disinfected before pumping it to the impoundment, and disinfection would be by chlorination, ozonation, or ultraviolet light.
157-47	***2.5.4.5 Transportation and Access*** *2.5.4.5.2 Bear Creek Road and Libby Creek Road* Page 116. Under this alternative, the Upper Libby Adit would have to be accessed via NFS Road 2316. While the current plans involve development of the Upper Libby Adit from underground, access to the adit from the surface will be required. In order for this adit to provide a secondary escape from the mine, the road will have to remain open to mine traffic (gated and locked) and snow plowing will have to occur during the winter time. Figure 30 shows this to be a foot trail and no indication of mine traffic. While there will be minimal trips on this road, snow removal will be the biggest activity that would occur on this road behind the gate.	**Comment Response 157-47** The SDEIS was revised to clarify mine use of NFS Road 2316.
157-48	MMC has made numerous comments regarding the upgrade of the Bear Creek Bridge. As previously mentioned, the combined use of logging trucks and public traffic has functioned adequately historically and at present. MMC understands we will be adding to the traffic load but other alternatives to control traffic at the bridge (turn outs, traffic lights, signs etc.) could be utilized. MMC feels it is unnecessary to increase stream impacts from construction on Bear Creek when there are many other viable options available and due to the original bridge design to handle loads from heavy equipment. No assessment of the "trigger" values for traffic increases was presented. MMC recommends the alternative traffic control measures be implemented and traffic monitoring be accomplished to determine actual public/mine traffic interaction and how they differ from previous timber harvesting traffic. .	**Comment Response 157-48** Thank you for your comment. The agencies believe widening of the Bear Creek bridge is appropriate for anticipated traffic levels with Alternatives 3 and 4.
157-49	Page 116, 4th Paragraph. The text discusses a supply staging area in Libby to be used during operations. While this can be done, MMC fully anticipates that primary deliveries to the site, especially during construction, will already be at the full load limit allowed by road load limits. Consolidation of shipments will only be possible for local supplies and materials that may only be partially loaded. In this case, MMC would likely have warehouse personnel operate a delivery truck that would regularly pick up non-time critical supplies and parts from the staging office in Libby.	**Comment Response 157-49** Permit #00150 and the KNF's original ROD required MMC to submit transportation plans for the construction and operation Phases that reduces mine-related vehicle traffic and minimizes parking availability at the plant site. Use of a staging area to consolidate shipment of materials is one component of this mitigation measure. It is unlikely that all deliveries would be at the legal load limit.
157-50	***2.5.5 Reclamation Phase*** General Comment. MMC believes that test plots will provide significant information to develop revegetation standards. While MMC understand the "prescriptive" nature of the comments throughout this segment, MMC believe the use of test plots to explore the appropriate level of organic amendments, plant density, fertilizer, weed control, and seed mixtures are warranted and appropriate. There will be sufficient time to assess the long-term success of various techniques that will help to optimize reclamation objectives. This is also true for the soil placement depth requirements and the lack of potential soil sources in the proposed disturbed area to meet the "standard" established for the project.	**Comment Response 157-50** Thank you for your comment.
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157-51	MMC would submit a Reclamation Test Program that would be initiated after construction and would focus on a number of issues identified in the DEIS. Using the control sites as well as test plots will help to develop a better site-specific reclamation plan that can be implemented during the life of the project. **2.5.5.2 Revegetation** *2.5.5.2.5 Noxious Weed Mitigation Measures* Page 123 3rd Paragraph. Noxious weeds are a statewide issue in Montana and it is no different at the Montanore Project Area. As identified in the DEIS, weeds are present on public and private lands in and around the project area. Is there any evidence that pre-treatment of noxious weeds prior to disturbance will be an effective deterrent to weed infestation? Under this alternative, MMC is already responsible for managing weeds in the project area. Because of the widespread weed issue on all the surrounding lands, MMC will have to maintain an active weed program on the disturbed lands just to battle weed infestation from the surrounding public lands where little or no treatment is occurring. Much of the area proposed to be disturbed is either very steep or vegetation is extremely thick, making it very difficult to effectively apply any weed treatment prior to land disturbing activities.	**Comment Response 157-51** The agencies will review any reclamation test program submitted by MMC. **Comment Response 157-52** The agencies recognize that noxious weeds are found throughout the Montanore Project area. The mitigation proposed in Alternatives 3 and 4 is designed to minimize the spread of noxious weeds by project-related disturbances.
157-52		
157-53	**2.5.6 Operational and Post Operational Monitoring Programs** **2.5.6.1 Ground Water Dependent Ecosystem Inventory** *2.5.6.1.3 Wetland and Riparian Vegetation Inventory* Page 125 1st Paragraph. The text references Figure 33. MMC has submitted a 3-D model that shows a substantive difference in groundwater response, MMC believes the inventory area is too large, especially when considering the 3-D model predictions. MMC recommends this section be revised based on the 3-D model.	**Comment Response 157-53** The 3D Model did not predict a substantial difference in effects from the 2D model used in the DEIS. The GDE inventory area was revised in the SDEIS and in the FEIS to reflect the results of MMC's 3D model. **Comment Response 157-54** The GDE inventory and monitoring plan was revised in the SDEIS and in the FEIS to reflect the results of MMC's 3D model. **Comment Response 157-55** See comment responses 157-53 and 157-54.
157-54	*2.5.6.1.4 Stream Base Flow Inventory* Page 125 1st Paragraph. Due to the natural variability of flow for streams throughout the inventory area, it would be prudent to measure base flow for specific and targeted streams based on model predictions, rather than "any stream in the GDE". The proposed weekly frequency of monitoring (mid-August to mid-September) is excessive based on the results of both the 2-D and 3-D model predictions and is unwarranted. In addition, these three very large areas of Upper Libby Creek, Rock Lake Area, and East Fork Bull River are only accessible by foot. Much of the area is very steep mountainous terrain which may or may not be accessible during the projected monitoring time periods. MMC anticipates this could be a daunting effort that is likely not even physically possible. Certainly, this level of monitoring is not necessary to meet the objectives of the GDE monitoring program.	
157-55	MMC understands the intent but clearly a better definition of the objectives, site selection, and other reasonable scientific assessment needs to be completed. A reduction in data collection is needed to make the monitoring manageable and possible. MMC would recommend that the 3-D model results help to target monitoring sites and objectives. This information along with the ground water dependent ecosystem inventory would provide more information to refine the monitoring area to a much a smaller subset of streams. It is expected that monitoring sites would be selected based on location, flow rates, representativeness, and other criterion to make this a more manageable effort while still providing meaningful scientific data. We have included a draft copy of the monitoring program based on the preliminary 3-D model results for guidance. *MMC Comments on Montanore Project Draft Environmental Impact Statement* 6/11/2009 Page 8 of 29	

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157-56	2.5.6.1.5 Lakes Inventory Page 125 1st Paragraph. Monitoring Lower Libby Lake is not necessary; it is perched at an elevation of nearly 7000 feet, more than a 1,000 feet above the proposed mine workings (see section "Impacts to Lakes and Springs" on page 500). 2.5.6.2 Ground Water Dependent Ecosystem Monitoring	**Comment Response 157-56** See comment response 157-14.
157-57	2.5.6.2.1 Monitoring Objectives Page 125 and Page 126, and Table 19. Due to significant variability in surface water, shallow ground water levels, and soil moisture on a seasonal basis, there is no reason to install piezometers and tensiometers in the GDE inventory areas to look for ground water level changes and soil moisture stress. This data will not provide any conclusive or preemptive action by the agencies. Proposed ground water monitoring will be conducted in the adits and underground workings, and in areas around the other mine-related facilities which will provide a comparison between predicted discharge rates and actual values. Surface flows near Rock Lake and other similar locations will also provide valuable information to compare against the hydrologic model predictions. If updated/calibrated model predictions indicate a significant predicted change on an annual basis, additional monitoring could be added to assess the groundwater issues.	**Comment Response 157-57** Table 19, which was moved to Table C-8 in the SDEIS and FEIS, identifies the specific monitoring options for surface resources in the GDE inventory area. After the initial survey, the options in the table would help establish the methods that would be used to monitor GDEs.
157-58	2.5.6.2.2 Springs Monitoring Page 126 3rd Paragraph. As mentioned above, monitoring springs will also be a difficult task unless the number of springs is reduced to representative sites. Further, the text indicates mining induced impacts are frequently subtle and hard to distinguish from natural variability. The 2-D model for the DEIS does in fact make that observation. Predicted stream impacts are projected to be small and within the natural variability level of the local stream systems. Therefore, it seems unrealistic to assume we can monitor impacts and relate them to mine activities. Further, it seems the GDE monitoring program is not consistent with the predicted level of impacts and was developed without the consideration of assessing the data collected and discerning mine impacts from natural variability.	**Comment Response 157-58** See comment responses 157-53 and 157-54. In some groundwater modeling scenarios, effects on springs and streamflow would not be small and would likely be measureable with adequate sample size. Effects on GDE in the CMW are a critical issue best addressed by the inventory and monitoring described in Appendix C of the FEIS.
157-59	MMC believes the 3-D model provides a valid and appropriate method to predict and monitor groundwater activities associated with dewatering the mine workings. Data collected over time will improve the model predictions allowing it to be used as an important monitoring tool by the company and the agencies..	**Comment Response 157-59** See comment responses 157-53 and 157-54. The agencies agree that data collected over time would improve model predictions.
157-60	2.5.6.3 Surface and Ground Water (Appendix C) Page 127. MMC has the following comments on the monitoring plan presented in Appendix C and referenced within this section.	**Comment Response 157-60** Thank you for your comment.
157-61	Appendix C Page C-7 Lake Monitoring Under this plan, MMC must sample the lakes quarterly at the outlet, inlet, and the deepest part of the lake. Access to all the lakes is by foot. Without a boat, depth sampling will be a technical challenge and well as meeting laboratory water sampling conditions (holding times, temperature etc.).	**Comment Response 157-61** The lake sampling requirements were revised in the SDEIS to included sampling of Rock Lake monthly between July and October.
157-62	Because of the complexities of obtain these depth samples and lack of modeled and/or predicted impacts from mine operations to lake quality, MMC respectfully feels this requirement is onerous and unnecessary. It will be difficult at best to reach each of the lakes on the frequency laid out to obtain surface samples from the lake. It is likely that other monitoring provisions could be incorporated to address these issues that would be less arduous. If sampling at depth is required, it should reduced and be eliminated after several years of data are collected to establish a general baseline condition. If after 3 MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 9 of 29	**Comment Response 157-62** See comment response 157-61.

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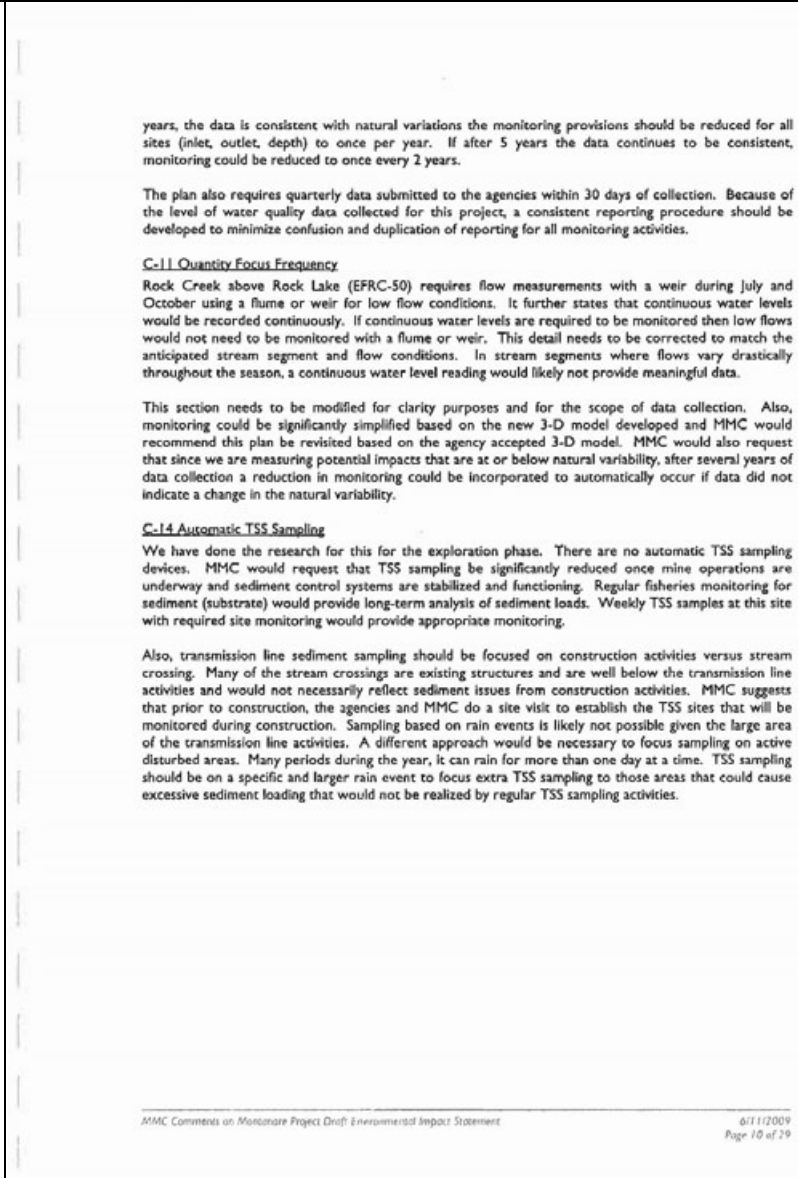
157-63 157-64 157-65 157-66 157-67		**Comment Response 157-63** The requirement to submit brief quarterly reports within 4 weeks after receipt of final laboratory results is reasonable, given the importance of the water quality monitoring. **Comment Response 157-64** Section C.10 was modified to indicate continuous stage measurements would be collected at EFRC-50. **Comment Response 157-65** All monitoring plans in Appendix C were revised in the SDEIS after reviewing comments on the DEIS. The water resources monitoring plan was revised in the SDEIS after incorporating MMC's 3D groundwater model. None of the alternatives would affect the natural variability in any resource. For example, Section C.10.7.1 discussed the role of monitoring in detecting trends in surface water flow. Section 3.11.4.2.2 in the SDEIS (3.11.4.4.6 in the FEIS) provided a discussion of streamflow variability and measurability. Section C.1 in the SDEIS and FEIS discussed after submittal of a monitoring report, the agencies may call a meeting with all other relevant agencies to review the monitoring plan and results, and to evaluate possible modifications to the plan or permitted operations. **Comment Response 157-66** Monitoring of suspended sediments in surface water was revised in the SDEIS. The KNF conducts continuous suspended sediment monitoring during the ice-free period with an automated sampler near LB-3000 on Libby Creek. The continuous suspended sediment monitoring would continue during construction and post-construction of the mine and transmission line facilities. MMC would either fund the existing KNF monitoring or they would implement their own monitoring efforts in Libby Creek. Any other suspended sediment monitoring required by the MPDES permit also would be implemented. **Comment Response 157-67** See comment response 157-66.

years, the data is consistent with natural variations the monitoring provisions should be reduced for all sites (inlet, outlet, depth) to once per year. If after 5 years the data continues to be consistent, monitoring could be reduced to once every 2 years.

The plan also requires quarterly data submitted to the agencies within 30 days of collection. Because of the level of water quality data collected for this project, a consistent reporting procedure should be developed to minimize confusion and duplication of reporting for all monitoring activities.

C-11 Quantity Focus Frequency

Rock Creek above Rock Lake (EFRC-50) requires flow measurements with a weir during July and October using a flume or weir for low flow conditions. It further states that continuous water levels would be recorded continuously. If continuous water levels are required to be monitored then low flows would not need to be monitored with a flume or weir. This detail needs to be corrected to match the anticipated stream segment and flow conditions. In stream segments where flows vary drastically throughout the season, a continuous water level reading would likely not provide meaningful data.

This section needs to be modified for clarity purposes and for the scope of data collection. Also, monitoring could be significantly simplified based on the new 3-D model developed and MMC would recommend this plan be revisited based on the agency accepted 3-D model. MMC would also request that since we are measuring potential impacts that are at or below natural variability, after several years of data collection a reduction in monitoring could be incorporated to automatically occur if data did not indicate a change in the natural variability.

C-14 Automatic TSS Sampling

We have done the research for this for the exploration phase. There are no automatic TSS sampling devices. MMC would request that TSS sampling be significantly reduced once mine operations are underway and sediment control systems are stabilized and functioning. Regular fisheries monitoring for sediment (substrate) would provide long-term analysis of sediment loads. Weekly TSS samples at this site with required site monitoring would provide appropriate monitoring.

Also, transmission line sediment sampling should be focused on construction activities versus stream crossing. Many of the stream crossings are existing structures and are well below the transmission line activities and would not necessarily reflect sediment issues from construction activities. MMC suggests that prior to construction, the agencies and MMC do a site visit to establish the TSS sites that will be monitored during construction. Sampling based on rain events is likely not possible given the large area of the transmission line activities. A different approach would be necessary to focus sampling on active disturbed areas. Many periods during the year, it can rain for more than one day at a time. TSS sampling should be on a specific and larger rain event to focus extra TSS sampling to those areas that could cause excessive sediment loading that would not be realized by regular TSS sampling activities.

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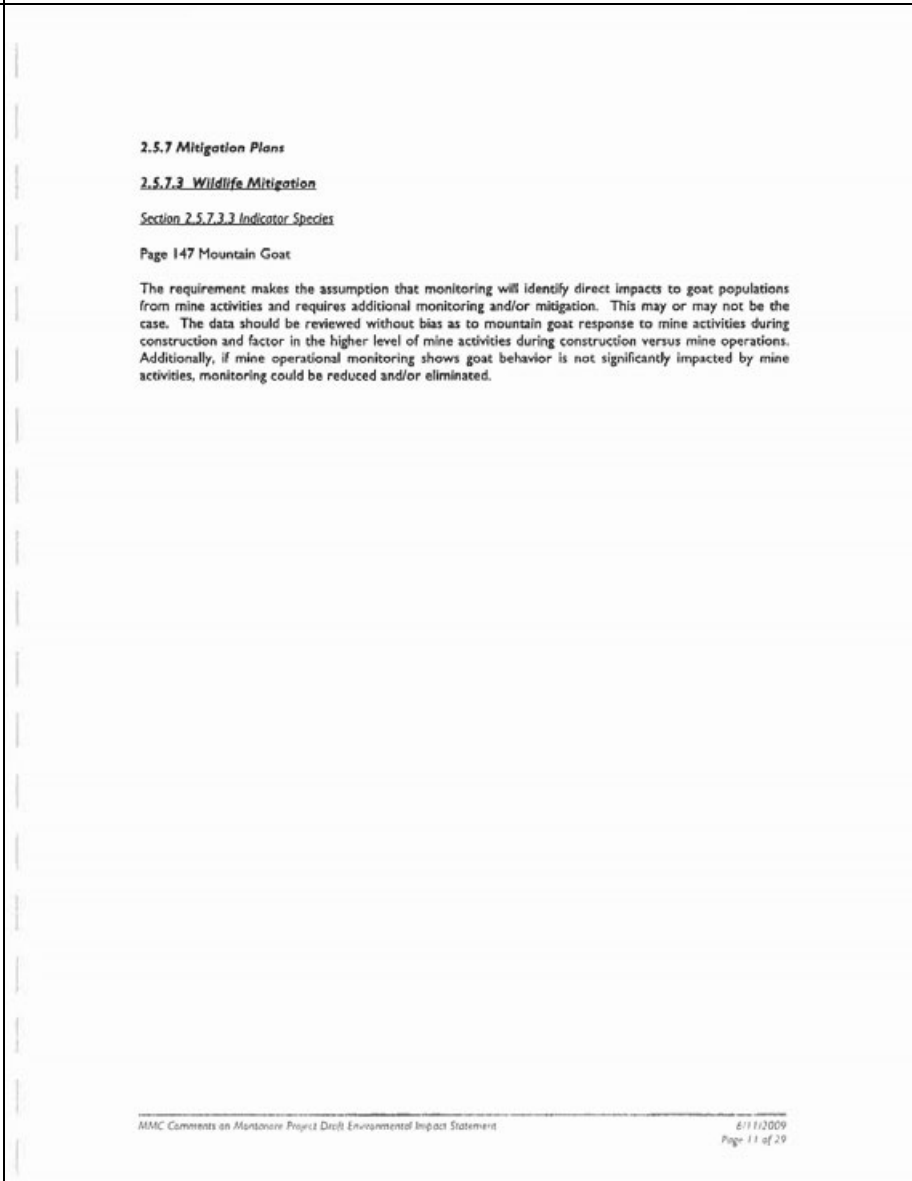
157-68		**Comment Response 157-68** The agencies wildlife mitigation plan was revised in the SDEIS to incorporate an adaptive management approach to mitigate potential impacts to mountain goats. As described in section 2.5.9.2.5 of SDEIS and section 2.5.7.4.5 of the FEIS, results of mountain goat surveys funded by MMC would be analyzed by the KNF, in cooperation with the FWP, at the end of the construction period to determine the appropriate level and type of survey work needed during the Operations Phase. If the agencies determined that construction disturbance were significantly affecting goat populations, mitigation measures would be developed and implemented to reduce the impacts of mine disturbance.

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157-69 157-70 157-71	 **2.10 Alternative D-Miller Creek Transmission Line Alternative** ***2.10.2 Alignment and Structure Types*** Page 181 1st Paragraph The propose alignment in Section 19 in T27N and R30W involves a short segment of private land. This portion of the alignment is also included in Alternative E. The agencies have placed the alignment over one of the only private pieces of property located in this area which is unnecessary and unwarranted. The line could be adjusted to the east slightly which would completely remove any impacts to private property. It is our understanding the property owner has constructed a house and the alignment would be close to or over the top of the residence. Further, moving it slightly east would also move it out of the residential visual line towards Howard Lake. Roads already exist farther east making this adjustment prudent and reasonable to accommodate the private landowner's wishes. We highly support modification of the alignment to avoid these parcels of private lands. ***2.10.3 Line and Road Construction Methods*** ***2.10.3.1 Access Road Construction and Use*** Page 182 1st Paragraph. Again, as in the comment above, placing roads and powerline structures on private land when there are clearly other alternatives is unnecessary. **2.11 Alternative E-West Fisher Creek Transmission Line Alternative** ***Section 2.11.2 Alignment and Structure Type*** Page 184 1st Paragraph. Under this alternative several residences are close to the alignment. This alternative seems to have the greatest impact to local residences in the area. To avoid conflicts, MMC believes the other alternatives provide a better option to avoid these private lands. Also, Figure 78 is missing at least one residence that should be included on the map (near Howard Lake). MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 12 of 29	**Comment Response 157-69** Transmission line alignments in Alternatives C, D, and E were modified in the SDEIS and again in the FEIS to reduce effects on private lands. **Comment Response 157-70** See comment response 157-69. **Comment Response 157-71** Thank you for your comment. Figure 78 was updated in the SDEIS and FEIS to identify known residential locations.

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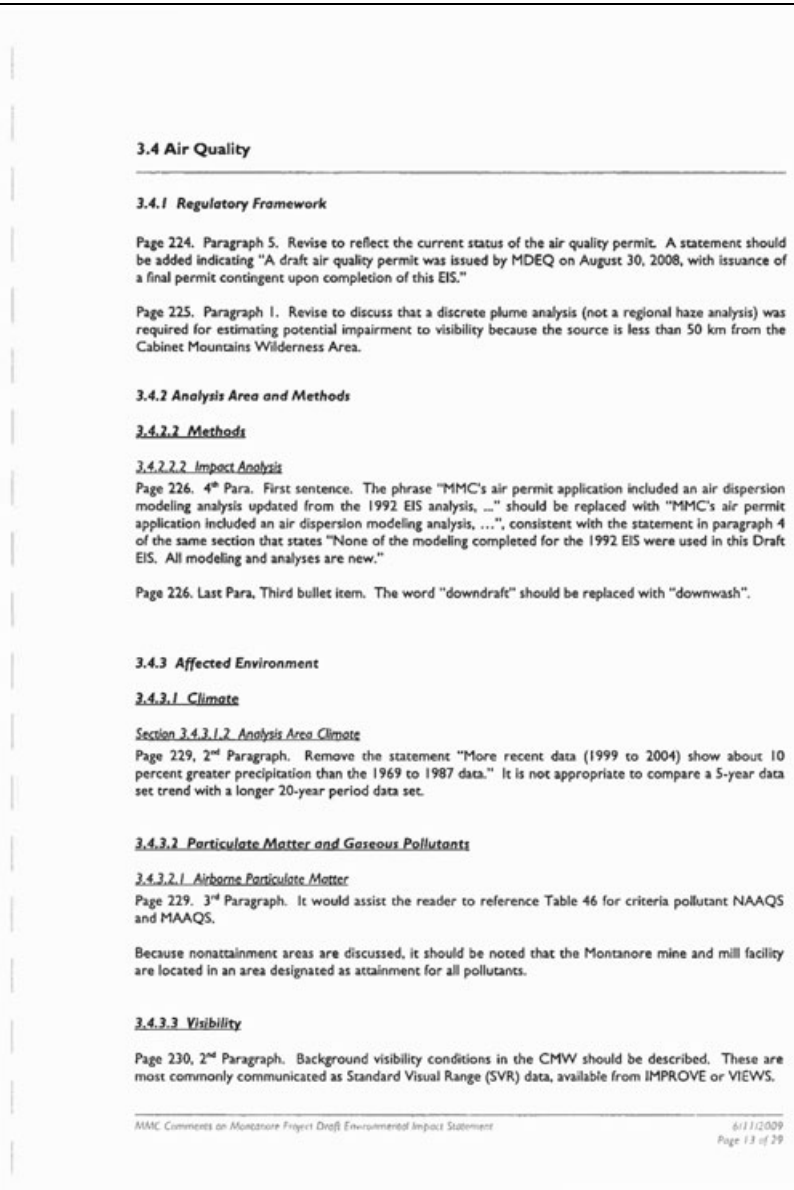
157-72 157-73 157-74 157-75 157-76 157-77 157-78 157-79		**Comment Response 157-72** Sections 1.6.2.1.2 and 3.4.2.2.2 of the FEIS were revised to discuss the status of the DEQ's Supplemental Preliminary Determination. **Comment Response 157-73** The visibility discussion was consolidated to Section 3.4.2.2.2 of the FEIS, which was revised to indicate that a discrete plume analysis was completed because the project would be less than 50 km from the CMW. **Comment Response 157-74** Section 3.4.2.2.2 was revised in the FEIS to clarify than no modeling from 1992 was used. **Comment Response 157-75** The text in Section 3.4.2.2.2 was revised in the FEIS to replace downdraft with downwash. **Comment Response 157-76** The discussion of climate in Section 3.4.3.1.2 was revised in the FEIS to provide the best available precipitation estimates. **Comment Response 157-77** A reference to applicable air quality standards was added to Section 3.4.3.2.1. **Comment Response 157-78** The discussion of nonattainment in Section 3.4.3.2.1 was revised in the FEIS to discuss the project facilities that would be in the nonattainment areas for $PM_{2.5}$. The section also was revised to indicate that in 2011 EPA determined the area surrounding Libby was in attainment of the 24-hour PM_{10} standard. **Comment Response 157-79** Section 3.4.3.3 was revised in the FEIS to discuss the standard visual range of the CMW.

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157-80	A discussion of annual background total N and S deposition conditions from the nearest CASTNET/NADP site should also be included following Section 3.4.3.3.	**Comment Response 157-80** Section 3.4.3.3 was revised in the FEIS to discuss the annual deposition of total nitrogen and sulfur in Glacial National Park, the closest monitoring site to the CMW.
157-81	***3.4.4 Environmental Consequences*** ***3.4.4.2 Particulate Matter and Gaseous Pollutants*** *3.4.4.2.1 Particulate Matter and Gaseous Pollutants* Page 231. First sentence. *"…from point sources such as generators."* This implies that multiple generators will exist under Alternative 2, when only one emergency backup generator is proposed. This sentence should be changed to "…from point sources such as propane heaters."	**Comment Response 157-81** Section 3.4.4.2.1 was revised in the FEIS to clarify point sources.
157-82	*3.4.4.2.1 Particulate Matter and Gaseous Pollutants and 3.4.4.2.2 Application Scenario ISCST3 and AERMOD Results Comparison* Pages 231-233. ISCST3 was the EPA-recommended guideline dispersion model at the time the MMC air quality permit application was prepared and submitted. AERMOD later replaced ISCST3 as the recommended model. Following AERMOD's approval by EPA, Alternatives 2 and 3 were analyzed using AERMOD to ensure that impacts disclosed in the EIS would reflect current guidance.	**Comment Response 157-82** Section 3.4.4 was revised in the FEIS to eliminate discussion of ISCST modeling results.
157-83	The background of AERMOD approval in Section 3.4.2.2.2, the ISCST3 model results in Section 3.4.4.2.1, and the detailed comparison of ISCST3 to AERMOD in Section 3.4.4.2.2, are redundant and confusing to the reader and should be removed. Because the final test of predicted criteria pollutant impacts vs. ambient standards rests upon the AERMOD results, the ISCST3 results and particularly the model comparison discussion hold little value in impact disclosure. These sections should be simplified by documenting only criteria pollutant impacts predicted using AERMOD.	**Comment Response 157-83** Section 3.4.4 was revised in the FEIS to eliminate discussion of ISCST modeling results.
157-84	*3.4.4.2.3 Hazardous Air Pollutant Impact Assessment* Page 233-234. Last Paragraph, second sentence. *"Modeled concentrations of arsenic, cadmium, and chromium in emissions were predicted to be above the DEQ's incinerator risk assessment levels, and these compounds were carried forward in the analysis."* This sentence should be removed based on the following.	**Comment Response 157-84** Section 3.4.4.2.4 was revised in the SDEIS to compare predicted HAP concentrations to EPA's concentrations for screening risk assessments.
157-85	First, DEQ's incinerator risk assessment requirements do not apply to the Montanore Mine, and the thresholds established in MT 17.8.770 were not used as a basis for determining applicability or compliance. As stated earlier in the EIS in Section 3.4.2.2.2 paragraph 3, "Montana does not have air toxics impact regulations…" Cancer risk was assessed for arsenic, cadmium, and chromium because IRIS contained lifetime cancer risk factors only for these substances, not due to any threshold value.	**Comment Response 157-85** See comment response 157-84.
157-86	Second, this sentence is confusing, referring to "modeled concentrations… in emissions…".	**Comment Response 157-86** See comment response 157-84.
157-87	Third, the sentence is incorrect. Maximum modeled concentrations of all pollutants listed are below the non-carcinogenic risk levels established for incinerators in MT 17.8.770 Table 2, and are below the carcinogenic risk levels established for incinerators in MT 17.8.770 Table 1 for all pollutants except arsenic and chromium.	**Comment Response 157-87** See comment response 157-84.
157-88	*Section 3.4.4.2.3 Hazardous Air Pollutant Impact Assessment* Page 234, First paragraph. It should be cited that the calculated cancer risk is within EPA's acceptable range. This should be changed to read "…was found to be 1 in 1,000,000. EPA's level of acceptable carcinogenic risk ranges from 1 in 10,000 to 1 in 1,000,000."	**Comment Response 157-88** See comment response 157-84.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-89	 Section 3.4.4.2.3 Hazardous Air Pollutant Impact Assessment Page 234, 3rd paragraph. The units for modeled lead concentrations are incorrect. The concentration units should be micrograms per cubic meter, µg/m³, not milligrams per cubic meter, mg/m³. The concentration values shown are correct. Section 3.4.4.2.4 Construction Emissions Page 234, 5th Paragraph, last two sentences. These statements and data are incorrect, and should be revised to read "The maximum modeled 1-hour NO_2 concentration was 367 µg/m³, less than the NO_2 1-hour MAAQS of 564. The maximum annual average NO_2 concentration was 47.7 µg/m³, less than the NO_2 annual MAAQS of 94 µg/m³ and annual NAAQS of 100 µg/m³." Remove the statement "there is no NAAQS for NO_x." Section 3.4.4.2.5 Non-attainment Area Boundary Impact Assessment Page 234, last para. Sentence one should be changed from "…*because the surface moisture of the concentrate and all loading activities would be enclosed*…" to "…due to the high surface moisture of the concentrate and because all loading activities would be enclosed…" Section 3.4.4.2.6 Cabinet Mountains Wilderness Impact Assessment Page 235. Worst-case meteorology was also utilized in the analysis, and that should be indicated. Sentence two of paragraph three should be modified to read "The emergency generator was modeled at maximum hourly emission rates year-round, although it is expected to be permitted to operate a maximum of 16 hours per year, and utilized worst-case meteorology. MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 15 of 29	**Comment Response 157-89** See comment response 157-84.
157-90		**Comment Response 157-90** Section 3.4.4.2.5 was revised in the FEIS to reflect maximum NO_2 concentrations reported in DEQ's Supplemental Preliminary Determination.
157-91		**Comment Response 157-91** Section 3.4.4.2.6 on nonattainment was revised in the SDEIS.
157-92		**Comment Response 157-92** Section 3.4.2.2 of the DEIS and FEIS adequately described modeling methods.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-93 157-94 157-95 157-96		**Comment Response 157-93** Discharge rates used in the streamflow effects analysis were presented in Appendix G of the DEIS, SDEIS, and FEIS. MMC's proposed application rates plus precipitation would exceed evapotranspiration. The rates used in the agencies' analysis of Alternative 2 were lower than those proposed by MMC. Section 3.6.4.2.2 was revised to indicate that when the LAD Areas were in use, discharges reaching surface water or groundwater would be less than those under Alternative 3 as much of the water discharged to the LAD Areas would evapotranspire. **Comment Response 157-94** The discussion of effects of changes in streamflow on aquatic life in all alternatives was revised in the SDEIS and FEIS to reflect revised surface water quantity effects analysis, which was based on the 3D model results. The KNF"s Biological Assessment indicated streamflow effects would adversely affect bull trout habitat. **Comment Response 157-95** The effect on Rock Lake was revised in Section 3.11.4.4.4 of the SDEIS and again in the FEIS. Effects were shown in terms of change in lake level and volume, and surface area changes (in the FEIS) that reflect the loss of baseflow to the stream flowing into Rock Lake, loss of deep bedrock groundwater flow into the lake, and loss in storage from the lake. It was assumed for the two time periods evaluated that deep bedrock groundwater would be the only source of water supply to the lake (which would be the case during dry periods when there is no precipitation and no snowmelt runoff or discharge from shallow deposits above the lake, or in the winter when the lake is frozen), so the analysis presents a worst case scenario of effects from mining to the lake. During the rest of the year, runoff from precipitation and snowmelt runoff provides most of the water to the lake. **Comment Response 157-96** The discussion of effects of changes in Rock Lake on aquatic life in all alternatives was revised in the SDEIS and FEIS to reflect revised surface water quantity effects analysis, which was based on the 3D model results. Reductions in lake levels and volume would probably not have a detectable effect on the aquatic biota of Rock Lake. While the lake volume is projected to be decreased by 2 percent post closure with mitigation and up to 5 percent without mitigation, aquatic habitat changes would likely be difficult to separate from those caused by natural variability in lake levels that occur in part due to large influxes of surface water into the lake during snowmelt and storm events. Surface water influxes to the lake would not be affected by the project alternatives. Adverse effects on the hybrid cutthroat trout population in Rock Lake would not likely occur.

3.6 Aquatic Life and Fisheries

3.6.4 *Environmental Consequences*

3.6.4.2 *Alternative 2*

Section 3.6.4.2.2 Water Quantity – Ramsey Creek

Page 306 4th Paragraph. Wastewater discharges at the LAD Areas would percolate to groundwater only when application rates (plus precipitation) exceed evapotranspiration. This comment also applies to paragraphs on page 308 under "Post-mine Operation".

3.6.4.2.2 Water Quantity – East Fork Rock Creek and East Fork Bull River

Page 307 4th & 5th Paragraphs. Any changes in flow throughout the entire reach of these streams would be within the range of natural variability for these streams and would not affect fish or fish habitat.

3.6.4.2.2 Water Quantity – Rock Lake

Page 307 6th Paragraph. We believe that wording should be changed that deep groundwater may be (not is) a contributor to Rock Lake. It is possible that shallow ground water stored in bedrock fractures and unconsolidated deposits may be a year-round source of water to Rock Lake. In the last sentence, we believe that reduced water levels in Rock Lake, if any, would be within the natural variability of lake level fluctuations.

3.6.4.2.4 Water Quality-Metals, Construction, Operation and Post-Operation of Mine - Lakes

Page 312 4th Paragraph. Changes to lake water quality from mining, if any, would likely be within the natural variability of lake water quality; therefore, there would be no effects on lake fisheries.

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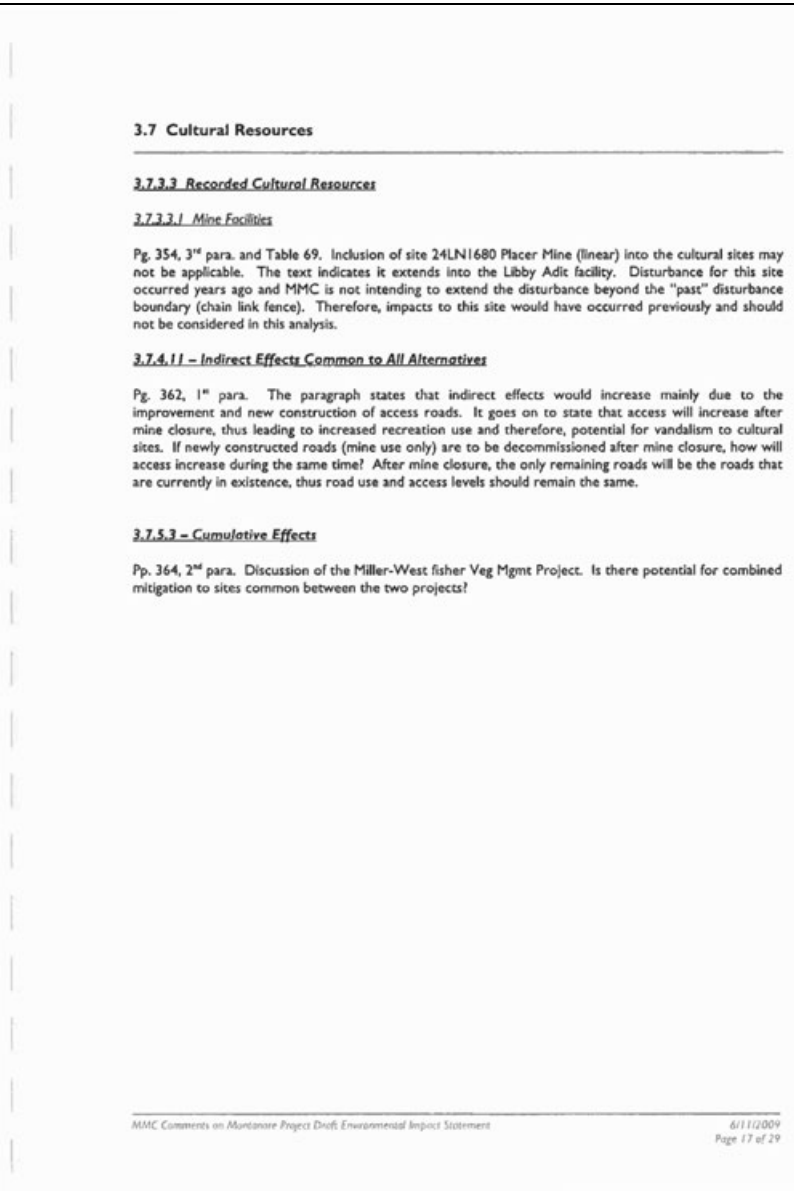
Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-97 157-98 157-99		**Comment Response 157-97** Section 3.7.4.2 and associated tables were revised in the FEIS to clarify that additional disturbance of 24LN1680 may not occur and mitigation may not be necessary. **Comment Response 157-98** Section 3.7.4.11 was revised in the FEIS to indicate that access to cultural resources would be similar to pre-mine levels following mine closure and decommissioning of all mine-related access roads. **Comment Response 157-99** Section 3.7.5.3 was revised in the FEIS to indicate the Miller-West Fisher Project would avoid or protect eligible cultural resources and there would be no cumulative effect with the Montanore Project.

3.7 Cultural Resources

3.7.3.3 Recorded Cultural Resources

3.7.3.3.1 Mine Facilities

Pg. 354, 3rd para. and Table 69. Inclusion of site 24LN1680 Placer Mine (linear) into the cultural sites may not be applicable. The text indicates it extends into the Libby Adit facility. Disturbance for this site occurred years ago and MMC is not intending to extend the disturbance beyond the "past" disturbance boundary (chain link fence). Therefore, impacts to this site would have occurred previously and should not be considered in this analysis.

3.7.4.11 – Indirect Effects Common to All Alternatives

Pg. 362, 1st para. The paragraph states that indirect effects would increase mainly due to the improvement and new construction of access roads. It goes on to state that access will increase after mine closure, thus leading to increased recreation use and therefore, potential for vandalism to cultural sites. If newly constructed roads (mine use only) are to be decommissioned after mine closure, how will access increase during the same time? After mine closure, the only remaining roads will be the roads that are currently in existence, thus road use and access levels should remain the same.

3.7.5.3 – Cumulative Effects

Pp. 364, 2nd para. Discussion of the Miller-West fisher Veg Mgmt Project. Is there potential for combined mitigation to sites common between the two projects?

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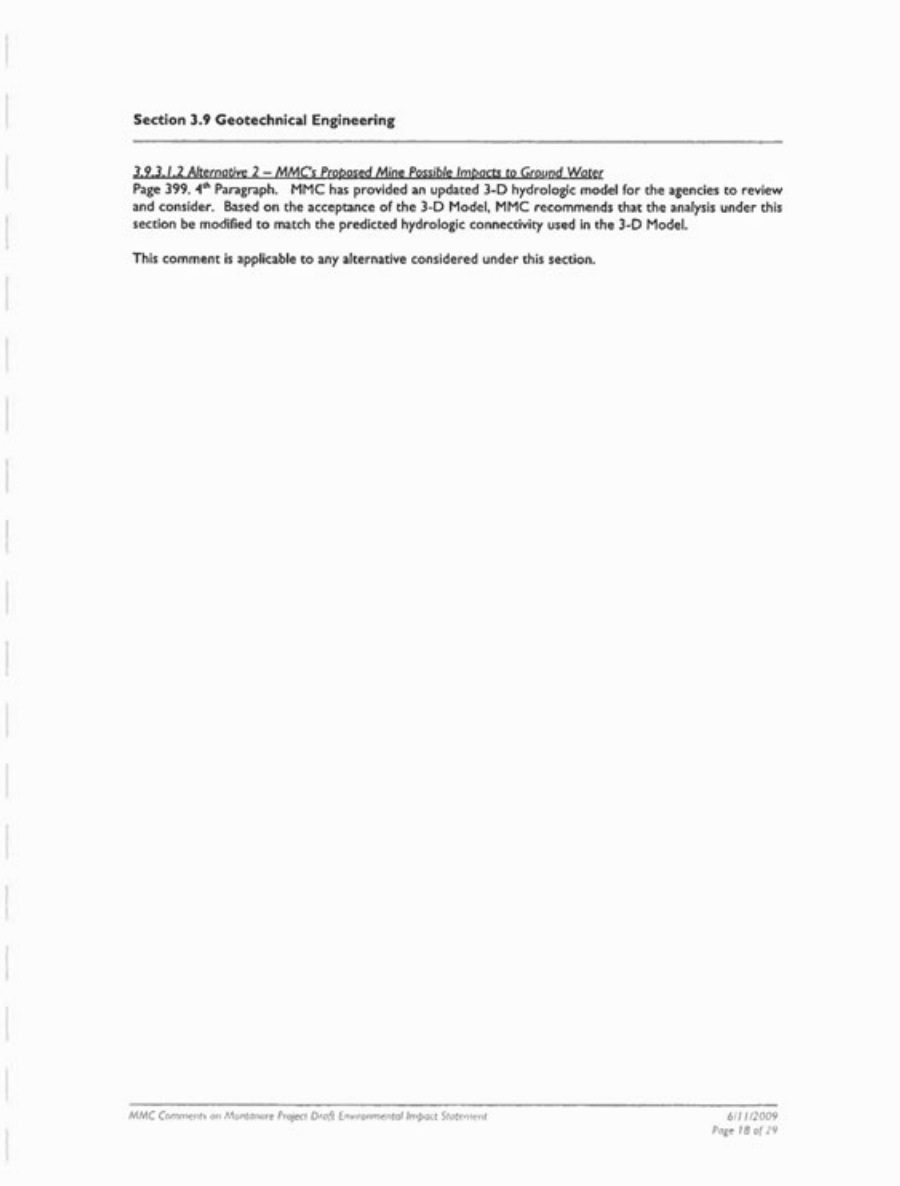
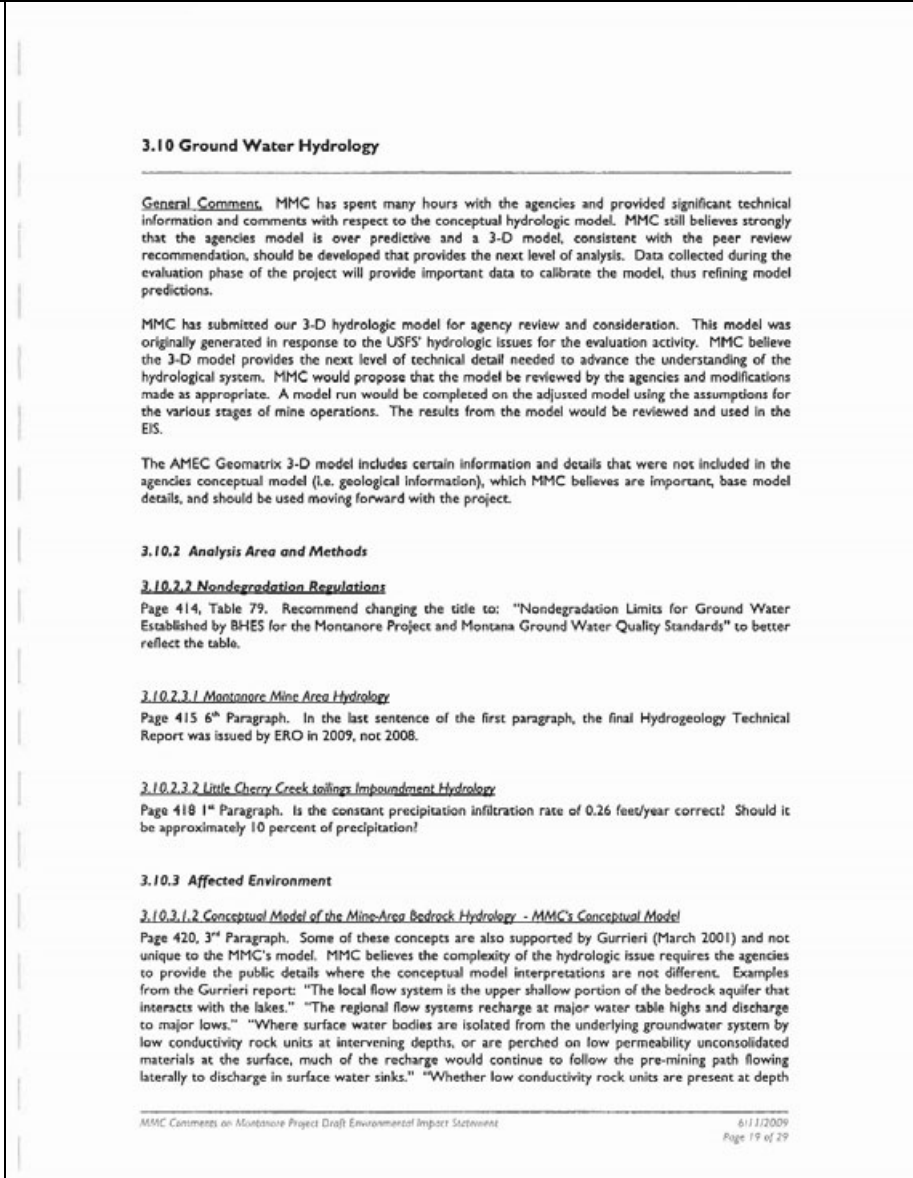
Comment	Document #157-Klepfer Mining Services, LLC	Response
157-100 157-101	 Section 3.9 Geotechnical Engineering 3.9.3.1.2 Alternative 2 – MMC's Proposed Mine Possible Impacts to Ground Water Page 399. 4th Paragraph. MMC has provided an updated 3-D hydrologic model for the agencies to review and consider. Based on the acceptance of the 3-D Model, MMC recommends that the analysis under this section be modified to match the predicted hydrologic connectivity used in the 3-D Model. This comment is applicable to any alternative considered under this section. MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 18 of 19	**Comment Response 157-100** The brief discussion on potential impacts on groundwater in the Subsidence section (3.14.3 of the FEIS) was limited to describing the effects of localized subsidence on groundwater and was not intended to describe the 3D model results, which were discussed in the Section 3.10.4 of the FEIS. **Comment Response 157-101** See comment response 157-100.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-102 157-103 157-104 157-105 157-106 157-107 157-108		**Comment Response 157-102** See comment responses 157-5 and 157-59. With the data currently available, the model results provide a potential range of dewatering and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in groundwater models. Both 3D groundwater flow models would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. Section 3.10.4.3.5 was added to the SDEIS and FEIS to discuss the limitation and uncertainty of the 3D models. **Comment Response 157-103** See comment responses 157-5 and 157-59. **Comment Response 157-104** See comment responses 157-5 and 157-59. **Comment Response 157-105** The title of the table was changed in the SDEIS. **Comment Response 157-106** The date of the report was clarified in the SDEIS. **Comment Response 157-107** The detailed discussion of the SEEPW model was deleted in the SDEIS. The agencies used MMC's 3D groundwater model of the tailings impoundment area in the effects analysis associated with the pumpback wells at the Poorman Impoundment Site. These model results were also used in Alternative 4 because of the similarity in hydrogeologic conditions between the two sites. The infiltration rate of 0.26 feet/year was correct and would represent about 10 percent of the estimated 30 inches of annual precipitation. **Comment Response 157-108** The discussion of MMC's conceptual model was eliminated in the SDEIS and FEIS. The conceptual model of both MMC and the agencies were similar after MMC completed the 3D models.

3.10 Ground Water Hydrology

General Comment. MMC has spent many hours with the agencies and provided significant technical information and comments with respect to the conceptual hydrologic model. MMC still believes strongly that the agencies model is over predictive and a 3-D model, consistent with the peer review recommendation, should be developed that provides the next level of analysis. Data collected during the evaluation phase of the project will provide important data to calibrate the model, thus refining model predictions.

MMC has submitted our 3-D hydrologic model for agency review and consideration. This model was originally generated in response to the USFS' hydrologic issues for the evaluation activity. MMC believe the 3-D model provides the next level of technical detail needed to advance the understanding of the hydrological system. MMC would propose that the model be reviewed by the agencies and modifications made as appropriate. A model run would be completed on the adjusted model using the assumptions for the various stages of mine operations. The results from the model would be reviewed and used in the EIS.

The AMEC Geomatrix 3-D model includes certain information and details that were not included in the agencies conceptual model (i.e. geological information), which MMC believes are important, base model details, and should be used moving forward with the project.

3.10.2 Analysis Area and Methods

3.10.2.2 Nondegradation Regulations

Page 414, Table 79. Recommend changing the title to: "Nondegradation Limits for Ground Water Established by BHES for the Montanore Project and Montana Ground Water Quality Standards" to better reflect the table.

3.10.2.3.1 Montanore Mine Area Hydrology

Page 415 6th Paragraph. In the last sentence of the first paragraph, the final Hydrogeology Technical Report was issued by ERO in 2009, not 2008.

3.10.2.3.2 Little Cherry Creek tailings Impoundment Hydrology

Page 418 1st Paragraph. Is the constant precipitation infiltration rate of 0.26 feet/year correct? Should it be approximately 10 percent of precipitation?

3.10.3 Affected Environment

3.10.3.1.2 Conceptual Model of the Mine-Area Bedrock Hydrology - MMC's Conceptual Model

Page 420, 3rd Paragraph. Some of these concepts are also supported by Gurrieri (March 2001) and not unique to the MMC's model. MMC believes the complexity of the hydrologic issue requires the agencies to provide the public details where the conceptual model interpretations are not different. Examples from the Gurrieri report: "The local flow system is the upper shallow portion of the bedrock aquifer that interacts with the lakes." "The regional flow systems recharge at major water table highs and discharge to major lows." "Where surface water bodies are isolated from the underlying groundwater system by low conductivity rock units at intervening depths, or are perched on low permeability unconsolidated materials at the surface, much of the recharge would continue to follow the pre-mining path flowing laterally to discharge in surface water sinks." "Whether low conductivity rock units are present at depth

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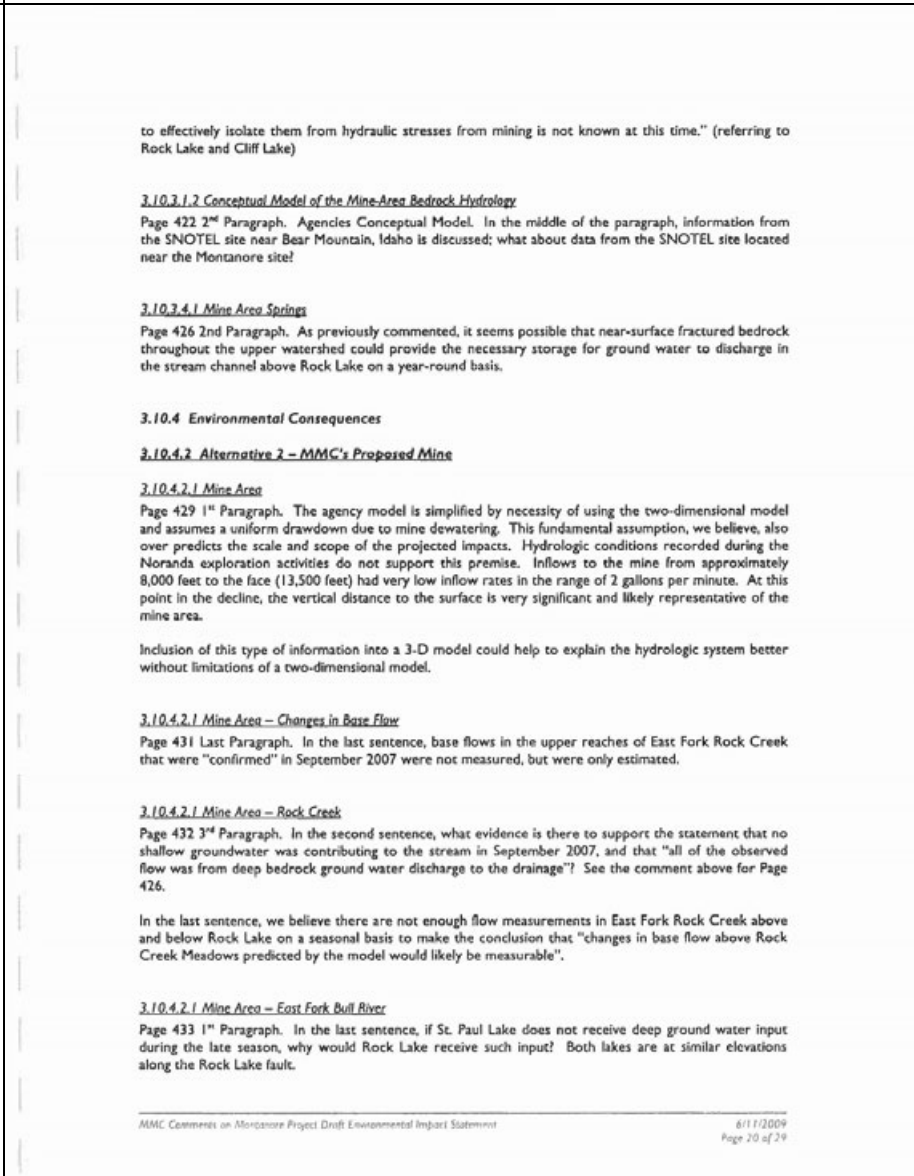
Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-109		**Comment Response 157-109** The Bear Mountain, Idaho SNOTEL site is more representative of the upper Cabinet Mountains than the Poorman SNOTEL site, which is on the east side of the Cabinet Mountains.
157-110		**Comment Response 157-110** The 3D model results indicate that near-surface bedrock throughout the upper watershed area would not provide adequate storage for groundwater to discharge in the stream channel above Rock Lake on a year-round basis.
157-111		**Comment Response 157-111** See comment response 157-102. A chart showing cumulative water inflow rates during adit construction, which showed inflows increased from about 120 gpm to 180 gpm from 8,000 to 14,000 feet was added to the SDEIS and FEIS.
157-112		**Comment Response 157-112** See comment responses 157-5, 157-59, and 157-102.
157-113		**Comment Response 157-113** The test in the FEIS was revised to indicate the flow at SP-41 was estimated and similar to that predicted by the 2D and 3D models.
157-114		**Comment Response 157-114** Section 3.10.3.1.2 of the SDEIS and FEIS disclosed that precipitation records from the SNOTEL site near Bear Mountain, Idaho, which is the site most representative of the upper Cabinet Mountains, indicate that the summer of 2007 had the second longest period (51 days) without precipitation since continuous precipitation data collection began in 1983.
157-115		**Comment Response 157-115** The groundwater and surface water sections of the SDEIS were revised to discuss predicted changes in baseflow in the groundwater section and predicted changes in $7Q_{10}$ and $7Q_2$ streamflow in the surface hydrology section. Section 3.11.4.4.6 of the FEIS discussed streamflow variability and measurability.
157-116		**Comment Response 157-116** St. Paul Lake is considerably smaller and shallower than Rock Lake and was formed by a glacial moraine.

to effectively isolate them from hydraulic stresses from mining is not known at this time." (referring to Rock Lake and Cliff Lake)

3.10.3.1.2 Conceptual Model of the Mine-Area Bedrock Hydrology

Page 422 2nd Paragraph. Agencies Conceptual Model. In the middle of the paragraph, information from the SNOTEL site near Bear Mountain, Idaho is discussed; what about data from the SNOTEL site located near the Montanore site?

3.10.3.4.1 Mine Area Springs

Page 426 2nd Paragraph. As previously commented, it seems possible that near-surface fractured bedrock throughout the upper watershed could provide the necessary storage for ground water to discharge in the stream channel above Rock Lake on a year-round basis.

3.10.4 Environmental Consequences

3.10.4.2 Alternative 2 – MMC's Proposed Mine

3.10.4.2.1 Mine Area

Page 429 1st Paragraph. The agency model is simplified by necessity of using the two-dimensional model and assumes a uniform drawdown due to mine dewatering. This fundamental assumption, we believe, also over predicts the scale and scope of the projected impacts. Hydrologic conditions recorded during the Noranda exploration activities do not support this premise. Inflows to the mine from approximately 8,000 feet to the face (13,500 feet) had very low inflow rates in the range of 2 gallons per minute. At this point in the decline, the vertical distance to the surface is very significant and likely representative of the mine area.

Inclusion of this type of information into a 3-D model could help to explain the hydrologic system better without limitations of a two-dimensional model.

3.10.4.2.1 Mine Area – Changes in Base Flow

Page 431 Last Paragraph. In the last sentence, base flows in the upper reaches of East Fork Rock Creek that were "confirmed" in September 2007 were not measured, but were only estimated.

3.10.4.2.1 Mine Area – Rock Creek

Page 432 3rd Paragraph. In the second sentence, what evidence is there to support the statement that no shallow groundwater was contributing to the stream in September 2007, and that "all of the observed flow was from deep bedrock ground water discharge to the drainage"? See the comment above for Page 426.

In the last sentence, we believe there are not enough flow measurements in East Fork Rock Creek above and below Rock Lake on a seasonal basis to make the conclusion that "changes in base flow above Rock Creek Meadows predicted by the model would likely be measurable".

3.10.4.2.1 Mine Area – East Fork Bull River

Page 433 1st Paragraph. In the last sentence, if St. Paul Lake does not receive deep ground water input during the late season, why would Rock Lake receive such input? Both lakes are at similar elevations along the Rock Lake fault.

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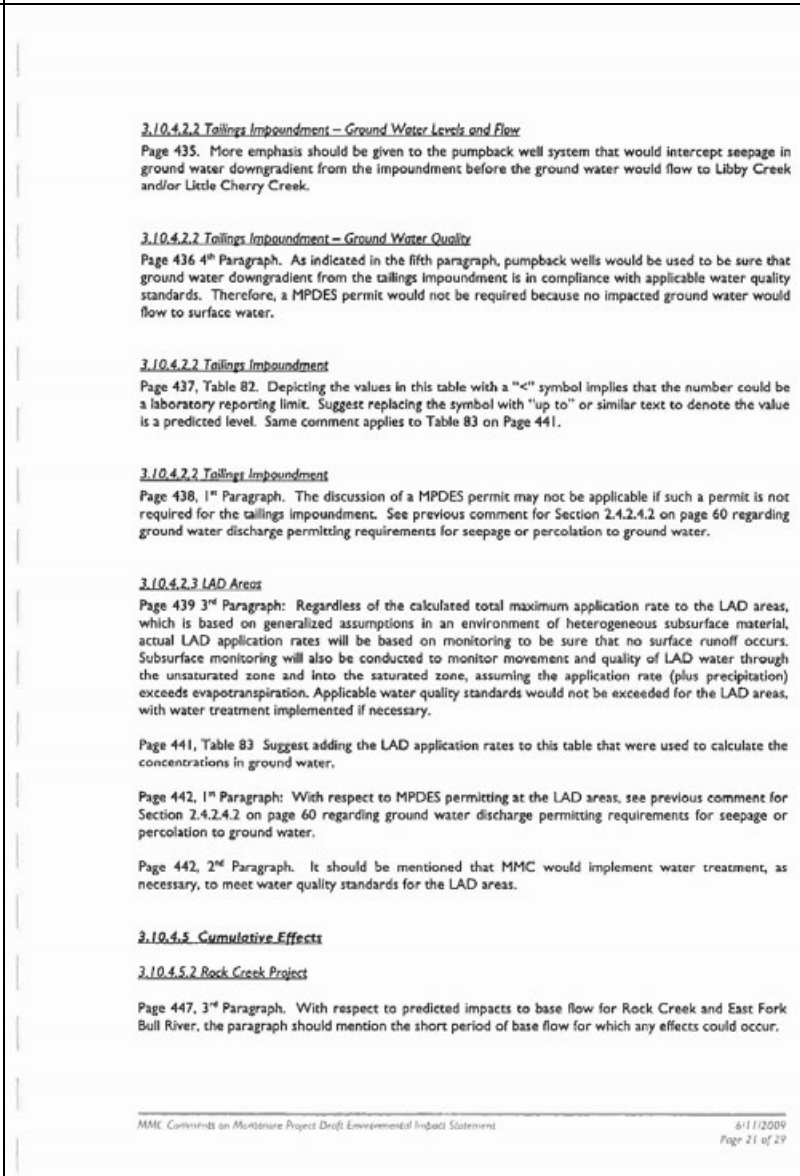
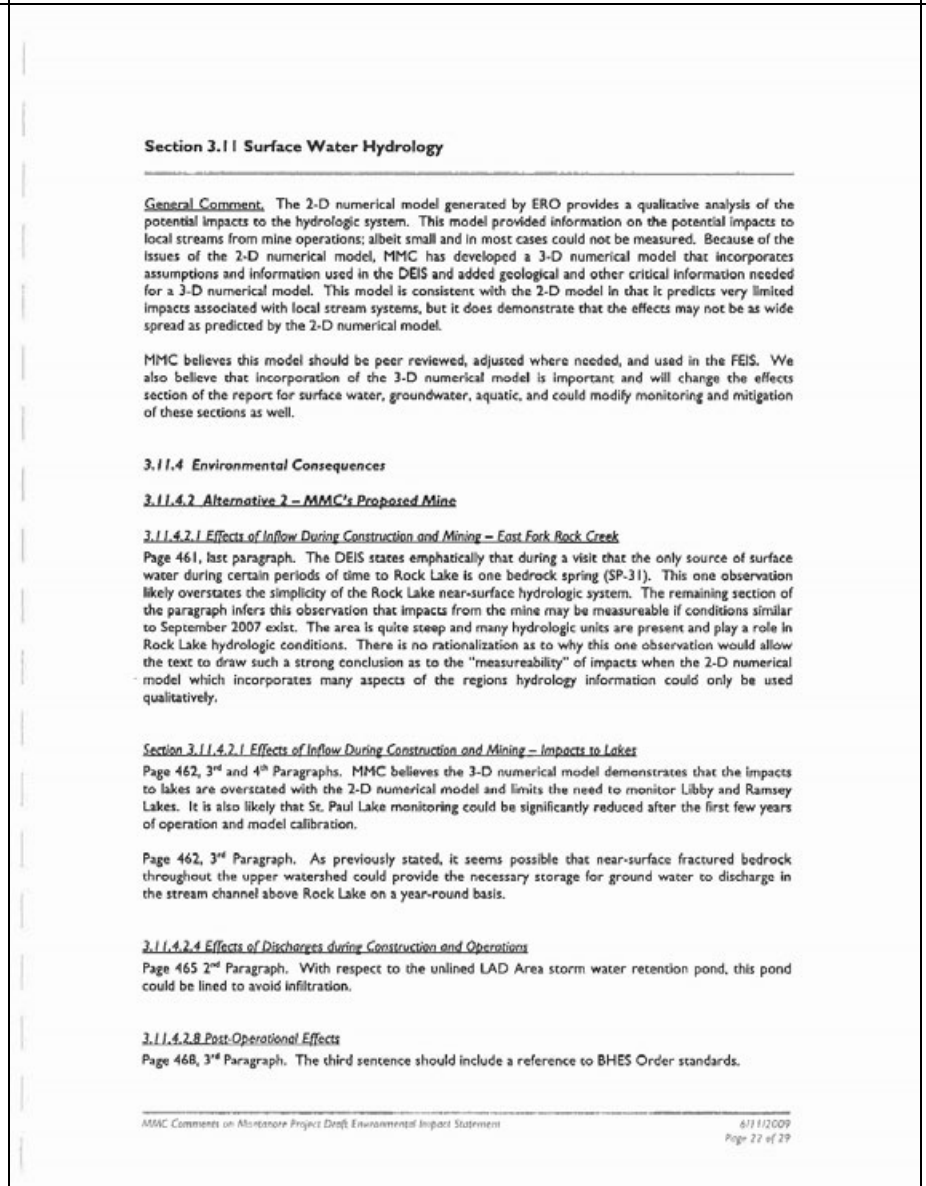
Comment	Document #157-Klepfer Mining Services, LLC	Response
157-117 157-118 157-119 157-120 157-121 157-122 157-123 157-124 157-125	 3.10.4.2.2 Tailings Impoundment – Ground Water Levels and Flow Page 435. More emphasis should be given to the pumpback well system that would intercept seepage in ground water downgradient from the impoundment before the ground water would flow to Libby Creek and/or Little Cherry Creek. 3.10.4.2.2 Tailings Impoundment – Ground Water Quality Page 436 4th Paragraph. As indicated in the fifth paragraph, pumpback wells would be used to be sure that ground water downgradient from the tailings impoundment is in compliance with applicable water quality standards. Therefore, a MPDES permit would not be required because no impacted ground water would flow to surface water. 3.10.4.2.2 Tailings Impoundment Page 437, Table 82. Depicting the values in this table with a "<" symbol implies that the number could be a laboratory reporting limit. Suggest replacing the symbol with "up to" or similar text to denote the value is a predicted level. Same comment applies to Table 83 on Page 441. 3.10.4.2.2 Tailings Impoundment Page 438, 1st Paragraph. The discussion of a MPDES permit may not be applicable if such a permit is not required for the tailings impoundment. See previous comment for Section 2.4.2.4.2 on page 60 regarding ground water discharge permitting requirements for seepage or percolation to ground water. 3.10.4.2.3 LAD Areas Page 439 3rd Paragraph: Regardless of the calculated total maximum application rate to the LAD areas, which is based on generalized assumptions in an environment of heterogeneous subsurface material, actual LAD application rates will be based on monitoring to be sure that no surface runoff occurs. Subsurface monitoring will also be conducted to monitor movement and quality of LAD water through the unsaturated zone and into the saturated zone, assuming the application rate (plus precipitation) exceeds evapotranspiration. Applicable water quality standards would not be exceeded for the LAD areas, with water treatment implemented if necessary. Page 441, Table 83 Suggest adding the LAD application rates to this table that were used to calculate the concentrations in ground water. Page 442, 1st Paragraph: With respect to MPDES permitting at the LAD areas, see previous comment for Section 2.4.2.4.2 on page 60 regarding ground water discharge permitting requirements for seepage or percolation to ground water. Page 442, 2nd Paragraph. It should be mentioned that MMC would implement water treatment, as necessary, to meet water quality standards for the LAD areas. 3.10.4.5 Cumulative Effects 3.10.4.5.2 Rock Creek Project Page 447, 3rd Paragraph. With respect to predicted impacts to base flow for Rock Creek and East Fork Bull River, the paragraph should mention the short period of base flow for which any effects could occur. MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 21 of 29	**Comment Response 157-117** Section 3.10.4.2 was revised in the SDEIS to disclose the effects of using pumpback wells at the tailings impoundment site. In Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. MMC indicated seepage pumpback wells could be installed along the downstream toe of the tailings dam. Given the heterogeneity of the foundation soils, additional wells could be required to ensure that all flow paths were intercepted. The wells may require active pumping, depending on the artesian pressures within the wells. MMC did not provide any analysis of using pumpback wells in Alternative 2. **Comment Response 157-118** The discussion of groundwater quality at the tailings impoundment site, now Section 3.13.4, was revised to indicate a MPDES permitted outfall would not be required for the tailings impoundment seepage because seepage reaching groundwater would be collected by the pumpback system and not discharged to surface water in Alternatives 3 and 4. In Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. Seepage pumpback wells could be installed along the downstream toe of the tailings dam. The discharge to groundwater beneath the impoundment would be authorized by a DEQ Operating Permit and a seepage recovery zone would encompass the impoundment footprint and extend to the pumpback wells. **Comment Response 157-119** A footnote regarding the less than symbol (<) was added to all water quality tables in the FEIS. **Comment Response 157-120** See comment response 157-118. **Comment Response 157-121** See comment response 157-9. **Comment Response 157-122** LAD application rates were presented in Appendix G. **Comment Response 157-123** See comment response 157-21. **Comment Response 157-124** See next page.

Comment	Document #157-Klepfer Mining Services, LLC	Response
157-126 157-127 157-128 157-129 157-130 157-131 157-132		**Comment Response 157-124** See comment response 157-9. **Comment Response 157-125** See comment response 157-94. **Comment Response 157-126** Thank you for your comment. The agencies agree that the 2D and 3D model results are similar. **Comment Response 157-127** The 2D model was peer reviewed and suggested modifications were incorporated as appropriate. See comment response 157-5. **Comment Response 157-128** See comment response 339-36. **Comment Response 157-129** Based on both the 2D and the 3D model results, the agencies concluded that the results are similar and collectively provide the best available estimate of effects on surface water and groundwater resources. Neither model overstates the possible effects. The analysis in the SDEIS was revised to present results with and without mitigation. See comment response 157-14 regarding Libby Lake monitoring. The requirement to monitor Ramsey and St. Paul lakes was eliminated in the agencies' conceptual monitoring plans in the SDEIS and FEIS (Appendix C). **Comment Response 157-130** See comment response 157-110. **Comment Response 157-131** The use of the LAD Areas in Alternatives 3 and 4 was eliminated in the SDEIS and FEIS. **Comment Response 157-132** The discussion of Closure and Post-closure Phase effects, now Section 3.13.4.2.3, was revised in the SDEIS to include a comparison of predicted concentrations with BHES Order limits.

Section 3.11 Surface Water Hydrology

General Comment. The 2-D numerical model generated by ERO provides a qualitative analysis of the potential impacts to the hydrologic system. This model provided information on the potential impacts to local streams from mine operations; albeit small and in most cases could not be measured. Because of the issues of the 2-D numerical model, MMC has developed a 3-D numerical model that incorporates assumptions and information used in the DEIS and added geological and other critical information needed for a 3-D numerical model. This model is consistent with the 2-D model in that it predicts very limited impacts associated with local stream systems, but it does demonstrate that the effects may not be as wide spread as predicted by the 2-D numerical model.

MMC believes this model should be peer reviewed, adjusted where needed, and used in the FEIS. We also believe that incorporation of the 3-D numerical model is important and will change the effects section of the report for surface water, groundwater, aquatic, and could modify monitoring and mitigation of these sections as well.

3.11.4 Environmental Consequences

3.11.4.2 Alternative 2 – MMC's Proposed Mine

3.11.4.2.1 Effects of Inflow During Construction and Mining – East Fork Rock Creek

Page 461, last paragraph. The DEIS states emphatically that during a visit that the only source of surface water during certain periods of time to Rock Lake is one bedrock spring (SP-31). This one observation likely overstates the simplicity of the Rock Lake near-surface hydrologic system. The remaining section of the paragraph infers this observation that impacts from the mine may be measureable if conditions similar to September 2007 exist. The area is quite steep and many hydrologic units are present and play a role in Rock Lake hydrologic conditions. There is no rationalization as to why this one observation would allow the text to draw such a strong conclusion as to the "measureability" of impacts when the 2-D numerical model which incorporates many aspects of the regions hydrology information could only be used qualitatively.

Section 3.11.4.2.1 Effects of Inflow During Construction and Mining – Impacts to Lakes

Page 462, 3rd and 4th Paragraphs. MMC believes the 3-D numerical model demonstrates that the impacts to lakes are overstated with the 2-D numerical model and limits the need to monitor Libby and Ramsey Lakes. It is also likely that St. Paul Lake monitoring could be significantly reduced after the first few years of operation and model calibration.

Page 462, 3rd Paragraph. As previously stated, it seems possible that near-surface fractured bedrock throughout the upper watershed could provide the necessary storage for ground water to discharge in the stream channel above Rock Lake on a year-round basis.

3.11.4.2.4 Effects of Discharges during Construction and Operations

Page 465 2nd Paragraph. With respect to the unlined LAD Area storm water retention pond, this pond could be lined to avoid infiltration.

3.11.4.2.8 Post-Operational Effects

Page 468, 3rd Paragraph. The third sentence should include a reference to BHES Order standards.

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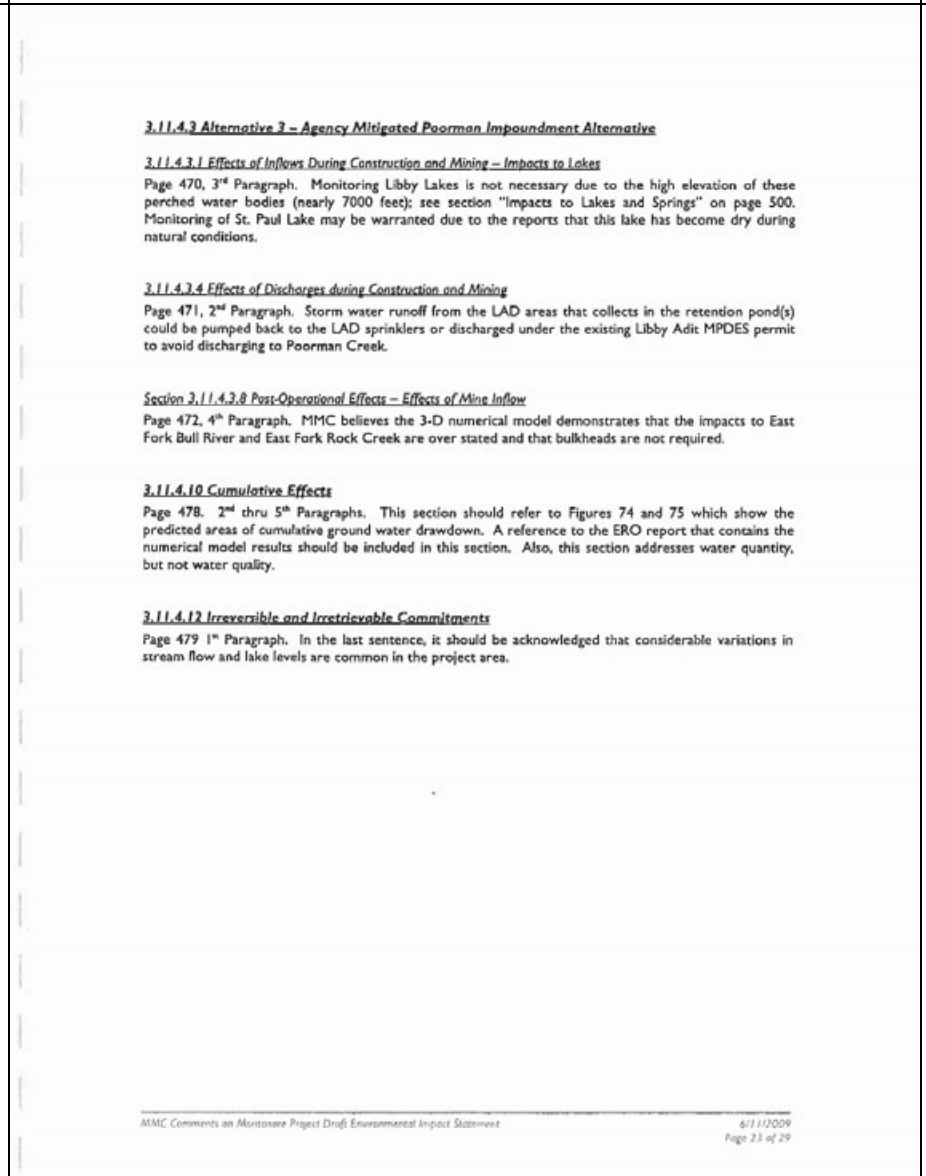
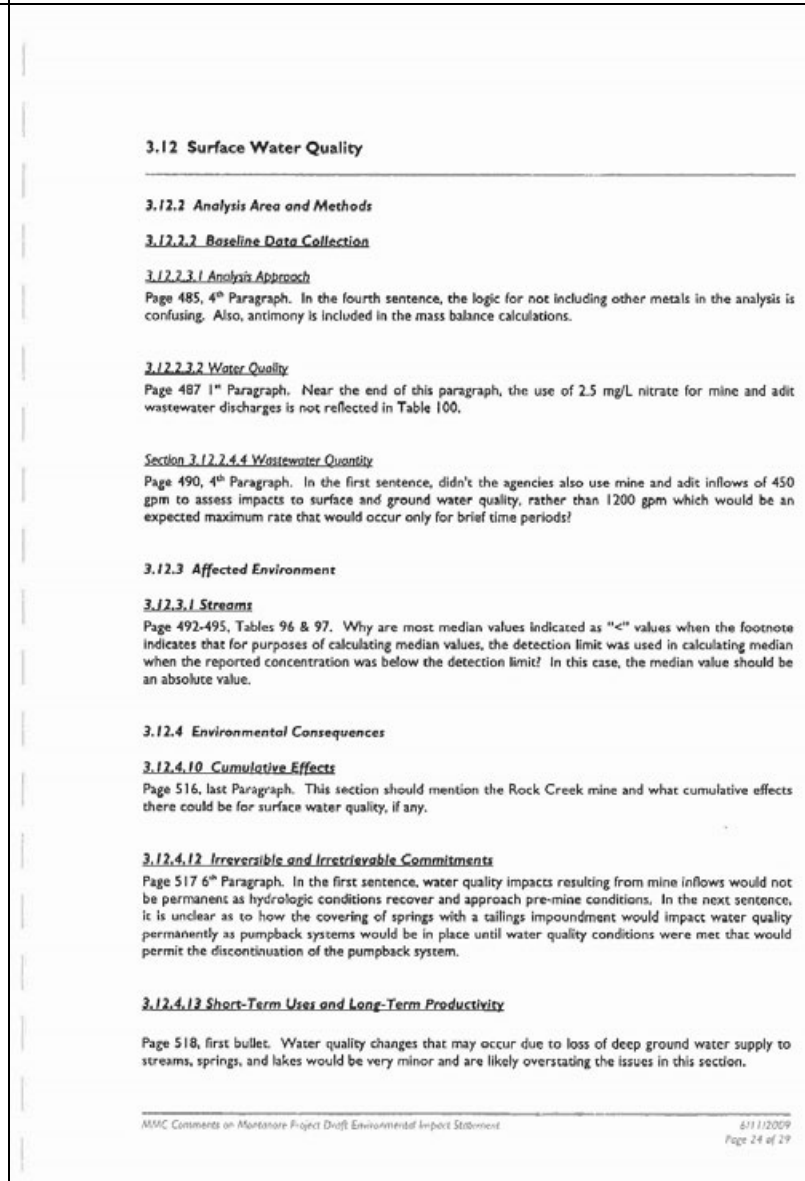
Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-133 157-134 157-135 157-136 157-137		**Comment Response 157-133** See comment response 157-14. **Comment Response 157-134** The use of the LAD Areas in Alternatives 3 and 4 was eliminated in the SDEIS and FEIS. **Comment Response 157-135** See comment response 157-38. **Comment Response 157-136** The cumulative effects section for surface water hydrology, Section 3.11.4.10, was revised in the SDEIS and again in the FEIS to reflect 3D model results. The surface water quality and surface water hydrology sections were separated in the SDEIS and FEIS. **Comment Response 157-137** Other subsections in Section 3.11 adequately describe the variability in streamflow and the uncertainty of the 3D model predictions.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-138 157-139 157-140 157-141 157-142 157-143 157-144		**Comment Response 157-138** The analysis approach section for surface water quality, now Section 3.13.2.2.2, was revised in the FEIS to state that the mass balance analysis included aluminum, barium, beryllium, nickel, and selenium. Thallium was not detected in surface water, groundwater, or adit and mine water and it is not discussed further in the EIS. **Comment Response 157-139** Table 100 of the DEIS presented expected quality of different wastewaters. In the DEIS, adit and mine water was expected to have a nitrate concentration of 2.5 mg/L after LAD treatment. The agencies assumed nitrate removal for the pretreatment system would be 90 percent, with a resulting concentration of 2.5 mg/L. Expected quality of different wastewaters was updated in Appendix G of the SDEIS and FEIS and in Table 123 of the FEIS. **Comment Response 157-140** The revised water balance for all mine alternatives was presented in the SDEIS and was based on results of MMC's 3D groundwater model were presented in the SDEIS and FEIS. The agencies used a discharge rate of 500 gpm for Alternative 2, which is based on the estimate treatment capacity of the existing Water Treatment Plant at the Libby Adit Site. The Water Treatment Plant would be increased in Alternatives 3 and 4 and higher flow rates were used in the FEIS analysis. **Comment Response 157-141** Representative concentrations of potential wastewaters and receiving streams were developed for the SDEIS and FEIS using EPA's statistical approach for water quality assessment. A less than symbol (<) was used if one or more of the sample results had a concentration less than the detection limit. **Comment Response 157-142** Section 3.13.4.9 was revised in the SDEIS to indicate the Montanore and Rock Creek projects would cumulatively reduce streamflow in Rock Creek and East Fork Bull River. Mine dewatering and the resulting drawdown of bedrock groundwater may subtly change the water quality of the East Fork Rock Creek and East Fork Bull River. **Comment Response 157-143** See next page

3.12 Surface Water Quality

3.12.2 Analysis Area and Methods

3.12.2.2 Baseline Data Collection

3.12.2.3.1 Analysis Approach

Page 485, 4th Paragraph. In the fourth sentence, the logic for not including other metals in the analysis is confusing. Also, antimony is included in the mass balance calculations.

3.12.2.3.2 Water Quality

Page 487 1st Paragraph. Near the end of this paragraph, the use of 2.5 mg/L nitrate for mine and adit wastewater discharges is not reflected in Table 100.

Section 3.12.2.4.4 Wastewater Quantity

Page 490, 4th Paragraph. In the first sentence, didn't the agencies also use mine and adit inflows of 450 gpm to assess impacts to surface and ground water quality, rather than 1200 gpm which would be an expected maximum rate that would occur only for brief time periods?

3.12.3 Affected Environment

3.12.3.1 Streams

Page 492-495, Tables 96 & 97. Why are most median values indicated as "<" values when the footnote indicates that for purposes of calculating median values, the detection limit was used in calculating median when the reported concentration was below the detection limit? In this case, the median value should be an absolute value.

3.12.4 Environmental Consequences

3.12.4.10 Cumulative Effects

Page 516, last Paragraph. This section should mention the Rock Creek mine and what cumulative effects there could be for surface water quality, if any.

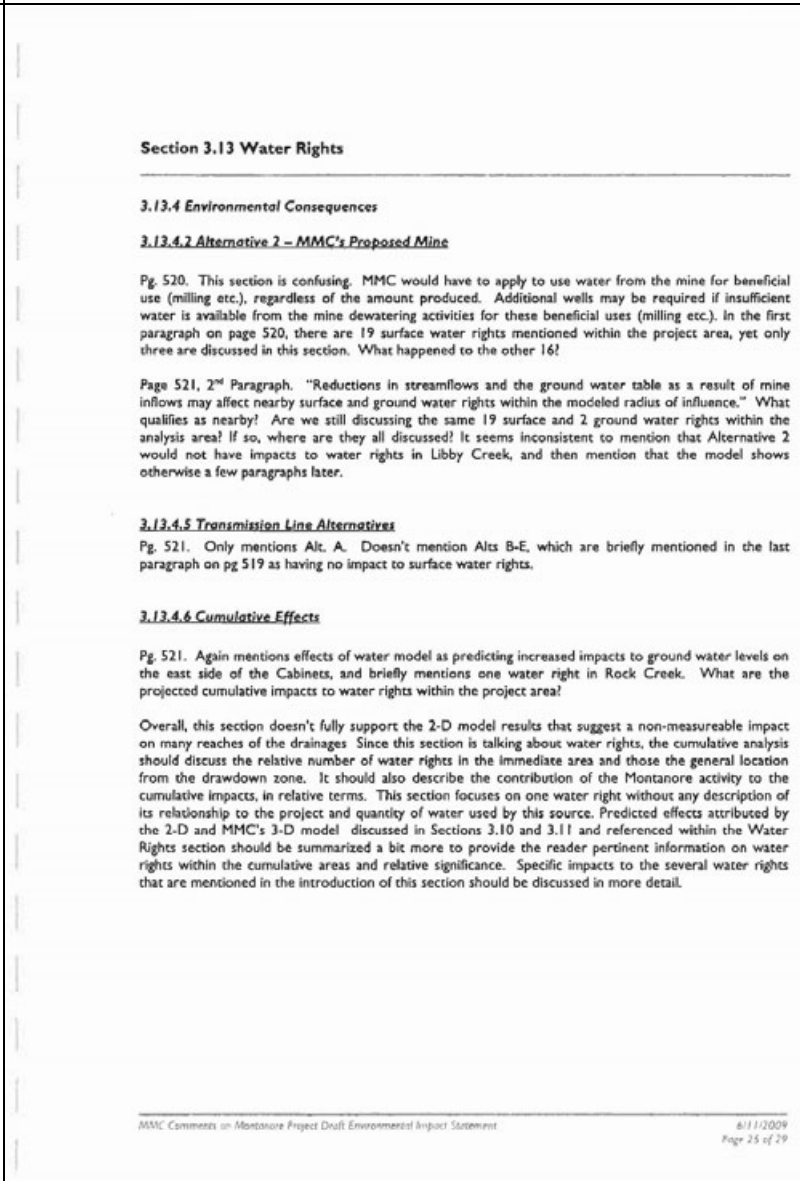
3.12.4.12 Irreversible and Irretrievable Commitments

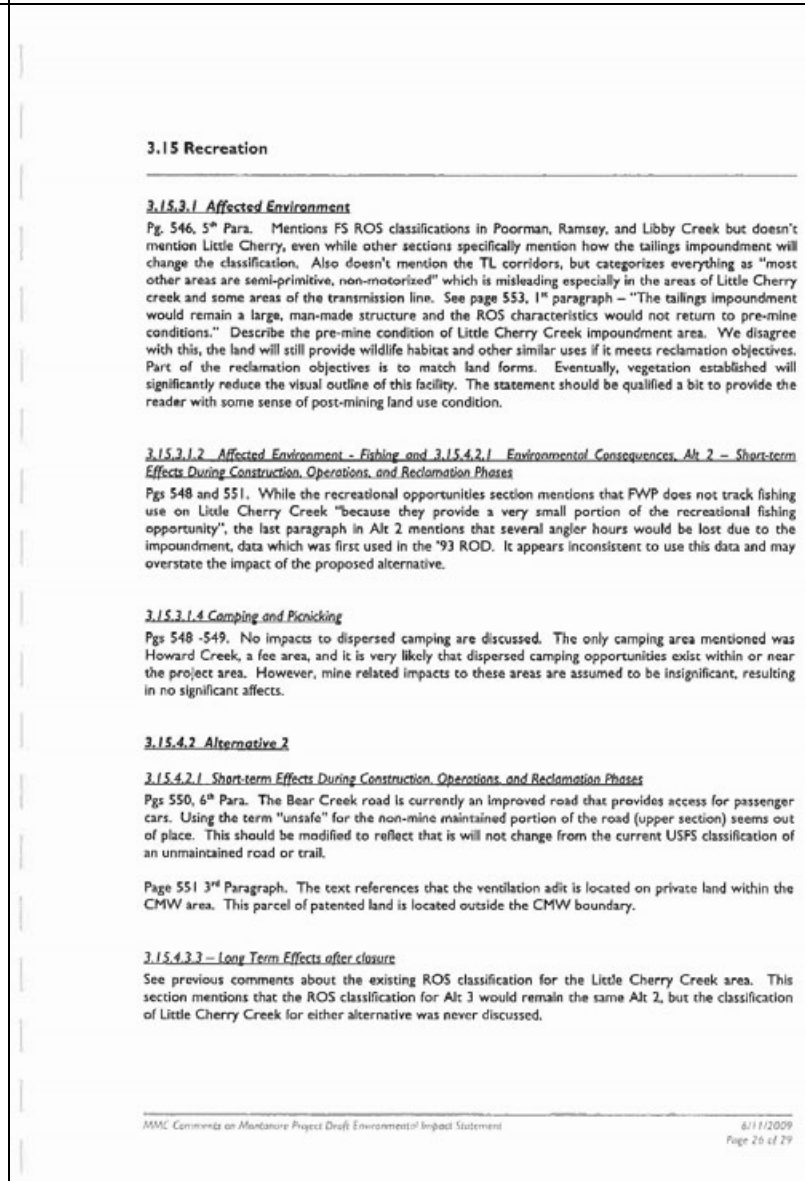
Page 517 6th Paragraph. In the first sentence, water quality impacts resulting from mine inflows would not be permanent as hydrologic conditions recover and approach pre-mine conditions. In the next sentence, it is unclear as to how the covering of springs with a tailings impoundment would impact water quality permanently as pumpback systems would be in place until water quality conditions were met that would permit the discontinuation of the pumpback system.

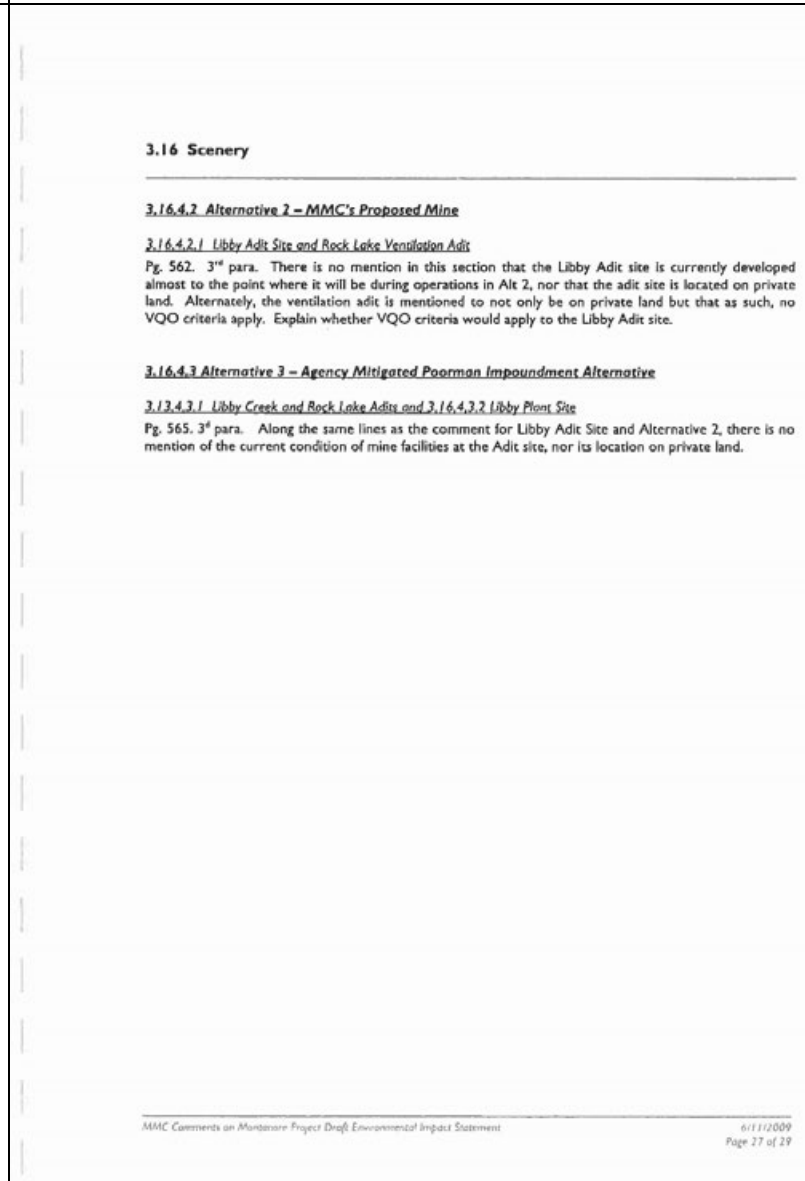
3.12.4.13 Short-Term Uses and Long-Term Productivity

Page 518, first bullet. Water quality changes that may occur due to loss of deep ground water supply to streams, springs, and lakes would be very minor and are likely overstating the issues in this section.

MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 24 of 29

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-145 157-146 157-147 157-148 157-149	 **Section 3.13 Water Rights** ***3.13.4 Environmental Consequences*** ***3.13.4.2 Alternative 2 – MMC's Proposed Mine*** Pg. 520. This section is confusing. MMC would have to apply to use water from the mine for beneficial use (milling etc.), regardless of the amount produced. Additional wells may be required if insufficient water is available from the mine dewatering activities for these beneficial uses (milling etc.). In the first paragraph on page 520, there are 19 surface water rights mentioned within the project area, yet only three are discussed in this section. What happened to the other 16? Page 521, 2nd Paragraph. "Reductions in streamflows and the ground water table as a result of mine inflows may affect nearby surface and ground water rights within the modeled radius of influence." What qualifies as nearby? Are we still discussing the same 19 surface and 2 ground water rights within the analysis area? If so, where are they all discussed? It seems inconsistent to mention that Alternative 2 would not have impacts to water rights in Libby Creek, and then mention that the model shows otherwise a few paragraphs later. ***3.13.4.5 Transmission Line Alternatives*** Pg. 521. Only mentions Alt. A. Doesn't mention Alts B-E, which are briefly mentioned in the last paragraph on pg 519 as having no impact to surface water rights. ***3.13.4.6 Cumulative Effects*** Pg. 521. Again mentions effects of water model as predicting increased impacts to ground water levels on the east side of the Cabinets, and briefly mentions one water right in Rock Creek. What are the projected cumulative impacts to water rights within the project area? Overall, this section doesn't fully support the 2-D model results that suggest a non-measureable impact on many reaches of the drainages Since this section is talking about water rights, the cumulative analysis should discuss the relative number of water rights in the immediate area and those the general location from the drawdown zone. It should also describe the contribution of the Montanore activity to the cumulative impacts, in relative terms. This section focuses on one water right without any description of its relationship to the project and quantity of water used by this source. Predicted effects attributed by the 2-D and MMC's 3-D model discussed in Sections 3.10 and 3.11 and referenced within the Water Rights section should be summarized a bit more to provide the reader pertinent information on water rights within the cumulative areas and relative significance. Specific impacts to the several water rights that are mentioned in the introduction of this section should be discussed in more detail. *MMC Comments on Montanore Project Draft Environmental Impact Statement* *6/11/2009* *Page 25 of 29*	The 2D and the 3D models predicted that hydrologic conditions would not return to pre-mine conditions. Based on both models, the agencies' analysis is that water quality impacts resulting from mine inflows post-mining, if measurable, would be an irreversible commitment of surface water resources. **Comment Response 157-144** The 2D and the 3D models predicted that hydrologic conditions would not return to pre-mine conditions. Based on both models, the agencies' analysis is that long-term water quality changes that may occur would be a loss of deep groundwater supply to streams, springs, and lakes. **Comment Response 157-145** The water rights section, now Section 3.12, was revised in the SDEIS and FEIS in response to MMC's beneficial use permit applications and coordination with the DNRC. The revision in the FEIS included measures MMC would take to ensure diversions of surface water upstream of the Forest Service's 40 cfs water right would either cease or be fully augmented whenever the Forest Service's right and any other senior water right were in priority over MMC's existing or new water rights. **Comment Response 157-146** See comment response 157-145. Section 3.12 was revised to indicate that MMC applied for beneficial use permits (water rights) for all water that would be used beneficially, such as milling, potable water, dust suppression, or evaporation. **Comment Response 157-147** The text was clarified in the SDEIS that the transmission line alternatives would not affect water rights. **Comment Response 157-148** Section 3.12.4.6 was revised in the SDEIS and FEIS to state more clearly that there would be no cumulative effects on water rights. **Comment Response 157-149** See comment response 157-148.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-150 157-151 157-152 157-153 157-154 157-155	 **3.15 Recreation** *3.15.3.1 Affected Environment* Pg. 546, 5th Para. Mentions FS ROS classifications in Poorman, Ramsey, and Libby Creek but doesn't mention Little Cherry, even while other sections specifically mention how the tailings impoundment will change the classification. Also doesn't mention the TL corridors, but categorizes everything as "most other areas are semi-primitive, non-motorized" which is misleading especially in the areas of Little Cherry creek and some areas of the transmission line. See page 553, 1st paragraph – "The tailings impoundment would remain a large, man-made structure and the ROS characteristics would not return to pre-mine conditions." Describe the pre-mine condition of Little Cherry Creek impoundment area. We disagree with this, the land will still provide wildlife habitat and other similar uses if it meets reclamation objectives. Part of the reclamation objectives is to match land forms. Eventually, vegetation established will significantly reduce the visual outline of this facility. The statement should be qualified a bit to provide the reader with some sense of post-mining land use condition. *3.15.3.1.2 Affected Environment - Fishing and 3.15.4.2.1 Environmental Consequences, Alt 2 – Short-term Effects During Construction, Operations, and Reclamation Phases* Pgs 548 and 551. While the recreational opportunities section mentions that FWP does not track fishing use on Little Cherry Creek "because they provide a very small portion of the recreational fishing opportunity", the last paragraph in Alt 2 mentions that several angler hours would be lost due to the impoundment, data which was first used in the '93 ROD. It appears inconsistent to use this data and may overstate the impact of the proposed alternative. *3.15.3.1.4 Camping and Picnicking* Pgs 548 -549. No impacts to dispersed camping are discussed. The only camping area mentioned was Howard Creek, a fee area, and it is very likely that dispersed camping opportunities exist within or near the project area. However, mine related impacts to these areas are assumed to be insignificant, resulting in no significant affects. *3.15.4.2 Alternative 2* *3.15.4.2.1 Short-term Effects During Construction, Operations, and Reclamation Phases* Pgs 550, 6th Para. The Bear Creek road is currently an improved road that provides access for passenger cars. Using the term "unsafe" for the non-mine maintained portion of the road (upper section) seems out of place. This should be modified to reflect that is will not change from the current USFS classification of an unmaintained road or trail. Page 551 3rd Paragraph. The text references that the ventilation adit is located on private land within the CMW area. This parcel of patented land is located outside the CMW boundary. *3.15.4.3.3 – Long Term Effects after closure* See previous comments about the existing ROS classification for the Little Cherry Creek area. This section mentions that the ROS classification for Alt 3 would remain the same Alt 2, but the classification of Little Cherry Creek for either alternative was never discussed. *MMC Comments on Montanore Project Draft Environmental Impact Statement* 6/11/2009 *Page 26 of 29*	**Comment Response 157-150** The Recreation section in the FEIS, now Section 3.16, was revised to clarify ROS classifications and changes in the Little Cherry Creek drainage and the transmission line corridors, and to better characterize existing dispersed camping use. The environmental consequences discussion already mentions the lack of impacts to dispersed camping, and was not changed. **Comment Response 157-151** The reference to fishing impacts in Little Cherry Creek was deleted in Section 3.16 of the FEIS. **Comment Response 157-152** Section 3.16.4 in the FEIS was revised to better characterize existing dispersed camping use. **Comment Response 157-153** Section 3.16.4.2.1 in the FEIS was revised to indicate the improvements to the Bear Creek Road would safely accommodate anticipated public and mine-related traffic. **Comment Response 157-154** Section 3.16.4.2.1 was revised to indicate the Rock Lake Ventilation Adit would be on private land. **Comment Response 157-155** See comment response 157-150.

Comment	Document #157-Klepfer Mining Services, LLC	Response
157-156 157-157	 3.16 Scenery 3.16.4.2 Alternative 2 – MMC's Proposed Mine 3.16.4.2.1 Libby Adit Site and Rock Lake Ventilation Adit Pg. 562. 3rd para. There is no mention in this section that the Libby Adit site is currently developed almost to the point where it will be during operations in Alt 2, nor that the adit site is located on private land. Alternately, the ventilation adit is mentioned to not only be on private land but that as such, no VQO criteria apply. Explain whether VQO criteria would apply to the Libby Adit site. 3.16.4.3 Alternative 3 – Agency Mitigated Poorman Impoundment Alternative 3.13.4.3.1 Libby Creek and Rock Lake Adits and 3.16.4.3.2 Libby Plant Site Pg. 565. 3d para. Along the same lines as the comment for Libby Adit Site and Alternative 2, there is no mention of the current condition of mine facilities at the Adit site, nor its location on private land. MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 27 of 29	**Comment Response 157-156** The Scenery section in the FEIS, Section 3.17.4.2.1, was revised to disclose the current development of the Libby Adit Site and its location on private land. **Comment Response 157-157** See comment response 157-156.

Com-ment	Document #157-Klepfer Mining Services, LLC	Response
157-158 157-159 157-160 157-161		**Comment Response 157-158** Section 3.23.4.2.1 was revised in the SDEIS and in the FEIS to update effects on jurisdictional and non-jurisdictional water of the U.S **Comment Response 157-159** See comment response 157-158. **Comment Response 157-160** See comment response 157-158. **Comment Response 157-161** See comment response 157-158.

3.22 Wetlands and Other Waters of the U.S.

3.22.4 *Environmental Consequences*

3.22.4.2 *Alternative 2 – MMC's Proposed Mine*

3.22.4.2.1 *Direct Effects*

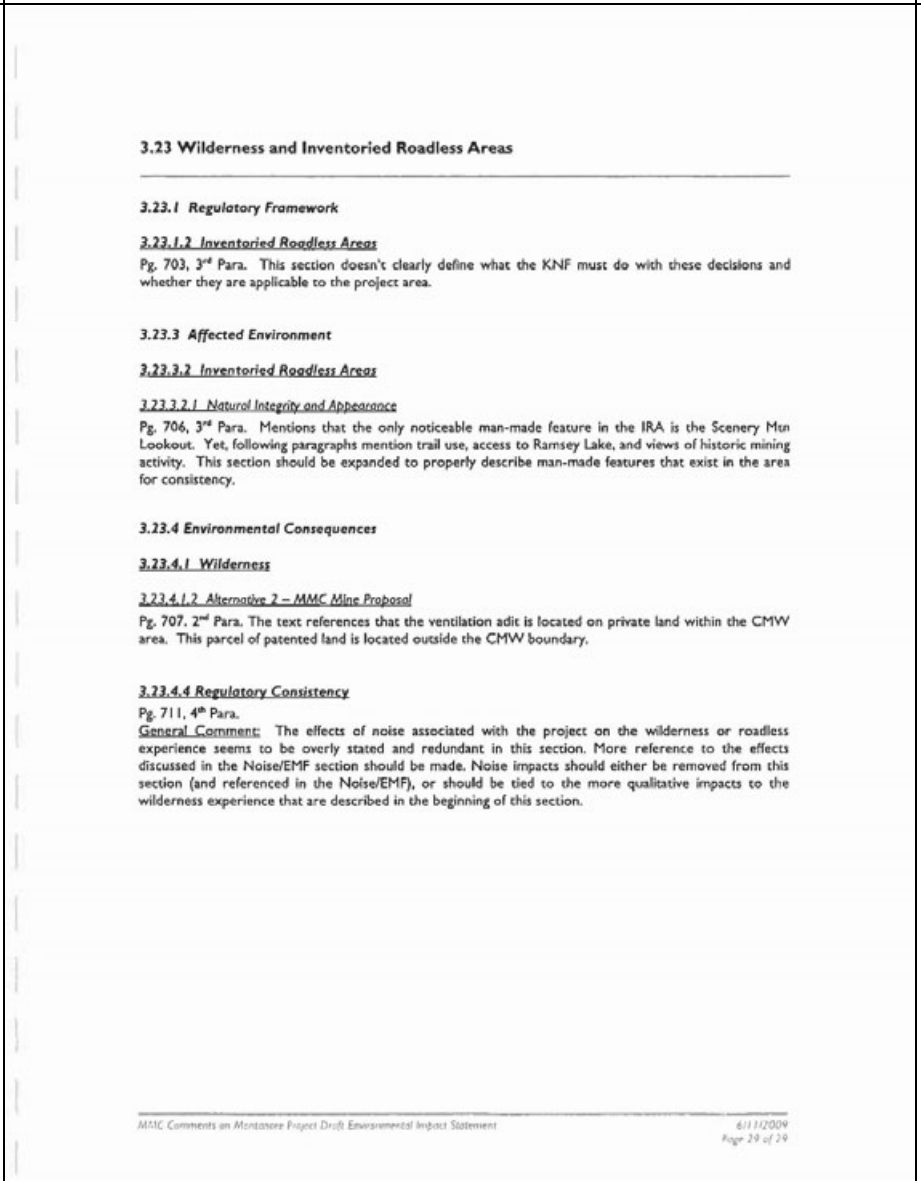
Page 694, Table 149. According to the November 2005 report by Westech, "Waters of the U.S. Redelineation, Montanore Project", there are 26.13 acres of jurisdictional wetlands and non-wetland Waters of the U.S. (not 36.3 acres as shown in Table 149). Please explain the discrepancy in these total acreages.

According to the January 2009 report by AMEC Geomatrix, "Survey of Wetlands, Sensitive Plants, and Amphibian/Reptiles in Alternative Sites for Tailing Impoundment, Plant Facility, and Mine Tunnel, Montanore Mine Project", 9.7 acres of jurisdictional wetlands occur in the Poorman Impoundment site for Alternative 3 (not 9.0 acres as shown in Table 149). Also, the amount of non-wetland Waters of the U.S. in the Poorman Impoundment site is 0.7 acre (not 0.6 acre as shown in Table 149).

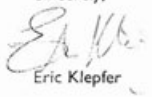
For the second footnote, the size and location of two small jurisdictional wetlands and one small isolated wetland that were identified by the Corps in the Poorman Impoundment Site have been determined; see WUS-35, -36, and -37 in the January 2009 report by AMEC Geomatrix, "Survey of Wetlands, Sensitive Plants, and Amphibian/Reptiles in Alternative Sites for Tailing Impoundment, Plant Facility, and Mine Tunnel, Montanore Mine Project".

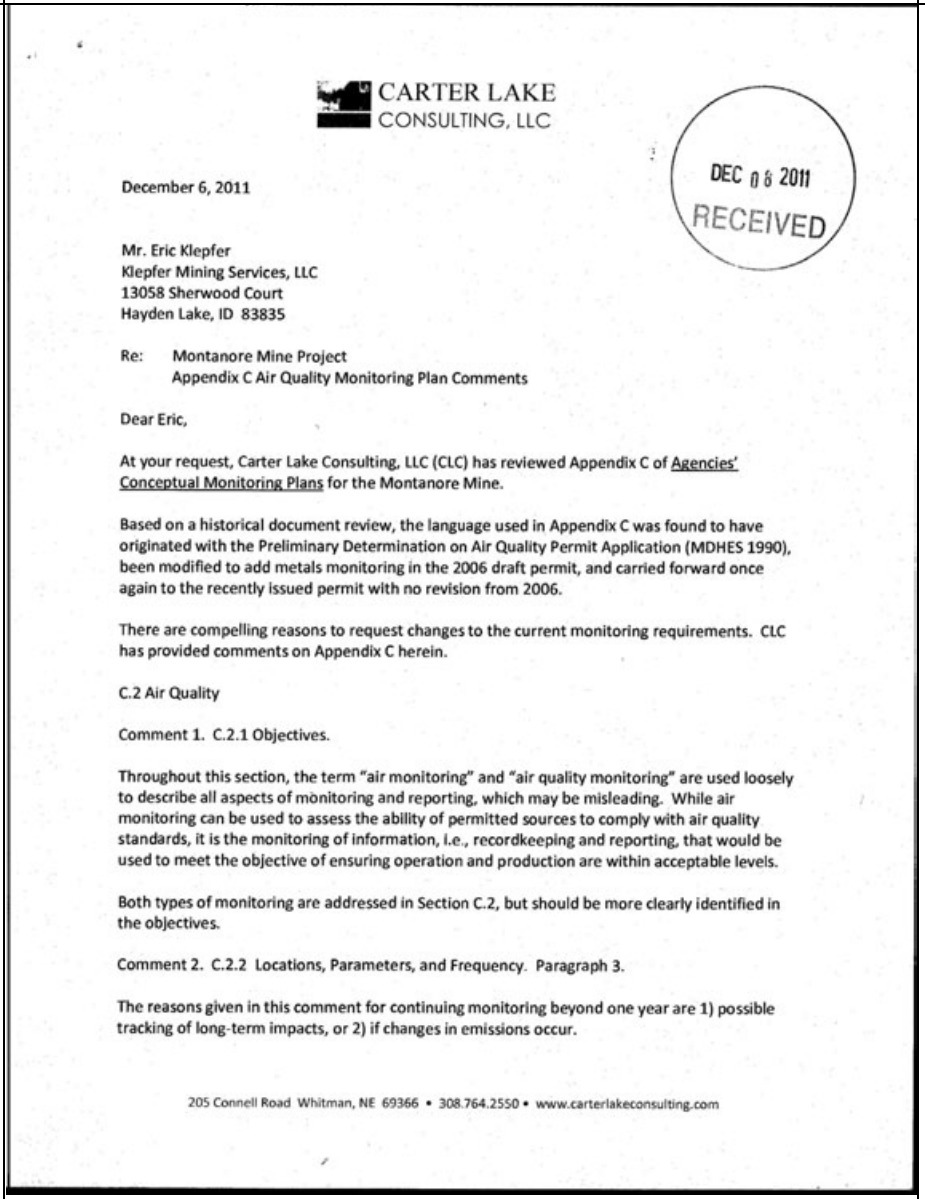
For the third footnote, the Libby Adit site would affect up to 0.1 acre of non-wetland Waters of the U.S.; see the January 2009 report by AMEC Geomatrix, "Survey of Wetlands, Sensitive Plants, and Amphibian/Reptiles in Alternative Sites for Tailing Impoundment, Plant Facility, and Mine Tunnel, Montanore Mine Project".

MMC Comments on Montanore Project Draft Environmental Impact Statement 6/11/2009 Page 28 of 29

Comment	Document #157-Klepfer Mining Services, LLC	Response
157-162 157-163 157-164 157-165		**Comment Response 157-162** The discussion of wilderness and unroaded areas, Section 3.24 in the FEIS, was revised in the FEIS to indicate reasonable access and disturbance for mineral entry within an IRA is allowed. **Comment Response 157-163** The discussion of man-made features in the Cabinet East IRA was revised in Section 3.24.2.3.1 of the FEIS. **Comment Response 157-164** Section 3.24.4.1.2 of the FEIS was revised to clarify that the ventilation adit would be on private land outside the CMW. **Comment Response 157-165** Noise was not discussed in the Regulatory Compliance section. The section on Environmental Consequences adequately cross referenced other EIS sections for indirect effects on wilderness and unroaded areas.

Comment	Document #263-Klepfer Mining Services, LLC	Response
	MNTR 263  KMS KLEPFER MINING SERVICE LLC PROJECT MANAGEMENT, ENGINEERING, AND ENVIRONMENTAL SERVICES RECEIVED JUN 2 9 2009 DEQ DIRECTOR'S OFFICE June 26, 2009 Bobbie Lacklen, Project Coordinator Kootenai National Forest 31374 US Hwy 2 Libby, MT 59923 Emily Corsi and Herb Rolfes Montana Department of Environmental Quality 1520 E. Sixth Ave. P.O. Box 200901 Helena, MT 59620-0901 Re: Montanore Draft Environmental Impact Statement Comments Dear Bobbie, Emily, and Herb,	
263-1	This letter has been written on behalf of Montanore Minerals Corp (MMC) concerning the Draft Environmental Impact Statement for the Montanore Project. We appreciate the efforts of the U.S. Forest Service and Montana Department of Environmental Quality on this important project.	
263-2	At this time, we would like to formally relay to you and other agency staff that we concur with the U.S. Forest Service's selected alternative for the project which includes Alternative 4, Agency Mitigated Little Cherry Creek Impoundment Alternative. While we appreciate the issue facing the agencies, we believe Alternative C, Modified North Miller Creek Alignment for the transmission line is a better selection. We have also reviewed Plum Creek's suggested transmission line alternative and believe this is a viable option to incorporate into the Modified N. Miller Creek alternative and encourage the agencies to consider this change.	**Comment Response 263-1** Thank you for your comment. **Comment Response 263-2** Thank you for your comment. In the SDEIS and FEIS, the KNF identified Alternative 3 as the preferred mine alternative and the agencies' identified Alternative D-R as the preferred transmission line alternative.
263-3	As you are all aware, the past several years have presented long hours and many challenges to us all in coming to this point in the project. We are very appreciative of the collaborative approach with the agencies to address important project issues. We have always felt that a cooperative approach during all phases of project analysis and development are beneficial to	**Comment Response 263-3** Thank you for your comment.
	13058 Sherwood Ct., Hayden Lake, ID 83835 (208)-772-6993 (208)-772-1480 (fax) email: eklepfer@roadrunner.com	

Com-ment	Document #263-Klepfer Mining Services, LLC	Response
	  everyone involved, and we hope to continue with this trend as we see the project move forward.	**Comment Response 263-4** Thank you for your comment. **Comment Response 263-5** Thank you for your comment.
263–4	The Montanore Project is very important to MMC and equally important to Libby and Lincoln County. Completion of the review process and approval of the project will result in a significant positive impact to the local economy by providing high quality jobs, tax revenue, and economic stimulus to local businesses. Our commitment to local hire will ensure future job opportunities for many years.	
263–5	We will continue our commitment to innovative and responsible mineral development and working together. We encourage you to continue to prioritize the process to wrap up the process and issue a Record of Decision Again, we appreciate all of your efforts. Sincerely,  Eric Klepfer cc: Thomas Tidwell (Chief of the Forest Service) Richard Opper (Director - MDEQ) Evan Barrett (Office of the Governor - Chief of Business Development) Paul Bradford (Forest Supervisor) MMC (File)	

Comment	Document #337-Carter Lake Consulting, LLC	Response
337–1 337–2 337-3 337-4		**Comment Response 337–1** The comment correctly identifies the origins of the agencies' proposed air quality monitoring plan in Appendix C. The DEQ issued an initial Preliminary Determination for public comment in 2006 and a supplemental Preliminary Determination for public comment in 2011. Both comment periods were 30 days. **Comment Response 337–2** Thank you for your comment. Neither Mines Management, Inc. nor MMC submitted comments on the initial or supplemental Preliminary Determinations. In addition, in MMC's 2008 Updated Plan of Operations, MMC indicated "DEQ has issued a preliminary draft air quality permit which will establish air quality monitoring activities. MMC will adhere to these permit conditions when the permit is issued" (p. 142 MMC 2008). Appendix C was not submitted to the agencies during the comment period. **Comment Response 337–3** The two uses of air quality monitoring in Section C.2 were revised in the FEIS to "air monitoring." Both the initial and supplemental Preliminary Determination refer only to air monitoring. The objective of the air monitoring was described in Section C.2.1 of the SDEIS and FEIS. **Comment Response 337–4** Section C.2.2 of the SDEIS and FEIS discussed that the DEQ may require continued air monitoring to track long-term impacts of emissions or if emission changes occurred.

CARTER LAKE
CONSULTING, LLC

DEC 06 2011
RECEIVED

December 6, 2011

Mr. Eric Klepfer
Klepfer Mining Services, LLC
13058 Sherwood Court
Hayden Lake, ID 83835

Re: Montanore Mine Project
Appendix C Air Quality Monitoring Plan Comments

Dear Eric,

At your request, Carter Lake Consulting, LLC (CLC) has reviewed Appendix C of Agencies' Conceptual Monitoring Plans for the Montanore Mine.

Based on a historical document review, the language used in Appendix C was found to have originated with the Preliminary Determination on Air Quality Permit Application (MDHES 1990), been modified to add metals monitoring in the 2006 draft permit, and carried forward once again to the recently issued permit with no revision from 2006.

There are compelling reasons to request changes to the current monitoring requirements. CLC has provided comments on Appendix C herein.

C.2 Air Quality

Comment 1. C.2.1 Objectives.

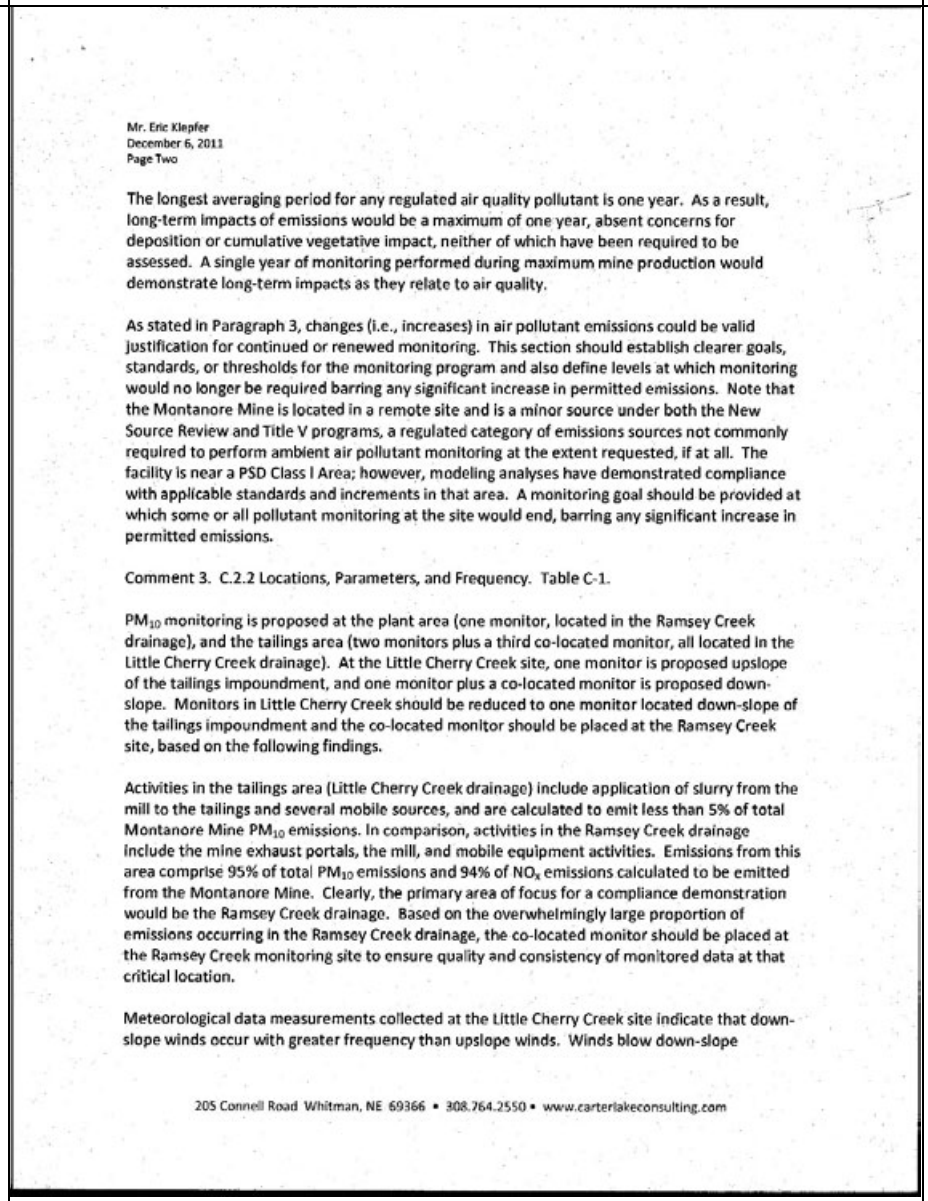
Throughout this section, the term "air monitoring" and "air quality monitoring" are used loosely to describe all aspects of monitoring and reporting, which may be misleading. While air monitoring can be used to assess the ability of permitted sources to comply with air quality standards, it is the monitoring of information, i.e., recordkeeping and reporting, that would be used to meet the objective of ensuring operation and production are within acceptable levels.

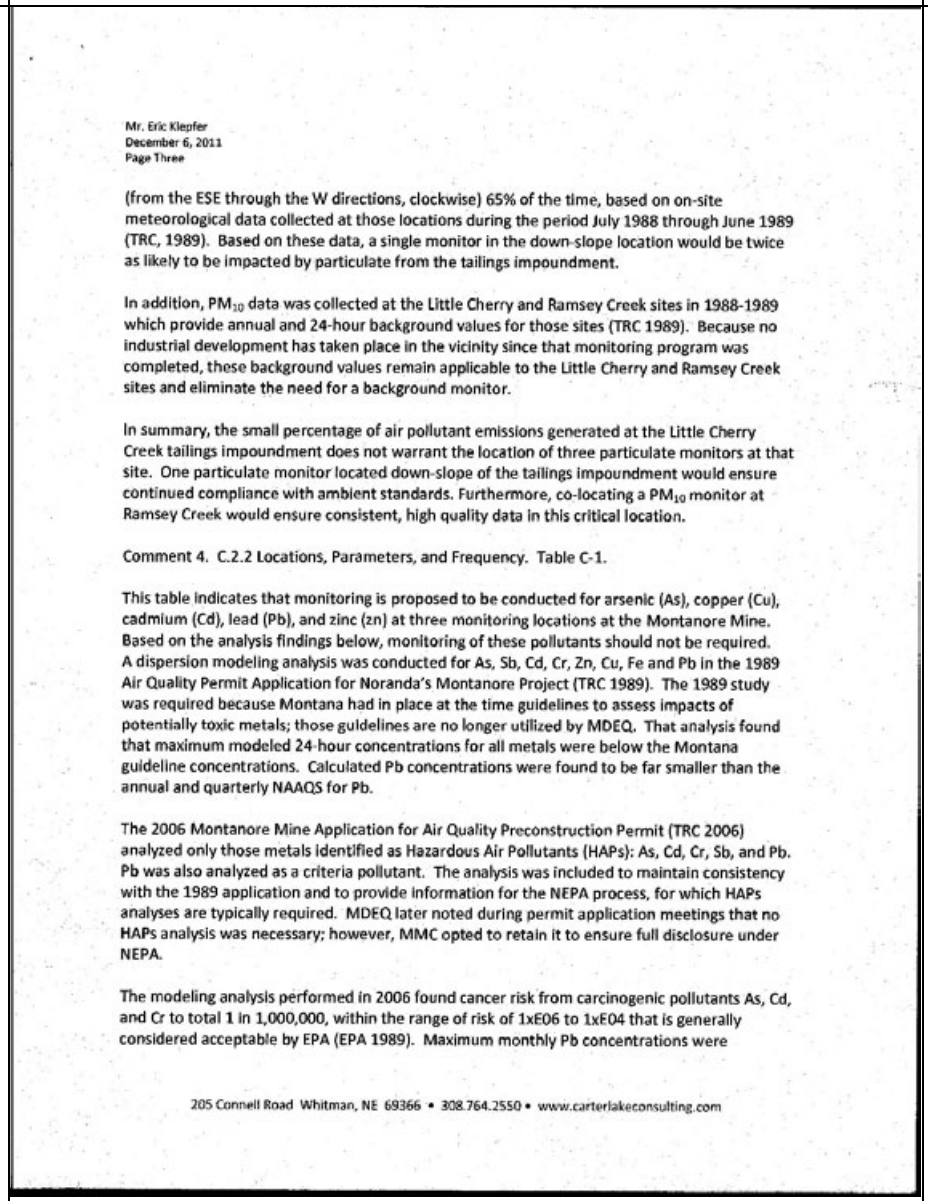
Both types of monitoring are addressed in Section C.2, but should be more clearly identified in the objectives.

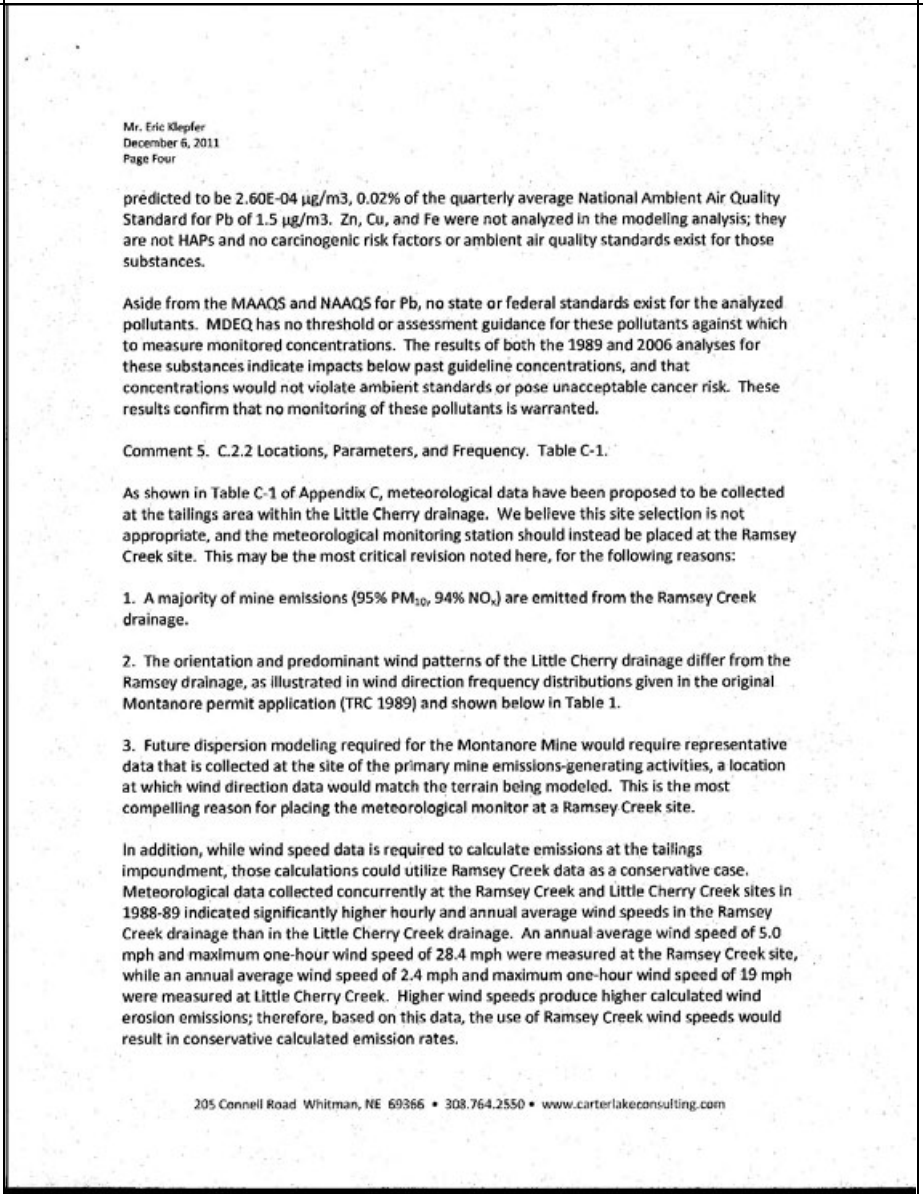
Comment 2. C.2.2 Locations, Parameters, and Frequency. Paragraph 3.

The reasons given in this comment for continuing monitoring beyond one year are 1) possible tracking of long-term impacts, or 2) if changes in emissions occur.

205 Connell Road Whitman, NE 69366 • 308.764.2550 • www.carterlakeconsulting.com

Comment	Document #337-Carter Lake Consulting, LLC	Response
337-5 337-6 337-7 337-8 337-9		**Comment Response 337–5** Maximum production would not occur until Year 11 of operations. Section C.2.2 requires MMC to begin air monitoring at the commencement of mill facilities or the tailings impoundment and continue air monitoring for at least 1 year after normal production was achieved. **Comment Response 337–6** Section C.2.2 described the conditions under which monitoring would continue. These conditions can be clarified when the DEQ issues a final permit. **Comment Response 337–7** The agencies' monitoring described in Appendix C is for Alternative 3 (see first sentence of Appendix C). The monitoring sites in Alternative 3 would be at the Libby Plant Site and Poorman Impoundment Site. **Comment Response 337–8** The DEQ will consider co-location of monitoring sites at the Libby Plant Site when it issues a final permit. **Comment Response 337–9** The DEQ will consider a single monitoring site at the Poorman Impoundment Site when it issues a final permit.

Com-ment	Document #337-Carter Lake Consulting, LLC	Response
337-10 337-11 337-12 337-13 337-14		**Comment Response 337–10** The DEQ believes the background values from the Little Cherry Creek and Ramsey Creek sites are applicable to the Poorman Impoundment Site and the Libby Plant Site. See DEQ's supplemental Preliminary Determination. **Comment Response 337–11** See comment responses 337-8 and 9. The agencies proposed two monitoring stations at the Poorman Impoundment Site and one monitoring station at the Libby Plant Site. **Comment Response 337–12** The DEQ will consider changes to air monitoring parameters when it issues the final permit. **Comment Response 337–13** See comment response 337-12. **Comment Response 337–14** See comment response 337-12.

Com-ment	Document #337-Carter Lake Consulting, LLC	Response
337-15 337-16		**Comment Response 337–15** See comment response 337-12. **Comment Response 337–16** Because of the concern with blowing tailings, collection of wind speed and direction at the Poorman Impoundment Site would be important.

predicted to be 2.60E-04 µg/m3, 0.02% of the quarterly average National Ambient Air Quality Standard for Pb of 1.5 µg/m3. Zn, Cu, and Fe were not analyzed in the modeling analysis; they are not HAPs and no carcinogenic risk factors or ambient air quality standards exist for those substances.

Aside from the MAAQS and NAAQS for Pb, no state or federal standards exist for the analyzed pollutants. MDEQ has no threshold or assessment guidance for these pollutants against which to measure monitored concentrations. The results of both the 1989 and 2006 analyses for these substances indicate impacts below past guideline concentrations, and that concentrations would not violate ambient standards or pose unacceptable cancer risk. These results confirm that no monitoring of these pollutants is warranted.

Comment 5. C.2.2 Locations, Parameters, and Frequency. Table C-1.

As shown in Table C-1 of Appendix C, meteorological data have been proposed to be collected at the tailings area within the Little Cherry drainage. We believe this site selection is not appropriate, and the meteorological monitoring station should instead be placed at the Ramsey Creek site. This may be the most critical revision noted here, for the following reasons:

1. A majority of mine emissions (95% PM_{10}, 94% NO_x) are emitted from the Ramsey Creek drainage.

2. The orientation and predominant wind patterns of the Little Cherry drainage differ from the Ramsey drainage, as illustrated in wind direction frequency distributions given in the original Montanore permit application (TRC 1989) and shown below in Table 1.

3. Future dispersion modeling required for the Montanore Mine would require representative data that is collected at the site of the primary mine emissions-generating activities, a location at which wind direction data would match the terrain being modeled. This is the most compelling reason for placing the meteorological monitor at a Ramsey Creek site.

In addition, while wind speed data is required to calculate emissions at the tailings impoundment, those calculations could utilize Ramsey Creek data as a conservative case. Meteorological data collected concurrently at the Ramsey Creek and Little Cherry Creek sites in 1988-89 indicated significantly higher hourly and annual average wind speeds in the Ramsey Creek drainage than in the Little Cherry Creek drainage. An annual average wind speed of 5.0 mph and maximum one-hour wind speed of 28.4 mph were measured at the Ramsey Creek site, while an annual average wind speed of 2.4 mph and maximum one-hour wind speed of 19 mph were measured at Little Cherry Creek. Higher wind speeds produce higher calculated wind erosion emissions; therefore, based on this data, the use of Ramsey Creek wind speeds would result in conservative calculated emission rates.

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Table 1
Noranda Montanore Project
Wind Direction Frequency

Direction	Ramsey Creek Frequency (percent)	Little Cherry Frequency (percent)
N	4.29	6.72
NNE	6.31	4.55
NE	3.02	3.07
ENE	1.40	2.22
E	2.08	3.11
ESE	3.48	3.51
SE	9.42	6.32
SSE	17.18	9.14
S	15.07	12.71
SSW	15.98	12.35
SW	12.47	10.82
WSW	3.24	5.48
W	1.75	4.29
WNW	1.24	3.77
NW	1.40	5.24
NNW	1.66	6.70

Period of Record: July 1988-June 1989

Please contact me at 308-764-2550 if you have any questions regarding these comments.

Sincerely,

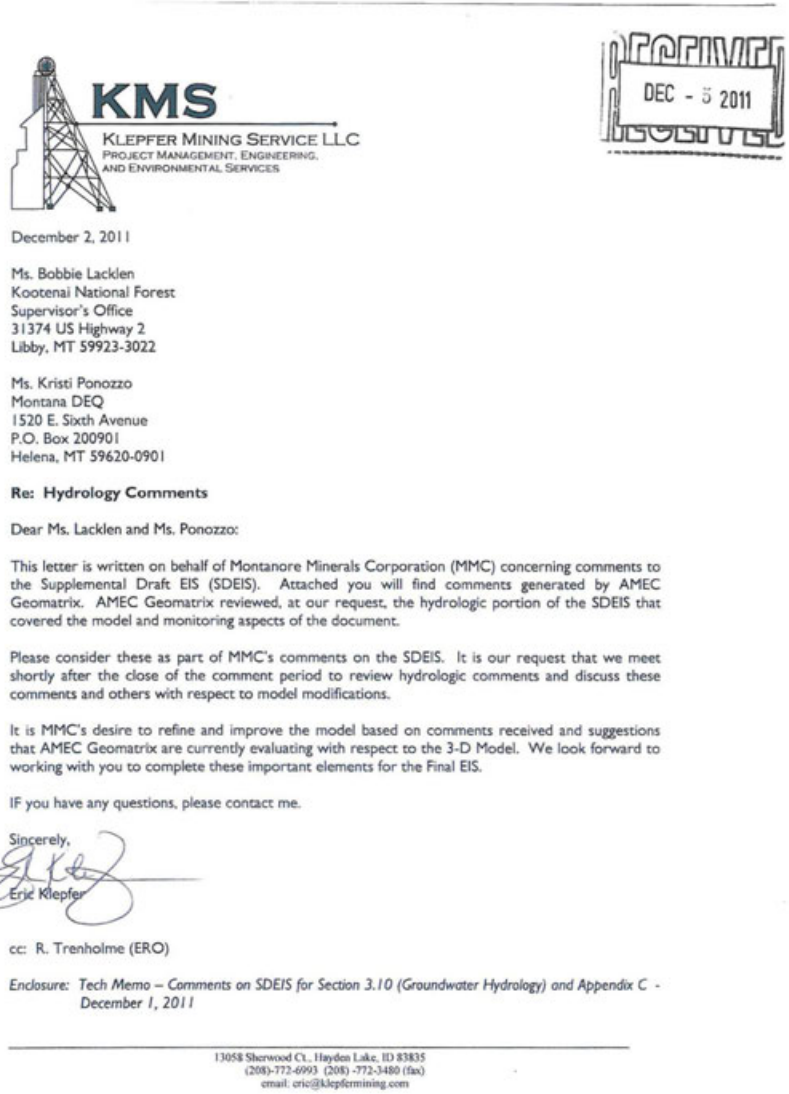
Carter Lake Consulting, LLC

Susan J. Connell
Carter Lake Consulting, LLC

Attachment: References

205 Connell Road Whitman, NE 69366 • 308.764.2550 • www.carterlakeconsulting.com

Com-ment	Document #337-Carter Lake Consulting, LLC	Response
	References EPA 1989. Risk Assessment Guidance for Superfund Volume I, Human Health Evaluation Manual (Part A) Interim Final . EPA/540/1-89/002. EPA Office of Emergency and Remedial Response. December 1989. MDHES 1990. Memorandum from Pat Driscoll, Air Quality Bureau, regarding Montanore Project – Preliminary Determination on Air Quality Permit Application. Montana Department of Health and Environmental Sciences, Air Quality Bureau. October 25, 1990. TRC, 1989. Air Quality Permit Application for Noranda's Montanore Project, Volume I Permit Application, TRC Environmental Consultants, Inc., Englewood, CO, October 16, 1989. TRC, 2006. Mines Management Inc. Montanore Mine, Application for Air Quality Preconstruction Permit, TRC Environmental Consultants, Inc., Laramie, WY, January 9, 2006, Revised May 17, 2006. 205 Connell Road Whitman, NE 69366 • 308.764.2550 • www.carterlakeconsulting.com	

Comment	Document #338-Klepfer Mining Services, LLC	Response
338-1 338-2		**Comment Response 338-1** The agencies appreciate MMC's and Geomatrix' review of the SDEIS. **Comment Response 338-2** On January 20, 2010, MMC submitted the results of model modifications for the mine area 3D model to the agencies for their consideration. After reviewing the results, the agencies concluded the model results in the SDEIS provided a potential range of dewatering and pumping rates and streamflow impacts with the data currently available. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models (for the mine area and tailings impoundment area) would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4, Evaluation Phase in Appendix C). The mine area 3D model results were not revised from those presented in the SDEIS.

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	amec **Memorandum** **To:** Eric Klepfer Klepfer Mining Services **From:** Doug Rogness AMEC Geomatrix, Inc. **Tel:** (406) 442-0860 **Fax:** (406) 442-0864 **Date:** December 1, 2011 **Subject:** Comments on Supplemental Draft EIS for the Montanore Project Section 3.10 (Groundwater Hydrology) and Appendix C AMEC Geomatrix, Inc. (AMEC) has prepared this Memorandum to present comments on Section 3.10 (Groundwater Hydrology) and Appendix C (Agencies' Conceptual Monitoring Plans – Water Resources) for the Supplemental Draft EIS for the Montanore Mine Project.	**Comment Response 338-3** The hydrology committee did not play the same role in preparation of the 3D model as was done for the 2D model. The 3D model was prepared by MMC's consultant, Geomatrix. The hydrology committee reviewed and commented on the model results at various stages of the modeling process. Section 3.10.2.3.1 of the FEIS was modified to reflect this.
338-3	Page 224, Section 3.10.2.3.1, first ¶, 5th sentence: The hydrogeology committee also reviewed and helped guide completion of the 3D model.	**Comment Response 338-4** Section 3.10.3.1.1 of the FEIS indicated geologic structure may play a significant role in groundwater flow in bedrock. Faults can act as conduits for flow, barriers to flow, or both.
338-4	Page 225, Section 3.10.3.1.1, first ¶, 6th sentence: As stated later in this section (p. 228), faults can also be low K zones and act as barriers to groundwater flow.	**Comment Response 338-5** Section 3.10.3.1.1 of the FEIS was revised to clarify the reference.
338-5	Page 226, 1st ¶, last sentence: This sentence seems to imply that the reference "Galloway 1977" specifically addresses the Rock Lake fault which probably is not the case.	**Comment Response 338-6** The USGS mapped stream locations are based on aerial photo interpretation and are not particularly accurate. Field checking by the Forest Service and others, such as was done in September 2007 in the Rock Creek drainage, is a much more accurate way to determine where streams become perennial. With the exception of upper Libby Creek, a comprehensive spring inventory of the mine area, such as upper East Fork Rock Creek and East Fork Bull River, has not been completed. It is premature to draw conclusions regarding the distribution of springs in the mine area. Additional field work and data collection described for the Pre-Evaluation and Evaluation Phases in Appendix C would provide the data needed to determine where streams become perennial, and what baseflows are at various locations, particularly in the CMW.
338-6	Page 226, 3rd ¶: The statements in this paragraph and elsewhere in the groundwater section that springs and perennial portions of streams generally start at elevations of 5400 to 5600 feet does not seem to be well supported by site data. Table 84 in the SDEIS shows that only 3 of the 9 springs listed for the Cabinet Mountains Wilderness (CMW) discharge from elevations in the range of 5400 to 5600 feet. In addition, a review of USGS topographic maps for the project area shows that streams become perennial at the following approximate elevations: Libby Creek = 5000 ft; Ramsey Creek = 4600 ft; Poorman Creek = 5300 ft; East Fork Rock Creek = 4960 ft (at Rock Lake); and East Fork Bull River = 4100 ft. In general, it appears that the elevation of springs and perennial portions of streams in the CMW varies considerably and does not often fit in the 5400 to 5600 ft range. Dry reaches of some streams have been observed, such as East Fork Rock Creek below Rock Lake and Rock Creek below the confluence of its East and West Forks. These results, in addition to the limited field data that show high seasonal variability of stream flows in the CMW, make it difficult to accurately determine where streams become "perennial" in the project area. The statement at the end of the first paragraph on p. 230 of the SDEIS supports this: "Without continuous flow measurements, it may not be possible to know whether streamflow is reduced to only the baseflow contribution in any given year." Several conclusions about flow rate and location in the SDEIS are based on one-time observations in September 2007. The AMEC Geomatrix, Inc. 639 Helena Ave., Suite 1A Helena, MT USA 59601 Tel (406) 442-0860 Fax (406) 442-0864 AMEC Geomatrix	

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338-7 338-8 338-9 338-10 338-11	*Montanore – AMEC Comments on Groundwater Portions of SDEIS* *December 1, 2011* *Page 2 of 6* hydrologic environment in the CMW cannot be generalized with respect to springs and surface water flow due to the high temporal and spatial variability in precipitation in the form of both rainfall and snowmelt. Page 227, 1st & 2nd ¶: Several conclusions are made in this paragraph about sources of springs based on only a few visual field observations. Springs that are noted by the SDEIS to discharge from faults could also be discharging from a shallow system of interconnected fractures in bedrock. This is supported by the statement on page 228 of the SDEIS, "Site-specific data indicate that near-surface bedrock, which is subject to freeze/thaw and may be experiencing unloading or decompression (as evidenced by the presence of talus slopes at the base of exposed bedrock), is more densely fractured than deeper bedrock." There is no conclusive information in the SDEIS to establish that any springs are discharging from a fault. This lack of conclusive evidence in the SDEIS is also true for the first sentence in the 3rd paragraph on page 227 regarding deeper groundwater being the only source of water to St. Paul Lake during the late summer to early fall. Page 228, 1st ¶: Recent observations inside the Heidelberg Adit in 2011 by MMC show that the first section of adit (450 feet) closest to East Fork Rock Creek was dry. At 450 and 685 feet, the adit intersected narrow fracture or shear zones that strike north-south, with minor dripping at 450 feet, and about 15 gpm flowing at 685 feet. A drill hole just beyond 685 feet was producing about 50 gpm flow; length of the drill hole is unknown. The adit was dry from the drill hole to the face at 705 feet, except for another smaller drill hole in the middle of the face that was producing about 5 gpm. Therefore, approximately 75% of water discharging from the Heidelberg adit is coming from two drill holes that appear to intersect north-south trending fracture/shear zones. The remaining 25% of flow was coming directly from exposed fractures. Rock between the fracture/shear zones was completely dry. This is similar to what has been observed in the Libby Adit. Page 240, last ¶: Two statements in this paragraph are important with respect to groundwater model predictions presented in the SDEIS: "Flow data from the upper reaches of the various streams are insufficient to quantify baseflow at these locations" and "There is considerable uncertainty regarding the annual variability of baseflow in the drainage reaches where baseflow has not been directly measured." These statements point to the high level of uncertainty in model predictions for the upper reaches of streams in the CMW. The 3D model domain covers a large area with regional groundwater flow systems and is not intended to accurately predict changes in stream flow of low-baseflow streams at high elevations in the CMW. In addition, the hydraulic interconnection of high elevation streams and lakes in the CMW with deep groundwater that would be intercepted by the mine workings is uncertain at this stage of the project. Therefore, it seems meaningless to present or rely on predictions of these streamflow impacts until additional field data can be incorporated into the model. This will occur when the evaluation adit extends into the ore zone, allowing for additional assessment and testing to be completed in rocks and geologic structures that would be directly affected by the mine project. Page 241, last ¶, 3rd sentence: This is another unsupported statement about how surface water flowing into Rock Lake is all from the deep bedrock groundwater system; as stated in a previous comment, this surface flow could also be coming from a shallow groundwater flow system in near-surface fractured bedrock that has been recharged directly by precipitation. Tables 86 through 90: Values used in these five tables for "Model-Predicted Pre-Mining Baseflow" can be compared to calculated 7Q10 low flows at the modeled locations to evaluate if the model-predicted values are reasonable. Some of the 7Q10 flow values have been presented in the SDEIS: Libby Creek at *AMEC Geomatrix*	**Comment Response 338-7** The descriptions and conclusions provided in the SDEIS are based on the observations of several experienced hydrogeologists who spent considerable time investigating the possible source of water observed discharging from the Rock Lake Fault (photographs are available in the project record) and spring activity above Saint Paul Lake. The September 2007 site visit was made during an exceptionally long dry period and there were no indications of any residual shallow ground water flow or run off from precipitation or residual snowpack in the upper reaches of Rock Creek. Additional field work and data collection described for the Pre-Evaluation and Evaluation Phases in Appendix C would provide the data needed to determine spring characteristics. **Comment Response 338-8** This new information was included in Section 3.10.3.1.1 of the FEIS. **Comment Response 338-9** See comment response 338-2. **Comment Response 338-10** See comment response 338-7. **Comment Response 338-11** As explained in Section 3.8.3.1, the agencies used a USGS equation to calculate $7Q_{10}$ flow; the equation was region-specific and the agencies used the equation for northwest Montana and northeast Idaho, which encompassed the analysis area. The equation for northwest Montana and northeast Idaho used drainage area and mean annual precipitation as the two equation variables. The USGS reported the equation may not yield reliable results for sites with characteristics near or outside the range of the equation variables. The range for drainage area used in the northwest Montana and northeast Idaho equation was 3 to 2,443 square miles. The agencies estimated a $7Q_{10}$ flow for selected stream locations in the analysis area. The estimated $7Q_{10}$ flows presented in the SDEIS were revised in the FEIS to use the most recent PRISM mean annual precipitation estimates reflecting a 30-year period from 1971 to 2000. The 3D model used the same PRISM estimates. The $7Q_{10}$ flow values presented in the SDEIS used PRISM estimates for the 1961-1990 period. According to the National Weather Service, the PRISM gridded climate maps are considered the most detailed, highest-quality spatial climate datasets currently available.

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	Montanore – AMEC Comments on Groundwater Portions of SDEIS *December 1, 2011* *Page 3 of 6* LB-100 (CMW boundary) and LB-300; Ramsey Creek at CMW boundary; Poorman Creek at CMW boundary; East Fork Rock Creek at EFRC-200 (CMW boundary); and East Fork Bull River at EFBR-500 (CMW boundary). The table below presents 7Q10 low flow calculations, along with the model-predicted baseflows for 11 stream stations at or near the CMW boundary. Results of this analysis show that calculated 7Q10 low flow values are always higher than corresponding model-predicted baseflow values, except for the 7Q10 value reported in the SDEIS for EFBR-500. This 7Q10 value of 2.96 cfs reported in the SDEIS for EFBR-500 is considerably lower than the 7Q10 value calculated by MMC (4.90 cfs). This is also true for two other stations (LB-100 and EFRC-200) where 7Q10 values reported in the SDEIS are compared to 7Q10 values calculated by MMC. This exercise shows that estimated low or baseflow values in CMW streams can vary depending on the method of calculation. Predicted impacts to streams in or near the CMW would be lessened if 7Q10 low flow values are used in Tables 86 through 90 in the SDEIS rather than the model-predicted baseflows. **Monitoring Site** / **Drainage Area (square miles)** / **Average Precipitation (inches)** / **Modeled Baseflow (cfs)** / **Calculated 7Q10 Low Flow (cfs)** Libby Creek at LB-50 (MMC) — 1.8 — 88 — 0.28 — 0.96 Libby Creek at LB-100 at CMW bndry. (SDEIS) — 3.4 — 68 — 0.54 — 1.10 Libby Creek at LB-100 at CMW bndry. (MMC) — 3.3 — 84 — 0.54 — 1.72 Libby Creek at LB-200 (MMC) — 5.7 — 82 — --- — 2.84 Libby Creek at LB-300 (SDEIS) — 7.4 — 63 — 1.22 — 2.22 Ramsey Creek at CMW bndry. (SDEIS) — 2.2 — 65 — 0.38 — 0.65 Poorman Creek at CMW bndry. (SDEIS) — 0.8 — 65 — 0.12 — 0.22 East Fork Rock Creek at EFRC-50 (MMC) — 0.4 — 85 — 0.04 — 0.18 East Fork Rock Creek at EFRC-100 (MMC) — 0.8 — 85 — --- — 0.38 East Fork Rock Creek at EFRC-200 at CMW bndry. (SDEIS) — 1.4 — 67 — 0.29 — 0.43 East Fork Rock Creek at EFRC-200 at CMW bndry. (MMC) — 1.45 — 85 — 0.29 — 0.71 East Fork Bull River at EFBR-300 (MMC) — 1.9 — 88 — 0.29 — 1.02 East Fork Bull River at EFBR-500 at CMW bndry. (SDEIS) — --- — --- — 4.36 — 2.96 East Fork Bull River at EFBR-500 at CMW bndry. (MMC) — 10 — 81 — 4.36 — 4.90 Note: 7Q10 low flows are calculated from Hortness (2006). Average precipitation values from AMEC calculated using PRISM 1971-2000 GIS data, weighted by precipitation area (using highest value in range) within drainage area. Tan values for 7Q10 are calculated by Montanore Minerals Corp. (MMC); green values for 7Q10 are from the SDEIS. *AMEC Geomatrix*	Section 3.8.3.2 discussed why the agencies used the estimated $7Q_{10}$ flows to analyze the effects of mine discharge to surface water, with the exception of LB-300 and EFRC-200. The estimated model baseflow may better represent low flow conditions at this location than the estimated $7Q_{10}$ flow.

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	Montanore – AMEC Comments on Groundwater Portions of SDEIS *December 1, 2011* *Page 4 of 6*	**Comment Response 338-12** A reference to spring flow measurements in the Libby Creek watershed (Table 85 in the SDEIS and Table 99 in the FEIS) was added to Section 3.10.4.3.1. Three of the 22 springs listed had more than one measurement; no range is available for 19 of the springs.
338-12	Page 244, last ¶: Suggest giving the range in flows measured for the springs listed in this section.	
338-13	Page 250, 1st ¶, last sentence: The comment about baseflow in East Fork Rock Creek at Rock Creek Meadows being affected by a large percentage reduction in flow from above the meadows is not supported in the SDEIS nor in the 3D model results. Maximum reduction in flow for East Fork Rock Creek below Rock Lake (EFRC-200) is predicted to be 0.17 cfs or 59% of modeled baseflow at that location (Table 88). Rock Creek Meadows is a series of ponds and wetlands that get a considerable amount of water from surface runoff (especially snowmelt), including drainage areas that would not be affected by mine dewatering. Therefore, it is not expected that any possible decrease in baseflow in upper East Fork Rock Creek would have as significant of an effect as described in the SDEIS statement.	**Comment Response 338-13** The discussion about effects on East Fork Rock Creek and Rock Creek Meadows was revised in the FEIS to distinguish anticipated effects above the Meadows from those anticipated at the Meadows.
338-14	Page 253, 3rd ¶ under "Mitigation" section, last sentence: With respect to the grouting scenario, the 3D model incorporated grouting (i.e., low permeability layer) only along the back side of uppermost Blocks 14, 16, and 18. Actual grouting in the mine blocks, where needed, would be completed along more blocks, and along the upper side of the blocks. Therefore, the grouting scenario used in the 3D model is very minimal with respect to what could be constructed during actual mining conditions.	**Comment Response 338-14** Section 3.10.2.3.1 of the FEIS was revised to describe the mitigations MMC modeled.
	APPENDIX C Comments:	
338-15	Page C-39, "East Fork Rock Creek" section: The following additional GDE monitoring activities are currently being performed: • Measuring flow and field parameters at the Rock Lake inlet (EFRC-100) and outlet (EFRC-200) in early summer and early fall. • Collecting and analyzing water samples for common ions from EFRC-100 and EFRC-200 once per year.	**Comment Response 338-15** This information was added to Section C.10.3.2.1 of the FEIS.
338-16	Page C-39, "Upper Libby Creek" section: Another GDE monitoring activity currently being conducted on Upper Libby Creek is: • Measuring stream stage at LB-200 using a pressure transducer datalogger (one data point every 2 hours).	**Comment Response 338-16** This information was added to Section C.10.3.2.1 of the FEIS.
338-17	Page C-39, Section C.10.3.2.2 (Additional GDE Inventory), 1st ¶: Some of the GDE inventory area shown on Figure C-3 is very steep and cannot be accessed by foot. The GDE inventory should focus on the major drainage bottoms and selected lakes, which is already being evaluated.	**Comment Response 338-17** The GDE inventory area shown on Figure C-3 is based on the predicted area of drawdown greater than 10 feet (Figure 72 in the SDEIS). The Level 2 GDE inventory would be completed between mid-August and mid-September when there should be little snow in the area. Section C.10.3.2.2 was revised to state that not all of the area is accessible by foot due to the steepness of the terrain. MMC can describe areas it believes are inaccessible in the final monitoring plan to be submitted to the agencies for approval.
338-18	Page C-40, "Streamflow" section, 1st sentence: The requirement to measure flow of any stream in the GDE inventory area currently not being monitored (Figure 3-C) is not necessary because all streams shown on Figure 3-C are being monitored or are included in the proposed monitoring program. These streams include Libby Creek, Ramsey Creek, East Fork Rock Creek, and East Fork Bull River, as well as Rock Lake, Lower Libby Lake, and St. Paul Lake.	**Comment Response 338-18** The purpose of the streamflow measurements in the GDE inventory described in Section C.10.3.2.2 of the FEIS is different than the streamflow measurements discussed in other parts of Section C.10. The streamflow measurement in the GDE inventory includes tributaries to the major streams identified during the inventory.
338-19	Page C-45, Section C.10.3.3.2 (Benchmark Stream, Lake, and Spring Sites): The requested benchmark monitoring sites for Wanless Lake and Swamp Creek cover very large areas at significant distances from the project site, some of which are difficult to access, especially considering the requested monitoring frequency of monthly. These sites would provide meaningless benchmark data for the Montanore *AMEC Geomatrix*	**Comment Response 338-19** The purpose of the benchmark stream, lake, and spring sites is to monitor areas that would not be affected by the mine; thus, they are somewhat distant from the mine. **Continued on next page**

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	Montanore – AMEC Comments on Groundwater Portions of SDEIS *December 1, 2011* *Page 5 of 6* Project given the high temporal and spatial variability of precipitation, snowpack, and runoff throughout the CMW. For example, Rock Lake and St. Paul Lake have significant differences with respect to water levels. As another example, Rock Creek below its East and West Forks typically has dry reaches during baseflow periods due to subsurface flow conditions.	The sites chosen, however, are geologically and geographically similar to sites monitored at the project area. Swamp Creek and Wanless Lake are accessible by trail, and Bear Creek is easily accessible. These sites would provide important information because they would allow the effects of the mine on surface flows and lake levels to be separated from natural variability and the effects of climate change. The benchmark sites are close enough to the project area that natural variability and the effects of climate change should be the same. The benchmark sites should be accessible during July to early October, the monitoring dates shown in Tables C-8 and C-13. St. Paul Lake has a very different geologic setting from Wanless Lake; it appears that Rock Lake and Wanless Lake have a very similar geologic setting. At the CMW locations where Swamp Creek would be monitored, it is unlikely that there would be dry reaches due to subsurface flows; in any event, any such reaches would be avoided.
338-20	Page C-46, Future Monitoring, 2nd and 4th bullets: Frequency of water quality sampling at EFRC-100 and EFRC-200 is not the same for these two bullets.	**Comment Response 338-20** The FEIS was revised to clarify the frequency by deleting the first bullet.
338-21	Page C-46, Future Monitoring, 3rd bullet: Flow measurements at station EFRC-50 are not necessary because EFRC-100 characterizes flow coming into Rock Lake. Flow measurements at the two Swamp Creek sites are not necessary (see comment above for page C-45).	**Comment Response 338-21** The talus and colluvium at EFRC-100 often has no measureable flow, so it would be important to measure the flow at EFRC-50. The two Swamp Creek sites would be benchmark sites for Rock Creek in the CMW and are important; see comment response 338-19.
338-22	Page C-46, Future Monitoring, 4th and 5th bullets: See comment above about monitoring Wanless Lake.	**Comment Response 338-22** Wanless Lake is a benchmark lake for Rock Lake; see comment response 338-19.
338-23	Page C-46, Future Monitoring, 7th bullet: Flow measurements should only be required at LB-50, LB-100, LB-200, LB-300, and LB-500 on a monthly basis from July 15 to October 15. Monitoring on a more frequent basis is unnecessary given that a pressure transducer is located at LB-200, which is a key location for detecting potential impacts to upper Libby Creek. Other stations requested for flow monitoring along upper Libby Creek are excessive given the wide variability of stream flow on a temporal and spatial basis. Define bimonthly and biweekly, if maintained in the bullet, as they can have two meanings (see comment below for page C-63).	**Comment Response 338-23** The purpose of the monitoring described in the 7th bullet under Future Monitoring in Section C.10.3.3.3 is to measure baseflows and understand the relative contribution of groundwater to Libby Creek at various locations in upper Libby Creek. Table C-9 was modified to state that streamflow at these sites would be measured every two weeks from July 1 to October 15.
338-24	Page C-46, Future Monitoring, 8th bullet: The existing pressure transducer at Libby Creek station LB-200 is recording data every 2 hours, and does not require a barometer because the transducer is vented. Page C-47, 1st full ¶: Requested sampling frequency for Rock Lake is excessive unless operational monitoring inside the mine workings or from the Rock Lake pressure transducer indicates potential impacts to the lake; one sample per year would be sufficient to adequately monitor the lake quality. Similar sampling requested for Wanless Lake, and installation of a pressure transducer in Wanless Lake, are unnecessary (see comment above for page C-45). Page C-49, Table C-7: Tensiometers and pressure bomb technique may not be appropriate for alpine environments with significant snowpack and runoff each year. Page C-49, Streamflow section: Streamflow monitoring for stations established in the GDE inventory area should be conducted only monthly (see comment below for page C-63 about defining "bimonthly"). Pages C-51 & C-52, Table C-8: Requested continuous electronic monitoring devices to be installed in upper stream channels in the CMW (e.g., EFRC-50, EFRC-100, EFBR-50, and inlet to Wanless Lake) would be difficult to install such that any reliable data about stage or flows could be obtained. These high elevation drainages typically are covered with snow 6 to 8 months of the year, with flows ranging from very high to little or none. The channels usually are small and not well confined and, as such, are not amenable to installing a transducer that can collect reliable stage data that can be related to flow rate. Page C-54, next to last ¶, 2nd sentence: Hourly recording of pressure transducer data is excessive; groundwater pressures do not change significantly on an hourly basis. This results in large files of unnecessary data points. *AMEC Geomatrix*	**Comment Response 338-24** The requirement to use a nearby barometric pressure datalogger would be included only for a datalogger that was not vented. This bullet in Section C.10.3.3.3 was changed slightly to reflect this. The agencies are requesting that data be collected at least once per hour.

Comment	Document #338-Klepfer Mining Services, LLC	Response
	Montanore – AMEC Comments on Groundwater Portions of SDEIS *December 1, 2011* *Page 5 of 6* Project given the high temporal and spatial variability of precipitation, snowpack, and runoff throughout the CMW. For example, Rock Lake and St. Paul Lake have significant differences with respect to water levels. As another example, Rock Creek below its East and West Forks typically has dry reaches during baseflow periods due to subsurface flow conditions. Page C-46, Future Monitoring, 2nd and 4th bullets: Frequency of water quality sampling at EFRC-100 and EFRC-200 is not the same for these two bullets. Page C-46, Future Monitoring, 3rd bullet: Flow measurements at station EFRC-50 are not necessary because EFRC-100 characterizes flow coming into Rock Lake. Flow measurements at the two Swamp Creek sites are not necessary (see comment above for page C-45). Page C-46, Future Monitoring, 4th and 5th bullets: See comment above about monitoring Wanless Lake. Page C-46, Future Monitoring, 7th bullet: Flow measurements should only be required at LB-50, LB-100, LB-200, LB-300, and LB-500 on a monthly basis from July 15 to October 15. Monitoring on a more frequent basis is unnecessary given that a pressure transducer is located at LB-200, which is a key location for detecting potential impacts to upper Libby Creek. Other stations requested for flow monitoring along upper Libby Creek are excessive given the wide variability of stream flow on a temporal and spatial basis. Define bimonthly and biweekly, if maintained in the bullet, as they can have two meanings (see comment below for page C-63). Page C-46, Future Monitoring, 8th bullet: The existing pressure transducer at Libby Creek station LB-200 is recording data every 2 hours, and does not require a barometer because the transducer is vented. Page C-47, 1st full ¶: Requested sampling frequency for Rock Lake is excessive unless operational monitoring inside the mine workings or from the Rock Lake pressure transducer indicates potential impacts to the lake; one sample per year would be sufficient to adequately monitor the lake quality. Similar sampling requested for Wanless Lake, and installation of a pressure transducer in Wanless Lake, are unnecessary (see comment above for page C-45). Page C-49, Table C-7: Tensiometers and pressure bomb technique may not be appropriate for alpine environments with significant snowpack and runoff each year. Page C-49, Streamflow section: Streamflow monitoring for stations established in the GDE inventory area should be conducted only monthly (see comment below for page C-63 about defining "bimonthly"). Pages C-51 & C-52, Table C-8: Requested continuous electronic monitoring devices to be installed in upper stream channels in the CMW (e.g., EFRC-50, EFRC-100, EFBR-50, and inlet to Wanless Lake) would be difficult to install such that any reliable data about stage or flows could be obtained. These high elevation drainages typically are covered with snow 6 to 8 months of the year, with flows ranging from very high to little or none. The channels usually are small and not well confined and, as such, are not amenable to installing a transducer that can collect reliable stage data that can be related to flow rate. Page C-54, next to last ¶, 2nd sentence: Hourly recording of pressure transducer data is excessive; groundwater pressures do not change significantly on an hourly basis. This results in large files of unnecessary data points. *AMEC Geomatrix*	**Comment Response 338-25** The purpose of the Rock Lake water quality monitoring described in Section C.10.3.3.3 is to establish water quality trends in Rock Lake during the Pre-Evaluation Phase and during all subsequent phases. MMC would sample Rock Lake water quality monthly during July through October by vertical profile sampling. USDA Forest Service field sampling and data analysis protocols would be followed. **Comment Response 338-26** Table C-8 lists monitoring options that would help establish monitoring methods to be proposed by MMC in the final mitigation plan. **Comment Response 338-27** The agencies required streamflow within the GDE monitoring area be measured bimonthly (twice/month) between July 1 and October 15 to understand the connection to the regional ground water system, the relative contribution of ground water to each stream during this period, and to collect baseflow data. **Comment Response 338-28** The agencies agree that it would be challenging to install continuous electronic recording devices, but believe that there are locations where they could be installed to collect valid stage data. The use of stilling wells in which to install the dataloggers may be a good option. The U.S. Forest Service has considerable expertise and experience in this area and would be a good resource for information. **Comment Response 338-29** Data collected at a frequency of 1 hour would provide better resolution of any head response to various activities, such as changes in adit dewatering, new sources of inflow, blasting, etc. Daily data would provide a satisfactory long term record, but any potential short term head responses would be missed. Once the datalogger was installed, there would be no disadvantages of collecting data at a higher frequency. Handling slightly larger files would not be an issue. Collecting data hourly for a quarter (90 days) would result in only slightly more than 2,000 data points.
338-25		
338-26		
338-27		
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338-29		

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338-30 338-31 338-32 338-33 338-34 338-35 338-36	*Montanore – AMEC Comments on Groundwater Portions of SDEIS* *December 1, 2011* *Page 6 of 6* Page C-56, Groundwater Isotope Analysis section: Isotope (oxygen-18 and deuterium) and tritium analysis of groundwater for selected samples from the Libby Adit, springs, and piezometers is being conducted as part of baseline studies. Additional tritium analysis beyond the baseline period is not necessary. Periodic stable isotope analysis of groundwater samples from the advancing adit and mine workings may be warranted to characterize water sources. Page C-56, Section C.10.4.4.2, 1st ¶, 3rd sentence: Explain why four monitoring wells are required for the Libby Loadout facility. Page C-56, Section C.10.4.4.2, 2nd ¶, next to last sentence: Sampling monitoring wells at the impoundment site monthly for 1 year before the Construction Phase is excessive. Baseline groundwater quality is not expected to change from month to month; quarterly sampling would be adequate. Page C-63, Table C-13: Define "biweekly" and "bimonthly" as they can have two separate meanings – once in two weeks and once in two months; or twice a week and twice a month. Page C-64, last ¶, 1st sentence: The requirement for flow measurement weirs to be installed downstream of the Seepage Collection Dam in any areas of observed flows is vague and excessive. Does this apply to channels with ephemeral or intermittent flows, as well as perennial flows? Page C-65, Section C.10.5.4.2, 2nd ¶, 1st sentence: The requirement to install two nested piezometers in each of two wetlands (LCC-35A and LCC-39A) should be justified and shown on a figure, such as Figure 72. Page C-69, Table C-15: Justify action levels of 20 mg/L for sulfate and 10 mg/L for potassium. *AMEC Geomatrix*	**Comment Response 338-30** See comment response 339-163. **Comment Response 338-31** MMC proposed four monitoring wells at the Libby Loadout facility on page 93 in its updated Plan of Operations (Figure 44; MMC 2008). **Comment Response 338-32** MMC proposed monthly sampling at the Little Cherry Creek impoundment site between March and November If the agencies determine additional monitoring wells were required for land application in the tailings area. The agencies agree that monthly sampling in areas with little or no characterization data is appropriate. Section C.10.4.4.2 was revised to describe the rationale for monthly sampling. The objective is to obtain a statistically useful number of samples from each well before initiation of construction. For example, MMC has the option of sampling quarterly for 3 years if it so chooses. **Comment Response 338-33** The words bimonthly and biweekly are no longer used in Section C.10. **Comment Response 338-34** MMC proposed installation of flow measurement weirs downstream of the Seepage Collection Dam on page 63 in its updated Plan of Operations. The requirement is to install weirs in any areas of observed flow. Any seepage would be collected and pumped back to the tailings impoundment before it reached surface water. **Comment Response 338-35** The purpose of the nested piezometers in two wetlands is to monitor effects of the pumpback well system on the hydrologic support of the wetlands north of the Poorman impoundment site. The locations were added to Figure C-7. **Comment Response 338-36** Table K-4 in the EIS provides ambient ground water concentrations and adit water concentrations. Ambient ground water sulfate concentrations are less than 10 mg/L; an increase to 20 mg/L would not be expected under natural conditions and may be a result of mine activities. Ambient ground water potassium concentrations are less than 1 mg/L; an increase to 10 mg/L would not be expected under natural conditions and may be a result of mine activities. Compliance wells for which the action levels would be applicable would be downgradient of the pumpback well system. Action levels are reasonable concentrations to provide early detection of adverse groundwater conditions.

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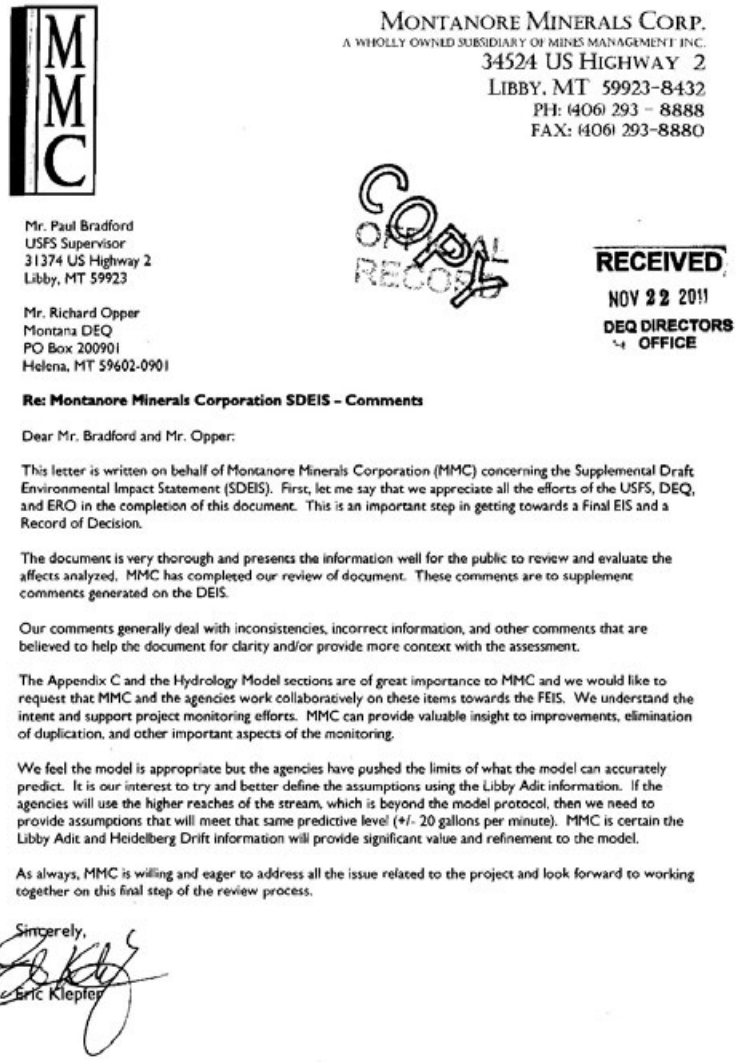
339–1 339–2 339–3		**Comment Response 339-1** Thank you for your comment. **Comment Response 339-2** As discussed in responses to comments in this letter, and other letters, the agencies modified the proposed monitoring plans in response to comments on the SDEIS. **Comment Response 339-3** MMC collected additional hydrologic data from the Libby Adit, which were incorporated into the 3D model and Section 3.10 of the SDEIS and FEIS. After the SDEIS was issued, MMC provided the agencies with four different 3D model simulations for the mine area. Three of the model runs simulated grounding and one simulated additional surficial deposits in the upper part of the Rock Creek basin. MMC also provided supporting documentation to assist the agencies in their review of the suggested model modifications. After reviewing the submitted information, the agencies concluded that the model results presented in the SDEIS provided a potential range of dewatering and pumping rates and streamflow impacts and were not changed for the FEIS. The results are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4, Evaluation Phase in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease.

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339–4 339–5 339–6 339-7	General SDEIS Comment • The document makes reference to toxic metals and MMC believes the reference should simply be metals. The SDEIS is not limited to merely the toxic concentrations of specific metals. **Issue 3: Fish and Other Aquatic Life and Their Habitats** Page S-36 The statement regarding distribution of redband trout is largely inconsistent with the genetics data and interpretations that are presented in the MFISH database. It appears that this statement is based on MFISH fish distribution summaries that are not always consistent with the MFISH genetics data. **Issue 5: Threatened and Endangered Wildlife Species** Page S-41, 4th and 5th Paragraphs It appears that the HE values discussed in these two paragraphs are not consistent with the July 2011 BA. In the July 2011 BA the following information is presented which is slightly different: BMU 5: Construction = 67 (activity + mitigation) Operations = 68 Post Closure = 72 BMU 6: Construction = 66 (activity + mitigation) Operations = 71 Post Closure = 71 *"All combined agencies' alternatives would reduce HE in BMU 5 during operations to 70 percent."* Statement is confusing; in the alternatives HE values appear to increase between construction and operations and may be due to mitigation that takes place. It appears that the HE is further reduced from the construction period, when the data suggests the HE is improved beyond the forest standard by the time operations occur. Page S-41, 5th Paragraph Same comment-doesn't match the 2011 BA data. **Issue 7: Wetlands and Non-Wetland Waters of the U.S.** Page S-44, 2nd Paragraph MMC has been monitoring springs, seeps, and wetlands based on the GDE monitoring program for several years. The effectiveness of the monitoring protocol should be reviewed and either modified or eliminated as MMC believes it is not providing information as expected. MMC is supportive of a *MMC Comments on SDEIS* *11/21/2011* *Page 1 of 40*	**Comment Response 339-4** The reference to "toxic metals" was revised to "metals." **Comment Response 339-5** The MFISH genetics data indicates genetically pure redband trout have been collected from portions of Libby, Bear, Ramsey, and Little Cherry creeks, and recently from the Fisher River. **Comment Response 339-6** Impacts to Habitat Effectiveness displayed in the 2011 BA were based on baseline roads data from 2010, as described in the introductory paragraph of that document. In the SDEIS, changes in habitat effectiveness due to the alternatives were based on 2006 roads data, as shown in the last footnote of Table 203 of the SDEIS. The Access Amendment replaced the HE goal and linear ORD standard with specific standards for core area, ORMD, and TRMD for individual BMUs. HE and linear ORD were not evaluated in the FEIS. The analysis of impacts to OMRD, TMRD, and core habitat was revised in the FEIS based on roads data from 2009 (modified and available in December 2010). A comparison done in September 2012 between a 2009 bear year non-activity baseline and a 2011 non-activity baseline demonstrated that the baselines in BMUs 5 and 6 would remain the same, while the baseline in BMU 2 would slightly improve. As explained in Section 3.25.5.2.1 of the SDEIS and the FEIS, the agencies' alternatives would include year-long access changes through the installation of barriers or gates in several roads to mitigate for impacts to grizzly bear. These road access changes were taken into account in grizzly bear effects calculations. Additional road access changes also would occur on land acquired as part of the mitigation plans proposed by MMC and the agencies. Core and open and total road density calculations do not take into account the effect of land acquisition proposed by MMC and the agencies described in the respective mitigation plans. Impacts displayed include road access changes associated with mitigation. In the FEIS, the caption of effects table and the first footnote were modified to clarify that effects displayed include changes in road status associated with mitigation, but do not reflect potential improved conditions that could result from required land acquisitions associated with mitigation for each alternative. **Comment Response 339-7** The GDE inventory and monitoring requirements were revised in the FEIS to reflect MMC's past and current inventory and monitoring efforts. The objectives of the GDE inventory and monitoring were described in the SDEIS and FEIS.

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339–8 339–9 339–10	comprehensive data collection program but it should be driven by significant issues with meaningful monitoring programs with reasonable expectations on the results. **Minimized Adverse Environmental Impact** Page S-54, 3rd Paragraph MMC provided comments on the January 2011 BA and included a proposed construction schedule for the transmission line. In that memo, we discussed scheduling helicopter use to avoid the spring and denning seasons. That proposal should be discussed as a potential mitigation to off-set displacement effects in the last sentence. **2.5 Alternative 3-Agency Mitigated Poorman Impoundment Alternative** Page 44, 3rd Paragraph *"MMC would install a small lined test area near the top of the waste rock storage areas…A sump would be constructed…collect any runoff and seepage…and pump it back through the water treatment plant and treated…runoff and seepage from the waste pile would be analyzed for metals and nitrate…"* Under Permit 150 we already have proposed and are authorized and have constructed the lined waste dump with the sump to collect runoff. Some waste material has been placed and we have been collecting runoff from this area and analyzing it since construction of the lined facility. The information collected provides some of the information outlined in this paragraph. This information is valuable and MMC suggests that the agencies use this data as part of the FEIS analysis and will help to better refine the geochemical program that has been suggested in the SDEIS. Appendix K includes data collected as part of the exploration permit approval. We haven't seen any indication that the water quality data, which is extremely good and represents initial conditions for the adit, used in any way to help understand and minimize the uncertainties for the evaluation and construction phase in this document. **2.5.3.5 Tailings Management** **2.5.3.5.2 Final Design Process** Page 47, 2nd Paragraph Second Bullet MMC is unclear about the requirement to use more recent attenuation relationships for the dam design. Please provide more information. **2.5.3.7.3 Scenery and Recreation** Page 48, 4th Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 2 of 40*	**Comment Response 339-8** Appendix D of the 2013 BA described the transmission line construction schedule in the agencies' transmission line alternatives. The agencies' grizzly bear mitigation plan described in Section 2.5.7.4 of the FEIS, and the Environmental Specifications in Appendix D of the FEIS, were updated to reflect the proposed construction schedule for the agencies' transmission line alternatives. All transmission line construction activities would occur between June 16 and October 14 for both construction seasons and during decommissioning of the transmission line. MMC's proposed construction period did not overlap with grizzly bear spring (April 1 – June 15) and denning (December 1 – March 31) periods. The analysis of impacts to grizzly bears was updated as appropriate in the FEIS. **Comment Response 339-9** Section 2.5.2.2 of the FEIS was revised to reflect the current status of the waste rock sump at the Libby Adit. The agencies agree that the waste rock sump water quality data were useful, and they were considered along with adit and other water quality data in Sections 3.9 and 3.13 of the SDEIS and FEIS. Sections 3.9 and 3.13 and Table C-4 of the FEIS were revised to discuss the monitoring data from the adit and waste rock sump independently. The waste rock sump water quality data indicated some constituents of potential concern, such as maximum total and dissolved antimony, maximum total and dissolved arsenic concentrations, and a representative total copper concentration. These data indicate the need for additional data collection to address the specific questions that are defined in detail in Appendix C. **Comment Response 339-10** According to Klohn Crippen (2005), peak ground accelerations were calculated using attenuation relations by Campbell (1981), Joyner and Boore (1992), and Idriss (1985). The FEIS indicated the requirement is to use more recent attenuation relationships, such as Spudich *et al*. 1999, Boore and Atkinson 2007, or Petersen *et al*. 2008.

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339–11	The requirement to create clearing edges with shapes that minimize visual impacts and the requirement for transitional forested clearings seem to suggest that the total disturbance area required will be significantly larger. MMC has proposed activities that require complete clearing of the space and we have minimized this area requirement to minimize visual impacts. Transitional forested clearing areas in general terms are not usable for the project and will create a larger footprint. We understand the intent but believe this requirement will cause more disturbance than it will visually improve. There may be some aspects that can be implemented on a localized basis but we caution the agencies that implementation of this will be a challenge.	**Comment Response 339-11** Section 2.5.3.7.3 discussed that MMC would complete vegetation clearing operations under the supervision of an agency representative with experience in landscape architecture and revegetation. The agencies anticipate this collaboration would ensure the total disturbance did not increase significantly or the implementation would not be a challenge.
	2.5.4.3.2 Water Treatment Page 52, 5th Paragraph	
339–12	MMC's monitoring frequency on the influent and effluent will be dictated by the MPDES permit and suggest the requirement for monthly monitoring be removed from the text to eliminate confusion in the future.	**Comment Response 339-12** Section 2.5.4.3.3 was changed to clarify that MMC would conducted the monitoring required by the MPDES permit.
	2.5.9.1.1 Non-wetland Water of the U.S. and Fisheries Page 56, 4th Paragraph	
339–13	MMC is currently completing summary reports on field work completed this season on these particular issues. There will be additional mitigation identified that should be included in the FEIS. Also, some of the mitigation proposed cannot be implemented prior to mine activities as they are tied to reclamation or other activities.	**Comment Response 339-13** Additional information on the drainages in the Poorman Impoundment Site and mitigation plans for wetlands, other waters of the U.S. and fisheries was incorporated into Sections 2.5.7 and 3.23 of the FEIS.
	2.5.9.2 Wildlife **2.5.9.2.1-A. Measures to Reduce Mortality Risks of Grizzly Bears** Page 59 1. a) Supply staging	
339-14	The majority of supplies delivered to the project will be on contracted deliveries that typically will be full loads. Staging of these supplies does not make any sense nor is it a reasonable request. Also there will be times when smaller loads will be required because of operational needs and cannot be staged because the items are needed immediately. There may be situations where partial loads, that are not urgent for the operation, could be staged and MMC will consider implementing that effort. This requirement needs to be modified to adjust for operational needs.	**Comment Response 339-14** The agencies' wildlife mitigation plan, described in detail in Appendix B of the Biological Assessment, included establishing a staging area in Libby and consolidating shipments to the mine to minimize mortality and displacement of grizzly bears, as well as other species. Item A.1.b) of the wildlife mitigation plan specified that exceptions to staging and consolidation would include expedited shipments to repair equipment and other emergencies as specified in the transportation plan.
	1. g) Private vehicle Page 60, 3rd Bullet	
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339–15	MMC understands this provision is intended for mine employees as we need contractors and vendors to be able to use their vehicles to access the mine. Page 71, 1st Paragraph	**Comment Response 339-15** The agencies understand the need for MMC to allow contractors and vendors to access the mine in their own vehicles. Item A.1.n of the agencies' wildlife mitigation plan, described in detail in Appendix B of the BA, specified that MMC would prohibit the use of personal vehicles, "except as approved in the transportation plan." The agencies believe that item A.1.n, as written, would allow the necessary flexibility for MMC to include an exception for vehicular use by contractors and vendors in the transportation plan.
339–16	MMC has completed bear scat study work on the project in 2009 and 2011. Bear scat and DNA work has progressed and is an accepted monitoring tool for grizzly bear. MMC plans to do bear scat collection and DNA sampling in the future. MMC would recommend that the use of bear scat be incorporated into the mitigation discussion as a viable method so that in the future it does not have to go in front of the oversight committee. **2.5.9.2.4 Key Habitats** Page 76, 2nd Paragraph	**Comment Response 339-16** In 2010, MMC submitted two reports concerning grizzly bears in the Montanore Project analysis area: 1) a report describing the methods used and results of bear scat studies conducted by the University of Washington in 2009 and 2010 (University of Washington 2010), and 2) a report prepared by Kline Environmental Research (2010) that analyzed the results of the bear scat studies and provided a review of existing data and literature. Kline made population estimates for the Cabinet Mountains of 37 bears based on hair snag data from studies conducted in the Northern Continental Divide Ecosystem (Kendall *et al.* 2009) and the Cabinet Mountains (Kasworm *et al.* 2007). The University of Washington (2010) reported that based on DNA analysis of the 998 scat samples, 23 were identified as grizzly bear, with 8 individuals being genotyped from the Cabinets.
339–17	MMC requests that the agencies look at old growth removal restrictions in this section and the restrictions for construction in the grizzly bear spring denning discussion for the transmission line. MMC is concerned the overlap may cause extreme segmenting of the construction schedule. By starting at one point and moving through the construction process this may require MMC to jump around the line in a very inefficient manner and increase the activity beyond that anticipated. **2.10 Alternative D-R-Miller Creek Transmission Line Alternative** Page 89	The USFWS reviewed Kline's analysis and found an error in his calculation of the Cabinet Mountain grizzly bear population; the corrected calculation resulted in an estimated 6.5 bears. The USFWS requested the 23 samples identified by the University of Washington as grizzly bear scats, and received 16. DNA testing of 16 samples confirmed 10 as grizzly bear scats and 6 as black bear scats. Of the grizzly bear scats, only one could be genotyped to an individual grizzly bear (Kasworm 2011).
339-18	General Comment MMC supports comments made during the public hearing by Joe Ginnaty and Roger Guches requesting the transmission line to be modified slightly around their private property. **3.6.4.2.3 Water Quality-Nutrients**	Item F.2 of the Grizzly Bear Mitigation Plan in the SDEIS and FEIS requires the establishment of an Oversight Committee comprised of members of the Forest Service, FWP, and other appropriate parties. The USFWS would be an ex-officio, non-voting member of the Oversight Committee with advisory responsibilities. Item F.3 requires that the Oversight Committee develop a Comprehensive Grizzly Bear Management Plan. The errors found in the University of Washington's DNA analysis and the Kline Environmental Research (2010) report described above illustrate the importance of Oversight Committee review of the MMC's bear scat methods prior to incorporation in the Comprehensive Grizzly Bear Management Plan.
339-19	Page 140, Last Paragraph The chlorophyll-a threshold for nuisance algae is given as 150 mc/m^2. Chlorophyll-a samples that MMC collected following DEQ methods at L9 macroinvertebrate sample locations during August 2011 ranged from 1.1 to 1.4 mg/m^2 (data to be included in the MPDES annual aquatic monitoring report). Given the large difference between measured chlorophyll-a concentrations and the nuisance threshold, it seems more likely that potential increases in nutrient concentrations will have a beneficial effect. The low-likelihood of nuisance algae and reduced dissolved oxygen should be emphasized. Page 142, 2nd Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 4 of 40*	

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339–17	MMC understands this provision is intended for mine employees as we need contractors and vendors to be able to use their vehicles to access the mine. Page 71, 1st Paragraph MMC has completed bear scat study work on the project in 2009 and 2011. Bear scat and DNA work has progressed and is an accepted monitoring tool for grizzly bear. MMC plans to do bear scat collection and DNA sampling in the future. MMC would recommend that the use of bear scat be incorporated into the mitigation discussion as a viable method so that in the future it does not have to go in front of the oversight committee. **2.5.9.2.4 Key Habitats** Page 76, 2nd Paragraph MMC requests that the agencies look at old growth removal restrictions in this section and the restrictions for construction in the grizzly bear spring denning discussion for the transmission line. MMC is concerned the overlap may cause extreme segmenting of the construction schedule. By starting at one point and moving through the construction process this may require MMC to jump around the line in a very inefficient manner and increase the activity beyond that anticipated.	**Comment Response 339-17** Figure 86 of the FEIS shows the mine and transmission line alternatives and old growth habitat. Two short segments of the agencies' preferred alternative (Alternative 3D-R) transmission line alignment overlap with old growth habitat at the following locations: 1) west of the point where Alternative D-R and E-R alignments diverged, 2) at the edge of an old growth habitat block north of Howard Creek, and 3) at the edge of an old growth patch northeast of the plant site. The agencies' grizzly bear mitigation plan specifies that all transmission line construction activities in the agencies' transmission line alternatives would occur between June 16 and October 14 of the 2-year construction period and during decommissioning to avoid grizzly bear seasonal use periods, such as denning and spring use. **Comment Response 339-18** Thank you for your comment. **Comment Response 339-19** The chlorophyll-a concentrations in samples collected during August 2011 do not represent concentrations when total nitrogen (TN) concentrations may be higher due to MMC's discharges. The FEIS disclosed that increased algal growth associated with TN concentrations greater than state standards of 0.275 mg/L and TP concentrations greater than 0.025 mg/L could stimulate productivity rates for aquatic insects and, consequently, stimulate populations of trout and other fish populations. The SDEIS and FEIS also disclosed it is unknown whether TN concentrations greater than 0.275 mg/L or BHES Limit of 1 mg/L for TIN would actually increase algal growth to the extent that it would be considered "nuisance" algae due to other factors that affect algal growth.
339-18	**2.10 Alternative D-R-Miller Creek Transmission Line Alternative** Page 89 General Comment MMC supports comments made during the public hearing by Joe Ginnaty and Roger Guches requesting the transmission line to be modified slightly around their private property.	
339-19	**3.6.4.2.3 Water Quality-Nutrients** Page 140, Last Paragraph The chlorophyll-a threshold for nuisance algae is given as 150 mc/m^2. Chlorophyll-a samples that MMC collected following DEQ methods at L9 macroinvertebrate sample locations during August 2011 ranged from 1.1 to 1.4 mg/m^2 (data to be included in the MPDES annual aquatic monitoring report). Given the large difference between measured chlorophyll-a concentrations and the nuisance threshold, it seems more likely that potential increases in nutrient concentrations will have a beneficial effect. The low-likelihood of nuisance algae and reduced dissolved oxygen should be emphasized. Page 142, 2nd Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 4 of 40*	

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339–20	Given the low chlorophyll-a values measured during 2011 by MMC (see above), the need to sample chlorophyll-a during July, August, and September should be based on a preliminary screening, see MMC comments on Appendix C. **3.6.4.2.5 Toxic Metals in Fish** Page 144, 3rd Paragraph *"Any increased metal concentration in surface water would increase metal concentration in fish."*	**Comment Response 339-20** See comment responses 339-4 and 339-19. **Comment Response 339-21** Section 3.6.4.2.4 indicated any increase in metal concentrations could increase the potential risk for future impacts to fish and other aquatic life in some reaches. Metal concentrations near the ALS could result in physiological stress, such as respiratory and ion-regulatory stress, and mortality. Predicting potential impacts to fish and other aquatic life in the Libby Creek watershed is significantly complicated by the fact that the very low hardness and total alkalinity occurring in these waters naturally cause potential ion-regulatory difficulties and stress in fish. These problems are exacerbated by the low nutrient and productivity levels in the streams that permit only minimal production of food organisms for fish, causing additional stress to fish and other aquatic life.
339–21	This is a very broad statement that is not supported by any scientific evidence. It is likely that the relationship between ambient and tissue metal concentrations would be metal-specific and may include threshold concentrations, below which, the fish depurates the metal without accumulating it in the tissues. **3.6.4.3.1 Sediment** Page 150, 4th Paragraph	
339–22	Please clarify the reference to bridge on Poorman Creek on (NFS road #278). It is expected this is referring to the temporary bridge structure MMC proposes for mine access and not the existing culvert crossing that the current road uses and was thought to remain after closure.	**Comment Response 339-22** The discussion about bridge and culvert replacements in Sections 3.6.4 and 3.13.4 was revised to reflect the updated wetlands and other waters of the U.S. mitigation plan.
339–23	**3.6.4.3.5 Fish Passage and Fish Loss** Page 151, Last Paragraph Reference is made to installing culverts along the Bear Creek Road such that they would not impact fish passage. MMC is not aware of any stream crossing along the existing Bear Creek Road prior to Bear Creek that contain fish. Culvert installation should be done appropriately to ensure long term operation and if there are specific segments that do have fish the agencies should identify those for the specific installation specifications.	**Comment Response 339-23** Sections 3.6.4.3.5 and 3.6.4.4.5 were revised to eliminate discussion of crossings of fish-bearing streams along the Bear Creek Road.
339-24	**3.8.2.2 Construction Phase** Page 190, 1st Paragraph The agencies discussion that construction would begin after MMC analyzed data from the evaluation phase is not accurate. MMC intends to submit a revised plan of operations that will include all the provisions from the final EIS and the ROD. While we understand that certain items may be necessary as part of baseline and monitoring, MMC needs the flexibility to initiate construction during the later stages of the evaluation phase. It is important to MMC that the construction phase is not specifically tied to the completion of the evaluation but tied to monitoring or other items that are necessary for baseline. *MMC Comments on SDEIS* *11/21/2011* *Page 5 of 40*	**Comment Response 339-24** Section 3.8.2.2 of the FEIS was revised to indicate that the Construction Phase would begin after MMC analyzed the data from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase.

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339–25 339–26 339–27	**3.8.3.1 Definitions and Comparison of Baseflow and $7Q_2$ and $7Q_{10}$ Flows** **Table 79. Simulated Baseflow and Calculated Average $7Q_2$ and $7Q_{10}$ Flow in Upper Analysis Area Streams** Page 193 MMC believes that Table 79 along with Wegner's reference on low flow stream variability of 20% suggests that the model based flow values presented in this table are extremely conservative. The calculated $7Q_{10}$ represents the seven consecutive lowest flows for a stream reach in a ten year period. The values shown in the model based flow columns when compared to the $7Q_{10}$ suggests that the values used in the model are extremely conservative and will result in the over prediction of impacts. Based on this, the modeled numbers likely represent a flow condition that would likely not exist under the criteria for a $7Q_{10}$ suggests that this condition is unlikely to occur more than the occasional day or so over a 10-20 year period. Below is a list of the variability monitored and its variability to the $7Q_{10}$ values: Site — Historical low flow data (cfs) 2007 2008 2009 2010 2011 LB 300 100% variation 2.66 4.1 1.8 2.2 7.8 LB 100 68% variation 1.12 4.4 This data certainly supports that a minimum of 20% variability exists on these stream systems. MMC will provide comments on the hydrology model later in the text; however, this suggests that the model predictions are actually more aligned as a worst case scenario. **3.9.4.3 Geochemistry of Revett-style Copper and Silver Deposits in Northwestern Montana** Page 208, 2nd Paragraph This text references the Geomatrix 2007 study and should include the MMC Waste Rock Characterization Report submitted to the agencies in September 2009 which included waste rock volume predictions used in this document. **3.9.4.3.3 Mine Area-Waste Rock in Surface Facilities and Backfill** Page 216, 1st Paragraph The sentence references total waste rock production reported by Geomatrix at 3.9 Million tons. The Waste Rock Characterization Report (Sept. 2009) that MMC provided reported the waste rock volumes in bank cubic yards. Geomatrix used the correct conversion of 12.18 cubic feet/ton, but it appears in Table C-3 Montanore Materials Balance by Phase of Mine Life used a slightly different factor. It is *MMC Comments on SDEIS* *11/21/2011* *Page 6 of 40*	**Comment Response 339-25** As explained in Section 3.8.3.1, the USGS equations used to calculate $7Q_{10}$ flows used drainage area and mean annual precipitation as the two variables, and the equations may not yield reliable results for sites with characteristics outside the range of the equation variables. For the drainage area variable, the range in the USGS study was 3 to 2,443 square miles. The footnote of Table 86 points out that the drainage areas for Poorman Creek, Ramsey Creek and the East Fork Rock Creek at the CMW boundary are less than 3 square miles. In Section 3.8.3.1, the agencies explained why the calculated $7Q_{10}$ flows are higher than the modeled baseflows in the upper reaches of each drainage in the analysis area. In Section 3.8.3.2, the agencies explained why the modeled baseflow at LB-300 was used for the analysis rather than the $7Q_{10}$ flow, even though the drainage area at LB-300 is greater than 3 square miles. The same rationale applies to all of Libby Creek above LB-300, including LB-100. This section also disclosed why modeled baseflows were used for analyzing effects at EFRC-200 rather than calculated $7Q_{10}$ flows. During a dry year, baseflow may be the only component of flow in the upper watersheds, including at LB-300 in late summer/early fall or during the winter, and may occur at a frequency greater than once in 10 years. By definition, a $7Q_{10}$ flow has a 10-year recurrence interval period, or a 1 in 10 chance of occurring in any one year. The agencies did not review any data to support that modeled predictions represent conditions unlikely to occur more than an occasional day or two in 10 to 20 years. The modeled baseflows at the edges of the model domain calibrated well to the FS-collected baseflow data. The low flow data provided for 2007 to 2011 may not represent baseflow, but rather flows influenced by precipitation events, and are likely to be more variable than discharges from bedrock to Libby Creek. See comment response 339-46 for a discussion of streamflow variability and measurability. **Comment Response 339-26** The cited text has been revised to reference the MMC Waste Rock Characterization Report. **Comment Response 339-27** The comment is correct that the agencies used a slightly different density, which makes very minor difference in the calculated tonnage in the SDEIS. The reported tonnage has been revised to reflect the density reported by MMC. The density of 12 cubic feet/ton suggested in comment 339-140 was not used.

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	pointed out only for point of clarification and to minimize confusion in the future why numbers don't match. **3.9.4.4 Geochemistry Summary** Page 221, 1st Paragraph	**Comment Response 339-28** The sentence in question describes geochemical risks to water quality. Nitrate is addressed as a component of that risk. The text has been modified by deleting the phrase "high potential," so that it now reads "near neutral pH and release of nitrate due to blasting."
339–28	The first sentence reflects a high potential for the project to release nitrates due to blasting, MMC disagrees with this assertion and points the agencies to the proposed plan and water balance where discharges through the water treatment plant are limited during operations. Further, the project proposes and is required to collect all contact water and we are not permitted to release it without treatment. Therefore this overstates the risks of nitrate released into the environment.	**Comment Response 339-29** The units used for flow (cfs) in the various tables that report predicted changes to baseflow have not been changed. It would be too confusing to use multiple units in the same table and some of the flow values are relatively large. A footnote was added to each table regarding the precision of the modeled estimates.
	3.10 Groundwater Hydrology General Comments	**Comment Response 339-30** See comment responses 339-3 and 339-25.
339–29	• Throughout the document cfs is used to present water flows and in several cases the values are extremely low and MMC believes it would help the reader place the projections in the appropriate context of presenting the data by including gpm. As an example, EFRC-50 on Table 89 predicted base flow is listed as .02cfs which is 8.9gpm. From the standpoint of model accuracy this is certainly beyond what the predicted capabilities of the model are.	**Comment Response 339-31** MMC's Libby Adit monitoring data was included in the revised Section 3.10. It is difficult to make definitive conclusions on the groundwater pressures in the bedrock based on a limited data set, but there appears to be a seasonal trend in the data. The trend is consistent with spring recharge from snow melt and little if any recharge during the winter months. Average annual discharges from the water treatment plant vary annually. Between 2009 and 2013, the average annual adit inflow rate ranged decreased from 125 gpm in 2009 to 53 gpm in 2013, based on the volume of water delivered to the Water Treatment Plant.
339–30	• The model predicted base flow values are significantly lower than the $7Q_{10}$ which is typically used in analyzing impacts. Since this represents the lowest flows that occur over a 10-year period the predicted model base flows must certainly represent a time period of at least 20 years that would see these low flows for extended period of times (7 consecutive days). For this reason the model results should be presented as worst case as opposed to simply base flow or average conditions. Flow data in Libby Creek supports that the $7Q_{10}$ is a very low number that does not occur frequently in these drainage systems.	
339–31	• MMC recommends that the agencies review and include in the SDEIS all the underground monitoring data collected by MMC. Long term pressure monitoring is indicating that pressures have not changed and have slightly increased while mine measured adit flows remain constant.	
339-32	• The model is a valuable tool and should be used as such; MMC feels strongly that the current model represents a period which may only occur for a few days in almost 20 years. This model also appears to use this as a steady state condition. MMC would request that the level of conservativeness in the model be reviewed and modified based on data collected from the Libby Adit and the Heidelberg Adit and to run the model on the average conditions versus a worst case scenario.	**Comment Response 339-32** The agencies disagree that the 3D model represents worst case conditions. The agencies did not review any data to support that modeled predictions represent a period that may only occur for a few days in 20 years. Geomatrix (2011a) indicated in the "results from the model runs described herein capture a feasible range of impacts and dewatering rates. With the data currently available, these are the best estimates of impacts and associated uncertainty that can be obtained using the FEFLOW model." The agencies agree and included similar language in the discussion of model results. The model used average precipitation based on a simulation calibrated against observed conditions in the adit and elsewhere in the model domain. The agencies agree that with limited data, the model does have uncertainty that is discussed in detail in Section 3.10.4.3.3. The agencies disclose that the predicted baseflows and changes to baseflow may not occur every year nor would they necessarily be measurable in any one year. The monitoring plan presented in Appendix C is designed to obtain sufficient data to establish when a stream is at baseflow and determine if reductions in baseflow have occurred.
	MMC will be submitting additional comments with regard to the hydrologic model from AMEC Geomatrix. They are looking at ways to reduce uncertainties and improve predictability based on *MMC Comments on SDEIS* *11/21/2011* *Page 7 of 40*	

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339–33 339-34 339-35 339–36	actual data collected since the start of model efforts. It is believed this information will help to better define aspects of the model assumptions. These comments will be forthcoming. **3.10.3 Affected Environment** **3.10.3.1 Mine Area** Page 226, 2nd Paragraph The baseflow elevations that are generally accepted for this area is about 5400-5600 feet in elevation, MMC has completed long term pressure monitoring in the Libby Adit. It appears from this data that groundwater levels based on pressure data is between 3800-4300 feet in elevation. Historical data from the Libby Lake Fault (9520 level in the adit) shows a pressure measurement of 250psi with 8gpm flows from a test hydrology drill hole. This is consistent with the water levels measured in the upper section of the adit while being significantly lower in elevation. MMC believes that this is an indication that base flow elevations vary significantly within the various basins. MMC further believes that the relationship between the fracture orientations and the alluvial deposits which store water provides information as to the water table elevations. Clearly none of the monitored pressures by MMC or by Noranda demonstrate that the fractures are fully saturated to the surface. This will play an important role in how the dewatering and drawdown will occur. Page 227, Table 84 Most of the springs have limited measurements and a high range of variability, this is likely due to many factors that deal with storage, precipitation, and amount of fractured bedrock that control water flow to the springs. MMC does not believe any of these springs are associated with a deep groundwater system. The text references dry years that deeper groundwater discharges may be the only source to springs and to the lakes. MMC believes that there is little potential that there are deep groundwater units but rather highly connected near surface storage that provides water during dry periods. It is expected that under most conditions precipitation recharge occurs prior to the depletion of storage in the high reaches of the stream systems. Page 227, 3rd Paragraph The text references that SP-31 is the only source of water to Rock Lake. SP-31 has only one measurement and there is no information to support that this is the only source of water to Rock Lake during typical precipitation years. There are large scree slopes that certainly mask visual discharges of stored water to Rock Lake that are related directly to snow melt and precipitation. There has been insufficient work by the agencies to draw this conclusion and there are numerous features that would have to be fully investigated to make this assertion. Page 228, 1st Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 8 of 40*	**Comment Response 339-33** The elevation calculated from water pressure measured from within the adit cannot be used to determine static or pre dewatering water level elevations. The current measurements represent groundwater levels under dewatered conditions, which began in February 2008. MMC collected 1 year of monitoring data beginning in September 2010 and reinitiated monitoring in 2013 with significantly reduced monitoring frequency to limit the amount of redundant data collected and managed. Because it is not known how much groundwater drawdown has occurred, static groundwater levels cannot be directly determined from the Libby Adit data. **Comment Response 339-34** See response to 339-33. Because no head measurements were taken before dewatering began, it cannot be concluded that fractures were not fully saturated to the surface, prior to dewatering. All that can be concluded is that under dewatering conditions, fractures do not appear to be fully saturated to the surface. **Comment Response 339-35** The table presenting spring flow measurements was updated in the FEIS to included available data through 2014. The agencies agree most of the springs have limited measurements, which precludes an estimate of variability. Two of the nine springs monitored in the CMW have three or more measurements. SP-1R has considerable variability and Spring-8 has had the same flow when measured in September for 3 years. The data are insufficient to conclude that none of the springs are associated with deep bedrock groundwater. As described in Section 3.10.3.1.1 of the SDEIS and FEIS, the agencies observed that one spring (SP-41 (formerly SP-31)) in the Rock Creek drainage flowed directly from the Rock Lake Fault during a relatively long period without precipitation and without any remaining snow pack. The agencies observed a second spring (SP-16) with an estimated discharge of 40 to 50 gpm and concluded that insufficient material was above the spring to store enough water to support the observed flow rate during the late summer/early fall. **Comment Response 339-36** This paragraph was modified to state that SP-41 is likely the only source of surface water to Rock Lake. The agencies' hydrogeologists did not identify sufficient volumes of surficial material in the upper portions of East Fork Rock Creek that would provide water to the stream during a typical late summer/fall season. The surficial deposits in the upper portion of the watershed would drain rapidly through summer due to their small volume, high hydraulic conductivity, and steep gradient except during years with exceptional snow depths and/or cool summer. The water observed in the upper creek during the 2007 site visit was observed discharging directly from the Rock Lake Fault.

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339–37	Heidelberg Adit is discussed in this section and flows reported that could be supported by both shallow and deep groundwater. The majority of the water flowing from the adit comes from a drill hole that intercepts a water bearing unit that is also intercepted by the drift. The flows recently observed from the intersection of the drift and the structure was very low while the drill hole was producing around 60gpm. This decrease in flows and the fact that the observed pressures indicate the source is located only a small distance above the workings. There is no evidence in the drift to support the premise that deep groundwater flows support this. One reason is that we do not see water percolating up through the sill. **3.10.3.1.2 Conceptual Hydrogeological Model of the Montanore Mine Area** Page 230, 2nd Paragraph	**Comment Response 339-37** The two measured flows in July and October 2012 are consistent with the concept that flows from the Heidelberg adit vary seasonally. The higher flows reported early in the year likely include a component of shallow groundwater. However, late in the year (such as during September 2007) when there had been little precipitation for two months, the agencies concluded that the observed flow represented a deeper bedrock flow component. The conclusions made in the comment cannot be supported without additional data.
339-38	As indicated previously MMC does not agree that the observations made in 2007 was thorough enough to be able to draw a conclusion that Rock Lake is fed solely by groundwater from bedrock springs. **3.10.4.2 Alternative 2-MMC's Proposed Mine** **3.10.4.2.1 Evaluation through Operations Phase** Page 238, 4th Paragraph	**Comment Response 339-38** See comment responses 339-35 and 339-36. **Comment Response 339-39** The section was revised to discuss measured high flows in Libby Creek and the requirement to maintain existing flows in Libby Creek above Bear Creek such that the Forest Service's instream flow water right would not be affected.
339–39	To provide the reader a better reference MMC suggests that the high flows values during withdrawal periods be included. Libby Creek flows in this reach, based on Table 92; LB 300 has a max measured stream flow of 148cfs. MMC is proposing to withdrawal slightly less than 2cfs at peak withdrawal rates. **3.10.4.3 Alternative 3-Agency Mitigated Poorman Impoundment Alternative** **3.10.4.3.1 Evaluation through Operations Phases** Mine and Adit Inflows	**Comment Response 339-40** Section 3.10.4.3 was revised to provide separate estimate of mine and adit inflows.
339–40	MMC suggests that the document present mine inflows for the adits and the mine separately to provide the reader the scope and scale of the various projected inflows. Page 240, 4th Paragraph	**Comment Response 339-41** MMC measured pressure data from within the adit beginning in September 2010; adit dewatering began in February 2007. There are no data to indicate what the pre-dewatering fracture pressures may have been. The hydraulic characteristics of the bedrock fractures in the vicinity of the adit and extrapolated to the mine void used in the 3D model are based on the actual testing results of fractures encountered within the adit. Additionally, the 3D model used measured adit inflow, which is a function of hydraulic conductivity, as a point of calibration. As discussed in the Appendix C, as more data became available during the Evaluation Phase, the model would be updated and the model uncertainty would decrease. See comment response 338-32 regarding the comment about the model presenting the worst case scenario.
339-41	The 3D model predicts groundwater drawdown in the ranges of 500-1000 feet by the end of the operations phase. Monitoring of the Libby Adit suggests that these drawdowns are extremely conservative and not supported by monitoring data. As an example, pressure data collected by Noranda and MMC over a period of almost 20 years shows that pressure data has not changed while the flooded aspect of the decline has changed. This suggests that the permeability and transmissivity values used in the model are extremely conservative and not supported by Libby Decline data. Again, MMC believes the model presents the worst case scenario and not the most likely scenario. Once activities occur MMC will have the opportunity to validate Noranda's data that is currently under water. *MMC Comments on SDEIS* *11/21/2011* *Page 9 of 40*	

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	Noranda prepared a memo dated January 6, 1992 that presented hydrology test drill hole data within the decline. The memo was intended to identify water bearing zones for drill water and other uses. This report is included in the Final Numerical Groundwater Development, Calibration and Predictions generated by AMEC Geomatrix April 2011. Fracture systems encountered from the 7945 level through the 12800 level of the decline demonstrated that geologic features contained no water. The report speculates that the fractures are dry due to litho-static loading; MMC concurs with this and believes that the current model does not accurately reflect this scenario making it a worst case scenario. Page 243, 1st and 3rd Paragraph	**Comment Response 339-42** See comment response 339-29. **Comment Response 339-43** See comment response 339-41. The 3D model is based on existing data and was designed to simulate groundwater flow and resulting mine inflow. When additional data became available, the model predictions would be refined. With currently available information, there is insufficient information to modify the simulation.
339–42	The document reports impacts in cfs but MMC believes that gpm should also be shown as most people do not work in cfs plus it provides the reader a better scale of the projections. **3.10.4.3.2 Closure Phase** Mine Area- Page 245, 1st Paragraph	**Comment Response 339-44** Seepage, as used in the second and third sentences of this paragraph, refers to water captured by the seepage collection system, not the amount estimated to seep to underlying groundwater. The discussion was clarified in the paragraph on the Tailings Impoundment in Section 3.10.4.3.3.
339–43	MMC believes the compartmentalization of groundwater as exhibited in the Libby Decline will be a similar scenario in the mine void areas. The model overly projects inflows at depth along the fault contact that is not supported by fracture monitored data in the mine. Page 248-Tailings Impoundment	**Comment Response 339-45** See comment response 339-48.
339–44	MMC is confused on the reference on increased seepage at closure shown in the text. Pumpback rates projected by Geomatrix in the pumpback well report, predicts 246gpm to meet the design objectives. Consolidation of tailings in the impoundment will commence early on during the project. At closure much of the lower section of the tailings will be at anticipated consolidation rates. It is expected that seepage will go down significantly. Page 248-249, Last Paragraph	**Comment Response 339-46** As discussed in Section 3.11.4.3.1 and 3.11.4.4.6, Wegner reported the average variability in low flow in area streams is 20 percent, based on an analysis of streamflow data from streams with gaging stations located at the periphery of the analysis area. In stream reaches when and where the only source of water to streams is deep bedrock groundwater, it would be expected that flow variability would be less. The baseflow variability at the locations listed in what was Table 89 in the SDEIS (Table 102 in the FEIS) is not known because few or no flow data have been collected at these locations. Mining would not affect streamflow variability. Although variability may affect the number of samples needed to measure a difference, Section 3.11.4.4.6 discussed that sufficient number of streamflow measurements could be collected to determine whether the streamflow that may be affected by mining is statistically different from the streamflow that occurred pre-mining, regardless of the variability. Although mining-induced streamflow changes would initially be small and gradually increase, a trend should be observable given adequate streamflow monitoring before mining began, during all mining phases, and after mining ceased.
339–45	MMC has the Noranda data from the Libby Lake Fault and it carries little water, based on this it is not anticipated that drawdowns could reach the depth projected by the conservative estimate. Page 249, Table 89	
339-46	The document references the natural variability in low flow conditions in the streams as being in the range of 20%. MMC believes that this variability should be presented in this table. Since the modeled base flows are really extreme low flow conditions it would seem that the 20% variability would be much higher for modeled base flows. This will help the reader understand that the prediction of 0.02 cfs is not measurable within this level of variability especially in the upper reaches of the stream systems. Page 250-Rock Creek and East Fork Rock Creek First Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 10 of 40*	

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339–47	The text suggests that based on the predicted mine inflow that 0.65cfs would be reduced above Rock Creek Meadows which is also suggested to be a large percentage of the total base flow. The predicted model base flows are extremely low flows and much lower than the $7Q_{10}$ the actual amount of time that this prediction could occur during the life of the mine is very remote. Simply stating flows without referencing the potential for this low flow to occur does not provide the reader the context of what the model actually predicts.	**Comment Response 339-47** See comment response 339-25. The method used to calculate the $7Q_{10}$ flow in the upper reaches of each watershed may not yield reliable results for sites with basin-characteristic values that are outside of or near the minimums and maximums of the values used to develop the equation. The agencies determined that modeled baseflows in upper watersheds were the best available data to assess effects rather than an estimated $7Q_{10}$ flow.
339–48	**3.10.4.3.3 Effectiveness of Agencies' Proposed Monitoring and Mitigation** **Monitoring** Page 251, 4th Paragraph Ground water monitoring by Noranda and MMC shows a very consistent water level in monitored fractures under very different conditions in the Libby Adit. Test work in the upper adit fractures monitored for drawdown shows that there is little storage in these fracture systems and that recharge occurs quickly. Therefore, MMC believes that the suggestion that baseline conditions cannot be determined is not supported by the hydrogeologic conditions that have been monitored. The drawdown test and long term pressure monitoring should be included in the SDEIS.	**Comment Response 339-48** The adit pressures reported by NMC (as provided in Appendix B of the final 3D model report) were measured under dewatering conditions, as were the pressures measured by MMC under dewatering conditions and do not represent different conditions. The NMC data include four single measurements of pressure and it is not clear whether these values represent pressure measured during the flowing of the piezometer while they were shut in and for how long. In addition, it was documented that while the adit was plugged, groundwater from within the adit discharged from the adit via surficial material near the mouth of the adit. Therefore, it is likely that groundwater levels never fully recovered between the NMC and MMC activities. MMC started measuring pressures 2.5 years after dewatering started. The data are insufficient to establish baseline conditions in the Libby Adit.
339–49	Page 251, Last Paragraph For clarification purposes the reference to additional monitoring locations should be predicated on water quality monitoring in Libby Creek and down gradient groundwater monitoring and any changes that may occur due to seepage versus the perception of full capture of the seepage. This seems like the only reasonable way to know if additional wells will be needed and provides a proactive approach.	**Comment Response 339-49** Applicable effluent limitation guidelines require that the tailings impoundment not discharge to surface water. Relying on water quality changes in Libby Creek to determine whether to add additional monitoring detected water quality changes would not be effective in ensuring zero discharge. The only way to ensure that seepage from the impoundment did not reach surface water would be to capture seepage close to the impoundment. As discussed in Section 3.10.4.3.6 and C.10.5.5.2, monitoring the effectiveness of the pumpback well system would be with a combination of groundwater level and groundwater quality monitoring.
339-50	Page 252, 2nd Paragraph Spring reference-The use of reference springs to identify background trends may or may not be an appropriate method of comparing changes in the project area. Spring flows are highly variable and local conditions can significantly influence spring flows, responses to precipitation, and other hydrogeologic conditions. If reference springs are used they should be selected very carefully and temper any direct comparison for compliance but certainly is a valuable tool to understand the regional system.	**Comment Response 339-50** See comment response 339-35. Two of the nine springs monitored in the CMW have three or more measurements. SP-1R has considerable variability and Spring-8 has had the same flow when measured in September for 3 years.
339-51	Changes in Steam Baseflow Page 252, 3rd Paragraph The suggestion that natural variability will mask trends that could be tied to mine dewatering is overstated. Noranda and MMC have been collecting stream flow data for over a 20-year period, that includes pre mine activities, post mine activities, and during current mine activities, there has been no monitored flow changes during these periods. To say that natural variability exists and impacts may fall *MMC Comments on SDEIS* *11/21/2011* *Page 11 of 40*	**Comment Response 339-51** See comment response 339-46. There are little streamflow data available for stream reaches predicted to be affected by mining, not enough at this time to establish long-term trends in streamflow before the commencement of mining.

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339–52 339–53 339–54	within that range is not to suggest that impacts are occurring. If changes are not measureable then it would seem that they would be insignificant to impacts. Page 253, 1st Paragraph The text suggests that the sensitivity analysis completed varying hydraulic conductivity suggests that the values used in the model are reasonable estimates of mine inflow, groundwater drawdown, and changes to baseflow. Given the underground data collected by Noranda and MMC, it suggests that these are not reasonable estimates but rather extremely conservative estimates that likely represent worst case scenarios. Mitigation Page 253, 3rd Paragraph MMC would recommend that as part of the reevaluation of the hydrogeology and rerunning the 3D model that the model domain be evaluated as well. The current model covers a huge area and is cumbersome to manage and minimizes the detail that can be effectively entered. To better represent the mine area and adjacent impacts a reduction in the model domain may be appropriate to make it a more useable and workable tool for both MMC and the agencies. **3.10.4.5 Cumulative Effects** Page 254 The text discusses the Heidelberg Adit and presents information provided by Joe Gurrieri and others. There are other documents that should be included in the discussion of the Heidelberg as it provides a good observation point of the geologic and hydrogeologic system near the Rock Lake Fault. Noranda completed some assessment work in the Heidelberg Adit and that data has been provided which includes flows and other important observations which are missing from the Gurrieri data. MMC has also made observations of the Heidelberg most recently and the following provides a summary of what was observed. • The vast majority of the adit flow comes from a drill hole that intercepts a water bearing structure; • The adit intercepts the same water bearing feature several hundred feet away from the drill hole and flows observed from this structure into the adit were significantly less than the drill hole discharge; • The zone at the drill hole to the intersection of the water bearing unit in the adit was completely dry; • The site visit occurred August/September; • MMC believes that the water in this unit is fed by Rock Creek and near surface groundwater and not deep bedrock sources; and *MMC Comments on SDEIS* *11/21/2011* *Page 12 of 40*	**Comment Response 339-52** In the 3D model report, Geomatrix (2011) indicated in the "results from the model runs described herein capture a feasible range of impacts and dewatering rates. With the data currently available, these are the best estimates of impacts and associated uncertainty that can be obtained using the FEFLOW model." The agencies agreed and included similar language in the discussion of model results. See comment response 339-48 with respect to the nature of the NMC data. **Comment Response 339-53** The domain for the 3D model is based on natural hydrologic boundaries, which is a common practice in groundwater modeling. Arbitrarily reducing the size of the model could introduce significant complexities and could make the model more difficult to operate. In addition, the model calibration is partly based on information in the outlying areas, such as stream baseflow and well locations at the periphery of the model domain. Baseflow data do not exist for streams closer to the proposed mine. **Comment Response 339-54** MMC's information on the Heidelberg Adit was incorporated into Section 3.10.3.1.1 of the FEIS. Thank you for the observations and opinion expressed in the comment.

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339-55	• These conditions are very similar to those found in the Libby Adit, highly suggesting that conditions in the Libby Adit are reasonable predictions of what will be expected to be encountered in the mine void area. **3.10.4.5.2 Rock Creek Project** Page 255, 2nd paragraph The cumulative drawdown from the Rock Creek and Montanore mines suggests they will merge beneath the East Fork Bull River watershed. MMC believes the existing data and other comments we have made on the model and the compartmentalization of groundwater will make this small impact likely not to occur. The Libby Adit fractures control water pathways and there is no evidence that drawdowns through highly impermeable bedrock is occurring.	**Comment Response 339-55** The cumulative effects discussion reflects the cumulative effect results of the 3D model. See comment response 339-52 regarding the likelihood of occurrence.
339-56	**3.11 Surface Water Hydrology** Page 258 General comment The comments generated in the Groundwater Hydrology section are applicable to many of the items under th0e Surface Water Hydrology section and will not be repeated.	**Comment Response 339-56** Thank you for your comment.
339-57	**3.11.2.3.2 Lake Levels and Volume** Page 262, 3rd paragraph Assuming the lakes would be frozen for the full 7-month period is conservative and that lake inflow and outflow would be equal is not a likely scenario under general conditions during the first several months. October, November, and sometimes early December can produce enough precipitation to recharge storage that would cause this condition not to occur until later in that 7-month period. MMC does not disagree with using it as an analysis but feels the agencies should qualify it as a conservative approach due to the normal precipitation cycle that occurs in this region.	**Comment Response 339-57** The agencies disclosed in Section 3.11.2.3.2 that Rock Lake was assumed to be full at the beginning of the 7-month winter period due to late fall precipitation. The 7-month period when Rock Lake is frozen was chosen based on field observations made by the agencies.
339-58	Page 262, 5th paragraph MMC monitoring of Lower Libby Lake and Rock Lake is ongoing with the assistance of USFS. Given the description of St. Paul Lake and the depth mining will occur below St. Paul Lake, MMC sees little value to monitoring lake levels.	**Comment Response 339-58** Section 3.11.2.3.2 was changed to eliminate monitoring of St. Paul Lake.
339-59	**3.11.4.3.1 Evaluation and Construction Phases (Years 1 through 9)** Page 277, 2nd paragraph Reference to section 3.11.4.3.1 is an incorrect reference. *MMC Comments on SDEIS* *11/21/2011* *Page 13 of 40*	**Comment Response 339-59** The cross reference was deleted in the FEIS.

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339-60	**3.11.4.4.2 Operations Phase (Years 6 through 25)** Page 283, 1st paragraph The agencies should be consistent in the terminology throughout the document with respect to low flow, baseflow, predicted model baseflow when discussing reductions and comparisons. Specifically the text indicates reduction in low flow would be most pronounced in the East Fork Rock Creek at the CMW boundary and would be 21% of the baseflow. Based on previous analyses in the document this would be 21% of the modeled baseflow conditions which as we've stated is an extremely low flow condition that has an extremely low likelihood of occurring. When considering Wegner's reference to natural variability of 20% this is a non-measurable effect.	**Comment Response 339-60** The purpose of Section 3.8.3 was to clearly define baseflow, $7Q_2$ and $7Q_{10}$ flows, and how each of these flows was used in the analyses. In Section 3.11.4.4.2, the first footnote to Table 95 in the SDEIS (Table 104 in the FEIS) indicated that modeled baseflow values rather than $7Q_{10}$ flow was used for EFRC-200 and LB-300. Baseflow conditions would occur at EFRC-200 during periods when the only source of water to the upper East Fork Rock Creek is bedrock groundwater. The frequency of such an occurrence is unknown. See comment response 339-46 for a discussion of variability and measurability.
339-61	**3.11.4.4.4 Post-Closure Phase (Years 31+)** Page 290, 3rd paragraph Based on the predicted model base flow the scenario described of when only deep bedrock groundwater supplies water to the lake needs to be qualified. The text suggests that the condition described will occur frequently or on a regular basis in the summer and winter. This is incorrect since the predicted model base flows are so much lower than the $7Q_{10}$ the likelihood of these conditions to occur regularly is not possible. Therefore, MMC believes the text should be modified so the reader understands the frequency of this occurring. As stated before the predicted model base flow is so low that it is only likely to occur in a 10 to 20-year period for a short duration of only a day or so. Current Rock Lake monitoring data indicates that the 7-month period identified as difficult to monitor can be monitored. The AMEC Geomatrix report, Groundwater Dependent Ecosystem for Rock Lake and Upper Libby Creek Areas-2010, shows lake levels varied by almost a foot during this period.	**Comment Response 339-61** See comment responses 339-25, 339-52, and 339-57 regarding model results and frequency of occurrence. The relationship between model-predicted baseflows and estimated $7Q_{10}$ flow is not relevant to the anticipated frequency of occurrence. The model-predicted baseflows may be too low and/or the estimated $7Q_{10}$ flow too high. Comment response 339-25 discussed that the USGS equations used to calculate $7Q_{10}$ flows used drainage area and mean annual precipitation as the two variables, and the equations may not yield reliable results for sites with characteristics outside the range of the equation variables. The discussion about effects on Rock Lake in the SDEIS stated that a trend may be difficult to observe when the lake is ice-covered. The data collected by Geomatrix using a datalogger in Rock Lake under the ice showed that a trend may be measureable. During that period, the change in lake level was about 0.2 psi, or about ½ foot. Avalanches occur frequently above Rock Lake that drop snow onto the lake; this could affect the pressure readings in the lake during the winter.
339-62	Page 292, Table 100 Previous comment has been made as to the relative conservativeness of the 7-month winter period analyses. Combining this with the use of the predicted model baseflow the likelihood of this occurring more than one or two days out of a 20-year period is extremely remote. MMC believes it is important for the agencies to discuss the potential frequency of this occurrence and that it is not likely to be the full 7-months and possibly not exist during the full like of the project.	**Comment Response 339-62** See comment responses 339-25, 339-57, and 339-61.
339-63	**3.11.4.4.5 Effectiveness of Agencies' Proposed Monitoring and Mitigation** Page 292, 2nd Paragraph There is data on Rock Lake levels that provide information that spans many years and provides valuable data to demonstrate the natural variability of the lake level. Continuous monitoring is occurring and there is two years' worth of data and a third year of data collection underway. By the time the EIS process is complete and the initiation of construction activities there will be several more years of baseline data. *MMC Comments on SDEIS* *11/21/2011* *Page 14 of 40*	**Comment Response 339-63** The lake level data that MMC began collecting in 2009 and the less than 1 year of additional data collected by Gurrieri in 1999 were used in the analysis. In the 2012 GDE report, Geomatrix reported "a substantial amount of "noise" appears from May through July 2011 and from July through September 2012. The "noise" seems to be the result of the barometric data logger and, therefore, may not be entirely representative of actual lake level fluctuations."

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339-64	The use of benchmark lakes seems reasonable on the surface but the potential variability in the hydrologic setting with each lake in the area makes it difficult to select one that specifically matches Rock Lake. MMC does not believe the monitoring of Wanless Lake is warranted given the predictions are extremely conservative (7-month) and lake level monitoring is effectively collecting baseline data that will meet monitoring objectives. Page 293, 1st Paragraph	**Comment Response 339-64** As discussed in Section C.10.3.3.2, Wanless Lake is slightly larger and has a slightly larger watershed than Rock Lake, is at a similar altitude, has similar topography, is located within the Revett formation, is bisected by the Rock Lake fault, and is within the 3D groundwater model domain. The agencies selected Wanless Lake as a good benchmark lake for Rock Lake. The purpose of monitoring a benchmark lake outside the estimated area of influence of mine effects is to be able to compare Wanless Lake to Rock Lake and separate changes due to natural variability and climate change (which are expected to be similar in both lakes due to their proximity) from mine effects.
339-65	The use of reference streams for project monitoring needs to be carefully considered and should only be used as a tool for project assessment because of the high variability in stream conditions and flows throughout the area. **3.13.4.2.1 Evaluation and Construction Phases (Years 1-5)** **Groundwater** Page 319, 3rd Paragraph	**Comment Response 339-65** Bear and Swamp creeks are located outside the area of mine influence, but still fairly close to the analysis area, so natural variability and climate change effects should be similar to those in Libby and Rock Creeks.
339-66	The document continues to reference that deep groundwater flow is an important aspect of many of the springs and streams in the area. Gurrieri (2001) makes reference to the same scenario feeding Rock Lake. MMC disagrees with the inference that deep groundwater is the source. All the data collected in the decline suggest otherwise and MMC believes strongly that near surface groundwater in fractured bedrock is not the same as deep groundwater located in bedrock. The text throughout the document suggests that deep groundwater is the only water source during low flow conditions and give the reader a misconception of the hydrologic system. Most would attribute deep groundwater with a different type of hydrologic system that is not present at the Montanore Project.	**Comment Response 339-66** This paragraph in Section 3.13.4.2.1 states that both shallow and deep groundwater may be water sources to area springs, and that some springs receive a large portion of their flow from deep groundwater. An example of this is SP-41 located above Rock Lake, which is located on the Rock Lake Fault. The creek was observed by the agencies in September 2007 during a very dry period to be flowing, and the only source of supply was water from the Rock Lake Fault.
339-67	The suggestion that TDS may decrease seems overly predictive when the contribution of the theoretical deep groundwater is not supported by current monitoring data. **3.13.4.2.3 Closure and Post-Closure Phases (Years 25+)** Page 331, 3rd Paragraph	**Comment Response 339-67** TDS concentrations for groundwater are provided in Appendix K-4, for springs in Appendix K-2, and for streams in Appendix K-1. TDS concentrations are higher in deep groundwater, so TDS concentrations in some springs may decrease in the area influenced by mine inflows.
339-68	The reference that water may begin to flow out of the underground mine workings and may mix with groundwater and saturated fractures may not be the case in the Libby Adit and could be the case in the mine void area. MMC has been collecting pressure data on a continuous basis in the Libby Adit for two years. The data that has been provided to the USFS on a quarterly basis indicates hydraulic head in the fractures is very consistent and is higher that the mine workings. When the mine workings flood it is likely that the hydraulic head differentials will remain the same. Because of this and because many fractures don't hold water, the suggestion that it may mix may not be the case based on the data collected in the Libby Adit. The mine void is expected to be similar to the Libby Adit and may have the same conditions. This data from the Libby Adit should be considered and used in the mine model and water quality considerations. *MMC Comments on SDEIS* *11/21/2011* *Page 15 of 40*	**Comment Response 339-68** MMC collected 1 year of monitoring data beginning in September 2010 and reinitiated monitoring in 2013 with significantly reduced monitoring frequency to limit the amount of redundant data collected and managed. See comments responses 339-31 and 339-33. The 3D model and FEIS incorporated flow, pressure, and testing results from the Libby Adit.

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339-69	Page 333, 1st Paragraph Surface Water The document suggests that a change in water quality may occur due to the reduction in deep bedrock groundwater and the lake would become somewhat more acidic and the loads of nutrients would be reduced. MMC does not believe that the studies referenced have any scientific evidence that clearly supports their premise that deep bedrock groundwater is a significant contributor to Rock Lake and at a minimum does not supply a significant amount of water to Rock Lake. MMC believes that near surface groundwater provides the majority of the water to the system. To further insinuate that there is a significant difference and that the water would become acidic has no basis at all. The text also references that nitrates would be reduced. This seems unfounded given the nutrient deficiencies that occur in high mountain lakes in the project area. The document spends an enormous amount of text on nitrate load from mine activities; MMC believes this section should be reviewed for consistency and to put things in the proper context. Using the work acidic is totally inaccurate.	**Comment Response 339-69** The studies referenced in the agencies' analysis (Gurrieri 2001, Gurrieri and Furniss 2004) provide the basis for the agencies analysis on possible water quality changes in Rock Lake discussed in Section 3.13.4.2.3. Rock Lake may become somewhat more acidic due to a larger contribution of surface runoff to the lake, which is more acidic due to atmospheric deposition. Lakes in the Cabinet Mountains rely on groundwater as their primary source of dissolved solids and nutrients. Gurrieri and Furniss (2004) reported that a significant proportion of the nutrient load for use by aquatic organisms is contributed by groundwater inflow. Depletion of groundwater inflow by mining induced changes in hydraulic gradients and groundwater flow paths may cause a shift in the hydrologic, chemical, and consequently the biological structure of Rock Lake.
339-70	Page 333, 2nd Paragraph MMC believes that water discharged to the East Fork Bull River after mine closure is overstated. The majority of the mine is situated at an elevation well below where this discharge would occur. The uncertainty of whether it will actually occur is also in question. Regardless, it seems as though the mine void water would be less likely to "turnover" and most likely have a "short circuit" flow that would not mix with flooded mine water, therefore, it seems hard to imagine that water quality changes in East Fork Bull River would be measureable given the limited quantity of water that would discharge compared to the stream flow.	**Comment Response 339-70** This paragraph in Section 3.13.4.2.3 states that it is not likely that changes in water quality in the East Fork Bull River would be measureable; this is not an overstatement. MMC would evaluate the possible discharge and potential effect to the East Fork Bull River as more information was collected during mining. The agencies did not review any data that suggested flow in the mine void would most likely have a flow path that would not mix with the flooded mine water.
339-71	Page 333, 3rd Paragraph_Water Quality As mentioned previously pressure data monitoring in Libby Adit does not support a large reduction in deep bedrock groundwater discharged to streams and springs in Libby Creek watershed. Further, almost 20 years of stream flow monitoring has indicated no measureable flow impacts from exploration activities. MMC understands the model shows this as a prediction but it is not supported by monitoring and the model as stated previously is really a worst case scenario. It is mentioned throughout this document, MMC does not believe there is a deep bedrock groundwater system in the context as it is presented.	**Comment Response 339-71** See comment responses 339-31 and 339-33 regarding Libby Adit monitoring data. NMC made streamflow measurements between 1988 and 1993. MMC began measuring streamflow in 2007. The table providing measured high and low flows in analysis area streams in the SDEIS and Appendix K presents the number of streamflow measurements at each monitoring location. Section 3.11.3 and Appendix K of the FEIS were revised to incorporate data collected through 2012. Data collected in Libby Creek after February 2009 may have been influenced by adit dewatering and, for stations below LB-300 below the Water Treatment Plant outfall) have been affected by discharges. It is not possible with the available adit to conclude Libby Creek baseflow has been affected by adit dewatering. NMC reported flows from fractures (from piezometers drilled into fractures and faults) as high as 120 gpm from the 5300 foot level (approximately 1,200 feet bgs) (Appendix B, 3D model report). As comment response 339-163 discusses, the Libby Adit isotope samples indicate the adit inflow is snowmelt infiltrating from the surface. The infiltrating water is being intercepted by the Libby Adit instead of flowing to Libby Creek.
339-72	**3.13.4.3.2 Effects of Discharges** Page 335, 4th Paragraph MMC agrees that Alternative 3 would likely be difference in the assessment from Alternative 2, however, the text suggests that the Prichard and the Revett formation sulfide halo rock will influence the potential impacts to water quality. The current Libby Adit water quality data that has fully intercepted the Prichard formation does not show any water quality issues and it seems that this data should be used when making the analysis. See Appendix C comments for Revett formation sulfide halo *MMC Comments on SDEIS* *11/21/2011* *Page 16 of 40*	**Comment Response 339-72** See next page.

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	comments. Regardless the volume difference from Alternative 2 and Alternative 3 are really not worth noting, certainly from the stand point of the Revett sulfide halo's, they should be virtually the same in the mine void. Page 336, 3rd Paragraph	**Comment Response 339-72** Section C.9.4.1 of the SDEIS and FEIS disclosed that, based on monitoring data from the Libby Adit and limited kinetic data, Prichard Formation does not appear to have potential to generate acid but it does have demonstrated potential to generate low concentrations of metals potentially significant for the high quality receiving water. The same is true of the lower-most Revett Formation, in the altered sulfide waste zones.
339-73	Sanitary waste disposal offsite was determined to be not feasible, but MMC has not seen the analysis suggesting why. MMC understands the issues but we may have to construct an expensive Water Treatment plant to meet the discharge numbers when we could work with the local community in supporting their system in some manner. We are not opposed to the Alternative 3 proposal but we also don't believe that the feasibility assessment fully presents all issues.	**Comment Response 339-73** The agencies' analysis that offsite sanitary waste disposal was not feasible was based on discussions with MMC. MMC's analysis of sanitary waste disposal options (Geomatrix 2010a) did not include offsite sanitary waste disposal.
	3.13.4.5.8 Effectiveness of Agencies' Proposed Monitoring and Mitigation Plans Monitoring Page 343, 3rd Paragraph	
339-74	The text suggests that waste rock would be used throughout the site for construction purposes. This is not correct; MMC proposes to use waste rock for the starter dam and possibly material for the main dam but no other locations for construction purposes.	**Comment Response 339-74** In its Plan of Operations (MMC 2008), MMC proposed to use waste rock for construction of tailings impoundment embankment, Ramsey Plant Site, and Ramsey Adit portals. This use was described in Alternative 2. The text in the impoundment sections of Chapter 2 and in Section 3.13.4.6.1 was revised to indicate waste rock would be used only for impoundment dam construction in Alternatives 3 and 4.
	3.15.4.8 Alternative D-R- Miller Creek Transmission Line Alternative **3.15.4.8.1 Direct Effects** Page 357, 2nd Paragraph	
339-75	It appears the impacts attributed to helicopter structure installation are overstated and may be incorrect. Please refer to TL construction memo that MMC submitted to the agencies. In this memo we proposed installing 16 structures using helicopters.	**Comment Response 339-75** MMC did not propose using helicopter construction for structures in Alternative B, but left it at the contractor's discretion. The number of structures set using a helicopter was revised in Section 3.15.4 of the FEIS. The SDEIS and FEIS identified the number of helicopter-constructed structures as 26 in Alternative C-R, 16 in Alternative D-R, and 31 in Alternative E-R.
	3.16.4.10 Cumulative Effects Page 361, 1st Paragraph	
339-76	MMC believes the cumulative effects are over stated in this section. The project activities for Montanore are located at the foot of the steep mountainous terrain of the CMW area. It is hard to imagine how increased traffic could affect recreational experiences at Elephant Peak and Rock Peak and the associated ridgeline. It also seems counter intuitive that the whole recreation assessment deems it as a negative when more people decide to use public land for recreational opportunities.	**Comment Response 339-76** The discussion of cumulative recreational effects in Section 3.16.4.11 was revised in the FEIS. Traffic and noise effects of the Montanore and Rock Creek projects would not result in any cumulative effect.
	3.20.4.1.6 Alternative B-MMC's Proposed Transmission Line Page 375, 3rd Paragraph	
339-77	The document presents a range of distances that residences are from the center line of the transmission line. The suggestion that residence may perceive air pressure changes as vibrations from helicopters *MMC Comments on SDEIS* *11/21/2011* *Page 17 of 40*	**Comment Response 339-77** Staging areas for any transmission line alternative have not been identified and consequently, flight paths between staging areas and any helicopter-constructed structures are not known. Fourteen residences or cabins are within 0.5 mile Alternative B; three of these residences are within 450 feet of the centerline. Noise from helicopters used in line stringing in Alternative B would be audible at these residences.

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339-78	seems to be over stating the issue. There would be no flight paths directly over any residence by the helicopters and there are few residents along the corridor, so it seems highly unlikely that this would occur. **3.20.4.1.7 Alternatives C-R, D-R, and E-R-Other Transmission Line Alternatives** Page 377, 2nd Paragraph The reference throughout this section discusses residences distance from the centerline; however, the text only talks about one residence. It seems like the distance should be pinpointed exactly as opposed to a range. **3.20.4.2.3 Alternatives C-R, D-R, and E-R-Other Transmission Line Alternatives** Page 377, 6th Paragraph Same comment as above. **3.22.1.4.12 Irreversible and Irretrievable Commitments** Page 383, 1st Paragraph	**Comment Response 339-78** The alignment of Alternatives C-R, D-R, and E-R were revised in the FEIS such that all residences are more than 450 feet from the centerline. **Comment Response 339-79** Section 2.4.1.1 of the DEIS and FEIS indicated the Bear Creek Road would disturb 79 acres; the disturbance area for roads excluded 33 feet of existing disturbance along roads. As Section 3.22.1.4.14 discussed, the area covered by asphalt and gravel by widening the Bear Creek Road would not be returned to pre-mine uses and the effects would be an irretrievable commitment of resources.
339-79	The Bear Creek Road improvements would be insignificant to the existing Bear Creek Road prism. The comment that native plant species would be lost, while true, MMC believes the loss would be insignificant. In addition the comment suggests that there would be irretrievable loses to native plant species in the mine project and transmission line. MMC believes that the native plant species will return with reclamation that requires us to us native plant species. **3.23 Wetlands and Other Waters of the U.S.** **3.23.2.1 Baseline Data Collection** Page 402, 3rd Paragraph	**Comment Response 339-80** Section 3.23 of the FEIS was revised to incorporate information collected through 2012.
339-80	This section should reference MMC's study plan that was completed summer 2011, and should incorporate the results into the analyses. **3.23.4.3.2 Indirect Effects** Page 408, 2nd Paragraph	**Comment Response 339-81** See comment response 339-80.
339-81	MMC has initiated GDE inventory and other monitoring of the project area which should be referenced in this document, and the data should be used in the analyses; which it appears may not have occurred. **3.24.4 Environmental Consequences** **3.24.4.1 Wilderness** *MMC Comments on SDEIS* *11/21/2011* *Page 18 of 40*	

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339-82	Page 416, 2nd Paragraph MMC has on numerous occasions commented on the reference to blasting at the Rock Lake ventilation adit, for some reason the agencies and the resource specialist ignore the fact that no blasting will occur on the surface as all development would be from the mine void out. MMC would expect one maybe two blasts that would be underground and muffled, the chances of any particular wildlife being within a reasonable range of this is highly unlikely and to suggest a short term disturbance in the wilderness is ridiculous. Further, the resource specialists continue to make an issue out of blasting for the Upper Libby adit, it too would have one to two blasts that would be heard from a near distance. The associated temporary effect is just overstating. It appears this analysis carries over into the grizzly bear mitigation where the small disturbance footprint on the ventilation adit has a disproportionate amount of mitigation compared to other mine activities.	**Comment Response 339-82** As discussed in Section 3.25.5.2.1 of the SDEIS and FEIS, methods used to estimate displacement effects from the Montanore Project and corresponding habitat compensation are described in greater detail in the *Revised FEIS Analysis of Grizzly Bear Displacement Effects* (ERO Resources Corp. 2015a). Due to the short-term nature of the effect, the analysis of displacement effects did not include influence zones for explosive use and no displacement effects were attributed to blasting at the ventilation adit. Because the effects of explosive use on wildlife would be negligible, grizzly bear mitigation would not be needed and was not included in the agencies' Wildlife Mitigation Plan in the SDEIS or FEIS. Mitigation for impacts to mountain goats was modified based on MFWP comments on the DEIS. In the agencies' alternatives, blasting would not occur at the entrance to any adit portals during May 15 to June 15.
339-83	Page 416, 3rd Paragraph Experience at numerous mines demonstrate that wildlife habituate to project activity and would permanently avoid the area. This is evidenced at the Greens Creek Mine in Alaska where grizzly bears continue to feed on returning salmon on the stream adjacent to the mine area. There are many other examples of the same situation occurring.	**Comment Response 339-83** Wildlife responses to disturbance are affected by numerous factors such as species-specific behavior, the availability of cover, and exposure to repeated disturbance and may differ considerably between species and between populations of the same species from different geographic areas. The KNF believes that conclusions based on studies conducted in Alaska or other areas where environmental conditions may favor tolerance of disturbance and where wildlife populations may be more stable should not be broadly applied to wildlife populations from other regions that may be less stable or more vulnerable to disturbance. The 2013 BA provides a detailed analysis of the effects of human activity on grizzly bear based on the most recent research available.
339-84	**3.23.4.10.2 Alternative 3-Agency Mitigated Poorman Impoundment Alternative** Page 412-413 The text should reflect MMC's proposed mitigation includes impacted non-wetland waters of the U.S.	**Comment Response 339-84** Section 3.23.4.10 was revised in the FEIS to reflect the mitigation plan for wetlands and other waters of the U.S. that MMC developed for Alternative 3.
339-85	**3.25 Wildlife Resources** Page 420 General Comment There are numerous references in the wildlife section that do not match the July 2011 BA, MMC has made some effort to identify them specifically but it is worth the agencies doing a thorough review to ensure all sections are consistent.	**Comment Response 339-85** The agencies reviewed the references in the 2013 BA and Section 3.25 and corrected discrepancies in the FEIS.
339-86	**3.25.2.2 Snags and Woody Debris** **3.25.2.2.3 Environmental Consequences** Page 422, Table 166 Table 166 displays the potential changes to the Population Potential Level, yet it is not discussed anywhere in the test, other than by reference to the table. The text following the table discusses *MMC Comments on SDEIS* *11/21/2011* *Page 19 of 40*	**Comment Response 339-86** As discussed in Section 1.1 of the SDEIS, Section 3.25 of the SDEIS, with the exception of the grizzly bear impacts analysis (section 3.25.5.2), which is presented in its entirety, disclosed the effects on various resources from the modified transmission line only. Sections of the DEIS that did not change were not repeated in the SDEIS. Effects on potential population level are described in Section 3.25.2.1 of the DEIS and the FEIS.

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339-87 339-88 339-89	changes to snag levels relative to the forest standard of 40%. Text should expand on exactly what the PPL means and its use as a forest standard. **3.25.3.2 Elk** **3.25.2.3.2 Environmental Consequences** Page 427, 3rd Paragraph If discussing whether or not the forest standard for ORD is being met, the actual standard should be listed in the text or referred to as a component in the table. Page 428, 6th Paragraph MMC agrees with the statement concerning displacement of elk movement through the area. We also believe that the same question should be raised with the analyses of grizzly bear displacement during the same time frame. Why is the amount of cover sufficient for elk (a prey species) and insufficient for grizzly bear? Why are the effects short-term for elk, yet long term consequences on displacement are predicted for grizzly bear? This shows an inconsistent and overly conservative management approach for grizzly bear. **Table 201. Credible Grizzly Bear Sightings, Credible Female with Young Sightings, and Known Human-Caused Mortality by BMU in 2004.** Page 478 Table 201 only provides data from 2004 credible sightings of grizzly bears, while the previous text discusses augmentation. MMC believes this paints an incomplete picture of the current grizzly bear population and should mention the augmentation program of 2011. **Table 202. Existing Grizzly Bear Habitat Conditions by BMU.** Page 478 The information in Table 202 does not match the July 2011 BA. **3.25.5.2.2 Affected Environment** Page 479, 2nd Paragraph The text references bear use data in BMUs 5 and 6 from the late 1980's. Is this the most current usage data for the area? Page 485, 1st Paragraph As in previous comments the data presented is different that the data in the July 2011 BA. *MMC Comments on SDEIS* *11/21/2011* *Page 20 of 40*	**Comment Response 339-87** The 2015 KFP does not have a forest standard for ORD. **Comment Response 339-88** For a variety of reasons, different species demonstrate different degrees of sensitivity to human disturbance. The agencies' analysis of human disturbance on wildlife is based on the best available science, as described in the FEIS. **Comment Response 339-89** The title of Table 201 in the SDEIS was erroneous, and should have indicated that it showed sightings from 2009. The table was updated in the FEIS to reflect credible sighting data from 2012. Augmentation in the Cabinet Mountains is discussed under Mortality, As summarized, the FWP augmentation effort appears to be the primary reason that grizzly bears remain in the Cabinet Mountains (Kasworm et al. 2013).

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339-90 339-91 339-92	changes to snag levels relative to the forest standard of 40%. Text should expand on exactly what the PPL means and its use as a forest standard. **3.25.3.2 Elk** **3.25.2.3.2 Environmental Consequences** Page 427, 3rd Paragraph If discussing whether or not the forest standard for ORD is being met, the actual standard should be listed in the text or referred to as a component in the table. Page 428, 6th Paragraph MMC agrees with the statement concerning displacement of elk movement through the area. We also believe that the same question should be raised with the analyses of grizzly bear displacement during the same time frame. Why is the amount of cover sufficient for elk (a prey species) and insufficient for grizzly bear? Why are the effects short-term for elk, yet long term consequences on displacement are predicted for grizzly bear? This shows an inconsistent and overly conservative management approach for grizzly bear. **Table 201. Credible Grizzly Bear Sightings, Credible Female with Young Sightings, and Known Human-Caused Mortality by BMU in 2004.** Page 478 Table 201 only provides data from 2004 credible sightings of grizzly bears, while the previous text discusses augmentation. MMC believes this paints an incomplete picture of the current grizzly bear population and should mention the augmentation program of 2011. **Table 202. Existing Grizzly Bear Habitat Conditions by BMU.** Page 478 The information in Table 202 does not match the July 2011 BA. **3.25.5.2.2 Affected Environment** Page 479, 2nd Paragraph The text references bear use data in BMUs 5 and 6 from the late 1980's. Is this the most current usage data for the area? Page 485, 1st Paragraph As in previous comments the data presented is different that the data in the July 2011 BA. *MMC Comments on SDEIS* *11/21/2011* *Page 20 of 40*	**Comment Response 339-90** The SDEIS disclosed effects on grizzly bear based on 2006 baseline conditions, which were the most current data available when the EIS analysis began in 2007. The 2011 BA addressed impacts to grizzly bears based on 2010 habitat conditions, using modified 2009 road data. The 2013 BA evaluated the impacts of Alternative 3D-R using a 2009 baseline (Bear Year 2009 road layer, modified and available in December 2010), but also incorporated the most recent road data through the summer of 2012 where available. A comparison done in September 2012 between a 2009 bear year nonactivity baseline and a 2011 nonactivity baseline demonstrated that the baselines in BMUs 5 and 6 would remain the same, while the baseline in BMU 2 would slightly improve. The baselines were corrected and updated in BMU 2 for the updated analysis. The moving window runs for BMU 5 and BMU 6 were also updated at this time to incorporate small changes occurring outside of the BMUs, but which slightly affected habitat parameters in the BMUs. The reanalysis of Alternative 3D-R demonstrated the projected impacts do not measurably change as a result of these updates. Based on similar changes to the remaining agency combined alternatives disturbance boundaries between fall of 2011 and July 2012, expected changes to grizzly bear habitat parameters would be comparable to Alternative 3D-R and the decision was made not to rerun core, OMRD, and TMRD for the remaining agency alternatives. In addition, the SDEIS considered several ongoing or foreseeable federal projects as cumulative effects, as required by NEPA. According to the ESA regulations, future Federal actions are not included in the analysis of cumulative effects because they require separate Section 7 consultation. In the BA, the anticipated impacts of proposed Federal projects in the analysis area that have already undergone formal or early Section 7 consultation, such as the Rock Creek Project, are included in baseline road densities. Although the grizzly bear impacts analysis in the FEIS was updated, baseline conditions shown in Table 220 may not match those provided in the BA. **Comment Response 339-91** The 2013 BA provides a detailed description of grizzly bear use of the analysis area based on the most recent data available, including the most recent grizzly bear observation data provided by the USFWS. Information on grizzly bear use of BMUs 5 and 6 was summarized in Section 3.25.5 of the FEIS. **Comment Response 339-92** See response to comment 339-90.

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339-93	According to Table 203, and partnered with the mitigation that will take place prior to and during construction, the HE value for BMU 6 increases between constructions and operations. Please explain how this is a greater impact to HE during operations? It is understandable that the long term nature of the operations period will have an impact to HE compared to the existing condition, however, there is no mention of the mitigation plan, the lessened impact due to reduced helicopter use or road closures. Page 489, 2nd Paragraph The text suggests monitoring of habitat acquisition to determine its effectiveness in bear habitat loss, MMC suggests that baseline data collection prior to the acquisition using bear scat, hair snag surveys, or other methods might be valuable. This will help to ensure that land acquired is actually meeting the objectives.	**Comment Response 339-93** The monitoring proposed in the agencies' grizzly bear mitigation plan was designed to confirm the effectiveness of mitigation measures. The data mentioned in the comment were considered in developing baseline conditions without the project. Item F.2 of the Grizzly Bear Mitigation Plan in the SDEIS and FEIS requires that the Oversight Committee (see comment response 339-16) develop a Comprehensive Grizzly Bear Management Plan. Item F.4 describes the objectives and requirements of the Grizzly Bear Management Plan, which include monitoring to confirm the effectiveness of mitigation measures. Item F.5 requires that monitoring be conducted or coordinated by the USFWS.
339-94	Page 498, 1st Paragraph The statements made in this paragraph may not be fully accurate, the data suggests that all combined action alternatives HE values increase between construction and operations. The text may paint an overly dire impact due to TL construction, a relatively short term event, and suggests that HE will be impacted during the entire operational period. Due to the mitigation that will be in place prior to or during the construction period, the HE value actually improves. As far as displacement is concerned the agency's road closures actually mitigate for almost 3,000 more acres than required for displacement mitigation, ranging from 12,000 and 13,500 acres of displacement mitigation.	**Comment Response 339-94** The Access Amendment replaced the HE goal and linear ORD standard with specific standards for core area, OMRD, and TMRD for individual BMUs. HE and linear ORD were not evaluated in the FEIS, but core, OMRD, and TMRD were. The analysis of grizzly bear displacement effects was revised in the FEIS to incorporate transmission line construction timing restrictions described in the agencies' mitigation plan (Section 2.5.7.4 of the FEIS) and to better characterize the short-term nature of the transmission line activities.
339-95	**Figures** **Figure 56: Project Water Balance, Evaluation Phase, Alternative 3** The insert is confusing while MMC understands the intent; there may be a better way to show where the water is coming from. **Figure 57: Project Water Balance, Construction Phase, Alternative 3** Same comment as above.	**Comment Response 339-95** Thank you for your comment. The water balance figures were developed at the request of the Environmental Protection Agency, which found them helpful.
339-96	**Figure 71: Predicted Are of Groundwater Drawdown Post-Closure Phase (Maximum Baseflow Change)** Figure 71 presents cumulative water table drawdown and should be presented in the true context of the conservative nature of the hydrologic model. As MMC has stated previously on the numeric model, it is allowing water drawdown to transcend geologic features and boundaries that are known to exist. These boundaries are very likely to be barriers to water movement. This figure is likely an extreme case of drawdown predictions. **Figure 75: Cumulative Water Table Drawdown Post-Closure Phase (Maximum Baseflow Change)** Same comment as above. *MMC Comments on SDEIS* *11/21/2011* *Page 21 of 40*	**Comment Response 339-96** See comment response 338-32.

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339-97 339-98 339-99 339-100 339-101 339-102	**Appendix C. Agencies' Conceptual Monitoring Plans** **C.1 Introduction** Page C-1, 1st Paragraph MMC plans the following schedule to develop and submit various plans to the agencies: • ROD-Plan of Operations-submitted shortly after ROD issued by agencies • Monitoring Plans-in phases as appropriate for activities in each phases of project (evaluation, construction, operations) • Implementation of plans-concurrently or prior to the various project stages • Site specific and issue specific as to the schedules that will maximize efficiencies, approval process and permit project to advance unimpeded MMC has reviewed the plan requirements and understands the importance of monitoring and data collection, however, we also believe that monitoring plan should be site specific, objective driven, and based on the SDEIS and the DEIS analyses of significant issues. This plan appears to collect data in the absence of rational scientific reasons or using the basis of the EIS analyses. MMC believes this is important to minimize the collection of data that provides no benefit to the agencies or the project. MMC requests that the agencies work directly with MMC in developing the monitoring plan based on all of the comments above. We understand this will take effort to review existing data, EIS analyses, and the establishment of reasonable objectives but believe this will provide an efficient and effective monitoring program. MMC would suggest we start this immediately. MMC feels the monitoring plan should specifically identify that provisions within this plan will change based on data collection and other important aspects. It is inferred in the text but is actually a very important aspect of the monitoring program. MMC is concerned about the blanket requirement to collect at least one year of data before dewatering and/or extension of the Libby Adit is initiated. This could have serious implications to the overall project schedule when 20 years' worth of data and the fact that many of the monitoring requirements can be done concurrently and still meet the objectives. MMC would request that that be eliminated and specific targets and time frames developed in the detailed monitoring plan based on when activities and impacts could occur. As an example, the SDEIS in general terms identifies little or no impact from the operations yet the plan requires monitoring one year prior to starting activities. Page C-1, 2nd Paragraph Monitoring report requirements seem to have some duplication with permits. MMC would like to minimize the amount of duplication and would suggest that the reporting aspects be developed after final permits are issued. *MMC Comments on SDEIS* *11/21/2011* *Page 22 of 40*	**Comment Response 339-97** Thank you for your comment. Chapter 2 and Appendix C describe the timing of required data collection, monitoring, and submittal of final design plans. For example, Section 2.5.2.6.3 described the final design process for the tailings impoundment and associated facilities. **Comment Response 339-98** The monitoring plans, as presented, are based on review of existing data, anticipated effects described in the EIS, and collaboration with cooperating and other reviewing agencies. Appendix C was revised in the SDEIS to provide the objectives of each monitoring plan and an implementation schedule. **Comment Response 339-99** See comment response 339-98. **Comment Response 339-100** Section C.1 indicates the agencies may call a meeting with all other relevant agencies after submittal of a monitoring report to review the monitoring plan and results, and to evaluate possible modifications to the plan or permitted operations. **Comment Response 339-101** Some of the required monitoring listed in Appendix C would be completed 1 year before the dewatering and extension of the Libby Adit to avoid the modeled effects during the Evaluation Phase. Section 2.5.6.2.1 and Section 1.3.1 of Appendix C of the 2009 DEIS indicated the GDE inventory was to be completed early enough for 1 year of baseline data to be collected before mining began. The pre-Evaluation Phase monitoring was clarified in Section C.10 of the SDEIS, again in the FEIS, and in a 8/1/12 letter to MMC. In 2009, MMC completed a GDE inventory focusing on areas at or below about 5,600 feet on the north side of the Libby Creek watershed. Additional inventory in the Libby Creek drainage was conducted in 2010. The additional inventory consisted of inventorying GDEs identified in 2009 and the threatened, endangered, and Region 1 sensitive species lists. MMC conducted an inventory of other mine areas, such as the Ramsey Creek, East Fork Rock Creek, and East Fork Bull River drainages, in 2012 2013 and 2014. **Comment Response 339-102** Section C.1 was revised to indicate final reporting requirements would be described in applicable permits or approvals.

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339-103	Page C-1, 3rd Paragraph The objectives of the monitoring plan as presented are certainly aspects of monitoring objectives but it does not seem like these are the primary objectives. MMC believes monitoring is done to ensure compliance with applicable permit stipulations and to monitor the effects of the major issues identified in the EIS process to ensure mine impacts are not greater than analyzed. It appears that some of the monitoring is based on affects that were identified as insignificant in the EIS. There may be opportunities to streamline and minimize monitoring requirements were appropriate; or at a minimum limit the time period collection occurs.	**Comment Response 339-103** The commenter correctly points out that some monitoring plans include aspects of data collection which are not directly related to "compliance with applicable permit stipulations," although they do address water quality, which is addressed as a major issue. For some resources, notably hydrology and geochemistry, data collection focused on gaps in existing data.
339-104	**C.2 Air Quality** Air quality comments will be submitted separately.	**Comment Response 339-104** MMC's comments on air quality are addressed in responses to document 337.
339-105	**C.2.4 Reporting** Page C-3, 2nd Paragraph The monitoring plan should not include details of reporting requirements at this stage of the projects. To reduce conflicts with future permits and the monitoring plan, the USFS should simply be copied on reporting requirements for those permits to reduce duplicating efforts.	**Comment Response 339-105** Potential for duplication of effort does exist with multiple reporting requirements, and can be avoided with coordination of those requirements at the time permits are issued. Key participating agencies have requested the specific reporting requirements as a means of ensuring that data collected through the monitoring program are disclosed publically, in a timely manner, and that the decision to proceed with mining considers those data. Without these specifics, there is agency and public concern that data collected during the Evaluation Phase would not be properly considered prior to initiation of mining.
339-106	**C.3 Cultural Resource** **C.3.2 Locations, Parameters, and Frequency** Page C-4, 4th Paragraph MMC respectfully reminds the KNF and DEQ that MSHA requirements will dictate access to the project and must be stringently adhered to during operations. In addition, most of the sites currently identified are historical in nature and MMC would expect that involvement of the local native communities would focus on those pre-historic sites and relative importance to their culture. MMC will work with the KNF to facilitate as much as possible for this to occur within the framework of MSHA requirements.	**Comment Response 339-106** The agencies anticipate any personnel involved in project monitoring would adhere to all applicable MSHA requirements. Section C.3.2 of the SDEIS and FEIS adequately described Tribal involvement in cultural resource monitoring.
339-107	Page C-5, Bullets 3-6 Section C.3.2, 2nd paragraph requires MMC to hire a qualified archaeologist to monitor land disturbing activities. This section requires us to obtain one when we already have one and seems redundant.	**Comment Response 339-107** Section C.3.2 of the SDEIS and FEIS required that monitoring be completed by a qualified archaeologist meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716).
	C.4 Wetlands **C.4.1 Objective** Page C-5, 2nd Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 23 of 40*	

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339-108	The requirement to monitor wetlands in the impoundment area will not be possible as once construction starts the wetlands will be filled. This section should clarify the specific wetlands to be monitored. **C.4.2 Locations, Parameters, and Frequency** Page C-6	**Comment Response 339-108** The discussion on monitoring wetlands in the impoundment area referred to Section C.10.5.5.2 of the SDEIS and FEIS, which discussed monitoring of wetlands north of the impoundment area to assess potential effects of the pumpback wells. Such wetlands would not be filled.
339-109	Monitoring and reporting should be defined based on the core permit issued; it is premature to discuss it at this point. **C.5 Wildlife** **C.5.2 Locations, Parameters and Frequency** **C.5.2.1 General Wildlife** Page C-7, 1st Paragraph	**Comment Response 339-109** See comment responses 339-102 and 339-105.
339-110	The requirement to monitor animals killed by vehicles needs to be clarified as MMC will not be patrolling the road, therefore, we will only be able to report vehicle collisions that occur for mine vehicles, vendors, and shippers associated with the project. MMC will report animals that are found on the road corridor but may not be able to determine why the animal died (i.e. vehicle).	**Comment Response 339-110** The agencies determined that the Montanore Project would result in an increased risk of wildlife-vehicle collisions caused by mine-related traffic as well as increases in other traffic not associated with the mine. While the agencies agree that MMC cannot control wildlife mortalities caused by the general public, increases in traffic volumes and speeds of vehicular traffic facilitated by widening and paving of the Bear Creek Road (NFS road #278) and new bridge construction would contribute to an increased risk of vehicle-caused wildlife mortality. The agencies believe it is appropriate for MMC to monitor wildlife mortalities caused by vehicle collisions along roadways used for access or hauling ore, and to implement mitigation strategies if wildlife-vehicle collisions increased substantially. The agencies understand it may not always be possible to determine the cause of death for animals found along the roadways, but MMC would record data, such as if someone witnessed the animal's death or if the carcass showed signs of disease or predation, that would provide evidence for determining the probable cause of death.
339-111	MMC does not understand why wolf and black bear mortalities have to be reported within 24 hours when neither are T & E species. It is important to specifically define the species to be monitored on this section. **C.5.2.2 Grizzly Bear** Page C-7	**Comment Response 339-111** The agencies determined it is important to monitor black bear mortalities because black bears and grizzly bears have similar movement patterns, and black bear mortalities may help indicate areas where grizzly bears may be most likely to cross roads and thus be vulnerable to vehicle collisions.
339-112	This section discusses MMC's funding of a bear monitoring program to identify a linkage area between the Cabinets/Yaak and the Cabinets/NCDE. Specifically, the plan calls for three years of funding for aerial surveys. What proportion of the linkage area funding would go to the aerial surveys? MMC suggests that similar data could be collected by using ground based surveys such as hair snags and/or bear scat. This would provide actual habitat usage data, which could be collected several times throughout the year. **C.5.2.3 Lynx** Page C-8, 2nd Paragraph	**Comment Response 339-112** In the agencies' mitigation plan, MMC would provide funding for bear monitoring in the area south of Libby between the Cabinet-Yaak Ecosystem and Northern Continental Divide Ecosystem as identified by USFWS. The linkage identification work along US 2 would involve 3 years of monitoring movements of grizzly and black bears along the highway to identify movement patterns and key movement sites. Other monitoring methods may be considered if approved by the Oversight Committee described in comment response 339-16.
339-113	MMC is unclear as to the monitoring of compacted snow but since the KNF is doing the monitoring MMC is fine with it, however, for clarity there will be no recreational snowmobiling allowed in the project area. *MMC Comments on SDEIS* *11/21/2011* *Page 24 of 40*	**Comment Response 339-113** Thank you for your comment.

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339-114 339-115 339-116 339-117	**C.5.2.4 Mountain Goat** Page C-8, 3rd Paragraph The requirement of monitoring tied to the generic term construction should be modified and tied to specific project activities that were identified in the EIS as having the largest impact. Based on the DEIS write-up mountain goat winter range includes spruce-fir forest with typical 80% slopes, their summer range is associated with steep rock outcrop. When considering these it seems the only items where major construction activities will occur would be the plant site and tailing impoundment. Neither of these are close to this type of habitat, therefore, the only remaining items are the Upper Libby Adit and the Rock Lake ventilation adit. Both of which are inconsequential to the mountain goats. MMC would suggest that the surveys do not necessarily need to be tied to any specific activity. MMC would also like to see the potential mitigation that may be considered. **C.6 Geotechnical** **C.6.2 Locations, Parameters, and Frequency** Page C-9, 4th Paragraph MMC is concerned that the geotechnical monitoring plan for the tailings impoundment would have to be submitted to the agencies prior to project initiation. MMC feels this task does not need to be tied to initiating any aspect of the project. Obviously, MMC will have to do the geotechnical work and the design efforts prior to the start of construction on the impoundment. Page C-10, Table C-2 Table C-2 provides a generic overview of what is typically collected for a tailing impoundment construction program. MMC will be taking the Poorman conceptual design in the SDEIS and will complete site investigation for geotechnical conditions and will develop a detailed design that will incorporate monitoring that will be required by the design engineer. The design firm will be given Table C-2 as guidance for their ultimate standard operating procedure plans and QA/QC program. This information will be provided to agencies for review. The pressure transducer requirement for the pond elevation can be accomplished and will be accomplished as part of the daily inspections by the operators. The design firm will establish free board and wave run up storage capacities that must remain at each stage to meet design criteria. Using a pressure transducer to monitor pond levels is unnecessary. **C.7 Subsidence** Page C-11, 6th Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 25 of 40*	**Comment Response 339-114** The agencies are confused by MMC's comment that the "generic term construction should be modified and tied to specific project activities" followed by a suggestion that surveys not be tied to any specific activity. The agencies' mitigation plan included monitoring during construction because the data collected would help identify adverse effects on mountain goats that could also occur during operations. Without these data, the agencies cannot determine the specific mitigation measures that would be most appropriate. Measures included in the agencies' alternatives described in Section 2.5.9.2 of the SDEIS and Section 2.5.7.4 of the FEIS were developed to mitigate potential displacement effects on mountain goats. Disturbance effects from human activity would have a much greater impact on the mountain goat than physical impacts to goat habitat, and are described in the analysis of impacts on mountain goats (Section 3.25.3.3 of the FEIS). **Comment Response 339-115** Section 2.5.2.6.3 of the SDEIS and FEIS described the final design process for the tailings impoundment, including data collection, likely a preliminary and final design phase, and a technical review of the final design by a technical review panel established by the lead agencies. **Comment Response 339-116** Table C-2 is based on MMC's proposed geotechnical monitoring shown in Table 2.1 in Klohn Crippen Berger (2007) report: Montanore Tailings Facility, Updated Design Aspects. As Section C.1 discussed, Appendix C contains the agencies' conceptual monitoring plans for Alternative 3. MMC would develop final monitoring plans for the agencies' approval before the Evaluation Phase for the mine alternative selected in the KNF's ROD. **Comment Response 339-117** MMC proposed pressure transducers in a Klohn Crippen Berger (2007) report: Montanore Tailings Facility, Updated Design Aspects (p. 5). See comment response 339-116.

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339-118	MMC does not understand why we would have to submit initial plan prior to the evaluation phase as there will be no major subsidence on geotechnical issue during the evaluation phase. The evaluation phase is intended to collect important data that is needed to prepare the plan and design for mine operations. It is premature to develop a comprehensive geotechnical monitoring program prior to the evaluation when we don't know the geologic conditions. MMC would develop the plan and provide it to the agencies after the evaluation, sometime during the construction phase as appropriate based on data collection and geologic information prior to operations.	**Comment Response 339-118** MMC's Plan of Operation contained a proposed geotechnical monitoring plan. The agencies modified MMC's proposed plan for Alternatives 3 and 4. Section C.7 was revised in the FEIS to indicate an initial plan would be developed during final design and would be approved by the agencies and implemented before any underground development began in the Construction Phase.
	Page C-12, 1st Paragraph	
339-119	This paragraph spends a considerable amount of time relating the Troy Mine sinkhole and pillar failures to the Montanore Project. Numerous technical reports have been completed by Call and Nicholas and Agapito with the same assessment. The non-yielding pillar designs are conservatively developed and the risk of subsidence from any pillar failure is an extremely low risk. Agapito specifically identified the possibility of a sinkhole similar to the Troy as unlikely, further, Call and Nicholas estimated the maximum elevation above the workings that could collapse was 380 feet. The suggestion that hydraulic effects could be exacerbated is not the case. Depth to the zones that would have near surface fracture storage is well above all of the mine void areas.	**Comment Response 339-119** The proposed mitigation, which the agencies discussed with MMC in a February 2, 2009 conference call, was developed by the agencies' independent consultant, Agapito Associates, Inc. It was developed after reviewing the numerous technical reports on the Montanore and Troy projects. The discussion of potential hydrologic effects is warranted because the hydrologic characteristics of the Rock Lake fault and the ore body are poorly characterized.
339-120	MMC believes the Geotechnical monitoring will stand on its own and there is no need to back calculate Troy pillar mine failures. There scenario is completely different and their mine voids are closer to the surface than MMC's mine voids will be.	**Comment Response 339-120** See comment response 339-119.
	Page C-12, 2nd Paragraph	
339-121	MMC understands the agencies interest in helping to develop the geotechnical data collection process as it relates to subsidence. Given the lack of risk associated with subsidence and the importance of pillar design and work area safety issues MMC will need the flexibility to focus designs, monitoring, and other important rock mechanic questions to meet company safety needs as well as MSHA rules and regulations. MMC highly recommends that the agencies defer these specific issues to MSHA authority.	**Comment Response 339-121** See comment response 339-119.
	Page C-12, 4th Paragraph	
339-122	MMC's focus will be on MSHA and worker safety as the primary objective for ground control, when we meet these criteria it will by default developed in an environmentally safe manner as well.	**Comment Response 339-122** See comment response 339-119. MSHA's jurisdiction is mine worker health and safety during operations through closure. Other resources, outside of MSHA's jurisdiction, are potentially affected by subsidence.
	C.9 Geochemistry	
	General Comments	
339-123	• Geochemical monitoring is more prescriptive as opposed to the more appropriate approach of performance based.	**Comment Response 339-123 and 339-131** The agencies determined the prescriptive approach is warranted, to address specific questions or uncertainties for which data collection has not been performed. This approach was based on significant consultation with reviewing agencies, and is intended to offer MMC the opportunity to address the data collection during (rather than prior to) the Evaluation Phase.
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339-124 339-125 339-126 339-127 339-128	• Figure C-1 Decision Matrix for Geochemical Sampling Analysis-Is more in line with the performance based approach however, individual monitoring detail has specific test requirements as opposed to following the decision tree. • Figure C-1-MMC suggests modifying the decision tree with performance based criteria as the decision tree doesn't set targets which are critical to the decision process. MMC will work with the agencies to better refine this process as we believe it is the correct approach. • "Uncertainties" This term is used loosely throughout the monitoring section. MMC disagrees that there is this much uncertainty in the potential quality of waste rock and water chemistry for all phases of the operation. The historical aspect of water quality while Noranda operated was limited to nitrates, which is not a geochemical aspect of the rock. Water quality in Libby Creek during the exploration activities was of extremely high quality. This information seems to be missed to help minimize the use of uncertainty when it is clear there is sufficient information from the adits to support otherwise. • MMC understands the importance of testing and proposed waste rock characterization. However, we believe it is important that test work be completed in a meaningful way as opposed to completing tests for the sake of doing tests. • Volume/spatial-the monitoring plan suggests spatial sample selection is more prudent than volume and geologic changes. MMC disagrees because of the lack of complexity with the Belt Series geology. There is much known about the system. MMC believes that a comprehensive approach allowing the site geologist to develop and select the sampling approach is best. They will have the most information, the best understanding of the geology, and first hand visual access to the various rock units. • QEMSCAN/XRD/SEM-EDS-These are valuable exploration tools to identify mineralogy for various reasons. It seems that this requirement appears numerous times in the monitoring plan when there may be little basis to support understanding mineralogy. Basic testing should be done first and the results used to determine if mineralogy is an important aspect of water quality issues or waste rock characterization information. • Nitrates-The geochemical section focuses on nitrates, which is not a rock quality or chemical issue. Nitrates will be treated on water that is to be discharges. MMC understands the issue but the fact that all water associated with the project will not be released without treatment seems to be overly emphasized and doesn't take into consideration the project details. • MMC does not have access to Troy Mine data and this should be removed throughout the geochemical monitoring as a requirement for MMC. • MMC urges the agencies to work with MMC on refining the plan to be more performance based versus prescriptive. MMC at the request of the agencies developed a Waste Rock Characterization Report September, 2009 where MMC divided the mine plan in to different phases. Each phase was correlated with specific drill holes and geochemical test work completed by Noranda. This document appears to be missing from the SDEIS, throughout the SDEIS it makes continuous reference to the uncertainty of acid generating *MMC Comments on SDEIS* *11/21/2011* *Page 27 of 40*	**Comment Response 339-124 and 339-125** The decision matrix in Figure C-1 provides a general context for the more specific test recommendations of the agencies monitoring plan. Insufficient data are presently available to establish meaningful performance based criteria, e.g. trigger levels, based on statistical analysis of confidence intervals for some parameters. Section C.9.7 discusses that the need to handle material selectively would be reevaluated and criteria for material placement would be established following completion of the Evaluation Phase. Where possible, trigger values that would enable mining personnel to identify rock for selective handling or to determine the need for mitigation would be identified. **Comment Response 339-126** Elements of uncertainty in sampling adequacy, analytical method coverage, and detection limits were described very specifically throughout Appendix C and were disclosed deliberately to balance the uncertainties with possible environmental impacts. (See discussion of uncertainty, monitoring, and mitigation in Sections 3.8.4, 3.10.4, and 3.11.4. The cited characteristics of Libby Creek at the time of NMC's initial adit development support an overall low risk of water quality effects during the Evaluation Phase, but are insufficient to resolve the identified elements of uncertainty listed by geological formation in Appendix C.9. The geochemical sampling and analysis plan (SAP) was developed to address the disclosed uncertainty through analysis of additional samples obtained once underground access is established during the evaluation phase. **Comment Response 339-127** The testing recommended in the SAP targets specific elements of uncertainty, as discussed in Appendix C.9. **Comment Response 339-128** The proposed sampling plan considers both spatial and geologic changes, in addition to volumetric considerations. Variation in sulfide mineralogy between the altered waste zones in the lower Revett is a well-documented aspect of the Revett geology, which is known to be regionally consistent (see Hayes et al, 1983). Aspects of the geology that will be intercepted in adits and underground workings have not yet been completely described *in situ*, but understanding of the regional geology suggests that some variation in sulfide content should be expected within the lower Revett altered waste zones (see Hayes et al. 1990). It may be that these zones represent a minor volume of rock, but if they produce significant acidity or metals, they may nevertheless influence overall water quality in weakly buffered downgradient water with low background solute (continued on next page)

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339-129 339-130 339-131 339-132 339-133	• Figure C-1 Decision Matrix for Geochemical Sampling Analysis-Is more in line with the performance based approach however, individual monitoring detail has specific test requirements as opposed to following the decision tree. • Figure C-1-MMC suggests modifying the decision tree with performance based criteria as the decision tree doesn't set targets which are critical to the decision process. MMC will work with the agencies to better refine this process as we believe it is the correct approach. • "Uncertainties" This term is used loosely throughout the monitoring section. MMC disagrees that there is this much uncertainty in the potential quality of waste rock and water chemistry for all phases of the operation. The historical aspect of water quality while Noranda operated was limited to nitrates, which is not a geochemical aspect of the rock. Water quality in Libby Creek during the exploration activities was of extremely high quality. This information seems to be missed to help minimize the use of uncertainty when it is clear there is sufficient information from the adits to support otherwise. • MMC understands the importance of testing and proposed waste rock characterization. However, we believe it is important that test work be completed in a meaningful way as opposed to completing tests for the sake of doing tests. • Volume/spatial-the monitoring plan suggests spatial sample selection is more prudent than volume and geologic changes. MMC disagrees because of the lack of complexity with the Belt Series geology. There is much known about the system. MMC believes that a comprehensive approach allowing the site geologist to develop and select the sampling approach is best. They will have the most information, the best understanding of the geology, and first hand visual access to the various rock units. • QEMSCAN/XRD/SEM-EDS-These are valuable exploration tools to identify mineralogy for various reasons. It seems that this requirement appears numerous times in the monitoring plan when there may be little basis to support understanding mineralogy. Basic testing should be done first and the results used to determine if mineralogy is an important aspect of water quality issues or waste rock characterization information. • Nitrates-The geochemical section focuses on nitrates, which is not a rock quality or chemical issue. Nitrates will be treated on water that is to be discharges. MMC understands the issue but the fact that all water associated with the project will not be released without treatment seems to be overly emphasized and doesn't take into consideration the project details. • MMC does not have access to Troy Mine data and this should be removed throughout the geochemical monitoring as a requirement for MMC. • MMC urges the agencies to work with MMC on refining the plan to be more performance based versus prescriptive. MMC at the request of the agencies developed a Waste Rock Characterization Report September, 2009 where MMC divided the mine plan in to different phases. Each phase was correlated with specific drill holes and geochemical test work completed by Noranda. This document appears to be missing from the SDEIS, throughout the SDEIS it makes continuous reference to the uncertainty of acid generating *MMC Comments on SDEIS* *11/21/2011* *Page 27 of 40*	loads. Further, whole rock and acid base accounting data identify variability within the Prichard formation (see Section 3.8.1.5.4 of the FEIS), which contradicts the "lack of complexity." Although this variability does not necessarily indicate a risk to water quality, it does indicate that additional sampling in zones of rock that have not yet been sampled or mined is warranted. The expertise of site geologists would certainly be needed to describe and document spatial variation, or lack thereof, and sound geological judgment will be essential in complying with the requested sampling program. **Comment Response 339-129** The text has been revised to clarify that mineralogy is needed at multiple levels in the sampling program. The sampling plan would involve two levels of mineralogical characterization. Initial geological description is "basic testing" that would be used to guide sample collection and subsequent analysis. Subsequent static tests of sulfur and metal geochemistry would then guide the need for further analytical mineralogy using the QEMSCAN/XRD or SEEDS. Figure C-1 has been revised to clarify the intent for descriptive mineralogy to accompany all sampling, while analytical mineralogy will be completed when needed to answer specific questions regarding sulfide reactivity or metal release in key lithotypes. The need for screening level hand specimen mineralogy, followed by more analytical mineralogy using QESCAN or other petrologic methods, is based on review of existing data. A small number of samples have been recommended for analytical mineralogy. The text has been revised to emphasize the need for "analytical mineralogy" over a particular method (e.g., QESCAN or other), and to indicate that analytical mineralogy may be set aside if future data support its exclusion. **Comment Response 339-130** Thank you for your comment. When rock is blasted during the mining process, it is coated with soluble nitrate-rich residue. Although it ultimately becomes a water quality issue that requires water treatment, the source of the nitrate would be the mined rock. For this reason, issues associated with nitrate release from mined rock were addressed in the geochemistry section.

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339-131 339-132 339-133	• Figure C-1 Decision Matrix for Geochemical Sampling Analysis-Is more in line with the performance based approach however, individual monitoring detail has specific test requirements as opposed to following the decision tree. • Figure C-1-MMC suggests modifying the decision tree with performance based criteria as the decision tree doesn't set targets which are critical to the decision process. MMC will work with the agencies to better refine this process as we believe it is the correct approach. • "Uncertainties" This term is used loosely throughout the monitoring section. MMC disagrees that there is this much uncertainty in the potential quality of waste rock and water chemistry for all phases of the operation. The historical aspect of water quality while Noranda operated was limited to nitrates, which is not a geochemical aspect of the rock. Water quality in Libby Creek during the exploration activities was of extremely high quality. This information seems to be missed to help minimize the use of uncertainty when it is clear there is sufficient information from the adits to support otherwise. • MMC understands the importance of testing and proposed waste rock characterization. However, we believe it is important that test work be completed in a meaningful way as opposed to completing tests for the sake of doing tests. • Volume/spatial-the monitoring plan suggests spatial sample selection is more prudent than volume and geologic changes. MMC disagrees because of the lack of complexity with the Belt Series geology. There is much known about the system. MMC believes that a comprehensive approach allowing the site geologist to develop and select the sampling approach is best. They will have the most information, the best understanding of the geology, and first hand visual access to the various rock units. • QEMSCAN/XRD/SEM-EDS-These are valuable exploration tools to identify mineralogy for various reasons. It seems that this requirement appears numerous times in the monitoring plan when there may be little basis to support understanding mineralogy. Basic testing should be done first and the results used to determine if mineralogy is an important aspect of water quality issues or waste rock characterization information. • Nitrates-The geochemical section focuses on nitrates, which is not a rock quality or chemical issue. Nitrates will be treated on water that is to be discharges. MMC understands the issue but the fact that all water associated with the project will not be released without treatment seems to be overly emphasized and doesn't take into consideration the project details. • MMC does not have access to Troy Mine data and this should be removed throughout the geochemical monitoring as a requirement for MMC. • MMC urges the agencies to work with MMC on refining the plan to be more performance based versus prescriptive. MMC at the request of the agencies developed a Waste Rock Characterization Report September, 2009 where MMC divided the mine plan in to different phases. Each phase was correlated with specific drill holes and geochemical test work completed by Noranda. This document appears to be missing from the SDEIS, throughout the SDEIS it makes continuous reference to the uncertainty of acid generating *MMC Comments on SDEIS* *11/21/2011* *Page 27 of 40*	**Comment Response 339-131** For the geochemical evaluation in the DEIS, SDEIS and FEIS, the agencies relied on publically available Troy monitoring data for its analysis of water quality for underground workings and tailings seepage chemistry, in the absence of comprehensive kinetic and metal mobility data for the Revett Formation at Montanore. Publicly available documents are cited in the FEIS and listed in Chapter 8. As a full scale, long term geologic analog, Troy data offer valuable real-time data that have been used to support the Montanore NEPA analysis and the agencies anticipate MMC would continue to consider the Troy data in its operations. Data generated by either the Troy Mine or the proposed Rock Creek Project are publicly available from the KNF or the DEQ. **Comment Response 339-132** See comment response 339-123. **Comment Response 339-133** The agencies considered the referenced report in Section C.9.1 and included the relevant portions of the information provided in it. The low overall risk of acid generation potential is recognized as consistent with the cited NP/AP ratio for Evaluation Phase, which has been instrumental in supporting the decision to proceed with the evaluation adit. The available metal mobility data, however, are insufficient to support the conclusions noted in the comment.

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339-134 339-135 339-136 339-137	potential. The document prepared by MMC helps to provide a better understanding of the representativeness of drill holes to the various mine phases. The Waste Rock Characterization Report looked at the zone five to twenty feet around the ore zone that would mimic the suggested halo zone that may exist for the Montanore deposit. While the raw data is included in the Geomatrix Waste Rock Management Plan report, MMC's report takes it a step further to relate specific information to the stages of mining Stage 1 (years 1-5) and Stage 2 (years 6-16). As an example, Stage 1 has a projected NP/AP ratio of 4 based on the geochemical analysis. Further, the metals that match the MPDES discharge criteria that exist for the project are compared in this report as well. In the report it shows that the metals when compared to the MPDES permit criteria are below or within the discharge limits; without treatment. It seems to MMC that this level of analysis in the geochemical portion of the document is valuable in helping to place in context the range of uncertainties presented throughout. The information presented in the Waste Rock Characterization Report will help to develop the geochemical monitoring program that needs much more flexibility than presented in Appendix C. MMC is willing and eager to sit down with the agencies to walk through the data and to develop the criteria that should be part of the decision tree. **C.9.1 Introduction** Page C-14, 5th Paragraph MMC believes that the concerns listed in this section, while things that need to be considered and assessed, the risks are overstated. There are many factors that will influence water quality but the fact that these are the Belt Supergroup Formation in and of itself should provide a significant inference as to the lack of risk. Page C-15, 2nd Paragraph MMC believes this paragraph is a perfect example of overreacting and forcing Montanore into a perceived mold of all mineral deposits, regardless of the geology or mineralogy. Issues raised about coordinating the collection and interpretation is unfounded based on all the data and information provided. Waste rock will be placed in only two areas, a lined facility at the Libby Adit and within the tailings impoundment, both areas that are controlled and contained and pose little risk. Page C-16, Figure C-1 MMC feels Table C-1 is a reasonable approach and should be the basis for the monitoring as opposed to the Appendix C text. Instead of providing detail on what MMC would propose it is suggested that the agencies and MMC develop this together as part of the FEIS. Page C-17, 1st Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 28 of 40*	**Comment Response 339-134** Thank you for your comment. **Comment Response 339-135** The proposed sampling program is lithology specific and addresses the key questions about the Belt Supergroup lithologies that are explained explicitly in Appendix C. Waste rock characterization has relevance for impacts to groundwater within underground workings, in addition to the described adit and tailing impoundment. Further, management of water from the lined facility and tailing impoundment also requires consideration. The geochemical sampling and analysis plan addresses these issues. **Comment Response 339-136** The paragraph discusses the comments and concerns identified during Draft and Supplement Draft EIS public comment periods. **Comment Response 339-137** See comment response 339-124.

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339-138	Monitoring will be an ongoing effort throughout the project, it seems unnecessary to require specific elements other than the basic plan prior to any mining activity. Data and results will be provided on a regular basis to the agencies. **C.9.2 Mine Plan and Material Balance** C-17, 6th Paragraph	**Comment Response 339-138** See comment response 339-123. **Comment Response 339-139** See comment response 339-97. **Comment Response 339-140** Table C-3 was revised to use a density of 12.18 cubic feet/ton, as suggested in comment response 339-27. **Comment Response 339-141** The justification for the limited additional characterization of the Prichard and Burke formations recommended in the SAP (See C.9) has been provided in detail in Appendix C.9.4.1 and C.9.4.2, respectively. To clarify, static testing and whole rock lead concentrations alone are not sufficient to address the uncertainties identified in waste rock sump water quality or in C.9.4.1.3. **Comment Response 339-142** The identified number of samples is considered to be a minimum necessary to provide a preliminary evaluation of data adequacy for a simple, normally distributed population. Further statistical evaluation of the collected data is indicated to determine whether populations are normally distributed and if further sampling, in addition to those identified, would be necessary. The text in this paragraph has been revised to clarify that intent.
339-139	For clarification purposes MMC intends to submit a ROD-Plan of Operations shortly after the ROD is issued, MMC would expect the agencies approval on the modifications for the full project. MMC understands numerous plans and other items will require agency approval throughout the project life. Page C-18, Table C-3	
339-140	MMC provided the information to the agencies that are included in this table. The original data was provided in bank cubic yards because of the consistency in the use bank cubic yards (no conversion is required). ERO converted these to tonnage values using a slightly different number than MMC. If tons are going to be used than MMC recommends the agencies use 12.0 cft/ton for the conversion. In addition values reported in the table for Operations (Years 1-5) and (Year 6+) are incorrect for the Revett non lead waste category and should be 383,160 tons and 402,898 tons respectively. **C.9.4 Evaluation Phase Sampling and Analysis** Page C-20, 2nd Paragraph	
339-141	*"...Prichard, Burke...would be exposed to changing weather conditions throughout mine life."* MMC understands the intent but for clarity the Prichard and Burke formations have both been encountered by the Libby Adit and have gone through the weathering exposure changes and other items listed in this section. When MMC sampled the water when the adit was opened in 2006 the water quality was extremely good. Since dewatering to the 7200' level water quality remains high, suggesting that these exposure changes in the Prichard and Burke may not be as relevant as suggested in the document. Years of data have been collected with little indication of elevated metals or reduced pH. This would hopefully be used to minimize unnecessary testing when there has been little indication of water quality issues. In this case MMC would suggest that simply static testing be completed on new exposures to validate the conditions observed in Libby Adit. Page C-20, 3rd Paragraph	
339-142	MMC understands the comment that minimum requirements for a simple normally-distributed data set would be used but the text goes further and sets values. Until we collect the data and do the analyses we will not know the number of minimum samples required. Again MMC highly recommends that the plan be focused on the decision tree with the decision tree being expanded significantly to include criteria. *MMC Comments on SDEIS* *11/21/2011* *Page 29 of 40*	

Comment	Document #339-Klepfer Mining Services, LLC	Response
339-143 339-144 339-145 339-146	There is no way to fully understand the range of variability in mineralization prior to any sampling and during initial sampling. Therefore, spatial and volume is the only way to get started and have a sense that you've collected a reasonable representation of the waste. It is also important to look at the results and not just be focused on statistics. Page C-21, 1st Paragraph *"Likewise, extensive characterization of a rock type represents a small percentage of the total mine material…that represents a large portion of the waste."* MMC understands the comment and the approach but quantity of waste rock should not be the sole basis for requiring samples, especially when considerable data already exists. This is an example of why a performance based is a better approach if there is large consistency in rock characterization than it is MMC's hope that this will drive testing necessary not just shear volume. If the data shows no potential or an insignificant potential then sampling and mitigation should be modified accordingly. Page C-21, Table C-5 MMC is not sure how this table fits in to developing the monitoring program but the initial data from Libby Adit and other data collected suggests that weathering probably plays little role in these low sulfide high carbonate type of systems. Defining lithology at this point is probably premature and may not be relevant to what is actually monitored in the mine workings. Geology and the understanding of its relationship to mineralogy and other important factors will be developed as we move through the project. The agencies should not get attached to the lithologies in the table as they will probably be redefined. The table makes reference to the use of waste rock in construction of roads and other facilities, this is incorrect. MMC only proposed the use of waste rock in the construction of the tailings facility. The DEIS indicates that mine waste rock would be used for the rock toe berm. MMC feels that the rock toe berm will not be necessary and after geotechnical investigation and final designs it will be better understood. Therefore, it is important that the document include waste rock for the starter and main dam construction. This is required for several reasons mostly dealing with the timing of waste generation and the need to place it directly to minimize costs. If a rock toe berm is required the material that was proposed for the starter dam would be used for the construction of this berm. **C.9.4.1.5 Future Geochemical Analyses** Page C-24, 1st bullet Waste rock used for the construction of the tailings impoundment will be contained and no water will leave the site, the text suggests that water quality downgradient of these facilities will be impacted. *MMC Comments on SDEIS* *11/21/2011* *Page 30 of 40*	**Comment Response 339-143** The text has been revised to re-emphasize this fundamental aspect of sampling practice, which is addressed by the recommended sampling program. **Comment Response 339-144** All rock experiences weathering, and the rock in question is not a "high carbonate type of system." The lithologies as defined in Table C-5 are based on the fundamental geology of the Revett-style Cu-Ag deposits (Boleneus et al. 2005), and are the foundation of the analytical framework for the geochemical sampling and analysis program. Any redefinition of fundamental geologic description would need to be justified. **Comment Response 339-145** Table C-5 was revised to eliminate the use of waste rock for road construction. The agencies assume that the rock toe berm or tailings impoundment components would be constructed using waste rock. **Comment Response 339-146** The text suggests that the quality of water with potential to be affected must be considered. In the case of the tailing impoundment, seepage would affect groundwater beneath the tailings impoundment up to the pumpback wells. While groundwater downgradient of the pumpback wells would not be affected if capture was maintained until cessation of the pumpback well system, the need to understand the potential change in water quality upgradient of the pumpback wells was not removed by MMC's commitment to capture tailings seepage.

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339-147 339-148 339-149 339-150	This is incorrect. Performance is preferred over prescriptive and this bullet suggests kinetic testing is needed and seems to jump past the decision tree process. **C.9.4.2.4 Conclusions** Page C-25, 3rd bullet MMC believes that the adit is currently in material that is generally thought of as transitional material and that the Burke has been fully exposed. **C.9.4.2.5 Future Geochemical Analyses** Page C-25, 6th bullet The particle size analyses required is premature and MMC is unclear as to the technical issues associated with this material. The Libby Adit has gone through the Burke and is currently in the transition material into the Revett formation and it has not exhibited any indication of water quality issues. Particle size analyses while academically fascinating has no purpose at this point. **C.9.4.3.1 Revett Barren Lead Waste Zone (Galena halo)** Page C-26, 2nd Paragraph Risk-MMC understands the importance of testing the lead waste material however; we think the analyses presented in the section should put everything in its true context. The total amount of lead waste projected to be generated is 620,338 tons over the life of the project represents approximately 18% of the waste generated for the project. When compared to the total ore production of 120 Million tons it represents 0.52% which is an insignificant amount of material and is the appropriate comparison since the waste will be disposed underground. The void space relative to the small tonnage of space even under flooded conditions can not pose a significant risk to the project. Existing data while limited still provides some basis of placing "sideboards" to the risk perception. The text further suggests that the mine void when not filled for 490 years as if this has any real basis for such a small quantity of material relative to the volume of water. Conclusions Third bullet There will be minimal exposure of the barren lead zone from the mine workings and MMC believes the uncertainty of this material is not as dramatic as suggested and believes that static testing should be done as the basis for considering additional testing. Future Geochemical Analyses Fifth bullet *MMC Comments on SDEIS* *11/21/2011* *Page 31 of 40*	**Comment Response 339-147** The agencies agree that the Burke Formation has been fully exposed in the Libby Adit. An additional 68,000 cubic yards of Burke Formation would be encountered during the construction phase (MMC 2009a). The statement in the 3rd bullet of page C-25 is meant to indicate that sampling would be conducted in new exposures, to confirm consistently of the mineralization throughout the project area. The text has been revised to clarify this point. **Comment Response 339-148** Solute transfer during leaching is a function of mineral surface area and the dilution that results from the water:rock ratio. Rock tested in humidity cell leach tests has a much higher surface area than most rock under field conditions, so the humidity cell tests commonly overpredict the mass transfer due to leaching. A particle size analysis is a simple and inexpensive way for the mass transfer measured in a column leach test to be scaled for application to a field scale model. Future models of groundwater chemistry based on solute release from waste rock backfilled into underground workings, as well as ore exposed in the back and rib, would benefit from such scaling of laboratory leach data. **Comment Response 339-149** Because the lead waste would be 18% of the waste projected over the life of the project; its characterization and management would be important. Its volumetric percentage relative to ore is unimportant in this context. It was weakly acidic in kinetic tests (see Geomatrix 2007a), with elevated potential for metal release, and is therefore designated for backfilling and subaqueous placement. It has demonstrated potential to affect water quality. Disposal underground would offer important advantages in reducing the magnitude of sulfide oxidation, but it should not be construed to resolve all possible concerns about mined material. Until waste placed underground was saturated, it would be exposed to oxygen and sulfide oxidation would occur, along with associated metal release. Once saturated, stored oxidation salts and soluble metal minerals could dissolve, thereby releasing solutes of potential concern to groundwater. The relative mass of dissolved metals that might be released to the volume of affected groundwater needs to be measured for a representative sample of rock to test the validity of the commenter's assumption that the barren lead waste "cannot pose a significant risk to the project." The existing whole rock and static data cannot be used to "place sideboards to the risk perception."

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339-151	This bullet is unclear as to why particle size analyses should be run on the barren lead waste. This seems like an unnecessary test that would be required if the results from static tests and subsequent tests completed indicate particle size is an issue. Water Quality Monitoring All bullets	**Comment Response 339-150** Testing and management of the barren lead zone has been defined as an important focus for the Evaluation Phase. Due to the risk of acid generation established in previous testing (see kinetic results reported by Geomatrix, 2007a), both static and kinetic testing is warranted, with more thorough characterization of potential for release of metals other than lead. This requires completion of leachate metal analyses at appropriate detection limits, which has not been done for the barren lead zone in previous kinetic tests.
339-152	MMC does not have access to Troy Mine monitoring data and believes the requirement for us to continue to evaluate this would be better suited to focus on the material mined at the project. MMC proposed to place barren lead waste into mined out voids that will not have water therefore it seems unnecessary to sample water quality in the mine voids downgradient from the placement of the waste. Also, the second bullet does not address the fact that the majority of the water will be entering from the decline not the mine void. Water entering the mine void, based on the model is somewhat evenly distributed along the Rock Lake Fault minimizing the amount at any given point of the mine void. The reference to nutrient concentrations seems somewhat irrelevant given the small quantity of waste and the potential nitrate volume that could even be present and water that would contain nitrates will be collected and treated.	**Comment Response 339-151** See comment response to 339-147.
	C.9.4.3.2 Revett Formation-Non-Lead Barren Waste Zone Page C-27, 1st Paragraph	**Comment Response 339-152** See comment response 339-131 regarding the publicly available Troy data and comment response 339-149 for discussion of issues related to barren lead zone waste. In the FEIS, post-closure water management was revised to include plugging each adit near the mine void soon after mill operation ceased. Consequently, very little of the water entering the mine void would be from the adits. The reviewer is referred to the discussion provided in Section 3.13.4.2.3 of the SDEIS and FEIS, which describes the issues associated with predicting discharge from underground workings to groundwater.
339-153	MMC does not fully support the position of a defined halo zone(s) as described in the text. Of course we will understand this as we progress towards the deposit. The Waste Rock Characterization Report discussed previously provides information on waste zones around the ore (5 feet and 20 feet). The data does not support this concept; however, there is limited data.	**Comment Response 339-153** Given the limited data about the non-lead barren zone, the agencies believe C.9.4.3.2 adequately describes the available data, risk, and uncertainty with this waste type.
	C.9.4.4 Revett Formation-Ore **C.9.4.4.5 Future Geochemical Analyses** Page C-29, 3rd Paragraph	
339-154	The requirement to review information used in the SDEIS and DEIS will obviously be important during the initial stage of the project. However, MMC feels strongly that the most appropriate comparison will be the data collected with previous work that has a spatial representation of the ore zone. If this data is not conclusive, certainly looking at the Rock Creek and in particular the Troy data will have some value otherwise the data collected by Noranda will be sufficient.	**Comment Response 339-154** In a thorough review of existing data from all three of the Revett deposits, the agencies have determined that there is little risk in proceeding with Evaluation Phase work while specific identified data gaps in the collective database are addressed. In other words, the agencies do not believe that the data collected by NMC are sufficient.
	C.9.4.4.6 Water Quality Monitoring Page C-29, 1st Bullet	
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339-155	As mentioned numerous times continual comparison with the Troy Mine will have less and less value as actual mine data is available. **C.9.4.5 Tailings** **C.9.4.5.2 Risk** Page C-30, 2nd Paragraph	**Comment Response 339-155** The agencies agree that as additional data were accumulated at Montanore, the Troy Mine data would have less relevance as a full scale geochemical analog than it does presently. In the meantime, the agencies determined the Troy Mine data are some of the best available data.
339-156	The comment that the surface area of ground tailings does increase metal release and tailing effluent is not based on what data has been collected on the project. This may be true but it is also likely that the metal release difference will be very insignificant. Combine this with the low risk, the sentence is misleading.	**Comment Response 339-156** The agencies disagree that the statement is misleading. Greater surface area creates more opportunity for metal dissolution. This is why rock is ground for processing. Low concentrations of dissolved metals have been measured in Troy Mine tailing pond water, as well as in Rock Creek tailings analyses. There are no available metal mobility data for Montanore tailings, apart from tests run at relatively high detection limits for a subset of the metals of concern.
339-157	**C.9.4.5.5 Future Geochemical Analyses** Page C-30, 2nd Bullet The mill process is designed to remove the sulfides which contain the metals that are associated with water quality issues. The quantity of sulfides that will remain after the milling process will be significantly less than the original ore which also has very low sulfide content. Also, the remaining material which is quartzite and siltite will be homogeneous and numerous waste characterization tests on tailings seem unnecessary. MMC will be tracking sulfide recovery as part of the normal mill data collection and MMC anticipates doing limited and representative sampling during the project.	**Comment Response 339-157** Thank you for your comment. These points were discussed in Section 3.9.4.3.2 of the SDEIS and FEIS.
339-158	**C.9.5 Operations Phase Sampling and Analysis** Page C-31, 3rd Paragraph The requirement to monitor water quality downgradient of certain facilities that contain waste will already be done under the water sampling requirements for various waste streams at the mine. The primary area for waste disposal is the tailings impoundment that will be associated with the starter dam and/or rock toe berm. In the case of waste rock used for the starter dam, coarse sand will be placed over the waste rock with both units being compacted minimizing oxygen exposure, water infiltration and other similar conditions. If waste rock is used for the rock toe berm the scenario discussed may have slightly more validation than if used in the starter dam. This is a good example of prescriptive versus performance requirements.	**Comment Response 339-158** The monitoring described in Section C.9.4.5.6 is consistent with the water resources monitoring in Section C.10. Sampling downgradient of waste facilities would provide MMC and the agencies with the opportunity to compare field scale weathering and solute release with results of generally more conservative laboratory tests. The tailings impoundment is an example of a location where it would be useful to document the relative influence of waste rock in a starter dam or berm on water quality. If design features such as compaction of coarse sand were included, *in situ* monitoring could be used to document the extent to which this practice succeeded in minimizing oxygen exposure or water infiltration, as described in the comment.
339-159	**C.9.7 Data Analysis** Page C-33, 3rd Paragraph MMC disagrees with the suggestion that a simple NP/AP ratio would be the only basis for requiring a kinetic test. It should be based on sulfur content and make-up along with metal leaching information. Again the decision tree should build these criteria a holistic approach to analyzing. *MMC Comments on SDEIS* *11/21/2011* *Page 33 of 40*	**Comment Response 339-159** The use of a NP/AP ratio is consistent with the GARD guide (International Network for Acid Prevention 2008).

Com-ment	Document #339-Klepfer Mining Services, LLC	Response
339-160	Page C-33, 4th Paragraph MMC disagrees with the statement that a minimum of 20 weeks should be followed and terminated only with regulatory approval. MMC is concerned about the process of obtaining agency concurrence and coordination of the termination of test work. Based on the plan there is a large number of kinetic test work that will have to be completed. What is really most important is what the results are from the test. Secondly, are the values within a range that would be problematic from a water quality standpoint?	**Comment Response 339-160** Thank you for your comment. The subject of when a humidity cell test should be discontinued is a common point of concern. In fact, this issue has caused ASTM to initiate an ongoing review of its protocol to provide more explicit recommendations about when to terminate column tests. The current ASTM standard for kinetic testing recommends a minimum of 20 weeks, so that sufficient time is allowed for sulfide oxidation to develop in partially buffered systems, but there are many examples of humidity cell tests which did not deplete available alkalinity and become acidic until after 20 weeks. The decision to terminate a kinetic test therefore needs to be based on professional judgment and analysis of relative trends in acid production and depletion of alkalinity. Because there is no cut and dried answer about terminating a humidity cell test, many agencies now ask that the decision to terminate tests be reviewed with them before cells are taken off line. As a practical matter, it is generally simpler and less expensive to review the decision with the agencies than to incur the time and cost associated with repeating the test if the agencies believe that all necessary information has not been gathered. For these reasons, humidity cell test results are often reviewed with agencies prior to termination.
339-161	**C.10 Water Resources** Page C-33 General Comments MMC has reviewed the Water Resource Monitoring Plan and provides the following thoughts and suggestions that would improve the monitoring program. • More site specificity is necessary; • The use of bench marks and reference sites must be carefully evaluated; • The timeframes are of serious concern to MMC; • Consideration of the remoteness of many of the sites, the staffing, and activity within the wilderness area should be considered; • Overall reporting needs to be reviewed to allow time to properly analyze and compile the data; • There is really little opportunity to assess the effectiveness of the specific monitoring requirement; and • Monitoring requirements do not seem to correlate with the risk potential and significant impacts identified in the SDEIS.	**Comment Response 339-161** Thank you for your comment. Specific changes made to Section C.10 are discussed in the following responses (339-162 to 339-183).
339-162	**C.10.1 Introductions and Objectives** Page C-33, last Paragraph MMC is concerned that the monitoring program was developed on the basis of the statement *"could be affected by the mine."* Not everything affected by the mine operations will have a significant or even measureable affect and to develop the plan to monitor for every affect is over reaching and negates the value of having the analysis to begin with. This is why MMC feels strongly that the agencies should work with us to go through the analyses, identify the most significant elements, and focus the monitoring program on that which can effectively be monitored. **C.10.3 Pre-Evaluation Phase** **C.10.3.2 Groundwater Dependent Ecosystem Inventory and Monitoring** *MMC Comments on SDEIS* *11/21/2011* *Page 34 of 40*	**Comment Response 339-162** While it is true that not all effects would be significant or measureable, the agencies chose locations where they believe impacts might be measureable, likely as changes in trends over time.

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339-163	**C.10.3.2.1 Previous Inventory and Current GDE Monitoring** Page C-37, 4th Paragraph MMC has collected isotopes as referenced in this section with mixed results. It is not clear that this methodology will identify ground water or near surface precipitation. The latest GDE monitoring report for 2011 will contain these results.	**Comment Response 339-163** The agencies disagree with this comment. The few isotope samples collected by MMC so far have been valuable in defining sources of water to different areas of the project. For example, the Libby Adit samples showed that inflow to the adit is not deep old groundwater but rather snowmelt infiltrating from the surface. This implies a direct connection between surface resources and the underground void. The isotope samples collected in the Poorman impoundment wetlands were also instructive in showing that some of the wetlands are surface water supported and others are groundwater supported.
339-164	**C.10.3.2.2 Additional GDE Inventory** Page C-39, 1st Paragraph The text has a requirement to start data collection one year before the extension of the Libby Adit commences. As identified in the text MMC has initiated the majority of the program and those which have not started are either associated with bench mark or isolated and remote from the mine activities. As identified in the SDEIS there would be little impact to water resources during the evaluation phase. Therefore, the one year requirement is not necessary to ensure data is obtained for these sites. MMC would request that the language be changed so that this would not cause a delay of up to two years depending on when the approval is obtained. It will take approximately three months of pumping and rehab work to get to the current face and then another six months just to reach the deposit.	**Comment Response 339-164** See comment response 339-101.
339-165	Page C-40, 4th Paragraph Some of the locations that are proposed for monitoring may not be accessible based on the snow conditions and the amount of flow existing at the site. Bi-monthly flow measurements for late spring and early summer are excessive. There is a large amount of data already collected on the stream systems that provide historical data for this time period. Since this is high flow periods and impacts would expect to be non-measureable it seems unnecessary to collect such detailed data.	**Comment Response 339-165** This paragraph says in the first sentence that the flows to be measured are for streams not currently being monitored. The agencies agree that high flow data are not needed for the purposes discussed in this paragraph; therefore, the first sentence in the paragraph on streamflow in Section C.10.3.2.2 of the FEIS was modified. Streamflows in the GDE inventory area would be measured weekly in August through mid-October.
339-166	**C.10.3.2.3 Continued GDE Monitoring** Page C-45, 1st Paragraph The requirement to effectively detect and minimize stress to flora and fauna from effects on surface water or groundwater due to mine dewatering is overly ambitious. MMC strongly believes that while monitoring may help to understand some aspects of the plant community, there are so many other influences that it will be unlikely to distinguish stress specifically associated with a slight reduction in water resources. Further, MMC believes most of the springs currently identified are not supported by a deep bedrock ground water system. Same comment on the one year requirement. **C.10.3.3.3 Other Surface Water Monitoring** Page C-47, 1st Paragraph *MMC Comments on SDEIS* *11/21/2011* *Page 35 of 40*	**Comment Response 339-166** As discussed in Section C.10.3.3.2 of the SDEIS and FEIS, benchmark springs outside the area, but close to the area potentially affected by the Montanore mine would also be monitored because it may be difficult to separate the effects of mine dewatering from other effects.

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339-167	Dr. Kline has attempted in past years to sample the Rock Lake water column with minimal success. Given the remoteness of the lake and the unlikely change lake temperature and/or water quality that would be measurable, MMC believes this sampling requirement is unnecessary and simple inflow/outflow in a lake sample will meet the same objective. **C.10.4.2 Groundwater Dependent Ecosystem Monitoring** Page C-48, 1st Paragraph	**Comment Response 339-167** Collecting vertical profile water samples as discussed in this paragraph is routinely done in lakes and would be completed as per Forest Service protocol. It is not known that changes in lake temperature or quality due to mining would be unmeasurable. Sampling lake inflow and outflow only would not provide information on changes that might happen at different depths in the lake.
339-168	The blanket requirement to continue GDE monitoring after the pre-evaluation phase does not permit the modification of the program to reflect results obtained, ability to meet the objectives, and the effectiveness of the procedure. MMC recommends that continuation of the monitoring would occur on those sites determined to be applicable. **C.10.4.3 Surface Water Monitoring** Page C-50, 1st Paragraph	**Comment Response 339-168** Section C.10.3.2.3 described the objective of the GDE monitoring and Section C.10.8.3 discussed modification to monitoring plans.
339-169	MMC is concern about the requirement to measure flows eight times per years in particular the peak flow as in most of the reaches there is a safety issue of being able to enter the stream for flow measurements. Since continuous flow monitoring is there it seems we can avoid these unsafe conditions. **Table C-8. Surface Water Monitoring Locations-Evaluation Phase** Page C-51	**Comment Response 339-169** The KNF and the USGS have experience measuring streamflow during high flow, including mountain streams. MMC could seek expertise in high flow monitoring to avoid dangerous conditions.
339-170	The requirement to do bi-weekly flows at LB-50 and LB100 during the low flow periods is unnecessary. The agencies should look at the weekly stream flow variations collected from these sites during the last two years.	**Comment Response 339-170** The flow data collected by MMC from September 2009 to 2012 are useful. However, to develop an understanding of natural flow variability in an area that would be affected by mine inflows is very important, so additional data need to be collected at these locations during the Evaluation Phase.
339-171	In addition to the comparability concern MMC has with Wanless Lake the requirement to do vertical profile sampling in the center of the lake raises the same level of concern MMC has with requirement. **Table C-10 Proposed Monitoring Parameters and Required Reporting Values for Surface Water Samples** Page C-53, Table C-10	**Comment Response 339-171** See response to 339-167.
339-172	The reporting requirement to flow measurements to an accuracy of 10% is not reasonable or determinable. **C.10.4.4 Groundwater** **C.10.4.4.1 Mine Area Locations and Frequency** *MMC Comments on SDEIS* *11/21/2011* *Page 36 of 40*	**Comment Response 339-172** As discussed in Section 3.11.4.5.6, the accuracy of various flow measurement methods is known. The existing and draft renewal MPDES permit has this requirement.

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339-173	Page C-54, 2nd Paragraph It is premature to specifically select a number and locations of the piezometers underground. Geology and the existence of water bearing fractures will play a significant role in the location of these. MMC suggests that we review the Noranda mapping that was completed on the Libby Adit and various memos that describe water bearing units and testing completed in 1992. This data set will provide information as to where the best location for first station. MMC will review and provide a technical memo to the agencies that can be used while we work on Appendix C revisions.	**Comment Response 339-173** The intent of the underground monitoring is not to monitor only locations where a piezometer is likely to produce water, but to establish the overall heterogeneity of the groundwater system for improvement of the 3D model. A measurement of zero pressure at some location is still useful information. In addition, biasing the data collection towards areas of obvious water production would skew the data collection process for improving the 3D modeling. Areas with little or no water production may eventually provide water pressure information. The intent of the underground monitoring program is to systematically install piezometers to obtain a relatively non-biased data.
339-174	Page C-54, 4th Paragraph The requirement to establish two stations as prescribed in the text most likely will not encounter water bearing structures. MMC has provided the agencies with a memo data 1992 where Noranda tested the fracture systems and many below the 5200' level had little or no water, this seems like an important factor in exactly where these would be placed.	**Comment Response 339-174** See comment response 339-173.
339-175	Page C-56, 1st Paragraph Isotope data has been collected on the Libby Adit and the results were not conclusive, if further testing is required of the isotopes MMC would like to see a limit if the data continues to be inconclusive.	**Comment Response 339-175** See comment response 339-163. The agencies will continue to use isotopes as well as other geochemical indicators as tools to define the groundwater flow system and interactions between surface water and groundwater.
339-176	**C.10.4.4.2 Libby Adit Site, Libby Plant Site, Poorman Impoundment Site, and Libby Loadout** Page C-56, 3rd Paragraph The selection of the well locations and the number of wells should be based on field and geotechnical investigations that will be part of the dam design effort. This would also include which ones should be nested based on geotechnical drilling results.	**Comment Response 339-176** Section C.10.4.4.2 was revised to indicate specific location and number of wells to be located below the impoundment would initially be based on hydrogeologic data collected during the geotechnical investigation of the impoundment site. One objective of groundwater monitoring is to provide confirmation that the pump back well system was capturing all potential seepage from the impoundment. The final number and location of these wells would depend on the nature of the hydrogeology and the initial monitoring results.
339-177	**10.5.3.2 Suspended Sediment** Page C-64, 1st Paragraph MMC is interested in discussing a cooperative approach to the continuous suspended sediment monitoring being conducted by the KNF. As the agencies know MMC has done some research on the use of these continuous monitoring devices and have been informed by the manufacturers that these will not calibrate for the conditions at Libby Creek. It would be helpful if the KNF could send us the information on the device they are using.	**Comment Response 339-177** The agencies appreciate that MMC will work with the KNF on this issue. Section C.10.5.4 states that any other suspended sediment monitoring required by the MPDES permit or any other permit or approval also would be implemented.
339-178	MMC has some reservation with the use of LB-3000 as the monitoring location as there are significant activities that occur between this station and the mine site that are unrelated to mine activities. How would we determine the cause of increased sediment? There may be a way for MMC to do periodic sample collection below activities that would help to provide additional information. Either way MMC will work with the KNF in addressing this issue. *MMC Comments on SDEIS* *11/21/2011* *Page 37 of 40*	**Comment Response 339-178** See next page.

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339-179	Page C-64, 4th Paragraph MMC would recommend that this section include the rest of the release criteria presented in MMC's Updated Plan of Operations March 2008 that provides for additional seeding and other efforts and a modification of the release criteria based on the exhibited site conditions.	**Comment Response 339-178** The KNF conducts continuous suspended sediment monitoring during the ice-free period with an automated sampler near LB-3000 on Libby Creek. MMC would either fund the existing KNF monitoring or they would implement their own monitoring efforts in Libby Creek. In lieu of collecting water samples for analysis of total suspended solids (TSS), MMC may use a turbidity meter in concert with the TSS sampling to establish a relationship between turbidity and TSS. Once a statistically valid relationship between the turbidity meter results and the TSS results was established and approved by the agencies, MMC may use a turbidity meter. The agencies are not aware of the significant activities between LB-3000 on the mine permit areas.
339-180	**Table C-14. Water Balance Monitoring Requirements.** Page C-66 MMC is not proposing to use processed water for dust suppression at any other facility except the tailings impoundment area. Therefore, the reporting of water used on a daily basis would come from a separate source which does not contribute nor subtract from the water balance intended with this table. That information will be kept but separately.	**Comment Response 339-179** The discussion regarding release criteria is typical to close out a stormwater permit; additional release criteria are not necessary for this purpose.
339-181	The requirement to monitor the pond areas and the approximate wet and dry beach is unnecessary at this frequency. Further, MMC is not sure what the agencies call wet or dry beaches in the dam area, these are not typical monitoring and certainly will not provide any information valuable to the water balance. As built drawings and other data collection that will be developed in the final design will provide pertinent information and should be considered by the agencies.	**Comment Response 339-180** The agencies agree.
339-182	**C.10.7.3 Groundwater Flow** **C.10.7.3.1 Mine Area** Page C-69, 2nd Paragraph The proposed plan for Alternative 2, which is assumed to have been incorporated in to Alternative 3, discusses water management and grouting. In this plan MMC would grout water bearing units discovered as we are advancing the workings. If grouting was effective and reduced inflows, then MMC does not think the process is needed as described in this section. We know from the Libby Adit that the 5200' level has a major water producing unit that has been grouted successfully.	**Comment Response 339-181** MMC proposed the monitoring of beach areas on page 2 of Klohn Crippen Berger Ltd. (2007). **Comment Response 339-182** The agencies agree if grouting was effective and reduced inflows, the reporting requirements in C10.7.3.1 would not be triggered.
339-183	**C.10.8.3 Data Reporting** Page C-71 and C-72, Last Paragraph The monitoring program envisioned in Appendix C will have various sampling dates during any given period. If MMC is required to report everything within 10 working days, we would be notifying the agencies on a weekly if not more frequent basis. We do not think this was the intent of the reporting requirement. MMC would suggest that notification of any exceedences would occur within a reasonable period of time after receiving the lab work. Also the requirement for brief reports is also onerous and will not provide valuable data as it takes time to develop trends. MMC believes that this is also extreme duplication with what will be in the annual *MMC Comments on SDEIS* *11/21/2011* *Page 38 of 40*	**Comment Response 339-183** The agencies do not believe that submitting water quality and flow measurement data within 10 working days after receipt of final laboratory results would be onerous. Laboratory results could be provided electronically to the agencies. If submittal of brief reports described in Section C.10.8.3 following each sample interval was not determined by the agencies to be useful or was too onerous for MMC and/or agency staff overseeing the project, this requirement may be reconsidered by the agencies.

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339-184 339-185 339-186 339-187 339-188	reports. Because of the sheer volume of data created by this monitoring plan it is expected, based on our current efforts for reporting on Permit 00150, that 90 days may not be sufficient time to do all the presentations, complete analyses, and other items needed. MMC understands the need for frequent communications and oversight by the agencies; we would suggest we develop a more streamline and timely manner to provide information to the agencies as part of the modification of Appendix C monitoring. With the advancement of electronic capabilities there are plenty of opportunities to upload data timely and access to the agencies. **C.11.7 Periphyton and Benthic Chlorophyll-a** Page C-75 The SDEIS identifies 150 mg/m^2 as the chlorophyll-a threshold for nuisance algae. Chlorophyll-a samples that MMC collected following DEQ methods at L9 macroinvertebrate sample locations during August 2011 ranged from 1.1 to 1.4 mg/m^2 (data to be included in the MPDES annual aquatic monitoring report). Given the large difference between measure chlorophyll-a concentrations and the nuisance threshold, a preliminary screening based on DEQ microalgae thickness and filamentous algae length (DEQ 2011 periphyton SOP) would be appropriate to determine if chlorophyll-a sampling is justified. DEQ should identify a scheme to allow field determination of the need to sample chlorophyll-a. The 2011 DEQ chlorophyll-a sampling method allows collection of samples across a single transect rather than at 11 transects along a reach that is 40X the average wetted width, if 40X wet width exceeds "approximately 500 meters". Based on available data, 40X wet width will be ~350 m for L9 and ~500 m for L3. DEQ should identify the single transect method at L9 and L3 as being suitable for meeting the monitoring objectives, when preliminary screening justifies chlorophyll-a sampling. No justification is provided for the requirement to collect algae samples on approximately the 10th day of the three sampling months. This requirement is likely to create unnecessary scheduling challenges. A two-week window for each of the three months (e.g. the first two weeks of the month) should be specified by DEQ. The summer chlorophyll-a sampling at all sites will be conducted at the macroinvertebrate sampling locations. MMC expects to collect these samples to improve interpretation of macroinvertebrate results, regardless of preliminary algae screening results. If preliminary algae screening dictates that chlorophyll-a sampling be conducted, DEQ should clarify whether the five chlorophyll-a samples, from the macroinvertebrate locations, will count toward the total number of required chlorophyll-a samples, given that they will not fit into the DEQ chlorophyll-a sampling design. The requirement to get agency approval to scrub additional delimited areas should be removed, as it only serves to improve data quality and is best judged at the moment of sampling. Furthermore, scrubbing of up to three areas is described in the DEQ 2011 chlorophyll-a SOP. The 2011 data from L9 *MMC Comments on SDEIS* *11/21/2011* *Page 39 of 40*	**Comment Response 339-184** C.11.8 was revised to describe the conditions specified in DEQ's standard operation procedure (DEQ 2011b) in which chlorophyll-a sampling would not be required and the documentation requirements in lieu of sampling. **Comment Response 339-185** C.11.8 was revised to indicate that DEQ's standard operation procedure provides a single transect adaptation of this method for large rivers where 40 times the average wetted width would result in a sampling reach greater than approximately 500 meters in length. Previous data on stream widths indicates that the eleven-transect method would likely be appropriate for the chosen monitoring sites. **Comment Response 339-186** C.11.8 was revised to eliminate this requirement. **Comment Response 339-187** C.11.8 was revised to make the monitoring consistent with DEQ's standard operation procedure. **Comment Response 339-188** C.11.8 was revised to describe the conditions specified in DEQ's standard operation procedure in which scrubbing could occur.

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	were based on scrubbing 4 to 5 delimited areas at each of the five sampling locations. This was factored into calculation of chlorophyll-a concentrations. *MMC Comments on SDEIS* *11/21/2011* *Page 40 of 40*	

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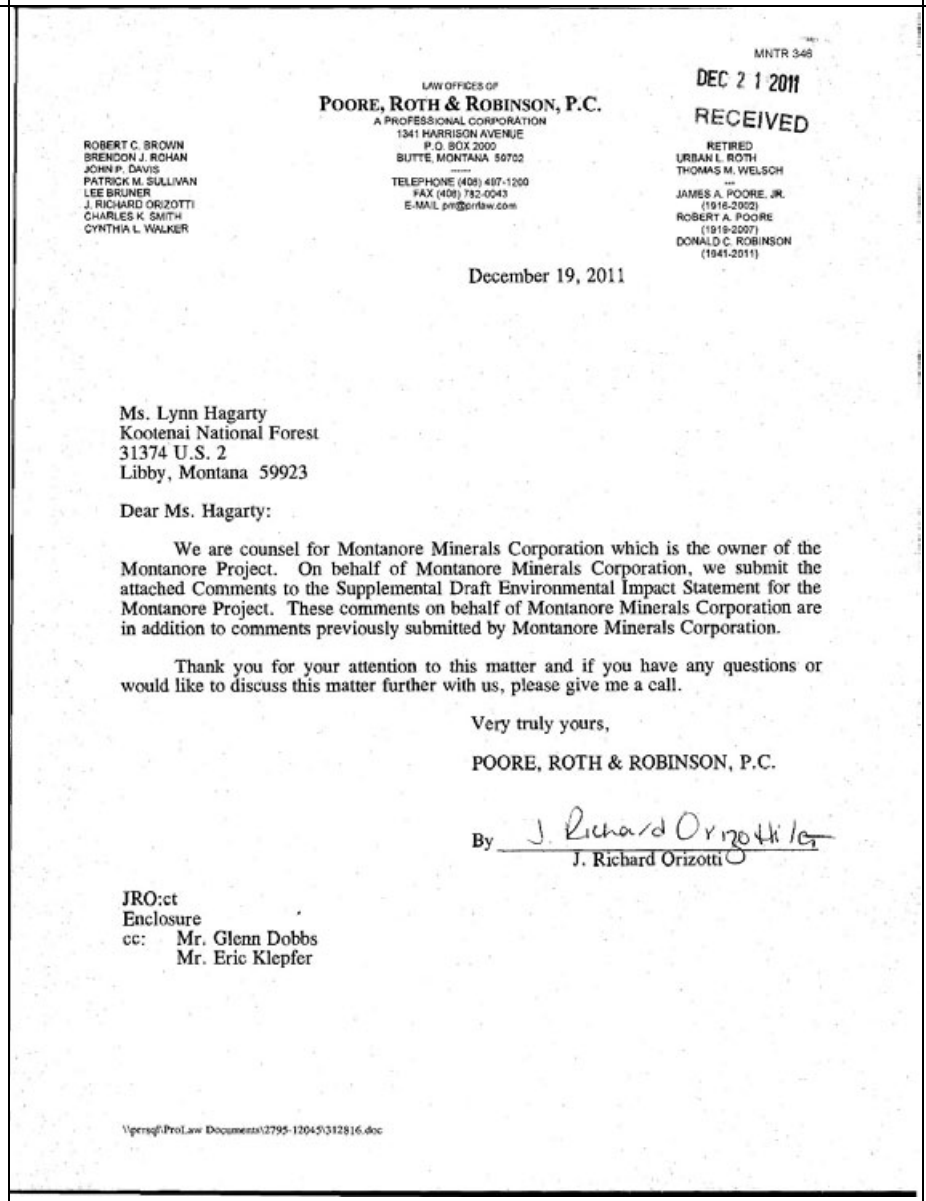
346–1		**Comment Response 346–1** Thank you for your comment. For a number of reasons, the DEQ does not agree that the statutes and rules are being applied retroactively or that application of the statute and rules impairs a vested right. Among those reasons are the following: First, Noranda Mineral Corp.'s (NMC) petition and the BHES Order applied to only certain water quality parameters (see Section 3.13.1.1.1 of the SDEIS and FEIS). For other parameters, the nondegradation law and rules in effect when the BHES Order was issued continued to apply and prohibited an increase in the concentration in any parameter not referenced in the Order. Second, the 1993 nondegradation statute took effect prior to issuance of the NMC's Operating Permit #00150. The 1994 nondegradation rules merely implemented the 1993 law. Third, NMC did not commence operation under the operating permit prior to the adoption of the law or the rules. The operating permit provides that, before commencing operation under the permit, the permittee (now MMC) must be in compliance with the water quality laws, "as amended." Neither NMC nor MMC commenced operations under the operating permit before the 1993 nondegradation statute, the 1994 nondegradation rules, and the 1995 outstanding resource water statutes had become effective.

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December 19, 2011

Ms. Lynn Hagarty
Kootenai National Forest
31374 U.S. 2
Libby, Montana 59923

Dear Ms. Hagarty:

We are counsel for Montanore Minerals Corporation which is the owner of the Montanore Project. On behalf of Montanore Minerals Corporation, we submit the attached Comments to the Supplemental Draft Environmental Impact Statement for the Montanore Project. These comments on behalf of Montanore Minerals Corporation are in addition to comments previously submitted by Montanore Minerals Corporation.

Thank you for your attention to this matter and if you have any questions or would like to discuss this matter further with us, please give me a call.

Very truly yours,

POORE, ROTH & ROBINSON, P.C.

By J. Richard Orizotti
J. Richard Orizotti

JRO:ct
Enclosure
cc: Mr. Glenn Dobbs
Mr. Eric Klepfer

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COMMENTS TO
SUPPLEMENTAL DRAFT ENVIRONMENTAL
IMPACT STATEMENT FOR THE MONTANORE PROJECT

In the Supplemental Draft Environmental Impact Statement ("SEIS") the Department of Environmental Quality ("DEQ") takes the position that for parameters not covered by the November 20, 1992, Order (the "Order") of the Montana Board of Health and Environmental Sciences ("BHES") relating to the authorization to degrade, the applicable non-significance criteria established by the 1994 non-degradation administrative rules apply unless Montanore Minerals Corporation ("MMC")[1] obtains an authorization to degrade pursuant to the current non-degradation statute. For the reasons discussed more fully below, MMC disagrees with DEQ's position on the ground and for the reason that it would serve to "retroactively" apply the 1994 non-significance criteria to activities that were clearly authorized under both the 1992 Order and the subsequently issued Operating Permit No. 00150 ("Permit 00150") in direct contravention with established principles of Montana law.

A. Permit 00150--Background.

The permitting process for the Montanore Project began in 1989. In that year, Noranda obtained an exploration license from the Montana Department of State Lands ("DSL") and other associated permits for construction of an exploration adit from private land in upper Libby Creek and thereafter began excavating the Libby adit. The exploration license provided for a system of water quality measuring points. In addition to water quality monitoring, Noranda conducted other activities on the project under the exploration license, including the construction of over 14,000 feet of the Libby adit.

In the latter part of 1989, Noranda also filed a Petition for Change in Quality of Ambient Waters (Petition) with BHES for the Montanore Project. Noranda filed the petition pursuant to Mont. Code Ann § 75-5-303 because it was known that its proposed method of mine water discharge would lower the water quality for certain parameters in the surface and ground water where the ambient quality for those parameters was higher than the applicable water quality standards. In 1989, Mont. Code Ann § 75-5-303 provided as follows:

> **75-5-303. Nondegradation policy.** The board shall require:
>
> (1) that any state waters whose existing quality is higher than the established water quality standards be maintained at that high quality unless it has been affirmatively demonstrated to the board that a change is justifiable as a result of necessary economic or social development and will not preclude present and anticipated use of these waters; and

[1] In 2006, the name of Noranda Minerals Corporation was changed to Montanore Minerals Corporation.

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(2) any industrial, public, or private project or development which would constitute a new source of pollution to high quality waters, referred to in subsection (1), to provide the degree of waste treatment necessary to maintain that existing high water quality. (Emphasis added.)

With its Petition pending before BHES, Noranda continued construction of the Libby Creek Tunnel. The excavation of the Libby Creek Tunnel involved the use of explosives that contained nitrogen compounds. During construction, seepage water from the interior of the Libby Creek Tunnel was pumped to a solids separator, and then down gradient to three leach fields, a percolation pond, and/or other infiltration facilities. Some of the seepage water entered the waste rock pile and some of the seepage water was used for dust control and irrigation at the site. Construction of the Libby Creek Tunnel was halted on November 26, 1991, because the above described uses of the seepage water was determined to constitute violations of the Montana Water Quality Act (WQA) as it contained elevated concentrations of nitrogen compounds. Prior to cessation of construction activities, the Libby Creek Tunnel had been extended a distance of approximately 14,000 feet from the Libby Creek Adit to a point well within the boundaries of the Cabinet Mountain Wilderness Area.

Though construction of the Libby Creek Tunnel ceased in 1991, formal proceedings to address the alleged violation of the WQA as well as the overall permitting process for the Montanore Project continued. With regard to permitting, the final Environmental Impact Statement ("EIS") for the entirety of the proposed Montanore Project was completed following the cessation of construction activities. Additionally, on November 20, 1992, approximately one year after the cessation of construction activities associated with the Libby Creek Tunnel, BHES issued its above referenced Order. The Order was fully consistent with the then existing requirements of Mont. Code Ann § 75-5-303 in all respects and included specific parameters for chromium, copper, iron, manganese, zinc and total dissolved solids in both surface and ground water and for total nitrogen in surface water and for nitrate plus nitrite in ground water. The Order additionally provided, in pertinent part, as follows:

FINAL DECISION AND ORDER

The petition of Noranda to lower water quality in the groundwater and surface water adjacent to the proposed Montanore Project is granted with the following conditions:

* * *

Surface and ground water monitoring, including biological monitoring, as determined necessary by the Department, will be required to ensure that the allowed levels are not exceeded and that beneficial uses are not impaired.

(4) The Board adopts into this Order the modifications developed in Alternative 3, Option C, of the

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Final EIS, addressing surface and ground water monitoring, fish tissue analysis and instream biological monitoring. Monitoring plans shall be submitted to the Department at least 180 days prior to any new or increased anticipated discharge from the Montanore Project and must be approved in writing by the Department prior to the commencement of any activity that would cause degradation of surface or ground water in the project area. The monitoring plan shall contain a system of surface and ground water monitoring locations sufficient to determine compliance with this Order.

* * *

(8) The provisions of this Order are applicable to surface and ground water affected by the Montanore Mine Project located in Sanders and Lincoln County, Montana, and shall remain in effect during the operational life of this mine and for so long thereafter as necessary. (Emphasis added.)

Also following the cessation of construction activities, in order to address the alleged WQA violations, the Montana Department of Health and Environmental Sciences ("DHES")[2] filed an action against Noranda alleging that Noranda had violated and was violating the WQA and the administrative rules adopted under the WQA. The action was resolved on May 12, 1993 with the entry of Findings of Fact, Conclusions of Law, Judgment and Consent Decree (the "Consent Decree"). The Consent Decree recognized the Order and adopted the limits for inorganic nitrogen established in the Order. The Consent Decree resolved the litigation filed by the DHES against Noranda relating to past and present compliance with the WQA and regulations implementing the WQA.

Two days following entry of the Consent Decree, on May 14, 1993, DSL fully authorized the Montanore project by issuing Permit 00150 to Noranda. In order to provide continuity, the provisions of the previously issued exploration license were incorporated into Permit 00150. DSL's issuance of Permit 00150 immediately after entry of the Consent Decree did not occur as a matter of happenstance. DSL could not issue Permit 00150 until immediately after the Consent Decree was entered because certain of Noranda's authorized activities affecting water quality were ongoing (e.g., dewatering activities and associated monitoring activities) and Noranda, by the express terms of permit 00150, was precluded from "commencing any activity authorized by" Permit 00150 until it was in compliance with the WQA. The requisite compliance could not have occurred until after entry of the Consent Decree.

The issuance of Permit 00150 served to authorize the Montanore Project for the period required to complete the operation and remains valid as a matter of law. In that regard, Mont. Code Ann. § 82-4-337(2), provides:

[2] The Montana Department of Health and Environmental Sciences is now known as the Montana Department of Environmental Quality ("DEQ").

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> (2) The operating permit must be granted for the period required to complete the operation and is valid until the operation authorized by the permit is completed or abandoned, unless the permit is suspended or revoked by the department as provided in this part.

Though Noranda gave some consideration to abandoning of the Montanore Project in or about 2002, Noranda did not actually proceed with abandonment and Permit 00150 has never been suspended or revoked.

With regard to water quality, the terms and conditions of Permit 00150 are comprehensive and serve to require extensive monitoring of water quality and mitigation of unanticipated effects on water quality. Specifically, Attachment 1, Section 2 of Permit 00150 provides:

> 2. Monitoring.
>
> Noranda must implement the monitoring plans identified in Attachment 2 to this document. These include the monitoring plans for hydrology, aquatic life, the tailing dam, and the tailing impoundment. These monitoring plans must be modified as the data indicate a need for change. In addition, if monitoring data reveals unanticipated effects on water quality, aquatic life, or tailing impoundment stability, Noranda must proceed, in consultation with the Department, to develop additional mitigations to assure compliance with standards and to assure effective reclamation.

Attachment 2 of Permit 00150 similarly confirms the goals of the monitoring programs and the duty to provide corrective action whenever performance standards have not been achieved:

> The goals of these monitoring programs, described in Chapter 2 of the Final EIS, are to (1) quantify any measurable environmental impacts accompanying construction, operation, and reclamation of the mine; (2) evaluate the accuracy of projections of impact; (3) document compliance with regulatory performance standards and permit conditions; and (4) determine whether changes to project operations or additional mitigative actions are required to correct any unanticipated impacts or to prevent future violations of regulatory requirements.
>
> Whenever performance standards, such as surface or ground water quality standards, have not been achieved, Noranda must implement corrective actions approved by the agencies.

Attachment 2 also requires that the extensive monitoring programs must be maintained during the life of the project.

Com-ment	Document #346-Poore, Roth & Robinson, P.C.	Response

Consistent with the above, Attachment 2, Section 9 of Permit 00150 provides, in pertinent part, as follows:

9. Water Resources

a. Noranda may not initiate mine-related disturbances or resume adit construction until supporting final designs for water disposal and treatment, which provide additional detail and are consistent with (1) preliminary designs, (2) the BHES November 20, 1992, decision on Noranda's petition to modify ambient quality and (3) Attachment 2, are submitted to the agencies. If any changes from the preliminary design are necessary, Noranda must apply for agency approval of the changes. . . .

* * *

f. If long-term withdrawals of surface water are necessary, Noranda must first notify the Department and must modify the aquatic monitoring program to take into account such withdrawals. Withdrawals may not proceed prior to the Department's approval of an updated aquatic monitoring plan. Noranda may not withdraw any surface water for operational use when flows at the point of withdrawal are less than the average annual low flow. In lieu of measured annual low flows, calculated low flows at the point of withdrawal, using data from similar drainages, are acceptable.

* * *

j. Noranda must implement monitoring at Rock Lake to provide data to estimate a baseline net groundwater seepage for the lakes and to allow subsequent detection of small changes in net seepage due to dewatering effects of the project. All major water budget variables must be accounted for and/or estimated for, including evaporation, precipitation, surface water inflows and outflows, groundwater inflows and outflows and continuous lake levels. The lake monitoring system design and evaluation must be coordinated with the Department and the Kootenai National Forest (KNF). Monitoring data and evaluation must be submitted with the annual reports. If substantial increased mine inflows occur in the vicinity of Rock Lake, Noranda must submit continuous lake level data, weather permitting, and any other lake level data accumulated during the year within 5 working days of the increase in inflows and must provide data and evaluation at an increased frequency as determined by the Department.

Com-ment	Document #346-Poore, Roth & Robinson, P.C.	Response

In September of 1995, the Montanore Project was temporarily suspended by Noranda. The project remained in that status until approximately 2006. In 2006, pursuant to the terms of a Stock Transfer Agreement between Noranda Finance Inc. ("Noranda Finance"), Newhi, Inc. ("Newhi") and Mines Management, Inc. ("MMI"), Newhi acquired from Noranda Finance all of the outstanding shares of capital stock of Noranda. Shortly thereafter, the name of Noranda was changed to Montanore Minerals Corp. ("MMC"). At present, MMC is seeking the following described minor amendments to Permit 00150 from DEQ:

- Expansion of the 1992 approved permit area from 3,424.4 acres to 3,682 acres and the permitted disturbance area from 1,272.4 acres to 2,582 acres. (Table 2-1 of Final EIS)
- Construction of an additional underground ventilation infrastructure that would result in about 1 acre of disturbance on private land near Rock Lake.
- Relocation of the concentrate loadout facility to the Kootenai Business Park located in Libby (private land) resulting in less than 1 acre of disturbance.
- Other minor changes to comply with the conditions in Permit 00150.

B. Amendments to Nondegradation Policy and Promulgation of Administrative Rules.

Effective April 29, 1993, the Montana Legislature amended Mont. Code Ann.§ 75-5-103 by defining the terms "degradation" and "high quality waters" and substantially amended the nondegradation policy set forth at Mont. Code Ann § 75-5-303 to read, in pertinent part, as follows:

75-5-103. Definitions.

* * *

(4) "Degradation" means a change in water quality that lowers the quality of high quality waters for a parameter. The term does not include those changes in water quality determined to be nonsignificant pursuant to 75-5-301(5)(c).

* * *

(9) "High-quality waters means waters whose quality for a parameter is better than standards established pursuant to 75-5-301. All waters are high-quality water unless classified by the board within a classification for waters that are not suitable for human consumption or not suitable for growth and propagation of fish and associated aquatic life.

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75-5-303. Nondegradation policy.

* * *

(2) Unless authorized by the department under subsection (3), the quality of high-quality waters must be maintained.

(3) The department may not authorize degradation of high-quality waters unless it has been affirmatively demonstrated by a preponderance of evidence to the department that:

(a) degradation is necessary because there are no economically, environmentally, and technologically feasible modifications to the proposed project that would result in no degradation;

(b) the proposed project will result in important economic or social development that exceeds the benefit to society of maintaining existing high-quality waters and exceeds the costs to society of allowing degradation of high-quality waters;

(c) existing and anticipated use of state waters will be fully protected; and

(d) the least degrading water quality protection practices determined by the department to be economically, environmentally, and technologically feasible will be fully implemented by the applicant prior to and during the proposed activity.

1993 Montana Session Laws, Ch. 595, Section 3. The same legislation, however, expressly provided that the new nondegradation policy applied only to "requests to degrade state waters filed with the department after" April 29, 1993. (Emphasis added.) Id. at Section 10.

In 1995, among other things, the Legislature adopted a definition of "outstanding resource waters" and a ban on the issuance of authorizations to degrade the same. The referenced provisions provide as follows:

75-5-103. Definitions.

* * *

(20) "Outstanding resource waters" means:

(a) state surface waters located wholly within the boundaries of areas designated as national parks or national wilderness areas as of October 1, 1995; or

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(b) other surface waters or ground waters classified by the board under the provisions of 75-5-316 and approved by the legislature.

75-5-303. Nondegradation policy.

* * *

(7) The board may not issue an authorization to degrade state waters that are classified as outstanding resource waters.

1995 Montana Session Laws, Chapter 495, Sections 1 and 2 and Chapter 501, Section 5. Unlike the 1993, legislation, the 1995 legislation did not include any express applicability provisions.

BHES adopted administrative rules for the implementation of the nondegradation policy in 1994 pursuant to the rulemaking authority granted to it in the 1993 amendments to Mont. Code Ann. § 75-5-303. Responsibility for administering those rules was transferred from BHES to the Board of Environmental Review (BER) in 1996 and the rules were amended in 2000 and again in 2006. The current nondegradation rules are set forth at A.R.M § 17.30.701, et. seq.

The administrative rules include criteria for determining non-significant changes in water quality. In that regard, ARM § 17.30.715 provides, in pertinent part as follows:

(1) The following criteria will be used to determine whether certain activities or classes of activities will result in nonsignificant changes in existing water quality due to their low potential to affect human health or the environment. These criteria consider the quantity and strength of the pollutant, the length of time the changes will occur, and the character of the pollutant. Except as provided in (2), changes in existing surface or ground water quality resulting from the activities that meet all the criteria listed below are nonsignificant, and are not required to undergo review under 75-5-303, MCA:

(a) activities that would increase or decrease the mean monthly flow of a surface water by less than 15% or the seven-day 10 year low flow by less than 10%;

* * *

(2) Notwithstanding compliance with the criteria of (1), the department may determine that the change in water quality resulting from an activity which meets the criteria in (1) is

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degradation based upon the following:

(a) cumulative impacts or synergistic effects;

(b) secondary byproducts of decomposition or chemical transformation;

(c) substantive information derived from public input;

(d) changes in flow;

(e) changes in the loading of parameters;

(f) new information regarding the effects of a parameter; or

(g) any other information deemed relevant by the department and that relates to the criteria in (1).

(3) The department may determine that a change in water quality resulting from an activity or category of activities is nonsignificant based on information submitted by an applicant that demonstrates conformance with the guidance found in 75-5-301(5)(c). In making a determination under this subsection, the department shall allow for public comment prior to a decision pursuant to the public notice procedures in ARM 17.30.1372.

(Emphasis added.)

C. Comments and Discussion.

It is settled in Montana that a "retroactive law" is "one which takes away or impairs vested rights acquired under existing laws . . ." *Porter v. Galarneau*, 275 Mont. 174, 911 P.2d 1143, 1148-49 (1996); *Wallace v. Dept. of Fish, Wildlife and Parks*, 269 Mont. 364, 889 P.2d 817 (1995). While there is no absolute prohibition against retroactive laws, Mont. Code Ann. § 1-2-109 provides that: "No law contained in any of the statutes of Montana is retroactive unless expressly so declared." The statute "creates a presumption against construing a statute retroactively." *Penrod v. Hoskinson*, 170 Mont. 277, 281, 552 P.2d 325, 327 (1976). The statute, however, applies only to substantive rights. New legislation "which affects only procedural matters and does not relate to substantive rights of the parties does not fall within the ambit of § 1-2-109." *St. Comp Ins. Fund v. Sky Country, Inc.* 239 Mont. 376, 379, 780 P.2d 1135, 1137.

It is axiomatic under Montana law that the administrative agencies cannot adopt retroactive rules for the purpose of implementing statutes which are not expressly declared to be retroactive. In that regard, it is well settled in Montana that administrative agencies "enjoy only those powers conferred upon them by the

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Legislature." *Bick v. State, Department of Justice, Division of Motor Vehicles*, 224 Mont. 455, 456, 730 P.2d 418, 420 (1986); *Auto Parts of Bozeman v. Employment Relations Division Uninsured Employers' Fund*, 2001 MT 72, ¶ 38, 305 Mont. 40, 23 P.3d 193. In other words, "administrative agencies are bound by the terms of the statutes . . . granting them their powers and are required to act accordingly." *State ex rel. State Tax Appeal Board v. Montana Board of Personnel Appeals*, 181 Mont. 366, 593 P.2d 747 (1979). Consequently, "[a]dministrative rules must be strictly confined within the applicable legislative guidelines." *Bick*, 224 Mont. at 456, 730 P.2d at 420.

Where administrative rules conflict with the legislation from which they are derived, it is well settled in Montana that the administrative rules are invalid. *See* Mont. Code Ann. § 2-4-305(5) and (6); *see also Haney v. Mahoney*, 2001 MT 201, ¶ 6, 306 Mont. 288, 32 P.3d 1254 ("[S]tate agencies may not enact administrative rules inconsistent with statutory law"); *Taylor v. Taylor*, 272 Mont. 330, 899 P.2d 523 (1995) ("[R]ules adopted by administrative agencies which conflict with statutory requirements or exceed the authority provided by statute, are invalid"); *Bick*, 224 Mont. at 458, 730 P.2d at 421 (An administrative rule "must not engraft additional and contradictory requirements on the statute, and it must not engraft additional non-contradictory requirements on the statute which are not contemplated by the Legislature").

In the instant case, DEQ's stated position—**that for parameters not covered by the Order, the applicable non-significance criteria established by the 1994 non-degradation administrative rules apply unless MMC obtains an authorization to degrade pursuant to the current non-degradation statute**—constitutes a clear attempt to apply the substantive requirements of the 1993 and 1995 amendments and the administrative rules to the very activities previously considered and authorized by way of the Order, the Consent Decree and Permit 00150, in direct contravention with established principles of Montana retroactivity law. In the case of the Montanore Project, it is clear that (i) MMC acquired vested rights by way of the authorizations included within the Order, the Consent Decree and Permit 00150 at the times they were issued and (ii) those authorizations were granted for the time required to complete the project and remain valid today. It is likewise clear that application of the 1993 and 1995 amendments and administrative rules could serve to divest or impair MMC's vested rights.

As detailed above, the Order, the Consent Decree and Permit 00150 include comprehensive provisions relating to water quality monitoring and explicit requirements relating to mitigation of unanticipated effects on water quality, including monitoring and mitigation of unanticipated impacts on flow. Notwithstanding those explicit provisions, DEQ, under its stated position in the SEIS, would now subject the very activities authorized under and pursuant to the Order, the Consent Decree and the Permit 00150, to the substantive requirements now set forth in ARM § 17.30.715(1)(a) and, potentially, as a result thereof, the ban on authorizations to degrade outstanding resource waters now set forth at Mont. Code Ann. § 75-3-303(7). Accordingly DEQ's stated position cannot be maintained under Montana law. In the event there are unanticipated effects on water quality (including flow impacts), MMC will proceed, in consultation with the Department, to develop additional mitigations as contemplated and required under Permit 00150.

Individual and Organization Comments

Chapter 1 Comments

1000 Purpose and Need: General comment about P&N

141-3 The US can easily meet its domestic needs for copper and silver without mining the CMW. States there are other sources and if there is a need for these materials domestically, it is not a vital need and it is not a need that has to be met now.

141-3 Would you please ascertain the likely destination of this project's ore and the percentage likely to be refined in the US?

Response: Sections 1.5.2 of the DEIS, SDEIS, and FEIS disclosed that domestic (U.S.) consumption of copper and silver has exceeded production, a pattern that has existed for over 10 years. The analysis was updated in the FEIS. All action alternatives would include the processing of ore in an on-site flotation mill and the production of a metal concentrate. The concentrate from the mill would be trucked to the Libby load-out facility and transported by rail to an off-site refining facility. The destination of the project's concentrate for further refining and consumption is not known, and not relevant to assessing environmental effect of the Montanore Project.

1002 Purpose and Need: Comment about DEQ's P&N

52-1 This seems a substantial amount of system resources for the BPA to deploy on a project benefiting relatively few, and requiring the construction of 16 miles of additional 230 kV line and infrastructure in mountainous terrain. This new construction appears to have few off-site system benefits and dead ends at the Cabinet Mountain Wilderness.

52-3 If this power was redeployed to provide rate relief and future growth in the residential, commercial, and industrial sectors currently supplied by FEC and other co-ops, a logarithmic increase in jobs would occur and the benefits would flow to a much larger segment of the population.

141-2 The redeployment of this power to the residential, commercial, and industrial sectors of our community in the form of rate stability, to mitigate future rate increases, or to provide for future growth would seem more cost effective, environmentally friendly, and a greater good to a larger segment of our population.

389-13 The Forest Service has not considered other ways to power this project that would not require building a transmission line, such as the use of solar energy or biomass to generate electricity.

Response: Section 1.5.4 of the DEIS, SDEIS, and FEIS disclosed the need for the transmission line.

1100 Existing Permits and Approvals: Comment about existing DEQ Permit #00150

109-2 Please address why MDEQ has allowed resumption of what are clearly "mine-related activities" without a comprehensive grizzly bear management plan in place (Condition 3) and without adhering to numerous other conditions of the Noranda Record of Decision.

Response: Section 1.3.2.4 of the DEIS, SDEIS, and FEIS discussed that following the acquisition of NMC and DEQ Operating Permit #00150, MMC submitted, and the DEQ approved in 2006, two requests for minor revisions to DEQ Operating Permit #00150 (MR 06-001 and MR 06-002). The key elements of the revisions include: excavation of the Libby Adit portal; initiation of water treatability analyses; installation of ancillary facilities; dewatering of the Libby Adit decline; extension of the current drift; and underground drilling and sample collection.

109-1 Because of the potential for overlapping issues that may impact the approval of Revett's Rock Creek Project, Revett has a strong interest in how the FS undertakes its evaluation of both the Libby Adit and the Montanore Mine. Revett has invested thousands of hours and millions of dollars in the permitting

of its Rock creek evaluation adit and mine. Such investment could be jeopardized by improvident permitting decisions regarding the Libby Adit. Mines Management Inc. has written to the Forest Service and the USFWS asserting that the Montanore Project was never abandoned and therefore should be included in the environmental baseline for the Rock Creek Project. This assertion is contrary to the record and forces Revett to submit these comments in order to defend the conclusions contained in the Rock Creek permitting documents.

109-5 Please explain how these activities are consistent with the statement by the USFS in the Draft EIS that MMC "is allowed to treat free flowing water from the adit" and why these activities which include rebolting, drilling and blasting are determined to be "neither mining nor mine-related construction".

109-17 Has MMC commenced activities concerning the Libby Adit without Forest Service authorization?

109-18 Revett requests that the Forest Service investigate this situation and determine whether MMC has commenced actions concerning the Libby Adit without the required authorization from the Forest Service which could also be in violation of the Endangered Species Act.

136-1 As of right now, MMI is operating without federal permits, dewatering the adit.

Response: The KNF issued a notice of non-compliance to MMC on August 21, 2009 for conducting dewatering activities in the Libby Adit without an approved Forest Service plan of operation. The notice required MMC to complete certain activities to be in compliance with Forest Service mining regulations. MMC has complied with the terms of the notice of non-compliance.

Validity of Hard Rock Operating Permit #00150

109-10 Commenter is concerned that the operating permit 00150 is invalid.

109-11 Commenter is concerned that the operating permit 00150 is invalid because the operation authorized by the permit has been abandoned.

248-28 Because Noranda expressly abandoned the Montanore project in 2002, DEQ should treat this as a new application rather than an amendment to an existing permit.

248-28 Noranda formally abandoned the project by means of letters sent to the agencies in September, 2002.

335-3 The Montanore project should be considered a new application by MTDEQ just as it is by the Kootenai National Forest. It is not a modification of an existing project plan, but an entirely different project by an entirely different operator.

248-8 DEQ should treat this mine as a new proposal, and fully review it for compliance with the Metal Mine Reclamation Act and the Water Quality Act. Further, both Agencies need to more fully review the proposal under NEPA and MEPA.

Response: Section 1.3.2.3 of the DEIS and FEIS discussed that NMC's DEQ Operating Permit #00150 and MPDES permit were not terminated because reclamation of the Libby Adit was not completed.

1500 Agency Decisions: General comment about decisions

109-1 Revett requests the agencies to use a permitting process for the Montanore Project that is consistent and fair with the process used at the Rock Creek Project.

109-2 Revett simply requests that each mining project be fully and fairly analyzed following the same diligent process as was mandated by the USFS for the Rock Creek Project. This is the only way final decisions for both projects can be defensible.

Response: Section 1.6 of the DEIS, SDEIS, and FEIS disclosed the roles and responsibilities of the agencies with permitting and regulatory responsibilities and the applicable laws and regulations to which the Montanore Project and other similar proposals would be subject.

141-8 It is stated several times that the respective agencies must follow the law and permit this mine if certain requirements are met. Please remind the deciders that the law is rarely black and white. It allows for considerable discretion. Discretion allows you to take into the consideration the effects of implementing these laws and the effects this may have on others.

Response: Section 1.6 of the DEIS, SDEIS, and FEIS disclosed the agencies' decision-making process and the discretion each decision-maker has regarding approval or disapproval.

202-44 The DEIS listed many important mitigation measures without any detailed analysis of their implementation or effectiveness. The revised DEIS must include, and make available to the public, detailed discussions of all mitigation measures.

Response: The agencies included a discussion of the implementation and effectiveness of mitigation measures in the SDEIS. The discussion was revised in the FEIS to reflect changes in mitigation measures.

202-45 40 CFR § 1502.22 imposes three mandatory obligations on the Forest Service in the face of scientific uncertainty: (1) a duty to disclose the scientific uncertainty; (2) a duty to complete independent research and gather information if no adequate information exists (unless the costs are exorbitant or the means of obtaining the information are not known); and (3) a duty to evaluate the potential, reasonably foreseeable impacts in the absence of 45 relevant information, using a four-step process. The Forest Service has failed to meet these requirements in the face of substantial uncertainty regarding numerous foreseeable environmental impacts of the Project – deferring review until after the FEIS and ROD were completed.

Response: The agencies used the best available scientific information in disclosing anticipated environmental impacts and disclosed the uncertainty in the DEIS, SDEIS, and FEIS. Scientific uncertainty was described in each resource section, where appropriate.

248-2 Is anyone at the Agencies at all concerned about MMC's complete lack of experience and expertise as an operator of a project of the size, scale and complexity as the Montanore Project?

Response: The proponent's experience and expertise as an operator is not outlined in federal or state statutes or rules as a criterion in the agencies' decision-making process.

1501 Agency Decisions: Comment about KNF's Decision

109-7 The FS must evaluate whether the Libby Adit and Montanore Mine are connected actions pursuant to 40 C.F.R 1508.25 (a)(1) and must be studied comprehensively in a single EIS….

109-8 The Libby Adit and Montanore Mine are cumulative actions requiring comprehensive study in a single EIS.

109-9 The Libby Adit meets the legal requirements for when an EIS must be prepared.

Response: Section 2.5.2 of the SDEIS and FEIS described the Evaluation Phase, in which the Libby Adit Evaluation Program would be implemented. In 2008, the KNF decided the best approach for disclosing the environmental effects of the Libby Adit evaluation program was to consider this activity as the initial phase for the overall Montanore Project EIS. The Libby Adit evaluation program would be the first phase of the Montanore Project in Alternatives 3 and 4.

182-2 P.12. KNF sharing monitoring and inspection responsibility with DEQ. Just what does this mean? If the Troy mine is to be an analogue then KNF responsibility / actuality will be next to negligible. This needs to be fleshed out. How inclusive is it? Will KNF have authority to enter mine property (especially forest lands used by project) w/o permission?

182-6 P.118. When accessing areas regulated by the Mine Safety & Health Administration, KNF personnel would check in at the mine office before entering regulated areas. This does not make sense on USFS property roads and could be used by the mine to hide activities they don't want to see the light of day.

Response: The Troy Mine administration is not considered to be an analog for the administration of the proposed Montanore Mine. The majority of the Troy Mine project area is located on private land, whereas the majority of the proposed Montanore Mine project area would be on National Forest System (NFS) lands. The Forest Service would monitor the Montanore Mine site for compliance with an approved Plan of Operations and required monitoring and mitigation measures on National Forest System lands. The Forest Service would have access to all of the project area located on National Forest System lands, and would coordinate with the mine operator when accessing private lands. DEQ would monitor the entire mine site for compliance with the Operating Permit and transmission line certificate, including monitoring and mitigation measures. Both the Forest Service and the DEQ may need to coordinate with MMC when entering certain facilities on the mine site to ensure MSHA compliance.

202-9 It appears the agencies do not know what the actual likelihood of acid generation is, and that there is insufficient information to make an informed decision. A simple statement that risk would be "mitigated" is not sufficient. What criteria would the agencies use to make decisions related to whether mine development would proceed or additional mitigations would be provided following review of this additional characterization? Would the public be involved in this decision-making process?

Response: The risk of acid generation is generally low and was discussed in detail in Appendix C.9 of the SDEIS and FEIS. Geochemical data analysis and development of handling criteria was discussed in Section C.9.7 of the SDEIS and FEIS. The agencies roles, responsibilities and decisions are discussed in Section 1.5 and 1.6 of the DEIS, SEIS and FEIS. Under various laws, the KNF's responsibility is to ensure that mining activities minimize adverse environmental effects on National Forest System lands and comply with all applicable environmental laws. The Montana legislature has passed statutes and the Board of Environmental Review has adopted administrative rules defining the requirements for construction, operation, and reclamation of a mine and transmission line, discharge of mining waters, discharge of emissions, storage of hazardous and solid wastes, and development and operation of public water supply and sewer systems. The DEQ is required to evaluate the operating permit modification, certificate, and license applications submitted by MMC. All final mitigation and monitoring plans would be available for public review.

344-1 The SDEIS is a very anthropocentric document and pro-business by design. The KNF is upfront about this stating "the objective of the KFP for mining activities is to encourage mineral development under the appropriate laws and regulations and according to the direction established by the plan (KFP Vol. 1, 11-8, Locatables) and again when it says "the KNF Supervisor will issue a decision on MMC's proposal in a ROD. The decision objective is to select an action that meets the legal rights of MMC…" P. 94 This is status quo, very deeply within the box thinking, and there's a place for it, but I'm not sure it should be the prime directive.

Response: Section 1.6.1 of the DEIS, SDEIS and FEIS accurately described the KNF's roles responsibilities and decision objectives. This section also accurately describes the applicable laws and regulations.

1502 Agency Decisions: Comment about DEQ's Decision

202-42 Why is a high hazard dam that contains 120 million tons of tailings exempt from Montana's Dam Safety Act? Other options for the tailings impoundment that would not create such significant long-term impacts to the watershed should have been analyzed.

Response: Section 1.6.2.4.1 of the DEIS, SDEIS, and FEIS discussed the Montana Dam Safety Act. The section was revised in the FEIS to indicate that the Montana Dam Safety Act applies to the construction, repair, operation, and removal of any dam or reservoir that impounds 50 acre-feet or more at normal operating pool level, the failure of which would be likely to cause loss of life. Dams constructed under a valid MMRA operating permit would be regulated under MMRA, rather than a DNRC dam safety permit, during mine operation and closure until reclamation bond release. After the reclamation bond was released, the impoundment would be subject to DNRC oversight and regulation if it met the definition of a high-hazard dam.

1510 Agency Decisions: Suggested SDEIS

98-2 The results of the Poorman Impoundment Alternative evaluation final design process, if this is selected as the preferred alternative, should be disclosed to the public, probably through a SEIS process.

331-15 The SDEIS plans on delaying a consideration of impacts until final design. The SDEIS repeatedly (34 times) plans to determine the mine plan and associated impacts during "final design." How will the public be able to comment, if the direct impacts would be determined during final design? There should be another opportunity for public involvement when these decisions are made. Thus, a new Draft SDEIS must be prepared, with full public involvement.

Response: All final design plans would be available for public review. The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate level of MEPA review on the application.

Chapter 2 Comments

2033 Alternatives Considered But Eliminated: Comment about tailings disposal analysis

Paste Tailings

182-5 P.102. The Poorman Impoundment Site is amenable to high-density (paste) tailings deposition from the upstream slopes, whereas Little Cherry Creek site has limited capacity for high-density deposition. In light of the Rock Creek requirements for paste tailings deposition why isn't it a requirement for this project and why hasn't the Poorman site been investigated as thoroughly as the Little Cherry Creek site?

248-15 The Agencies' cursory examination of dry placement of tailings, which suggests a predisposition on the part of the Agencies for surface disposal at the Little Cherry Creek site, is wholly inadequate. Where is the comparison of the relative impacts dry tailings disposal versus the impacts of surface disposal in Little Cherry Creek? Dry placement of tailings appears to be a fully practicable alternative taking into consideration at least the factors of existing technology and logistics in light of the overall project purposes.

248-18 As in the case of dry tailings disposal and hydraulic transport and filling, the Agencies also seem to shortchange the viability and practicability of high density slurry/paste disposal methods. As noted by the Agencies (DEIS, page 204), high density slurry/paste technology is in essence an improved hydraulic transport and filling method of tailings disposal. It has the advantages of not needing much drainage and not needing the removal of fine tailings material. These are both cost reducing factors.

248-18 If this tailings disposal method is the preferred alternative for the Rock Creek project, why has it not been more seriously considered or adopted for the Montanore Project?

Response: The agencies' analysis of surface tailings disposal methods was updated for the SDEIS and was discussed in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a). The design considerations at the Rock Creek Project are different from the Montanore Project. The agencies analyzed various surface disposal methods to avoid or minimize effect on wetlands and other waters of the U.S. Effects on wetlands was identified as a key issue during project scoping (see Section 2.1.2.1.7 of the DEIS and FEIS). The analysis also was completed to determine if an alternative surface disposal method was practicable. Section 2.13.6.2 of the SDEIS (2.13.7.2 of the FEIS) disclosed that compared to thickened tailings deposition, paste or filter tailings deposition would not likely reduce the impoundment footprint enough to substantially decrease the acreage of wetlands affected at the site. Reductions in the volume of

tailings deposited at the surface due to the use of paste or filter tailings would not be directly proportional to reductions in the required surface area, due to the convex topography at the Poorman site.

Backfilling of Tailings

74-13 It would be prudent to backfill the mine to minimize effects on groundwater hydrology and probabilities of subsidence.

74-14 Reclamation plan should employ backfilling in addition to the room and pillar method already under consideration in order to minimize the potential for subsidence and for groundwater contamination.

74-19 Taking all possible measures to prevent subsidence, now and in the future, including backfilling the mine void.

182-9 P.202-5. Dry placement tailings. Because of the costly dewatering, labor intensive transportation requirements and inefficient use of backfilling space, the lead agencies eliminated dry placement of tailings. It is not the province of the lead agencies to make a determination based on costliness to the project proponents. It is their responsibility to disclose the impacts and the possible tradeoffs being made. Where are the realistic economic evaluations that would disclose the public losses and private gains from the public domain?

182-8 P.195. The lead agencies used a capacity requirement of 120 million tons, and either surface disposal, underground backfill, or a combination to match the Little Cherry Creek tailings impoundment capacity. How is the public to understand why this practical procedure is eliminated if no cost estimates associated between it and other methods cited are developed or shown?

182-9 Paste tailings. Based on the lead agencies preliminary economic analysis of incorporating underground backfilling into the Montanore Project, paste backfilling would likely make the project uneconomical (Agapito Associates). It is not a requirement within the province of the permitting agencies to make or facilitate a projects economic viability. It is the requirement of the permitting agencies to disclose all impacts and ensure they conform with the requirements of existing laws.

182-10 Furthermore, why is it that “A detailed discussion of the relationship between mining cost, copper and silver prices, cutoff grades, and reserve tonnages at the Montanore Project is beyond the scope of this study,” is off the table? The cost of doing business does not and should not be limited when equally valuable national resources are potentially liable to as a result of this irrevocable commitment to private interests. It also appears the Agapito Associates analysis was only conducted on the MMC preferred alternative as it continually messages the exceptional distances that both water and tailings would have to be delivered. The discussion does not appear to take into account Alt. 3, the agency mitigated alternative that locates the tailings impoundment (Poorman) closer to the mine and locates all of the mine adits in one location (Libby Creek).

182-10 P.211-12. Tailings disposal techniques: in every instance, conventional, partial, dry the agencies dismissed the proposal as making operations economically unfeasible. It is not the agencies duty to propose alternative methods based on the economic profitability or feasibility for the company. The criteria that are supposed to be used are those that maintain the other multiple uses and environment.

327-26 However, as is true in many other sections of the SDEIS, this viable option to minimize wetland destruction in the Kootenai National Forest is summarily dismissed because “backfilling at Montanore would result in significantly greater capital and operating costs than would normally be associated with room-and-pillar mining projects.” Because “significantly greater” is not quantified in terms of dollars and cents, this dismissal of backfilling is meaningless. We believe that wetlands are too critical to the overall health of the Kootenai National Forest to dismiss a thorough exploration of any plan, no matter the cost, that would minimize their destruction.

327-27 We believe that the backfilling Alternative to the current Poorman Creek Tailings Impoundment plan must be revisited and a new study commissioned based on site-specific data. Actual costs in U.S. dollars, reasonable cost comparisons of backfilling vs. impoundment of all tailings, and a basis in fact using an as-yet undeveloped Poorman impoundment design is the only way that the permitting agencies can

definitively evaluate whether backfilling as an environmentally preferable alternative to a toxic tailings edifice.

342-22 The Agencies' review and rejection of tailing backfill methods is based principally on the economic effect of mine profitability, and not on impacts to environment or population.

Response: The agencies analyzed tailings backfill as a method to avoid or minimize effect on wetlands and other waters of the U.S. Effects on wetlands was identified as a key issue during project scoping (see Section 2.1.2.1.7 of the DEIS and FEIS. The analysis also was completed to determine if an alternative to surface disposal of tailings was practicable. The agencies' analysis of backfilling of tailings was updated for the SDEIS and was discussed in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a). The agencies considered cost because under the 404(b)(1) Guidelines, an alternative is practicable if "it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes" [40 CFR 230.3(q), 230.10(a)(2)]. A 1993 joint Corps/EPA memorandum stated the determination of what constitutes an unreasonable expense should generally consider whether the project cost is substantially greater than the costs normally associated with the particular type of project. The agencies determined that backfilling would result in greater capital and operating costs than would normally be associated with associated with room-and-pillar mining projects.

182-9 Pneumatic placement. The main drawbacks to this method are the limited capacity (typically less than 200 tons per hour) of the blowers used to inject the solids into the transport pipe……. Why is it that in the water treatment section the company says it can simply add units to increase capacity, but here the same application of process is made into a major meltdown?

Response: Limited capacity was only one reason pneumatic transport and placement of tailings was infeasible. Other reasons were the limited distances that materials can be transported, and the large compressed-air volumes necessary for transport.

182-9 Placement of tailings underground as backfill would reduce the potential for surface subsidence, but would not reduce the potential for the collapse of the underground workings. Regardless, there is a low probability for surface subsidence without backfill under the current mine plan.

Response: The agencies agree.

182-9 Hydraulic filling could be employed at Montanore, provided that adequate underground drainage capacity is provided. Because the sand tailings represent about 90 % of the material suitable for placement hydraulically, the lead agencies eliminated hydraulic placement as an acceptable option for Montanore. If backfilling is an alternative that reduces surface and biological impacts then it should not be eliminated as an option. It is most interesting to note that most if not all alternatives that are costly to implement, but most protective of environmental factors are eliminated from further consideration.

248-16 As in the case of dry placement of tailings, the Agencies have not subjected hydraulic transport and placement of tailings to a rigorous analysis and comparison of its impacts versus surface disposal at the proposed Little Cherry Creek site as proposed.

Response: Hydraulic transport and placement of a portion of the tailings underground as a means to reduce surface impacts was disclosed Section 2.13 in the SDEIS and FEIS, and in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a). The DEIS, SDEIS and FEIS discussed that hydraulic placement would be limited to the sand tailings and the fine tailings would still require surface disposal. Instead of using sand tailings for the dams, hydraulic placement of sand tailings as backfill would require borrow for the dams. Both the borrow areas and the disposal area would be affected, increasing surface and biological impacts. The impacts to wetlands which were identified as a key issue and which were incorporated into the analyses under the 404(b)(1) Guidelines were disclosed in the SDEIS, FEIS and supporting documents. Section 2.13.6.2 of the SDEIS and section 2.13.4 of the FEIS compared acres of wetlands disturbed under various surface and backfilling scenarios.

202-42 Alternative 3 did not require the diversion of a perennial stream, but was dismissed because of the smaller capacity for tailings. Other options should be considered to limit the volume of tailings to avoid the diversion of Little Cherry Creek, such as the backfilling of the tailings.

243-3 At least three reasonable alternatives to the tailings disposal method were not evaluated fully. These three methods - dry placement of tailings, hydraulic transport and placement of tailings, and high-density slurry or paste disposal - were all discussed but eliminated without full consideration. The omission of further discussion of paste disposal is most striking in light of the fact that paste disposal was the method chosen for the nearby Rock Creek project.

Response: Alternative 3 was not dismissed but was identified as the KNF's preferred alternative in the SDEIS and FEIS. The agencies' analysis of backfilling of tailings was updated for the SDEIS in Section 2.13.3 and was discussed in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a). Section 2.13.4 of the FEIS summarized the agencies' analysis of backfilling of tailings.

248-15 The Agencies cite two "drawbacks" to this tailings handling and disposal methodology, i) the need for a dedicated fleet of vehicles to transport the tailings, and ii) the inability to place the backfill close to the roof and loss of backfill space as a consequence of the clearances required of truck dumping. Neither of these two "drawbacks" appear to be insurmountable problems in disposing of the tailings. Large construction projects routinely employ large fleets of dedicated vehicles to move material. It is therefore, difficult to imagine that a limited fleet of dedicated vehicles to move dry tailings would constitute a significant problem (particularly since this system is routinely used in other mining operations such as gold mines in Nevada, coal mines in Wyoming, underground salt mines in Louisiana and tar sands operations in Canada, as well as in large landfill operations throughout the United States. The second "drawback" cited by the Agencies (actually characterized by the Agencies as a "serious" drawback), concerned the inability to place backfill to the top of the mine roof and the loss of backfill space due to the clearances required for truck dumping. Did the Agencies investigate how other mining or large construction projects handle this issue?

Response: The basis for eliminating dry placement of tailings was logistics as described in Section 2.13.2.5.1 of the DEIS, Section 2.13.4 of the FEIS, and in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a) referenced in the SDEIS and FEIS. Most of the operations mentioned in the comment are surface operations and not underground operations. The elimination of backfilling as a practicable tailings disposal alternative was evaluated in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a) as part of the SDEIS analysis and in conformance with 404(b)(1) Guidelines where the economic analysis was based on operational needs and data specific to the Montanore Project.

342-6 "Typically denser tailings material would reduce the footprint of a tailings impoundment. However, the deposition requirements to achieve the required impoundment capacity for tailings disposal at the Poorman site ... would require an increase in the footprint for the thickened tailings deposition area over that for slurry deposition." (emphasis added) This is inconsistent with the Agencies' conclusion (ERO Report, Executive Summary, page ii):"The Agencies identified the Poorman impoundment site as the least environmentally damaging alternative for surface tailings disposal..."

Response: The sentence in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a) should be clarified, as discussed in this response. The agencies' analysis of a conceptual design at the Poorman impoundment site indicated that the site could not hold 120 million tons of tailings using slurry deposition, primarily because of the projected shortage of cyclone sand available for dam construction. If thickened tailings were deposited at the site at a tailings volume equal to the maximum slurry deposition capacity of the site, the size of the impoundment would be slightly smaller.

342-6 So, the Agencies are favoring and recommending a tailings deposition method without knowing if the method will actually work. This uncertain assumption then drives the selection of the Poorman impoundment site. What happens if the "simulated tailings" prove to be not suitable for thickening or if the needed tailings density cannot be achieved? Furthermore, maintaining a "near 100% efficiency" in the thickening circuit does not constitute a realistic expectation.

Response: The agencies' analysis concluded that thickened tailings deposition is technically feasible based on the best available information. MMC would conduct additional analysis of the tailings properties after it obtained ore samples during the Evaluation Phase. Section 2.5.3.5.2 of the DEIS and SDEIS and Section 2.5.2.6 of the FEIS discussed the final design process. The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate level of MEPA review on the application. An inability to reliably achieve the design criteria for tailings density would be an example of such a situation during final design

342-7 Since the Agencies have determined that certain non-slurry disposal methods are indeed practicable disposal methods, why have the agencies not examined their use at alternative potential tailings impoundment sites? Why have the Agencies limited their consideration of non-slurry disposal methods (e.g., thickened, paste and filter disposal) to just the Poorman site (and the Little Cherry site)?

342-8 With the determination that certain non-slurry tailings disposal (e.g., thickened, paste and filter disposal) methods are in fact feasible alternatives, how would their use at some of the rejected tailings impoundment locations affect the tailings impoundment selection process? Most of the non-slurry disposal alternatives (but, ironically, not the method favored by the Agencies, thickened/cyclone deposition), would result in a lower overall impact of the tailings impoundment site, including a smaller impoundment footprint (but not the method favored by the Agencies, which, as noted above, would result in a larger impoundment footprint).

342-9 So, use of filter tailings would reduce the size of the impoundment, reduce the size of the impoundment dam, result in significantly better slope stability and result in significantly better seepage control. Clearly, filter tailings would result in significantly less overall environmental impact and damage. ERO evaluated filter tailings disposal within the context of the Poorman tailings site. How would the use of filter tailings impact the evaluation of other potential tailings sites such as Midas Creek, Standard Creek, Crazyman Creek and Upper Hoodoo Creek?

Response: The agencies' used a sequential process to identify alternatives. The analysis of surface deposition method was made after identifying potential sites. Based on a number of environmental and engineering criteria, the agencies identified sites that are likely to result in the least environmental damage. The basis for eliminating other sites is described in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a) and summarized in section 2.13 of the SDEIS and FEIS.

2034 Alternatives Considered But Eliminated: Comment about tailings impoundment site analysis

243-3 There are numerous instances where the Agencies either did not evaluate an alternative or eliminated a reasonable alternative from review. These include failure to fully evaluate two tailings impoundment site alternatives — the Standard and Midas sites — that had previously been identified as preferable to the sites currently under consideration.

248-11 Inexplicably, while the Agencies noted that it was not clear why the Standard Creek site had not been investigated further, they made no effort to investigate the Standard Creek site and did not include it in alternatives evaluated even after the Corps requested a reevaluation of alternative impoundment sites.

248-12 The Agencies need to fully evaluate the Standard Creek tailings site impoundment alternative.

311-1 By failing to objectively evaluate reasonable alternatives that are available, namely the alternative impoundment sites like Midas Creek, Upper Standard Creek, Crazyman Creek and Upper Hoodoo Creek, on a consistent basis and in combination with the different tailings disposal methods now deemed feasible,

342-4 The SDEIS states, however, makes no mention of the existence of bull trout in Midas Creek, one of the two impoundment sites deemed the "most desirable alternatives" by MKE. In Table 9 of the ERO Report, the Upper Midas site is listed as eliminated due to "bull trout habitat". This is not consistent with the description of bull trout habitat waters outlined in the SDEIS. Similarly, the upper Standard Creek site, the second impoundment site identified by MKE as "most desirable" is also eliminated due to "bull trout habitat". While Standard Creek is listed in section 3.6.3.9.6 of the SDEIS as being occupied by bull trout, Standard Creek is effectively blocked by an old beaver dam structure at Standard Lake and it is difficult to imagine that any bull trout are able to move upstream of Standard Lake. The Midas Creek site and the upper Standard Creek site seem to have been arbitrarily dismissed from Level III consideration based on incorrect classification as bull trout habitat.

342-4 The Agencies need to re-examine the suitability of the Midas site and the upper Standard Creek site, particularly in view of the potential for using one of the non-slurry tailings deposition methods that the Agencies have now determined to be practicable alternatives,

Response: Section 2.13.2.4 of the DEIS, Section 2.13.4.2 of the SDEIS and Section 2.13.5 of FEIS disclosed the agencies' evaluation of the Standard and Midas sites for tailings disposal. The agencies' analysis of tailings impoundment sites was updated in the SDEIS and was discussed in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a).

342-3 If a 2000-foot buffer were applied to the Poorman site, the Poorman site would have been discarded at this initial Level I screening because the 2,000 buffer would push the impoundment 2,000 feet from LPMC's property boundary and would result in a site without sufficient capacity to accommodate 120 million tons of tailings. Instead, the Agencies ignored this criterion for the Poorman site and placed the toe of the impoundment 250 - 300 feet from LPMC's property

342-4 The Agencies compound the error of their impoundment selection process by then applying a different method of tailings disposal to the Poorman site than they apply to any other site evaluated (other than, evidently, the Little Cherry Creek site). For all tailings impoundment sites evaluated, other than the Poorman site, conventional slurry tailings are considered as the disposal method. For the Poorman site, a different method of tailings disposal must be used due to capacity limitations.

342-9 The Agencies need to evaluate other potential tailings sites on the same basis as the Poorman site. They also need to more fully evaluate the various tailings deposition methods at various impoundment site alternatives to determine which would have the least overall environmental impact. This analysis needs to include the impacts to LPMC land. Without the application of consistent evaluation criteria, the Agencies have no basis for concluding that the Poorman site results in the least overall adverse environmental impact.

Response: The area around all impoundment sites except the Little Cherry Creek and Poorman sites was enlarged by 2,000 feet to standardize disturbance areas for the impoundment sites during screening. The disturbance area around Little Cherry Creek and Poorman sites was not enlarged during the screening because the disturbance area for these sites was known at the time of the screening analysis. The buffer also was used to account for tailings impoundment site evaluations in prior alternatives analyses that were completed using lower impoundment capacity requirements than currently necessary for the Montanore Project. During alternatives development before the DEIS was issued, the agencies developed six options for an impoundment site between Little Cherry Creek and Poorman Creek (Poulter 2007). Three Poorman Creek options were eliminated because the dam was sited on private land that was not owned by MMC, and that could not be reasonably obtained. Two options were eliminated because they did not have adequate capacity or required large dam volumes. The option retained was subsequently refined.

342-5 Now, however, a number of these non-slurry disposal methods do appear to be practicable tailings disposal methods and it is only by considering these alternative methods of handling tailings, that the Poorman site might be able to accommodate 120 million tons of tailings. None of these non-slurry disposal methods were considered for any other potential tailings site, however (other than, apparently, the Little Cherry Creek site). Again, this reflects a flawed analysis methodology which appears to be designed to

achieve a predetermined outcome, namely the selection of the Poorman site for tailings disposal to the exclusion of other potential sites.

Response: Section 6.0 of the Final Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a) disclosed that the tailings disposal method has a relatively minor effect on surface disturbance and effects on waters of the U.S.

342-7 It seems that the Agencies considered the Midas Creek site to be a viable location for a tailings impoundment for combined MMC/Revett mining operations, however it was eliminated from consideration in the Level 11 screening in the SDEIS for tailings impoundment locations for the Montanore Project.

342-10 If the agencies were focused on minimizing the extent to which RHCAs would be affected then they should be focusing on Crazyman Creek and Upper Hoodoo Creek rather than Poorman and Little Cherry Creek as impoundment sites.

342-10 As summarized in Table 10 on page 57 of the ERO Report, in addition to less impact to RHCAs, the Crazyman Creek and the Upper Hoodoo Creek sites would have other advantages over the Little Cherry Creek and Poorman Creek sites, including a smaller footprint, much shorter dam crest length and less impact to critical bull trout habitat and no impact to grizzly bear core and grizzly bear habitat. As discussed in I, D above, the use of paste or filter tailings disposal methods would result in further benefits and lower overall environmental impacts by significantly reducing the height of the impoundment dam structures, reducing overall impoundment capacity requirements, increasing tailings slope stability and provide significant benefits with respect to seepage control.

342-18 By failing to objectively evaluate reasonable alternatives that are available, namely the alternative impoundment sites like Midas Creek, Upper Standard Creek, Crazyman Creek and Upper Hoodoo Creek, on a consistent basis and in combination with the different tailings disposal methods now deemed feasible, the Forest Service is failing to meet the requirements under the Organic Administration Act and the Multiple Use Mining Act to minimize adverse environmental impacts on NFS lands. In addition, as noted above, the Agencies have failed to address impacts to LPMC lands resulting from the Montanore Project as they are required to do pursuant to NEPA and MEPA.

Response: In their analysis of a combined MMC/Revett mining operation, the agencies assumed for analysis purposes a second tailings impoundment in Midas Creek. Standard Creek and Midas Creek sites were eliminated in the agencies' impoundment siting alternative analysis because of bull trout or grizzly bear habitat. Effect on RHCAs was one of numerous criteria used in the agencies' three levels of screening. The Crazyman Creek and Upper Hoodoo Creek dams would be nearly twice as high (600 feet or more) as the Poorman or Little Cherry Creek dams. High embankments (greater than 400 feet) often pose design and construction problems that could be avoided by better siting (Environmental Protection Agency 1994). The agencies concluded that the Poorman site was a better site than either the Crazyman Creek or Upper Hoodoo Creek sites.

342-11 In view of the fact that the Agencies, MMC and the Agencies' and MMC's consultants have never initiated any contact with LPMC and have never inquired about a pipeline route through its private property, it is not clear what "correspondence" in the project record ERO is referring to. This of course raises the question of how the evaluation of the Crazyman Creek and the Upper Hoodoo Creek sites might change if a pipeline route through LPMC land were available.

Response: The commenter is correct that neither the agencies nor MMC's consultants contacted Libby Placer Mining Company regarding a pipeline route through its property. The agencies' tailings disposal alternatives analysis indicated the pipelines to the Crazyman Creek and Upper Hoodoo sites could not follow the Libby Creek Road (NFS road #231) because it is on private land owned by the Libby Placer Mining Company. Among other correspondence, the commenter submitted the following comment on the DEIS: "The Agencies should assume that sampling stations LB-1000, LB-800, RA-600, (and possibly a sampling station in Poorman Creek) will not be available in connection with a water monitoring program for the Project." (See comment response 248-9 on p. M-366 for comment.) The agencies did not eliminate the Crazyman or Upper Hoodoo creek sites from detailed analysis because of the agencies' assumption that

Libby Placer Mining Company property was not available. The sites would have a greater effect on perennial streams than the Poorman site and would require more stream crossings by tailings pipelines than the Poorman and Little Cherry Creek sites. They also would have substantially greater impacts on aquatic resources than the Poorman site and overall would not offer environmental advantages over the Poorman site.

342-12 The Agencies must abide by the provisions of NEPA and MEPA and consider the impact of the Poorman site to Libby Placer Mining Company property. When impacts to LPMC lands are considered, LPMC believes that other potential tailings sites would be less environmentally damaging.

342-23 As noted several times above in this comment, the Agencies have failed to address impacts from the Montanore Project to LPMC as they are required to do under NEPA and MEPA.

Response: The DEIS, SDEIS and FEIS disclosed the effect of the mine and transmission line alternatives on private property.

2037 Alternatives Considered But Eliminated: Comment about joint venture (Rock Creek/Montanore)

29-1 A joint venture approach would permit the mine to drive the additional one-quarter mile to the west to intercept the existing Rock Creek Mine. Its adit, located at a much lower elevation and sheltered by a cliff from the wilderness, could supply a much less intrusive ventilation shaft.

29-1 From the perspective of a resident of the State of Idaho, the benefits of the copper-silver are body located under the Cabinet Mountain Wilderness should accrue to the State of Montana and so should the environmental risks of its extraction. I have been informed by friends, who have long careers in the mining industry, that stable development of the entire ore body has its best chance of success as a joint venture by the two companies proposing to develop it Such development would only logically be supported by a single direction of entry into the ore body, rather than the current Revett Mining proposal of entering from the west, and the Montanore proposal from the east. A combined effort would solve an additional problem for the mining companies and the agencies. The first proposed mine will be required to mitigate grizzly habitat impacts, as will the second, but the second will likely be required to mitigate the cumulative impacts of both, making it a far more difficult proposition. A joint venture entry removes most, if not all, cumulative impact issues. Libby deserves one stable mining enterprise, rather than two with a lesser chance of survival due to

29-1 a single entry approach from the east side of the mountain range should be encouraged by state and federal public policy

60-11 Also, I'm wondering why is it that the Revett and Mines Management can't both use the same tunnel or adit, if you will, to get to their respective ore bodies which are next to each other. It makes sense. It's less of a footprint on the ecosystem, on the wildlife, et cetera, et cetera.

72-27 The first gentleman that spoke, suggested why can't they both use the same portal? And I don't know that there's any authority to require this. But consider that if both — it's essentially one body. There's a fault, but if it all came out this side, you would have a lot more steady stayed employment for a lot longer for this community. You wouldn't have the boom and bust effect. You wouldn't have double the impact.

97-5 For now, these are my final statements on Montanore outside the Lincoln County Courthouse: "Me thinks" it would be a good idea for Revett Minerals Corp. and whomever is operator of the Montanore project to jointly use the existing Libby Creek adit to access their copper-silver ore bodies that are adjacent to each other: minimal political, physical, carbon, and costs' footprint.

182-2 P.29. Joint venture dismissed as non-significant issue. Dismissal of a joint venture in an area that is classified as GB Situation habitat 1, where the potential of two independently operating mines has the potential to cut said habitat in ½ and preclude interaction between elements of an already endangered

population is not insignificant. The regulatory agencies refusing to explore an alternative that looks at this possibility are not only neglecting their responsibility to ESA but also to the proponent developers.

243-3 The Agencies did not evaluate the logical alternative of a joint venture with Rock Creek.

248-4 The Agencies discussed the subject of combining the two mining developments in Section 2.13.3.6 (page 213) of the DEIS. The Agencies acknowledge that a combined mining development would likely provide for a more cost efficient operation as compared to two separate operations. While acknowledging that they have no authority to require this alternative, the Agencies in any case go on to state that this alternative was dismissed for "environmental, engineering and legal reasons".

Response: The Agencies discussed the subject of combining the two mining developments in Section 2.13.3.6 of the DEIS and 2.13.3.2 of the FEIS. The analysis, in Section 2.13.2.2 of the SDEIS, was revised and an expanded discussion was presented in the Tailings Disposal Alternatives Analysis (ERO Resources Corp. 2011a). The agencies determined that they did not have authority to require Revett and MMC to join their proposals into one operation, and joint operation is not a reasonable alternative and therefore was dismissed detailed analysis. The agencies' final analysis of combing the two mining operations is disclosed in section 2.13.3.2 of the FEIS.

2039 Alternatives Considered But Eliminated: Comment about transmission line analysis

354-1 Cost estimates for above-ground transmission line construction, impact mitigation and removal at end of mine life ought to be given also, so that the reader can better judge the issue. The analysis is assumed that duct banks for underground line will be encased in concrete. Is this strictly technically necessary?

Response: Costs for all transmission line alternatives were presented in Section 2.8 of the DEIS and updated in Section 2.8.1 of the SDEIS and FEIS.

2051 Suggested New Mine Option/Alternative: Suggested plant and adit option

327-15 If avoidance of wetlands destruction means moving its milling operation to the Libby Industrial Park, then MMC must assume the cost of the requisite transportation. This should clearly be a primary consideration that would avoid rather than destroy.

Response: Transporting up to 20,000 tons per day of ore would be logistically difficult and create high traffic volumes on access roads. Assuming 20 ton trucks, which is the legal limit on US 2, 1,000 one-way truck trips would be necessary or 2,000 trucks per day for a round trip. It would be more than one truck every minute.

2052 Suggested New Mine Option/Alternative: Suggested tailings disposal option

182-3 An unlined 6-foot-wide ditch paralleling the entire length of the road and pipelines would intercept any released tailings.

Response: The agencies' mitigation to bury double-walled pipelines, coupled with MMC's proposed leak detection, should minimize the risk of pipeline rupture and tailings release.

327-27 By far the best and most environmentally acceptable alternative to the Poorman Creek Tailings Impoundment is transporting the tailings out of the Kootenai National Forest to a processing facility located on private property such as the Libby Industrial Park.

331-14 A location for the tailings impoundment must be found that would not result in a loss of wetlands. Can waste rock from the Montanore Mine be transported to the town of Libby where there are no wetlands?

331-46 The tailings should be transported to one of the abandoned mine sites for W.R. Grace. These sites are already compromised by environmental degradation. Relocating the tailings impoundment for the Montanore mine would protect the Libby Creek watershed from the expected long-term impacts. Relocation of the impoundment to the W.R. Grace site would protect wetlands and the fisheries of Little Cherry Creek, Poorman Creek, and Libby Creek.

Response: Transporting up to 20,000 tons per day of tailings to any offsite facility would be logistically difficult and create high traffic volumes on access roads. Tailings would be shipped with some moisture. Paste tailings has 33 pounds of water for every 100 pounds of tailings. Assuming 20-ton trucks, which is the legal limit on US 2, 1,333 one-way truck trips would be necessary or 2,666 trucks per day for a round trip. It would be nearly two trucks every minute 24 hours per day. The agencies did not consider offsite disposal as a feasible alternative. Waste rock would be used in the tailings impoundment dam or stored underground in Alternatives 3 and 4.

2054 Suggested New Mine Option/Alternative: Suggested LAD Area option

182-16 In addition, to ensure proper monitoring of the facilities, real-time public video monitoring of the areas should be required.

Response: The agencies would administer the activities to ensure compliance with DEQ Operating Permit and Forest Service Plan of Operations. The agencies determined a visual video record of the construction was not needed to ensure such compliance.

2056 Suggested New Mine Option/Alternative: Other suggested option

202-42 Another alternative that was not reviewed regards the USFS' authority, under the Wilderness Act, 16 U.S.C. § 1134(a), to exchange private interests within a Wilderness Area as a means of protecting Wilderness values.

331-46 Land exchange to avoid intrusions into the Wilderness and impacts to Wilderness resources/values

Response: None of the agency alternatives would create surface disturbance in the CMW. Section 1.2 of the DEIS, SDEIS, and FEIS indicated all access and surface facilities including the 230-kV transmission line would be located outside of the CMW boundary.

202-44 Since completion of the evaluation adit is the next step in the "logical sequence" of developing the ore body, that phase is the only phase that can be considered for approval at this time.

331-46 Approving only the pumping of the evaluation adit water at the current time. This will allow the agencies to obtain critical information on water quality, hydrology, dewatering, etc.

Response: In 2008, the KNF decided the best approach for disclosing the environmental effects of the Libby Adit evaluation program was to consider this activity as the initial phase in the overall Montanore Project EIS. The Libby Adit evaluation program would be the first phase of the Montanore Project in Alternatives 3 and 4.

331-46 Alternatives that would not require any claimed "exemption" from water quality or other environmental standards. This would include alternative facility and/or treatment locations and/or designs to either avoid discharges or the need for perpetual treatment.

Response: The agencies considered all reasonable facility location alternatives, as discussed in Section 2.13 of the DEIS, SDEIS, and FEIS. The agencies did not identify any reasonable alternative that would avoid discharges. The need for perpetual treatment is not known. Anticipated post-mining water quality is discussed in Section 3.13.4.2.3 of the SDEIS and FEIS.

2071 Suggested New Transmission Line Alignment: Suggested transmission line alignment

Buried line

53-2 The proposed buried line will follow NFS road #231, and be buried under the road and/or nearby adjacent to the road. It will have the curving/ meandering plan view alignment of the road.

53-3 A connecting segment from the east end of NFS road #231 at highway US 2 to the proposed Sedlak Park substation on US 2 is about 4 miles in length. This segment could also be buried-in highway US 2 right-of-way if MDT is agreeable.

53-2 If a buried line can be built in less time, which seems likely, them a comparison with time to build an aboveground line is not a key issue.

143-1 Another route for a buried electrical transmission line is via and along Miller Creek Roads (NFS roads #4724 and 4780 to and then along #231).

327-11 Put the power lines underground along an established roadway — Fisher Creek Road — and save untold acres of established grizzly bear habitat.

327-22 The rationale for excluding the underground power line option is weak. This option should have been included so that a more comprehensive analysis could have been done. It is the responsibility of the Agencies to weigh a number of factors in its evaluations and choices, yet in this case they have really utilize only one—cost—and even that criterion has not been subjected to comprehensive analysis.

Response: Section 2.13.10 of the SDEIS and Section 2.13.11 of the FEIS included the agencies' analysis of underground installation of a transmission line. The DEQ considers cost an appropriate criterion based on MFSA (75-20-301, MCA), which requires the DEQ to determine that "the facility minimizes adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives." MFSA also requires the DEQ to determine "that the facility or alternative incorporates all reasonable, cost-effective mitigation of significant environmental impacts."

Proximity to residential property

12-1 The new 'safe' distance from these lines is 400ft.-from residential property lines/yards-not the 200ft as reported in the 'outdated' DEIS.

19-1 the line to be a minimum of 450 feet from any residences

100-1 We just wanted to ask you again to please keep the transmission lines for Montanore Mines at a safe, (healthy?) distance away (400ft. Minimum) from all residential property lines.

103-1 If they must be than they should not be closer than 2000ft of any residential property lines, public roads and recreational areas.

108-1 At or close to the west property line of Section 32, a new alternative location is proposed. This location bears north/northwest across Section 36 and diagonally across Section 26 from the southeast comer to the northwest comer, and continuing into Section 22 near the southeast corner, across Miller Creek and tying into the proposed North Miller Creek Alternative (Alt B) or the Modified North Miller Creek Alternative (All C).

145-1 Please do not come closer than 2000ft from our home/property lines and family recreation areas.

147-1 If these lines must be than maybe if they are done right the first time (no closer to residences and the recreating public-(Howard Lake area) than two thousand feet).

240-1 We would not feel safe or with peace of mind with these lines any closer than 2000ft of our property lines or any other residential property lines (as in our neighbors-the Rose's). Howard Lake recreation area, and public roads.

290-3 We are requesting varied viewings from our home and cabin rental sites.

327-18 The homes of the four full-time Midas Mine residents are the only residential structures within ten miles, yet the proposed power line route seems to gravitate towards them without any apparent rhyme or reason. Surely, if DEQ officials can seriously consider moving the lines 1,000 feet from the far less remote Roger Guches residence, they can relocate those which practically run through our land several miles away. If the current proposed alternative remains in place, this should be done.

360-2 I respectfully submit my plea to you to consider relocating the main transmission line approximately 1000 feet further north. The best way I have of explaining where the new location might be is as follows: A small ridge runs parallel along my north property line.- Current plans indicate the line will run along the south side of the ridge, which is close to my property. I request the line be run along the north side of the ridge which I estimate to be about 1000 feet further than planned.

364-1 I would just propose that it would be located just slightly north of me to be out of eyeshot, earshot and for health-issues wise.

Response: The alignments of transmission line alternatives C-R, D-R and E-R were modified in the SDEIS and again in the FEIS to reduce effects on private land. All residences are more than 450 feet from the alignments of transmission line alternatives C-R, D-R and E-R. Residences more than 450 feet for the centerline were considered to be "Category I" homes in the EMF assessment. Category I homes would have electric field strength always less than 50 V/m and the magnetic field strength always less than 1.0 mG, regardless of the pole type. Exposures in Category I homes are characterized as having "no recognized potential for a health impact from exposure to EMFs" (Asher Sheppard Consulting 2007, 2012).

Other options

147-1 They should not be put in our national forest at all. Maybe it would be possible for the Montanore Mine to run on generators (muffled for noise)

236-1 Where ever possible, sitting towers, should considered over/through existing harvested areas, as these areas have existing road facilities, and clearing should be minimal.

Response: Section 2.13.10 of the FEIS was revised to disclose that on-site generation was not reasonable because of high capital costs and the likelihood of other environmental concerns, such as air quality. The preferred location criteria, which are listed in DEQ Circular MFSA-2 and discussed in the Draft Findings for Transmission Line Certification Approval section of the DEIS, SDEIS, and FEIS Summary, include locations in logged areas rather than undisturbed forest and locations that use or parallel existing utility and/or transportation corridors.

238-1 The size of the power line should reflect the amount of power through the line only lower power smaller lines. No mine or running the lines up and mining from Rock Creek only.

241-1 I told you at the meeting that the only way the transmission lines would not be in view from our house is if you ran them up Rock Creek.

Response: Locating mine facilities and associated transmission line on the west side of the Cabinet Mountains was eliminated from detailed analysis, as discussed in Section 2.13 of the DEIS, SDEIS and FEIS.

2185 Financial Assurance: Comment about financial assurance

74-14 An adequate Reclamation bond to repair all potential physical, ecological and experiential damages to the CMW resource, both now and in the foreseeable future, must be posted.

74-18 [The DEIS] fails to provide full financial information that would indicate MMC's compliance with relevant legislation for public consideration.

97-5 Ensure that residual funds are set aside for future generations as the mines will close . . .Ensure that residual funds are set aside to perpetuate healthy, local flora and fauna . . .Ensure that residual funds are set aside to protect wildlife, fowl and aquatic animals

111-1 Is the reclamation bond sufficient to cover actual costs of reclamation and which set of reclamation standards (as per the Metal Mines Reclamation Act) are going to be required? If this project were to proceed, after 100 years, would the area look as it did before the massive extraction of these rocks? Would the ecosystem function, sufficiently, to allow species who depend on this habitat be able to find there way through the next 100 years

141-3 My concern is the costs of treating water for decades or in perpetuity is not calculated or part of any cost benefits analysis. What is the value to our community of a permanent source of pollution? The costs of water treatment forever would eventually exceed any benefit. Whereas permanent water treatment may be a likely scenario, it is unrealistic to expect any business to be around for even a few centuries let along always. Few make 50.

182-6 P.107. The pump back recovery wells would located beyond the dam toe, and would be designed to collect seepage not collected by the drain system. This sounds like a perpetual system and would have to be addressed in the amount of reclamation bond posted.

182-7 P.120. The length of time these closure activities would occur is not known, but may be decades or more. With an unknown such as this how do the permitting / regulatory authorities plan to bond for this?

182-17 15. P. 467. “The agencies estimate that it would take about 70 years for the groundwater level to return to steady state conditions.” 70 years before steady state conditions and the probability of mine-water discharges via whatever routes. How much longer beyond this time-frame before associated impacts might be perceived? What will the long-term bonding requirements of such a scenario entail? Is such a bond simply a long-term promissory note or a cash bond that secures interest over time, and whose interest can be utilized for inflationary increases in the cost of mitigation if required?

331-31 It is suggested that bonding for the proposed project would likely be in the form of an “irrevocable line of credit”. If the project were to enter into bankruptcy in the future, would securing the bonding in this way guarantee adequate funding for reclamation? Reclamation bonding must be fully secured prior to the turning of dirt.

202-10 The DEIS contains insufficient information on bonding, particularly regarding water quality. There is limited information regarding a transmission line bond for clean up and reclamation and for the $6.2 million bond required by the Forest Service for reclamation. We could find no information pertaining to a bond to cover long-term water treatment, as is required. Under NEPA, the EIS process must allow the public to fully participate in the bonding process.

235-2 The reclamation plan should provide sufficient funds to ensure that the tailings impoundment surface will be fully restored and revegetated with native flora. The fund amount should be indexed to inflation.

331-18 Regarding perpetual treatment (for the mine void, seepage, groundwater impacts, or any other aspect of the project) that is not allowed under federal or state law. Admitting the potential for perpetual treatment is essence admits that reclamation will never be fully accomplished. As all mine operations must be reclaimed under the Organic Act/228 regulations and related federal law (such as the Mining and Minerals Policy Act of 1970), the failure to achieve reclamation requires that the Plan of Operations and metals mining permit be denied. It should be noted that having a financial assurance/bond in place to cover perpetual treatment is not a substitute for reclamation.

331-31 The SDEIS states that the possibility exists that the responsibility for reclamation of the project may one day fall on the agencies. The bonding amount should reflect this contingency by estimating agency time and resources that would be consumed managing the site. How can there be a public comment period on the bond amount for reclamation if the total amount will not be known until after the ROD is released? Will there be another comment period available after the bond amount is issued?

331-31 What if the treatment extends beyond 100-years? The bond should cover long-term water treatment that would be required for more than 100-years.

331-32 The SDEIS states that treatment will be required for decades or more, and will bond for up to 100-years. The logic for not requiring bonding beyond that 100-year window is flawed. The SDEIS wrongly assumes that water treatment will become more economical in the future so additional bonding should not be required. (SDEIS Section 1.6.3.2.3, Pg 30) Water quality standards may also be more stringent in future so treatment options in 2011 may be considered grossly inadequate in 2111.

343-1 Further, from what I have read in the Wall Street Journal, Mines Management has nowhere near the funding they need to begin mining, let alone meet standards this report requires them to meet. Apparently hundreds of thousands of my tax dollars have been spent preparing this impact statement for a corporation that may well, in the end, decide not to proceed. Our tax dollars and your extensive efforts will then have been wasted. Why is there not requirement that a corporation put money up front for the development of this kind of report? It could be remitted to them, at least in part, when they actually begin operations.

344-2 The assumption that "the cost of water treatment will become more economical with technological advances" is unsubstantiated and solely in the interest of industry. There is no evidence that water treatment for an entire aquifer has become more economical, or that technological advances will ever restore this watershed to preindustrial levels. If we are going to permit perpetual water degradation, we must have in place an adequate bond that is designed to protect the public for a similar amount of time and is not so heavily discounted that it will be inadequate after only 100 years.

344-2 The SDEIS states many times water treatment may be required for perpetuity and that the length of time treatment is required is unknown. By only projecting the DCF for 100 years, the public is again left holding the bag for long term cleanup, which seems what this projection is designed to do.

389-13 How will we know whether the reclamation bond is adequate? Is it possible to anticipate long-term, persistent impacts in such a way as to make them compensable? The reclamation bond is likely to be grossly inadequate to cover the damage to public resources this mine will cause.

Response: Section 1.6.3 was added to the SDEIS to discuss financial assurance and the agencies' approach to calculating a reclamation bond amount. Section 1.6.3.2.3 discussed long-term water treatment and reclamation bond considerations. Section 1.6.3.1 discussed that a bond must be in place before issuance of an operating permit or approval of a Plan of Operations. The agencies calculate a long-term water treatment cost using a discounted cash flow (DCF) analysis, where the annual treatment costs are converted to a net present value (NPV). Projecting the DCF over 100 years is in line with federal guidelines contained in the USDA's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies (USDA 1983).

2186 Financial Assurance: Suggested change in financial assurance

74-9 If there is a need for additional positions to monitor and protect grizzly bears, it is the Forest Service's responsibility to secure adequate funding for these positions.

Response: As discussed in the agencies' grizzly bear mitigation plan in the DEIS, SDEIS, and FEIS, MMC would provide funding for the additional positions to monitor and protect grizzly bears as result of the Montanore Project.

2216 MMC's Proposed Mine: Suggested change in water use and management

152-17 The seepage collection pond, downstream from the tailings impoundment, will have a liner designed to achieve permeability of 10-6 cm/s (DEIS, page 52). Neither the text nor cross-section (figure 9) shows the thickness of the liner. Without the thickness it is impossible to assess the efficacy or usefulness of the liner. Note that this permeability equals 0.0028 ft/d, which is not a very low value for a liner; at a gradient equal to 1.0, seepage will pass a 1 foot thick liner in less than a year.

Response: The agencies would require a geomembrane liner for the Seepage Collection Pond under all alternatives. The geomembrane thickness would be on the order of 80 mil to 100 mil. The industry-recognized test for geomembrane permeability measures the gas diffusion rate through the membrane with the assumption that the material is homogeneous across the test sample with respect to physical and chemical characteristics. This test measures the transmission rate of a liquid in its vapor or gas phase through the membrane. Typical values for gas diffusion are on the order of 1×10^{-13} to 1×10^{-14} cm/s. Higher permeabilities through installed geomembranes arise from manufacturing defects or poor quality control during installation. With proper quality assurance and quality control during manufacturing and pond construction, the permeability of the lined facility can be reduced to below the 1×10^{-6} cm/s cited in the DEIS and FEIS, and would likely be on the order of 1×10^{-9} cm/s.

Post-closure Water Management

141-4 ASARCO who developed the Troy mine often used as an analog for this project, has since sold out and been in bankruptcy since 2005. While it is possible to create a perpetual source of water pollution, it is not possible to create a responsible party in perpetuity. A more prudent design would be a project where permanent water treatment would not be necessary or expected. If this cannot be done under any alternative, please reconsider the need for this project. Allowing permanent water degradation, even with treatment, shifts the costs of this project to future generations who will receive none of the benefits.

152-17 The DEIS also plans for 5 gpm to seep to the groundwater after operations cease. This means there will be a continuous source of contaminants into perpetuity. This also means there will also be a substantial amount of water captured by the underdrain system after operations cease. The agencies do not have a plan for handling this continuing seepage in perpetuity.

200-6 It is likely that the Land Application Disposal would be required in perpetuity and treatment of the wastewater will be necessary as well. Who will be responsible for the treatment of this perpetual discharge?

200-8 The post-mining seepage from the tailings would be discharged in one of the two Land Application Disposal (LAD) areas. Will this discharge be perpetual? If the discharge does become perpetual, who will be responsible for the long-term maintenance?

202-5 Given that the long-term discharge of 50-100 gpm would occur long after the mining company has departed, who will be responsible for the maintenance of this perpetual discharge?

335-16 The SDEIS doesn't provide analysis of the implications for long-term water treatment or water treatment into perpetuity as a result of infiltration of water into the tailings impoundment from the five springs which will be buried by the tailings impoundment. The SDEIS should analyze the extent of long-term treatment.

Response: Section 3.1.1 of the DEIS, SDEIS and FEIS disclosed that MMC or its assigns would maintain and operate water treatment and seepage collection systems until water quality standards were met in all receiving waters from the specific discharge. Based on the current level of information, the agencies would likely estimate costs for water collection and treatment in perpetuity when calculating the reclamation bond. Section 1.6.3.1 of the SDEIS and FEIS disclosed that the bond would be determined after an alternative has been selected for implementation and a ROD or decision is issued by each agency.

152-17 The mining company has indicated they will install "seepage control measures, such as pump-back wells, if required to comply with applicable standards" (DEIS, page 52). The DEIS should state at this point what those applicable standards are and how the decision to install the seepage control measures will be made. This statement contradicts other statements in the MPDES permit application (Geomatrix, 2007a) which claims there WILL be a pumpback system. The DEIS discusses seepage as though the 25 gpm is what will occur after the seepage passes the pumpback wells.

Response: Section 2.4.1.5 of the DEIS and FEIS indicated that MMC was committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. The agencies' analysis indicated such as system would be necessary to meet ELGs. Section

2.5.3.5.2 of the DEIS and Section 2.5.2.6.4 of the FEIS indicated a pumpback system would be installed in Alternatives 3 and 4.

152-18 The DEIS should verify whether the existing outfalls will be abandoned.

Response: Section 2.4.2.4 of the SDEIS and FEIS indicated that MMC applied to the DEQ to renew the existing MPDES permit and existing outfalls and requested the inclusion of five new stormwater outfalls under the permit. In 2011, the DEQ determined the renewal application was complete and administratively extended the permit (ARM 17.30.1313(1)) until MMC receives the renewed permit. The DEQ issued a draft renewal MDPES permit in July 2015 and held a public hearing on the draft permit in August 2015. The draft renewal permit included the three existing outfalls and approved five stormwater-only outfalls. The DEQ will issue the final MPDES permit in its ROD.

LAD Areas

182-3 Mine and adit water would not receive treatment prior to land application. In essence this practice would make the LAD areas water impoundment facilities. Water-bound copper in the effluent would supposedly attenuate in the LAD areas and be susceptible to exposure at a later date depending on what future activities were proposed in the areas.

182-15 11. P.440. “Because of the limited subsurface data available for the LAD Areas, it is not possible to refine the estimated application rate beyond what is presented in this EIS.” Once again we have a situation where conservative as it may be desired the permitting agencies will be making qualitative and quantitative judgments based on inadequate data.

182-16 In all of the discussion about the LAD Areas there has been no mention of fall / winter weather and ground freezing events. Is there a considered period of no use? When is it? Who is the determinant? If not, then water discharged to the LAD areas will flow overland directly into streams and will require an MPDES permit.

200-5 The DElS mentions a few alternatives when the ground does reach saturation and additional application is not possible. More details are needed for the option of storing LAD water at the tailings impoundment. Will the impoundment storage option be lined? If the storage is not lined, can an MPDES outfall be expected? Will the water be treated prior to storage at the impoundment?

202-42 Alternatives other than the LAD need to be explored because of afore mentioned problems and impacts that will become inherent with this type of discharge.

331-26 Could LAD disposal still be required if the water balance predicted in the SDEIS is incorrect? The LAD area is still an option for Alternative #2. Since the LAD option could still be employed, questions and concerns about that option still need to be considered.

Response: Section 2.4.2.4.2 of the DEIS and Section 2.4.2.4.3 of the FEIS discussed that MMC would use the LAD Areas for discharge over a 6-month growing season in Alternative 2. In the SDEIS, the agencies modified the proposed water management plan in Alternatives 3 and 4 to address the uncertainties about quality of the mine and adit inflows, the effectiveness of LAD for primary treatment, the quantity of water that the LAD Areas would be capable of receiving, and the effect on surface water and groundwater quality. In Alternatives 3 and 4, MMC would use the Libby Adit Water Treatment Plant to treat non-stormwater before discharge.

182-4 P.63. An estimated 71 million gallons of water (220 acre feet) would be required to initiate mill operations. That’s a lotta water and where does this initial lump sum come from?

Response: Adit inflows would be stored behind the Starter Dam during the Construction Phase in all mine alternatives to provide water for initial mill operations.

182-19 “If necessary, additional water would be treated at the Libby Adit Water Treatment Plant or would be cycled within the tailings impoundment.” Between rain-on snow events and artesian pressures,

dewatering and stabilizing the 350 acre tailings impoundment area be dewatering it will be of critical importance. Recycling water through the tailings impoundment is the last thing needed in a post-mining scenario.

Response: Using the tailings impoundment to store seepage collected by the Seepage Collection System post-mining would be necessary in all alternatives during the initial years of tailings consolidation. The impoundment would not be needed to store water at closure when the seepage rate and the rate of the pumpback well system would be less than the capacity of the water treatment plant.

202-4 The option for storing excess water at the tailings impoundment also needs to be explained in detail. Would the impoundment option be lined? Would the impoundment option be treated prior to winter storage? During a significant rain event would there be a risk of overflow?

Response: The DEIS discussed that the tailings impoundment would be used to store water for subsequent use in the mill in all mine alternatives. An area above the Starter Dam would be lined in all mine alternatives to reduce seepage. Design criteria for storing water are discussed in comment response 2316.

2219 MMC's Proposed Mine: Suggested change in transportation and access

182-24 Lincoln County advertises its motorized recreational opportunities. It cannot and should not be overlooked that some elements of the motorized community will view an unfenced tailings impoundment area as an opportunity to recreate on. How would this impact reclamation? What long-range scenarios and enforcement activities need to be considered in this regard?

Response: Except for the Bear Creek Road (NFS road #278), all roads in the tailings impoundment area would be gated and restricted to mine only traffic. Section 2.6.3.1 of the DEIS and FEIS indicated operating permit disturbance area boundaries would be marked in the field with fence posts and signed to limit potential disturbance outside permitted disturbance areas. The effect on recreation was discussed in Section 3.16.4 in the DEIS and FEIS. The agencies anticipate these measures would be adequate to restrict unauthorized access to the tailings impoundment.

248-21 Will the upgrading of Bear Creek Road #278 take one year or two years?

Response: Upgrading of Bear Creek Road #278 would take 1 to 2 years.

344-8 Road improvements should include BMPs for road building and improvements and should be standard operating procedure, not mitigation. Other mitigation such as bear proof garbage containers, food storage and so forth are already required, or will be shortly, of most forest users and again are basically standard operating procedures not additional mitigation.

Response: MMC proposed BMPs for road construction or reconstruction in its proposed Plan of Operations. The BMPs proposed by the agencies in Alternatives 3 and 4 are in addition to those proposed by MMC and are consequently considered mitigation. MMC's other proposed measures in its Plan of Operations, such as bear-proof garbage containers and food storage, are also a requirement in the agencies' mitigation plans to ensure the agencies' measures to minimize effects are complete and stand-alone, without reference to MMC's proposed measures.

2220 MMC's Proposed Mine: Suggested change in reclamation

182-4 P. 70. Prior to temporary or final closure, MMC would submit a revised reclamation plan to the agencies for approval. If the Troy mine is the analog then this could be a lengthy process fraught with delays and civil lawsuits. A provision of the Operating Permit needs to include a finite time line along with penalties around this issue.

Response: The reclamation plan disclosed in the SDEIS and FEIS for the selected alternative would be the plan included in the DEQ Operating Permit and any Forest Service-approved Plan of Operations for the Montanore Mine. No revisions to the reclamation plan are anticipated; the reclamation plan can be revised

if the need arises (i.e. if unanticipated issues are revealed by a field inspection or if the mine requests a modification). Any revisions to the reclamation plan would need to be approved by the DEQ on private land and by both DEQ and the Forest Service on National Forest System lands to ensure impacts to both private and National Forest System lands are within the scope of the FEIS analysis. The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate level of MEPA review on the application.

182-4 It would take up to 20 years for settling and consolidation to stop and to complete the entire cover on the tailings impoundment surface. How then is it the proposed reclamation plan estimates 3-years for completion?

Response: Section 2.4.3 of the DEIS and FEIS disclosed that it would take up to 20 years for tailings settling and consolidation to stop. All other unreclaimed disturbances would be reclaimed within 2 years after mining completion. The reclamation bond would account for this time horizon by including coverage for costs associated with completing reclamation of the tailings impoundment past the initial 2-year time frame.

182-19 Where did the analog mine (Troy) and its reclamation requirements go? Troy reclamation plan requires 24 inches of top soil replacement.

Response: Section 2.5.3.2.4 of the DEIS and Section 2.5.5.2.3 FEIS indicated that the replaced soil depth in Alternatives 3 and 4 would average 24 inches using two lifts, including over the entire tailings impoundment.

2221 MMC's Proposed Mine: Suggested change in other components/activities (not monitoring or mitigation)

182-19 25. P. 507. "MMC would use hazardous and non-hazardous materials in its operations, including reagents during milling, lubricants, fuels and blasting agents." If the analog mine (Troy) is any example of how poorly this aspect of mineral development was regulated tracking, reporting and effective monitoring of hazardous materials use and disposal must be a critical component of any permit requirements.

Response: Appropriate use and management of hazardous and non-hazardous materials would be required in all alternatives.

2315 Agency Mitigated Poorman Impoundment Alternative: Suggested change in tailings management

182-5 P.103. What good does additional MEPA / NEPA documentation do if additional impacts cannot be mitigated?

Response: The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate

level of MEPA review on the application. If additional NEPA or MEPA analysis was conducted, the agencies would identify design features to minimize environmental impact.

344-3 How susceptible is the pipeline to being deliberately breached by an act of terrorism or economic sabotage? Almost every sign in the mine vicinity is shot up - what would small arms fire do to the exposed pipeline?

Response: All tailings pipelines would be double-walled, and except at stream crossings, buried. The risk of the pipelines being breached by an act of terrorism or economic sabotage is very low.

2316 Agency Mitigated Poorman Impoundment Alternative: Suggested change in water use and management

332-8 The DSEIS states that water would be treated to remove nitrate and ammonia, but there are no plans to treat for metals removal (DSEIS, p. 52). Leaching of the barren lead zone could easily produce water that would require metals removal before disposal. Considering the elevated concentrations of lead in leachate samples from this material, and uncertainties about MMC's ability to handle the material in a way that would ensure environmental protection, detailed plans for a metals removal treatment plant should be prepared at the EIS stage.

Response: Section 2.5.4.3.2 of the SDEIS and Section 2.5.4.3.3 of the FEIS disclosed that the existing Water Treatment Plant at the Libby Adit uses ultrafiltration to remove metals that are sorbed onto particulates suspended in the water, thereby reducing total metal concentrations. The current system has been successful in treating adit discharges to concentrations less than MPDES permitted effluent limits. The same sections also indicated that the Water Treatment Plant would be modified as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits. MMC would continue to monitor influent monthly and would make appropriate modifications to the water treatment plant if necessary to remove dissolved metals. Treatment technologies for dissolved metals could include the addition of chemicals to promote chelation (formation of a larger, filterable compounds) followed by the existing ultrafiltration system, or reverse osmosis.

333-18 SDEIS Table 17 should be presented with annual time steps, rather than grouping longer periods such as years 6 to 10, or 11 to 15. Substantial differences in the components occur among those periods, as listed in the previous paragraph. A yearly basis would help show how the components transition. The water balance misses at least two important points, or in part depends on certain assumptions being true, as follows. If the dewatering rate is higher than projected, 480 gpm, there will be excess water in the system. This would exceed the water treatment system capacity and potentially cause discharge to Libby Creek to be higher than projected, and possibly not treated to standards. If the system does not capture as much water from precipitation and runoff in the impoundment or the dewatering rate is lower than projected, either due to dry years or by underestimating the amount, the system will require make-up water. The SDEIS acknowledges this possibility, but states only that make-up would come from a well field north of the seepage collection pond (SDEIS, p 244).

Response: The agencies developed a water balance with annual time steps, which was consolidated into the intervals presented in the SDEIS and FEIS. A yearly basis was not necessary to show how the various components of the water balance transition. Such transition is apparent from the intervals presented in the SDEIS and FEIS. Excess water management for Alternative 2 was discussed in Section 2.4.2.4.3 of the DEIS and Section 2.4.2.4.4 of the FEIS. With the exception of the use of LAD Areas, Alternatives 3 and 4 would use the same management techniques. The agencies' analysis concluded these techniques would be adequate to manage inflows greater than predicted.

333-15 Excess water from either dewatering or in the tailing impoundment could create a potential spill of contaminated water or impoundment failure. The mine must have action plans that would minimize the chance of such a spill. The action plans must include changed operations, including shutting down if there is excess water. There must also be containment to prevent uncontrolled spills from the tailings area.

333-18 The tailings generated for the Poorman site as proposed in alternative 3 will be drier, which may "affect the ability to use the [tailings] impoundment as a reservoir to maintain a water balance" (SDEIS, p 49). MMC would "reevaluate[d] the water balance and the tailings deposition plan" (Id.) as part of the final design. This is a huge oversight in the SDEIS because the water balance controls the potential contamination from the mine site. An alternative water storage site would be the "seepage collection pond" (Id.), although the SDEIS does not analyze the effect of this or whether it would be large enough merely by assuming "that all collected water would be returned to the impoundment" (Id.). The SDEIS considers this pond only by assuming that precipitation within it would be gathered to use in the mill (Table 17, SDEIS).

335-4 The SDEIS fails to provide sufficient information to analyze water use and management. Without appropriate analysis and design for the tailings impoundment facility, the agencies cannot determine whether the tailings impoundment can be used for managing water, or whether some other option is needed altogether.

Response: The design criteria for the Little Cherry Creek tailings impoundment is described in the 2005 Klohn Crippen Tailings Technical Design Report, starting on p. 70. The same criteria would be used for the Poorman impoundment site. Section 5.5.1 of that report indicates "the impoundment freeboard during operations will include the following: storage of 20 days of tailings discharge; storage of the design flood, which is the runoff from the two week Probable Maximum Precipitation (PMP) plus snowmelt; and freeboard of 3 feet above peak flood water surface." The agencies' review of the design criteria proposed for the Little Cherry Creek Site and applicable to the Poorman Site were appropriate and could be met at each site. Section 2.5.4.3 of the DEIS and FEIS described the options for maintaining sufficient water for mill use. MMC's proposed Plan of Operations includes a spill prevention and containment plan.

333-19 The tails deposited at the Poorman site in Alternative 3 would be thickened, meaning the density would exceed 55 percent (SDEIS, p 46). Considering that the water balance assumes water released from the tails, the SDEIS should specify the density and not just state they would be greater than 55 percent.

Response: Sections 2.5.3.5.4 and 3.9.3.3.1 of the DEIS and Sections 2.5.4.2.2 and 3.14.3.3.1 of the FEIS indicated the tailings in Alternative 3 would be thickened to a target slurry density of 70 percent.

2410 Agency Mitigated Little Cherry Creek Impoundment Alternative: Suggested change in permit/disturbance areas

182-21 4a. Figure 37: Mine facilities and Permit areas, Alt. 4. 4. There is no figure detail of the proposed Libby Plant site comparable to the one for the Ramsey Creek site?

Response: The Libby Plant Site would have similar components as the Ramsey Plant Site. Figures 24 and 31 were updated in the FEIS to provide additional detail of the Libby Plant Site and its reclamation.

2711 Modified North Miller Creek Alternative: Suggested change in structure type

52-3 Finally, I noticed that wooden H frame structures are proposed in Alternative C. The structures are to be used in steep mountainous terrain. Would these structures be more susceptible to damage from forest fires?

Response: Wooden poles would be more susceptible to damage from forest fires than steel structures. The risk would be minimized through vegetation management surrounding each pole.

Chapter 3 Comments

Past, Current, and Reasonably Foreseeable Actions

3051 Comment about reasonably foreseeable actions

Analysis of cumulative effects

202-39 Abandoned and active mine projects should all be considered when evaluating the numerous impacts from the Montanore mine. All of the active mine claims would entail road building, noise, air quality impacts, discharges to ground and surface waters, sediment production, and impacts to threatened species. The evaluation of impacts from the Montanore mine on grizzly bear, lynx, bull trout, wolverine and other species needs to include potential cumulative impacts from other large and small mining proposals. The proposed Montanore and Rock Creek mines would not

202-40 Montanore's DEIS addresses the possibility that the agencies may permit numerous mines to operate simultaneously. While the DEIS seems to accept that Montanore, Rock Creek, Way-up, Fourth of July, and others may be permitted to operate concurrently, the DEIS fails to give even cursory examination of the cumulative impacts to wildlife, wilderness, and water quality.

162-1 I question the validity of some conclusions drawn from the data presented in the Draft Environmental Impact Statement for the Montanore Project regarding air and water quality standards, and the mitigation requirements for grizzly bears. Throughout the EIS, while the Rock Creek Project is mentioned, the language used would lead one to believe the Montanore Project and the Rock Creek Project were some distance apart. They, of course, are not. The areas subject to the most disturbances are within five miles of one another. How then can the Kootenai National Forest and the Montana Department of Environmental Quality pretend that the operation of two world class mines in such close proximity will not have a major adverse effect on the environment?

Response: The cumulative effects of the Montanore Project and other past, current, and reasonably foreseeable mining projects described in this section are discussed in each resource section of Chapter 3 under *Cumulative Effects*. For example, cumulative effects of the Montanore Project on the grizzly bear in combination with past, current, and reasonably foreseeable actions for which road status information is available, including the Way-up Mine/Fourth of July Road Access Project, Plum Creek activities, the Rock Creek Project, and the Miller-West Fisher Vegetation Management Project were described in Section 3.25.5.2 of the SDEIS and the FEIS.

The location of the Rock Creek Project relative to the Montanore Project was also disclosed in this section: "The combined action alternatives, in combination with reasonably foreseeable actions, would result in cumulative disturbance to grizzly bears during spring. The combined action alternatives and the Rock Creek Project would occur *adjacent to, and on opposite sides of* (emphasis added), the CMW and core habitat. The Miller-West Fisher Vegetation Management Project also would occur in grizzly bear spring habitat. Due to the magnitude and duration of the cumulative disturbances, and the limited amount of foraging options available to bears in the spring, changes in spring habitat use might have adverse consequences for bear survival."

Description of past, current, and reasonably foreseeable actions

109-8 The Rock Creek deposit is fully permitted with the final EIS issued in September 2001, the final Record of Decision in June of 2003 and the revised Biological Opinion issued in October 2006. For clarification, the Rock Creek deposit is proposed to be mined by RC Resources, Inc., a wholly owned subsidiary of Revett Silver Company, not "mined by the Rock Creek Project". Please revise accordingly.

Response: Section 1.3.1 of the FEIS was revised to clarify that the Rock Creek deposit is proposed to be mined by RC Resources, Inc., a wholly owned subsidiary of Revett Silver Company, not "mined by the

Rock Creek Project." The description of the Rock Creek Project in Section 3.2 of the FEIS was revised to reflect the current status of that project.

Air Quality

3100 Emissions Analysis: Suggested new information/analysis

Climate Change

62-13 I'm also concerned that there's no climate change analysis under the EIS. And there's a CEQ guidance that mandates this and, also, there are legal precedence.

74-19 Analyzing the effects of climate change on the mining process is pertinent, and important.

141-7 If climate change is real and fossil fuel consumption has a role, this project will be a huge emitter of greenhouse gases.

186-4 How will potential climate changes impact the likelihood of acidification occurring in CMW lakes?

202-41 In addition to affecting the frequency of storm events, climate change could result in significantly less or more annual precipitation in given years and in increased temperatures. These impacts should be addressed.

389-1 The SDEIS does not adequately consider the effects of climate change.

Response: The SDEIS and FEIS was revised to discuss climate change. Climate change is not a reasonably foreseeable future action, but may represent a reasonably foreseeable future affected environment. Information on the effects of the project on greenhouse gas emissions is discussed in section 3.4, *Air Quality.* The potential project effects associated with climate change are described in section 3.6, *Aquatic Life and Fisheries,* section 3.10, *Groundwater Hydrology*, section 3.11, *Surface Water Hydrology*, section 3.11, *Water Quality*, and, for those wildlife species potentially affected, in section 3.25, *Wildlife*.

Other Comments

235-1 The issue of air quality should be elevated to the same level of priority as water quality has traditionally been given. Air quality issues at the Montanore mine should be evaluated based on the toxicity, as determined by comprehensive testing, of the fugitive emissions that may occur.

Response: Section 3.4.4.2.4 was added to the SDEIS to provide a hazardous air pollutant impact assessment.

393-5 What study or data regarding fugitive emissions from the analog Troy mine on impacts to Lake Creek is there?

Response: Data regarding fugitive emissions from the analog Troy mine were not needed to complete the air quality analysis for the Montanore Project.

3101 Emissions Analysis: Suggested new mitigation

235-2 A dust mitigation plan should be developed to provide metrics by which the actions of the mine operator can be measured. This plan should be in place before the use of the tailings impoundment begins and should be developed with input from the public particularly those who will be directly affected. The dust mitigation plan should encourage the adoption of new technologies such as improved surfactants and binders as they become available.

Response: Section 2.5.4.3.5 of the DEIS and FEIS and DEQ's Supplemental Preliminary Determination (DEQ 2015a) discuss measures to control and minimize fugitive dust.

186-4 What mitigation steps will be used to ensure acidification does not occur in CMW lakes?

Response: The analysis of nitrogen and sulfur deposition in Alternative 3 in Section 3.4.4.3.3 was revised in the FEIS. Modeled maximum nitrogen deposition rates in Alternatives 3 and 4 from the mine were less than the deposition analysis threshold established by the USDA Forest Service, National Park Service, and U.S. Fish and Wildlife Service at Upper Libby Lake, Lower Libby Lake, and Rock Lake. The agencies' mitigation in the FEIS was revised to require the use of Tier 4 engines on underground mobile equipment and emergency generators, if available, and use of ultra-low sulfur diesel fuel in those engines during all project phases. The agencies' air quality monitoring in Appendix C was revised in the FEIS to include monitoring of nitrogen and sulfur emissions at the Libby Adits.

3102 Emissions Analysis: Suggested new monitoring

162-1 All base line data relevant to the proposed operation of the mine, i.e. air quality, lake water levels, and water quality must be collected before construction begins, not just 1 year before operations begin. Also, with today's technology, data should be collected continuously; 24 hours a day all year.

Response: The agencies' monitoring plans were revised in the SDEIS and FEIS to better describe monitoring requirements during each mine phase. Continuous monitoring at some locations is required.

182-5 P.83. MMC would install, operate and maintain three air monitoring sites near the mine and facilities. This is an insufficient amount of air monitoring sites for a project of this scope.

182-12 P. 236. "Infrequent, episodic events , such as high winds causing erosion of tailings Impoundment surface could cause minor, short-term visual impacts from dust plumes that could be visible from the CMW and other areas." This statement belies the fact the fugitive emissions from the Troy Mine have been a consistent / persistent problem source despite the best efforts by all involved and have been consistently downgraded by the DEQ. A series of air quality monitors between all aspects of the facility must be a requisite of any monitoring program in order for this contention to be viable.

235-2 Provisions should be made to require monitoring of tailings dust should it become a problem. The cost of monitoring should be borne by the mine and financial penalties (fines) should be imposed for repeat offenses. It is important to provide both incentives to reward good behavior and disincentives to discourage bad behavior.

264-2 The project should have strong and clear requirements for monitoring air quality for diesel emissions within the mine and at the ventilation adit.

248-30 Have the Agencies quantified how much diesel exhaust would be created? Have the Agencies considered any exhaust treatment systems (similar to the system proposed for Noranda) to treat diesel exhaust prior to its release to the atmosphere?

248-30 Have the Agencies quantified how much diesel exhaust would be created? Have the Agencies considered any exhaust treatment systems (similar to the system proposed for Noranda) to treat diesel exhaust prior to its release to the atmosphere?

393-8 Real time visual air quality monitoring of the tailings impoundment needs to be part of any permit, with said capability located in the office of the nearest KNF Ranger Station.

Response: Along with reporting requirements described in Appendix C and DEQ's Supplemental Preliminary Determination (DEQ 2015a), operation of three air monitoring sites would be sufficient to monitor air emissions. Two of the monitoring sites would be at the tailings impoundment. DEQ's Supplemental Preliminary Determination has limitations of diesel generator use and reporting requirements, such as amount of diesel fuel used and hours of operation of diesel generators.

3103 Emissions Analysis: Comment about analysis-mine

PSD Regulations

182-11 P.224-5. Class I areas are accorded the highest level of protection by allowing the smallest incremental pollutant increase. Project Facilities would be located in an area designated as Class II under PSD regulations and the CMW is designated as Class I. This statement conveniently fails to concede that the mine location is underneath a Class I area and that a ventilation adit is to be located within the proposed wilderness as well. Just as the 1872 Mining Law allows for extralateral rights to pursue a vein throughout the course of its run, the air quality classification does not end at the edge of the surface expression of the zone. It extends throughout every which area within the boundaries of the zone where air exists for use by homo-sapiens and wildlife. The underground workings must reflect the Class I air-shed within the boundaries of the CMW.

202-26 The USFS and MDEQ must "demonstrate that the allowable emission increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions) would not cause or contribute to air pollution in violation of…any applicable maximum allowable increase over the baseline concentration in any area." 40 C.F.R. §52.21(k), accord, EPA's New Source Review Workshop Manual: Prevention of Significant Deterioration and Nonattainment Area Permitting (Draft October 1990) at C.35 (hereinafter "NSR Manual") commanding that all new stationary sources consume available increment after the minor source baseline date has been triggered).

202-28 Also, any increment inventory performed to determine compliance with applicable PSD increments for NOx, SO2, and PM-10 should not be limited to stack emissions, but must include all emissions from the Project.

202-28 Also, the DEIS' assumption that the Montanore Project is a "minor source" ignores the fact that the combined emissions from the Project are well-above the applicable triggers (e.g., for PM10 and CO at a minimum, see Table 45). The agencies cannot categorize Project emissions as "fugitive" to escape the Title V and other permitting requirements.

331-42 The agencies have failed to conduct this analysis, as they are required to do under NEPA/MEPA and the Clean Air Act (and Montana state air quality laws). Thus, the agencies have not ensured that all PSD increments, Class I protections, and other CAA/Montana requirements have been met.

393-5 This said, reason would dictate that those aspects (adits, underground mine) of the Montanore mine within the boundaries of the CMW should also be subject to Class 1 air quality standards.

Response: The Montanore Mine would be a minor source under PSD regulations and as such is not explicitly required to analyze visibility impacts. PLUVUE II analyses were performed for the Montanore Mine point sources, Libby portal, Ramsey portal and the emergency generator. DEQ stated in the Supplemental Preliminary Determination that the "Department's position is that increment consumption is not applicable to this project because it is a minor source in an area where the baseline has not been triggered." Section 3.4.4.2.7 of the SDEIS and FEIS disclosed that modeled concentrations were predicted to be less than PSD Class I Increments at all locations at and within the Class I Area boundary. The Project would be considered a minor source and would not require a Title V operating permit under ARM 17.8.1204 because the potential emissions are less than 100 tpy for any pollutant, less than 10 tpy for any single hazardous air pollutant (HAP), and less than 25 tpy for total HAPs. Fugitive emissions from the project were not considered when determining the source category because the project is not one of the source categories listed in ARM 17.8.1201(23)(b).

Libby Adit Emissions

109-17 The FS must analyze air quality and air emissions in its evaluation of MMC's proposed development of the Libby Adit. This analysis should cover MMC's generators, fugitive emissions, haul trucks, hauling of heavy equipment, year-round road use, sanding, road grading, snow plowing, and other emissions-generating activities. How does MMC propose to operate its equipment? Such analysis is critical

as there are wilderness limitations due to a Class 1 air-she designation. Further, the FS must identify the air permits that MMC requires. What air permits if any has MMC obtained to replace Noranda's Permit 2613? Does MMC require additional air permits?

Response: MMC's proposed development of the Libby Adit was included in the air quality effects analysis, described in Section 3.4 of the DEIS, SDEIS, and FEIS. NMC's air permit is no longer valid and Chapter 1 discussed the need for a new air quality permit. DEQ issued a Preliminary Determination (draft air quality permit) in 2006, a Supplemental Preliminary Determination in 2011, and another Supplemental Preliminary Determination in 2015. The latest preliminary determination can be obtained from DEQ's website: http://deq.mt.gov/AirQuality/ARMpermits/AirQuality.mcpx.

Baseline Data Collection

182-11 P.225-6. Base line data collection. "Only data from the Ramsey Creek Air monitoring site were used because the data recovery at the Little Cherry Creek air monitoring site was not as complete and because the Ramsey Creek Air monitoring site meteorological data are more representative of the conditions where a majority of the pollutant emissions would be emitted. This statement is sooo indicative of the poor regulatory environment and attitude of MDEQ. Baseline data is baseline data whatever site it is supposed to be recovered for. The simple expedient that data recovery for one site was not complete is insufficient grounds to not collect the required data. The Little Cherry site is the preferred tailings impoundment site and most likely has a very different air model than the location at Ramsey Creek located in the narrow confines of a small side valley. Fugitive air emissions have been and continue to be a problem at the Troy mine which the agencies have repeatedly said it the analog for both the proposed Rock Creek and Montanore Mines. There is also the time line issue of when air quality data was collected. July 1988 and July 1989 is two decades from the current time of consideration. Numerous factors including global warming have come forward that bring into question the appropriateness and credibility of incomplete data that was collected twenty years ago.

Response: Section 3.4.3.2.1 of the SDEIS and FEIS discussed PM_{10} and lead background values were collected during 1988-1989 at MMC's air monitoring sites, which the DEQ determined to be representative of PM_{10} concentrations at the mine site. Site conditions since 1989 that would affect 1988-1989 PM_{10} concentrations have not changed. The $PM_{2.5}$ background values were obtained from the Forest Service IMPROVE site, about 3 miles south of the CMW southern boundary. The NO_2 and SO_2 background values are typical values provided by DEQ for use in permit modeling analyses.

Rock Lake Ventilation Adit

186-4 Was the proposed Rock Lake ventilation adit incorporated in the modeling of air quality impacts at and within the PSD Class I Area boundary?

347-1 Since the Troy Mine intake ventilation adit discharges diesel emissions, why did the SDEIS determine that the Rock Creek and Montanore ventilation adits would not emit diesel?

393-4 As well there has been little if any discussion regarding the proposed ventilation adit above Rock Lake. Is this ventilation adit for the sole purpose of air intake, or is it the equivalent of a 15,000-foot chimney from the underground works of the proposed Montanore Mine that will belch carbon, nitrogen, and particulate laden air into the Class 1 airshed of the CMW? If it's sole purpose is the intake of air what happens when there is a local forest fire? Will the adit entrance be closeable? Superheated air traveling down a mineshaft can have disastrous consequences.

Response: Under Condition 28 of DEQ's Supplemental Preliminary Determination (DEQ 2015a), any pollutant emission from the Rock Lake ventilation raise is prohibited. Consequently, the proposed Rock Lake ventilation adit was not incorporated in the modeling of air quality impacts. The proposed location is on an very rocky slope unlikely to be affected by forest fires.

Greenhouse Gas Emissions

344-5 I believe the current SDEIS quantitative and qualitative assessment for GHG emissions omit large sources of emissions and understates this projects effect.

344-6 It appears the GHG calculations in the SDEIS begin at the mine and end at the load out facility. They exclude massive electrical energy inputs, transportation of ore concentrate to the smelter, smelting and refining energy requirements and emission out puts, and the effects of deforestation and carbon sequestering and release on several thousand acres of coniferous forest. It also ignores the amount of carbon released when this land is converted to relatively unproductive tailing ponds, building sites, power line right of ways, substations, and roads. Nor does it seem to deal with the post closure energy budget required to maintain pumping stations, water treatment plants, and so forth stretching into the future for perhaps forever.

344-6 First, there would be “additional rail service” - 420 tons of ore-concentrate would have to be loaded into cars and shipped to a destination on an average daily basis. These cars would not tide for free, “because they would be consolidated into an existing train that was already traveling on the rail route”; and they would affect the trains energy budget.

344-6 Instead of assuming ore cars travel for free, consider that loading, moving, and unloading ore cars requires work (work is a scalar quantity that can be described as the product of a force times the distance through which it acts), and that all ore cars will be part of a train and as such “require additional rail service". Each ore car will comprise x amount of each trains weight and will comprise a proportional % of its energy budget and emissions.

344-6 Rail cars loaded with ore concentrate are heavy, score low in aerodynamics, and may be moved long distances across the Rocky Mountains. The trains utilized burn fossil fuels - lots of it. Also, to load a rail car with concentrate you must first have an empty car. The return of the empty cars should be part of the energy budget. These empty rail cars would have lower energy requirements but they would still be very heavy, not aerodynamic, and moved an equal distance from where they were off loaded. If this ore concentrate is then loaded onto ships, this transportation should also be part of the energy calculations.

344-7 Another comment regarding the energy budget calculations is that they ignore the refining component of this operation. Copper mining and the smelting and refining process are codependent and should be considered together. Their business interest overlap, and smelters and refineries often help capitalize mining ventures.

344-7 This project requires heavy grid import and this power will therefore be unavailable to adjacent regions which are also grid connected to fossil fuel based power plants. This may contribute to higher carbon dioxide emissions in adjacent regions when hydropower generation is diverted to MMC.

344-7 To really understand the GHG emissions resulting from this project we need to include all the inputs and outputs: electrical generation provided the mine, mine operations, transport of ore concentrate to a smelter, and the conversion of ore to a readily useable product such as ingot or cathode copper.

344-7 Smelting the ore produced should be an important part of the greenhouse gas calculations.

344-7 Since the Troy Mine has similar ore, and is used as an analog for many calculations in the SDEIS, perhaps you could use the historical or current Troy Mine ore concentrate flow path for your greenhouse gas and transportation emission calculations.

344-8 The people deserve to know the total GHG emissions this project will contribute to the biosphere. For it to be meaningful it should be complete.

Response: Section 3.4.4.2.1 was added to the SDEIS and FEIS to address greenhouse gas emissions and climate change using EPA’s suggested four-step approach. See comment response 196-42 (Comment document from the EPA).

Other Comments

235-2 We believe that more attention needs to be focused on air quality issues than has historically occurred during the permitting process. As an example, the original Environmental Impact Statement (EIS) for the Troy mine did not call for additional dust control measures because "the area receives sufficient natural precipitation that further measures are unnecessary". This is of course preposterous. Even in the face of all the air quality problems here caused by blowing mine tailings, the MDEQ is currently allowing the mine to renew its permit with an Environmental Assessment (EA) instead of a more rigorous second EIS. The EA doesn't even address air quality issues. Our concern is that unless air quality issues are thoroughly considered in the Montanore EIS, like Troy, the MDEQ may fail to later correct the problem, even if and when they have the opportunity to do so. This is relevant because management teams come and go, and without a regulatory framework to define the "rules of the road", compliance to good operating practices becomes strictly voluntary and may be abandoned on a whim. Just as a new CEO and Chairman at Revett Minerals has resulted in an improvement in our situation, the next change in management could bring the dust clouds back if there are no regulatory requirements in place to prevent it. This unfortunate circumstance can be and should be prevented with the Montanore mine.

344-6 The on-site emissions of this project (2,860 homes) are twice the output of Libby proper. This is a significant input to a relatively clean and remote landscape, the adjacent CMW, the county air shed; especially areas downslope, and downwind. It seems unlikely this amount of pollution would have no air quality impacts.

Response: The DEIS, SDEIS, and FEIS adequately disclosed the anticipated effects of the mine and transmission line alternatives on air quality. The analysis did not indicate the project would have no impact. The analysis disclosed that anticipated emissions would be below applicable Federal and Montana standards.

3105 Emissions Analysis: Comment about effect-mine

202-6 The tailings impoundment at the Troy mine has an unresolved issue with fugitive dust. Numerous complaints from area homeowners to the agencies have not resolved the problem. Are the agencies planning on being more responsive to the fugitive dust issue at Montanore? What are the long-term impacts on air and water quality, human health, and aesthetics from wind blown dust containing metals and nutrients? Sprinklers are in place at Troy, but have been unable to control the problem.

331-25 The tailings impoundment at the Troy mine has an unresolved issue with fugitive dust. Numerous complaints from area homeowners to the agencies have not resolved the problem. Are the agencies planning on being more responsive to the fugitive dust issue at Montanore? What are the long-term impacts on air and water quality, human health, and aesthetics from wind blown dust? Sprinklers are in place at Troy, but have been unable to control the problem.

Response: See comment response 3102 (p. M-240). Sections 2.5.4.2.2 and 2.5.4.3.5 of the FEIS were revised to include a discussion of dust control at the tailings impoundment. As a condition of the air quality permit, MMC would develop a general operating plan for the tailings impoundment site including a fugitive dust control plan to control wind erosion from the tailings impoundment site. The plan would include, at a minimum, the embankment and cell (if any) configurations, a general sprinkler arrangement, and a narrative description of the operation, including tonnage rates, initial area, and timing of future enlargement. Should these measures not be adequate to control wind erosion from the impoundment, MMC would submit a revised plan to the agencies for approval, incorporating alternative measures, such as a temporary vegetative cover. These measures would be effective in minimizing wind-blown tailings at the tailings impoundment site.

3110 Emissions Analysis: Comment about cumulative effect

Montanore and Rock Creek Project Cumulative Effects

57-4 Air quality issues would include cumulative impacts associated with the neighboring Rock Creek mine. The wilderness has a Class One Airshed meriting the highest level of protection. Potential impacts include discharges of particulates (PM10), nitric oxides, and sulfur dioxides.

182-12 P.239. The Montanore and Rock Creek projects have been analyzed and found to have a potential minor impact on ambient air quality. The geographic areas of impact for each project do not overlap, and therefore wound not be additive. Thus cumulative air quality impacts would not exceed the NAAQS or MAAQS. This is not consistent with the air quality violations that have occurred at the analog Troy mine with fugitive emissions. In addition, it is CRG's contention that the Class 1 air-shed that extends above the CMW also extends to subsurface activity areas within the confines of its physical borders.

200-21 Air quality issues would include cumulative impacts associated with the neighboring Rock Creek mine. The wilderness has a Class One Airshed meriting the highest level of protection. Potential impacts include discharges of particulates (PM10), nitric oxides, and sulfur dioxides. The agency needs to evaluate the air quality impacts from proposed mining in the region cumulatively and not as individual projects.

202-26 The DEIS fails to adequately analyze all direct, indirect and cumulative air quality impacts. For example, the DEIS barely mentions the air impacts from the nearby Rock Creek Project proposed directly adjacent to the Cabinet Mountains Wilderness Area in northwest Montana, a pristine Class I airshed. This proposal includes up to four ventilation adits, including one adit to be located in the heart of the Wilderness Area itself. Furthermore, according to Montana Department of Environmental Quality (MDEQ) calculations, emissions of criteria pollutants from the Rock Creek Project alone are predicted, in some instances, to consume 96% to 98% of the allowable Class I increment for the Cabinet Mountain Wilderness Area

202-28 The DEIS seems to be concluding that the Rock Creek and Montanore mine sites are in two different geographical locations, so that emissions and associated impacts on the wilderness airshed would not be considered cumulatively. What does the agency base its conclusion on that these two mines are located in two different geographical areas? The ridge that separates the two projects is part of the Class 1 airshed of the Cabinet Mountains Wilderness, and should not be considered as a buffer between the two sources. The conclusion that the air quality impacts from these two projects would not overlap seems to ignore the region's geography and requires an explanation as to how this determination was made.

202-28 These mines [Libby Creek Ventures and the Wayup mine] need to be included in any analysis of future impacts to the airshed because the current size of the project should not be indicative of future potential emissions generated.

202-28 Additionally, the agencies must assess, review, determine and/or model, the cumulative impacts of the Project in conjunction with all other emissions sources within a 50 kilometer impact area to determine the cumulative impacts to the Class I and II areas for NOx, PM-10, and SO_2.

202-28 A new cumulative air quality model analyzing the air emissions from both Projects must be included in the revised Draft EIS.

202-29 The cumulative air impacts to Libby Lakes from the large and small mines that are located in the region of the Cabinet Mountains Wilderness must be considered.

202-30 The agency conclusion that the mine would not impact the Cabinet Mountains Wilderness seems very inconsistent with other agency analysis within the state of Montana. The USFS EIS travel plan for the Lewis and Clark National Forest, expressed concerns that OHV activity would negatively impact the Class 1 airsheds of the adjacent Bob Marshall and Scapegoat wilderness. Yet the Kootenai National Forest dismisses any impacts on the Class 1 airshed of the Cabinet Mountains Wilderness from two adjacent massive mining operations. Is it the conclusion of the USFS that ATV's have a greater impact on a Class 1 airshed than two mining operations or does the Bob Marshall and Scapegoat wilderness receive more

protection from the Lewis and Clark National Forest than the Cabinet Mountains Wilderness is afforded from the Kootenai?

202-38 The USFS analysis of the impacts to Libby Lakes must consider mine related air emissions from multiple sources. All of the region's numerous mining projects would consume fossil fuels. Emissions of SO4 and NO3 would threaten the pristine and sensitive nature of Libby Lakes with acidification. Why are the cumulative air impacts on the Libby Lakes from the large and small mines that are located in the region of the Cabinet Mountains Wilderness not being considered? Even by agency standards, the Wayup mine, Libby Creek Ventures, and the proposed Montanore mine would have to be considered in the same "geographical area."

310-36 Air quality issues would include cumulative impacts associated with the neighboring Rock Creek mine. The wilderness has a Class One Airshed meriting the highest level of protection. Potential impacts include discharges of particulates (PM10), nitric oxides, and sulfur dioxides. The agency needs to evaluate the air quality impacts from proposed mining in the region cumulatively and not as individual projects.

Response: The cumulative effects analysis of air quality (Section 3.4.4.7) was revised to better disclose the anticipated cumulative effects of the Montanore Project with past, current, and reasonably foreseeable actions, such as the proposed Rock Creek Project. In 2015, to evaluate cumulative effects, DEQ completed a modeling demonstration that included modeled emissions from other mines with valid air quality permits in the vicinity. Specifically, modeled emissions from the proposed Rock Creek Mine (RC Resources Inc.; MAQP 2414-03) and the existing Troy Mine (Troy Mine, Inc.; MAQP 1690-03), were modeled together with Montanore Mine emissions. The compliance demonstration addressed the 1-hour NO_2 NAAQS, 24-hour PM_{10} NAAQS/MAAQS, annual PM_{10} MAAQS, and 24-hour and annual $PM_{2.5}$ NAAQS; (DEQ 2015a). The results of this modeling have been incorporated into the cumulative effects analysis of air quality.

March 2003 Settlement Stipulation and Order Regarding Rock Creek Project

311-2 DEQ, by failing to model the cumulative air quality impacts on the Class I area from this and other sources violates the March 2003 Settlement Stipulation and Order for Permit No. 2414-01.

335-5 Pertaining to Permit No. 2414-01, which states in part, "The Department will, as part of the permit application process, perform a computer dispersion modeling analysis of the cumulative consumption, by minor and major air contaminant sources, of the air pollutant increments that apply in Prevention of Significant Deterioration of Air Quality (PSD) Class 1 baseline areas." How does the project and SDEIS comply with this agreement?

Response: In March 2003, a Settlement Stipulation and Order (STIP) was finalized concerning a Montana Air Quality Permit (MAQP) #2414-01 (issued to Sterling Mining Company). As a result of the STIP, the DEQ revised Sterling Mining Company's MAQP, which was issued final on March 28, 2003. On October 23, 2003, Sterling Mining Company requested a name change to Revett Silver Co. (Revett) and MAQP #2414-02 was issued final on December 17, 2003. Pursuant to MAQP #2414-01 (and subsequently MAQP #2414-02), "construction must begin within 3 years of permit issuance and proceed with due diligence until the project is complete or the permit shall be revoked. If, after 3 years, Sterling desires to keep the permit active but has not commenced construction, an alteration application could be submitted". Revett did not complete construction, did not submit a permit application to keep the permit active and therefore, the MAQP was considered invalid as of March 28, 2006, even though the permit was not revoked.

At the time of the STIP (2003), Noranda Montanore Mine Project's MAQP had just been revoked. On January 17, 2006, Mines Management, Inc. (Montanore) submitted a new permit application; however, the application was not considered complete until July 21, 2006. The DEQ determined that at the time Montanore's permit application was deemed complete, Revett's MAQP was no longer valid and therefore, Montanore would not be required to complete a cumulative analysis because there were not any facilities to consider for cumulative consumption. The Montanore Project is 13 miles (21 km) east-northeast of the Revett's Project, but on the other side of the topographic divide. It was also determined that the Montanore

project and the Revett project were in different air sheds and would have peak impacts at different receptors.

The DEQ required Montanore to complete a visibility impact assessment, an acid deposition impact assessment and comparison of modeled concentrations to Prevention of Significant Deterioration of Air Quality (PSD) Class I increments. These analyses were requested because the mine is within ¼ mile of the Cabinet Mountains Wilderness. Montanore demonstrated compliance with all NAAQS, MAAQS and the PSD Class I increment's analysis. Note, the only source and emitting units evaluated were those associated with the Montanore Mine. There were no other sources located within the radius of impact as Revett's MAQP was invalid and did not need to be considered.

The DEQ further believes that the requirements of the STIP would apply to any future construction, installation, alteration, or use that would be located within 10 kilometers of the Cabinet Mountains Wilderness or that would have an impact on that Class I area equal to or greater than 1 $\mu g/m^3$ on a 24-hour basis.

3117 Emissions Analysis: Comment about mitigation-mine

186-4 What mitigation measures will be employed to ensure air quality in the CMW is not compromised? Simply stating "emission controls to be used at the proposed project would constitute Best Available Control Technology (BACT)" is not sufficient, an example of exact technology to be employed is necessary.

Response: MMC's air quality permit analyses (TRC Environmental Corporation 2006a, Carter Lake Consulting, LLC 2011) describe some available methods of controlling emissions from the sources used at the Montanore Mine. The DEQ's Best Available Control Technology (BACT) Determination is presented in its Supplemental Preliminary Determination (DEQ 2015a).

Fish and Aquatic Life

3201 Sediment: Suggested new mitigation

312-2 In the event that Alternative 3 is implemented and habitat restoration work is planned for Libby Creek in the form of major channel reconstruction and bank stabilization, MMC should be required to use the large trees and root wads that are removed for the construction of the impoundment and other associated facilities, for the restoration work of Libby Creek.

Response: The conceptual bull trout mitigation plan includes the option of installing large formidable wood structures in the floodplain and riparian zone within the Libby Creek reach upstream of Libby Falls, as described in section 2.5.7.3 of the FEIS if this option was determined to be feasible. Woody debris would be used for wildlife mitigation along the transmission line corridor (see Section 2.8.6.1). As part of final design, MMC would prepare a Vegetation Removal and Disposition Plan for the agencies' approval. The plan would evaluate the opportunities to minimize tree and other vegetation clearing, particularly in RHCAs, and consider potential uses of vegetation removed from disturbed areas, and describe disposition and storage plans during mine life. It also would address vegetation removal along the transmission line (see transmission line Alternatives C-R, D-R, and E-R).

3205 Sediment: Comment about effect-mine

200-8 Sediment also would be a significant issue for the receiving waters from the erosion of the tailings. How will this delivery of toxic sediment affect bull trout in Libby Creek?

Response: The DEIS discussed the effect of sediment delivery to streams under Alternative 2 in Section 3.6.4.2.1, including the potential for erosion of the tailings from the impoundment to occur. The SDEIS and FEIS expanded this discussion to further discuss the effects of sediment on aquatic life. In all mine alternatives, runoff from the tailings impoundment and dams would be intercepted, routed to the Seepage Collection Pond, and returned to the mill for reuse. Stormwater controls were discussed in Section 2.4.2.4.5

in the DEIS and Sections 2.4.1.2.1 (Alternative 2) and 2.5.3.2.6 (Alternative 3) of the FEIS. Alternatives 3 and 4 would have similar controls to Alternative 2, and would further reduce the risk of sediment delivery to streams as all associated ditches and sediment ponds containing mine drainage or process water would be sized for a 100-year/24-hour storm rather than the 10-year/24-hour storm proposed under Alternative 2.

At closure, surface runoff from the tailings impoundment would be directed toward either Bear Creek (Alternative 2), a tributary of Little Cherry Creek (Alternative 3), or Little Cherry Creek (Alternative 4), and would briefly increase sediment delivery to these streams as the diversion channels adjusted to accommodate the runoff. These brief increases may impact aquatic habitat and fish populations, including bull trout populations as discussed in section 3.6.4.2.1. The increases would be temporary as high flow events would likely flush excess sediment out of the system. While Bear Creek supports a bull trout population, Little Cherry Creek does not, and thus impacts from the sedimentation through this route would not affect bull trout in Alternative 3 unless it reached Libby Creek, as discussed in section 3.6.4.3.1. The diversion channel would be designed to minimize erosion and sedimentation. Effects in Alternative 4 would be less than those under Alternative 2 due to modifications in the design of the tailings impoundment and diversion channel.

202-13 The disturbance of Riparian Habitat Conservation Areas (RHCAs) would also contribute to sediment impacts to the streams. The preferred Alternative #4 would disturb 349 acres of RCHAs, mostly related to the Cherry Creek tailings impoundment site. Can the amount of RHCA damage be reduced?

Response: The analysis of disturbance in RHCAs was revised in SDEIS and again in the FEIS to reflect minor changes in the proposed disturbance area. Acreage of RHCA and other riparian areas disturbed under Alternative 4 on both private and National Forest land was estimated to be 383 acres in Section 3.6.4.2.1. The disturbance boundaries for the Little Cherry Creek tailings impoundment were already reduced from those used in Alternative 2 to minimize effects on RHCAs as described in Section 3.6.4.4.1 of the SDEIS and FEIS. Additionally, the amount of RHCA and other riparian areas disturbance would be decreased further by 31 percent under Alternative 3 as compared to Alternative 4. Alternative 3 is the preferred mine alternative. Sediment delivery to streams would be further reduced though road access changes and the use of BMPs in the long-term with all alternatives, as described in the “Sediment” subsections of Section 3.6.4.3.1. Road closure could allow the reestablishment of RHCAs along these roads in the Libby Creek, East Fork Rock Creek, and Fisher River watersheds.

331-8 Libby Creek is already approaching the sediment threshold where bull trout incubation would be impacted. Any increase in sediment delivery to the stream as a result of the road grading and construction would send Libby Creek above the threshold of 30 percent fines and further impact bull trout incubation.

Response: While some reaches of Libby Creek that were sampled had percent fines near the 30 percent threshold, other reaches of Libby Creek had percent fines well below that threshold, as presented in Section 3.6.3.1 of the DEIS and FEIS. The BA for bull trout (KNF 2013a) concluded that existing sediment levels were functioning at unacceptable risk within Libby Creek, as disclosed in the updated Section 3.6.2.12.2 of the FEIS. The potential for short-term increases in sediment and effects to bull trout and other salmonid populations from such increases, including effects to incubation, was discussed in sections 3.6.4.2.1, 3.6.4.3.1, and 3.6.4.4.1 of the SDEIS and FEIS and also disclosed in sections 3.6.4.3.8, 3.6.4.4.6, and 3.6.4.5.6. BMPs and road access changes would result in long-term decreases in sediment delivery to project area streams in Alternatives 2, 3 and 4. These decreases would benefit the bull trout habitat and populations. Various studies have shown that BMPs implemented to reduce sediment movement from roads, cutslopes and fillslopes to drainages are effective in reducing sediment by 70 to 100 percent. Appropriate BMPs would be determined on a site-specific basis and would be monitored to determine their effectiveness. While some adverse effects to successful incubation of bull trout embryos may occur during the Construction Phase, these effects are expected to be short-term. Additionally, the high flows that occur during runoff and storm events would flush accumulated sediment downstream.

331-15 Sediment would also impact the water quality of many of these streams. Sediment generated by runoff and road and transmission line construction could have serious and long-term consequences to the fisheries habitat in many of these streams and creeks.

331-21 This sediment would impact fisheries in adjacent streams. We are concerned about impacts to redband and Westslope cutthroat trout, as well as to the population of sculpin that provides a winter food base for bull trout. In the event that a large runoff-producing storm occurred during the initial reclamation period, soil losses along roads and road cuts may be locally moderate to severe. SDEIS, page 163

Response: Changes in the amount of sediment delivered to streams as result of the action alternatives were discussed in Sections 3.6.4 and 3.13.4 of the SDEIS and were revised in the FEIS. The potential effects of sediment on fisheries habitat and populations, including bull trout, redband trout, and westslope cutthroat trout populations, were discussed in Section 3.6.4 under the "Sediment," "Threatened and Endangered Species," and "Forest Service Sensitive Species" subsections for each mine and transmission line alternative in the DEIS. These sections were updated with the results of further analysis and discussion in these sections of the SDEIS and FEIS. The mechanisms through which changes in sedimentation rates could adversely affect habitat for fish and invertebrates within the Libby Creek watersheds were disclosed in Section 3.6.4.

Over all phases of the project, sediment delivery to streams from roads under the project alternatives would be reduced in the long-term compared to existing conditions over that same time period through BMPs and road access changes. These long-term reductions would increase habitat quality in analysis area streams, and would benefit trout and other aquatic populations. Less data were available to determine the status of sculpin within the analysis area, but effects on fish populations in general and on the invertebrate populations which also serve as a food source for bull trout were described in the "Sediment" subsections.

335-22 How would the increase in flows in Libby Creek and other streams affect sediment and siltation levels, and how would the loss of RHCA increase sediment loads?

Response: Substantial increases (>10 percent) in surface water low flows are not predicted to occur in any project area streams other than Libby Creek, Bear Creek, and Little Cherry Creek under Alternative 3 as discussed in Section 3.11.4 of the SDEIS and FEIS. These increases would occur during all phases. Similar or smaller increases in flows are predicted qualitatively under Alternatives 2 and 4 in Libby Creek. The increased flows in Libby Creek would occur through permitted discharges from the water treatment plant into Libby Creek or, with Alternative 2 only, from the LAD areas, and would only be substantial during the baseflow period of the year. Increases in flows in Bear Creek or Little Cherry Creek would occur during the Post-Closure Phase only as runoff from the tailings impoundment was routed toward this stream. Discharges to Libby Creek would not result in substantial increases in sediment and siltation levels, and flows would not likely be great enough to move any material in the channel and would not affect sediment transport or physical habitat, as disclosed in Section 3.13.4.3.2. The increases in flow in Little Cherry Creek or Bear Creek (depending on the alternative) may increase sediment loads to the stream temporarily until the channel readjusted to the higher flows.

Disturbance within RHCAs for road or facility construction could result in brief increased sedimentation in the adjacent analysis area streams and adverse effects on fish habitat, but the design features and BMPs that would be implemented under all action alternatives would minimize or eliminate such effects. Disturbance within RHCAs was minimized in Alternative 3, with the number of acres disturbed decreasing by almost 40 percent in Alternative 3 compared to Alternative 2, as presented in Section 3.6.4.2.1. Sections 3.6.4.2.1, 3.6.4.3.1, and 3.6.4.4.1 discuss the possible effects of sediment delivery to streams qualitatively on fish habitat and populations based on the amount of disturbance within RHCAs and other factors associated with the project. The road access changes and BMPs under all alternatives would reduce sediment delivery to streams substantially in the long-term as described in these sections, and would benefit aquatic habitat. Overall reductions would be maximized under Alternatives 3 and 4. Road closure would allow for the reestablishment of RHCAs along these roads in the Libby Creek, East Fork Rock Creek, and Fisher River watersheds.

389-8 All of the proposed alternatives involve constructing facilities in Riparian Habitat Conservation Areas (RHCAs) (SDEIS § 3.6.4.11.2, pp 171). The agencies' preferred alternatives require disturbance of 195 acres of RHCAs. (Id. at 149). However no timber cutting is permitted in these areas except in cases of natural disaster. It is unclear how the Forest Service proposes to construct these facilities without cutting timber.

Response: The standard for minerals management in RHCAs (MM-2) allows location and construction of mine facilities in ways that avoid impacts to RHCAs and streams and adverse effects on inland native fish where no alternative to siting facilities in RHCAs exists. Alternatives 3 and 4 would comply with this standard as discussed in Section 3.6.4.11.2 of the SDEIS and FEIS. The 195 acres of RHCAs disturbed under Alternative 3 on National Forest System land was updated to 256 acres in the FEIS based on additional analysis, and an updated discussion of the effects of this disturbance on aquatic habitat were discussed in Section 3.6.4.2.1 and 3.6.4.3.1 of the FEIS.

3217 Sediment: Comment about mitigation-mine

153-2 Construction of pool-forming instream structures in the EFBR may not be the best mitigation approach, as large woody debris and pool frequency in this area is not limiting. In addition, such construction within a wilderness area would face permitting challenges as well as being logistically difficult. In fact, these wilderness stream reaches are used as "reference reaches" for habitat restoration efforts elsewhere in the drainage. Similarly the conversion of -1 mile of Trail #935 along Rock Creek to non-motorized use (more than this would not be possible due to a private residence) would be of relatively small value because to date sediment input from the existing use of this limited length of road has not been identified as negatively affecting existing aquatic habitat in Rock Creek.

Response: The mitigation plans included under Alternatives 3 and 4 were revised in the FEIS, as discussed in sections 2.5.7, and do not include habitat improvements to the East Fork Bull River. Instead, the conceptual bull trout mitigation plan includes the restoration of habitat in the downstream reach of Copper Gulch to alleviate the intermittent flows in this stream and provide habitat for bull trout. Additionally, elimination of brook trout and reintroduction of bull trout in Copper Gulch would be considered as well. These projects would be assessed to determine their feasibility; but, if successful, they would contribute to offsetting any loss of bull trout and critical habitat in the East Fork Bull River. The success of the mitigation would be determined through monitoring to ensure that the value of these projects exceeds and precedes predicted impacts for the Lower Clark Fork and Kootenai River core areas.

Trail #935 is an extension of 150A and is 2.9 miles long. The road is currently gated and motorized access to MMC's private property is allowed. Under the agencies' alternatives, MMC's private property would be conveyed to the Forest Service or restricted with a conservation easement. The road would be barriered and some of the road would be converted to a trail. While the sediment reduction expected from these changes was not modeled using WEPP, sediment delivery would be reduced because the road would no longer be used by motorized vehicles. Decommissioned roads would be monitored for stability, drainage, and erosion control. To minimize sediment movement from decommissioned roads to RHCAs, MMC may decompact the road surface, move any unstable road fill to a more stable location, re-establish natural surface drainage patterns (such as by removing culverts and reshaping stream banks), recontour and revegetate the former road area. An analysis of decommissioning treatments on forest roads in northern Montana and Idaho showed a reduction in fine sediment delivery to streams of 97 percent.

331-19 Road closures are being used as mitigation for sediment. Would these road closures be permanent? Would the road closures allow mine related traffic? Would there be timber sales that would allow log trucks to use the roads in question? Who would have keys? Would there be seasonal access?

Response: Road closures for mitigation would be for the life of the project. Most of the closures would be year-round, but some would be seasonal (see sections 2.4.6.3 and 2.5.7.4.1 of the FEIS). Roads closed year-round would not be accessed by mine related or timber related traffic. Access would be controlled by the KNF. In Alternatives 3 and 4, MMC would check the status of the closure device twice-a-year (spring and fall), and repair any gate or barrier that was allowing access. Decommissioned roads would be monitored

for stability, drainage, and erosion control. To minimize sediment movement from decommissioned roads to RHCAs, MMC may decompact the road surface, move any unstable road fill to a more stable location, re-establish natural surface drainage patterns (such as by removing culverts and reshaping stream banks), recontour and revegetate the former road area. An analysis of decommissioning treatments on forest roads in northern Montana and Idaho showed a reduction in fine sediment delivery to streams of 97 percent.

3219 Sediment: Comment about regulatory compliance

331-20 What are the time frame parameters for the short-term exemption? Was the expected increase in turbidity included in sediment predictions for surface water? It would seem the sediment predictions included in the SDEIS would be seriously flawed if the agency permitted MMC to exempt sediment increases occurring during this waiver from the mine sediment analysis. The activities included in the waiver, including the tailings impoundment, are those that would be predicted to produce the most sediment. The waiver does not preclude an analysis of how much sediment would be generated during the activities granted under the exemption. We need to know how much sediment would be generated during this turbidity. The waiver would likely impact bull trout, redband, and Westslope cutthroat trout. Why is MDEQ considering a waiver that would allow impacts to fisheries? In any event, the mandates upon the USFS to protect fisheries and water quality noted herein do not contain any exemption for "short-term" or "temporary" violations of water quality standards and other protective requirements and thus cannot be allowed.

Response: The waiver referred to in Section 1.6.2.1.1of the SDEIS and FEIS was reworded in the FEIS. If authorized by the DEQ by a 318 authorization, the short-term water quality standards for total suspended solids and turbidity resulting from stream-related construction activities or stream enhancement projects are the narrative standards for total suspended solids. If a short-term narrative standard is authorized, the numeric standard for turbidity does not apply to the affected water body during the term of the narrative standard (75-5-318, MCA). During the review of a 318 authorization application, the DEQ reviews each application on a case-by-case basis to determine whether there are reasonable alternatives that preclude the need for a narrative standard. If the DEQ determines that the numeric standard for turbidity cannot be achieved during the term of the activity and that there are no reasonable alternatives to achieve the numeric standard, the DEQ may authorize the use of a narrative standard for a specified term. Any authorization would include conditions that minimize, to the extent practicable, the magnitude of any change in water quality and the length of time during which any change may occur. The authorization also would include site-specific conditions that ensure that the activity is not harmful, detrimental, or injurious to public health and the uses of state waters and that ensure that existing and designated beneficial uses of state water are protected and maintained upon completion of the activity. Conditions that require water quality or quantity monitoring and reporting may be included. As such, effects on aquatic life would be considered before the waiver was authorized. Additional discussion of the 318 exemption was added to Section 3.13.1.2.2 of the FEIS.

3223 Water Quality (Metals and Nutrients): Comment about analysis-mine

122-9 In Libby, Ramsey, and Poorman Creeks, nitrate levels in all phases of the mine and into the foreseeable future would be from 2-4 times the numeric standards being proposed by DEQ and the US EPA. These are very high levels of pollution, and deserve a correspondingly detailed level of analysis under MEPA and NEPA. The only discussion of the impacts of nutrient pollution on aquatic life is a single paragraph on page 310 which indicates the agencies do not know what the limiting factors for algae growth are in these waters, and therefore what the effects of a 10 to 20-fold increase in total inorganic nitrogen will be (other than to suggest they may be beneficial). This analysis is not adequate, particularly given the presence of two sensitive native trout species in these waters.

389-7 The SDEIS does not analyze whether algal growth would increase to the extent that it would be considered "nuisance algae." The habitat in Libby Creek is already impaired as a result of high levels of fine sediment.

335-22 Increases in nitrogen pollution in receiving waters need a detailed level of analysis under MEPA and NEPA that evaluates the impacts of nutrient pollution on algal growth, dissolved oxygen and aquatic

life, particularly bull trout. It is insufficient to rely on a future monitoring program when the most current scientific data demonstrates that the BHES Order is insufficiently protective for streams in the Northern Rockies ecoregion.

Response: An expanded discussion of the effects of the alternatives due to changes in nutrient concentrations was included in the SDEIS and FEIS in Section 3.6.4.2.3. This discussion disclosed the potential for adverse effects on aquatic life in the Libby Creek watershed, including effects that may occur to fish and invertebrate populations if algal growth increases and dissolved oxygen levels decrease. Quantifying the effect of the increased nutrients on algal growth or fisheries remains complicated based on site-specific factors in the project area streams such as total phosphorous concentrations, canopy cover, temperature, growing season and high flow events that scour algae from the streambed. Initial data indicated that total phosphorus levels in Libby Creek are low in analysis area streams. If monitoring of nutrients in the groundwater beneath the LAD Areas included as part of Alternative 2 were to indicate that total nitrogen or total phosphorus standards or the BHES Order limit of 1 mg/L for total inorganic nitrogen (TIN) would be exceeded, less water would be sent to the LAD areas and additional water would be sent to the Water Treatment Plant to prevent such an exceedance. Under Alternatives 3 and 4, the Water Treatment Plant would be modified as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits, and the LAD areas would not be used, decreasing the potential for increased algal growth and effects on aquatic life. In 2015, MMC requested that the general variance for both total nitrogen and total phosphorus be incorporated into the MPDES permit and indicated that the facility design flow is less than 1.0 million gallons per day (mgd). In the draft renewal MPDES permit, the DEQ preliminarily granted the variance request for total nitrogen of 15 mg/L, and preliminarily determined that a variance for total phosphorus was not necessary because the facility did not show reasonable potential to violate this nutrient standard. The DEQ would require the completion of an optimization study/nutrient reduction analysis to optimize nutrient reduction with existing infrastructure and analyze other cost-effective methods of nutrient load reductions. MMC would comply with the BHES Order limit of 1 mg/L total inorganic nitrogen. The BHES Order discussed protection of beneficial uses. On page 5, the Order states “surface water and groundwater monitoring, including biological monitoring, as determined necessary by the Department [DEQ], will be required to ensure that the allowed levels are not exceeded and that beneficial uses are not impaired.” Further on page 7, the Order indicates that the limit of 1 mg/L for TIN “should adequately protect existing beneficial uses. However, biological monitoring is necessary to insure protection of beneficial uses and to assure compliance with …applicable standards.” The applicable standards include the existing narrative standard prohibiting undesirable aquatic life, or nuisance algal growth. According to the reopener provisions of MPDES permits described in ARM 17.30.1361(2)(b), “permits may be modified during their terms if…the department [DEQ] has received new information …indicating that cumulative effects on the environment are unacceptable, or (c) the standards or requirements on which the permit was based have been changed by amendment or judicial decision after the permit was issued.” Consequently, the TIN limit for ambient surface waters set in the BHES Order could be modified in the MPDES permit issued by DEQ at any time if nuisance algal growth caused by MMC’s discharge was observed. To address the uncertainty regarding the response of area streams to increased TIN concentrations, MMC would implement the water quality and aquatic biology monitoring described in Appendix C.

As noted in Section 3.6.4.3.6 of the FEIS, the BA for bull trout (KNF 2013a) concluded that the potential for detrimental effects to bull trout populations and their critical habitat from nutrient increases would be negligible based on the ability to modify the BHES Order limit if effects warranted modification. Sections C.10.4.3, C.11.5 and C.11.7 of the SDEIS and FEIS detailed the proposed monitoring plan that included sampling for water chemistry parameters such as nitrogen and phosphorus, and sampling for periphyton and chlorophyll-a levels based on DEQ protocols. Using future monitoring (as described in Section C.11) of the water quality and aquatic populations to address the uncertainties in the effects of increased nitrogen levels would be reasonable based on the number of site-specific factors which may influence the response of these populations to increased nutrients in this stream.

331-15 Run off from sources such as the tailings impoundment would expose many of these creeks to metals and nutrients that would further degrade the quality of the water quality and fisheries habitat.

Response*:* In all mine alternatives, runoff from the tailings impoundment and dams would be intercepted, routed to the Seepage Collection Pond, and returned to the mill for reuse. Stormwater controls were discussed in Section 2.4.2.4.5 in the DEIS and Sections 2.4.1.2.1 (Alternative 2) and 2.5.3.2.6 (Alternative 3) of the FEIS. During reclamation of the tailings impoundment, any runoff would be required to meet BHES Order limits, water quality standards, or nondegradation criteria before being routed into the diversion channel and would not likely impact water quality or aquatic habitat, as discussed in the applicable subsections of 3.13.4 and 3.6.4.

310-15 If and when they do seep, how will that affect the fish?

335-10 What are the potential impacts to water quality and fisheries resulting from pipeline leaks or spills? Overflow of seepage ponds?

Response: Section 3.13.4.2.2 of the SDEIS and FEIS addressed the risk of accidental spills and ruptures and determined that the risk level was low. If the tailings or water return pipelines ruptured, water quality may be adversely affected, depending on the location and duration of the leak. Section 3.6.4.3.6 addressed potential results of a tailings pipe rupture on critical habitat for bull trout. Dependent on the magnitude of the rupture and the time frame over which it occurred, adverse effects on bull trout populations and their habitat could result, likely from reductions in food resources and the introduction of fine sediment into the Libby Creek watershed. Overflow of seepage ponds could have similar effects. Sections 3.6.4.2.1 and 3.6.4.3.1 addressed the possibility of failure of the tailings impoundment. Risk of failure is estimated at 1 percent or less, but extensive adverse effects and large scale loss of aquatic populations would be possible dependent on the extent of the failure. Design requirements of sediment ponds containing process water or mine drainage, was revised in the FEIS to accommodate flows from a 100-year/24-hour storm. Other sediment ponds would be sized for a 10-year/24-hour storm. Overflow from the sediment ponds would be directed into analysis area streams, and short-term adverse effects to fisheries may occur, depending on the location and duration of the discharge. The high flows that would accompany such events would likely dilute metal concentrations and flush the sediment downstream and distribute it in low gradient reaches, floodplains, or the Kootenai River.

3225 Water Quality (Metals and Nutrients): Comment about effect-mine

74-10 The DEIS claims that nitrates can have beneficial effects on fish populations. This is highly suspect, particularly given current DEQ concerns regarding nitrates, and irrelevant in Wilderness where any changes to water quality violate the law.

Response: The discussion of the effects of increased nutrients on aquatic populations was expanded in Section 3.6.4.2.3 of the SDEIS and the section was revised in the FEIS. This discussion does not suggest that increases in nutrient concentrations would have beneficial effects on fish or other aquatic populations. Instead, it indicated that small increases in nutrient concentrations in Libby Creek could result in increased productivity that would provide a larger food base for fish populations. Nutrient concentrations that reach levels high enough to cause increases in algal growth would have the potential to be detrimental to Libby Creek. Many other factors play a role in whether nuisance algal blooms and the resulting adverse effects on other aquatic resources occur, such as temperature, canopy cover, and streambed scouring of algae. As included in the discussion, the many site-specific factors present in the Libby Creek watershed result in uncertainty as to whether increased nutrient concentrations would result in nuisance algal growth. The agencies anticipate that the Water Treatment Plant would be modified as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits as stated in Section 2.5.4.3.3 of the FEIS. Discharges from the LAD areas with total nitrogen or total phosphorus concentrations that exceed standards could occur with Alternative 2, but discharges from the Water Treatment Plant in all alternatives would meet nutrient standards and the BHES Order TIN limit at the end of the mixing zone in Libby Creek (sections 3.6.4.2.3 and 3.6.4.2.4). In 2015, MMC requested that the general variance for both total nitrogen and total phosphorus be incorporated into the MPDES permit and indicated that the facility design flow is less than 1.0 million gallons per day (mgd). In the draft renewal MPDES permit, the DEQ preliminarily granted the variance request for total nitrogen of 15 mg/L, and preliminarily determined that a variance for total phosphorus was not necessary because the facility did not show reasonable potential to violate this nutrient standard. The DEQ would require the completion of an optimization study/nutrient reduction

analysis to optimize nutrient reduction with existing infrastructure and analyze other cost-effective methods of nutrient load reductions. In addition, according to the reopener provisions of MPDES permits described in ARM 17.30.1361(2)(b), "permits may be modified during their terms if…the department [DEQ] has received new information …indicating that cumulative effects on the environment are unacceptable, or (c) the standards or requirements on which the permit was based have been changed by amendment or judicial decision after the permit was issued."

3240 Streamflow: Suggested new information/analysis

74-15 The effect that climate-induced changes to hydrologic cycles, in addition to those caused by the mine, might have on ecological integrity merits discussion further.

74-15 Climate change stands to have discernable impacts on hydrologic cycles, and thus, on aquatic life in the CMW, and may alter operating conditions that will affect the mine.

74-8 The possible influence of climate change on bull trout populations, combined with other factors contributing to changes in water quantity, has not been explored in the DEIS.

Response: The potential project effects associated with climate change are described in section 3.11. This section cites studies that have determined that regional climactic changes in temperature and precipitation have occurred and are projected to continue to occur. However, as stated in this section, it was not possible to quantify the impacts of climate change due to the range in possible effects of climate change on the water resources and the many factors that could affect that outcome. This uncertainty would also apply to any effects on ecological integrity; however, a discussion of the mechanisms through which effects could occur and a range of possible effects on macroinvertebrate and fish populations, including bull trout populations, was added to Section 3.6.3.14 of the FEIS as part of the discussion of the affected environment.

202-18 How would the dewatering of the East Fork Bull River impact water temperature?

Response: Dewatering of the East Fork Bull River would have the potential to result in increased stream temperatures during the low flow period, but the effect is uncertain. Additional discussion of possible changes to stream temperature as a result of the project alternatives is included in the FEIS in Section 3.13.4.3.4, with discussion of the effects on aquatic habitat and populations included in the temperature subsections of Sections 3.6.4. The removal of riparian vegetation for construction of roads and mine facilities could also affect stream temperatures, although no disturbance is planned with any alternative in the RHCA areas in the East Fork Bull River. Multiple factors such as amount of direct solar radiation, air temperature, topography, weather, shade, streambed substrate, stream morphology, groundwater inflows, and amount of subsurface streamflow can influence stream temperature. As disclosed, the multiple factors that may affect stream temperatures and the constantly changing stream temperature regime that occurs naturally make it difficult to predict how the project may alter stream temperatures or the extent of such impacts on aquatic resources. The highest reductions in low flows for the East Fork Bull River are predicted to occur near EFRC-50 in the CMW where dense canopy cover may be present and air temperatures would be cooler than at lower elevations, which may minimize the temperature increases that would occur as a result of the lower baseflow in this reach of the river. As summarized in the FEIS in the "Threatened and Endangered Species" subsection of Section 3.6.4, the BA for bull trout (KNF 2013a) also includes a discussion of the uncertainty associated with estimating the effects of the project on stream temperatures in the East Fork Bull River and other analysis area streams.

331-8 Base flow into Libby Creek above the adit and in the wilderness would be reduced significantly during the closure and post-closure (14% LB-50) phases of the proposed Montanore Mine. Not enough has been said in the SDEIS about the impacts the dewatering would have on the fisheries in this stretch of the stream.

Response: The "Water Quantity" and "Threatened and Endangered Species" subsections of Section 3.6.4 of the FEIS were revised to more specifically describe potential effects on fisheries from the reductions in low flow estimated to occur in Libby Creek in the reach within the CMW. Bull trout are not found in Libby

Creek in the CMW (Figure 55). The discussion focused on potential impacts from decreases in low flow on aquatic habitat availability and the resident bull trout population that exists in Libby Creek outside of the CMW, and qualitatively assessed the impacts of decreased low flows on macroinvertebrate populations.

3241 Streamflow: Suggested new mitigation

153-2 Some flow augmentation could avoid the need for mitigation.

Response: Water management in Alternatives 3 and 4 was modified to ensure senior water rights on Libby and Ramsey creeks would not be injured by streamflow reductions. Flow augmentation in the East Fork Bull River and East Fork Rock Creek was not technically feasible under any alternative. The fisheries mitigation plan was designed to mitigate streamflow effects, as described in sections 2.5.7 and 3.6.4.3.6 of the FEIS. These plans were revised from the ones presented in the DEIS and SDEIS to better address potential impacts of the project. The USFWS' terms and conditions in the bull trout Biological Opinion provides mitigation for impacts on bull trout in Libby Creek.

3242 Streamflow: Suggested new monitoring

153-1 The project proponent could be required to implement a comprehensive hydrological modeling and monitoring program to assess the differences between actual project impacts as opposed to natural variability, with required mitigation measures commensurate with project impacts.

Response: The 3D groundwater flow model would be refined and rerun after data collection during the Evaluation Phase were incorporated into the models, as detailed in Appendix C. The predicted impacts on surface water resources may change and the model uncertainty would decrease. Appendix C of the SDEIS and FEIS also details the agencies' monitoring plans, including monitoring of the quantity and quality of the surface water and groundwater and monitoring of the aquatic habitat and populations. Monitoring of the aquatic habitats and populations would occur at up to seven stations on an annual basis or more frequently, including a site on Bear Creek, a site on Poorman Creek, and up to five sites on Libby Creek. Monitoring of the aquatic resources would be comprehensive, as it is planned to include surface fines measurement, habitat surveys, macroinvertebrate surveys, water quality sampling, periphyton surveys, fish tissue collection, and fish population surveys. The ability to distinguish effects of the project from natural variability will increase as the multiple years of data are collected, as general trends could become apparent even if differences from year to year are within the range of natural variability. As revised for the FEIS, the bull trout mitigation plan also includes the development and implementation of a monitoring program, as described in sections 2.5.7.3 and 3.6.4.3.6 of the FEIS. The BA (KNF 2013a) provides further details on this plan. The USFWS' terms and conditions in the bull trout Biological Opinion provides mitigation for impacts on bull trout in Libby Creek. The success of the proposed mitigation actions for bull trout would be determined through the results of the monitoring to confirm that the value of the projects that are implemented exceeds and precedes documented and predicted impacts.

153-2 Based upon the existing conditions of late summer temperatures (EFBR) and presently limited spawning habitat, reduced flows would result in habitat loss, which would impact the westslope cutthroat trout of the EFBR as well as bull trout. The final EIS could consider some monitoring to better understand these downstream impacts.

Response: The effects of the reduced flows on aquatic habitat for bull trout and westslope cutthroat in the East Fork Bull River were discussed in the "Water Quantity", "Threatened and Endangered Species", and "Sensitive Species" subsections of Section 3.6.4 of the DEIS, and these sections were revised in the SDEIS and FEIS to reflect the results of additional analyses and data. A more detailed discussion of the potential effects of decreased flow on stream temperatures and salmonid populations was also added to the FEIS in the "Temperature" and "Water Quality" subsections. As summarized in the FEIS, the BA determined that potential impacts to trout populations in the East Fork Bull River and other analysis area streams may occur from temperature changes, but the magnitude and extent of the impact was uncertain based on the multiple factors that can affect stream temperatures.

The 3D modeling analysis results were expanded to include predictions of the reductions in low flow that would occur within an additional reach of this stream that is used by both westslope cutthroat trout and bull trout. Bull trout spawning has been documented in this reach. The reductions in flow estimated to occur using the model results for the low flow period of the year under Alternative 3 were used to estimate the corresponding decreases in habitat availability for adult, juvenile, and spawning bull trout in the East Fork Bull River and other analysis area streams. While the habitat availability analysis focused on effects to bull trout, the effects to westslope cutthroat trout populations from these reductions in flow were qualitatively assessed as well. Results of these updated analyses are included in sections 3.11.4.4, 3.6.4.3.2, and 3.6.4.3.6 of the FEIS, and were discussed in more detail in the BA (KNF 2013a). The streamflow reductions were determined to likely have an adverse impact on bull trout populations through reduced habit availability within the Lower Clark Fork Core Area. Kline and Savor (2012) were also used to update sections 3.6.3.5 and 3.6.3.1of the FEIS. Stormwater controls were discussed in Section 2.4.2.4.5 in the DEIS and Sections 2.4.1.2.1 (Alternative 2) and 2.5.3.2.6 (Alternative 3) of the FEIS. Success of the mitigation projects would be determined by further monitoring. Additional monitoring would be conducted according to the plan detailed in Appendix C of the FEIS at seven sites in the Libby Creek watershed to assess impacts that may occur as a result of the project. Additionally, the revised bull trout mitigation plan discussed in the BA and in sections 2.5.7.3 and 3.6.4.3.6 of the FEIS would require development and implementation of a monitoring plan specific to the evaluation of impacts to bull trout from the project and proposed mitigation. While impacts to westslope cutthroat trout would also occur with the action alternatives, these trout are present in higher densities within these streams than bull trout, particularly in the East Fork Bull River, and would thus likely to be less affected. Additionally, these fish spawn in the spring, when the changes in flow would not reduce habitat availability.

3243 Streamflow: Comment about analysis-mine

122-6 As a general comment, the DEIS makes repeated statements with regard to the East Fork and other surface waters that flow reductions “may be difficult to measure,” or “may be difficult to separate from natural variability.” The DEIS should include appropriate clarifications to these statements to avoid misleading the public.

153-1 Page S-39, Fourth Paragraph, third sentence: Based upon the existing conditions of intermittency (Rock Creek), and late summer temperatures (EFBR), native trout habitat is reduced during low flows. Fourth sentence: how is it determined that “changes in flow downstream would not likely be measurable"? Sixth sentence: “Changes in flow in the EFBR may be difficult to separate from natural variability of low flows:’ Stream flow is certainly a measurable physical parameter.

312-1 Even though the estimated magnitude of this decrease in flow may be small, it is an estimate. No one knows for sure how much flow will be reduced in these important Bull Trout streams.

Response: These statements were revised in the FEIS to clarify that flow reductions that are difficult to separate from natural variability was not intended to mean that effects on aquatic resources would be insignificant in all cases. Language indicating that changes in flow would not likely be measurable was also revised to reflect that small changes in flow that were within the average range of variability may be difficult to detect as changes of this magnitude could occur from year to year under existing conditions. As stated in Section 3.11.4.2.2 of the SDEIS and Section 3.11.4.4.6 of the FEIS, average variability in low flow values was estimated to be approximately 20 percent based on data from nearby streams with gaging stations on them. Additionally, as stated in the Section 3.8.3.1, the standard error of prediction ranges for the equations used to calculate the $7Q_{10}$ vary from +113 percent to -53 percent. The 3D model results predicted that estimated changes in flow in East Fork Bull River from the Wilderness Boundary to the mouth would range from a less than 1 percent decrease to an 11 percent decrease in $7Q_{10}$ flows over the phases of the project. Changes in low flow in East Fork Rock Creek are predicted to be greater than 20 percent during Operations, Closure, and Post-Closure phases.

As discussed in Section 3.11.2.3, the 3D model provides the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both groundwater flow models would be refined and rerun after data collected during the Evaluation Phase

were incorporated into the models (see section C.10.4, *Evaluation Phase* in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. As discussed in Section 3.6.4.3.6 and in the BA for bull trout (KNF 2013a), mitigation success for this species would be determined through monitoring to confirm that the value of the proposed projects exceeded predicted impacts in analysis area streams.

335-23 The SDEIS does not provide information on the range of potential water quality impacts related to these changes or how these water quality changes and flow changes will affect bull trout, westslope cutthroat and other trout populations in these streams. Nor does it provide information on how the cumulative effects of water quality, flow and periodic increases in sediment could affect bull trout in these reaches.

Response: Impacts to water quality and sediment delivery to streams were addressed in section 3.13.4 of the DEIS, SDEIS, and FEIS, while impacts to stream flows were addressed in section 3.11.4 of these documents. The DEIS and SDEIS evaluated the potential effects from the project alternatives on bull trout, westslope cutthroat trout, and other fish populations from changes in water quality, water quantity, and sedimentation under each alternative in the appropriate subsections of section 3.6.4. These discussions were revised in these sections of the FEIS to reflect the results of additional analyses and data.

Effects on water quality were presented as estimated concentrations of various parameters (e.g. nutrients and metals) that would occur as a result of the project alternatives. While a range of potential concentrations was not presented for each site for which estimates were calculated, the representative values were developed for receiving and discharge water quality and presented over a range of sites and for the various phases of the project. The agencies used DEQ's standard surface water mixing zone rules (ARM 17.30.516) and used the $7Q_{10}$ flow to assess effects of discharges that may affect surface water. Effects of water quality changes on aquatic life were evaluated qualitatively for each alternative based off the estimated changes in nutrient and metal concentrations resulting from the project in each stream and phase. The effect of water quantity changes on habitat availability for bull trout were evaluated quantitatively based on the analyses presented in the BA (KNF 2013a). Maximum changes in low flows and the resulting changes in habitat availability for bull trout that would occur at stream sites in the analysis area during each phase were modeled rather than presenting a range of effects, to represent when the greatest effects would occur during each phase. Changes in sediment delivery to analysis area streams as a result of the project were assessed quantitatively using the WEPP analysis and qualitatively, with the resulting effects on aquatic life evaluated qualitatively. The cumulative effects of all of these factors on bull trout populations and habitat were discussed in the BA (KNF 2013a) and summarized in the "Threatened and Endangered Species" subsections of section 3.6.4 of the FEIS. Decreases in habitat resulting from changes in flows during the low flow period of each year would occur and would adversely affect bull trout populations in west side streams under all alternatives. Such impacts would also impact bull trout populations in the east side streams, including the resident populations in Libby Creek upstream of Libby Falls. Sections 3.6.4 and 3.13.4 of the FEIS were revised to provide additional information on potential temperature effects.

3245 Streamflow: Comment about effect-mine

202-14 The DEIS for the Montanore project examines the dewatering impacts to westslope cutthroat trout 0.75 miles downstream from Rock Lake and looks at dewatered sections of the mainstem, but fails to analyze the impacts to the bull trout stronghold in the lower reach of the East Fork of Rock Creek. It was suggested that the dewatering would impact the upper reaches of the East Fork of Rock Creek and the main stem, but not the section of the East Fork where the bulk of the bull trout population resides and where critical habitat is found for the species. How can the mine related dewatering process impact the extreme upper reaches of the East Fork of Rock Creek, and the main stem but somehow not impact the mid and lower section of the East Fork where a large portion of the bull trout reside? Changes in flow downstream from Rock Creek Meadows would not likely be measurable, but would contribute to the dewatered sections of lower Rock Creek. (Vol. 1, pg. 307)

Response: Additional analysis conducted for the FEIS included calculation of estimated changes in low flow at a site immediately upstream of the confluence of East Fork and West Fork Rock Creek (RC-3) to allow for more specific discussions of potential impacts to bull trout and other trout populations within this reach of East Fork Rock Creek. The DEIS and SDEIS did not assume there would be no decreased streamflow or effects to trout populations within this reach of East Fork Rock Creek; instead, since changes to low flows were not modeled at that location, the changes were assumed to be between the changes predicted to occur at the sites modeled upstream and downstream of this reach. The statement quoted from the DEIS was revised in Section 3.6.4.2.2 of the SDEIS and FEIS, and reflects the additional modeling results for RC-3. The percentage of change to low flows estimated to occur would lessen downstream, from a maximum decrease of 59 percent during the Post-Closure phase with mitigation in East Fork Rock Creek at the CMW boundary to 2 percent at RC-3. Analyses included in the BA for bull trout (KNF 2013a) used the projected changes to low flows to estimate changes to bull trout habitat availability in the Rock Creek drainage and other analysis area streams in Alternative 3, as summarized in Section 3.6.4.3.2. The SDEIS and FEIS also disclosed that the decreased streamflows during low flow period in the mainstem of Rock Creek would be 2 percent or less with mitigation, but would have the potential to exacerbate the intermittent flows that occur under existing conditions near the mouth, which may further restrict fish passage. Changes in flow of this magnitude as a result of the project would be difficult to differentiate from natural variation at this location near the mouth of Rock Creek (see comment response 153-1, p. M-256).

299-1 Although the impacts to base flow of the EFBR listed in the SDEIS do not seem large in magnitude, there are several factors which need to be considered: 1) in low flow years, water temperatures in late summer in the lower sections of the EFBR approach the upper limit for bull trout, and reduction of base flow will increase water temperatures, as well as negatively affect fish passage, and 2) even with a 3D model, it is difficult to quantitatively predict with a high degree of certainty the effect of the mine on stream base flow, and thus the effect could be greater than predicted.

Response: See comment response 202-18 (p. M-254) for additional discussion of effects of baseflow decreases on stream temperature. The changes in streamflow estimated with the 3D model were updated in the FEIS to include estimates for changes in some phases for an additional site on the East Fork Bull River within a reach used by bull trout, as presented in Section 3.11.4. As disclosed in the SDEIS and FEIS, changes to streamflows were estimates. The collective response to comments 122-6, 153-1, and 312-1 (p. M-256) discussed the uncertainty inherent in these estimates. Section 3.6.2.3.2 addresses the uncertainty in using these estimates to address impacts to bull trout passage and habitat availability. The success of the proposed mitigation projects would be based on monitoring data to confirm that the value of the projects exceeded documented and predicted impacts to bull trout populations and critical habitat to account for this uncertainty, as discussed in Section 3.6.4.3.6, the BA for bull trout (KNF 2013a), and the USFWS' terms and conditions in the bull trout Biological Opinion.

202-17 The dewatering of the East Fork of Bull River would significantly impact the stream's aquatic habitat. The impacts from dewatering would include an alteration of stream temperature, and mineral and nutrient dilution. Data on the reduction of flows appear limited, but the agency acknowledges that the reduction would be "relatively large," and if the chart on page S-30 of the DEIS is any indication of the expected flow reduction, it would be significant. Any reduction in flow to the East Fork of Bull River would degrade aquatic habitat. With dewatering occurring over a 70-year span, the agency will not be able to protect approximately ten generations of bull trout, from the obvious habitat degradation. When it becomes apparent that the dewatering is having a significant impact on bull trout, what recourse will the agencies have to stop the dewatering created by the mine void?

202-33 Impacts to wilderness streams and creeks also are expected, including the East Fork of Bull River, which is essential for the survival of the threatened bull trout in the region. Most of the impacted tributaries in the Libby Creek drainage find their origin within the boundary of the Cabinet Mountains Wilderness and are dependent upon it for recharge.

310-7 It would result in dewatering that would impact aquatic habitat of bull trout, westslope cutthroat trout and redband trout.

Response: Reductions in the low flows and the resulting effects to the water quality of the East Fork Bull River and other analysis area streams are discussed in Sections 3.11.4 and 3.13.4 of the EIS. The greatest decrease in streamflow would occur after mine closure in the East Fork Bull River, and was estimated to be 0.4 cfs, a decrease of 11 percent of $7Q_{10}$ flows, at the CMW boundary. Effects to streamflow at an additional site on East Fork Bull River, as well as an additional site each on East Fork Rock Creek and Libby Creek, were modeled for the FEIS to provide further information on effects to bull trout populations and critical habitat. Decreases in low flows within analysis area streams were predicted to decrease aquatic habitat under all three of the action alternatives, as discussed in the "Water Quantity" subsections of Section 3.6.4 of the SDEIS and FEIS. Impacts to bull trout populations from streamflow changes were based on the analysis of changes in habitat availability for juvenile, adult, and spawning bull trout as presented in the BA (KNF 2013a). Impacts to westslope cutthroat trout and redband trout were assessed qualitatively. Bull trout populations and habitat would be adversely affected in analysis area streams from these decreases in low flow. Specific impacts on bull trout as a threatened and endangered species, and on westslope cutthroat trout and redband trout as sensitive species, were discussed in the "Threatened and Endangered Species" and "Sensitive Species" subsections of Section 3.6.4.

The BA also stated that impacts to bull trout from changes to nutrient levels would be negligible, and the impacts from and effects on stream temperatures resulting from the alternatives was uncertain, but assumed to be minimal. Effects to westslope cutthroat trout and redband trout from these factors would be similar. Qualitative discussions of the potential effects of nutrient and stream temperature increases on aquatic habitat and populations resulting from project alternatives were updated in the FEIS in sections 3.6.4.2.3 and 3.6.4.2.5, respectively.

The agencies' mitigation, such as barriers between Rock Lake and the mine, and between the Rock Lake Fault and the mine, are designed to minimize inflows. The agencies' fisheries and bull trout mitigation projects are proposed to offset any loss of bull trout and other fish species and their habitat, as described in sections 2.5.7 and 3.6.4.3.6. The success of the proposed mitigation projects would be based on monitoring data to confirm that the value of the projects exceeded documented and predicted impacts to bull trout populations and critical habitat to account for this uncertainty, as discussed in Section 3.6.4.3.6, the BA for bull trout (KNF 2013a) and the USFWS' terms and conditions in the bull trout Biological Opinion.

327-7 There are a growing number of environment problems associated with human water withdrawals and use. Water scarcity often results in unhealthy aquatic ecosystems because of changes in the timing, quantity, and quality of freshwater flows needed to sustain their natural functions. Data looking at the number of endangered or threatened species of fish, amphibians, gastropods, and freshwater mussels show that aquatic species are exposed to higher extinction risk than other species.

Response: Predicted effects on aquatic ecosystems from the alternatives are disclosed in Section 3.6.4 of the SDEIS and FEIS. Effects specifically from changes to water quantity and quality are addressed in this section for each alterative under the appropriate subheading. There would be no substantial change to the timing of peak or low flows in the analysis area streams. Effects on fish habitat from changes in water quantity would occur during low flow periods of the year, and effects during the runoff/snowmelt periods of each year would be negligible. Bull trout occur in analysis area streams and are currently listed as threatened by the USFWS, and as such were considered to be at a higher risk than other species. Some adverse effects on bull trout habitat were predicted with the action alternatives, as discussed specifically in sections 3.6.4.2.7, 3.6.4.3.6, and 3.6.4.4.6. A BA was prepared for this project that specifically analyzed impacts to bull trout populations and critical habitat, as summarized in Section 3.6.4.3.6. This section and the BA also discuss the proposed mitigation projects, and state that success of these projects would be based on data from continued monitoring efforts.

327-7 In particular, threatened bull trout would lose their spawning grounds in the East Fork Bull River, compromising the population's ability to reproduce. An estimated water drawdown of up to 22 percent in Libby Creek (see table 86, page 242, SDEIS Vol. 1) by the end of mining operations would reduce the fish population, compromising recreational fishing opportunities in the area.

Response: The effects of changes in water quantity on bull trout and their spawning habitat in the East Fork Bull River and other analysis area streams were discussed in Section 3.6.4 of the FEIS in the "Water Quantity" and "Threatened and Endangered Species" subsections. Bull trout populations in the East Fork Bull River and Libby Creek, as well as other analysis area streams, would be predicted to be adversely affected under all alternatives without mitigation. The reductions in habitat availability (including spawning habitat) would likely have the greatest effect on this species. While decreased low flows in the upper reaches of Libby Creek may be substantial enough to result in decreased salmonid habitat and effects on the resident bull trout population in this reach, estimated flow increases in Libby Creek from discharges from the Water Treatment Plant would occur and provide additional spawning habitat within Libby Creek further downstream. Changes in low flows were modeled for additional sites in Libby Creek, East Fork Rock Creek, and East Fork Bull River in the FEIS to provide further information on the effects to salmonid habitat in these streams. Additionally, the BA specifically addressed changes in spawning habitat availability for bull trout in the East Fork Bull River and other analysis area streams as a result of the changes in streamflows (KNF 2013a). Results of these analyses are summarized in the FEIS within the cited sections. If mitigation projects are successful, bull trout populations in the Kootenai and Lower Clark Fork core areas are expected to benefit.

Most recreational fishing within the analysis area occurs in the Fisher River and Howard Lake, as described in Section 3.15.3.1.2 of the SDEIS and FEIS. Road closures under Alternative 3 and 4 would have a long-term impact by reducing access to some streams. Alternative 3 would not adversely affect recreational fishing opportunities, and improvements to some roads may increase opportunities for recreational fishing, particularly in the winter, as described in Section 3.16.4.3 of the DEIS and FEIS.

331-9 Due to dewatering some sections of Libby Creek will see a reduction in subsurface flow, which will increase water temperature and further impair the fisheries and aquatic habitat. Dewatering will also reduce the pools necessary for bull trout to spawn.

Response: This comment addresses the Draft 404(b)(1) analysis of the effects of Alternative 3 that was included as Appendix L in the SDEIS and FEIS. Further discussion of the effects of changes in water quantity on Libby Creek as the result of the alternatives was added in sections 3.6.4.2.2, 3.6.4.3.2, and 3.6.4.4.2 of the FEIS. Decreased flows in Libby Creek would mainly occur upstream of the Water Treatment Plant and would decrease salmonid habitat, including spawning habitat, in this reach. As included in Section 3.6.4.3.2, the BA for bull trout (KNF 2013a) specifically estimated changes in habitat availability for spawning bull trout, as well as for juvenile and adult bull trout. While habitat availability would decrease in Libby Creek upstream of the plant, it was estimated to increase substantially downstream of the plant by up to 125 percent as a result of plant discharges. Additional discussion of the effects of the decreased flows on stream temperatures was also included in the FEIS in sections 3.6.4.2.5, 3.6.4.2.3, and 3.6.4.4.3. The USFWS' terms and conditions in the bull trout Biological Opinion provides mitigation for any impacts that could occur to bull trout upstream of these discharges in Libby Creek. Mitigation success would be determined by monitoring results to ensure that impacts to bull trout populations are accounted for appropriately.

340-2 Even if the SDEIS projections of incremental flow depletion in the range of 3 to 11 percent post-closure in the mid-reaches of East Fork Bull River and East Fork Rock Creek are correct – and assuming no fundamental change in groundwater to surface water interaction – this magnitude of base flow loss is biologically significant. In streams of this size and bed configuration, any depletion of base flow tends to produce proportionally large reductions in usable habitat area. These base flow reductions will have dramatic effects on bull trout and aquatic life, especially when they may potentially persist for 1000 years or more.

Response: Additional analysis was conducted for the FEIS that included modeling changes in low flow at additional sites on East Fork Rock Creek, East Fork Bull River, and Libby Creek in reaches determined to be important for bull trout spawning and populations. An estimate of the effects of the low flow changes on bull trout habitat availability in analysis area streams was included in the BA for bull trout (KNF 2013a), and the results from this analysis are summarized in Section 3.6.4.3.2 of the FEIS. Habitat availability for

spawning bull trout was estimated to be affected most by the change in low flows, and was estimated to decrease by up to 13 percent in the East Fork Bull River and up to nine percent in East Fork Rock Creek. Effects to other fish populations and aquatic life in analysis area streams were qualitatively evaluated. Bull trout populations in the Libby Creek, Rock Creek, and East Fork Bull River drainages would be adversely affected by mine activities under all alternatives. As presented in the BA and in Section 3.6.4.3.6 of the FEIS, mitigation projects have been proposed to account for the adverse impacts to bull trout in both streams, and, if successful, are expected to offset the projected impacts. The success of these projects would be based on data from continued monitoring efforts.

389-6 Stream dewatering combined with nutrient changes may result in warmer water temperatures that decrease habitat quality for certain species. How will these effects be compounded by the warmer temperatures and increased incidence of drought projected to occur as a result of climate change?

Response: An expanded discussion of the potential for the estimated changes in low flows to result in changes in stream temperatures in analysis area streams as a result of project alternatives was included in the FEIS in the "Temperature" subsections of section 3.6.4. See prior discussion of temperature on p. **Error! Bookmark not defined.**. The BA disclosed that temperature changes could occur as a result of the project alternatives, but the effects on bull trout populations were assumed to be present a minimal risk to bull trout, as the locations of the maximum baseflow reductions would be in stream reaches with cooler air temperatures and presumably greater canopy cover. The FEIS disclosed that if temperatures increases occurred in analysis area streams, they would have the potential to adversely impact bull trout and other salmonid populations, as well as result in changes in the composition of the macroinvertebrate assemblages.

A revised discussion of the effects of the alternatives on nutrient levels was included in the SDEIS and was expanded in the FEIS in Section 3.6.4.2.3. If monitoring of nutrients in the groundwater beneath the LADs included as part of Alternative 2 were to indicate that total nitrogen or total phosphorus standards or the BHES Order limit of 1 mg/L for total inorganic nitrogen (TIN) would be exceeded, less water would be sent to the LAD areas and additional water would be sent to the Water Treatment Plant to prevent such an exceedance. Under Alternatives 3 and 4, the Water Treatment Plant would be modified as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits, and the LAD areas would not be used, decreasing the potential for increased algal growth and effects on aquatic life. As discussed in Section 3.6.4.3.6 of the FEIS, the BA for bull trout (KNF 2013a) concluded that the potential for detrimental effects to bull trout populations and their critical habitat from nutrient increases would be negligible based on the ability to modify the BHES Order limit to prevent any detrimental effects. In addition, the total nitrogen and total phosphorus standards of 0.275 mg/L for total nitrogen and 0.025 mg/L for total phosphorus are intended to protect beneficial uses. In 2015, MMC requested that the general variance for both total nitrogen and total phosphorus be incorporated into the MPDES permit and indicated that the facility design flow is less than 1.0 million gallons per day (mgd). In the draft renewal MPDES permit, the DEQ preliminarily granted the variance request for total nitrogen of 15 mg/L, and preliminarily determined that a variance for total phosphorus was not necessary because the facility did not show reasonable potential to violate this nutrient standard. The DEQ would require the completion of an optimization study/nutrient reduction analysis to optimize nutrient reduction with existing infrastructure and analyze other cost-effective methods of nutrient load reductions. In addition, according to the reopener provisions of MPDES permits described in ARM 17.30.1361(2)(b), "permits may be modified during their terms if…the department [DEQ] has received new information …indicating that cumulative effects on the environment are unacceptable, or (c) the standards or requirements on which the permit was based have been changed by amendment or judicial decision after the permit was issued."

The SDEIS and FEIS added additional text discussing the potential effects of climate change on surface water hydrology in Section 3.11. This section cites studies that have determined that regional climactic changes in temperature and precipitation have occurred and are projected to continue to occur. However, as stated in this section, it was not possible to quantify the impacts of climate change and the Montanore Project due to the uncertainty and the range of effects on surface water hydrology that are possible. This uncertainty would also apply to any effects on ecological integrity. A discussion of the range of possible

effects, including drought and its effects on bull trout, and uncertainty associated with predicting such effects was added to Section 3.6.3.14 of the FEIS.

3254 Streamflow: Comment about mitigation-mine

153-2 Page S-39, Last sentence through first paragraph on page S-40: The Draft EIS recommends that an independent party perform "comprehensive aquatic habitat assessment"; however, such assessments already exist for the EFBR and Rock Creek (WWP 1996, Land and Water 2001, GEL 2005), and have documented that "the extent of fish habitat in the EFBR" extends further upstream than 1.3 miles above the wilderness boundary. Construction of pool-forming instream structures in the EFBR may not be the best mitigation approach, as large woody debris and pool frequency in this area is not limiting.

Response: Revisions to the SDEIS and FEIS did not include this text. The habitat assessments cited from WWP 1996, Land and Water 2001, and GEI 2005 were referenced in Section 3.6.2.2.1 of the DEIS and FEIS. GEI (2005) does not present new data for either of these streams, but instead summarizes the existing habitat data presented by WWP 1996 and Land and Water 2001; thus, the habitat assessments referred to by the commenter were conducted over 15 years ago. Adequate amounts of large, woody debris are present in EFBR based on surveys conducted by Washington Water Power Company (1996), and as discussed in Section 3.6.3.1 of the DEIS. Additional habitat surveys in East Fork Bull River and East Fork Rock Creek were conducted in 2012 to provide more recent data (Kline and Savor 2012). Data on pool quality and frequency for East Fork Bull River suggest that these habitat indicators are "functioning at risk" in the BA (KNF 2013) for bull trout. WWP (1996) states that there is a natural barrier to fish located approximately 0.9 mi above the CMW area boundary. The recent habitat surveys conducted in 2012 suggested the barrier might be further upstream based on the maps presented (Kline and Savor 2012), but it was not assessed for fish passage under all flow conditions. No data were located that verified the presence of bull trout upstream of the Placer Creek confluence, but they may exist. This text in Section 3.6.5.3 was revised to indicate this uncertainty.

The proposed mitigation for impacts to aquatic resources in the East Fork Bull River were revised in the FEIS and no longer include the construction of pool-forming instream structures in this stream. Off-site mitigation projects were proposed to account for impacts to bull trout population and habitat resulting from decreased low flows East Fork Bull River, as described in sections 2.5.7.3 and 3.6.4.3.6, as well as in the BA.

182-7 Mitigation of lower flows in Rock Creek an East Fork Bull River would focus on the East Fork Bull River and would consist of two parts: 1) completion of a comprehensive habitat survey and 2) construction of instream habitat structures. The proposed mitigations make little sense if there is insufficient water to accommodate them! The monitoring and maintenance of structures would need to be maintained beyond the life of the mine, in all probability for the same amount of time (20 years) claimed in P. 73 for consolidation of the tailings impoundment.

Response: Proposed mitigation actions for Rock Creek and the East Fork Bull River were revised in the FEIS and no longer include the construction of instream habitat structures in either stream. Possible mitigation projects for impacts to bull trout were discussed in sections 2.5.7.3 and 3.6.4.3.6 of the FEIS, as well as in the BA (KNF 2013a). All mitigation projects would be evaluated for feasibility before being implemented. Proposed mitigation projects for these two streams include off-site mitigation in Copper Gulch to improve habitat, the identification and rectification of limiting factors in West Fork Rock Creek, and the eradication of non-native fish species in both Copper Gulch and the Rock Creek mainstem. The bull trout mitigation plan includes the development of a monitoring plan to determine the extent of impacts that occur to bull trout populations as a result of the project and to determine the success of the mitigation projects (KNF 2013a). This monitoring and the mitigation actions would be extended into the Closure and Post-Closure phases if necessary.

3260 Fish Passage and Loss: Suggested new information/analysis

334-12 In streams of this size and bed configuration, any depletion of base flow tends to produce proportionally large reductions in usable habitat area (see EES 2005), primarily because of loss of depth in shallow glides, pool tails, and pocket pools within riffles and rapids makes these areas less suited, or in some cases completely unsuitable, for juvenile, subadult, and adult bull trout foraging. In headwater streams many presently used habitats are at the margin of depth for suitability for bull trout. More formalized analysis of instream flow response, including possible PHABSIM analysis, would be needed to understand the biological magnitude of potential harm to bull trout. Simply because the percentage magnitude of sustained base flow loss is within the margin of interannual variability does not mean it can be tolerated by a fish population without substantial cumulative impact.

Response: The SDEIS did not state that if the percentage of baseflow loss was within the margin of interannual variability that there would be no impacts to the aquatic resources, but that such changes may be difficult to differentiate from interannual variation, which could initially cause uncertainty as to whether any observed changes in the fish populations are a response to natural variation or effects from the project. The BA conducted for bull trout (KNF 2013a) analyzed changes to habitat availability for juvenile, adult, and spawning bull trout that would be predicted to occur as a result of changes in water quantity. This analysis was based on PHABSIM model data from several USGS studies (Maret et al. 2005, 2006; Sutton and Morris 2004, 2005) that assessed habitat/discharge relations for bull trout in Idaho streams with a range of $7Q_{10}$ flows that encompassed the range of these flows in streams in the analysis area. Results of these analyses were included in Section 3.6.4.3.2 of the FEIS. Bull trout spawning habitat was most affected, decreasing up to 20 percent in Libby Creek upstream of the Water Treatment Plant discharges. Downstream of these discharges, spawning and other types of bull trout habitat availability would increase from 50 to 125 percent as the discharges increase low flows. Specific and cumulative impacts on bull trout, westslope cutthroat trout, and redband trout as a result of the action alternatives were discussed in the subsections labeled “Threatened and Endangered Species” and “Sensitive Species” in Section 3.6.4. Further discussion of cumulative impacts was included in the BA for bull trout (KNF 2013a). Mitigation projects were revised for the FEIS and detailed in the BA and sections 2.5.7.3 and 3.6.4.3.6. These projects, if successful, would offset impacts to bull trout as a result of the decreased habitat availability that would occur in some analysis area stream reaches.

3263 Fish Passage and Loss: Comment about analysis-mine

392-3 The Biological Assessment references existing stream habitat conditions in the EFBR. The amount of large woody debris and the number of pools was considered “Functioning Appropriately”, but the depth of pools was considered “Functioning at Risk” (page 38 and 39). However, Land and Water Consulting (2001) referenced “deep plunge pools” within this area (see below). Intended habitat surveys and fish habitat enhancement should be focused on habitat that is currently limited and habitat that will be impacted by reduced flows.

Response: Additional habitat surveys were completed in three reaches of the East Fork Bull River by MMC in 2012 to further characterize amounts of large woody debris, number of pools, quality of pools, and other habitat features (Kline and Savor 2012). These data are presented in Section 3.6.3.1 of the FEIS. The BA for bull trout was also updated and revised to incorporate the 2012 data (KNF 2013a). Large pool frequency and scour pool average width/maximum depth were categorized as “Functioning Appropriately” in this BA, as referenced in Section 3.6.3.12 of the FEIS, as was the amount of large woody debris. Pool frequency and quality was categorized as “Functioning at Risk”. The data from Land and Water (2001) was considered and referenced in the BA assessments.

3265 Fish Passage and Loss: Comment about effect-mine

389-8 Impacts to fish passage in Rock Creek are anticipated (SDEIS 3.6.4.10, pp 164). Such impacts are likely to affect bull trout passage and will make the bull trout more vulnerable to environmental changes. Projected climate change should be considered as a factor in anticipating such changes. Downstream from Saint Paul Lake, changes are also anticipated. The SDEIS contemplates that the cumulative effects of this project may cause long-term loss of genetic diversity to bull trout.

Response: The FEIS added additional text discussing the potential effects of climate change on surface water hydrology in Section 3.11.3.5 and Section 3.11.4.3.1. These sections cite studies that have determined that regional climactic changes in temperature and precipitation have occurred and are projected to continue to occur. As stated in this section, it was not possible to quantify the possible impacts of climate change due to the uncertainty and the range of effects on surface water hydrology that are possible. This uncertainty would also apply to any effects on ecological integrity. A discussion of the range of possible effects, including effects on bull trout from as a result of habitat fragmentation, and the uncertainty associated with predicting such effects, was added to Section 3.6.3.14 of the FEIS. The "Water Quantity" and "Fish Passage and Loss" subsections of Section 3.6.4 of the SDEIS and FEIS discuss the potential for increasing the length and persistence of the seasonally dewatered section at the mouth of Rock Creek under the action alternatives and the effect that this may have on limiting bull trout passage. The "Threatened and Endangered Species" subsections specifically discussed and disclosed the potential for long-term adverse effects on the bull trout population within the lower Clark Fork River drainage from the project alternatives. The proposed mitigation projects, as described in section 2.5.7 and 3.6.4.3.6, include creating or securing genetic reserves through bull trout transplanting or habitat restoration to protect existing bull trout populations in the Kootenai and Lower Clark Fork Core areas. These projects are described in more detail in the BA for bull trout conducted for the project (KNF 2013a).

3269 Fish Passage and Loss: Comment about mitigation-mine

141-5 The loss of 13,000' of aquatic habitat in Little Cherry Creek under alts 2 and 4 would be very poorly mitigated by the design of the Little Cherry Creek diversion channel. The diverted channel will be shorter and steeper. Not only will there be much less habitat available under any conditions, it will have a much higher stream gradient. MMC's survey of the unnamed tributary to Libby Creek that would receive diverted water (channel A) shows that most of the drainage would develop habitat comparable to Little Cherry Creek. This seems speculative. How long will this take?

Response: Alternative 3, the KNF's preferred alternative, does not include the construction of a Little Cherry Creek diversion channel and thus would not result in the loss of habitat in Little Cherry Creek. Additional discussion added to the SDEIS and FEIS Section 3.6.4.2.2 disclosed that the engineered diversion channel would not provide any fish habitat, and the two channels (Channels A and B, which were renamed Drainages 10 and 5, respectively) would eventually provide marginal habitat when the pumpback wells ceased operations. Kline Environmental Research, Inc. (2005) provided more details on the methods by which the habitat was assessed in the potential drainage diversion and the quality of the habitat predicted to develop in the various reaches of the diversion channel. No estimate is provided of the length of time over which this habitat would develop. Some habitat would be available immediately, but changes in the stream channel would continue to occur for many years after the initial diversion.

340-3 The fisheries mitigation plans presented in the alternatives section of the DEIS in section sections 2.4.6.2, section 2.5.7.2, and section 2.6.6.2 leave many questions as to future mitigation plans. No information is given as to the feasibility of mitigation measures, their potential cost and their duration and lifespan. Furthermore, the SDEIS assumes that instream habitat structures can mitigate for the loss of instream flow and boost population numbers of bull trout in the affected areas. There is no documented literature to support these claims.

392-3 It would not be desirable to impact stable stream banks and riparian areas with equipment in order to construct in-stream habitat structures. The effectiveness of hand built structures would be questionable given that the EFBR is considered a "flashy" drainage that is subject to the impact of high intensity rain-on-snow storm events. The SEIS should acknowledge these concerns and possible limitations.

Response: Proposed mitigation projects to account for impacts to bull trout and other aquatic resources were revised in the FEIS, as described in sections 2.5.7 and 3.4.6.3.6. As discussed in more detail in the BA for bull trout (KNF 2013a), mitigation projects no longer include the installation of in-stream habitat structures in the East Fork Bull River. Instead off-site mitigation in Copper Gulch has been proposed to account for impacts to bull trout populations in this stream. On-site mitigation in upper Libby Creek would potentially still include the installation of large formidable wood structures to improve riparian function

and habitat quality for the resident bull trout population within this reach. A feasibility and cost analysis would be conducted prior to initiation of this restoration (KNF 2013a). If this on-site mitigation in Libby Creek above the falls was not successful, various mitigation projects have been proposed in Flower Creek to offset any impacts to bull trout populations in this section of Libby Creek. Mitigation success of these and the other proposed projects would be verified through monitoring of these populations, and thus would not be based on any assumptions of their beneficial effects.

392-3 Chapter 3, page 150 states that "The agencies' proposed fisheries mitigation plan, discussed in Wetlands, other Waters of the US, and Fisheries Mitigation Plan in Chapter 2 (section 2.5.7.1.2), includes 13 possible stream enhancement or restoration projects, and riparian planting along seven streams or channels that would improve aquatic habitat." However, this section does not exist in the SDEIS. The proposed fisheries mitigation is described in Section 2.5.7.2 of the DEIS (page 129 and 130).

Response: As stated in Section 1.1 of the SDEIS, the reader should refer to the DEIS for components and activities not described in the SDEIS- only sections in which additional analyses and information were available were presented in the SDEIS. Thus, the reference to Section 2.5.7.1.2 was referring to the DEIS. The commenter is correct in indicating that the reference should have been to DEIS Section 2.5.7.2 rather than 2.5.7.1.2. Potential mitigation projects (and references to these projects) were revised in the FEIS, and are included in sections 2.4.6, 2.5.7.3, and 3.6.4.3.6. Further discussion of the proposed mitigation projects specific to bull trout mitigation was provided in the BA for bull trout (KNF 2013a).

392-4 It is difficult to conclude that the mitigation measures proposed (underground buffers, bulkheads and grouting, and a habitat inventory to direct construction of up to 60 habitat improvement structures in the EFBR) would offset all impacts and result in a net improvement of aquatic habitat in EFBR and Rock Creek. Proposed mitigation measures should provide benefits to native trout beyond the proposed loss of available habitat due to flow reduction. Ideally, flow augmentation to offset the calculated or measured reduction in base flow in the EFBR and Rock Creek could offset the need for habitat mitigation. Any efforts proposed in the final SEIS should also take into account existing efforts in the watershed to restore habitat for native salmonids and protect existing populations.

Response: Proposed mitigation projects to account for impacts to bull trout and other aquatic resources were revised in the FEIS, as described in sections 2.5.7 and 3.4.6.3.6. As described in more detail in the BA (KNF 2013a), mitigation projects no longer include the installation of in-stream habitat structures in the East Fork Bull River. Instead off-site mitigation in Copper Gulch has been proposed to account for impacts to bull trout populations in this stream. The identification of limiting factors for bull trout populations and the removal of brook trout from the Rock Creek mainstem were proposed as potential mitigation actions to offset impacts to bull trout populations in the Rock Creek drainage. These options would provide benefits to the bull trout populations within the Lower Clark Fork Core Area that go beyond accounting for the predicted loss of available habitat, and would complement the existing Avista efforts in the Rock Creek drainage. A feasibility analysis would be conducted prior to initiation of these projects, and the mitigation success of these and the other proposed projects would be verified through monitoring of the bull trout populations, and thus would not be based on any assumptions of their beneficial effects. Underground buffers and grouting were included in the agencies' mitigation, but were not assumed to offset all impacts or result in a net improvement of aquatic habitat. These structures and actions were intended to minimize low flow decreases to the extent practical. Water management in Alternatives 3 and 4 was modified to ensure senior water rights on Libby and Ramsey creeks would not be injured by streamflow reductions. Flow augmentation in the East Fork Bull River and East Fork Rock Creek was not technically feasible.

3280 TE&S Fish Species: Suggested new information/analysis

74-8 Nutrient changes to water quality, combined with changes to water quantity (both surface water and groundwater), and climate change suggest a significant threat to bull trout populations. Further exploration should be done.

Response: The BA (KNF 2013a) discussed the effects of changes in nutrient concentrations, other water quality parameters, and water quantity, and included additional analysis that estimated the impacts to bull

trout habitat availability as a result of changes in low flows. The BA concluded that potential impacts to bull trout populations and critical habitat from water quality changes, including nutrient concentrations, would be negligible. Impacts would occur to this species and its habitat as a result of decreased low flows in both east and west side streams in the analysis area. Proposed mitigation projects would offset these impacts if successful, and monitoring would be used to verify the beneficial impacts of these projects on bull trout populations and their habitat (KNF 2013a). The FEIS included a summary of the results of the additional analyses conducted for the BA in Section 3.6.4.3.2, and the proposed mitigation projects are discussed in sections 2.5.7.3 and 3.6.4.3.6. The SDEIS and FEIS also added additional discussion of the potential effects from changes in nutrient levels in Section 3.6.4.2.3. Quantifying the effect of the increased nutrients on algal growth or fisheries remains complicated based on site-specific factors in the project area streams such as total phosphorous concentrations, canopy cover, and high flow events. Under Alternatives 3 and 4, the Water Treatment Plant would be modified as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits and the LAD areas would not be used, decreasing the potential for increased algal growth and effects on aquatic life.

The potential project effects associated with climate change are described in section 3.6, *Aquatic Life and Fisheries*, section 3.10, *Groundwater Hydrology*, section 3.11, *Surface Water Hydrology*, and section 3.11, *Water Quality*. These sections cite studies that have determined that regional climactic changes in temperature and precipitation have occurred and are projected to continue to occur. However, as stated in the FEIS, it was not possible to quantify the possible impacts of climate change due to the uncertainty and the range of effects on surface water hydrology that are possible. This uncertainty would also apply to any effects on ecological integrity; however, a discussion of the mechanisms through which effects could occur and a range of possible effects on macroinvertebrate and fish populations, including bull trout populations, was added to Section 3.6 .3.14 of the FEIS.

335-8 The SDEIS doesn't provide information on the number of river miles or percent of EFBR effected under these seasonal conditions, but based on the map in Figure SS, it appears to be almost a third of the EFBR -- all of which is designated critical natural habitat. This should also be expressed as a range, due to the uncertainties and assumptions associated with calculating low flows.

Response: Estimated reductions in low flows with project alternatives were modeled for three additional sites in the FEIS, including a site each on Libby Creek, East Fork Bull River, and East Fork Rock Creek, and the changes in flow and aquatic habitat at these sites were presented in section 3.11.4 and 3.6.4. These additional sites were modeled to better characterize the length and area of these streams that would be affected by the reductions in low flows, and to provide further information on the effects on fish habitat and aquatic resources based on these reductions. The additional East Fork Bull River site was located within a reach near the Isabella Creek confluence where impacts to bull trout may occur, and provided further information on the range of effects that would occur over the length of this stream. Based on the BA for bull trout conducted for the project (KNF 2013a), the estimated maximum reductions in $7Q_{10}$ flows ranged from a 13 percent decrease near the CMW boundary to a 5 percent decrease near the mouth. Additional analysis included in the BA and discussed in Section 3.6.4.3.2 of the FEIS estimated changes in habitat availability for bull trout as a result of the flow changes. The largest decreases in habitat availability occurred near the CMW boundary for spawning bull trout. The uncertainty associated with calculating effects to low flows was discussed in Section 3.11.2.3.1, and the uncertainty and assumptions inherent in using the effects to low flows to address impacts to bull trout habitat availability were discussed in the BA (KNF 2013a) and in section 3.6.2.3.2. As noted in section 3.6.3.5.3, the presence of fish in the East Fork Bull River has been documented up to the Placer Creek confluence, indicating about 7 miles of fish habitat would be affected to varying extents in this stream. Fish populations may also exist in reaches further upstream or in Placer Creek, but no records of surveys conducted in these areas were located. Mitigation projects have been proposed to account for impacts to bull trout and critical habitat in the East Fork Bull River, as described in sections 2.5.7.3 and 3.6.3.6, as well as in the BA. If successful, these projects would offset any impacts. Success of the projects would be verified through monitoring data.

3283 TE&S Fish Species: Comment about analysis-mine

74-8 The DEIS states that any changes to dissolved toxic metals in the water will affect fish populations, and that changes to these levels are possible in East Fork Bull River because of potential gradients that may be created after mine closure. However, it claims that once water quality and quantity stabilize post-mine, bull trout are unlikely to be affected. It seems there is little basis for this assumption.

Response: Section 3.6.4.2.4 described the predicted effects of changes in metal concentrations on aquatic resources, and was revised in the SDEIS and FEIS based on the results of the 3D groundwater modeling conducted for the SDEIS. These revisions include the conclusion that the surface waters would likely have lower dissolved solids concentrations, with potentially lower metals concentrations, in East Fork Bull River and East Fork Rock Creek during all phases of mining. Section 3.13.4.2.3 of the SDEIS and FEIS stated that the discharge of mine void water predicted to occur into the East Fork Bull River during the Post-Closure Phase is unlikely to result in any detectable changes in water quality. As described in this section and in Appendix C.10, the monitoring plan includes collection of additional data to develop quantitative estimates which would be used to predict effects on water quality in the East Fork Bull River beginning in the Pre-Evaluation Phase. At steady state conditions, reductions in $7Q_{10}$ flows are estimated to be less than 1 percent at the CMW boundary and the mouth of the East Fork Bull River. Based on this, bull trout populations would likely not be affected at that time. However, the additional monitoring data collected would be used to provide more accurate data with which to assess potential impacts from changes in water quantity and water quality. Mitigation projects have been proposed to account for impacts to bull trout and critical habitat in the East Fork Bull River, as described in sections 2.5.7.3 and 3.6.3.6, as well as in the BA. If successful, these projects would offset any impacts. Success of the projects would be verified through monitoring data.

153-1 Page S-39, Fourth Paragraph: There are many unanswered questions and therefore concerns with flow reduction to EFBR and East Fork Rock Creek including quantity and duration of flow reductions and the linear distance of stream channel affected. These two streams represent the stronghold for bull trout in the Cabinet Gorge Reservoir reach of the lower Clark Fork River and are currently impacted by intermittency (Rock Creek), and late summer temperatures in the lower reach that exceeds optimum water temperatures for bull trout rearing (EFBR). Based upon ten years of practical field experience in both the EFBR and Rock Creek, any reduction to base streamflow would exacerbate these existing physical conditions. Additionally, unforeseen impacts such as a further loss of connectivity for returning bull trout adults, loss of available but presently limited spawning habitat, and potential changes to physical habitat that would favor non-native fish species in both streams are very likely to occur due to flow reductions. Possibly the project proponent could be required, if stream flow impacts are greater than expected, to augment stream flow.

Response: The summary paragraph referenced by the commenter was not included in the SDEIS and FEIS. The effects of the reduced flows on aquatic habitat for bull trout during the low flow period of the year in the East Fork Bull River and East Fork Rock Creek were discussed in the "Water Quantity" and "Threatened and Endangered Species" subsections of Section 3.6.4 in the SDEIS, and these sections were updated to include additional analyses and discussion in the FEIS. A more detailed assessment of the potential effects of decreased flow on stream temperatures was also added to the FEIS in the "Temperature" and "Water Quality" subsections. As summarized in the FEIS in Section 3.6.4.3.6, the BA determined that potential impacts to trout populations in the East Fork Bull River, East Fork Rock Creek, and other analysis area streams may occur from temperature changes, but the extent and magnitude of the impact was uncertain based on the many factors that can affect stream temperatures and the constantly changing stream temperature regime that occurs. Potential impacts to bull trout due to benefits occurring to non-native fish species was also evaluated and considered possible. Brook trout and other non-natives could benefit from the reduced sediment delivery to analysis area streams, as would bull trout. If non-native species benefit from this or other effects of the project, they could present an increased risk of hybridization or competition with bull trout.

Additional analyses completed for the FEIS included modeling reduction in low flows for an additional site on both East Fork Rock Creek and the East Fork Bull River to provide estimates of the magnitude of the

streamflow decreases under Alternative 3 at these locations. The reaches modeled were located in areas used by bull trout for spawning, and helped further designate the length and extent of stream potentially affected by the project. The changes in flow estimated to occur at all sites for which modeling data were provided were then used to predict changes in habitat availability for juvenile, adult, and spawning bull trout, as described in detail in the BA (KNF 2013a). Results of these analyses were provided in Section 3.6.4.3.6 of the FEIS. In East Fork Rock Creek and the East Fork Bull River, the maximum decreases in habitat availability were predicted to occur in the Closure and Post-Closure phases, and ranged from a two percent reduction in all types of habitat availability for bull trout in the East Fork Bull River at the mouth to a 13 percent reduction in habitat availability for spawning bull trout in this stream near the CMW boundary.

Adverse impacts to bull trout populations and critical habitat from decreased low flows was considered likely to occur in both east and west side streams. The intermittent flows that currently exist seasonally at the mouth of Rock Creek could also occur more frequently and over a greater extent of Rock Creek as a result of the reductions in flow, which could limit access of migratory bull trout. It may also limit brook trout access in Rock Creek, which could be beneficial to bull trout populations through decreasing the risk of hybridization and competition between the two species. The proposed bull trout mitigation projects in Copper Gulch, West Fork Rock Creek, and the Rock Creek mainstem would mitigate these impacts if successful. Success of the mitigation actions would be determined by further monitoring. Elimination of non-native species was included as an option in some mitigation projects. Flow augmentation in the East Fork Bull River and East Fork Rock Creek was not technically feasible. The fisheries mitigation plan was designed to mitigate streamflow effects.

310-14 The Montanore SDEIS fails to disclose and analyze the cumulative impacts of the Rock Creek mine combined with adverse impacts from the Montanore project on bull trout and other native fish.

Response: The cumulative effects of the Rock Creek Project and the Montanore Project on aquatic habitat were addressed in the SDEIS and FEIS in Section 3.6.4.10, with discussion of impacts to bull trout populations in Rock Creek and the East Fork Bull River. Streamflow and aquatic resources in eastside streams would not be affected by the Rock Creek project, and so thus are not included in the cumulative analysis for both projects. The SDEIS and FEIS discussion included disclosure of the effects of the increased intermittency in Rock Creek that would be likely to occur when both projects were implemented, and the consequential effects to fish passage. It also included disclosure of the additional loss of habitat for bull trout and other fish predicted to occur in both streams if both projects were implemented in comparison to only the Montanore Project being implemented. Additional decreases in low flows would be estimated to occur as a result of the cumulative impacts, with low flows in Rock Creek and the East Fork Bull River at the mouth decreasing by an additional 0.03 cfs, and low flows in the East Fork Bull River at the CMW boundary decreasing by an additional 0.08 cfs.

335-8 The SDEIS fails to provide sufficient analysis of the impacts to threatened bull trout, the effectiveness of mitigation, and how the proposed activities will comply with the Endangered Species Act and Montana's bull trout recovery efforts.

335-9 How will the long term impacts of reduced flows in the upper EFBR effect spawning, the long-term viability of the EFBR bull trout population, and the long-term viability of the lower Clark Fork River watershed? Is there anyway to mitigate the impacts? How does the project comply with the USFS' duty to "maintain and protect fisheries and wildlife habitat which may be affected by the operations." 36 CFR 228.8(e).

Response: In-depth discussion of the effects on bull trout and their critical habitat from the alternatives are presented in sections 3.6.4.2.7, 3.6.4.3.6, and 3.6.4.4.6 of the SDEIS and were updated in the FEIS with the results of additional analyses. The updated sections contain a summary of the analyses and conclusions presented in the BA for bull trout (KNF 2013a), including additional analysis and modeling data prepared for the FEIS that estimates changes in habitat availability for juvenile, adult, and spawning bull trout as a result of project alternatives. The BA and FEIS disclose that adverse impacts to bull trout populations in the

Kootenai and Lower Clark Fork Core areas are expected to occur with the project without mitigation, mainly through the decreased streamflow during the low flow period of the year. Impacts to spawning habitat availability in analysis area streams ranged from a decrease of 13 percent in the East Fork Bull River near the CMW boundary to an increase of 125 percent in Libby Creek downstream of the Water Treatment Plant discharges. Potential mitigation projects were revised for the FEIS and presented in sections 2.5.7.3 and 3.6.4.3.6. Further details on the possible mitigation options were provided in the BA. The various mitigation options included on-site and off-site mitigation in which genetic reserves for bull trout populations were created or secured, factors limiting bull trout populations were identified and rectified, or non-native fish eradication methods were employed. If successful, these mitigation projects would offset the impacts to bull trout and their critical habitat and be beneficial to bull trout populations within the affected core areas. The effectiveness of the mitigation would be assessed through monitoring.

Compliance with the Endangered Species Act was discussed in Section 3.6.4.11.1 of the SDEIS and FEIS. For all alternatives, ESA compliance would be ensured through Section 7 consultation. The KNF submitted a BA to the USFWS that describes the potential effect on threatened and endangered species that may be present in the area (KNF 2013a). Implementation of the proposed development of the Montanore Project may affect, and is likely to adversely affect threatened bull trout, may affect, and is likely to adversely affect designated bull trout critical habitat, and would have no effect on endangered white sturgeon. After review of the BA and consultation, the USFWS issued a Biological Opinion for the proposed Montanore Project, as required under the Endangered Species Act. In its 2014 Biological Opinion on the bull trout, the USFWS indicated that it was the USFWS' Biological Opinion that the project as proposed in the KNF's preferred Mine Alternative 3 and the agencies' preferred Transmission Line Alternative D-R is not likely to jeopardize the bull trout, and is not likely to destroy or adversely modify bull trout critical habitat (USFWS 2014c). The Biological Opinion contained terms and conditions that implement the reasonable and prudent measures.

FEIS and DEIS Section 3.2.3.2 describe the Avista-funded bull trout recovery activities in Montana, and the SDEIS and FEIS discussed the AVISTA fish passage program in Section 3.6.4.10 as part of the cumulative effects on bull trout in the analysis area.

335-10 A statement is made under Effects to Critical Habitat that "reduced flows would affect designated bull trout critical habitat with direct effects to springs, seeps, groundwater sources, and subsurface water connectivity...such that normal reproduction, growth, survival are NOT inhibited." (emphasis added) (p. 152)

Response: The statement was corrected in the FEIS to state that "normal reproduction, growth, and survival would be inhibited".

335-21 How will the degradation limits authorized in the BHES affect threatened and endangered species or sensitive species, given the sensitivity of salmonids to even very small increases in copper?

Response: Concentrations of copper are projected to increase above the BHES Order non-degradation limits in Ramsey Creek with the land application treatments during closure and post-closure phases under Alternative 2 after mixing. However, with Alternatives 3 and 4, land application treatments would not occur, and any excess water would be treated at the Water Treatment Plant and discharged at existing permitted outfalls. The Water Treatment Plant in these alternative may be modified as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits. Discharges would meet water quality standards or BHES limits at the end of the mixing zone in Libby Creek. Section 3.6.4.2.4 of the SDEIS and FEIS discussed the difficulties associated with predicted effects to fish and other aquatic life in Libby Creek as a result of increases in copper concentrations based on uncertainty regarding the protectiveness of hardness-modified copper standard and existing instream copper concentrations. This section was revised in the FEIS to include a discussion of the sensitivity of salmonids to copper.

392-2 Avista appreciates the careful attention given to the EFBR and Rock Creek drainages, both in terms of hydrology and fish populations. We suggest that the discussion of impacts in Chapter 3 be

amended to note that reductions in base flow from the mine will not only impact access to Rock Creek for spawning bull trout later in the migration season, but will also impact overwintering juvenile bull trout and westslope cutthroat trout. Interstitial space in the substrate with enough water depth to prevent total freezing provides critical overwintering habitat for both juvenile bull trout and westslope cutthroat trout.

Response: Additional text was added to Section 3.6.4.3.6 to clarify that impacts to bull trout and other fish populations from the decreased low flows predicted to occur as a result of the project were not limited to summer and fall months, but that the decreases in flow could persist through the winter months and also decrease winter survival due to decreased water depths and flows.

3284 TE&S Fish Species: Comment about baseline data

335-9 Is there baseline data for all potentially effected bull trout streams?

Response: Baseline data describing fish species abundance or densities were presented in Section 3.6.3.5 of the DEIS and FEIS for all analysis area streams. Multiple fish population surveys were completed on many of the streams. Surveys on some streams also provided data on fish genetics and spawning activity. This section was updated in the FEIS to include the results of more recent fish surveys conducted in analysis area streams by FWP, MMC, Avista, and others.

3285 TE&S Fish Species: Comment about effect-mine

195-1 The Draft EIS indicates that the proposed mine will intercept ground water in the region, and divert it into the mine's underground tunnels. Streams and lakes that rely on this groundwater will suffer the consequences, including overlying alpine lakes within the Cabinet Mountain Wilderness that are designated Outstanding Natural Resource waters. To make matters even worse, the Draft EIS predicts at least 25 gallons per minute (13 million gallons per year) of wastewater will leak from the tailings impoundment – perhaps in perpetuity. The Cabinet Mountains Wilderness Area is one of the first ten Wilderness Areas established by Congress recognized by President Theodore Roosevelt for its outstanding scenic grandeur. It provides a vital source of cold clear water for important bull trout populations and downstream communities.

Response: Under the Montana Water Quality Act, no authorization to degrade may be obtained for outstanding resource waters, such as surface waters within a wilderness, as stated in section 3.11.1.1.1. Current nondegradation rules provide that if an activity increases or decreases the mean monthly flow of a stream by less than 15 percent or $7Q_{10}$ low flow of a stream by less than 10 percent such changes are not significant for purposes of the statute prohibiting degradation of state waters. Section 3.13.1.1.1 of the SDEIS and FEIS disclosed that for parameters not covered by the BHES authorization to degrade (including flow), the applicable nonsignificance criteria established by Montana's 1994 nondegradation rules would apply, unless MMC obtains an authorization to degrade under current statute. Information for outstanding resource waters such as those in the CMW for surface water hydrology and water quality was provided in Sections 3.11.1 and 3.13.1 of the SDEIS and FEIS. .

Decreases in the amount of available aquatic habitat would occur during the low flow period of the year under all alternatives in the East Fork Rock Creek, East Fork Bull River, and Libby Creek watershed, including in areas within the CMW, as disclosed in the "Water Quantity" subsections of 3.6.4 of the DEIS and SDEIS. This section was updated in the FEIS to reflect additional analyses conducted for the project and the BA (KNF 2013a). This reduction in habitat would adversely affect bull trout and other salmonid populations within these streams, as well as affecting macroinvertebrate assemblages.

In most analysis area streams, bull trout populations do not occur in the reaches within the CMW, although impacts to the macroinvertebrate populations in these CMW reaches could affect downstream fish populations. Effects to low flows would decrease downstream in the bull trout inhabited reaches but are still substantial in some stream reaches within the analysis area. The FEIS included results from analyses conducted for the BA (KNF 2013a) that quantified changes in habitat availability for spawning, juvenile, and adult bull trout as a result of the decreased flows. As discussed in the BA and the "Threatened and Endangered Species" subsection of section 3.6.4 of the FEIS, bull trout populations and their habitat would be adversely impacted by the project without mitigation through the changes to low flows.

The proposed bull trout mitigation projects were revised for the FEIS and would mitigate these impacts if successful. These projects are presented in sections 2.5.7.3 and 3.6.4.3.6, and are discussed in more detail in the BA (KNF 2013a). Success of the mitigation projects would be determined by further monitoring, and the value of the projects would be confirmed to ensure that the beneficial effects of the project exceed and precede documented and predicted impacts for each Core Area. While these projects are aimed specifically at benefitting bull trout populations, some aspects of the projects would also likely benefit westslope cutthroat trout and other aquatic populations as well. Additionally, sediment delivery from roads to analysis area streams would be predicted to decrease under the alternatives compared to existing conditions over the long-term, which would result in beneficial effects on bull trout, westslope cutthroat trout, and other fish populations.

200-2 The East Fork of Bull River is the most important bull trout stream in the lower Clark Fork River drainage. Dewatering would reduce bull trout spawning within this stream and could have long-term adverse effects on the bull trout population within the lower Clark Fork River drainage.

Response: The "Water Quantity" and "Threatened and Endangered Species" subsection of Sections 3.6.4 of the SDEIS and FEIS disclose that long-term adverse effects on the bull trout population within the Lower Clark Fork River drainage are likely without mitigation in all alternatives. Additional analyses included in the BA for bull trout (KNF 2013a) evaluated the relationship between low flows and spawning habitat availability, and estimated that the maximum decreases in spawning habitat availability that would occur in the East Fork Rock Creek and the East Fork Bull River ranged from two percent at the mouth of the East Fork Bull River to 13 percent in the East Fork Bull River near the CMW boundary. Results of these analyses were included in the cited subsections of the FEIS. The proposed mitigation options were revised in the FEIS, and include potential projects in Copper Gulch, West Fork Rock Creek, and the mainstem Rock Creek to offset impacts in the lower Clark Fork River drainage. These projects are described in sections 2.5.7.3 and 3.6.4.3.6 of the FEIS, and further details are given in the BA. If successful, these mitigation projects would offset impacts to the bull trout populations and critical habitat in the lower Clark Fork River drainage. The success of the projects would be evaluated through monitoring.

200-3 Dewatering from Montanore also would impact a population of pure westslope cutthroat trout in Rock Creek and Bull River. A forest sensitive species and species of special concern, the agency has a responsibility to protect this species. The intent of classifying the westslope cutthroat trout as a forest sensitive species is to keep it from being listed under ESA as a result of USFS actions. How is permitting a project that threatens their habitat consistent with these protections? With the genetically pure westslope cutthroat trout now occupying only 2-4% of its historic stream distribution, what impacts will the Montanore project have on the agencies responsibility to maintain a viable population of westslope cutthroat trout?

202-15 A pure strain of westslope cutthroat trout exists in the East Fork of Rock Creek. As a forest sensitive species and a species of special concern, the Montanore project would likely push the westslope cutthroat trout toward protective status due to impacts in the East Fork of Rock Creek and Bull River. It is the responsibility of the agencies to protect the westslope cutthroat trout. The habitat of the westslope cutthroat trout should be protected from the perpetual dewatering impacts that would be a consequence of the Montanore Mine.

331-6 The SDEIS claims that dewatering would not cause a trend toward federal listing and that the primary risk to the species is hybridization. Yet, the EFBR contains a pure strain of Westslope cutthroat. How can the complete loss of base flow in a stream that supports a non-hybridized population not threaten this species?

Response: As disclosed in the "Water Quantity" and "Forest Service Sensitive Species" subsections of the SDEIS and FEIS, westslope cutthroat populations would be adversely impacted through decreased habitat availability in the East Fork Bull River and Rock Creek drainages with all action alternatives as a result of the decreased flows during the low flow period of the year. Other effects associated with the project, such as changes to stream temperature, also have the potential to adversely affect these populations. While the habitat availability analysis conducted for the BA and FEIS was specific to bull trout, the effect of

decreased low flows on westslope cutthroat trout populations was evaluated qualitatively and would be similar in many respects to the effects on bull trout. Spawning habitat would not be as affected with westslope cutthroat trout as bull trout, as cutthroat trout spawn in the spring when flows would not be substantially altered. Additionally, abundance of westslope cutthroat trout is higher than bull trout. The FEIS discloses that adverse effects would occur to this species as a result of the Montanore project, mainly based on the substantial low flow reductions, but the lack of sizable impacts to spawning habitat availability combined with higher abundances suggests that effects would not likely be substantial enough to cause a trend toward federal listing. Hybridization and competition with nonnative trout would continue to be large risks to these populations, particularly in the Rock Creek drainage where hybrid trout have been documented to occur in the upstream reaches near Rock Creek Meadows. There are no barriers to downstream movement between the reach inhabited by hybrid trout and the reach inhabited by pure cutthroat trout near the mouth.

200-5 Land applied wastewater would contaminate surface waters in Ramsey and Poorman Creeks as there is an established hydrological connection between the groundwater beneath the two LAD areas and Poorman and Ramsey Creeks. This will result in impacts to these streams, which provide habitat for the threatened bull trout and a population of pure redband trout, a forest sensitive species and a species of special concern.

Response: The changes in water quality and potential effects of this on these trout populations under Alternative 2 were discussed in Sections 3.6.4.2.4. If concentrations of metals in groundwater were greater than BHES Order limits, the amount of water discharged to the LAD areas would be decreased and the additional water would be sent to the Water Treatment Plant. Alternative 3, the KNF's preferred mine alternative, and Alternative 4 do not include land applied wastewater and would therefore not result in impacts to bull trout or redband trout populations in analysis area streams through this route.

200-7 The tailings impoundment proposal also includes discharging tailings into Little Cherry Creek, a perennial tributary to Libby Creek. (DEIS Vol. l, Page 199) The fill would result in the relocation of Little Cherry Creek and would permanently destroy 13,000 feet of aquatic habitat for fish, including interior redband trout. (DElS, Summary, Page 39). The presence of sensitive and threatened fish species habitat should preclude any discharge of tailings into the Libby Creek drainage. The size of the tailing impoundment should be reduced in order to eliminate the impacts to Little Cherry Creek and Libby Creek. The filling and diversion of a major stream in order to accommodate the volume of tailings should not be approved.

202-15 Little Cherry Creek is a perennial stream that would be diverted to accommodate the tailings. Little Cherry Creek would lose 13,000 feet of habitat for the population of pure redband trout, yet the DEIS claims that the impacts would be minimal. The redband trout is a forest sensitive species and a Montana species of special concern. These designations warrant the species special protection. Little Cherry Creek would be diverted permanently around the tailings impoundment, resulting in a loss of 13,000 feet of aquatic habitat in the existing Little Cherry Creek. (DEIS, Summary, Page 39)

Response: As discussed in Section 3.6.4.3 of the SDEIS and FEIS, Alternative 3 provides a plan that does not include the construction of a tailings impoundment on Little Cherry Creek, and as such would eliminate the impacts from such construction on Little Cherry Creek and would not result in the destruction of 13,000 feet of the habitat that currently exists. Alternative 4 would include the Little Cherry Creek tailings impoundment as in Alternative 2, but effects to aquatic habitat and redband trout populations in Little Cherry Creek would be less than with Alternative 2. The potential impacts to the redband trout populations under alternatives 2 and 4 are disclosed in sections 3.6.4.2.8 and 3.6.4.3.7.

202-16 The East Fork Bull River is the primary source for bull trout in the lower Clark Fork River Drainage, and should be afforded the highest level of protection by the agencies. The impacts to the bull trout in the East Fork would be from 70 years of mine induced dewatering and an untreated perpetual drainage from the mine void. The fisheries would be exposed to and impacted by metals leaching, acid mine drainage, and nutrients from the mine void. When water quality problems develop in the East Fork of Bull River from mining, stopping the flow from the mine void will not be possible.

Response: Decreased low flows would adversely affect bull trout populations though the decreased habitat availability as disclosed in the SDEIS and FEIS in sections 3.6.4.3.2 and 3.6.4.3.6. Effects to the bull trout populations within the East Fork Bull River as a result of water quality issues from the alternatives were determined to be negligible in the BA (KNF 2013a). Waters in the west-side streams such as the East Fork Bull River may have lower dissolved solids concentrations, as the mine void filled but this would not likely affect fish populations. While adits would be plugged during the Closure Phase, water is predicted to continue to flow toward the mine void in much of the Post-Closure phase for hundreds of years as it fills. Only after the groundwater table recovers would mine void water possibly flow toward the East Fork Bull River. Water quality changes in the East Fork Bull River or East Fork Rock Creek as a result of these discharges are unlikely to be detectable or adverse, as described in Section 3.13.4.2.3. While some uncertainty exists as to effects due to lack of information from the underground setting, the commenter's prediction that fish populations would be impacted by metals leaching, acid mine drainage, and nutrients from the mine void would be unlikely to occur. As discussed in this section, cadmium, lead, and copper minerals probably exist within the bedrock fractures at low concentrations, but are unlikely to be soluble. As part of the monitoring program discussed in Appendix C, the chemistry of the underground workings would be monitored by MMC, and the downgradient groundwater flow and chemistry within the bedrock fracture systems will also be monitored.

309-3 It could result in dewatering that would impact, in addition to bull trout, westslope cutthroat and redband trout.

Response: As disclosed in the SDEIS and FEIS, bull trout, westslope cutthroat trout, and redband trout populations would be adversely affected in some stream reaches in the analysis area, mainly through the reduction in habitat availability that would occur as a result of mine dewatering. The effects of changes in water quantity as a result of project alternatives on fish habitat and populations were discussed in "Water Quantity" subsections in Section 3.6.4 of the SDEIS and FEIS. Revisions to these subsections based on data from additional 3D modeling sites and analyses conducted for the BA (KNF 2013a) were included in the FEIS. The specific effects to bull trout, westslope cutthroat trout, and redband trout are discussed in the "Threatened and Endangered Species" and "Sensitive Species" subsections of Section 3.6.4, with further discussion specific to potential effects on bull trout included in the BA. As disclosed in these sections, bull trout populations and their habitat in East Fork Rock Creek, Rock Creek, and East Fork Rock Creek would be adversely affected under all alternatives. Bull trout populations in Libby Creek and Bear Creek could also be affected adversely by the project alternatives, although increase in flows in Libby Creek though discharges from the Water Treatment Plant in some phases would increase spawning habitat and could have a beneficial effect in some reaches.

Westslope cutthroat trout populations in the westside streams may also be adversely affected through decreases in habitat availability that occur as a result of changes in low flows, although the higher numbers of these trout and time of year in which they spawn would suggest that they would be at less risk than bull trout populations under all alternatives. Alternatives 2 and 4 would adversely affect redband trout populations through the loss of habitat that would occur with the construction of the tailings impoundment in the Little Cherry Creek drainage. Redband trout populations would be less affected under Alternative 3, and the increase in low flows during the Post-Closure Phase that is expected under this alternative could be beneficial in the long-term to redband trout populations in Little Cherry Creek.

The proposed mitigation projects were revised in the FEIS and are described in sections 2.5.7 and 3.6.4.3.6. The USFWS' terms and conditions in the bull trout Biological Opinion would offset impacts to bull trout populations in the Kootenai and Lower Clark Fork Core areas. While much of the proposed mitigation is specifically aimed at offsetting or avoiding impacts to bull trout, the options that include stream habitat restoration and elimination of non-native species would also benefit redband trout and westslope cutthroat trout in those areas where they are present.

310-11 However, decreases in flow during operations in Libby and other creeks may be substantial enough to adversely affect bull trout critical habitat. Increased nutrient and metal concentrations may also

affect the critical habitat in Libby Creek. The pumpback well system would reduce flows and bull trout critical habitat in Bear Creek as long as it operated.

310-11 All mine alternatives would affect bull trout critical habitat in both the Clark Fork River and Kootenai River drainages.

311-2 Reduced streamflow would likely result from mine operations. How is this consistent with the designation of Libby Creek as critical bull trout habitat?

342-18 Reduced streamflow would likely result from mine operations. How is this consistent with the designation of Libby Creek as critical bull trout habitat?

Response: The critical habitat designation does not necessarily indicate that no further development can occur in these watersheds, but instead indicates that consultation between federal agencies is required to determine if this development will adversely modify the habitat to the point that it will no longer aid in the species recovery. The SDEIS and FEIS disclosed the adverse impacts that would occur to bull trout critical habitat under all project alternatives in Libby Creek, East Fork Rock Creek, and the East Fork Bull River in the "Threatened and Endangered Species" subsections of Section 3.6.4. Additionally, these impacts are discussed further in the BA for bull trout (KNF 2013a). Most effects to critical habitat would be through the decreases in water quantity expected to occur in some reaches of analysis area streams; however, flows would increase in Libby Creek downstream of the Water Treatment Plant and may improve the quality and quantity of the critical habitat within this reach. The critical habitat reaches of Libby Creek upstream of the plant would be impacted by the decreased low flows. The general effects of changes in water quantity as a result of project alternatives on fish habitat and populations was discussed in "Water Quantity" subsections in Section 3.6.4 of the SDEIS and FEIS, and the FEIS was updated with the results of additional modeling and the BA analysis.

Under Alternatives 3 and 4, LAD areas would not be used, and all water would be treated at the Water Treatment Plant before being discharged. Additionally, the plant would be modified as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits in these alternatives. Based on this treatment, impacts to critical habitat under Alternatives 3 and 4 would be negligible from increased nutrients or metals concentrations.

312-1 Bear Creek happens to be the most important tributary for Bull Trout in the Libby Creek drainage. The SDEIS also indicates that reduction in flow of East Fork Rock Creek and Rock Creek would reduce habitat and be "detrimental" to westslope cutthroat trout populations and further exacerbate the problem with migratory Bull Trout passage in Rock Creek. Reduced flow can have exceedingly detrimental effects on Bull Trout through the potential to increase water temperature (Bull Trout being a very thermal sensitive species), impede migration, reduce pool habitat and increase sedimentation of interstitial spaces in gravels required for embryo survival and juvenile habitat. The SDEIS indicates that operations phase will last approximately 16 years. The actions of Alternative 2 have the potential to essentially create a 16 year drought condition in some of the Kootenai and Clark Fork drainage's most fragile and vital Bull Trout spawning and rearing streams. Furthermore, reduced flow is a problem that cannot be mitigated for on-site. Lack of water in a stream cannot be solved without putting the water back in the stream. Therefore, attempted mitigation for this problem of reduced flow will not remedy the problem itself where it exists.

Response: Bull trout populations and habitat in Bear Creek could be affected by reduced flows under Alternative 2, but would not be affected under alternatives 3 and 4. Impacts to bull trout populations in most analyses area streams would be less under alternatives 3 and 4, but would still occur, mainly as a result of the decreases in low flows predicted to occur with the project. The effects of the reduced flows on aquatic habitat for bull trout and westslope cutthroat in the East Fork Bull River were included in the "Water Quantity", "Threatened and Endangered Species", and "Forest Service Sensitive Species" subsections of Section 3.6.4 of the SDEIS, and were updated with additional data and analyses for the FEIS. A more detailed discussion of the potential effects of decreased flow on stream temperatures was also added to the FEIS in the "Temperature" and "Water Quality" subsections of Section 3.6.4. The effect of the project on bull trout due to possible changes in stream temperatures was uncertain because many

factors affect stream temperatures in addition to the amount of flow, as discussed in these sections and the BA (KNP 2013a). See prior discussion of temperature on p. **Error! Bookmark not defined.**.

The 3D modeling analysis results were expanded to include predictions of the reductions in low flow that would occur within an additional reach of East Fork Bull River and East Fork Rock Creek that is used by both westslope cutthroat trout and bull trout. Bull trout spawning has been documented in this reach. The reductions in flow predicted to occur using the model results for the low flow period of the year under Alternative 3 were used to estimate corresponding decreases in habitat availability for adult, juvenile, and spawning bull trout in the East Fork Bull River and other analysis area streams. While the habitat availability analysis focused on effects to bull trout, the effects to westslope cutthroat trout populations from these reductions in flow were qualitatively assessed as well. Results of these updated analyses are included in cited sections of the FEIS. The streamflow reductions would be likely to have an adverse impact on bull trout populations through reduced habit availability within the Lower Clark Fork and Kootenai Core areas. While impacts to westslope cutthroat trout would be possible with the action alternatives, these trout are present in higher densities within these streams than bull trout, particularly in the East Fork Bull River, and would thus be less likely to be adversely impacted. Additionally, these fish spawn in the spring, when the changes in flow would not reduce habitat availability.

The proposed bull trout mitigation projects were revised for the FEIS and would mitigate these impacts if successful. These projects are presented in sections 2.5.7.3 and 3.6.4.3.6, and are discussed in more detail in the BA (KNF 2013a). Possible mitigation options include creating or securing genetic reserves through bull trout habitat restoration and transplanting activities, identifying and rectifying factors limiting bull trout populations, and eradicating of non-native fish species. Mitigation projects are proposed both off-site and on-site, and are expecting to result in beneficial effects to the bull trout populations in the Kootenai and Lower Clark Fork Core areas without putting the water back in the stream by improving habitat, reducing hybridization risk, reducing competition, and protecting existing bull trout populations from catastrophic events. Success of the mitigation projects would be determined by further monitoring, and the value of the projects would be confirmed to ensure that the beneficial effects of the project exceed and precede documented and predicted impacts for each Core Area. While these projects are aimed specifically at benefitting bull trout populations, some aspects of the projects would also be expected to benefit westslope cutthroat trout and other fish populations as well. Additionally, sediment delivery to analysis area streams would be predicted to decrease under the alternatives compared to existing conditions over the long-term, which would result in beneficial effects on bull trout, westslope cutthroat trout, and other fish populations.

327-12 Predicted levels in the base flow of upper Rock Creek and the east fork of the Bull River, spawning grounds for threatened bull trout, would be 100%, according to the document (p. 250). Partial recovery of water flow in these waterways would take more than 1,000 years. Bull trout populations would not survive, period.

331-4 It is predicted that the dewatering of the East Fork of Bull River would be a 17% (EFBR-300) reduction in base flows at the end of operations. During the closure and post closure phases, it is anticipated that the EFBR, with the principal and most productive local population of bull trout in the core area, would lose 100% (EFBR-300) of base flow. The SDEIS predicts that by the year 3211, the stream will have recovered. Yet even well into the next millennium, the stream will never be fully restored to its pre-mining condition, suffering a perpetual loss of an estimated 7% base flow. Dewatering will begin to extirpate fish from the tributary, including bull trout, shortly after the mine begins production and the diversion of groundwater begins (Tables 87,88,89, pages 246, 247, 249).

Response: The first commenter was presumed to mean that predicted levels in the base flow of upper Rock Creek and the East Fork Bull River would be decreased by 100 percent. The findings of the analyses and review of data conducted for the SDEIS and FEIS disagree with the first commenter's conclusion that bull trout populations would not survive in these two streams, but agree that the flow reductions are expected to have adverse and long-term effects on bull trout and their spawning grounds without mitigation, as disclosed in sections 3.6.4.2.7, 3.6.4.3.6, and 3.6.4.4.6. As stated in Section 3.10.4.3.2, the maximum low flow changes that would occur during the post-closure phase (which was the phase the commenter was

referring to from p.250) would occur in the upstream reaches of East Fork Rock Creek and East Fork Bull River, with lessening changes in flow occurring further downstream. Bull trout do not inhabit the extreme upstream reaches of these streams.

Additional modeling results were provided in 2012 and presented in the FEIS that estimated the change in low flows that would occur in the East Fork Rock Creek reach upstream of the confluence with West Fork Rock Creek and in the East Fork Bull River near the Isabella Creek confluence. Both of these reaches were chosen for the additional modeling based on their utilization by bull trout, and these results indicate that the percentage of decrease in low flows estimated within these reaches was lower than at the reaches modeled further upstream. Low flows would be reduced by a maximum of 9 percent at the Rock Creek site (RC-3) and 26 percent at the East Fork Bull River site (EFBR-2). Available habitat for bull trout would be substantially reduced by the changes in low flows during portions of the year, but would not be eliminated, as discussed in the "Water Quantity" subsections of Section 3.6.4 of the FEIS and in the BA (KNF 2013a). The permanent reduction in baseflow of 7 percent and 25 percent at EFBR-300 and EFRC-50, respectively, as well as the lesser reductions downstream, were disclosed in Section 3.6.4.13 to potentially result in an irretrievable and irreversible commitment that would be detrimental to bull trout populations. The proposed bull trout mitigation projects were revised for the FEIS and would mitigate these impacts if successful. These projects are presented in sections 2.5.7.3 and 3.6.4.3.6, and are discussed in more detail in the BA (KNF 2013a). Possible mitigation options include creating or securing genetic reserves through bull trout habitat restoration and transplanting activities, identifying and rectifying factors limiting bull trout populations, and eradicating of non-native fish species.

328-5 The efforts of the Avista recovery program would themselves be negated if this project moves forward as proposed. Millions of dollars that have been committed to bull trout recovery would be wasted if two of the major bull trout streams on the west side of the Cabinets were compromised for decades or more by dewatering. If dewatered portions of Rock Creek become longer, or are dewatered for a longer period of time, fewer bull trout may be able to access the upper reaches for spawning.

Response: An update of the efforts of the Avista recovery program was added to Section 3.6.3.5.2 of the FEIS, and a discussion of the Avista program was included in the evaluation of cumulative effects in Section 3.6.4.10 of the FEIS. Sections 3.6.4.2.7, 3.6.4.3.6, and 3.6.4.4.6 disclose the predicted effects to bull trout and their habitat in the SDEIS and FEIS, including the potential that the seasonally dewatered reach in Rock Creek may increase in length or persistence with the project and thus limit fish passage. If this occurs, fewer migratory bull trout would have access to the Rock Creek drainage; this would potentially also limit brook trout access to this stream, which would decrease the risk of hybridization and competition of this species with bull trout. While migratory bull trout have been documented in the Rock Creek drainage, they have limited access under current conditions. The potential mitigation projects were revised for the FEIS, as presented in sections 2.5.7.3 and 3.6.4.3.6, and, if successful, are expected to offset the impacts to bull trout and critical habitat in the East Fork Bull River and East Fork Rock Creek. Possible projects include the restoration of habitat in the lower reach of Copper Gulch, a stream in which bull trout were historically present, and on-site mitigation in the Rock Creek drainage to identify and rectify the factors limiting bull trout in West Fork Rock Creek and to eradicate non-native species from the mainstem Rock Creek. These projects would aid in the recovery of bull trout populations in the Lower Clark Fork Core area if successful and would complement the Avista programs that are being implemented.

331-7 The main channel of Rock Creek lacks surface flow during periods of low flow for the majority of its lower 3.4 miles. In most years, habitat is adversely affected to some degree due to the seasonal lack of connectivity preventing upstream movement of adult migratory bull trout. The dewatering of the EFRC would significantly exacerbate the low-flow of the main stem of Rock Creek. The additional dewatering of lower Rock Creek would cause irreparable harm to the migratory bull trout. The lower reaches of Rock Creek are already threatened by sediment and discharges from the proposed Rock Creek Mine. The prospect of significant dewatering as a result of the Montanore Mine should not be permitted.

Response: Low flows at the mouth of Rock Creek near where the subsurface reach occurs were predicted to decrease by two percent or less during all phases of mine activities with mitigation, based on the updated

modeling results presented in Section 3.11.4.1 of the FEIS. Cumulative flow reductions from both the Montanore and Rock Creek projects would be 0.03 cfs greater at the mouth during low flows than reductions estimated to occur with only the Montanore Project, as presented in Section 3.11.4.10. These are not substantial decreases in base flows, but, as disclosed in the SDEIS and FEIS in sections 3.6.4.2.6, 3.6.4.3.5, 3.6.4.4.5, and 3.6.4.10, the decreases in flow may exacerbate the length of the reach that is seasonally dewatered in Rock Creek or result in the dewatering occurring for longer time periods each year. Migratory bull trout have been observed in Rock Creek and East Fork Rock Creek, although the bull trout population in this drainage is thought to be composed primarily of resident fish. While movement of these resident fish may also be limited by an increase in the length or persistence of the seasonally dewatered reach, the seasonally dewatered reach that exists currently likely already results in limited use of the Rock Creek drainage by migratory fish. While increasing the persistence and length of this dewatered reach could certainly have an adverse effect on native trout in some regards, it may also function (and would continue to function under the alternatives) as a barrier that limits hybridization or competition with nonnative trout by limiting movement of such fish into Rock Creek. Mitigation has been proposed that would benefit the Rock Creek bull trout population and offset any impacts that result from the Montanore project if they are successful. These projects are discussed in the BA for bull trout (KNF 2013a) and in sections 2.5.7.3 and 3.6.4.3.6 of the FEIS.

340-2 The East Fork of Bull River, the East Fork of Rock Creek, and Libby Creek are all recognized in the SDEIS as subject to adverse alteration of groundwater elevations and streamflow from the proposed mining area, which will significantly affect water temperatures and bull trout spawning and rearing habitat. Since the East Fork Rock Creek and the East Fork Bull River are two primary tributaries supporting recovery of migratory bull trout in the US Fish and Wildlife Service's Lower Clark Fork River Critical Habitat Subunit, these impacts will have make it extremely difficult for bull trout to persist, let alone reach recovery levels in this area. These impacts to bull trout also do not include the potential for catastrophic failure of a pipeline or tailings impoundment, which would decimate fish and aquatic life downstream and completely wipe out a population.

Response: Decreased groundwater inflows and the resulting decreases in low flows would have the potential to result in increased stream temperatures in analysis area streams during the low flow period, but the effect is uncertain. Additional discussion of possible changes to stream temperature as a result of the project alternatives is included in the FEIS in Section 3.11.4.3., with discussion of the effects on aquatic habitat and populations included in the temperature subsections of Sections 3.6.4. See prior discussion of temperature on p. **Error! Bookmark not defined.**. The highest reductions in low flows for are predicted to occur in the extreme upstream reaches of these streams where dense canopy cover may be present and air temperatures would be cooler than at lower elevations, which may minimize the temperature increases that would occur as a result of the lower baseflow in this reach of the river. As summarized in the FEIS in the "Threatened and Endangered Species" subsection of Section 3.6.4, the BA for bull trout (KNF 2013a) also includes a discussion of the uncertainty associated with estimating the effects of the project on stream temperatures in the East Fork Bull River and other analysis area streams.

Analysis was conducted for the FEIS that included modeling changes in low flow at additional sites on East Fork Rock Creek, East Fork Bull River, and Libby Creek in reaches determined to be important for bull trout spawning and populations An estimate of the effects of the low flow changes on bull trout habitat availability in analysis area streams was included in the BA for bull trout (KNF 2013a), and the results from this analysis are summarized in Section 3.6.4.3.2 of the FEIS. Habitat availability for spawning bull trout was predicted to be affected most by the change in low flows, and was estimated to decrease by up to 13 percent in the East Fork Bull River and up to nine percent in East Fork Rock Creek. Effects to juvenile and adult bull trout habitat availability were also estimated. Bull trout populations in the Libby Creek, Rock Creek, and East Fork Bull River drainages would be adversely affected by mine activities under all alternatives. Most of the bull trout collected in East Fork Rock Creek were thought to be resident fish, although there is a small migratory component. As presented in the BA and in Section 3.6.4.3.6 of the FEIS, mitigation projects have been proposed to account for the adverse impacts to bull trout in both streams, and, if successful, are expected to offset the projected impacts. The success of these projects would be based on data from continued monitoring efforts.

The potential for catastrophic failure of a pipeline or the tailings impoundment would be small, with risk of failure of the tailings impoundment estimated to be 0.1 to 1 percent, as discussed in Section 3.6.4.2.1. As cited in this section, extensive adverse effects to bull trout and other aquatic life would result if the tailings impoundment failed. Both of these occurrences would only affect the bull trout populations in the Libby Creek watershed, and would not affect East Fork Rock Creek or East Fork Bull River populations.

3290 TE&S Fish Species: Comment about cumulative effect

195-1 The US Fish and Wildlife Service has already determined that the proposed Rock Creek Mine would harm the bull trout population in Rock Creek. Now the proposed Montanore Mine is expected to dewater and degrade the East Fork Bull River, the most important bull trout stronghold in the Lower Clark Fork region.

200-3 The permitted but contested Rock Creek Mine will have serious consequences to the population of bull trout in Rock Creek and the lower Clark Fork River drainage. In the face of this threat, the agencies are relying on the East Fork of Bull River to maintain the bull trout sub-population in the lower Clark Fork River drainage. Considering the expected impacts from the Rock Creek Mine on bull trout habitat, how can the agencies justify additional habitat degradation in the East Fork of Bull River from the Montanore project?

200-3 Dewatering would impact the East Fork and Mainstem of Rock Creek, which both provide critical habitat for the bull trout (DEIS Vol. 1, Summary, Page 39). Rock Creek's bull trout population will likely be exposed to severe impacts, if not extirpation as a result of the permitted Rock Creek mine. How is it that the agencies can authorize further habitat degradation from the Montanore Mine? The cumulative impacts from the both mines operating simultaneously or sequentially must be considered by the Forest Service and the other agencies whose approval is required.

310-14 Considering the expected impacts from the Rock Creek Mine on bull trout in Rock Creek, the agencies cannot ignore the cumulative effects of the Rock Creek project on bull trout when combined with the habitat degradation in the East Fork of Bull River from the Montanore project.

340-3 Furthermore, cumulative impacts to bull trout from Revett Mineral's proposed Rock Creek Mine and the proposed Montanore Mine are not sufficiently addressed in the SDEIS. In its 2006 Rock Creek Biological Opinion, the Fish and Wildlife Service found that harm to bull trout in Rock Creek did not jeopardize recovery because productive habitat was present elsewhere in the unit—most notably, in East Fork Bull River (USFWS 2006, p.B-54 and B-58). As the proposed Montanore Project will have significant impacts to bull trout through groundwater and surface water reductions in the East Fork Bull River, further analysis on the combined effects to bull trout is warranted.

Response: The cumulative effects of the Rock Creek Project and the Montanore Project on aquatic habitat were addressed in the SDEIS and revised in the FEIS in Section 3.6.4.10, with discussion of impacts to bull trout populations in Rock Creek and the East Fork Bull River. Streamflow and aquatic resources in eastside streams would not be affected by the Rock Creek project, and so thus are not included in the cumulative analysis for both projects. The SDEIS and FEIS discussion included disclosure of the effects of the increased intermittency in Rock Creek that would likely occur when both projects were implemented, and the consequential effects to fish passage. It also included disclosure of the additional loss of habitat for bull trout and other fish estimated to occur in both streams if both projects were implemented in comparison to only the Montanore project being implemented. Additional decreases in low flows would be predicted to occur as a result of the cumulative impacts, with low flows in Rock Creek and the East Fork Bull River at the mouth decreasing by an additional 0.03 cfs, and low flows in the East Fork Bull River at the CMW boundary decreasing by an additional 0.08 cfs. The results of an analysis of the percent reductions in wetted habitat in both streams were added to the FEIS in this section as well. While the cumulative effects of the two projects would affect the East Fork Bull River and East Fork Rock Creek more than the Montanore project alone, both streams would continue to provide habitat for bull trout populations.

The proposed bull trout mitigation projects were revised for the FEIS and would mitigate the impacts from the Montanore Project if successful. These projects are presented in sections 2.5.7.3 and 3.6.4.3.6, and are

discussed in more detail in the BA (KNF 2013a). Possible mitigation options include creating or securing genetic reserves through bull trout habitat restoration and transplanting activities, identifying and rectifying factors limiting bull trout populations, and eradicating of non-native fish species. Mitigation projects are proposed both off-site and on-site, and are expecting to result in beneficial effects to the bull trout populations in the Kootenai and Lower Clark Fork Core areas by improving habitat, reducing hybridization risk, reducing competition, and protecting existing bull trout populations from catastrophic events. Success of the mitigation projects would be determined by further monitoring, and the value of the projects would be confirmed to ensure that the beneficial effects of the project exceed and precede documented and predicted impacts for each Core Area.

331-7 The Rock Creek Mine is expected to increase sediment delivery to the EFRC by approximately 20%. See Rock Creek Mine Final EIS and 2006/07 Biological Opinions for Bull Trout (incorporated into the administrative record herein). The long term dewatering expected to occur to varying degrees along the entire length of the stream would exacerbate the impacts of the additional sediment. Sections of the stream than retain pockets of water would become more sediment rich and unsuitable for the remnant population of bull trout and cutthroat trout that survive the massive dewatering.

Response: As with the Montanore Project, only short-term increases in sediment delivery to the Rock Creek drainage are predicted to occur with the Rock Creek Project, with long-term decreases predicted. The high flows that occur during runoff and storm events would flush sediment that accumulated in the short-term downstream. While habitat availability for bull trout and cutthroat trout would decrease under both the Montanore action alternatives and the Rock Creek Project operations based on the decreases in low flows, suitable habitat for both species would likely persist.

335-11 What are the cumulative impacts upon the lower Clark Fork core area and implications for range-wide recovery of bull trout of the Montanore Mine, Rock Creek Mine, and climate change on bull trout?

389-6 Without climate analysis it is impossible to tell whether the mine might threaten the continued existence of the bull trout or westslope cutthroat

389-8 Will these cumulative factors jeopardize the continued existence of the bull trout?

Response: The cumulative impacts of the Montanore and Rock Creek projects on bull trout and their habitat were discussed in Section 3.6.4.10 of the SDEIS, and this section was expanded in the FEIS to further assess the effects on wetted habitat perimeters from both projects. A discussion of the mechanisms through which climate change effects could occur and a range of possible effects on macroinvertebrate and fish populations, including bull trout populations, was added to Section 3.6.3.14 of the FEIS as part of the discussion of cumulative effects.

3292 TE&S Fish Species: Comment about effect-transmission line

310-11 Transmission Line Alternative E-R would potentially impact West Fisher critical habitat due to canopy removal and ground disturbing activities.

Response: Section 3.6.4.9.3 of the SDEIS and FEIS disclosed the potential effects on bull trout critical habitat in West Fisher Creek that would occur with Transmission Line Alternative E-R, and states that bull trout critical habitat may be adversely affected during construction and decommissioning activities, mainly through possible short-term increases in sediment. The other transmission line alternatives would not affect West Fisher Creek critical habitat. Alternative E-R was developed because it minimizes effects on core grizzly bear habitat. Road closures and reconstruction, as well as fisheries mitigation as described for Alternative 3, would be anticipated to offset these effects.

3297 TE&S Fish Species: Comment about mitigation-mine

74-8 They also propose to rehabilitate habitat in Libby Creek, and conduct monitoring in Rock Lake. The monitoring plan does not include the fish populations in the East Fork Bull River or Rock Creek within

Wilderness and MMC has made no additional commitment of financial resources to support Bull trout populations and other sensitive fish species.

74-8 The proposed mine constitutes a threat to bull trout populations. No specific and decisive mitigation measures sponsored by MMC have been proposed to mitigate for, or monitor, these effects in wilderness. Impacts that occurred in Wilderness, and would degrade Wilderness character. Impacts to fish species would also substantially affect the CMW's value for primitive recreation, a key Wilderness quality and one for which Forest Service directives mandate management.

74-14 MMC needs to be held liable for some kind of supportive measures with regards to the Threatened bull trout populations whose habitat it would be trammeling.

74-19 A thorough environmental analysis would include: Supportive measures for bull trout, for which MMC would be held liable.

105-2 For the East fork Bull river in particular; it is my opinion that continual monitoring and a new stream improvement plan cannot make up for the effects of 50 percent reduced flow for up to 70 years post mining. These mitigation measures, although well-intentioned, seem sadly insufficient to mitigate for the predicted effects of the mine. What possible stream improvement plan can make up for 50 percent reduced flow? Mitigation measures designed to reduce sediment contributions to Libby Creek including grade controls, sediment abatement and instream stabilization measures can be very effective measures if they work. Libby Creek is a flashy drainage prone to rain-on-snow events and extreme bed load volumes. Libby Creek has already been degraded by the effects of mining and riparian area logging for over a hundred years. Similar actions proposed for mitigation in Libby Creek have already been implemented in the upper part of the drainage with results that are less than desirable. In my opinion it is a mistake to believe that the mitigation measures proposed for Libby Creek will be successful in the long run.

109-7 Although it appears unlikely that impacts to the East Fork of Rock Creek and the East Fork of the Bull River will occur, based on the statement in the Draft EIS that "Alternatives 2, 3 and 4 would reduce flow" please explain how the agencies plan to mitigate potential for reduced flow impacts.

248-29 The Agencies need to re-examine this aspect of the fisheries mitigation program. Based on direct experience by LPMC and FWP with this habitat improvement technique, structures are not a viable mitigation measure in Libby Creek (nor probably Ramsey and Poorman Creeks).

392-2 From the discussion in the SDEIS, it is clear that to minimize the impact to bull trout in the EFBR and Rock Creek from a reduction in ground water and stream base flows, the proposed mitigation will need to be effective until steady state conditions are reached in 1,200 to 1,300 years. We suggest that the intent and expected outcome of these strategies be further clarified.

Response: The proposed bull trout mitigation projects were revised for the FEIS and would mitigate for potential impacts to bull trout populations and habitat in the Libby Creek, Rock Creek, and East Fork Bull River drainages if successful. Some of these projects, as well as the mitigation proposed for Waters of the U.S. and those measures designed to decrease sediment delivery to streams, would also benefit other sensitive fish species within the analysis area. The revised mitigation plan was presented in sections 2.5.7.3 and 3.6.4.3.6 of the FEIS, and was discussed in more detail in the BA (KNF 2013a). Possible mitigation options include creating or securing genetic reserves through bull trout habitat restoration and transplanting activities, identifying and rectifying factors limiting bull trout populations, and eradicating of non-native fish species. Mitigation projects are proposed both off-site and on-site, and are expecting to result in beneficial effects to the bull trout populations in the Kootenai and Lower Clark Fork Core areas by improving habitat, reducing hybridization risk, reducing competition, and protecting existing bull trout populations from catastrophic events. All mitigation projects would be evaluated for feasibility prior to initiation. MMC would be responsible for implementing all mitigation actions. The mitigation plan includes the development of a monitoring plan to assess impacts of both project effects and mitigation actions; this plan would be approved during the evaluation phase before mine construction and operation was initiated. Mitigation efforts and monitoring would continue during the Closure and Reclamation phases. Success of the mitigation projects would be determined by utilizing the monitoring data, and the value of the projects would be confirmed to ensure that the beneficial effects of the project exceed and precede documented and

predicted impacts for each Core Area. While these projects are aimed specifically at benefitting bull trout populations, some aspects of the projects would also be expected to benefit westslope cutthroat trout and other fish populations as well. Additionally, sediment delivery to analysis area streams would be predicted to decrease under the alternatives compared to existing conditions over the long-term, which would result in beneficial effects on bull trout, westslope cutthroat trout, and other fish populations.

334-13 In section 2.5.7.2.2 of the DEIS (p.1129-1130), in-channel mitigation measures were proposed to compensate for losses of streamflow on streams including Rock Creek and East Fork Bull River. What literature supports the notion that losses of stream flow can be biologically compensated by instream structural manipulations?

Response: The proposed bull trout mitigation projects were revised for the FEIS and do not include specific in-channel mitigation measures to compensate for decreases in low flow on Rock Creek and the East Fork Bull River. Some in-channel mitigation measures may still be implemented to restore habitat in the upstream reaches of Libby Creek, but a feasibility analysis would be conducted before these mitigation actions were initiated. If they were determined to not be feasible or have a low chance of success, other mitigation actions in the Flower Creek drainage would instead be implemented to offset any effects to bull trout in the Libby Creek drainage. The revised mitigation plan was presented in sections 2.5.7.3 and 3.6.4.3.6 of the FEIS, and was discussed in more detail in the BA (KNF 2013a). Possible mitigation options include creating or securing genetic reserves through bull trout habitat restoration and transplanting activities, identifying and rectifying factors limiting bull trout populations, and eradicating of non-native fish species. Mitigation projects are proposed both off-site and on-site, and are expecting to result in beneficial effects to the bull trout populations in the Kootenai and Lower Clark Fork Core areas by improving habitat, reducing hybridization risk, reducing competition, and protecting existing bull trout populations from catastrophic events. Success of the mitigation projects would be determined through monitoring, and the value of the projects would be confirmed to ensure that the beneficial effects of the project exceed and precede documented and predicted impacts for each Core Area.

392-2 We are concerned that the uncertain outcome and timeline associated with the proposed mitigation could extend the risk to bull trout and native salmonids. While habitat improvement (also discussed as mitigation) may address impacts, it is unclear that such improvements will be required to last, or even be capable of lasting, through the recovery period and beyond, to address permanent stream flow reductions. We suggest that alternative3 include options for restoring stream base flow in EFBR and Rock Creek within the operating time frame of the proposed mining operations. Both hydrologic monitoring and modeling should be robust enough to provide information to the project proponent to address stream flow impacts as early in the operations phase as possible, and specifically during low-flow seasons. On p. 297, the cumulative impact's of both the Montanore and Rock Creek Projects moving forward are discussed. There may be opportunities for both project proponents to work in concert to address stream now issues, particularly if removed groundwater is treated and tested to ensure it is appropriate for stream recharge. Mitigation efforts should be focused on accomplishments during operations to avoid the difficulty of addressing these items post-closure.

Response: Restoring baseflows to the East Fork Bull River and East Fork Rock Creek during the Operations Phase through flow augmentation using the removed groundwater would not be technically feasible under any alternative. The proposed bull trout mitigation plan was revised for the FEIS and includes mitigation projects that do not involve returning treated groundwater to these streams. These projects would mitigate for potential impacts to bull trout populations and habitat in the Libby Creek, Rock Creek, and East Fork Bull River drainages if successful, and thus would affect aquatic resources affected by the Rock Creek Mine as well. Some of these projects, as well as the mitigation proposed for Waters of the U.S. and those measures designed to decrease sediment delivery to streams, would also benefit other native salmonid populations within the analysis area. The revised mitigation plan was presented in sections 2.5.7.3 and 3.6.4.3.6 of the FEIS, and was discussed in more detail in the BA (KNF 2013a). Possible mitigation options include creating or securing genetic reserves through bull trout habitat restoration and transplanting activities, identifying and rectifying factors limiting bull trout populations, and eradicating of non-native fish species. Mitigation projects are proposed both off-site and on-site, and are expecting to

result in beneficial effects to the bull trout populations in the Kootenai and Lower Clark Fork Core areas by improving habitat, reducing hybridization risk, reducing competition, and protecting existing bull trout populations from catastrophic events. All mitigation projects would be evaluated for feasibility prior to initiation. The mitigation plan includes the development of a monitoring plan to assess impacts of both project effects and mitigation actions; this plan would be approved during the evaluation phase before mine construction and operation was initiated. Mitigation projects would also begin before mine construction, and would continue during the Closure and Reclamation phases. Success of the mitigation projects would be determined by utilizing the monitoring data, and the value of the projects would be confirmed to ensure that the beneficial effects of the project exceed and precede documented and predicted impacts for each Core Area.

Additional monitoring was described in Appendix C of the SDEIS and FEIS, and includes monitoring of surface water flows in East Fork Rock Creek and East Fork Bull River up through the closure phase of mining (Section C.10). Monitoring of the macroinvertebrate, fish, and periphyton communities would be conducted at sites on Bear Creek, Poorman Creek, and Libby Creek at least annually (Section C.11). The monitoring plan for the aquatic resources would be reviewed annually by MMC and the agencies, and modification would be made if necessary. The monitoring plan as a whole is expected to be dynamic and to change as new data are collected and analyzed, as stated in C.1.

3299 TE&S Fish Species: Comment about regulatory compliance

162-1 Dewatering: The DEIS summary, page 28, states that dewatering would extend 2 miles in all directions from the mine void. Thus Rock Lake, Rock Creek, St. Paul Lake, East Fork Bull River, will be impacted. These are all “Outstanding Resource Waters". Portions of Rock Creek and East Fork Bull River are prime bull trout habitat. Rock Lake is westslope cutthroat trout habitat. One does not have to be a biologist to understand the problem, common sense tells me that dewatering will have an adverse effect, as does the DEIS on page 39. Please explain how this can be justified with the mandates charging the various responsible agencies with protecting these resources.

Response: Adverse effects on bull trout and westslope cutthroat populations and their habitat are predicted to occur with all alternatives as a result of the Montanore project, and these effects are discussed and disclosed in section 3.6.4 of the SDEIS. Revisions and updates to this section were included in the FEIS to reflect the additional data and analyses conducted and the results of the BA (KNF 2013a).While the dewatering associated with the mine would have adverse effects, the bull trout mitigation plan and other mitigation actions that are proposed would offset these impacts if successful, and would thus be justified. Success of the mitigation actions would be determined by further monitoring, and the value of the projects would be confirmed to ensure that the beneficial effects of the project exceed and precede documented and predicted impacts for each Core Area.

202-32 The Project does not comply with all of these INFISH and other Forest Plan requirements. The DEIS also does not ensure that the operator take all practicable measures to “maintain, protect, and rehabilitate fish and wildlife habitat” as required by INFISH standard MM-1. The same is true for the agency’s decision to locate “structures, support facilities, and roads” in a RHCA (MM-2). Because the Project’s roads, pipelines, transmission lines, culverts, fences, and mitigation structures are considered structures or support facilities, they are prohibited, unless there is no alternative to locating them within a RHCA. See Hells Canyon, 2006 WL 2252554, at *8-9. The agency has not shown that no alternative exists for these structures and facilities.

310-14 Clearly impacts to RHCAs are unavoidable no matter which alternative is selected.

331-22 Overall, the agency has not shown that, for each facility/structure/road, there is no alternative to locating it within an RHCA – as is required by the MM standards. Such a failure violates NEPA’s mandate to review all reasonable alternatives, as well as the NFMA’s requirement that all Forest Plan/INFS standards be met at all times.

331-45 An alternative needs to be considered whereby all facilities, as well as alternatives for each facility currently proposed to be located in an RHCA, would be located outside of Riparian Habitat Conservation

Areas. This would remove RHCAs as an issue and would protect the habitat that these areas provide. Financial and logistical considerations need to be secondary to protecting the RHCAs. This includes avoidance of transmission line stream crossings and other structures within RHCAs.

Response: Section 3.6.4.11.2 of the SDEIS and FEIS discussed consistency with INFISH (referred to as INFS in the document) and other 2015 KFP direction. This section includes descriptions of the RHCA standards and guidelines, and states specifically whether and how the alternatives would achieve compliance with these. The SDEIS and FEIS state the Alternative 2 and Transmission Line Alternative B would not be in compliance with several of the standards and guidelines. As described in sections 3.6.4.2.1, 3.6.4.3.1, and 3.6.4.4.1, all alternatives include some disturbance within RHCAs. The location of the mine facilities, including transmission line stream crossings and access road stream crossings, outside of RHCAs, would not be feasible. Alternative 3 minimized the number of acres disturbed, and decreased this acreage by almost 50 percent. No alternatives were devised that eliminated the need to place facilities and structures within RHCAs. A discussion of the other alternatives evaluated but not included in the analysis were described in Section 2.13 of the SDEIS and FEIS, with the rationale for why these alternatives were not considered further also provided in this section. Optional locations were evaluated for the underground mine, tailings disposal, plant site, adit sites, LAD areas, access roads, and transmission lines. The possible locations of the plant and impoundment sites evaluated in the initial screening are shown in Figure 46 of the SDEIS. The potential effects of various tailings impoundment locations were evaluated using Level 1, Level 2, and Level 3 screening criteria as described in Section 2.13.5.2.2 through 2.13.5.2.4. Level II screening stresses a focus on impacts to RHCAs and bull trout habitat, among other criteria. The SDEIS acknowledges that adverse direct effects to fish habitat could occur where roads and other structures were constructed in RHCAs, and describes the potential effects in Section 3.6.4.2.1. This section further notes that the required implementation of BMPs would minimize the amount of sediment contributed to the project area streams and serve to decrease long-term sediment delivery. Overall, when the effect of BMPs and road status changes are factored in, long-term sediment delivery from roads to streams would be less with the alternatives than under existing conditions (see sediment discussion in Section 3.13.4).

202-32 Further, the Project does not avoid locating solid waste and facilities (such as waste rock, tailings, etc.) outside of RHCAs, as required by MM-3. Such location could only be authorized after the required alternatives review, waste analysis, and other MM-3 requirements – something which has yet to occur. Even if the DEIS had reviewed alternative waste facilities outside of RHCAs, the other requirements of MM-3 have been violated. Releases from the tailings, waste, and development rock within an RHCA will not be "prevented," and the location of waste facilities has not been "prohibited," as required by MM-3. Also, even if releases could be prevented, the USFS did not "analyze the waste material using the best conventional sampling methods and analytic techniques to determine its chemical and physical stability characteristics" – as required by MM-3. It should also be noted that the failures to review alternatives to each structure, facility, usage, etc. in the RHCA's violates NEPA's requirement that the agencies fully analyze all reasonable alternatives.

Response: Section 3.6.4.11.2 of the SDEIS and FEIS discussed consistency with the RHCA standards and guidelines, including MM-3. A discussion of the other options evaluated but eliminated from the analysis were described in Section 2.13 of the SDEIS and FEIS, with the rationale for why these alternatives were not considered further also provided in this section. Optional locations were evaluated for the underground mine, tailings disposal, plant site, adit sites, LAD areas, access roads, and transmission lines. Disturbance within RHCAs was part of the Level II and Level III screening used to evaluate all options. These evaluations fulfill the requirement in MM-3 to determine if there are alternatives to locating mine waste facilities in RHCAs, and, if not, and if releases can be prevented and stability ensured, there are five other requirements to comply with (a-e). Based on this and as discussed in Section 3.6.4.11.2, the tailings impoundments would be in compliance with MM-3 for all three action alternatives; however, the plant site in Alternative 2 would not be in compliance. It would be located within a RHCA and would be constructed with waste rock. The plant site for Alternatives 3 and 4 would not be within a RHCA, and preliminary evaluation indicates that it could be built without using waste rock during construction. The compliance with the other five requirements were also discussed in this section, with Alternatives 3 and 4 determined to be in compliance with these standards.

331-21 The RHCAs in the Poorman tailings Impoundment Site in Alternative 3 are not adjacent to fish-bearing streams. (SDEIS, page S-37) More explanation is required for this statement from the SDEIS. In addition, the fact that the streams may not be "fish-bearing" does not exempt them from the MM standards protecting RHCAs. Why does the SDEIS erroneously state that the tailings impoundment site is not adjacent to fish bearing streams?

Response: The FEIS clarified this statement with additional text in the summary and also within Section 3.6.4.3.1. The statement in the summary of the SDEIS and FEIS was referring to the fact that the RHCAs at Poorman impoundment site are not adjacent to fish-bearing streams, which affects the width of the RHCAs. Text was added to clarify that non-fish bearing streams are not exempt from the standards protecting RHCAs but do differ in standard widths mandated for a RHCA. Compliance with MM standards was discussed in Sections 3.6.11.2 of the DEIS, SDEIS and FEIS.

331-22 Further, although the SDEIS claims that "Tailings seepage would not reach any RHCAs or surface water," SDEIS at 174 (a claim which has not been technically supported), this essentially admits that some seepage will reach groundwater. This would violate MM-3's requirement that "releases can be prevented," among other requirements. Also, there is no assurance that waste/development rock will be located so as to avoid RHCAs, and if located there, that all releases will be prevented.

Response: The SDEIS and FEIS disclose in Section 3.6.4.11.2 that the tailings impoundment would be designed to minimize seepage into underlying groundwater. If seepage reaches the groundwater, the pumpback well system would be used to collect this seepage. The Libby Plant Site included in Alternatives 3 and 4 was located so as to avoid placement within a RHCA, and, as stated in Section 3.6.4.11.2, preliminary evaluation indicates that it could be built of fill material rather than waste rock. Based on this, these alternatives would not include activities that generate releases from waste rock and would meet thus meet the INFS standards.

331-22 During the spring when the roads are most vulnerable to run-off, would public travel be restricted to minimize sediment delivery? It appears that decisions such as this have been left to MMC to make. The development and implementation of a Road Management Plan on public land should not be done without public involvement.

Response: The final Road Management Plan would be developed by MMC. It would not be subject to public involvement, but would be subject to approval by the agencies, as stated in Section 3.6.4.11.2 of the SDEIS and FEIS. The Road Management Plan is part of RF-2c of the RHCA standards and guidelines, which also specifies that this plan would address the regulation of traffic during wet periods to minimize erosion and sediment delivery to streams. The agencies would have to agree that the Road Management Plan designed by MMC would effectively do so, although this may include other methods rather than restricting public travel in spring. The Road Management Plan would be available for public review.

331-22 The final design pertaining to the location of structures within the RHCAs should have been included in the SDEIS to allow public comment. What structures would be located in the RHCAs, where in the RHCAs would they be built, and how much traffic would be associated with these structures? Why is MMC allowed to decide whether the final location of the structures is economically feasible? Is it the opinion of the agencies that economic interests should be considered when deciding various siting options? If a location outside of an RHCA for structures was identified, but would cause MMC economic hardship, would that site be eliminated in favor of a location within an RHCA?

Response: Figure 53 of the SDEIS shows the location of the RHCAs and other riparian areas in relation to the generalized mine facility and transmission line locations for the alternatives. Sections 3.6.4.2.1 states what mine facilities would be located within RHCAs for Alternative 2, and Alternative 4 uses similar locations for some facilities but was specifically designed to reduce effects on RHCAs. Section 2.13 of the SDEIS discussed the agencies' rationale for other alternatives that were initially considered but subsequently eliminated from the alternatives analyses. These included other locations for the tailings impoundment, plant site, and other mine facilities. While economic feasibility was considered during the agencies' analysis of possible options, many other factors were also considered before the final set of

alternatives were produced. The potential effects of various tailings impoundment locations were evaluated using Level 1, Level 2, and Level 3 screening criteria as described in Section 2.13.4.2.2 through 2.13.4.2.4. Level II screening stressed a focus on impacts to RHCAs and bull trout habitat, among other criteria. Projected traffic volume in each alternative was discussed in Section 3.21 of the DEIS and FEIS.

American Indian Consultation

3303 Comment about analysis-mine

74-15 Areas of concern among tribes included: the mine's effect on resources reserved for tribes under the Hellgate Treaty, tribal access to and protection of sacred sites, disturbance of native American human remains and burial grounds, and effect on historic properties traditionally identified as traditional cultural properties. In the DEIS consideration of the final quality was eliminated. In section 3.5.1.5 the DEIS states that: "the thresholds indicated by the three issues could not be measured, as the tribes have declined to provide the baseline data necessary to conduct effects analysis."

74-16 Furthermore the DEIS does not specifically address impacts to tribal resources guaranteed under the Hellgate Treaty, creating a confusing structure and decreasing the navigability of this already-cumbersome document for someone looking for that specific information.

74-16 It is unclear whether data involving exactly which sacred sites or sacred processes would be disrupted by the mine has actually been collected and is not being disclosed, and or if it has simply not been collected. Section 3.5.1.5.5 states: "The CSKT have stated their position that there would be irreversible and irretrievable impacts to nonrenewable cultural resources. The specific resources referred to have not been disclosed to date." (pg 244). If this means, as it implies, a lack of disclosure to the DEIS preparers by the tribe, then because the tribal resources data has not been collected, the tribal consultation in the DEIS has been conducted inadequately.

74-16 This determination is racist and shows a lack of commitment to participatory process on the parts of the preparers of the document in their choice to ignore tribal (specifically, Confederated Salish and Kootenai Tribes) concerns. In some cases naming tribal sacred sites makes them less valuable; in others, tribes fear that these sites will be desecrated if named. In the case of dealing with native American tribes, it should be emphasized that participatory process is a cross-cultural process and must be conducted with due sensitivity to a different culture's practices and beliefs.

74-16 Finally, while tribes are mentioned in the Environmental Justice section of the DEIS (3.25.1, pg 935), the lack of adequate analysis discredits this section. The section claims that the mine will not disproportionately impact American Indian tribes (a minority population); yet there is little basis for this, given the lack of data. The impacts on tribal members are not known because they have not been disclosed. Without determining, quantifying and including these impacts in the DEIS, the document should not be considered complete or sufficient-it fails to honor the rights of a sovereign nation, and is not compliant with the legislation.

74-19 The lack of proper tribal consultation is a human rights issue and reprehensible both legally and morally. The CSKT's rights have been violated and their statement that the mine would irreparably damage valuable cultural resources seems to have been ignored.

371-2 The other issue I'd like to address is the Native Americans that used to dwell in this area and that Ms. Stephens from the National Forest Service and others from the tribes, especially their cultural representatives from the Salish and Kootenai, be kept apprised during the course of this process. They were the original indigenous people in this area, and they deserve to be consulted.

327-36 The SDEIS ignores traditional tribal uses of sacred lands and resources that would also be deflected for at least 40 years along the 16-mile long power line corridor and adjacent acreage. Like Howard Lake, areas that constitute sacred ancestral lands are unique, and this issue cannot be dismissed with a cavalier "go elsewhere."

Response: The KNF has been working with the CSKT in a culturally sensitive manner for 30 years. This includes hiring Tribal Liaisons from the Kootenai Tribe for 20 of those years. The KNF hosted a Kootenai Elders visit in 2006 to sites of activity proposed by MMC. The KNF asked at the time for input that would allow us to consider mitigation, and this included areas of culturally significant plants, as well as any KNF cultural sites. The Tribes declined to provide any specific locations of concern. The CSKT have in the past provided such specific information to the KNF, reflecting the high level of trust between the KNF and the Tribes. There are currently two TCP nominations being prepared at the request of the CSKT, including one which is associated with another proposed mine project. When TCPs and/or Sacred Sites are provided to the KNF, the protocol agreed to between the KNF and the CSKT is that this information is exempt from public disclosure. The CSKT have not made any similar requests for a TCP for the proposed Montanore Mine. This choice by the Tribes must be respected by the KNF. The adequacy of documentation is best determined by the Tribes, and there has been no indication from them that the consultation is inadequate.

Cultural Resources

3367 Comment about mitigation-mine

331-43 MMC has been given the responsibility of inventorying and/or monitoring everything from wetlands to landbird populations. Why are the federal agencies not performing this role? MMC should not be doing a cultural resource inventory.

Response: MMC would be responsible for all monitoring described in Appendix C. Monitoring reports would be submitted to the agencies for approval. In completing prior studies, MCC contracted a qualified cultural resource firm meeting the Secretary's Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) to conduct the inventories for the project. The KNF Archaeologist provided guidelines that the contractor was required to meet in conducting survey and the archaeologist reviewed the inventory report for adequacy before it was forwarded to the Montana State Historic Preservation Office. Cultural resource monitoring would be completed by a qualified archaeologist meeting 48 FR 44716 and the monitoring results would be reviewed by the KNF Archaeologist

Geochemistry

3400 Mine Drainage and Trace Element Release: Suggested new information/analysis

98-7 Cycloning sands from sulfide ore deposits for tailings dam construction has led to the concentration of pyrite in the course fraction of the cycloned sands at the Thompson Creek mine in Idaho. Geochemical analysis of the cycloned tailings dam sands should be performed to insure that this will not be an issue for the proposed Montanore dam.

Response: The mineralogy and geochemistry at Montanore is quite different from Thompson Creek. The concentration of sulfide in bulk Rock Creek tailings is very low (See Section 3.9.4.3 of the FEIS) and the sulfides are non-acid generating chalcocite, and bornite instead of pyrite. This information suggests that cycloning of tailings for construction of the dam would not pose a risk of pyrite concentration or associated production of acid rock drainage. To confirm this conclusion, the geochemical sampling and analysis plan (SAP) includes a requirement for additional testing of a bulk tailing sample when one can be collected during the Evaluation Phase (see Appendix C.9). The sampling and analysis plan recommends at least 5 analyses of multi-element whole rock chemistry, acid base accounting, mineralogy, and metal mobility in tailing samples that represent the range of tailings characteristics, including coarse cyclone fractions (see C.9.4.5.6).

152-23 There should be an estimate of how much neutralizing material is necessary to counter the AMD and how much is available.

Response: Apart from the barren lead zone, which would be managed to limit oxidation, there is very little indication of acid rock drainage risk that would require amendment for neutralization. The mine plan calls

for subsurface placement of all reactive rock, so any amendment to increase pH would most likely involve inclusion of cement in backfill. Such evaluations are relatively straightforward and could be made when (and if) data support such a decision.

3402 Mine Drainage and Trace Element Release: Suggested new monitoring

General Comments

332-2 Samples above the NP:AP 3:1 line are considered potentially acid generating.

Response: The U.S. EPA (1994; EPA 530-R-94-036 Technical Document on Acid Rock Drainage Prediction), considers samples between the NP:AP 3:1 and 1:1 lines to have uncertain potential for acid generation.

332-2 The Montanore SDEIS plays down one of the most important differences – the Montanore deposit has approximately twice as much ore as the Troy deposit, and that much more waste will be produced.

Response: The relative size of the deposit is not proportional to geochemical risk. Twice the volume of non-acid generating rock will not produce acid rock drainage. Twice the volume of space will be created underground for disposal of twice the volume of waste rock. Metal concentrations would be limited by solubility and attenuation. Due to the commitment to treat mine facility discharges, loading would not increase as a result of the larger size of the Montanore operation.

Comments on Decision Matrix (Figure C-3)

332-10 "Evaluate need for mineralogical analyses based on geological observations." Mineralogic analyses should be required and used to help interpret the static and kinetic testing results – there are no arrows from this box to any interpretation. Mineralogic analysis should be required for each kinetic column test and generally for interpretation.

Response: The SAP (Appendix C.9.4) was revised to emphasize the need for mineralogy of every sample to be described in hand specimen. Additional analytical mineralogy, using methods such as optical petrography, scanning electron microscopy or QEM-scan methods, would be used to address specific questions regarding metal and sulfur mineral residence and paragenesis in samples where needed. Relevant boxes and arrows have been added to Figure C-3.

332-10 "Identify key constituents (potential exceedances)" only refers to whole rock data. Key parameters of concern should also be identified after short-term and longer term leach testing.

Response: The identification and quantification of parameters of concern is, of course, the goal of leach testing. The need for comprehensive analysis of metal concentrations in leach tests was identified in Appendix C.9.4. Appendix C.9 was revised to emphasize that analyses of effluent from short and long term leach testing would be reviewed to identify constituents of concern at appropriate levels of detection.

332-10 "Review statistics with baseline data to determine adequacy of sampling" It is not clear what this statement refers to. According to Enviromin (2007, p. 3), baseline data to be used in the analysis include mineralogy, whole rock geochemistry, acid base accounting tests, HCTs, in-situ monitoring of water quality, and metallurgical data. These data will come not only from Montanore but also from the adjacent deposit Rock Creek, as well as its geological analog at Troy.

Response: Baseline data would be integrated with those collected during the Evaluation Phase sampling and analysis program, based on the recommendations offered in the SAP, and evaluated collectively to determine if sampling was adequate. This would be accomplished in various ways depending upon the population distribution. Possibilities include qualitative use of histograms (Runnells et al 1997) and quantitatively approaches, such as use of standard T-test/ANOVA based methods for parametric data or a Keyser-Meyer-Olkin test for non-parametric data.

332-10 "Develop sampling or compositing plan for low-S SPLP tests." Why are short-term leach tests (SPLP) only proposed for low-sulfur wastes? SPLP tests will often underestimate contaminant concentrations in underlying groundwater and underestimate long-term leachate concentrations (Townsend et al., 2006; Maest et al., 2005).

Response: There are no laboratory tests of metal mobility that can perfectly predict field concentrations. This is why the opportunity to compare laboratory results with *in situ* monitoring data from the Troy mine is valuable for the Montanore Project. In the U.S., the EPA method 1312 SPLP, Nevada Meteoric Water Mobility Test, and/or measurements of metal in effluent from kinetic tests are commonly used to predict metal mobility. Each of these methods produce concentrations in effluent which must be interpreted in context of the important differences in the surface area:water volume ratio between the laboratory and field scales. The cited examples in which SPLP tests underestimate contaminants fail to address the appropriate interpretation of these data, which accounts for surface area and dilution factors. Metal mobility is directly influenced by pH, which is in turn influenced by sulfide oxidation. Where significant concentrations of sulfide exist (e.g., greater than 0.3 weight percent) and the NP:AP ratio is less than 3, such oxidation is best studied using kinetic methods in humidity cells. For very low sulfide materials, the time and expense of humidity cell testing are not warranted, and more metal mobility data can be collected for a greater number of samples with a static method. This is why the EPA SPLP method is recommended for this work, coupled with field scale monitoring.

332-10 "Evaluate need for WTP." A detailed plan for a water treatment plan should be prepared before mining begins at the EIS stage.

Response: The cited text in Appendix C contained a typo and was revised. This was intended to convey that a list of constituents of concern, and their relative magnitude, would be used to guide WTP design. Preliminary design plans have been prepared for water treatment at Montanore, which address the need to remove nitrate and metals from water (see Section 2.5.4.3.3 of the FEIS). These preliminary plans rely on existing data to identify the probable suite of metals and estimated concentrations that would require management, and would be revised as additional data are collected during the Evaluation Phase

152-21 The conclusion that kinetic tests are necessary is correct, but the DEIS then relies on one test completed in 1992 (DEIS page 379). Additionally, that one humidity cell, in 1992, was not run for long enough to reach a conclusion regarding the long-term productions of acid, as the DEIS suggested is necessary.

152-23 The DEIS should be redone with many additional kinetic tests considered.

332-10 No kinetic testing is proposed for the Burke, Revett ore, or tailings. The wastes and ore cannot be assumed to have a low acid-generation potential and contaminant leaching potential based on the few geochemical tests performed to date. Long-term kinetic testing should be conducted on each geochemical test unit (see Maest et al., 2005) to evaluate the potential for neutral leaching of contaminants. Only two kinetic tests are proposed for the barren lead zone: one unsaturated and one saturated. This zone could leach very high concentrations of lead and other metals over time. More samples are needed for long-term leach testing to obtain an estimate of the range of leachate concentrations, especially an estimate of maximum leachate concentrations of lead, to assist in developing waste management strategies. SPLP tests can be used to estimate short-term runoff leachate concentrations, but SPLP results should not be used for determining long-term placement of wastes; for this, long-term kinetic testing is needed. SPLP tests for tailings are not appropriate as the only measure of potential seepage concentrations. Multiple kinetic tests are needed for all elements of the Montanore deposit listed as column headings in Table C-6: Prichard, Burke, Revett Waste (non-lead), Revett Barren Lead, Revett Ore, and Tailings.

Response: The reported kinetic tests were run for a standard 20 week period of time, in compliance with ASTM protocols. Several elements of uncertainty (e.g., representative samples, complete suite of metals analyzed at relevant detection limits, etc.) were identified relative to the kinetic testing completed for the Montanore Project, which did not comprehensively address all questions about rates of reaction. These uncertainties could only be addressed in a meaningful way once samples were obtained during the

Evaluation Phase. Recommendations for limited additional kinetic testing, as well as *in situ* monitoring of water quality, are proposed to address these uncertainties in Appendix C.9.

Composite testing is most appropriate for homogeneous materials such as tailings, or when average characteristics of a well-defined unit are of interest. For all other waste types, especially waste rock, sub-units within the three waste rock sources (i.e. Revett waste, Revett barren zone, Prichard, Burke) should be identified based on mineralogy and weathering characteristics, and composite created within those geochemical testing units (Maest et al., 2005).

Response: Composites for kinetic testing would be created based on mineralogy and static chemistry, in consultation with the agencies, as described in Appendix C.9. The question of whether compositing is appropriate would be considered when data characterizing the relative homogeneity of mineralogy and weathering characteristics were available for evaluation. Available data suggest that compositing would be appropriate.

3403 Mine Drainage and Trace Element Release: Comment about analysis-mine (general)

321-1 The Troy mine is not a good comparison for the Montanore Mine as it relates to chemistry.

Response: The Troy Mine is not identical to the Rock Creek-Montanore deposit, but it is an excellent mineralogical and geochemical analog, as described in Section 3.9.4.2 of the SDEIS and FEIS and by Enviromin (2013).

152-22 The Libby adit flow is not a useful analog because it is a mixture of flow entering the adit from many fracture zones. The DEIS should use water samples collected from each fracture zone to assess the variability in water chemistry rather than reporting an average.

321-2 The Libby Adit discharge water is not same range of potential acid mine drainage as Montanore. There are chemical different at the Montanore Mine which will create different chemical seepage.

Response: Rock exposed in the Libby Adit includes the Prichard and Burke formations. Neither of these formations has shown potential for acid generation *in situ* or in kinetic tests, although they do have associated risk of low level metal release. Static tests indicate some variability within the Prichard formation that warrants further evaluation, relative to metal release and sulfide content. There is no information to suggest that individual fracture zones would represent unique water quality or that the characterization of individual chemistries for each fracture zone would change the overall understanding of low risk to water quality associated with the rocks as they have been exposed. The use of the adit monitoring data to represent all adit inflows is considered to be appropriate to address evaluation and management objectives.

332-1 The SDEIS and associated studies recognize that there are very few geochemical studies on Montanore ore, waste rock, and tailings (Enviromin, 2007, p. 2). Very limited site-specific information on the long-term environmental behavior of contaminants is available for the Montanore Project.

332-3 Summary: The SDEIS and associated studies emphasize the similar geology, stratigraphy, and mineralogy of the Troy and Montanore deposits. These similarities could make the Troy an acceptable geologic and geochemical analogue for the Montanore deposit, but the SDEIS has failed to show that the Troy Mine is a good environmental analogue for the Montanore deposit. The paucity of geochemical testing results and the inadequate monitoring of mine water at the Troy Mine undermine its use as a true environmental analogue for any proposed mining project.

Response: Due to the location of the mineral deposit beneath the CMW, it is not possible to collect samples needed for additional testing through drilling. MMC proposes to collect needed samples during an Evaluation Phase. The majority of geochemical testing in support of the Montanore Project was conducted 20 years ago, when expectations of sampling density and analytical methods were different. Substantial additional data are available from Rock Creek and Troy which address many of the limitations of the

Montanore data set. Additional work would be needed as described in Appendix C.9 before construction and mining would begin.

389-3 Acid mine drainage (AMD) from adits is a real and present danger to water quality and wildlife. The SDEIS concludes the risk of this is low, but later characterizes the potential for AMD as "uncertain" (SDEIS § 3.9.4.3.1, pp 209). Monitoring will be necessary to ensure that AMD is not compromising the quality of naturalness the Forest Service is required to protect.

Response: The comment misrepresents the classification of the static test data as having "uncertain potential" for ARD production as an evaluation of overall risk. Determination of overall potential for acid production is based not only on static acid base account test results (which indicate some uncertainty in acid generation potential) but also on mineralogy, kinetics and *in situ* monitoring of geologic analogs (which indicate low potential for acid production). In light of the low sulfide content of the rock, the abundant presence of non-acid producing sulfides, and the encapsulation of those sulfides, as well as the utter absence of acid rock drainage in the Revett district at the operational scale, the risk of acid production is quite low. Additional monitoring is specified in Appendix C.9.

3405 Mine Drainage and Trace Element Release: Comment about analysis-mine (ore)

152-21 Montanore ore has a much greater chance of generating acid than does Rock Creek or Troy (Table 74, DEIS). Based on 35 samples, the ABA is -4, which is closer to the acid producing end of the range than is either Rock Creek (5.1) or Troy (7.6). The NP/AP ratio indicates the ore would produce acid, averaging 0.8 (which is less than the 1:1 ratio which would indicate acid producing capacity equalizes the neutralizing capacity, at least for static testing).

Response: The reviewer has misinterpreted the results of the acid base accounting analysis. The complexity of mineral habit, encapsulation, and reactivity prevents the ABA data from being interpreted in this manner. Samples which lie between values of ±20 are considered to have uncertain potential to generate acid. In this case, based only on the acid base accounting data, all of the deposits show an "uncertain potential " to generate acid, yet there has been no acid production observed. The acid base accounting results calculated based on the assumption that all sulfide is pyrite misrepresent the actual risk because the calculation includes non-acidic Cu-sulfide minerals in the calculation of acid generation potential. When the sulfide content is adjusted to remove Cu-sulfide minerals from the mass of sulfide that is assumed to be pyrite, the ABA and NP/AP ratios increase significantly to levels that agree with results of mineralogy analyses, kinetic tests, and *in situ* monitoring. See Chart 2 and related discussion in Section 3.9.4.3.1 of the FEIS

321-1 The acid mine drainage is based on an insufficient testing [need more test] of Montanore ore and its waste rock. Chemically it is not totally analogous to that of the Troy Mine. Neither is the waste rock totally analogous to that of the Troy Mine.

331-29 There is too much uncertainty about whether the Revett Formation ore would be acid generating. Additional testing after the groundwater begins to rebound is irresponsible. Is the plan for the MMC, the USFS, and MDEQ to do further testing during the 490-1200 years in which the void fills and the regional groundwater recovers?

Response: Section 3.9.4.3 of the SDEIS and FEIS discussed the acid generation risk of ore, waste rock and tailings. Most available data suggest that the Revett ore zone would not be acid generating. Critical elements of uncertainty about the Revett ore are related to delineation of altered waste zones in the lower Revett. An evaluation of the altered waste zones would be undertaken during the Evaluation Phase (See Appendix C.9), not during groundwater rebound. Testing of geochemistry, water quality, and water flow would continue throughout mine life and into closure.

3406 Mine Drainage and Trace Element Release: Comment about analysis-mine (waste rock)

152-22 The ABA test results for each type of waste lie in the "uncertain" range (DEIS, pages 383-4). Because of this uncertainty, the two kinetic tests performed on Prichard formation rock are grossly insufficient, especially since those results are uncertain. The DEIS is wrong to conclude these tests do not support acid generation from this formation because in the previous paragraph it noted the wide range in ABP values and one test producing more acidity than alkalinity at the end of the 20-week test. This is exactly the reason that longer tests are necessary; there is no confidence in the conclusion of the DEIS for the Prichard formation.

Response: The Prichard formation has been exposed to weathering within the Libby Adit for nearly 20 years, with no associated acid production. The need for further characterization of the Prichard when it is exposed in new portions of the ore deposit is addressed in Appendix C9.

202-9 The Rock Lake ore body is potentially acid generating. This potential for acid generation creates an immediate threat because of the proposed use of the waste rock in construction activities. The waste rock would be used to construct the dams at the tailings impoundment. If the waste rock used in construction is potentially acid generating, then it is also likely that the tailings would have the potential to become acid generating.

Response: Section 3.9.4.3 of the SDEIS and FEIS discussed the acid generation risk of ore, waste rock and tailings. Apart from the barren lead zone, none of the waste rock that would be mined at Montanore has shown acid production in kinetic tests or *in situ* monitoring. Additional data collected during the Evaluation Phase would inform decisions about the merit of using waste rock for construction of the tailing impoundment. There would be very little sulfide in the tailings.

327-23 This is a totally unacceptable plan, given the fact that by the time testing is completed, the stockpile would already have leaked heavy metals into the watershed. The agencies should demand a professionally drafted plan that includes a lined storage area that will preclude any leakage from the from the outset.

Response: Section 2.5.3.4 of the DEIS and FEIS discussed the additional geochemical analyses that would be completed in Alternatives 3 and 4. These additional analyses were expanded in the SDEIS, and a comprehensive Geochemical Sampling and Analysis Plan developed independently by the agencies (see Appendix C.9). Waste rock during the Evaluation Phase would be stored on a liner at the Libby Adit. Data from the Evaluation Phase would guide waste rock management in subsequent mine phases.

331-28 The SDEIS acknowledges that there is a strong possibility that waste rock from the Revett Formation could become acid generating with associated metal release. Designating the material for special handling is not good enough. Planning to return barren zone (non ore) containing galena underground seems very irresponsible. That would be putting high-risk material into conditions whereby ARD would develop. The risk for ARD at the proposed mine is higher than previously considered. The extraction of ore would expose rock from the Revett Formation and allowing MMC to later design "underground facilities to minimize its disturbance" is wholly inadequate.

Response: This comment misrepresents the agencies' analysis in the SDEIS, which did not acknowledge a possibility for acid generation from the Revett Formation. The agencies identified a low risk of acid production, with potential for low to moderate metal release. The agencies acknowledged the need for additional characterization of the sulfide altered waste zones in the Revett formation, but recognized that no acid generation has resulted from mining and exposure of the Revett Formation at Troy.

331-28 The SDEIS mentions the possibility that ARD could possibly develop from the Pritchard Formation. The SDEIS needs to describe in detail what recourse would be taken if ARD were to develop. While the SDEIS dismisses the possibility of ARD from the Prichard Formation, there seems to be doubt as to the conclusiveness of the analysis that must be resolved.

331-28 Waste rock should not be used in any type of construction that includes roads, the tailings impoundment, starter dams, and pads for the mill construction. The waste rock can never be used because of the possibility it could release arsenic, copper, lead, and antimony into adjacent streams. The impacts to aquatic life, including bull trout and cutthroat, would be irreparable.

Response: All available kinetic and monitoring data show neutral pH for the Prichard Formation. These results contradict the interpretation based on static acid base accounting data, which do not take into account mineral encapsulation or reactivity and therefore known to be a conservative predictor of acid generation potential. The agencies (Appendix C.9) required further testing to confirm the conclusion that ARD is unlikely to develop from the Prichard Formation. The sampling would be obtained during the Evaluation Phase.

331-30 If the waste rock were to be backfilled and not used for construction, conditions in the mine void would become "saturated and anaerobic" during the 500-years required to fill the underground void. What would happen if the waste rock were backfilled and left exposed to the oxygen in the void as the cavity slowly filled?

Response: Oxidation of backfilled waste rock is expected to occur under these conditions. Testing to be conducted during the Evaluation Phase would address this possibility, and results would be used to adjust backfilling plans as needed. If oxidation would result in significant release of acidity and metals, alternative strategies involving water management, encapsulation, and amendment would be used to reduce the potential for adverse impacts to groundwater quality.

332-3 Enviromin (2007) states that acid will not be generation from most copper-iron sulfides in the Montanore deposit, with the exception of chalcopyrite (CuFe5S), yet they provide no supporting evidence for this statement. Enviromin (2007, p. 17) further suggests that the acid production values for the Montanore Project should be reduced to account for the presence of copper sulfide minerals that do not produce acid. Plumlee (1999) and the GARD guide (2011), which is cited in the DEIS, state that bornite (Cu5FeS4), one of the primary copper ore minerals at Montanore (DEIS, p. 200), will produce acid when oxidized by oxygen.

Response: Plumlee (1999) "infers" that bornite is acid generating, and the GARD guide cites this directly from Plumlee. This directly contradicts results published by Miller et al. (2003), who reported that bornite was not acid producing in comparisons of mono-sulfide net acid generation tests. Likewise, Brunesteyn and Hackl, in their Evaluation of Acid Production Potential of Mining Waste Materials (1982) reported "….sulfides such as bornite (Cu_5FeS_4) will be net acid consumers when oxidized, as shown by the following reaction:"

$$12Cu_5FeS_4 + 111O_2 + 20H_2SO_4 = 60\ CuSO_4 + 4H_3OFe_3(SO_4)_2(OH)_6 + 2H_2O$$

More detail was provided by Bevilaqua and others, in their 2010 study, "Oxidative dissolution of bornite by *Acidithiobacillus ferrooxidans*," which concludes that "the [bornite] oxidation was a net acid-consuming reaction."

332-4 More geochemical testing is needed on the barren lead zone material during the EIS phase to increase the understanding of its environmental behavior and improve waste management approaches.

Response: The need for additional testing of the barren lead zone was identified in Appendix C.9 of the SDEIS and FEIS.

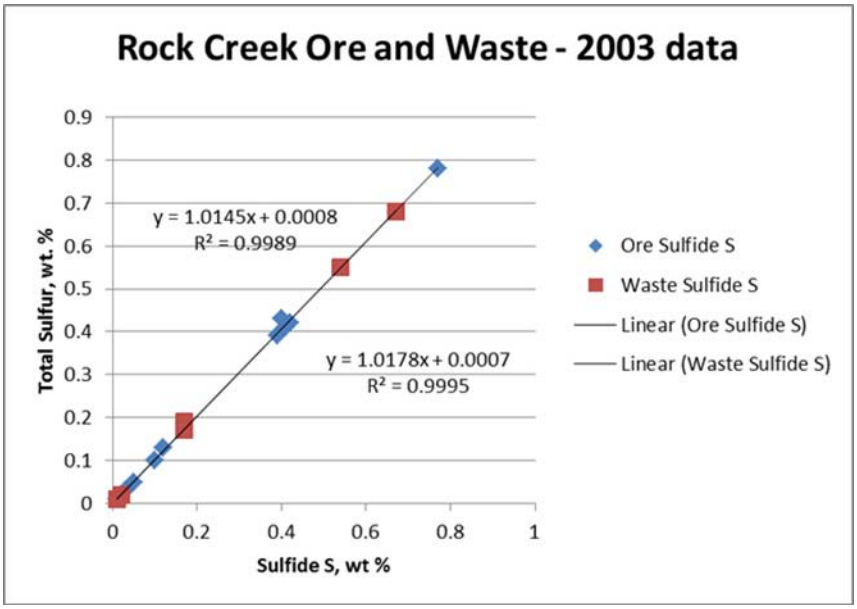
332-4 The ABA results for Troy and Rock Creek in Enviromin (2007; Figure 3-4) were adjusted to lower acid production values, using an assumption that all sulfide was chalcocite. There is no support for this approach in the GARD Guide, an industry-sponsored website, or any other reputable source. The only adjustment made for sulfur analysis in ABA testing should be to use sulfide sulfur rather than total sulfur. However, this approach is only suggested if a good relationship can be established between the two forms of sulfur through testing. Use of total sulfur is the most conservative approach, but the amount of sulfur

associated with sulfate and organic sulfur should be discounted if information on sulfur speciation is available (GARD Guide, 2011). The method used for estimating acid production potential (total sulfur vs. sulfide sulfur) for the Montanore deposit ABA results was not reported explicitly (although it appears that sulfide sulfur was used), but unless a good mathematical relationship can be established, total sulfur values should be used in ABA measurements and the interpretation of ABA testing results.

Response: Acid base accounting methods quantify and compare acid generating and acid neutralizing minerals on an equivalent stoichiometric basis. The GARD guide (International Network for Acid Prevention 2010) provides excellent general guidance for calculation of acid generation potential, but specifically recognizes that some sulfides are not acid generating. It explicitly emphasizes the importance of understanding the mineralogy in a rock for proper interpretation of acid generation potential. As explained in the GARD guide, acid generation potential is calculated based on the assumption that all sulfide occurs as the acid generating mineral pyrite. In the case of the Revett ore, this is known to be incorrect, because the sulfide minerals are non-acid generating copper sulfides (see discussion Enviromin 2013b and Maxim 2003). Based on the known mineralogy of the ore zone, which is dominated by chalcocite, the portion of sulfide which is not potentially acid generating was calculated and removed from the total sulfide used to calculate a meaningful estimate of acid generation potential. This approach was developed by Montana DEQ for interpretation of a group of samples from Troy and Rock Creek that had accompanying copper analyses. This correction could not be made for Montanore due to the lack of corresponding copper data, but the principal is equally valid. This correction is not appropriate for the Prichard Formation, or for the sulfide altered waste zones in the lower Revett, which do contain pyrite, and has consequently not been applied to these zones.

The only adjustment made for sulfur analysis in ABA testing should be to use sulfide sulfur rather than total sulfur. However, this approach is only suggested if a good relationship can be established between the two forms of sulfur through testing. Use of total sulfur is the most conservative approach, but the amount of sulfur associated with sulfate and organic sulfur should be discounted if information on sulfur speciation is available (International Network for Acid Prevention 2010). The method used for estimating acid production potential (total sulfur vs. sulfide sulfur) for the Montanore deposit ABA results was not reported explicitly (although it appears that sulfide sulfur was used), but unless a good mathematical relationship can be established, total sulfur values should be used in ABA measurements and the interpretation of ABA testing results.

Sulfide sulfur was used, appropriately. The sulfur data and correlation coefficients for Montanore were not reported by previous investigators, but the strong correlation (R2>0.99) observed for the Rock Creek portion of the Rock Creek/Montanore deposit shown in the graph indicates that the sulfur is almost entirely sulfide. These results are consistent with the very limited occurrence of sulfate or organic sulfur in the samples (See FEIS Section 3.9.4.3 and Enviromin 2013b).



335-12 What is the efficacy of selective handling and/or backfilling of underground workings on managing metals leaching or acid generation?

Response: Selective handling and backfilling of underground workings are two commonly used strategies for mine waste management. Reactive waste can be identified, amended and placed selectively, on a lined facility, under a cover, or below water to reduce oxidation and/or control migration of contaminants. Waste is backfilled underground to limit its exposure to precipitation, which promotes sulfide oxidation and metal release. Backfilling not only isolates reactive waste from surface weathering conditions, it can provide opportunities for subaqueous management (hence, anaerobic conditions) and can also provide physical support to prevent subsidence of the mined workings. These methods are recognized for their effectiveness in reducing contaminant loading, particular to surface water, but should not be misconstrued as a means of preventing all solute release from backfilled material. Rock that is backfilled under wet or subaerial conditions may continue to oxidize in the subsurface, until oxygen is depleted and/or groundwater fills the underground workings.

335-12 The SDEIS indicates that Montanore may have some potential for acid generation and metal leaching that should be fully evaluated, and that water quality impacts may be more significant than indicated. The SDEIS inappropriately defers analysis until after the ROD has been issued.

Response: Samples required for analysis could only be obtained through underground access to the deposits, due to limited access for drilling from the surface within the wilderness area. Data collected during the Evaluation Phase would be evaluated and disclosed, together with the data presented in the FEIS, to determine if the agencies preferred alternative required modification.

389-9 During the evaluation phase, 256,000 tons of waste rock would be stored on private land at the Libby Adit site in a lined storage area. Seepage from this rock would eventually be discharged into Libby Creek. The reclamation procedures associated with disposing of this rock are unclear. It is critical that a monitoring and reclamation plan is developed and implemented because pit liners are subject to tear. A lined pit is not an adequate long term storage plan for these toxic wastes.

Response: If the project did not proceed after the Evaluation Phase, the waste rock storage area would be graded and reclaimed in accordance with MMC's Minor Revision 06-002 to Permit #00150 (Montanore Minerals Corp. 2006). If the project proceeded after the Evaluation Phase, the waste rock would be used at the tailings impoundment.

3407 Mine Drainage and Trace Element Release: Comment about analysis-mine (tailings)

141-4 Could you provide a chemical analysis of what a representative sample of tailings would likely be?

141-4 Would you estimate what amounts of toxic metals such as lead, copper, zinc, antimony, manganese and other common metals and chemicals the tailing may contain, and calculate respectively how many tons of each would be in the tailings pond when full?

Response: A table providing estimated mine wastewater, adit wastewater, tailings wastewater and Water Treatment Plant treated water quality was added to Section 3.13.2.2.2 in the FEIS.

152-22 The DEIS notes that the chemistry of the tailings may be more influenced by the process activities than by the amounts of sulfide in the ore (DEIS, page 380). However, based on the potential for ore to produce acid, it is not appropriate to dismiss it in the tailings as the DEIS apparently does. For example, the DEIS bases the analysis on one test from 1992 (DEIS, page 381). The DEIS claims that most sulfides are removed during processing, resulting in sulfide concentrations less than 0.1%; it dismisses this proportion as too little to produce acid. This is not correct because the test mixes the tailings so that the sulfide is well distributed into a homogeneous mixture. In a tailings impoundment, there will certainly be areas with much higher sulfide concentrations – these will produce acid over the long term.

Response: Tailings are highly homogenous materials, as a result of the grinding, mixing and flotation processes used to recover metals. The sulfide content of the tailings is very low, as described in Section 3.9.4.3.2, and it is extremely unlikely that there would be acid generation from the tailings impoundment.

344-5 It's impossible to assess the risk potential of the tailings ponds without knowing what they contain and it seems a denial of convenience that no estimates are provided.

Response: The quality of water in the tailings ponds is estimated based on tailings chemistry from Rock Creek (whole rock, SPLP and TCLP) as well as 20 years of monitoring at the Troy mine tailings impoundment. Together, these data represent solid laboratory and field evidence for the predicted water quality.

3415 Mine Drainage and Trace Element Release: Comment about effect-mine

98-2 "The leaching of nitrate from blasting residues on ore, waste rock, and tailings is also a short-term concern." This statement is misleading unless "short term" is more clearly defined. This should be clarified in the EIS.

Response: Section 3.9.4.1 was revised in the SDEIS and FEIS to eliminate "short term."

321-2 Tests seem to indicate that pH [acid/base] tests indicated Montanore Mine is more likely to generate acid than either Rock Creek or Troy mines. That is an unacceptable condition in which to allow the mine.

Response: The low risk of acid generation is very consistent between deposits, and is not significantly higher for Montanore than at Rock Creek or Troy.

342-23 Rock detritus and rubble from subsidence will include high concentrations of sulfides that are more amenable to oxidation than target minerals, and the rate of acid generation will be elevated and subsequent release of all metals available in the system will increase beyond that suggested by the SDEIS.

Geology

3450 Suggested new information/analysis

74-18 [The DEIS] does not mention the possibility that the mine could increase presence of asbestos fibers in air, nor assess this possibility in a meaningful way.

74-18 How will this project affect levels of airborne asbestos fibers in Libby's air, and will this pose an additional health hazard to Libby residents and to mine workers?

74-18 The type of particulate matter is not specified, but given Libby's history, it seems likely that some might be asbestos fibers. The project is expected to increase concentrations of "criteria air pollutants." While the DEIS refers to a document drafted in their application for a Montana Air Quality Permit (MAQP) in which an assessment of impacts to Libby PM10 and PM2.5 non-attainment areas, this is not part of the DEIS. In the preliminary determination issued in 2006, the MAQP does not list air quality in Libby in regards to these primary pollutants as a chief concern.

74-20 Additional assessment of the mine's impact on current levels of asbestos fibers in the air near and in Libby.

Response: 3.8.2.1.3 of the DEIS and Section 3.9.2.2.1 of the SDEIS and FEIS discussed that no asbestos fibers were detected in 11 samples collected from five drill holes. The Montanore Project would have no effect on asbestos-related health hazards in Libby.

186-1 When were the three periods of movement that can be distinguished from the Rock Lake Fault? How many periods of movement can be distinguished from the Libby Lake Fault? What is the probability

of movement occurring on these faults in the future? Given the close proximity of the proposed mine adits to these faults and subsequent impact to the existing stress fields, what is the likelihood of inducing localized movement? What would be the cumulative effects of the Montanore Project and the Rock Creek Project on the Rock Lake Fault and existing stressfields? How many faults would be intersected concurrently by both proposed projects?

Response: In all mine alternatives, MMC would maintain a buffer between any mine void and the Rock Lake Fault, eliminating the likelihood of inducing localized movement. The Snowshoe Thrust, frequently referred to as the Libby Lake Fault, was likely encountered during the development of the Libby Adit 25 years ago. The relatively small size of the openings of the three adits would unlikely induced localized fault movement. The Montanore and Rock Creek projects are geographically separated and the same faults would not be close to both mines.

Subsidence

3500 Suggested new information/analysis

182-3 P.55. Are there any such stress monitors being utilized at Troy??

Response: The existence or absence of stress monitors at the Troy Mine was considered in the EIS. The agencies consider stress monitors and other geotechnical monitoring to be prudent at Montanore, regardless of practices at other operations.

3503 Comment about analysis-mine

186-1 As cited, Agapito Associates, Inc. (2007b) concludes that depth of cover will prevent any chimney subsidence from breaching the surface. There assessment, however is based an excavated height of the mine entries being 30 feet for the upper-seam only and 64 feet for both seams. As stated in the DEIS the minimum excavation height is 48 feet and the maximum height is 70 feet for a single seam. The cumulative heights for both seams would be either 96 feet or 140 feet. What is the potential for chimney subsidence given these excavation heights?

Response: The caving analysis was performed assuming an extraction height of 70 feet. The extraction height was based on an average thickness of the lower horizon (the B ore zone) of 34 feet and average thickness of the upper horizon (the B1 ore zone) of 30 feet (see Section 2,4.2.1.1 of the DEIS and FEIS.) Thickness of the two zones ranges from 14 to 140 feet. This height was not defined as a single seam, 2 seams, or 2 seams with a barren zone in between. The analysis simply looked at what the anticipated effects would be if a slice 70 feet in height were removed. No other thicknesses were analyzed. Qualitatively, a thicker extraction height could result in a higher cave height. Using an empirical relationship that maximum observed caving has been up to 10x the extraction height (Call and Nicholas, 2005), the caving height associated with a 140 foot extraction zone would be 10 x 140 = 1,400 ft. Note that the quantitative analysis performed by Call and Nicholas (2005) estimated the affected cave height at Montanore, which was based on rock type, rock strength, and mine depth, the affected area was between 3 and 5 times the extracted seam height. The 10x rule-of-thumb is observed under the most adverse ground conditions such as soft and highly fractured rock, both conditions which do not exist at Montanore.

74-12 The Troy mine, considered a geological analog for the Rock Creek and Montanore projects and used in predictive modeling of groundwater dynamics and mineral composition in the DEIS, has experienced problems with subsidence, described as two sinkholes, one 50 feet long and 50 feet deep and the other 135 feet long, 100 feet wide and about 20 feet deep. The first sinkhole is considered an instance of “chimney” subsidence; the second is supposedly due to pillar collapse.

202-38 Considering the history of the Troy mine and the occurrence of subsidence, it is surprising that the DEIS would use that mine as an analogy for the Montanore mine. The Montanore mine proposes using a mining depth of 500 feet, despite two very recent sinkholes at Troy having occurred at 270 feet and 320 feet. Why are the agencies assuming there won’t be future issues of subsidence and surface disturbance at Troy, and at depths greater than the recent 320 feet?

Response: The agencies have made no assumption about future subsidence issues at Troy. The Troy Mine sinkholes were the result mining into or close to (near) vertical structural features (faults) where the strength of the overlying rock was weak, allowing for failure propagation along a plane of structural weakness. The 2012 Troy Mine subsidence was due to inadequate pillar sizes. There may be subsidence at depths greater than 320 feet should there be an alignment of similar conditions. The 2012 Troy Mine subsidence was due to inadequate pillar sizes. Caving and potential subsidence would be avoided at Montanore by identifying zones of structural weakness (e.g., faults, highly fractured rock) and keeping a buffer between the mining operation and these zones. In the FEIS, the agencies increased the buffer distance between any mine void and the Rock Lake fault to 300 feet until additional data collection and analysis was completed. Because of the 2012 Troy Mine subsidence, the KNF completed a Failure Modes Effects Analysis (FMEA) for the underground mine component of the Rock Creek Project in 2014. Based on the FMEA, the agencies identified additional measures that were incorporated into the agencies' mitigation required in Alternatives 3 and 4 (Section 2.5.2.6.4 of the FEIS).

248-26 The DEIS ignores the complicating factors and higher risks of subsidence arising from multi-seam mining, and ignores some of the major impacts of subsidence on mine water quality by focusing only on operating mine analogs based predictions. Long term, collapse and subsidence will greater than stated. Rock detritus and rubble from subsidence will include high concentrations of sulfides that are more amenable to oxidation than target minerals, and the rate of acid generation will be elevated and subsequent release of all metals available in the system will increase beyond that suggested by the DEIS.

342-23 The SDEIS ignores the complicating factors and higher risks of subsidence arising from multi-seam mining.

Response: The issue of mining two ore zones was addressed by the agencies' mitigation to explicitly consider the stability of the sill pillar (rock between the two ore zones) in the final mine plan. Waste rock characterization at Montanore has indicated the mine rock has low sulfide concentrations and a low potential for acid generation. Most of the mine void would be flooded post-mining, limiting oxygen availability and inhibiting the oxidation reaction of exposed or backfilled rock.

331-41 The risk of subsidence that would transfer to the surface is also a real threat. We were unable to find in the SDEIS the amount of buffer proposed between the inner mine workings and the surface, but regardless, subsidence is an inevitable consequence of underground mining. Buffers merely delay the occurrence.

Response: A minimum of 500 feet of cover is required over the Montanore mine workings. This minimum buffer would be reevaluated during final design, after additional data are collected during the Evaluation Phase. The agencies' mitigation for subsidence, which was revised in the FEIS (Section 2.5.2.6.4), was designed to minimize the likelihood of subsidence affecting surface resources.

264-3 Like to see more convincing studies that use the best available technology regarding the geologic structure of the mined (proposed) areas and the possible effects on the overall hydrology of the disturbed areas.

Response: Improving the understanding of the structural setting was one of the agencies' mitigation discussed in Section 2.5.3.7 of the DEIS and SDEIS, and Section 2.5.2.6.4 of the FEIS

74-13 If visible disturbances or changes in the qualities of the land resulted from subsidence due to the mine, whether immediately or in the long-term, Wilderness character would be degraded. Potential effects to water resources that could occur because of this phenomenon are not fully analyzed in the DEIS. MMC's mitigation plan will not prevent subsidence or effectively minimize its impacts; pillars are liable to collapse (as was the case in Troy).

Response: The agencies have analyzed the potential for subsidence and its possible effects on surface and underground resources in Section 3.9.3 of the DEIS and Section 3.14.3 of the FEIS using available information. The agencies believe the analysis is sufficient to fulfill the intent of NEPA and MEPA. Because of the 2012 Troy Mine subsidence, the KNF completed a FMEA for the underground mine

component of the Rock Creek Project in 2014. Based on the FMEA, the agencies identified additional measures that were incorporated into the agencies' mitigation required in Alternatives 3 and 4 (Section 2.5.2.6.4 of the FEIS).

333-9 Another common impact of drawdown is subsidence. The SDEIS does not mention subsidence, other than to provide a definition in the glossary, Chapter 7. The SDEIS therefore ignores the potential for subsidence.

335-31 Subsidence was not predicted during the permitting of the Troy Mine or the Stillwater mine, and yet it occurred at each mine. What are the potential impacts of subsidence at Montanore, particularly given its location underneath the Cabinet Mountains Wilderness?

Response: Section 3.9.3 of the DEIS and Section 3.14.3 of the FEIS disclosed potential subsidence effects. Subsidence was not discussed in the SDEIS because no new or updated information was available. Groundwater drawdown is unlikely to increase the risk of subsidence. The KNF's FMEA for the underground mine component of the Rock Creek Project in 2014 considered numerous failure modes in the underground mine that could lead to subsidence. Based on the FMEA, the agencies identified additional measures that were incorporated into the agencies' mitigation required in Alternatives 3 and 4 (Section 2.5.2.6.4 of the FEIS).

347-1 The number of adits doesn't seem to be incorporated into the question of subsidence.

Response: Section 3.14.3 of the FEIS was revised to discuss potential subsidence of the adits.

3505 Comment about effect-mine

74-12 The partial-extraction mining technique planned for the Montanore project, in which pillars are sized and left permanently to support the overlying rock, will in the DEIS's estimation, prevent subsidence during active mining. Subsidence may, however, occur after mine abandonment, even hundreds of years post-mine.

74-13 The rationale for Rock Creek given in the geotechnical assessment stated that subsidence occurred at the Troy mine in part because of its proximity to the surface and lack of overburden. The CSPP report finds that: "Mining at any depth can result in subsidence, and the affected surface area is generally larger than the extraction area. Greater depths of overburden do not prevent subsidence, but may prolong the time period before subsidence effects are observed at the surface." (Blodgett and Kuipers, 23). This suggests that even if effects from subsidence were not immediately discernable, as they were in Troy, they would occur in the long term. So, while we might not perceive effects during the mining process, they would still be a 'hazard in the years following the closing of the mine. CSPP further states, "Buffer zones are not true mitigation measures because subsidence will still occur." (Blodgett and Kuipers, 19).

Response: The agencies cannot predict with absolute certainty that subsidence would not occur, however the analytical and empirical data point to subsidence not occurring at Montanore provided mitigations are followed. The underground data collected during the evaluation phase would help refine the subsidence analysis, and may result in changes to the mine plan. The agencies' mitigation includes the requirement for MMC to fund an independent technical advisor to assist the agencies in review of MMC's subsidence monitoring plan, underground rock mechanics data collection, and MMC's mine plan. MMC would fund and facilitate biannual surveys of the underground workings that would be completed by an independent qualified mine surveyor. After completing the monitoring survey, the independent surveyor would submit maps of the workings to the agencies and would report any underground disturbances that crossed the established extralateral rights boundary, entered into designated buffer zones, or deviated from agency approved mine design.

74-13 MMC's mitigation plan to prevent subsidence includes, in addition to the pillars which may be up to 50 feet in width, observing a 500 foot vertical and horizontal buffer at the outcrop near Rock Lake and a 100 foot buffer to the Rock Lake Fault. Yet, if trough subsidence occurred, it could affect up to 1200 feet beyond the footprint of the failure (399). Even given the 500-foot buffer, this could affect a sizable portion of Rock Lake. If chimney subsidence occurred, it would cause increased rock fracture and thus,

permeability, probably increasing presence of water in the mine and need for dewatering, for the life of the project. Drawdown from increased dewatering would increase deleterious effects on surface water levels and rock stability.

202-37 The DEIS proposes to use mining depth as a mitigation for mine subsidence. Other research indicates that mining at any depth can result in subsidence. The surface above the mine cavity is wilderness. Can these proposed mining depth mitigations actually protect surface features long-term and prevent the occurrence of sinkholes and surface disturbance?

Response: Section 3.9.3.1.2 of the DEIS and Section 3.14.3.1.2 of the FEIS disclosed that trough subsidence effects could occur within an 18° angle of critical deformation. Therefore, the area beyond the mining footprint that may be impacted by subsidence is a function of the mining depth. For the maximum assumed mining depth of 3,800 feet, subsidence effects may occur up to 1,200 feet beyond the footprint of pillar failure. However, near Rock Lake, where the minimum mining depth would be 500 feet, the limit of subsidence effects beyond the failure footprint would be about 160 feet, well within the proposed 500 feet horizontal buffer zone. Due to the spatial relationship between the ore body and Rock Lake, no mining would take place beneath Rock Lake (in plan view). The agencies do not believe Rock Lake would be dewatered.

202-33 Subsidence or collapse of the subsurface cavity and tunnels occurs frequently in the industry. If that failure were to happen beneath the wilderness, surface impacts could be expected.

310-35 Subsidence and/or collapses in subsurface cavity and tunnels occur frequently in deep underground mines. If any such failure were to happen beneath the wilderness, surface impacts would be expected.

Response: Section 3.9.3.1.2 of the DEIS and Section 3.14.3.1.2 of the FEIS discussed possible effects to surface resources from subsidence.

Tailings Impoundment Stability

3553 Comment about analysis-mine

Maximum Credible Earthquake

98-1 The random local earthquake M 6.5, cited under the mine site at a depth of 5 km, should be used as the Maximum Credible Earthquake (MCE) for calculation of peak acceleration, rather than a M 7.0 earthquake on the Bull Lake Fault.

98-5 The usual, and conservative, choice of distance for a random earthquake (sometimes called a floating earthquake since it is not associated with a known fault) is to site it directly under the site in question. It is not clear why Morrison-Knudsen chose to site this earthquake 15 km from the mine site, but one result of siting this earthquake event 15 km from the mine site, as opposed to under the mine site, is that the maximum horizontal acceleration associated with the random event is significantly decreased. To be conservative in evaluating the potential impacts on a random local earthquake, the event should be sited under the mine site, for example at a depth of 5 km.

98-6 The acceleration associated with the MCE (the acceleration associated with a M6.5 earthquake located under the mine site, or 0.22 g, whichever is larger) should be used in calculating the seismic safety of the tailings dams.

98-6 The choice of 0.11 g as a design event by Klohn-Crippen for the Montanore tailings dams appears to be highly unusual, and should be carefully reviewed.

98-6 The assumption of 0.11 g as the maximum acceleration as opposed to 0.22 g has huge implications for the design safety of the tailings dams. As the g acceleration increases, the amount of energy increases logarithmically. This assumption appears to be made on the basis of “professional judgment.” The

conservative choice, and the choice that is usually made in making seismic safety calculations for tailings dams, is to use the acceleration associated with the MCE.

Response: Klohn Crippen used 0.22 g for Peak Ground Acceleration (PGA) for the liquefaction analysis (see Appendix II in Klohn Crippen 2005). An acceleration of 0.11 g was used in the pseudostatic stability analyses, the basis and appropriateness of which is discussed in Klohn Crippen (2005). The agencies' independent analysis, discussed in Section 3.9.3.2.2 of the DEIS and Section 3.14.3.2.2 of the FEIS, concluded the estimated PGA of 0.22 g is sufficient to demonstrate the feasibility of providing dynamic stability in the layout and design of the tailings impoundment. At this point in design development, the use of pseudostatic analysis is an acceptable seismic evaluation approach since liquefaction is not anticipated. Section 2.5.3.5.2 of the DEIS and SDEIS and Section 2.5.2.6.3 of the FEIS discuss the final design process. The final design process would include re-examination of static and seismic analyses using standard methodologies to ensure the estimated PGA is the most appropriate value for the Montanore site and for construction of a high-hazard dam. The final design would also undergo a peer review.

Capacity

331-24 We have serious concerns about the proposed Poorman tailings location. First, it appears that the design of the Poorman site is conceptual only. The Poorman site has a limited capacity so an increase in the dam crest would be required and a thickener would also be needed for the location to be used to store 120 million tons of mine tailings. These are significant changes that require an analysis that would address some of the obvious concerns related to environmental protection and dam safety.

331-24 The SDEIS concludes that the design of the tailings impoundment will be decided during the design phase of the mine, which is unacceptable from a NEPA standpoint. When is the design process for the tailings impoundment projected to occur? Will the public be able to examine and comment on this phase of the proposed Montanore Mine? The SDEIS explains in great detail the different mine alternatives. One of the key issues separating different alternatives is the location and design of the tailings impoundment. Unfortunately, the SDEIS contains very limited geotechnical and design information for the Poorman location. The SDEIS should have made current design information available in the SDEIS for public comment.

Response: The level of design for all project facilities was appropriate for an environmental analysis under NEPA and MEPA. Section 2.5.3.5.2 of the DEIS, SDEIS and FEIS discussed the final design process for the KNF's preferred mine alternative (Alternative 3). The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate level of MEPA review on the application.

Impoundment Foundation Materials

98-7 Given the numerous assumptions about dam stability, including that the dam drains will work properly in perpetuity, and that the tailings material used for dam construction will remain fully unsaturated in perpetuity, there is a finite but unquantifiable risk that an unanticipated failure could occur in the glaciolacustrine clay sediments that underlie the main tailings dam and the diversion dam.

182-2 P. 51. Alt. 3 (Cherry Creek); soft-clayey material is present beneath the south abutment of the starter dam. This same situation as reflected in the Rock Creek EIS is dealt with by excavation of the clayey material and replacement with other material. Why is it proper in one mine area but not in another. Is cost a factor? Is safety a long-term issue?

182-13 3. P.424. "It is not known whether the low permeability fine-grained material in the Poorman tailings impoundment site are the same glaciolacustrine type deposits found in the Little Cherry Creek drainage, but they appear to function in the same manner. How is it that a Poorman Creek tailings impoundment site is even a viable DEIS consideration and such information is unknown?

342-20 While this last statement [concerning the presence or absence of liquefiable material beneath the dam] pertains to the Little Cherry Creek site, it also applies to the Poorman site. The existence of liquefiable glaciolacustrine clays under a large portion of the Poorman site is already known (SDEIS, Volume 2, Figure 64). It is also known that these clays are prone to liquefaction under seismic loading conditions. In the event that tailings liquefied in a seismic event, the impoundment dam could fail and result in a catastrophic flow of tailings downgradient, onto LPMC land only 250-300 feet away.

Response: Section 2.4.1.5.3 of the DEIS and FEIS discussed the presence of clayey materials beneath the Little Cherry Creek Tailings Impoundment Site. Section 2.5.3.5.3 of the DEIS and Section 2.5.3.6.2 of the FEIS discussed that the geology and near surface soils of the Poorman Tailings Impoundment Site are similar to the materials found in the Little Cherry Creek Tailings Site (Alternative 2) except that soft weak clays do not appear to be present in the soil strata (Morrison-Knudsen Engineers, Inc. 1989a). Section 2.4.1.5.3 of the Montanore DEIS and FEIS stated that a portion of the soft clayey material would be excavated and replaced with "suitable foundation material", and shear key(s) constructed in strategic locations. This is similar to what is proposed at Rock Creek, so the approach for dealing with soft foundation clays is similar for both mine proposals. The extent, location, and volume of the glaciolacustrine clays at the Little Cherry Creek site and the Poorman site are unknown and would not be definitively known until additional geotechnical drilling was conducted during subsequent phases of the design process and until foundation preparation was underway. At that point in time, the exact volume of the clay to be removed would be known determined, and the volume and location of the removed clays would be based on ensuring the structural stability of the tailings impoundment. The level of information available for the Little Cherry Creek and Poorman Tailings sites is sufficient to conduct an analysis that fulfills the intent of NEPA and MEPA. At both sites, the extent of the glaciolacustrine clay and its strength would be assessed during final design to optimize the need, location and extent of the shear keys or removal of the clay stratum. Section 2.5.3.5.2 of the DEIS and SDEIS and Section 2.5.2.6 of the FEIS discussed what information would be collected at final design. The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate level of MEPA review on the application.

Artesian Conditions

182-10 MKE dismissed the Poorman site from consideration because it lacked sufficient capacity and would require a large volume of earth and rock fill material for balance. In addition artesian ground water conditions at the site would probably require the installation of pressure relief wells to control uplift pressures in the dam foundation. This latter conflicts with a different interpretation earlier in the DEIS. The same artesian pressures are found at the [Little] Cherry Creek site.

200-7 Artesian pressures at both impoundment sites (Little Cherry Creek and Poorman) were identified in some boreholes during the site investigations conducted by Noranda (Morrison Knudsen Engineers, Inc. 1990). Noranda proposed to use a system of pressure relief wells to relieve artesian water pressures. In 1992 the agencies concluded an adequately designed pressure relief well system would relieve artesian pressure and ensure dam stability during all project phases. (MPDES Volume 1, page 405) Has there been a more recent, up-to-date effort to determine the potential for destabilization of the tailings pile due to the artesian pressures? Both NEPA and the ESA require effects analyses to be based on the best available science. Is there new information since 1992 that might affect the conclusion that was reached at that time?

248-13 The Agencies need to more fully investigate the conflicting consultants' conclusions on the effect of artesian conditions in the Poorman and Little Cherry Creek areas. The Agencies should retain their own third party engineering consultant to examine, in an objective, professional manner (i.e., not in a predisposed manner), the artesian condition data relative to the impoundment structure and explain why MKE and Noranda's previous conclusions were wrong (or, conversely, why Klohn Crippen's are right).

310-15 Have there been more recent efforts to determine the potential for destabilization of the tailings pile due to the artesian pressures? Both NEPA and the ESA require effects analyses to be based on the best available science. Is there new information since 1992 that might affect the conclusion that was reached at that time? The FEIS needs to address this issue.

331-24 The geotechnical issues are critical for numerous reasons, including the possibility of a catastrophic failure of the impoundment, which would have significant environmental consequences to the Libby Creek drainage and the Kootenai River. The proposed Poorman site would be placed on four different springs. It is critical to understand how those springs would impact the stability of the impoundment.

Response: Section 3.9.3.2.2 of the DEIS (Section 3.14.3.2.2 of the FEIS) disclosed the potential effect of artesian conditions on an impoundment at the Little Cherry Creek site. Similar effects would be anticipated for the Poorman site. No new information, site investigations or analyses regarding the Poorman impoundment site characteristics have been conducted since the DEIS. The lead agencies completed a stability evaluation of Alternative 3. The purpose was to confirm the feasibility to locate and design a stable Poorman Tailings Impoundment facility at a 120 million-ton capacity between Little Cherry and Poorman creeks. Based on the results of the analyses, the Alternative 3 tailings facility can be designed as a safe and stable structure under both static and pseudo-static loading conditions.

Effects from artesian conditions and potential impacts to the tailings impoundment would be re-evaluated using standard-of-practice techniques during the final design process. Specifically, additional site investigations would be carried out using standard-of-practice techniques during the detailed design stage and, in conjunction with additional engineering and stability analyses, would be used to finalize the dam sections, required monitoring, and, if necessary, additional measures to manage the impact, if any, due to artesian pressures. The final design would be reviewed by an independent 3rd party technical review panel. The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate level of MEPA review on the application.

Catastrophic Failure

141-4 What is the design life of the tailing ponds and other water treatment facilities? Will these facilities provide adequate protection to this community and ecosystem for even a thousand years?

202-6 The DEIS predicts the possibility of a tailings impoundment failure as high as 1%. The consequences of such a failure would be catastrophic to the fisheries and to water quality. Is it prudent to locate the 120 million ton tailings impoundment on top of wetlands and springs, including artesian springs? The agencies need to consider the impact of an impoundment failure on the Kootenai River because of the massive volume of sediment and metals that would enter the drainage.

312-2 Even a 0.1 to 1 percent chance of catastrophic failure of the impoundment and what it would mean for our local watershed including the Kootenai River itself is not a chance I think our community should be willing to take.

331-24 Has a failure modes effects analysis been completed for the proposed Poorman tailings impoundment site? The Little Cherry Creek site estimated that there would be a 0.1 to 1 percent likelihood of catastrophic failure of the impoundment. The SDEIS contends that the failure mode for the Poorman site would be comparable to the Little Cherry Creek site. How can the SDEIS make that determination with a complete lack of geotechnical data for the site? There seems to be a lack of sufficient data on the Poorman site to conduct a failure mode effects analysis.

331-25 A failure would be devastating not only to creeks in the region of the mine, but the Kootenai River would suffer significant damage if a massive sediment load were introduced. Is there an emergency plan to protect the Kootenai from an introduction of massive amounts of sediment? How would the sturgeon survive in the Kootenai River if this were to occur? Would impacts extend beyond Montana into the Kootenai River drainages of Canada and Idaho? The Little Cherry Creek impoundment site has been analyzed, but it appears the Poorman site is conceptual only. Could the risk of failure be higher at the Poorman site.

344-3 1% failure rate is actually pretty high, well within the realm of possibility. So are 1:1,000 odds. No airline, rail, or bus service would be allowed these odds for their passengers, but apparently these odds are fine for anyone living downstream from MMC. Why is that?

344-3 Catastrophic failure of the tailings impoundment would release tailings with elevated metal concentrations into the diverted Little Cherry Creek and Libby Creek. The release of metals would cause severe adverse effects on the aquatic biota that would persist for an undetermined period of time depending upon the type of failure, size of the impoundment at the time of failure, volume of water, and volume and character of sediments". P223 A good example of being comfortable with large environmental risk.

Response: Section 3.14.3.2.3 was revised in the FEIS to include a discussion of the Failure Mode and Effects Analysis (FMEA) for the Poorman site. The FMEA is an engineering reliability technique used to systematically identify, characterize, and screen risks that derive from the failure of an engineered system to operate or perform as intended. The term "risk" encompasses the concepts of both the likelihood of failure (the expected frequency of failure), and the severity of the expected consequences if such events occurred. FMEA seeks to characterize risks in a systematic way and is intended to identify the main risks or failure modes. The FMEA examined the likely consequences of the identified risks. The agencies are not endorsing any failure rate as an acceptable level. The EIS disclosed the results of the FMEA.

3554 Comment about baseline data

327-23 A field exploration program must be completed upon which to base a safe and effective containment facility design for mining waste, and there can be absolutely no credible reason that the corporation did not complete this essential step prior to declaring the SDEIS complete.

333-3 The SDEIS has also presented a preferred alternative for a tailings impoundment at Poorman Creek which has not adequately studied. There has bean no geotechnical analysis to show the site is even acceptable. This is especially problematic because the mining company had considered this site less acceptable for a tailings impoundment than any other site they had considered.

333-19 The SDEIS was submitted without a detailed design for the Poorman tailings impoundment, although that is the preferred action. The SDEIS presents only a conceptual design and that site information "would be collected during field exploration programs during the design phase". They have not even completed a seepage analysis on the Poorman tailings impoundment (SDEIS, p 225), rather they have relied on estimates from the Little Cherry Creek site to arrive at the 25 gpm estimate (AMEC 2010, p 9). Considering that MMI (2005, p 211) had considered that the Poorman site was not a viable site for a tailings impoundment, this is especially problematic. This is another reason why this SDEIS is premature – there is much additional information to be collected and presented in the NEPA documents.

335-4 It is impossible to evaluate the impacts of the Poorman tailings impoundment facility (the preferred alternative), and compare to other alternatives, when the plans considered by the SDEIS are conceptual only. The SDEIS clearly states that they need additional data to determine whether the site can accommodate the amount of proposed tailings (120 million tons), and that there is insufficient geotechnical

data to demonstrate that alternative3 will be stable over short and long-term. A preferred alternative should not be approved without sufficient information to determine its feasibility.

373-1 Instead of presenting a detailed design for the proposed tailings impoundment, page 47 of the SDEIS states that the preferred tailings plan is conceptual only and MMI has not yet commissioned a design. This means that the public will probably not be included in reviewing or commenting on this integral component of the mine plans.

Response: The level of design for all project facilities was appropriate for an environmental analysis under NEPA and MEPA. Section 2.5.3.5.2 of the DEIS and SDEIS and Section 2.5.2.6 of the FEIS discussed the final design process for the KNF's preferred mine alternative (Alternative 3). The KNF would conduct additional NEPA analysis if the data collected during final design require substantial changes in the selected alternatives that are relevant to environmental concerns or constitute significant new circumstances or information relevant to environmental concerns and bearing on the proposed action, as required by 40 CFR 1502.9(c)(1). If MMC submitted final designs that were not materially different from the conceptual designs of Alternative 3, the DEQ would approve the final designs. If the analysis of the data collected during the Evaluation Phase caused MMC to submit final designs that are materially different from the conceptual designs of Alternative 3, the DEQ would require MMC to submit an application to modify its operating permit. The DEQ would conduct the appropriate level of MEPA review on the application.

3567 Comment about mitigation-mine

182-5 P. 82. If we look to the analog (Troy) mine, we find that it was not constructed to specifications submitted to the regulatory agencies. Responsibility, requirements and penalties for non-compliance must be included and detailed in this field manual.

393-8 If the proposed Montanore mine is permitted the regulatory agencies need to ensure the tailings impoundment is built to the final specifications submitted. A visual video record of the construction needs to be required and made.

Response: The agencies would provide adequate oversight during facility construction. Typically this would involve retaining a third-party independent engineering firm to perform the quality assurance and quality control (QA/QC) on all construction to ensure facilities and structures are constructed to specifications. This is a common practice for large construction projects and is intended to limit any conflict of interest for the contractor who is performing the work. The agencies determined a visual video record of the construction was not appropriate.

Groundwater Hydrology

3600 Mine and Adit Areas (Mine and Adit Inflows): Suggested new information/analysis

Groundwater Dependent Ecosystem Inventory and Monitoring

182-7 The plan would be submitted to the agencies for approval after the GDE inventory is completed and early enough for 1 year of baseline data to be collected before mining begins. Baseline must be collected before any construction activity related to the mine is begun not just 1-year before mining commences.

182-14 Other nearby springs and seeps outside the analysis area, but within the Ramsey and Libby creek watersheds, have not been surveyed.

182-22 8. Appendix C. Surface Water, Ground Water, and Aquatic Life Monitoring Plans, Alt. 3 & 4. The objective of the surface and ground water monitoring plans will not be met with monitoring that begins 1 year before mine construction. Realistic baseline and monitoring requirements need to begin within 120 days of the ROD. Lapses in collecting data due to any circumstance are unacceptable and penalties need to be incorporated into any plan to ensure compliance.

182-22 To be fair and provide a more reliably accurate monitoring picture should require several years of baseline gathering beginning immediately.

182-23 Any changes and or modifications to the monitoring programs need to ensure that data collected over any time periods is comparable and compatible with previously collected data, so that what occurred at the Troy mine (incomparable data sets) is not repeated. This is critical to enforcement capabilities and needs.

186-2 Were no springs identified near the Libby Lakes and the Libby Lake fault? Or was no spring survey conducted in this area?

186-3 More data is needed about all springs in the proposed area. At minimum a survey of plant species in areas that will be impacted by the proposed mine is necessary.

328-8 In Figures 32 and C-3, Previous and Proposed Groundwater Dependent Ecosystem Inventory Area, we note that the wetland area in East Fork Rock Creek, located about three quarters of a mile below Rock Lake is not currently included in the inventory area, and it should be. For that matter, all of the riparian zone on EFRC and EFBR should be included in this inventory area, extending from the headwaters to at least the wilderness boundary.

335-26 If the company tries to mitigate the impacts of mine discharge water to EFBR with grouting or bulkheads, what are the most likely places for where that water will surface? Table 84 on page 227 indicates there are a number of springs within the CMW where this may be an issue. The SDEIS indicates that it will be surveying these springs after the ROD is issued to identify the source of water. This is critical baseline data to include in the SDEIS to determine whether these springs would be affected by dewatering, and/or water quality would be affected by mine discharges after closure.

335-27 A groundwater dependent ecosystem (GDE) survey is essential baseline data that should be included in the SDEIS for public review.

347-1 There was not an inclusive inventory of all the springs in the area that would be impacted.

Response: Appendix C was revised to reflect the current status of the GDE inventory and monitoring. As discussed in Section 3.11.2.3.2, Libby Lakes are perched well above the regional water table, and therefore any springs located near them would be part of the shallow groundwater flow system and unlikely to be affected by mine dewatering. Appendix C was revised to reflect the current status of the GDE inventory and monitoring. Data collected through the monitoring would be comparable and compatible with previously collected data.

334-14 The SDEIS does not make clear what the purpose of “GDE monitoring” is when executed during project operations. Are there elements of groundwater impact that can be mitigated during construction or operations if the monitoring information calls them out?

Response: Section C.10.5.1 of the SDEIS and FEIS explained that GDE monitoring would continue during mine construction and operations to assess the effects on GDEs due to mining activities so that measures could then be taken to mitigate effects on GDEs. GDE monitoring would also occur outside of the area of influence of the mine in an attempt to separate natural variability from the effects of the mine.

335-14 The SDEIS states that the GDE monitoring program is intended to detect and minimize stress to flora and fauna from mine dewatering. How does a monitoring program minimize stress? What are the proposed mitigations that are intended to reduce these impacts? Once drawdown occurs, isn’t it impossible to mitigate the impacts to the GDEs that rely on that groundwater?

335-14 An inventory to identify and rank GDEs based on their importance in sustaining critical habitat or species should be incorporated as baseline data in the SDEIS, to determine what the impacts of the various alternatives are to critical habitat or species, effectiveness of mitigation, and whether there are other alternatives that could reduce these impacts.

Response: Section C.10 of the FEIS was reworded to make it clear that the monitoring program is intended to detect stress, so that measures could then be taken to reduce stress to flora and fauna from mine dewatering. A surface water and groundwater monitoring program and GDE inventory and monitoring, which would occur in a portion of the CMW area, was described in Appendix C. The objective of the monitoring program and inventory is to establish pre-construction conditions and then periodically monitor those conditions as the facilities are constructed and operated. Remedial actions or mitigation would be determined for any impacts to aquatic resources are found during monitoring. Wetland mitigation was proposed for expected losses from the project activities. If additional wetlands are impacted that were not part of the compensatory mitigation, additional mitigation would be implemented.

182-23 1. Within the Montanore Project there exist a series of exploration drill holes. Many of these holes are within the wilderness boundary. To date there is no information from the permitting agencies that these holes have been revisited to check for groundwater inflows or to secure samples of any surrounding area migrating water. This needs to be done and results included in the accumulated body of data for the proposal. Why hasn't this been considered and would it help in the creation of a three dimensional hydrologic model?

Response: If available, exploration drill hole data would have been useful in preparing the groundwater models. Many of the exploration hole locations were revisited by agency personnel during site visits. In all cases, the holes could not be located because either they had collapsed or were plugged and covered. Any water level data noted in exploration drill logs were considered in the development of the 3D groundwater models.

Comment on figures

182-21 6. Figure 73: Predicted area of ground water drawdown during mining. Figure 74: Predicted area of cumulative groundwater drawdown during mining. Figure 75: Predicted area of cumulative groundwater drawdown post-mining. 7. Figure 76. Surface Water Resources in the analysis area. Rock Lake is missing from the diagram.

Response: These figures cover a large area, so Rock Lake is quite small on each figure. It was labeled on all figures in the DEIS, SDEIS and FEIS.

186-1 Please expand the geologic area of Figure 57, Figure 58, and Figure 59 as well as include the proposed adits for the preferred alternative and the proposed Rock Creek Project. Please construct a three-dimensional diagram incorporating Figures 57, 58, 59, and 70 as well as the proposed adits forth preferred alternative and the proposed Rock Creek Project.

Response: Additional figures depicting the mine area's hydrogeology were presented in the SDEIS and FEIS, including a three-dimensional diagram.

186-2 In Figure 70 the top of the ground water table is approximated, please incorporate the resulting water table as simulated by the agencies' numerical model for dewatering of the mine void. And incorporate the cumulative impact to the water table from the proposed Rock Creek Project and Montanore Project.

Response: A figure was added in the SDEIS and FEIS that provided the modeled cumulative drawdown.

186-3 It is the responsibility of the agencies involved to acquire the necessary information to make sound decisions. Continuous monitoring for a minimum of three years for all resources that may be impacted by the proposed Montanore Project is requisite to ensure adequate baseline data.

Response: Available baseline data were adequate for the impact assessment. The agencies' conceptual monitoring plans, which were revised in the SDEIS and again in the FEIS, required the collection of additional data before certain mining phases.

335-27 Furthermore, the SDEIS provides no information on the number of acres affected by the drawdown zone, or the number of acres affected by the cumulative effects of drawdown from Montanore and Rock Creek.

Response: The area in acres above the predicted drawdown area cannot be directly correlated to the extent of impacts because groundwater level declines or drawdown beneath mountainous areas would have no direct impact to surface resources. The areas where drawdown would potentially impact surface resources would be along drainages where baseflow is a component of stream flow.

3602 Mine and Adit Areas (Mine and Adit Inflows): Suggested new monitoring

152-20 Because dewatering will be commenced before the piezometers are installed, the value of the piezometers as currently proposed is questionable. . .MMC should drill and install piezometers at multiple points adjacent to and in front of the current end of the adit.

Response: The piezometers located at the ground surface east of Rock Lake in the DEIS were eliminated in the SDEIS and FEIS. Well installation east of Rock Lake, as proposed in the DEIS, would be logistically difficult, and adversely affect core grizzly bear habitat and other wilderness values. In the SDEIS and FEIS, the agencies required that piezometers be installed in several directions from the adit immediately after dewatering and drifts during the construction process (See Section C.10.4.4 in Appendix C).

182-22 The remote sensing and monitoring should be done in real-time and instantaneously (radio-remote) distributed via the internet to a public monitoring web site.

Response: Section C.10.9.3 of the SDEIS and FEIS discussed data reporting requirements. The predicted impacts to the groundwater portion of streamflow (baseflow) would not likely be discernible in "real time," but would rather require data from multiple years to identify.

328-2 Clearly, construction of more wells within the Cabinet Mountains Wilderness is not possible, but monitoring wells at mid-elevations on the west side of the wilderness would have been helpful.

Response: Except for some areas east of Rock Lake, which is very steep exposed bedrock, the drawdown on the west side of the Cabinet Mountains is within the CMW. Wells were not proposed in the CMW or east of Rock Lake because of potential adverse effects on the grizzly bear.

333-15 Contrary to the results of the modeling, which assumes porous media flow, changes could occur rapidly. If the faults do not verify to be as modeled, mining near them could rapidly lower water levels in the faults and quickly drain the fractures higher in the bedrock. Seasonal recharge would short circuit to depth rather than to the upper stream channels and springs. There is no monitoring design that would detect these effects prior to them actually occurring.

Response: Section 3.10.4.3.5 was added to the SDEIS and FEIS to discuss the limitation and uncertainty of the 3D groundwater models. The hydrologic characteristics of the fault systems cannot be obtained without some level of underground exploration. Therefore, MMC would collect data during the Evaluation Phase and the numerical model updated, reducing the uncertainty of its predictions. The reanalysis would then be used to reconsider various mitigation measures, such as increasing or decreasing buffer distances between various features, such as Rock Lake and the Rock Lake Fault.

333-15 The proposed data collection should be expanded to include piezometers developed within the high conductivity core of the Rock Lake Fault (it is difficult to determine from Figure C-6 whether this is currently proposed or not). This would help to fine-tune the conceptualization of the fault and help to improve the known location of the fault. The only way a setback as proposed could be useful would be if the location of the fault is well known.

Response: Figure C-6 showed seven borings that penetrated the trace of the Rock Lake Fault. Until more is known about the fault hydrology, the borings would be drilled from drifts excavated at least 300 feet from the fault.

3603.1 Mine and Adit Areas (Mine and Adit Inflows): Comment about analysis-mine: general

General comments

182-13 Borehole information would be very useful in the production of a three-dimensional hydrologic model. Sampling at various times of the year (spring, summer, fall) would / could provide static water levels for the sampling period.

Response: Because the proposed mine underlies the Cabinet Mountains Wilderness, it has not been possible to install boreholes at the surface for monitoring groundwater. Appendix C provided the agencies' proposed groundwater monitoring requirements.

182-16 12. P. 447. "The agencies' numerical model predicted mining period changes to base flow in the upper reaches of each drainage of Rock Creek and East Fork Bull River that are relatively large compared to calculated pre-mining base flow (ERO Resources Corp. 2008b)." How relative are the descriptives "relatively large and masked" (#7. P.433) and why isn't the public given a quantitative figure to better understand the loss to this aquatic resource?

321-2 My son also informs me that all sections related to pre-mining and post-mining base-flows of four streams should be done over since the results show they are invalid or, possibly, oversimplified to obtain a certain pre-determined result.

Response: Section 3.10.4 of the SDEIS was revised to provide model-predicted values of baseflow change in each of the drainages. The analysis was included in the FEIS. With the data currently available, the 3D model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models (mine area and tailings impoundment area) would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease.

186-2 Is the following statement "the fault zone does not appear to play a major role in the regional hydrogeology" based on results from the agencies' two-dimensional numerical model. If not what evidence supports this conclusion because "bedrock springs from the Rock Lake fault zone along the East Fork Rock Creek drainage above Rock Lake accounted for 100 percent of the flow in stream," "bedrock ground water appeared to be the sole source of water to Rock Lake," and "deeper ground water discharge may be the only source of water to St. Paul Lake during late summer to early fall."

Response: Section 3.10.4 of the SDEIS was revised to provide additional discussion on the role of the Rock Lake Fault and other faults. The agencies' required monitoring during the Evaluation Phase to better characterize the role of faults was revised in the SDEIS and again in the FEIS.

186-3 Did the agencies' numerical model account for potential changes to precipitation patterns, rates, and subsequent snow pack due to climate change predictions when assessing base flow to the East Fork Rock Creek, East Fork Bull River, and Libby Creek?

Response: Both numerical models used average precipitation conditions. Section 3.11.4.3.3 of the SDEIS and FEIS included a discussion of the variability in baseflow due to variable precipitation patterns. The effects of climate change on surface water hydrology (Section 3.11) and water quality (Section 3.13) were discussed in the following sections of the FEIS: 3.11.3.5, 3.11.3.1, 3.11.4.4.5, 3.13.3.4, 3.13.4.2.4, and 3.13.4.3.6. Due to the possible range of effects on surface water hydrology due to climate change, it is not possible to quantify the cumulative effects of the Montanore Project and climate change. For that reason, the agencies would require that reference streams and lakes outside the area of potential influence of the

mine also be monitored to assess whether observed trends are associated with mine impacts or with climate change.

297-1 "Groundwater here is fed from the cabinets. (page 229)…deeper bedrock groundwater is connected to shallow groundwater and surface water at elevations below about 5,600 feet." (page 230) the valley-fill systems are recharged by precipitation, streamflow and surface discharge from bedrock groundwater systems. Groundwater flow follows the topography along the valley bottoms. The valley-fill discharges to surface water…along the mountain front. (page 231) there is uncertainty regarding the nature and extent of the Rock lake fault in the vicinity of the East Fork of The Bull River. There is not sufficient mapping data to determine rather the near vertical Rock Lake fault terminates with the East Fork Bull River, extends Northward…(page 251)." The quoted sections of the SDEIS seem to indicate that numerous and unpredictable changes will happen to area streams, groundwater and watersheds.

Response: Section 3.10.3.1.2 was revised in the FEIS to provide a clearer discussion of the relationship between various flow paths and surface water.

297-1 According to the SDEIS: "All mine alternatives would reduce groundwater discharge to area streams…and lower the groundwater table during all five mine phases." (SDEIS page 273) How would the groundwater drawdown affect my well? How will the reduced stream flows affect Falls Creek?

Response: No known bedrock groundwater wells within the analysis area would be affected by groundwater drawdown (see Section 3.10.3.3 of the SDEIS and FEIS). Any shallow alluvial well in the vicinity would not be affected unless it was located near the proposed pumpback wells or make-up wells, and there are no known wells in these areas. Falls Creek is not located within the area that may be affected by mine dewatering.

321-2 Neither I nor my son can find any analysis of seepage rates in the waste rock piles nor through any of the other features in or near the waste rock site. That neglect is a fundamental flaw and no mine should be permitted until it is addressed.

Response: Waste rock at the Libby Adit would be placed on lined pads and any water draining from the piles would be collected and treated. The water balances for Alternatives 3 and 4 provided an estimated rate.

321-2 The calculations and data based on Goodman et al and Lei are highly questionable. My son, a consulting geologist, can find no valid reference to them in any standard hydrology text. That entire section based upon those calculations should be disregarded.

Response: The two publications listed in the comment were not used in the DEIS, SDEIS, or FEIS.

328-7 As a flow-through system, it would not be surprising if the lake currently loses water from groundwater outflow as well as surface outflow. Since the groundwater component is determined in the AMEC Geomatrix water balance by difference, and because this is necessarily a net value, the reliability of the groundwater component of the water budget is only as good as the estimates of surface water inflow. The measurements of surface flow in and out of the lake are likely good, but the estimate of overland flow is not similarly measured or verifiable, and it's a large percentage of the total. It's possible that groundwater may be a much larger component of the annual water budget, and thus the impact of mine-induced drawdown of the water table may be much larger.

Response: The analysis of effects on Rock Lake is based on the conceptual model of the groundwater flow systems used in both the 2D and 3D numerical models. Based on the conceptual model and the results of the 3D model, the agencies developed a water balance for Rock Lake that included groundwater inflow to the lake, evaporation, and surface inflow and outflow. A previous investigation (Gurrieri 2001) of Rock Lake used a different approach to develop a water balance for the lake. Using measured surface water inflow and outflow and water chemistry, Gurrieri developed a water balance that had a groundwater outflow component and that was dominated by surface water flow. With a groundwater outflow component, the estimated effects on Rock Lake water levels would be within the same range as disclosed in the FEIS.

330-3 Uncertainties regarding the relative contribution of bedrock systems to baseflow in individual streams are not adequately examined or disclosed. Shallow colluvial and alluvial groundwater systems likely continue to provide a component of stream baseflow from storage throughout much of the year. Allocating all baseflow to the bedrock flow system is not a defensible assumption.

Response: Based on observations made during site visits by agency personnel to the upper watersheds, the agencies concluded that there is little surficial material in the upper water sheds and that while this varies with snowpack, they likely completely drain during the summer (in a typical or dry precipitation year), so by late summer/early fall, the only water in creeks is from bedrock groundwater. In the lower watersheds, however, the thickness of alluvium is sufficient to provide water to the stream throughout the year.

331-3 The steady state condition that currently exists in the region of the proposed Montanore Mine will begin to change as soon as the water in the 14,000 ft Libby adit is pumped out. This adit needs to be pumped out and all information regarding water quality/quantity, hydrology, geochemistry, etc. should be obtained and analyzed before any subsequent adit expansion is allowed to occur, or can be permitted. The agencies must obtain and analyze this information in order to fully comply with NEPA's information-gathering and public-information/participation mandates prior to permitting any additional activities.

Response: The Libby Adit has been dewatered to the 7,000 foot level. MMC collected additional hydrologic data, which were incorporated into the 3D model and Section 3.10 of the SDEIS and FEIS. Appendix C in the FEIS was revised to describe the additional monitoring required during each mine phase.

331-17 It is proposed that following the evaluation phase of the project MMC, USFS, and MDEQ would be able to make more accurate prediction on the impacts to Rock Lake. If the new predictions were for more water loss for Rock Lake than originally anticipated, what remedies are available? There is already a partial evaluation adit in place. Some of the data required could likely be obtained from this adit without permitting the mine.

Response: A possible mitigation measure that could be adopted if predicted impacts to Rock Lake were unacceptable is an increase in the buffer distance between the lake and the mine void. The Libby Adit is a good potential source of hydrologic data, but it is not located sufficiently close to the East Fork Rock Creek drainage to obtain site-specific data.

331-26 Modeling predicts that mine inflows could be as high as 1,800 gpm. How will this excess water be managed? Will there be periods when the mine is shut down and water needs by the mine are negligible? During post mining, water management will likely exceed the capacity of the treatment facility. What is enhanced evaporation? How would this technique be used if it were needed during wet periods or winter? A more dependable and credible option is needed if the water entering the mine cavity exceeds predictions, or if the mine were either temporarily or permanently shut down. It is likely that excess water will require additional management either during closure or because supply surpasses mine demands.

Response: Mine inflows as high as 1,800 gpm are unlikely, but possible. Inflows in this range, should they occur, would be short-lived. If inflows in this range were encountered, they would be diverted to the tailings impoundment for temporary storage, some of which could be treated and released up to the capacity of the treatment system. Grouting would be used to eliminate or reduce the high inflows. As precaution, it is typical for mining companies to drill ahead of the mine's advance so that they are aware of the hydrologic conditions. If potentially high flows were detected, grouting would be used to reduce the overall permeability of the fractures.

333-22 Geomatrix suggests that historic flow rates into the Libby Adit "typically decrease with depth" (Geomatrix, p. 3). They convert the location within the adit into depth of overburden (Geomatrix, Figure 4) to suggest that inflow decreases with increasing depth. Geomatrix has not proven that the decrease is not simply caused by different geologic formations being intersected by the adit or by a lucky fracture. SDEIS Figure 62 shows the first 8000 feet or so is Prichard formation.

Response: The compressive weight of the rock at depth is more likely to be a factor in the hydraulic conductivity of the fractures, than formation lithology. There is virtually no primary permeability in any of

these formations and any water movement is through fractures. In general, fractures tend to be less permeable with increasing depth, unless associated with major structures.

321-1 The sections on amount of water drawn due to operation of the mine needs to be redone. It lacks sufficient data and is lacking in depth of study. The sections on recharge of water should be thrown out and totally redone. The ones in the DEIS do not offer an analysis of the recharge based on reach of the various watersheds.

321-2 The DEIS does not address the role of faults in recharging water at lower levels since they likely are a major factor. The study does not do this.

342-3 The assumption that groundwater would be stored and released from a thin veneer of soils overlying bedrock is not supportable. Based on observation and testing in the field, fairly classic mountain block recharge processes are in evidence over most of the Belt bedrock in northwest Montana. Relatively high recharge of bedrock underlying the thin silty matrix soils occurs. The underlying surficial bedrock include sufficient fractures that accept recharging water from the thin soil mantel especially during snowmelt. The more highly fractured near surface bedrock (100' - 500' thick) stores and transmits groundwater to deeper bedrock via deeply seated vertical fracture systems (Overton, personal communication).

342-4 The position that the thin soils on the slopes store and release water all year is simply unrealistic, undocumented, with no credibility. Throughout western Montana in the Belt rock environment, mountain block recharge/discharge processes are the critical element that supports and maintains groundwater in the valley bottoms and perennial flow streams. Mountain block and mountain front recharge processes dominate the behavior of local streams that drain mountain topography in western Montana. The field evidence including the presence of perennial streams and springs is widespread throughout Western Montana and Northern Idaho.

Response: The agencies agree with this comment. The agency 2D numerical model results indicated that the shallow "veneer of soils" do not play a major role in water storage and transmission to a mine void. Both models included provisions for such near surface layers, but the relatively low permeability fractures and faults within the bedrock control the rate of water movement to or from a mine void. In the lower watersheds, the surficial deposits are sufficiently thick to store groundwater and release to water streams through an entire typical water year. In low precipitation conditions, these surficial deposits may not continue to discharge water to streams during the driest part of the year.

342-21 While the Agencies adopted a 3D groundwater model in the SDEIS instead of the 2D model used in the DEIS, many of the fundamental assumptions used in the 2D model were not significantly altered in the 3D model resulting in the new analysis falling short of what is needed to analyze the impacts of the Montanore Project on water quality and water resources.

Response: The 3D model was prepared by MMC and reviewed by the agencies. With the data currently available, the 3D model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models (mine area and tailings impoundment area) would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. Section 3.10.4.3.5 was added to the SDEIS and FEIS and provided a discussion of model uncertainty. Fundamental assumptions between the models are the same because the models both deal with the same hydrogeology.

342-22 The Agencies' conceptual 3D model fails to realistically address groundwater recharge. Fault/fracture frequency and subsidence means that the Agencies' predictions of impacts to groundwater and surface water systems are unrealistic and understated.

Response: Section 3.10.3.1.2 was revised in the SDEIS to eliminate the discussion of MMC's conceptual model, which evolved to be similar to the agencies' conceptual model following 3D model development. The agencies' conceptual model addressed groundwater recharge. The responses below under *Effects of subsidence* address the comment regarding possible subsidence and potential effects on groundwater.

344-4 "Hydrologic effects could be exacerbated by reactivation of fault zones, such as the Rock Lake Fault or any sympathetic and/or undocumented faulting that may exist". P45A Gravity still works under ground and subsidence is bound to occur. The environmental consequences of this project are really unpredictable and may significantly under estimate actual impacts.

Response: There is no evidence from the Troy Mine that geologically inactive faults have been reactivated by mining activities.

342-32 Based on experience, the fracture systems (primary fault/fracture with finer fracture halo) occur every few hundred feet on the average. These findings are based on field reconnaissance, geophysical surveys, drilling and sampling of bedrock and aquifer testing.

Response: In the 3D numerical model report, MMC provided a detailed geologic map of the Libby Adit that was prepared by NMC.

Effects of subsidence

74-6 Potential changes to water quality due to subsidence have not been measured or modeled.

74-13 Appreciable changes in groundwater quantity and quality can also occur without a thorough understanding of groundwater hydrology in the proposed mine area, it is difficult to predict what subsidence's ecological effects might be.

74-14 Allowing the mine to begin operations before fully modeling subsidence's potential effects on groundwater dynamics constitutes irresponsible management.

74-14 Additional research should be done, and made available to interested parties, regarding potential impacts to groundwater related to subsidence.

74-19 Additionally, quantifying potential effects subsidence might have on groundwater quality and quantity.

186-1 Given the worst case scenario, "a fractured zone would exist over the caved zone, extending perhaps 1,400 feet to 2,100 feet above the mine workings" and "subsidence could be measured for horizontal distances up to 2,000 feet beyond the footprint of failure," occurring near Rock Lake what is the potential for dewatering the lake or permanently altering the hydrology such that the lake is compromised?

202-37 Subsidence is an inevitable consequence of mining. Subsidence in the mine void could impact the region's hydrology including surface features such as lakes, streams, creeks, and wetlands. Subsidence would also exacerbate the dewatering expected as a result of the Montanore project by intercepting additional shallow groundwater.

248-25 Subsidence is analyzed in the DEIS only from a localized failure perspective, and does not consider the greater hydrologic impacts of subsidence. Vertical subsidence and changes in surface elevations are the focus of the DEIS comments, but an evaluation of expanded areas where subsidence may affect the groundwater and surface water systems is not conducted.

331-12 There is ample scientific evidence that questions the effectiveness of the mitigations that are planned to protect Rock Lake is from the proposed Montanore Mines. It certainly seems that subsidence and settling will occur in the mined out cavity in the future. The highly fractured nature of the bedrock that will be mined will be conducive to the opening of pathways whereby water contained beneath Rock Lake could drain, thus promoting the potential draining of the lake. The SDEIS recognizes that grouting is of value only in the very short term and is not a viable mitigation. The SDEIS seems to have determined that the installation of low-permeability barriers within the mining cavity would lessen the dewatering impacts

to Rock Lake. How would the potential for future subsidence in the mine cavity impact the effectiveness of these low permeability barriers? It certainly seems that as water enters the void during the 490 year filling period that there would be considerable sloughing off of the already disturbed rock. There appears to be a strong likelihood that minor or major instances of subsidence would create avenues by which water could circumvent the barriers and significantly exacerbate the dewatering of Rock Lake. This subsidence would not require a visible surface impact for it to significantly alter the predicted hydrology for Rock Lake.

342-2 The conceptual model continues to disregard the changes in the bedrock hydraulic characteristics that will be induced by subsidence. If the conceptual model was appropriately developed it would have included a discussion of what would occur within the bedrock mass as subsidence occurs, how the hydraulic conductivity of the bedrock would change, and the change in the flow of groundwater through the subsidence zones.

342-3 The 3D model should have incorporated the influence of more general subsidence and bedrock stress relief due to mining. Because of subsidence and changed stresses in bedrock, the diversion of groundwater to the mine during and after mining operations will likely be much greater than predicted. This of course means that the extent and magnitude of drawdown will be greater as well. As a result, reduction in stream flows will be greater than predicted.

342-21 Because of subsidence and changed stresses in bedrock, the diversion of groundwater to the mine during and after mining operations will likely be much greater than predicted by the Agencies. This means that the extent and magnitude of groundwater drawdown resulting from the Montanore Project will be greater. As a result, reduction in stream flows will be greater than predicted. This will cause much greater harm to LPMC's senior water rights than implied in the DEIS.

342-21 A related issue affecting groundwater that is not addressed in the SDEIS is the potential for subsidence. The conceptual model continues to disregard the changes in bedrock hydraulic characteristics that will be induces by subsidence.

342-22 Subsidence is analyzed in the SDEIS only from a localized failure perspective, and does not consider the greater hydrologic impacts of subsidence. Vertical subsidence and changes in surface elevations are the focus of the SDEIS comments, but an evaluation of expanded areas where subsidence may affect the groundwater and surface water systems is not conducted.

Response: Section 3.9.3.1 in the DEIS and Section 3.14.3.1 in the FEIS provided a discussion of subsidence and possible effects on groundwater. It is expected that any subsidence effect on groundwater flow would be minor and short-lived, and not affect groundwater quality. Because of model uncertainty, the agencies increased the buffers between the mine void and the Rock Lake Fault and Rock Lake to 300 and 1,000 feet, respectively in the FEIS. Also, MMC would update the model with data collected during the Evaluation Phase and the buffer distances would be reconsidered.

3603.2 Mine and Adit Areas (Mine and Adit Inflows): Comment about analysis-mine: modeling approach

74-10 Let's start by saying that Hydrology is complex. The groundwater hydrology in the CMW is by all accounts difficult to model due to faulting in the rock, and the groundwater quality measured is based on limited data. Models for groundwater hydrology in the location of the proposed mine have been based on the Troy mine (although the team of hydrologists working on the DEIS claim that the impacts to water quality will be different because the Montanore mine will be farther subsurface than the Troy mine is).

Response: Neither of the two numerical models were based on the Troy mine. The models were based on the mine area geology, proposed mine plan, and the best available hydrology data. Section 3.10.4.3.5 was added to the SDEIS and FEIS to discuss the limitation and uncertainty of the 3D model.

111-2 As for dewatering of wilderness assets and surrounding watersheds, the DEIS states that sufficient data does not exist to accurately predict the movement of water through this hydro system. Two-dimensional modeling is not sufficient in the realm of volume and placement of water on the land, which is inherently a three-dimensional entity. The agency is acting well outside of its responsibility to "protect the

land and serve the people" if they do not demand accurate and sufficient data to fully predict the effects of this project. Without a baseline to begin with, any monitoring will be a lost cause.

152-6 The mine and its drawdown will affect at least two fault systems, the Libby Lake and Rock Lake Faults. These should have been included in the conceptualization of the model. The speculative model testing of the effects of faults (ERO Resources, 2008) does not suffice for a proper conceptual model including the faults.

162-1 In the DEIS, volume 3, there is acknowledgement that insufficient data exists to create a three dimensional model, which is the Best Available Technology. The process of compiling this DEIS has been over ten years; why doesn't the data exist?

186-2 There is sufficient geologic data of the proposed mine site to be incorporated in a three-dimensional model. There are many methods that could be used to assess the ground water and surface water interactions, including isotope analysis, organic dyes, etc.

182-15 9. P.435. "MMC intends to construct a three dimensional ground water model during the mine development period when additional hydraulic data would be collected." Why is it possible to construct a three dimensional model after the mine is permitted but not before, given the understanding that more information will be collected during mine development? Wouldn't it be better to gather more information within the current resource available to develop the three dimensional model and then supplement that information with whatever is garnered during the exploration phase?

186-2 All models are inherently wrong due to their fundamental assumptions and subsequent propensity to oversimplify complex geologic and hydrologic environments. "The inherent uncertainties in the agencies' numerical model are not sufficiently large to preclude the model's ability to predict reasonable values of base flow and changes to base flow under mine dewatering conditions." The agency is applying a two-dimensional homogenous model to a three-dimensional, heterogeneous, and anisotropic system and that assumption is deemed "not sufficiently large." How is that <reasonable values" can be obtained when the geologic bedding, structures, orientation and relationships between geologic features are ignored? Do the agencies assume these features have no influence on ground water recharge, discharge, and stream base flow and/or are negligible? What precluded the gathering of sufficient site data in order to construct a three-dimensional model?

Response: The agencies used a more detailed 3D model constructed by MMC in the SDEIS and FEIS for impact assessment. The 3D model includes the two faults systems mentioned in the comment, as well as others. In addition to the limited data used in the 2D model, the 3D model used hydraulic test results from within the Libby Adit that were not available for the DEIS. Section 3.10.3 of the SDEIS and FEIS was revised to include Libby Adit data. The 2D model included the Rock Lake Fault. Appendix C was revised in the SDEIS and FEIS to describe the agencies' monitoring requirements. Gathering of site-specific data (e.g. permeability of geologic units and faults at depth near the ore deposit) to improve the groundwater model would require either drilling from the surface or from underground, from the evaluation adit. Because the ore deposit occurs beneath a wilderness area, drilling from the surface is considered not to be essential for the operation of the Montanore Project. Collection of data from underground during extension of the evaluation adit can only be approved following an environmental impact analysis, which is one of the purposes of this EIS.

321-2 The adverse effects of surface dewatering [springs, streams, lakes, etc.] are unreliable since they are based on a model which has many faults and, once again oversimplifies the adverse effects which would result from the interrelatedness of the surface water and groundwater.

330-1 Groundwater modeling over the large area covered by the 3D model presented in the SDEIS is severely limited by the availability of empirical input data to populate the model. "Calibration" of the model to data that is almost entirely peripheral to the actual area of interest (the mine area) will yield problematic results of no utility for purpose of actual predictions of potential adverse effects. Because of this, the use of the model to predict potential impacts at specific sites as shown in the SDEIS is not an appropriate use of the model. Except for data from the Libby Creek adit and the proposed Ramsey portal site, essentially all of the well data is outside of the Cabinet Mountain uplift block. Even though the

technical document (Geomatrix 2010) highlights the limitations of the model, the SDEIS presents model results with inadequate explanation of the limitations. For example, the SDEIS evaluation of potential impacts to stream flow impacts focuses on a table that presents "Predicted" reductions to surface flows to the hundredth of a cfs as if it were fact (Table 86, p242). This is not an appropriate use for the model as a scientific tool in the context of NEPA.

Response: Section 3.10.4.3.5 was added to the SDEIS and FEIS and contained a discussion of uncertainty regarding the model predictions. The use of two significant figures in reporting stream flow change is partly a reflection of the units selected (i.e. one cfs equals 448.8 gallons per minute). Section 3.11.4 in the SDEIS and FEIS included a discussion as to whether the predicted changes would likely be measurable.

330-2 Use of this type of model as a quantitative predictive tool requires a great deal more actual water level and permeability data in the areas where mining will actually occur than is available. The SDEIS should emphasize, that as currently calibrated, the 3D model is restricted to identifying areas of potential concern and examining possible differences between various hypothetical scenarios. The 3D model should not be used to present model results such as "predicted changes to baseflow".

Response: With the data currently available, the model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. Section 3.10.4.3.5 was added to the SDEIS and FEIS to discuss the limitation and uncertainty of the 3D models.

3603.3 Mine and Adit Areas (Mine and Adit Inflows): Comment about analysis-mine: modeling details

Mine area model

152-3 The key components of the agencies' model (DEIS, page 421) are that recharge occurs in the mountains, flows vertically downward to a water table aquifer at about 500 feet below ground surface. Some recharge is to perched aquifers which discharge to high elevation springs/streams. Fractures nearer the ground surface are larger than those at depth which impede the vertical flow and potentially cause the water table to slope toward the valleys and form springs/streams at about 5600 feet msl. They miss three important points. · The recharge flows vertically downward through the larger fractures until it reaches the smaller fractures. Because the smaller fractures have lower permeability, the groundwater will "back-up" and form a water table. The limit for vertical flow rate is the decreasing permeability at depth. The mechanism for horizontal flow is not explained. · Diffuse recharge will occur around the mountains wherever there are exposed fractures or shallow soils overlying the fractures. · Recharge also occurs through stream bottoms and from the small perched aquifers. The agencies refer to perched aquifers, but these likely occur in larger fracture and small fault zones so that as a perched aquifer fills with water it not only discharges to the springs/streams but also through the bottom to the underlying fracture.

152-4 The agencies' model must account for the variable water levels that would be expected in the bedrock and the structure of the fractures which would allow the groundwater to flow horizontally toward the streams. It also must address the role of faults, which may be a major conduit for recharge to reach deeper levels. It does not meet this requirement. However, the agencies' conceptual model supports the fact that the shafts may significantly lower the water table and cause much more impact on surface waters than the agencies allow in the DEIS.

Response: The agencies agree with much of these comments and these concepts are part of the overall conceptual model and current 3D model prepared by MMC.

152-4 The DEIS indicates that the groundwater model determined the rate would be 450 gpm, but this appears to be a long-term steady state flow (DEIS, page 429). It also states that MMC original estimate, from 1992, was 1200 gpm but that now Geomatrix (2007c) estimates 800 gpm. The DEIS notes that the drawdown area for 800 gpm is about twice that estimated for 450 gpm (Id.) The DEIS uses different flow rates and never really justifies any of them. This is an unacceptable level of uncertainty for a DEIS-level analysis. To estimate it properly, the agencies should determine the rate and drawdown cone based on the calibrated parameters of the geologic material around the mine. This can be done within the model by using a head-dependent flux boundary to lower the water level to the level of the shaft. If the agencies had used the MODFLOW computer code, the DRAIN boundary could have been used to lower the water level to a set level to determine the required inflow (dewatering rate) and water level surface (Myers, 2006 and 2009).

152-5 The DEIS suggests the area of drawdown at steady state should approximate the area over which recharge equals the dewatering rates. If the groundwater table is initially flat, not the case here, these areas would exactly equal one another. With a steeply sloping surface, the area within the water surface that drains to the mine will equal the area within the groundwater divides, either natural or formed by pumping. As an approximation, based on DEIS Figure 73, the area within the 1-meter drawdown is about 9000 acres. If 450 gpm is the recharge within the area, it is just 0.08 feet/y, or less than 1 in/y. At 800 and 1200 gpm, the recharge would equal 1.7 and 2.6 in/y, respectively. These are extremely low recharge rates; even for just 32 in/y precipitation, as found at the lower elevations, a 10% recharge rate, as used in the groundwater model (ERO Resources, 2008) would be 3.2 in/y. For comparison, in the Great Basin the Maxey-Eakin recharge estimation procedure treats areas with over 20 in/y of precipitation as having a 25% recharge rate, or 5 inches for a 20 in/y precipitation. This suggests that the estimated dewatering rates are substantially too low.

152-13 The model code, MODFLOW, could be easily used to test the conceptual model as proposed for flow around the mine. A simple three-layer model could be used to set different parameter values for the void. The DRAIN boundary could be used to lower water levels to the bottom of the adits and void without effectively creating a canyon above these points.

182-14 "The previous discussion of changes in base flow is based on the agencies' numerical model, which predicted total steady state mine and adit inflows of 450 gpm. MMC estimates a steady-state inflow of 800 gpm in a revised water balance for the mine operation (Geomatrix 2008a). If the steady state inflows were 800 gpm, then the reduction in streamflow would be about two times higher than predicted by the agencies' numerical model. Using a total inflow rate of 800 gpm would not affect the changes in base flow predicted by the agencies numerical model during the post-mining period (ERO Resources Corp. 2008b)." The difference in model prediction here is a source of concern. It is hard to believe order of magnitude difference between the models doesn't indicate a significant impact to areas like the E. Fork Bull River or Rock Lake, Creek and Meadows. The implications to Bull Trout in low precipitation years could be significant. This once again argues for the significance of using a three-dimensional model and securing the data necessary to construct one. The agency / document use of the word "MASK" throughout this discussion is significant in that it distorts potential impacts and attributes mitigation to possibilities and unknown factors. Basing protection of endangered species on the unknown is not a credible strategy for their protection.

Response: The agencies used a more detailed 3D model constructed by MMC in the SDEIS and FEIS for impact assessment. The various flow rates mentioned in the comment were predicted via modeling. Finite Element Modeling lends itself more readily to the complex geology and hydrology typically found at mine sites, than does Finite Difference Modeling, such as MODFLOW. In addition to the limited data set used in the 2D model, the 3D model used hydraulic test results from within the Libby Adit that were not available for the DEIS. Section 3.10.3 of the SDEIS and FEIS was revised to include Libby Adit data.

With respect to recharge rates, MMC's 3D model used slightly different recharge rates than used in the 2D, but they are generally in the same range. Much of the higher terrane in the model area is very steep bare rock and unlikely to have recharge rates approaching that of the Great Basin. The agencies agree that there is some uncertainty regarding the actual recharge rates, but the rates used in the two models are consistent

with observed baseflow in the upper most watersheds and the reported inflows to the Libby Adit which is about 14,000 feet long. For clarification, the recharge rate discussed for the steep upper watersheds in the 2D model report is the net recharge to bedrock and does not include recharge to surficial deposits.

152-8 Effects on baseflow are incorrectly considered. "The model results are also based on the assumption that the predicted base flow is representative of a typical precipitation year" (DEIS, page 431). This is relatively standard in that average recharge is used in steady state calibration; in this model, the recharge is based on an inaccurate calibration and cannot be assumed to resemble an "average" year. The very next sentence also differs from their apparent logic: "The agencies' numerical model predicted base flow values for the various model nodes that are comparable to the $7Q_{10}$ values calculated for several locations along various streams." (Id.) It is not possible for the model results to be "representative of a typical precipitation year" AND for the "predicted base flow … [to be] comparable to $7Q_{10}$ values" because the ten-year low flow does not result from a typical precipitation year.

Response: Section 3.8.3 was added to the SDEIS and included in the FEIS and discussed the comparability between model predicted baseflow and calculated $7Q_{10}$ values. In the upper perennial reaches of the analysis area streams (below about 5,000 to 5,600 feet) where the sites have precipitation or drainage outside the range of or near the minimums and maximums of the Hortness (2006) equation variables, the estimated $7Q_{10}$ and $7Q_2$ flows may not be reliable and are higher than the modeled baseflows. The estimated $7Q_{10}$ values are less than the modeled baseflow values at six of the nine sites in the lower reaches.

152-12 ERO Resources (2008) notes that the model is extremely sensitive to "infiltration rates"; they judge that sensitivity by noting the large changes observed in flows from the adits. The observed sensitivity simply reflects the fact that outflow from the model equals inflow (recharge) and that increasing inflow increased the outflow; this sensitivity analysis is useless.

Response: The objective of the noted statement in the DEIS was not offered as a "sensitivity" analysis, but rather to note that using the adit inflows as a point of calibration limited the range of recharge that could be used in the model.

152-12 The model should have set recharge independent from the calibration.

Response: Recharge is one of many parameters for which there is little direct data. Varying recharge within a reasonable range of probable values assisted in calibrating the models, but recharge was not used directly for calibration. The values of recharge used in the models had a direct affect in achieving calibration to other parameters, such as adit inflow and creek baseflow.

182-13 From P. 450. "The primary objective of using this model was to establish a hydrogeologic framework that could be used to evaluate potential mine impacts and develop possible impact mitigation." Are the permitting and regulatory agencies utilizing the best information possible to evaluate impacts and develop possible impact mitigation? Is this a case of expediency over public health and safety?

327-5 This kind of prediction-based analysis is unacceptable given the expected impact on publicly owned natural water resources. We believe that the entire water analysis section of the document is unacceptable as presented, and demands a complete re-evaluation using current, factual hydrological data specific to the water analysis area. The water analysis sections must be redone and a new SDEIS be produced with fact-based information.

Response: With the data currently available, the model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. See section 3.10.4.3.5 of the FEIS for more discussion of model uncertainty.

186-2 "The area of study (model domain) is based on the maximum area potentially affected by mine induced changes in the groundwater hydrology, as determined by the agencies' numerical groundwater model." However, the "maximum area potentially affected" does not account for the vertical (z) domain, interconnection of geologic features and subsequent groundwater hydrology as well as the potential to irreversibly alter the larger hydrologic system.

Response: The 2D model could not directly address changes in the vertical dimension, but the subsequent MMC 3D model did. The 3D model used essentially the same domain and generally confirmed the previous results.

186-2 Why was "the numerical model, predicted base flow in East Fork Rock Creek" compared to only stream flow observed in September 2007, why not more comparisons? The proposed mine is expected to run 24/7 year round, thus the numerical model predictions should be compared to observed flow year round. A single occurrence where model-predicted values equate observed values isn't sufficient to say the model represents the system.

Response: The significance of the September 2007 stream flow observation is that based on observed spring flow and a very long period without precipitation before September 2007, it is likely that the observed flow was baseflow for East Fork Rock Creek. Therefore, this observation could be compared to model predicted baseflow for this same reach of the creek. The agencies agree that additional flow data would be necessary. MMC conducted a GDE inventory of the upper East Fork Rock Creek drainage and would continue monitoring flow in the creek (see Appendix C).

186-3 Looking at Figure 70 the water table appears to be at 5400 feet. As stated in the agencies' conceptual model, "ground water and surface water are hydraulically connected below elevations of about 5,600 feet." Rock Lake is at approximately 5000 feet and St. Paul is approximately at 4750 feet. The simulated dewatering of the mine void reduced the water table by 3,300 feet to an approximate elevation of 2,100 feet over an area extending 2 miles from the mine void. Was simulated dewatering for an inflow of 450 gpm or 800 gpm? What is the potential for draining Rock Lake and St. Paul or eliminating ground water recharge by reducing the water table 3,300 feet for the duration of the mine life? What is the cumulative dewatering and subsequent water table reduction from the Montanore Project and Rock Creek Project?

Response: The effects on baseflow were revised in the SDEIS to use the predictions of the 3D model. Baseflow effects and mine inflow rates were predicted by the model and were not variables in the modeling. The effect on Rock Lake was revised in Section 3.11.4.4.4 of the SDEIS and again in the FEIS. Effects were shown in terms of change in lake level and volume, and surface area changes (in the FEIS) that reflect the model predicted loss of baseflow to the stream flowing into Rock Lake, predicted loss of deep bedrock groundwater flow into the lake, and predicted loss in storage from the lake.

186-3 The agencies' model (two-dimensional and homogenous) predicts that it would take 70 years for ground water levels to return to a steady-state condition. However, in reality the system is three-dimensional, heterogeneous, anisotropic, and most likely there are preferential flow paths. Is there a caveat for this prediction, say plus or minus 20 years, 30 years, or 50 years? Given the assumptions inherent in the agencies' model can there really be any justification in this estimate? With what degree of certainty can you say that it will not take 150 years for steady-state conditions to be attained.

Response: The agencies used a more detailed 3D model constructed by MMC in the SDEIS and FEIS for impact assessment. The 3D model report assigns predictions to the nearest year, such as Year 22 or Year 1172. There is uncertainty as to the actual year any specific event would occur, particularly for those events that would occur beyond end of mining.

248-24 Use of appropriate conceptual and digital models, that are based on realistic assumptions is a significant issue for LPMC properties, and the Libby Creek watershed in general, because conclusions drawn from flawed model predictions cascade throughout the decision making process. The groundwater model is too overly simplified to support conclusions. The bulk hydraulic conductivity of 10-7 cm/sec used

is unrealistic for Belt rocks, the role of fractures were excluded, the full effect of subsidence was excluded, and the zone of influence was limited to 1 meter of drawdown preventing a complete analysis of impacts to water rights. The DEIS conceptual model contends the deep bedrock water is not hydraulically connected to shallow bedrock groundwater, and calls for the highly unrealistic assumption that thin surficial deposits on mountain slopes (±60%) will store and release water to support perennial flows, mountain front recharge is excluded, and subsidence induced changes not accounted for.

Response: The agencies used a more detailed 3D model constructed by MMC in the SDEIS and FEIS for impact assessment. Some of the issues raised in this comment are not correct with respect to the conceptual model, which was revised in the SDEIS. Section 3.10.3.1.2 in the SDEIS and FEIS provided an revised discussion of the site conceptual model. The conceptual model discussion states that the deep and shall bedrock systems are not hydraulically connected above an elevation of about 5,000 to 5,600 feet (they are likely connected below this elevation). Water likely percolates vertically downward to the deeper bedrock from the shallow saturated zone via an unsaturated interval. The concept of "mountain from recharge" is not relevant to areas under discussion and subsidence issues are discussed in Section 2.9.3.1 in the DEIS and Section 3.14.3.1 in the FEIS.

330-3 The Geomatrix report offers a substantial discussion of a water balance approach to evaluating potential groundwater impacts to surface flows. This approach has the benefit of a much larger empirical data base and easier access for monitoring. Furthermore the water balance concept is more intuitively understandable by the general public who can easily see that a groundwater withdrawal of a few hundred or even a few thousand gpm over a 400 square mile study area is not likely to result in significant reductions to surface flows. Comparing and discussing the multiple lines of evidence available provides a stronger and more scientifically valid analysis than that presented in the SDEIS.

Response: While the total consumptive use of groundwater by the Montanore Project may be small compared to the total water yield from 400 square miles, an important consideration is where would those depletions occur and would the depletions impact other resources, such as fisheries. Another importance consideration is if the predicted changes in streamflow would meet Montana non-degradation rules. Therefore, for the purposes of NEPA, it is important to use available tools to determine where groundwater depletions would occur and to evaluate potential impacts.

330-4 The model sensitivity/uncertainty analysis assesses the effect of variations in hydraulic conductivity at only a very rudimentary level. There are other important parameters such as infiltration recharge rates, which also have virtually no available empirical information, that were not assessed in the uncertainty analysis. One approach that could result in a better assessment of uncertainty could be obtained through a stochastic analysis (i.e. running multiple simulations while varying a broader suite of model parameters over a reasonable range and then statistically quantifying the results).

Response: As described in previous responses, a reasonable range of infiltration rates were used during the calibration process to calibrate against what was known about the area, such as adit inflow data and the elevation of perennial streams. It is unlikely that the range in the various parameters would be sufficient to justify stochastic modeling. The working range of parameters such as hydraulic conductivity and infiltration rates is not large and was considered by performing simple sensitivity analyses.

321-2 Allowing a variation up to 50% on simulated base-flows is ridiculous. It makes that section and everything based upon it invalid statistically and also lacks common sense.

Response: The agencies used a more detailed 3D model constructed by MMC in the SDEIS and FEIS for impact assessment. In addition to the limited data used in the 2D model, the 3D model used hydraulic test results from within the Libby Adit that were not available for the DEIS. Section 3.10.3 of the SDEIS and FEIS was revised to include Libby Adit data. The FEIS provides a discussion of model uncertainty due to uncertainty in various parameters used to construct the model. In the case of baseflows, actual baseflows vary year to year depending on many factors such as long term precipitation trends. It is not unexpected for the model to provide such a large range of values for baseflow given inherent model uncertainty and when dealing with relatively small values for baseflow.

The following comments address the report on the 3D numerical groundwater model for the mine area prepared by Geomatrix, MMC's consultant. Geomatrix (Geomatrix 2011a). MMC provided responses to some of the comments at the agencies' request.

328-2 Is it appropriate to use these low K envelopes around the Rock Creek fault, and effectively seal the high K fault zone from Rock Lake? It certainly changes the prediction of stream dewatering for the worse, as shown in Table 24 of the modeling report. This is not surprising since these zones have the effect of sealing off water flow through the fault zones from any of the surrounding rock, as if there is no system of interconnected fractures beyond the faults. Removing these low permeability envelopes results in a somewhat poorer calibration, and as a general rule, if a modeler needs to resort to this type of "fix" in order to calibrate the model, there is probably a fundamental problem elsewhere, such as with conceptualization or parameterization of the model.

328-2 The placement of essentially impermeable "skins" on either side of the high conductivity fault zones in the vicinity of the Libby adit (only) is difficult to justify for anything beyond modeling inflow to the adit itself. The hydraulic conductivity contrast between the high conductivity faults and the surrounding rock is already two or more orders of magnitude different, so it's not clear why an even more impermeable envelope is necessary– it seems like a calibration artifact.

328-3 Given the lack of empirical data and the somewhat questionable calibration, it's not clear that this model really represents the "worst" case scenario at all. Even though faults are modeled as high conductivity zones throughout, this otherwise conservative assumption is partially negated by enclosing critical portions of the faults in low K envelopes.

333-7 Rock Lake Fault, using this configuration, bounds the proposed mine void, which is in model layer 6. The low-conductivity zone artificially minimizes the connection between the mine void and the fault, and therefore the effects that dewatering would have on water levels within the fault zone. Geomatrix Figure 33 shows the 10-foot drawdown just touching the north edge of the lake but less than 1000 feet north of the lake's edge the drawdown is 1000 feet, which reflects the Rock Lake Fault. The SDEIS notes that "[water levels over the mine void nearest Rock Lake would permanently remain greater than 100 feet below pre-mine conditions" (SDEIS, p 257). Regardless of the exact depth the groundwater is drawn beneath the lake, the natural groundwater exchange with Rock Lake will be broken.

MMC Response: "Using the same parameterization pattern from faults and fractures intercepted in the Libby Adit for the Rock Lake Fault was made because these are the only fractures and faults in the region that have been hydraulically characterized; thus this parameterization is the best estimate of how the fracture and faults behave hydraulically in the proposed mine area. Despite appearances, the low-K envelope parameterization was not design to be a "skin" around faults; it was designed only to mimic the parameterization calibrated for faults and fractures intercepted in the Libby Adit. Thee low permeability zones were necessary in order to simulate the lack of communication across fracture sets as observed in the Libby Adit. At this stage of the project, no hydrogeologic data exist which suggest the Rock Lake Fault behaves differently."

Agency Response: The agencies are also concerned about this specific simulation, particularly as it may be related to the hydrologic function of the Rock Lake Fault. Because of this feature and others, the agencies increased the initial buffer distances between the Rock Lake Fault and Rock Lake in the FEIS. Additional data characterizing the Rock Lake Fault would be collected during the Evaluation Phase and the 3D model updated (see section C.10.4 in Appendix C). The agencies would then make an assessment of the appropriate thickness of buffers.

328-2 The model calibration statistics of observed vs. simulated heads shown in Figures 12 (AMEC Geomatrix, 2011) appear to fit the 1:1 line reasonably well, but two facts are apparent: (1) the residuals are smaller at lower elevations, especially below 3,000 ft, and (2) as a result of the overall range of elevation in the model, the residuals are 100 feet or more in magnitude. While this is a small percentage of the total elevation range, it is nonetheless a large discrepancy at any individual location. In particular, the water levels in the three wells in the Montanore area are each under-predicted by more than 100 feet. In addition, Figure 13 shows that the spatial distribution of positive and negative residuals is not random, that is, certain

areas are consistently over-predicted while others are under-predicted. The higher elevation locations on the west side of the model area are all under-predicted.

MMC Response: "The heads at these three wells were actually over-estimated not under-estimated. Head targets in the three exploratory boreholes (HR-19, HR-26, and HR-29) are approximate because they are based on water levels noted in driller's comments (Chen Northern Inc. 1989); Geomatrix 2006) and because the location accuracy is questionable. HR-19 and H-26 were noted as having water levels between 5400 and 5500 feet. Thus, a target of 5450 was used in the model for residual calculations. Locations of these boreholes were determined by geo-referencing a scan of the borehole location map on a site map. The location accuracy and uncertainty in water elevations in these wells resulted in a high residual value (50 meters) for the calibration goal."

328-3 We note that hydraulic testing in the Libby adit yielded several values of hydraulic conductivity for the fracture zones that range from 7.7 x 10-4 cm/sec to 3.4x10-5 cm/sec. Yet in the model parameterization, the faults in layers 6 and 7 (in the adit zone) are given conductivity values that are two orders of magnitude lower than what was measured, and lower than in layers 3, 4 and 5 above it. It is curious that the only empirical value of hydraulic conductivity in the area is apparently not used in the vicinity of the adit, where it was measured. The effect of using a drastically lower hydraulic conductivity for fractures in the adit area may be to decrease overall drawdown.

MMC Response: "Parameterization of faults and fractures in the Libby Adit was calibrated to hydraulic tests conducted in the Libby Adit. The model reproduced time-drawdown and or time-lack of drawdown, so empirical data from the hydraulic testing was taken into account. Furthermore, actual values simulated in the model are close to values determined during the testing analysis. For example at location 3680RR and observation borehole location 3110LR, the fracture hydraulic conductivity is 7.7 E-4 cm/sec based on analysis of the hydraulic test data. These boreholes are located near the top of layer 4. The fractures in layers 3 and 4 of the model have a hydraulic conductivity of 1.2 E-4 cm/sec and 5.0 E-5 cm/sec, respectively. At location 5220RR, the fracture hydraulic conductivity is 3.4 E-5 cm/sec based on analysis of the hydraulic test data. Borehole 5220RR is located in layer 5 of the model. The fractures in layer 5 of the model have a hydraulic conductivity of 3.0 E-5 cm/sec. The model calibration was sensitive to conductivity of the fractures in all layers. A value greater than 2.0 E-7 cm/sec in the fractures of layers 6 and 7 result in poor calibration to the observed time-drawdown data."

330-3 The assumptions made for varying bedrock permeabilities with depth as well as in and adjacent to known faults are at best crude approximations and almost certainly do not adequately represent actual conditions with respect to structure and stratigraphy. Although there may be no practical alternative to the assumption that the bedrock fracture flow system approximates an isotropic homogeneous flow system for modeling purposes, to not adequately consider the uncertainty and errors in model outputs from variations of this and other assumptions is not scientifically acceptable. The limited site data and other model input assumptions create model results that have very large errors and confidence limits. The large inherent error and associated uncertainty preclude use of the groundwater model as a predictive tool as presented in the SDEIS.

330-3 While major geological structures are known over much of the area covered by the model, there is essentially no information about their hydraulic characteristics. Similarly, the only area in which there is any significant information regarding fracture density characteristics is confined to a small area within the ore body and along the adit. Extrapolation of these data over the large area covered by the model will lead to very large errors which can only be reduced by obtaining additional site data. Although the Geomatrix report identifies many of the limitations to the model, the SEIS does not adequately document or describe these limitations. The confidence limits and range of potential errors for any quantitative values calculated by the model were not adequately evaluated or presented.

Agency Response: The SDEIS and FEIS incorporated by reference the Geomatrix 3D numerical model report for the discussion on model calibration and sensitivity analysis. With the data currently available, the model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models would be refined and rerun

after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. Section 3.10.4.3.5 was added to the SDEIS and FEIS to discuss the limitation and uncertainty of the 3D models.

333-2 Modeling completed for the SDEIS simulated the faults as a high conductivity fracture zone surrounded by unfractured bedrock with extremely low conductivity without any data or other verifying justification, even though there is no data to support these assumptions. This artificially minimized the simulated dewatering, drawdown, and impacts to surface water as projected in the SDEIS.

Agency Response: Geomatrix considered the results of flow tests in a piezometer located at the 5220 level in the Libby Adit. Although the tests results are from only one location in the adit, the response of adjacent piezometers (outside of the tested fracture) indicate that the bulk permeability of the unfractured rock is very low relative to that of the fracture.

333-6 The mining company projected dewatering rates using the 3-d numerical model (Geomatrix 2011). The simulated rates are generally less than 500 gpm, with a few intermediate peaks to 800 gpm (SDEIS, p 239-240). The short-term simulated variability should be given little credence because it is an artifact of the modeling; boundary conditions that simulate dewatering change the head level over a section of the mine void instantaneously so the rapid change in head would cause short-term changes in the simulated flow. The projected rates should be considered very uncertain and quite likely a low estimate by as much as threefold.

Agency Response: The agencies agree that the short-term inflow rates predicted by the model are uncertain. Regardless of the model predictions, it is reasonable to assume that short-term higher rates may be encountered occasionally if saturated fractures with limited storage were intersected. Once substantially drained, inflows would be reduced to some lower rate. The model predicted steady state rates are comparable to what was observed during the construction of the 14,000-foot-long Libby Adit. Another factor is that during mining, it is a common practice to drill ahead and grout water-bearing fractures to avoid large mine inflows. NMC used this method during the development of the Libby Adit.

333-7 Regardless, without the low conductivity zones assumed in the model, simulated dewatering rates were 11 to 35 percent higher than determined with the calibrated model. Streamflow reductions were even greater, with the largest effect occurring in the wilderness stations, based on simulations reported to the end of operations. Reductions in flow at both the outlet from Rock Lake and the East Fork Bull River were almost doubled, with the outflow from Rock Lake being more than halved and the flow at the upper EFBR station being reduced by more than a third. Although imprecise, Geomatrix's uncertainty analysis demonstrates how the SDEIS grossly under predicts the effects of dewatering and mine closure are on dewatering rates and discharge to the streams.

Response: With the data currently available, the model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. Section 3.10.4.3.5 was added to the SDEIS and FEIS to discuss the limitation and uncertainty of the 3D models.

333-8 Consistent with the conceptual model as described herein is the possibility for dewatering to affect surface water features higher than 5600 ft amsl, including lakes. As described, water that infiltrates into the bedrock fractures bifurcates with some going to the springs/lakes and some continuing deeper into the bedrock. The modeled decreasing conductivity of the fracture zones with depth controls the proportions. The mine void would encounter these deeper lower conductivity fracture zones. The fractures may no longer fill with water during the snowmelt or high runoff periods. Effectively, removing the deeper, low

conductivity portions of the fracture zones is like pulling a plug and allows more of the infiltrating water to flow deeper, not to the springs, to the mine voids. The higher elevation springs, contrary to the assertions in the SDEIS, could go dry for much longer periods.

Agency Response: Net infiltration rate to bedrock is more likely controlled by near surface conditions rather than whether a given fracture is saturated or not. The agencies do not agree that the analogy used in the comment (pulling a plug) is applicable to this situation.

333-10 The simulated recharge at high elevations may be too low and the conceptualization may not accurately partition the recharge between discharge to the streams and deep recharge. Geomatrix could have used $7Q_2$ flow rates as calibration targets to improve the estimates and comparisons in the SDEIS.

Agency Response: The value for recharge used in both numerical models for the high elevation areas was based on many factors, including the calibration process. The recharge value represents the net recharge to deeper bedrock and does not include temporary recharge that discharges from shallow flow paths. The high elevation areas are devoid of significant surficial deposits, including soil and vegetation, and they are generally very steep. One would expect that most of the precipitation that falls on these areas would run off. The assumptions used in for estimating $7Q_2$ and $7Q_{10}$ flows suggest that the Hortness method is not applicable for streams in the higher elevation areas.

333-20 The accuracy of the projected effects of that dewatering on the resources in the remaining model domain depends on how well they are conceptualized and calibrated. There is no description of how the boundary used to simulate the mine void dewatering is calibrated, which increases the uncertainty around the projected dewatering rate.

MMC Response: "Indeed these boundaries were placed as specified boundary conditions, and were not calibrated in any fashion. Rather, the properties of the model that control groundwater flow were calibrated, and then a boundary representing dewatering was simulated assuming that the mine operators would be able to dewater the void to the floor."

333-20 Wells cannot be drilled in the wilderness, but the springs and streams offer data which has not been fully utilized. Each spring could be considered a head target in the calibration if that spring can be assumed part of the water table being modeled. The point at which a stream becomes perennial is also a head observation.

MMC Response: "This assumption may be reasonable for some springs and stream headwaters; however, others are likely fed by water stored and released in colluvium and alluvium that may not be in hydraulic communication with the deeper groundwater system."

Agency Response: The agencies agree with this comment and require that the source of water to various springs be determined during the Evaluation Phase (see Appendix C – Spring Monitoring). This type of information was used in constructing the agency's 2D model.

333-20 Figure 3 shows the Rock Creek EFRC-50 and Rock Creek at Wilderness Boundary in darker red, Libby Creek at wilderness boundary in darker purple, and the East Fork Bull River in dark green. These, and the other reaches and other streams, have been modeled as transfer boundaries with the discharge to them controlled by gradient and a conductance (which the report does not specify) in model layer 1. These could be calibrated to flows estimated for these streams. The mine is in model layer 6, so the drawdown must propagate through five layers to affect the streams by inducing recharge from or reducing discharge to the stream. The vertical conductivity of these layers controls the rate at which the drawdown occurs. Baseflow changes occur when the gradient at the stream change; if the gradient changes from positive to negative, the stream will change from receiving discharge to recharging the aquifer. At high elevations where there is no baseflow, this could not occur since there would be no water in the stream to flow into the aquifer; recharge may occur from these streams during runoff periods.

MMC Response: "Over time, more flow data have been collected and gaging locations have been added to the monitoring network. Indeed future model modification would likely include calibration of the model to more stream flow data obtained in the higher reaches."

Agency Response: The agencies agree with this statement. However, recharge during periods of runoff in intermittent reaches of streams is likely to be very small due to the steep, rocky, nature of the drainages when compared to the rate of the runoff flows.

333-20 The figures show clearly the simulated drawdown occurs directly under the reaches EFBR-300 and EFRC-50. The time of maximum impact is 16 years after mining ceases because the drawdown continues to expand as the mine void fills with water. EFRC-50 goes essentially dry but discharge to EFBR-300 decreases by less than 20% at this time; drawdown at EFBR-300 appears to range from 10 to 100 ft while at EFRC-50 it appears to exceed 100 ft. Not knowing the initial gradient, it is difficult to verify or even understand the modeled changes in flow; in particular, the gradient controlling flow to the upper end of the E Fork Bull River must initially be high if drawdown from 10 to 100 feet causes less than 20% flow reduction.

MMC Response: "Not all of the stream channel above East Fork Bull River station EFBR-300 is within the 10 to 100 ft drawdown region. Indeed the gradients toward the stream pre-mine are steep."

333-21 Geomatrix is correct in stating that fractures that are not connected to others can contain water that may drain but not be a long-term source of flow (Geomatrix, p. 3). However, they present or utilize no site-specific data for the Montanore project regarding connectivity. Considering that most of the fracture zones are apparently related to faults, the fracture zone would likely be more extensive than suggested by the statement.

MMC Response: "Unconnected fractures likely exist, but there are no empirical data to support the nature of fracture connection. The faults are simulated as extensive lineaments of increased permeability."

333-22 They convert the location within the adit into depth of overburden (Geomatrix, Figure 4) to suggest that inflow decreases with increasing depth. Geomatrix has not proven that the decrease is not simply caused by different geologic formations being intersected by the adit or by a lucky fracture. That the mining company found two fracture zones in the first 5300 feet that produced significant water followed by several in the next 7000 feet not producing water does not prove that lithostatic pressure in this instance caused the lack of flow.

MMC Response: "The geologic and fracture data observed and reported in the 14,000-foot-long Libby Adit shows that groundwater flow is controlled by the fractures and not geologic units. Therefore, the model includes the condition of decreasing hydraulic conductivity with depth."

Agency Response: The agencies agree with this comment. A detailed look at adit inflow measurements and cumulative inflow by NMC do not support Geomatrix's conclusion.

333-22 It may be an exaggeration to state that 'the upper 600 feet of bedrock yields 50 percent of the water" (Id.).

MMC Response: "This is the case observed for the Libby Adit, but may not be true in all locations." "There is extensive geologic information on the deposit and there is no information to support that the geologic units intersected by the 14,000 decline are not characteristic of the geologic setting and reflect representative hydrologic conditions as well."

Agency Response: The agencies agree with this comment. A detailed look at adit inflow measurements and cumulative inflow by NMC do not support Geomatrix's conclusion.

333-22 It is correct that, in general, the permeability of fractured rock decreases with depth (Geomatrix, p. 4). Geomatrix however has no data to support any conceptualization that faults, including the Rock Lake

Fault, are barriers to flow. They present no information about gouge or other fines in the fault (Caine et al 1999), nor do they present any hydrologic data showing a significant head drop across the fault, which would be expected if a fault was a flow impediment.

MMC Response: "The model does not treat the faults as barriers to flow."

Agency Response: The agencies agree with this comment. The Rock Lake Fault was not simulated as a barrier to flow.

333-22 Geomatrix does not present the derivation of their recharge estimate (Geomatrix, Table 1), other than to state that "AMEC developed a steady-state groundwater balance…when the system receives the least stress…" (Geomatrix, p. 4). This reference and the derivation should be included because recharge drives a groundwater model. However, setting recharge equal to discharge for a specific study area is the best way to make the estimate (Myers 2009a; Cherkauer 2004), therefore 4.6 in/y may be reasonable. The geology in the project area has a low conductivity and most precipitation runs off rather than becoming recharge. Interbasin flow from the area is not measured, nor measurable. The main point here is that the recharge estimate may be very uncertain.

MMC Response: "The volume of water from recharge was determined by setting it equal to discharge; it was used to complete the water balance."

Agency Response: The agencies agree with this comment. Based on site knowledge, it seems that the large difference in net recharge used in both models between the high steep areas versus the lower, flatter areas represents actual conditions. The actual values for recharge are subject to some degree of uncertainty.

333-23 Even if the areal average is accurate, Geomatrix method of distributing it around the domain is not reasonable. They set the recharge equal to two percent of PRISM precipitation if the ground slope exceeds 30 percent and equal to 14 percent if the ground slow is less than 30 percent. Slope definitely affects runoff which in turn affects recharge, but their method ignores soils and geology; there would be little recharge for precipitation landing on a rock outcrop regardless of the slope. Their simple criterion leads to large changes in the recharge across the area – the most ludicrous is the near 1.0 in/y just west of the mountain crest on some steep slopes and 11 in/y adjacent to it on the flatter ridge tops (Geomatrix, Figure 9). Figure 9 shows a broad area of low recharge east of the crest (and "proposed mine void") although Geomatrix Figure 10 shows a variety of geologic formations.

MMC Response: "Soil type could have been used to vary recharge. Using slope of ground surface was a logical method because, in general, steep slopes are associated with bedrock exposures, while flatter slopes are associated with soil accumulations and alluvial/colluvial deposits. "

333-23 Setting recharge high based simply on the ground-surface slope could also cause the modeler to overestimate conductivity. Forcing recharge into the ground can cause simulated heads to be too high if the conductivity is low, so the calibration process changes the conductivity to allow the recharge into the ground. This could lead to zones of high and low conductivity in the same formation for no reason other than the ground slope.

MMC Response: "Hydraulic conductivity does not change within a unit formation except with depth and along faults. So the recharge distribution did not affect the calibration of hydraulic conductivity within formations, as suggested."

333-23 Geomatrix should not call setting permeability in the faults higher than the surrounding bedrock a "conservative assumption" (p 7) because it simply is not. It may be correct, but that just means it is accurate, not conservative.

MMC Response: "Comment noted."

Agency Response: The agencies agree with this comment. The agencies characterized the 3D model predictions as the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models.

333-23 The conductivity distribution reflects the recharge over large sections of the domain. Figures 18 through 22 demonstrate several north-south K trends that do not reflect the mapped geology on Figure 10.

333-23 The text has described the bedrock as having a low K, but these recharge-driven K zones have K varying over two orders of magnitude. The geologic mapping does not justify the K-zonation show on the K maps (Geomatrix Figures 18 through 23).

MMC Response: "The K zonation was guided by geologic mapping; however, there was some grouping of geologic units in the K zonation, and alluvial and glacial deposits were not represented below layer 1. The Wallace, Sheppard, and Snowslip formations were grouped; however, in the shallowest units (layers 1, 2 & 3) the Wallace Fm had its own zonation. The Prichard, Mountsheild, Revette [sic], Burke, and St. Regis formations were also grouped. The difference in K values between the rock units diminishes with depth. In Layer 5, the Wallace Formation and other units have K-values just over 2 times the Prichard Formation and other units. In layer 6 and 7, the units are equivalent."

333-23 The combined recharge and K distribution biases the model to cause groundwater to flow in certain directions and protects certain areas from drawdown. One area with potential bias is just north of the proposed mine void. Geomatrix Figure 18 shows an almost triangular area north of the mine void colored orange for conductivity (K) equal to 4.0 or 4.5 E-4 cm/s; although there are other areas with this K, it is one of the highest K areas in layer 1. It adjoins a huge area to the east with the lowest K, 5E-5 cm/s which coincides with the lowest recharge. This region follows through to layer 5 being one of the highest K zones in the bedrock. This region connects with the E Fork Bull River, as well. Because it coincides with high recharge, it limits the drawdown to the north and assures that flow to the East Fork Bull River is not impacted that much. This also manifests in Geomatrix's uncertainty analysis, in which they found less than 20% variability in flow to that river (p. 32).

MMC Response: "Driving the K-value distribution were two factors: 1) Wallace unit was rich in limestone and would therefore more readily weather near the surface, and 2) baseflow in Bull River was substantially more per catchment area than other streams in the model area, and the difference in precipitation did not make up for this. It was evident that hydrogeologic influences were preferentially supplying water to the Bull River. It is true that there is some preferential flow, but this design was not intended to reduce drawdown; it was intended to reproduce the disproportionate amount of baseflow in the Bull River."

333-23 There were 115 head targets used for steady state calibration (p. 9), but most were clustered around the edge of the domain far from the mine area, or clustered near mine facilities (just three near the area to be dewatered) (Figure 13). Contrary to Geomatrix's claim they "are not spatially biased," Figure 13 shows extreme spatial clustering of positive or negative residuals. Along the southwest edge of the model near the Clark Fork, there are 19 negative and just 4 positive residuals (Figure 13). Further northwest along the river is a string of positive residuals. Only near the mine facilities are the residuals relatively balanced. Additionally, large extents of the model domain in the northwest and southeast have no observations and the model is therefore essentially unconstrained.

MMC Response: "There was not an attempt to model variability in the alluvial materials that would bring the calibration in tighter around the Clark Fork River. In general along the Clark Fork River, there is a mix of positive and negative residuals. The only change to bedrock permeability that may have resulted in few negative residuals (over-predictions) at the southwestern most edge, and more negative residuals a little farther north, would be to have more of a contrast between the Wallace and other units versus the Pritchard and other units."

333-24 A preferable uncertainty analysis would be to determine the sensitivity of the model to each parameter zone. The modeler would vary the K of each zone individually across a range up to an order magnitude and compare the relevant test statistic with the variation in the K. This would show which parameters are most sensitive (and might help the modeler to improve the model).

MMC Response: "This would give a sensitivity analysis showing which parameters the model is most sensitive to; however, it would not provide a range of predictions (an uncertainty analysis)."

328-2 The lack of available data for calibration is also apparent in the fact that the model is not truly calibrated to transient conditions. Although the model was calibrated to hydraulic testing performed in the Libby adit, and while this limited transient calibration is undoubtedly useful, it covers only a very small part of the model area, both aerially and with depth, and does not represent a complete transient calibration to seasonal changes in the aquifer.

Response: During the Evaluation Phase, the model would be revised to incorporate new data from multiple sources to improve its predictive ability and reduce the uncertainty of those predictions.

333-24 Transient calibration with short-term pump tests does not provide useful information, because the stresses are a very small proportion of what will occur in the future.

MMC Response: "Calibration to these tests gives very useful information about the hydraulic behavior of fractures and adjacent bedrock in the region. However, it is true that calibration to these tests only permits transient calibration in a small portion of the model."

333-24 Geomatrix Figure 13 does not provide a very good fit; for more than half of the period, the simulated dewatering was 20 percent or more less than the observed; this could bias future projections downward. There is very little confidence that the transient calibration provided an accurate calibration.

MMC Response: "The simulated versus observed discharges in the Libby Adit are quite close (within 20%) and range from under-predicting to over-predicting during the simulation. Thus, it is not likely that future projections would be biased downward. It is acknowledged that, during the period simulated, there are several points where the model-simulated flux rate is under- or over-predicted by 20%, but this variation is not considered a poor fit."

333-24 A preferable uncertainty analysis would be to determine the sensitivity of the model to each parameter zone. The modeler would vary the K of each zone individually across a range up to an order magnitude and compare the relevant test statistic with the variation in the K. This would show which parameters are most sensitive (and might help the modeler to improve the model).

MMC Response: "This would give a sensitivity analysis showing which parameters the model is most sensitive to; however, it would not provide a range of predictions (an uncertainty analysis)."

333-24 For this model, the biggest uncertainty may be the rate that water enters the adit and the mine void, which is controlled by the gradient at the boundary and a specified conductance. The conductance would represent the "skin" resistance and conductivity in the rock next to the void. The best way to estimate the effect of uncertainty on the dewatering rate would be to vary the conductance and/or the K of the element next to the mine void boundary.

MMC Response: "This adjustment was captured in the uncertainty analysis mention above; the K-values next to the void, along with the K-values throughout the model were changed. This adjustment was also captured in the subsequent uncertainty analysis where K-values along the entire eastern side of the mine void were increased."

334-11 The conceptual model of flow effect in the SDEIS and Geomatrix (2010) implies, but does not specify the implications of, three points of linkage between the deep groundwater system affected by the mine and surface waters in streams: First, headwater spring sources at high elevation that originate in bedrock fractures or fissures; second, potential subsurface flow contributions of deep groundwater volume to shallow groundwater systems in the glacial and alluvial valley fill surrounding the streams (i.e., buried springs); and third, the potential influence of the slope or regional water table on valley fill water table and resultant connectivity of valley fill shallow aquifers to surface waters thought hyporheic flows. While the descriptions of this analysis in the SDESI suffer from vagueness, it appears that in evaluating the potential

effects of mine dewatering post-closure infilling, the SDEIS only explicitly accounts for the first category of flow impact—direct effects on surface spring discharge. Failure in the SDEIS and supporting analyses to fully address the second and third sources of potential impact on stream flow could result in a serious underestimation and mischaracterization of the potential consequences of the Montanore project for bull trout and stream habitat. It appears quite conceivable that if water table lowering produces such a hydrologic tipping point, the result could be catastrophic transformation of these now-productive streams into systems that are ill-suited to support bull trout. The keystone to this possible transformation is not the volume of water issuing from bedrock springheads, but rather the loss of vertical (hyporheic) flow connectivity along the stream length associated with drawdown of valley fill water tables.

Agency Response: Depletions from streams, as predicted by the models, are not limited to headwater springs. Predicted reductions in stream baseflow occurs along various reaches of each stream as a function of drawdown resulting from mine dewatering. The models did not specifically identify headwater springs, but rather looked at reduction of heads and therefore changes in groundwater contribution to streams. The depletions are tracked downstream both as a net loss to baseflow and as a percentage of total baseflow at each indicated location. The fisheries and other aquatic life section (Section 3.6.4) discussed potential impacts to fisheries.

342-2 The agencies continue to attempt to support disconnection between shallow to deep groundwater with a conceptual model based on thin surficial soil deposits on ±60% mountain slopes that are claimed to store and release water over the span of the year to support perennial stream flows. This is a highly unrealistic assumption and is not known to exist in thin steep slope soils overlying Belt rocks (Overton, personal communication).

Agency Response: The comment reflects a misunderstanding of the conceptual model presented in the SDEIS and FEIS. The agencies noted that there is very little surficial material in the upper watersheds. What surficial material is there is thin and discontinuous and much of the steeper areas have no soil cover. Baseflow in creeks in the upper areas appears to be maintained by discharge from bedrock, not surficial material which probably drains fairly quickly during periods of snow melt and runoff. The apparent disconnection that is referred to by the agencies is between the upper perennial portions of the creeks and yet higher very limited areas of springs or seep. From observation, these highest springs and seeps are ephemeral and appear to discharge from shallow fractures, or in some cases surficial deposits, only when there has been recent precipitation and/or residual melting snow cover. During the 2007 site visit, it was observed that at least one of these very high ephemeral seep areas was likely evapo-transpired before reaching East Fork Rock Creek.

342-3 The mountain blocks cannot generally be characterized as having general water table aquifer as described in the supplemental draft EIS, rather the bedrock groundwater system with depth quickly transitions to semi-confined and confined conditions; with any overlying unconfined water table condition being sporadic and discontinuous. Based on experience, it is difficult to find a very large mass of Belt rock that will have a relatively uniform low (10 - 10 8 cm/see) hydraulic conductivity (Overton, personal communication). Consequently, the volumes of water in storage in bedrock are larger than implied in the agencies models, the degree of hydraulic connection from the bedrock surface to depth is more significant than suggested, and the mine impact to groundwater systems and surface water flows will be larger than predicted.

Agency Response: The conceptual model, and subsequently the numerical models, are based on several observations in the area. The 14,000-foot-long Libby Adit inflow data provides significant insight as to groundwater flow in the region. Although limited, measured and observed baseflow conditions in the upper watersheds also provide information as to likely groundwater contributions from bedrock. The statement made in the comment regarding more storage in bedrock, more connection, and more impact is not consistent with the available observations and data. As more hydrologic data became available, MMC would reanalyze the hydrology with a revised model.

Tailings impoundment area model

182-14 "No aquifer tests were performed on the fine-grained deposits in the Poorman tailings impoundment site.

Agency Response: The geology of the Poorman Tailings Impoundment site is similar to that of the Little Cherry Creek site, which was extensively tested. This information was adequate for effects analysis in the FEIS. Section 2.5.2.6.3 of the SDEIS and FEIS disclosed required characterization of the site before impoundment construction would begin.

The following comments address the report on the 3D numerical groundwater model for the tailings impoundment area prepared by Geomatrix, MMC's consultant. Geomatrix (Geomatrix 2010c). MMC provided responses to some of the comments at the agencies' request.

333-25 The report describes that "glacial lacustrine deposits act as a confining unit across much of the site" (p 2) because they have a low conductivity and that glaciofluvial and colluvial units have moderate and high "permeability", respectively. No references or pump-test results are provided to support these contentions. They describe the bedrock as low to moderate conductivity.

MMC Response: "The references that should have been included are: Geomatrix (2006), Chen-Northern (1989), and Klohn Crippen (2005)."

Agency Response: MMC would obtain additional hydraulic data in the tailings impoundment area prior to construction of the impoundment. Section 2.5.2.6.3 and Appendix C of the SDEIS and FEIS described additional data collection.

333-25 They correctly describe flow as to the east except on the ridges, and that all of the flow discharges into Libby Creek due to a bedrock constriction (p 2). This is probably an oversimplification because, if the bedrock does have moderate conductivity, some flow likely continues within or enters the bedrock. Additionally, there remains a small alluvial aquifer beneath the stream so some flow would likely remain in that aquifer.

MMC Response: "Libby Creek is a major hydraulic divide in this location, with groundwater flow in the TSF area moving east toward the creek. It is possible that a small amount of water could move into the bedrock, as well as be stored in alluvium."

Agency Response: MMC would confirm the hydrogeology of the impoundment site with boreholes and aquifer testing before final design. This additional data would be used to revise the 3D model of this area.

333-25 It is also possible that some flow would discharge north to Little Cherry Creek, especially due to a potential mound forming due to seepage under the impoundment. AMEC's assumption would have the effect of underestimating the flux through the system, because the only way for groundwater to exit the domain is through Libby Creek.

MMC Response: "Flow can leave the model through boundaries representing Ramsey Creek, Poorman Creek, Little Cherry Creek, Bear Creek, and Libby Creek. Mounding is expected to be relatively mine to the low seepage rate predicted from the TSF impoundment." In addition, the underdrain system would also minimize any head build up beneath the impoundment.

333-25 The discharge to all streams is considered to be 4.9 cfs, or 3550 af/y; this target was apparently based on simulated flows from Geomatrix (2011) (AMEC, p 6). AMEC used the recharge rate used for the regional model (described in the previous section) of 14 percent of rainfall. There is no reference given for this value and the comments made above regarding recharge in the Geomatrix model pertain here as well. The total recharge therefore equals 1570 af/y, so the interbasin flow to the domain from the west and south would be 1980 af/y. AMEC should determine whether this is reasonable based on recharge and watershed area draining to this point.

MMC Response: "Comment noted. Total recharge seems reasonable."

333-25 Layer 3 is the bedrock layer. There is no justification for brown-colored zone with K=0.5 ft/d mostly under the tailings impoundment, surrounded by K=0.06 ft/d.

MMC Response: "Additional zonation was added within the geologic units in order to reproduced observed hydrogeologic conditions, including heads, potentiometric surfaces, and gradients. Attachment 1 of the report shows the area of artesian conditions. The elevated hydraulic conductivity in the brown zone of layer 3 is conceptualized as fracture bedrock; it creates upward gradients in the region of artesian conditions and permitted calibrating to the strong upward gradient in well pair PLCM-6-d and –s."

333-26 Very high conductivity along Libby Creek drains the model so that flow into the creek occurs easily. The high K value was probably necessary to allow vertical flow into the creek. The conductivity in this zone being so excessively high suggests the flow around the creek is poorly conceptualized.

MMC Response: "The high K zone is stream valley alluvium, which is characteristic of this material."

333-26 The green bedrock in layers 1 and 2 near the confluence of Little Cherry and Libby Creek does coincide with Precambrian bedrock on Attachment 1.Presumably this is an outcrop of the deeper bedrock, but weathering where it is exposed would have increased the conductivity which should allow some leakage from the model.

MMC Response: "Comment noted."

Agency Response: Because of the large contrast between the hydraulic conductivity of the surficial deposits and the bedrock, it is unlikely that there would be enough downward vertical leakage to affect the predicted result. Also, the vertical gradient in the weathered bedrock may be upward so that if there were to be any leakage, it may be upward.

333-26 The light-blue K=12.5 zone splits the much lower conductivity zone in layer1 and especially in layer 2. The zone on the north end of the impoundment serves as a drain for the tails water. That there are up to 5 wells completed in that zone shows that the zone conveniently helps to simulate capture of the simulated tails seepage.

MMC Response: "The complex flow patterns, artesian conditions; and steep gradient were all difficult to simulate, and the well capture system was challenging to design. This explains why there are many capture wells and relatively high capture rates."

333-26 AMEC calibrated the model in steady state mode so that discharge to the stream matched the measured value and so that the simulated water level observations closely matched the observed. However, considering how well constrained the model is with flux boundaries, it is surprising the simulated discharge to the streams, 4.1 cfs, is 16 percent less than targeted rate. It suggests the calibration was completed too quickly, possibly leading to some of the errors outlined above.

MMC Response: "The only specified flux boundaries in the model are for areal recharge. Underflow from up gradient is simulated with a general head boundary."

333-26 AMEC simulates the tailings impoundment by replacing the natural recharge with the expected 25 gpm spread across the site, which is about 40 af/y. In alternative 3, the tailings impoundment would cover up to 1272 acres (SDEIS, Table S-1). The seepage rate reduces recharge to less than 0.4 in/y, from 4.6 or 5.8 in/y, depending on the recharge zone; at 4.6 in/y, the total natural recharge under the tails would be about 488 af/y. The impoundment, if it works as conceptualized, would reduce the recharge on its footprint by 448 af/y. This would cause a significant drawdown itself. The drawdown figure (AMEC Figure 7) is unclear as to whether this is included.

MMC Response: "The drawdown in Figure 7 does include drawdown induced by the diminished recharge plus the drawdown due to the capture wells."

333-26 The model boundaries are obviously too close to the impoundment; this is especially true for the upgradient side. As the recharge reduces from natural to the lower tailings seepage rate under the impoundment, the groundwater level would also be lowered. This lowering of the water table would increase the effective gradient at the boundary. If the increase is small, it may be acceptable. However, the boundary is effectively an unlimited water supply in the model. If the drawdown draws more flow from the boundary than would realistically occur, it may inappropriately minimize the drawdown under the impoundment. This would decrease the reduction in simulated discharge to Libby Creek. The drawdown map (AMEC, Figure 7) shows that drawdown approaches the boundary, but the report does not indicate whether the flux across the boundary increases. A similar issue applies on the east at Libby Creek; the model boundary is too close. Drawdown at the creek appears to exceed 10 feet.

MMC Response: "We were also concerned about boundary influences on the model results; however a mass balance analysis was performed on the upgradient underflow boundary and there was less than a 1 percent change in flow (approximately 0.01cfs increase)."

333-26 That the model simulates a decrease in flow to the creek equal to the pumping rate (AMEC, p 9) indicates that they have not adjusted the natural recharge under the tailings impoundment. The decreased recharge must affect the flows to the creek as well. AMEC should present a full water balance accounting from the model with pumping to show where the excess flow goes.

MMC Response: "The model does take diminished recharge into account. The total depletion to all streams in the domain is 0.7 cfs."

	Steady State Flux (cfs)	With TSF and Pumping Flux (cfs)	Change Flux (cfs)
Well	0	-0.55	0.55
Rivers	-4.04	-3.34	-0.70
GHB	1.84	1.85	-0.01
Recharge	2.20	2.03	0.16

3604 Mine and Adit Areas (Mine and Adit Inflows): Comment about baseline data

74-19 A publicly available monitoring plan for Wilderness waters, including a Wilderness-friendly strategy for groundwater monitoring that extends at least 70 years into the future.

109-16 Please confirm that MMC's plan of operations for the Libby Adit contains these measures (monitoring wells, piezometers, ground water baseline data, an inventory of ground water dependent ecosystems, and appropriate mitigation measures).

331-17 The lack of real data on the hydrology of the region, the dependency on questionable modeling, and the dependence on anecdotal evidence should give the agencies sufficient cause to not permit the mine. The ecosystem at risk includes the Outstanding Resource Waters of the Cabinet Mountains Wilderness, a threatened species, and two species of special concern. There is simply too much at stake. At a minimum, data collection and modeling must be revised (subject to further NEPA and public review) as noted herein and in Dr. Myers report (attached).

333-5 Neither the agencies nor the mining company have any data on the most important hydrogeologic structure in the system. The modeling simulations are therefore based on assumed properties that have not been verified with data. The results of that modeling are little better than educated guesswork. Also, it is not a "conservative assumption that mapped faults near the mine area have greater permeability than the surrounding bedrock" (SDEIS, p 228), rather it is accepted as fact that could affect flow, both pre-, during, and post-mining more than realized in this SDEIS. This SDEIS is grossly deficient in baseline hydrogeologic data.

Response: With the data currently available, the model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated

uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. Section 3.10.4.3.5 was added to the SDEIS and FEIS to discuss the limitation and uncertainty of the 3D models. Appendix C in the SDEIS and FEIS described monitoring requirements prior to mining.

333-14 There are no groundwater monitoring points near the area to be mined. There are monitoring points near the Libby Adit and around the tailings impoundment. The monitoring plan includes no way to monitor the drawdown near the areas in which the modeling analysis projects up to 1000 feet of drawdown.

Response: Section C.10 in Appendix C in the SDEIS and FEIS discussed required groundwater monitoring.

333-25 They correctly describe flow as to the east except on the ridges, and that all of the flow discharges into Libby Creek due to a bedrock constriction (p 2). This is probably an oversimplification because, if the bedrock does have moderate conductivity, some flow likely continues within or enters the bedrock. Additionally, there remains a small alluvial aquifer beneath the stream so some flow would likely remain in that aquifer.

Response: The conceptual model in Section 3.10.3 was revised in the SDEIS and FEIS. Section 3.11.3 was revised in the SDEIS to describe the relationship of surface water and groundwater.

3605 Mine and Adit Areas (Mine and Adit Inflows): Comment about effect-mine

74-10 Water flows based on pressure gradients; it flows from high pressure to low pressure, which sometimes can be uphill. The mine would change these gradients, particularly due to the dewatering process, which would pump groundwater from the mine during operations creating a drawdown cone. Post-mine, groundwater levels may be affected due to changed rock density resulting from the extraction.

Response: There is no evidence that the characteristics of the unmined rock would change due to mining.

152-15 Seepage from the tailings impoundment may cause a significant groundwater mound beneath the impoundment. It is doubtful that the aquifer beneath the tailings impoundment can even accept 25 gpm of seepage from the tailings impoundment without mounding to levels above the ground surface because the current natural groundwater flux is only about 35 gpm (DEIS, page 435; Geomatrix, 2007a) and the planned seepage will exceed 25 gpm (because MMC has determined that 25 gpm is the flux that will pass the pumpback wells which are located downgradient of the TSF. This contrasts with the assurance provided in the quote cited above, which was not supported by analysis.

Response: This comment is not accurate. MMC would operate the pumpback well system in such a manner to collect any and all seepage not intercepted by the seepage collection system. Because the impoundment would intercept all precipitation that falls on the footprint of the impoundment, there would not be any natural recharge to the saturated zone. Therefore, the estimated 25 gpm loss of water into the groundwater would not likely create significant mounding. Additionally, the underdrain system would prevent any excess head build up beneath the facility.

186-2 If ground water from the Rock Lake fault zone is the principal source of water to Rock Lake and St. Paul Lake during the driest part of the season what is the likelihood that both lakes are hydraulically connected by the Rock Lake fault? What would the cumulative impact to these lakes be from the Montanore Project and Rock Creek Project if they are hydraulically connected?

Response: The cumulative impact analysis (Section 3.10.4.5) was revised in the SDEIS and again in the FEIS. The cumulative analysis did not indicate that drawdown from the Rock Creek Project would extend as far east as the Rock Lake Fault. Rock Lake is clearly connected hydraulically to the Rock Lake Fault.

The fault trace is directly beneath the lake and the elevation of the lake suggests that the lake level is partly maintained by groundwater flow when surface water flow is absent. St. Paul Lake is located within glacial moraine material that overlie the trace of the Rock Lake Fault, which causes the lake level to fluctuate to a much greater extent than does Rock Lake. St. Paul Lake may be affected by mining, but effects may be difficult to separate from the large, natural lake level variations. In a dry year when the only source of water to St. Paul Lake is bedrock groundwater, the lake level may lower more quickly.

200-4 Dewatering would extend 2 miles in all directions from the mine void. This dewatering would intercept groundwater and divert it into the mine cavity. The dewatering would impact fisheries both inside and outside the wilderness. (DEIS Summary, Page 28) Have the agencies considered the impacts on the region's hydrology from the dewatering of the numerous small tributaries that are within that 2-mile reach?

Response: The hydrology sections were revised in the SDEIS and FEIS to include more detail concerning potential impacts to streams and aquatic resources. The model predictions included the effect of drawdown of bedrock groundwater on all streams and tributaries within the model domain.

308-1 The models may be the best currently available but that does not mean that they are reliable in their predictions.

Response: With the data currently available, the model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. Section 3.10.4.3.5 was added to the SDEIS and FEIS to discuss the limitation and uncertainty of the 3D models.

309-2 Many of us depend on that water table for our drinkable water. Once it is gone, it can never be replaced, and Montanore admits that a portion of the region's water would be "an irretrievable commitment of resources."

Response: MMC would obtain water rights for any water appropriated.

310-7 One of the most significant adverse impacts on fisheries and water quality from all Alternatives for the proposed Montanore mine is the inevitable diversion of ground water in the region of the mine into the mined out void. This alteration of the region's hydrology would have serious consequences for alpine lakes and streams, including many inside the Cabinet Mountains Wilderness.

310-9 Many of the wilderness lakes depend on groundwater for recharge. Once the groundwater flow has been disrupted, there would no foreseeable solution to restoring pre-mining condition. It will be impossible to protect or restore the hydrology of the wilderness lakes given the extraordinary and inevitable impacts from the mine.

Response: The Surface Water and Groundwater sections of the DEIS, SDEIS, and FEIS disclosed possible impacts to lakes and streams in the CMW and discussed possible mitigations to reduce those impacts.

310-16 Once the mine cavity is created, it is highly questionable whether measures could ever be taken that would prevent water that collects in the cavity from leaking into the Bull River watershed and other water bodies within the wilderness, including Rock Lake.

Response: Section 3.10.4 of the SDEIS and FEIS discussed groundwater flow from the mine void and Sections 3.9.4 and 3.13.4 of the SDEIS and FEIS discussed water quality effects.

310-35 As described above, severe impacts to wilderness lakes are likely, including Rock and St. Paul Lake and possibly even the high alpine chain of Libby Lakes. The mine cavity will divert groundwater that

these lakes depend on for recharge. Once the cavity beneath the wilderness is created, the consequences will be irreversible.

Response: Because Libby Lakes are perched well above the regional water table, it is highly unlikely that they would be affected by mine dewatering. Saint Paul Lake is located on a thick moraine and completely drains by the end of the summer and therefore, any potential reduction in groundwater flow to that lake would be difficult to measure and/or observe. Rock Lake may have measureable changes due to mine dewatering, but the buffer between the lake and the mine void would be reconsidered during the Evaluation Phase to reduce potential impacts.

331-3 Overall, the dewatering and water losses resulting from the Mine, both predicted and potential, for all waters discussed herein, violates the USFS' duties "to maintain and protect fisheries and wildlife which may be affected by the operations." 36 CFR 228.8(e). In addition, these impacts violate the agencies' duties to protect sensitive, threatened, and endangered species, and their habitat, under the Endangered Species Act (ESA), Organic Act of 1897, and the National Forest Management Act (NFMA) (including Forest Plan standards protecting fish and wildlife habitat). These impacts also violate the USFS' duties to "minimize adverse environmental impacts on National Forest surface resources," including water resources, fish and wildlife, and habitat, under 36 CFR 228.8.

Response: The DEIS, SDEIS, and FEIS disclosed regulatory compliance for all resources of all alternatives.

340-1 There is inadequate field data available to analyze groundwater elevations and the effect the proposed mine would have on groundwater drawdown in the study area. Consequently, the SDEIS relies upon results from modeling groundwater and surface water, which indicate serious potential for dewatering of Rock Lake and the wilderness headwaters of East Fork Bull River and East Fork Rock Creek both during and after mining. TU believes that the modeling efforts and conclusions underestimate the potential impacts to groundwater and that the potential for dewatering is much higher than predicted. While the SDEIS accounts for potential changes to spring sources at high elevations in the headwaters, the modeling effort appears to ignore the potential subsurface flow contributions of deep groundwater volume to shallow groundwater systems in the glacial and alluvial valley fill surrounding the streams, as well as the potential influence of the slope or regional water table on valley fill water table and resultant connectivity of valley fill shallow aquifers to surface waters through hyporheic flows.

Response: With the data currently available, the model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. Both 3D groundwater flow models would be refined and rerun after data from the Evaluation Phase were incorporated into the models (see Section C.10.4 in Appendix C). Following additional data collection and modeling, the predicted impacts on surface water resources in the analysis area, including simulation of mitigation measures, may change and the model uncertainty would decrease. See section 3.10.4.3.5 for more discussion of model uncertainty.

3610 Mine and Adit Areas (Mine and Adit Inflows): Comment about cumulative effect

331-43 The Rock Creek Mine will divert over 2,000 gpm from groundwater. Neither the Rock Creek FEIS nor the SDEIS for the proposed Montanore project accounted for the source of the water intercepted by the Rock Creek Mine. The SDEIS for the proposed Montanore Mine needs considerably more analysis of the hydrology of the proposed Rock Creek Mine to assess the cumulative impacts. If the reach of the Montanore Mine is 1 mile for diverting groundwater, what is the reach of the Rock Creek Mine? It is likely that both mines would be tapping into the same groundwater source. If that were the case, then the Rock Creek Mine would also be diverting groundwater that is intended for the East Fork of Bull River, Rock Creek, and most likely Rock Lake. The Montanore Mine would have significant impacts to the water levels of Rock Lake. In combination, these two projects would both divert water from Rock Lake and have devastating consequences to this wilderness lake.

Response: The cumulative analysis was updated in the SDEIS to reflect the 3D model results, which concluded there would be some overlap in drawdown areas from the two mines, but the Rock Creek Project drawdown area would not extend as far east as Rock Lake.

331-44 Why are mining activities proposed as part of the Libby Creek Ventures, the Way-up Mine, and Fourth of July Mine not considered as reasonable and foreseeable? These projects should receive an in depth analysis in the SDEIS because they may develop into very real projects, with significant environmental consequences to the region.

331-45 Thus, in this case, the USFS must consider the cumulative impacts from all past, present, and reasonably foreseeable future projects in the region on, at a minimum, water and air quality and quantity, recreation, wildlife, scenic and visual resources, etc. As held by the court decisions noted above, this means that the impacts from other projects – not just the current project under review – must be fully reviewed. The SDEIS failed to do that here.

Response: The mining activities identified in the comment were identified as reasonably foreseeable actions in Section 3.3 of the DEIS and FEIS and discussed in the cumulative impact sections of 3.10.4 and 3.11.4.

389-7 d. The analysis should also consider the effects of climate change on hydrologic cycles. While the incidence of heavy precipitation events is projected to increase as a result of climate change, overall precipitation is expected to decrease. This could affect the rate of groundwater recharge, exacerbate the effects of diverting water for use in the mine workings, and increase the overall impacts to any bodies of water affected. These impacts require special analysis in wilderness, where discernable impacts should be avoided at all costs. It may change the timeframe over which monitoring will need to occur by affecting how long it takes for the mine void to fill.

Response: Changes in precipitation patterns due to climate change are difficult to predict. Increases or decreases in overall precipitation would be reflected in both stream baseflows and mine inflows. Therefore, the predicted percentage change in baseflow due to dewatering provided in the SDEIS and FEIS is believed to remain applicable should climate changes occur. The monitoring plan (Appendix C) is designed to distinguish between effects of climate change and mine dewatering.

3617 Mine and Adit Areas (Mine and Adit Inflows): Comment about mitigation-mine

182-4 P.78. If substantial increased mine inflows occurred near Rock Lake, MMC would submit continuous lake level data, weather permitting, and any other lake level data accumulated during the year, within 5 working days and would provide data and evaluation at an increased frequency as determined by the lead agencies. This is a prime example of misunderstanding the mining company gives to the aesthetic values pertinent to and located within the CMW. The logical thing to do would be to stop mining in the area until the problem or source was determined.

333-15 The action levels proposed by the agencies are insufficient to protect the lakes or streams. A sixty percent exceedance of the projected dewatering rate for two months is excessive, and the agencies only require that MMI report such an overage within two weeks.

Response: The agencies' modifications to MMC's proposed action level for mine inflow were revised in the SDEIS in Section C.10.7.3 (C.10.8.3 of the FEIS) of Appendix C. The agencies anticipate some seasonal fluctuations. The proposed action level for inflows greater than 500 gpm occurred over a 10-day period would accommodate such fluctuations.

182-23 P. C-19. Piezometers located at the ground surface. Rock lake: Surface-based ground water monitoring would include a pair of piezometers adjacent to Rock Lake, screened at different depths (deep and shallow) for the purpose of monitoring the vertical gradient in the saturated zone beneath the lake. Changes in the vertical gradient would indicate a mining effect to the aquifer that supports the lake water balance. Water level measurement data would be measured at least four times per day. A second pair of

piezometers with a transducer and continuous recorder would be installed in the CMW uphill from Rock Lake. Continuous monitoring of the lake level is a necessity. If you have one set of piezometers measuring 4 times per day and another continuous, you have a disparity that cannot be effectively measured against the other and may be subject to interpretational dispute.

Response: The piezometers located at the ground surface east of Rock Lake in the DEIS were eliminated in the SDEIS and FEIS. Well installation east of Rock Lake, as proposed in the DEIS, would be logistically difficult, and adversely affect core grizzly bear habitat and other wilderness values. In the SDEIS and FEIS, the agencies required that piezometers be installed in several directions from the adit immediately after dewatering and drifts during the construction process (See Section C.10.4.4 in Appendix C). The measurement frequency proposed for the underground piezometers is related to the likely rate at which the measured media changes. Given current digital recording tools, the measurement frequency can be easily changed, if necessary.

Proposed Buffers and Barriers

109-14 MMC should be required to avoid the 1000-ft buffer zone around the Libby Lakes consistent with what the Forest Service has required for the Rock Creek project.

109-5 The use of buffer zones at Montanore to protect Wilderness lakes does not appear to have been consistently addressed with the use of buffer zones at the Rock Creek Project. Please explain why mining and drilling below the Libby Lakes area appears to not require a buffer zone.

109-14 A 1000-ft buffer zone around the Libby Lakes area (consistent with the Cliff Lake buffer zone at Rock Creek) would eliminate most of MMC's proposed development plan. Does the FS contend that MMC should be allowed to mine and drill inside of a 1000-ft buffer zone below the Libby Lakes are? If yes, on what basis? Has the FS evaluated the potential for impact to the lakes due to vertical hydraulic connection to the mine workings? If yes, what documents memorialize this analysis?

333-16 First is a setback of 100 feet from the Rock Lake Fault (SDEIS, p 253). This assumes the location is accurately known or can be discovered by drilling during mining. It also relies on the 100 feet being very low conductivity, as conceptualized in the model. If this conceptualization is incorrect, and there is no evidence to support it, the setback mitigation would not be effective and the surface water features it is intended to protect would not occur. If the zone around the fault core is just one order of magnitude more conductive, the zone needs to be an order of magnitude wider to provide the same protection. It is disappointing the agencies have not changed this grossly insufficient proposed setback from the 2009 DEIS. The agencies should require a 1000-foot setback from the Rock Lake Fault, to protect Rock Lake and other surface water features connected to the Rock Lake Fault.

Response: Increasing the buffer zones between the mine void and Rock Lake fault of 300 feet and between the mine void and Rock Lake of 1,000 feet, discussed in Section 3.10.4.3.3 of the FEIS, would help to mitigate effects on Rock Lake. After additional data collection at Rock Lake occurred during the Pre-Evaluation and Evaluation phases, which would be used to refine the 3D model and reduce model uncertainty, MMC and the agencies would evaluate the size of the buffer zones needed to mitigate effects on Rock Lake.

182-3 P.54. MMC would stop mining about 500 feet from Rock Lake and 100 feet from the Rock Creek Lake fault. MMC is not proposing to mine within this 100 ft. buffer zone, but would conduct hydrologic and geotechnical studies to determine whether closer mining could be safely conducted. Fault zones at the Troy mine have already been determined to be a factor in caving. It has already been determined that Rock Lake's groundwater recharge zone extends to a depth of at least 1000 ft. If such is the case, then it is ludicrous to believe that 500' is established as the "stop mining zone." Stop mining needs to be established at a minimum distance of 1000'. Similarly, hydrologic and geotechnical studies to determine if mining could be safely conducted "closer" need to be dropped period and a provision in any permit needs to stipulate such.

186-1 What methodology was used to determine that a 500-foot vertical and horizontal buffer zone near Rock Lake would be sufficient to mitigate for hydrologic disturbance to the lake? What methodology was used to determine that a 100-foot barrier would be a sufficient buffer to the Rock Lake Fault?

328-8 A 100 foot buffer zone seems much too narrow, given the potential consequences for wilderness headwaters. A buffer of 500 feet would be more conservative, and should be the default value unless MMC can show otherwise. Likewise, a more protective buffer zone of 1000 feet between the mine void and Rock Lake should be the default value until more data is gathered.

331-11 The use of mitigation buffers is of questionable value. Even with a mining buffer of 500-feet, the proposed project would still intercept groundwater that is hydraulically connected to Rock Lake. Other studies have shown that these buffers are relatively ineffective. So if the water table were to permanently drop by 100-1,000 feet, the impacts to Rock Lake could be considerably more severe than those included in the SDEIS.

Response: Libby Lakes are perched well above the regional water table and therefore not connected to the regional groundwater that would be impacted by mine dewatering. There are no compelling data to suggest that Libby Lakes could be impacted by mine dewatering. With regard to buffer distances, the buffers proposed in the FEIS are a starting point, based on limited data. MMC would collect additional hydrologic data during the Evaluation Phase to be used in reevaluating the buffer distances between Rock Lake and the Rock Lake Fault and the mine void. Depending on those results, the buffer distances could be increased to minimize the risk of impact to the lake.

202-8 The mitigation of using bulkheads in the void to reduce the flow into the East Fork of Bull River is of very limited value because their effectiveness in protecting the wilderness waters is questionable. Even if the bulkheads did reduce the flow to the East Fork of Bull River, would it not simply force the mine effluent to discharge at other locations within the Cabinet Mountains Wilderness? If the bulkheads required maintenance after mine closure, who would be responsible for monitoring and maintenance? If the void was filled, how would the work be performed underwater? Is the use of bulkheads simply an easy economic fix for MMC?

Response: Because of the depth of the proposed mine, it is not a forgone conclusion that there would be "effluent discharge" to surface drainages. However, the potential direction of post-mining groundwater flow direction within the mine void would be better defined using all hydrologic data collected during mining. The low permeability barrier design and location would be based on an analysis of these data. The intent of the barriers would not be to form impermeable barriers, but rather create barriers that would be similar in permeability to the existing rock. The objective would be to create groundwater heads and gradients within the mine void as close to premining as possible.

202-8 Why isn't hydrologic modeling done in advance of mining to make this determination? The mitigation measures intended to protect the East Fork of Bull River and other wilderness waters should be explained in detail before the permitting of the mine is considered, not after agency approval. Also, because of the value of the aquatic resources that are at risk, any "modeling" by MMC needs to have a third party peer review to evaluate the results of the modeling and the actual long-term effectiveness of the proposed mitigation.

Response: Because of model uncertainty, the agencies increased the buffers between the mine void and the Rock Lake Fault and Rock Lake to 300 and 1,000 feet, respectively in the FEIS. Also, MMC would update the model with data collected during the Evaluation Phase and the buffer distances would be reconsidered.

328-6 When this low conductivity envelope is removed (Table 24, AMEC Geomatrix, 2011), the dewatering of Rock Creek above the lake triples in Stage 3, and doubles below the lake and at the mouth. This scenario should be further explored by the agencies, especially in regard to the width of the buffer zone that is appropriate between the fault and the mine, and Rock Lake and the mine.

Response: The current buffer distances between the mine void and Rock Lake and the Rock Lake Fault are based on limited site data. MMC would obtain additional hydrologic data during the Evaluation Phase so

that better impact analyses can be performed. Based on this analysis, the buffer distances would be reconsidered.

328-8 The life expectancy of bulkheads is not discussed in the EIS. The biggest effect of the bulkheads would be at the East Fork Rock Creek station above Rock Lake (EFRC-50). Failure of this mitigation effort would seriously decrease inflows to Rock Lake in perpetuity, so the efficacy of this mitigation technique as well as the consequences of failure should be more fully considered.

Response: The intent of the barriers would not be to form impermeable barriers, but rather create barriers that would be similar in permeability to the existing rock. The objective would be to create groundwater heads and gradients within the mine void as close to premining as possible.

186-1 What mitigation measures would be incorporated if there was a hydrologic connection along the fault?

Response: During the Evaluation Phase, additional testing would be performed to determine the hydraulic characteristics of the fault. This information would be used to reevaluate the required set back or buffer distance between the fault and the mine void. If the fault were to be hydraulically connected to the mine void via other fractures, site specific grouting of fractures has been successfully used in mining to reduce or eliminate specific inflows.

331-3 The impacts to surface water will likely be more significant than what is predicted in the SDEIS. There does not appear to be any real contingency plans within the SDEIS if it were determined that the impacts to wilderness lakes, wetlands, and streams were significantly more severe than predicted. How will the surface water loss be stopped if the mine is in production and the surface impacts are greater than predicted?

340-1 Proposes a monitoring of ―Groundwater Dependent Ecosystem Inventory and Monitoring‖ in upper Libby Creek and East Fork Rock Creek during project operations. But there is no justification for how this data would be used to mitigate the impacts to groundwater. No mitigation activities would be available in the East Rock Creek, where the impacts from mine dewatering, excavation, and refilling would have serious effects on large-scale groundwater distortion.

Response: Buffer distances are an important mitigation tool to prevent impact to surface water resources. Alternatives 3 and 4 were revised in the FEIS to increase the buffer distance. The buffer zones (where mining would not occur until additional data collection) would be between the mine void and Rock Lake fault of 300 feet and between the mine void and Rock Lake of 1,000 feet. The buffer distances between the mine void and Rock Lake and the Rock Lake Fault are based on limited site data. MMC would obtain additional hydrologic data during the Evaluation Phase and the buffer distances would be reconsidered.

331-12 The SDEIS claims that low permeability barriers would minimize the water loss from Rock Lake, but this mitigation would not be effective in any other watershed. The SDEIS offers no explanation why this mitigation would prevent the draining of Rock Lake, but would not help prevent water loss to St Paul Lake or the EFBR. The SDEIS should explain why this mitigation is only applicable to Rock Lake.

Response: Should the low permeability barriers be used for mitigation, the primary purpose would be to control the direction of groundwater flow within the mine void after mining was completed between the East Fork Rock Creek and East Fork Bull watersheds. The potential direction of post-mining groundwater flow direction within the mine void would be better defined using all hydrologic data collected during mining. The low permeability barrier design and location would be based on an analysis of these data.

331-18 With mitigation it is stated that the flow water would be reversed, that water would flow towards the EFRC? How can mitigation reverse the flow of groundwater? Either way the groundwater is predicted to flow, contaminated water from the void would still enter groundwater.

331-18 Without mitigation, groundwater would permanently flow from the East Fork Rock Creek to the East Fork Bull River watershed via the mine void because of the very high permeability void that would

connect the watersheds. With mitigation a small volume of groundwater would permanently flow from the East Fork Bull River to lower Rock Creek via the mine void. SDEIS, page 286As noted herein, NEPA requires a sufficient mitigation analysis, including an analysis of the effectiveness of all mitigation measures. This is lacking in this case.

392-2 We suggest that the SDEIS be amended to clarify that the project proponent would be responsible to conduct modeling, and that the final SEIS include a review and decision-making process for determining the need for bulkheads or other solutions. Similarly, in Chapter 2, grouting is discussed as a means to deal with groundwater decline and reduced stream base flow. It is unclear from this mention and the broader discussion on void filling on how the use of grout, pillars and bulkheads will either fill void themselves or enhance refilling by groundwater, and what the ultimate outcome would be.

Response: An analysis of the use of barriers was performed by both the 2D and 3D models. The conclusion was that the use of barriers would be able to affect the direction of groundwater flow between the two watersheds. The 3D model runs with low permeability barriers within the mine void indicated that the hydraulic gradient within the mine void would be reversed from the non-mitigated condition. The unmitigated mine void would essentially become a very long pipe of infinitely high hydraulic conductivity connecting two watersheds. The final condition of the mine void (*i.e.* mitigated or unmitigated) would determine which direction groundwater would have the potential to flow within the void, and therefore between the watersheds. There is insufficient information to provide details concerning barrier design and location within the void. Hydrologic data collected during mining would be used to reevaluate the use of barriers to balance the groundwater flow between the two watersheds. By Year 5 of operations, MMC would assess the need for barrier pillars and/or bulkheads to minimize changes in East Fork Rock Creek and East Fork Bull River streamflow. If needed, MMC would submit a revised mine plan to the agencies for approval. One or more barriers would be maintained underground, if necessary, after the plan's approval.

333-3 The projected impacts to surface water flows and associated habitat are high, but the range in the potential magnitude of impacts is also high. The proposed monitoring and mitigation will not protect the streams because monitoring would not detect impacts quickly enough for mitigation to prevent the impacts. There is simply no way to mitigate the damages dewatering could cause to wilderness streams, lakes, and springs.

Response: The agencies' proposed mitigations incorporated into Alternatives 3 and 4, and the agencies' proposed monitoring in Appendix C would be adequate to detect mine effects on wilderness resources and to minimize effect.

333-16 The SDEIS indicates that there is evidence grouting has worked in the Libby Adit to reduce inflow; the SDEIS should either present the evidence or reference a study regarding it. These two mitigations could decrease the impact caused by dewatering for a period of time, but the effectiveness is very uncertain and depends on the accuracy of the fault conceptualization. It is also probable that the effectiveness of the mitigations may not last forever. The SDEIS presents no data concerning the longevity of either grout or bulkheads. Proposed monitoring of the tailings impoundment could be improved by mapping preferential flow zones. There should also be a requirement or a standard that requires the mining company to actually look for preferential flow paths and to install the appropriate monitoring well so that contaminants do not miss the wells.

334-13 Considering the potential importance of simulated underground mitigation measures (grouting of mine void walls and construction of bulkheads after mining is completed) for water table and streamflow response in the post-closure period (Geomatrix, Appendix G, and see Geomatrix Table 2 and Figure 2 above), it seems critical that a clear formal appraisal of these mitigation measures be included in the SDEIS.

347-1 There seems to be no back-up plan if grouting fails to reduce water flow into the adits.

Response: The effectiveness of MMC's modeled mitigation was discussed in section 3.10.4.3.3 in the SDEIS and in section 3.10.4.3.5 of the FEIS. Historically, grouting of fractures in the Libby Adit has been effective in reducing inflows, but the effectiveness of grouting over the long term (i.e., 100 years or more)

is uncertain. Fracture grouting of storage facilities typically use a design life of 50 years, and the effectiveness of grouting may decrease beyond 50 years. Because this mine would be of room-and-pillar design, grouting of fractures would be difficult, but technically feasible.

Because of model uncertainty, the agencies increased the buffers between the mine void and the Rock Lake Fault and Rock Lake to 300 and 1,000 feet, respectively in the FEIS. Also, MMC would update the model with data collected during the Evaluation Phase and the buffer distances would be reconsidered. An analysis of the use of barriers was performed by both the 2D and 3D models. The conclusion was that the use of barriers would be able to affect the direction of groundwater flow between the two watersheds. Currently, there is insufficient information to provide details concerning their design and location within the void. Hydrologic data collected during mining would be used to reevaluate the use of barriers to balance the groundwater flow between the two watersheds.

335-15 The SDEIS states that, "if the mine void encountered substantial groundwater inflows in the vicinity of the Rock Lake Fault or Rock Lake, MMC would notify the agencies within 5 business days. Substantial flows are those over 50 gpm over a 24 hour period. At that point MMC would evaluate the possible effect to Rock Creek and Rock Lake and provide an evaluation report to the agencies within 30 days after initial agency notification. (C-69 Appendix C) This is clearly inadequate to prevent impacts to Rock Lake and Rock Creek. This underscores the inability of MMC to ensure that key wilderness features, including ORWs are protected during mine operations.

Response: Because of model uncertainty, the agencies increased the buffers between the mine void and the Rock Lake Fault and Rock Lake to 300 and 1,000 feet, respectively, in the FEIS. Also, MMC would update the model with data collected during the Evaluation Phase. The updated groundwater model would be used to re-evaluate potential impact to Rock Lake so that buffer distances can be reconsidered to minimize impact to the lake. The protocol described in the comment is intended to deal with unexpected sustained higher inflows to determine whether they could impact surface water resources and if so, to perform a mitigation, such as grouting.

3633 LAD Areas (Wastewater Discharges): Comment about analysis-mine

74-16 LAD is a means of water treatment by which water used to treat mine tailings and extract ores is dispersed onto an area of land so that the land and vegetation can remove its toxic properties (particularly nitrates). How much water can be treated in an LAD area is largely a product of soil properties, vegetation type and cover, and growing season.• In the case of the Montanore project, these have not been fully assessed, although Montanore still claims that the plots have a capacity to treat 2,000 gpm of water. (2.4.2.4.2, pg 61).

152-19 The DEIS calculated the natural flux through the saturated groundwater beneath the LAD areas to equal 141 gpm. It was based on flow through a cross-section beneath the LAD; adding flow from the LAD will increase the area of this cross-section by mounding. The agency noted that the conductivity must be too high because 141 gpm would require a recharge rate equal to 53% of the annual precipitation (DEIS, page 438). The DEIS does not indicate the area over which the recharge would occur, so it is hard to interpret what this means. However, if the precipitation is 32 in/y (DEIS, page 229, for the tailings area), a 53% recharge efficiency is 1.41 ft/y of recharge which would require about 160 acres of recharge area. Appendix G, under LAD Application Rates, confirms that they are considering an LAD area of 200 acres. This ignores any groundwater flowing under the LAD from upgradient of the facility. Groundwater flow through a cross-section under the LAD would include the recharge occurring in the drainage basin flowing to that cross-section, therefore calculations of recharge based on the area of the LAD are meaningless. Geomatrix (2008b) essentially repeats this argument only increasing the cross-sectional area through which the groundwater will flow and is also not useful. This is a fatal flaw in the analysis which indicates the analysis is not considering the appropriate recharge area; during wet years this could be a major problem because there will be much more natural recharge and the cross-sectional area will increase. That means the groundwater level will be much closer to the ground surface and there will be no place to put the infiltrating water from the LAD site. The remainder of the LAD water balance analysis is based on this flawed logic and is essentially meaningless.

248-25 The DEIS outlines infiltration and groundwater flows from the LAD area utilizing a technically flawed approach. Technical arguments in the DEIS confuse hydraulic conductivity with infiltration rates and treats them as the same, and assumes that the only source of groundwater under the LAD areas is from vertical infiltration, ignoring upgradient sources of groundwater. These flaws result in a significant misinterpretation of the magnitude of impacts down gradient of the LAD area, which includes impacts to LPMC lands.

248-25 The DEIS states that 90% of the 4 inches per month of water applied to LAD areas will be transpired by plants. The DEIS states that the plan is to apply 4 inches per month for 6 months. However, after accounting for precipitation, there are only 2 months per year where there 4 inches or more of excess ET potential that could achieve the 90% transpiration. During the remaining months, the excess would recharge. Consequently, the LAD areas will likely contribute more water, and therefore, transport more metals, ammonia, and nitrate to LPMC lands.

248-27 The DEIS is filled with uncertainty as noted in Mr. Wilson's letter. Such uncertainty is not sanctioned under NEPA or MEPA. The Agencies can neither postpone analysis of potential impacts or fail to gather and evaluate base line data. Such a high level of uncertainty is unacceptable under NEPA and MEPA. From LPMC's perspective, the uncertainty surrounding the discharges from the LAD Areas are especially disturbing, given the likelihood that any impacts from the LADs will be felt most directly by LPMC.

342-4 The assumptions about infiltration rates and local on-site recharge being the sole source of groundwater under the LAD area and under LPMC lands result in a significant misinterpretation of how groundwater flow in such environments behaves, and leads to significant misinterpretation of the magnitude of impacts down gradient of the LAD area, which includes impact to LPMC lands.

342-4 In addition, there is no specific evidence cited in the initial draft or supplemental draft EIS to support that the only source of groundwater under the LAD areas is from local or vertical recharge, and not supplied from the mountain block.

Response: The agencies' analysis of the use of LAD treatment of wastewater in Section 3.13.4 of the SDEIS and FEIS (Section 3.12.4 in the DEIS) indicated that the use of LAD would adversely affect surface water and groundwater quality. Therefore, the use of LAD was not included in the agencies' mitigated Alternatives 3 or 4.

3635 LAD Areas (Wastewater Discharges): Comment about effect-mine

182-3 MMC evaluating option of using snow making equipment to convert stored water into snow during the winter season. If such does it contribute to the potential for flooding beyond the borders of the LAD Areas?

309-3 Mine wastewater collected from the tailings would be discharged into the ground water by first applying it to the land surface with sprinklers and allowing it to percolate into the underlying aquifer. This is called "land application disposal," and is a technique that has failed at many sites, including the notorious Zortman/Landusky mines near Malta and the Kendall mine near Hilger. Again, this disposal would continue in perpetuity.

342-4 Based on the supplemental draft EIS, the use of the LAD areas under Alternative 2 remains, but the volume of applied water will likely be reduced. If Alternative 2 is selected, then the LAD areas would be used and LPMC lands would still be impacted, generally as described in comments made on the earlier draft EIS.

Response: The agencies' analysis of the use of LAD treatment of wastewater in Section 3.13.4 of the SDEIS and FEIS (Section 3.12.4 in the DEIS) indicated that the use of LAD would adversely affect surface water and groundwater quality. Therefore, the use of LAD was not included in the agencies' mitigated Alternatives 3 or 4.

3662 Impoundment Areas (Diversions, Interceptions and Seepage): Suggested new monitoring

152-20 In addition to the proposed monthly water quality samples, the water level should be monitored with continuous recorders to provide real time data for management of the sites.

Response: Appendix C was revised in the SDEIS and FEIS to require continuous data recorders for the collection of some monitoring data.

152-20 Several piezometers should be installed through the tailings to beneath the seepage trenches.

Response: Drilling through the tailings would increase the risk of providing a pathway directly to the underlying groundwater. It is assumed that groundwater beneath the impoundment would be affected and is allowed by DEQ as a mixing zone before having to meet groundwater standards downgradient of the facility.

152-20 There should be an additional upgradient well. For the Little Cherry Creek site, there should be a well in the deep channel and a well in the shallower terrace area away from the deep channel. Also, the pumpback wells should be sampled monthly for water quality only.

Response: The Little Cherry site is not the preferred alternative. Appendix C was revised in the SDEIS and FEIS.

152-20 There should be three monitoring wells with similar completions downgradient of the LAD sites.

321-1 The DEIS lacks proper monitoring of the seepage mound at the tailings site and/or the LAD sites.

Response: The monitoring requirements in Appendix C were revised in the SDEIS and again in the FEIS. LAD Areas are not proposed in Alternatives 3 and 4.

333-4 More piezometers should be added to the monitoring wells system downgradient of the pumpback wells to better monitor preferential flow paths.

Response: The monitoring wells identified in Appendix C would be the minimum number of wells. MMC is would install additional monitoring wells if the initial number did not adequately monitor the area downgradient of the pumpback well system.

333-17 With wells spaced 1000 feet apart, the monitoring data would merely verify drawdown at a point, not the shape of the drawdown cones. The monitoring wells are clearly insufficient. After the pumpback wells have operated for a while and the monitoring wells have collected water levels, the model of the tailings impoundment should be verified. The model should then be recalibrated and the pumpback system reconsidered.

Response: The agencies agree. After aquifer testing has been completed at the Poorman site and before construction began, MMC would rerun the model to reevaluate the pumpback well system. See section 2.5.2.6.5.

3663 Impoundment Areas (Diversions, Interceptions and Seepage): Comment about analysis-mine

327-24 Given the fact that no design for the actual tailings impoundment yet exists, these predictions regarding seepage and flow are at present pure speculation, and are likely to be much more conservative than they would be if based on a professionally rendered design.

Response: The agencies developed a conceptual design of the Poorman tailings impoundment that was based on the currently available information and adequate for effects analysis. Additional geotechnical and hydrologic data would be collected and analyzed prior to construction. Tailings seepage was estimated with groundwater modeling conducted of the Little Cherry Creek Impoundment Site for MMC (Klohn Crippen 2005) and independently verified by the lead agencies (USDA Forest Service 2008). Seepage not collected

by the underdrain is expected to flow to groundwater at a rate of about 25 gpm and, after the impoundment was reclaimed, slowly decrease to 5 gpm (Klohn Crippen 2005). The agencies used the same estimates for the Poorman Impoundment Site because of the similarity in the geologic conditions and in the proposed underdrain system at both sites. The proposed underdrain system would be designed to capture most of the seepage from the impoundment, regardless of the actual seepage rate.

335-24 There appears to be a glacial riverbed that is quite permeable, and could be a preferential pathway for flows to Cherry Creek. Further investigation is needed to evaluate these issues. Will the preferential pathway created by the glacial riverbed allow flows from the impoundment to flow into Cherry Creek? How will surface and groundwater be affected by seepage that bypasses the tailings impoundment? The SDEIS cannot properly analyze the impacts of the mine's discharges until the specific number, location, and nature of these outfalls, as well as the enforceable conditions applicable to each, are specifically described in a proposed permit and fact sheet. Will tailings seepage increase nutrient levels, metals, and any other constituent?

Response: Section 3.9.2.2.2 of the SDEIS and FEIS indicated resistivity survey and limited drilling did not identify any buried channels like those identified at the Little Cherry Creek site. The effect on groundwater quality from seepage was discussed in Section 3.13.4 in the SDEIS and FEIS (Section 3.10.2.4 in the DEIS). The discharge to groundwater would be covered by DEQ's Hard Rock Operating Permit.

335-25 Provide analysis to indicate the estimated length of time for surface and/or groundwater treatment from the tailings impoundment seepage. Given the presence of springs under the tailings impoundment, please provide information on whether the interaction of spring water with tailings will form a discharge source, which will have to be addressed in perpetuity?

Response: MMC would collect and treat all seepage water and groundwater impacted by seepage until those waters met BHES Order limit or nondegradation criteria. The length of time seepage interception and water treatment would be necessary is unknown, but may be decades or more after operations. It is unknown whether any springs that would be buried beneath the proposed impoundment would continue to flow with the addition of significant hydraulic head above their current elevations. Should they continue to flow, water would be intercepted by the underdrain system and be treated along with any tailings seepage. The requirement to treat this water until those waters met BHES Order limits or the nondegradation criteria would apply.

Groundwater Quality

3730 LAD Areas (Wastewater Discharges): Suggested new information/analysis

200-5 The agencies must consider the consequences of a rain event that would accelerate the saturation of the LAD area.

Response: The agencies determined that the use of LAD for wastewater disposal presented several potential problems with respect to water quality and therefore LAD's are not part of Alternatives 3 and 4.

3762 Impoundment Areas (Diversions, Interceptions and Seepage): Suggested new monitoring

332-9 The proposed groundwater monitoring plan does not include any groundwater monitoring between the Poorman impoundment and Little Cherry Creek (Figure 4). More multi-level monitoring wells that could easily be converted to pumpback wells (4-in diameter wells) should be proposed on the northern and western sides of the impoundment.

Response: The pumpback well system would be required to capture all seepage that is not collected by the underdrain system and would include non-pumping monitoring wells for measuring water levels. If monitoring indicated affected groundwater is moving toward the Little Cherry Creek drainage, additional

pumping wells would be required. Wells on the northern and western sides of the impoundment are proposed in the agencies monitoring plan (see C.10 in Appendix C).

3763 Impoundment Areas (Diversions, Interceptions and Seepage): Comment about analysis-mine

152-15 The DEIS is also deficient in not considering the seasonal changes and potential seasonal impacts on the seepage.

Response: Infiltration of precipitation does vary seasonally. The downward movement of net infiltration to groundwater (net being defined as total infiltration minus the amount either evaporated directly from soils or transpired by plants) tends to reach a steady state rate with depth and therefore does not reflect seasonal changes.

152-18 The DEIS fails by not estimating the seepage from the Poorman tailings impoundment or determine groundwater concentrations near the site; the source of the concentrations shown in Table 82 is not provided and should therefore not be considered useful. The values in Table 82 cannot be evaluated. The DEIS is deficient from the perspective of considering a viable alternative because the potential alternative has very little site-specific data.

152-24 The DEIS lists the sources of discharges (DEIS, page 501) and notes that all, excepting storm runoff, are discharges to groundwater. The DEIS does not include the 25 gpm tailings seepage in that list, as it should.

Response: The groundwater quality sections (3.10.4 in the DEIS) was restructured in the SDEIS and FEIS (Section 3.13.4). The 25 gpm of tailings seepage was included in the groundwater quality effects analysis in the DEIS, SDEIS, and FEIS. The calculations of all water quality predictions, such as those in Table 82 of the DEIS, were presented in Appendix G of the DEIS, SDEIS, and FEIS. Sufficient data for the Poorman site exists to predict potential effects. MMC would collect additional data from the Poorman site before construction began.

152-25 The agencies must provide better justify the low seepage rates.

321-1 The impoundment for tailings are such that they will leak. Seepage will go into Libby Creek [as planned] but also into Little Cherry Creek which is not in the MPDES permit. This will likely happen because of the greater head created by the groundwater mound.

331-23 The SDEIS states that most of the water from the tailings impoundment would be either captured and treated or recaptured with the use of pumpback wells. How was the seepage rate of 25 gpm. arrived at? Where will the drainage go? What happens when the mine closes, either temporarily or permanently at the end of mine life. Will these pumpback wells continue to operate? Are they considered to be required post-mining maintenance? Who would be responsible for this maintenance if Mines Management abandons the project?

333-4 The estimated seepage from the Poorman tailings facility, 25 gallons per minute, is not much better than a guess because seepage means the liner system will have failed. The estimate of seepage is an acknowledgement of failure before the facility is even built. Similarly, the amount could easily be much higher – if the liner fails in one or two places, it could easily fail in more places. The true amount will never be known because it cannot be measured and even an amount four to six times the projected value would not be noticeable in the impoundment water balance, due to errors in measurement of all of the components. Pumpback wells are proposed to capture this seepage before it reaches Libby Creek; as designed the well will reduce the flow in Libby Creek significantly during operations. The monitoring wells proposed for the facility are spaced too widely to adequately assure that seepage is not reaching Libby Creek.

333-18 Also, the SDEIS proposes no method for actually measuring the discharge to groundwater. Because the expected seepage is within the measurement error for the other components of the system, it would be impossible to detect the leak from other water balance components. The amount could easily be

two or threefold higher. This would render the groundwater quality analysis in SDEIS Table 108 completely wrong. The concentration in groundwater could easily be twice that projected, based on the amounts of natural groundwater flux used to calculate the concentrations.

Response: The 25 gpm rate was estimated using a 3D groundwater model and independently verified by the agencies (USDA Forest Service 2008). The estimate of 25 gpm is the rate tailings seepage water could bypass the seepage collection system, which would be designed to collect seepage from beneath impoundment. The pumpback well system would be designed to collect any seepage not collected by the seepage collection system (regardless of the actual rate) and any groundwater affected by that seepage. The pumpback well and underdrain systems would be operated until groundwater adjacent to and surface water downstream of the reclaimed impoundment met BHES Order limits or nondegradation criteria. The project would be bonded so that these systems would be operated by the State in the event MMC abandoned the project.

3765 Impoundment Areas (Diversions, Interceptions and Seepage): Comment about effect-mine

202-6 Numerous impacts would be expected from the tailings impoundment, including the stability of the impoundment, water quality issues from uncollected seepage into groundwater, runoff from the tailings, and the management of post mining seepage. The seepage collection process and the collection pond potentially would impact surface and groundwater from failure, leaks, and storm events. Another concern would be fugitive dust that has plagued other mines in the area.

Response: In all alternatives, MMC would collect all seepage and groundwater affected by seepage. Dust suppression also would be required.

310-15 The 20 million ton, 647 acre tailings pile that would be contained behind a 310-foot dam would have long term impacts, including impacts on water quality and fisheries due the seepage of toxins to groundwater. The tailings would contain arsenic, copper, cadmium, iron, lead, silver, manganese, aluminum, nitrates and ammonia which would discharge to and contaminate surface and ground water, perhaps in perpetuity. As discussed above, the massive accumulation of mine tailings would require the relocation of a major stretch of a significant stream (Little Cherry Creek) under Alternatives 2 and 4.

Response: Changes in groundwater quality beneath the tailings impoundment was discussed in Section 3.12.4 in the DEIS and in Sections 3.13.4 of the SDEIS and FEIS. The preferred alternative is the Poorman site, which would partially fill four non-fish-bearing drainages.

3779 Impoundment Areas (Diversions, Interceptions and Seepage): Comment about regulatory compliance

327-9 The agencies must not allow Montanore Minerals to proceed with its plan to surpass legally mandated levels of antimony, manganese, and other contaminants in the natural water system of the Kootenai National Forest.

331-23 Due to the hydrological connection between the tailings, the groundwater that will receive the seepage, and local surface waters, the tailings facility must be covered by a point source NPDES permit and the USFS and MDEQ must ensure that all water quality standards will be met at all times.

342-14 “In all mine alternatives, seepage not captured by the seepage collection system at the tailings impoundment would mix with underlying groundwater. The existing groundwater quality would be altered because the seepage water quality would have higher concentrations of nitrate, several metals and total dissolved solids than existing water quality.” Despite, and contrary to, the views expressed above, the DEQ evidently believes that all seepage would be captured, SDEIS, page 329:”In all mine alternatives, a MPDES permit outfall would not be required for the tailings impoundment because seepage reaching groundwater would be collected by the pumpback system...” This view, however, is not consistent with the views of the Agencies’ consultants.

342-14 It is LPMC's view that these impacts would, at a minimum, be in violation of the Montana Water Use Act and the Montana Reserved Water Rights Compact (85-20-140 1, MCA), as well as BHES non-degradation limits.

342-15 Through the use of the pumpback well system, MMC would be taking groundwater that would otherwise flow to LPMC land. These wells would also probably draw groundwater from LPMC land. This action would adversely affect LPMC's groundwater resources. Seepage from the impoundment would adversely impact LPMC's groundwater resources. LPMC believes that these adverse impacts would, at a minimum, be in violation of the Montana Water Use Act and the Montana Reserved Water Rights Compact (85-20-1401, MCA), as well as BHES non-degradation limits.

Response: Montana mixing zone regulations allow a mixing zone beneath the impoundment. A mixing zone allows a discharge to mix with ambient water. BHES Order limits and non-degradation criteria apply to groundwater outside of a mixing zone. All affected groundwater would be intercepted by the pumpback well system and treated before discharge from the Water Treatment Plant at the permitted outfall. MMC would obtain a water right for any surface water or groundwater appropriation. Section 2.5.4.3 and 3.13.4 were revised to reflect revised water management in Alternatives 3 and 4. The agencies' Alternatives 3 and 4 would avoid injuring senior water rights. See responses to issue codes 3990 (p. M-363), 3993 (p. M-396) and 3995 (p. M-397).

Surface Water Hydrology

3800 Mine and Adit Areas (Mine and Adit Inflows): Suggested new information/analysis

Rock Lake and other CMW lakes

152-8 The DEIS should discuss the reduction in stream flow both as a flow rate and percentage of inflow to the lake, the volume of the lake and the effect of losing this flow on its water balance.

333-5 They indicate that "bedrock groundwater appeared to be the sole source of water to Rock Lake" (Id.) during this period, but the description does not provide an actual estimate of the inflow beyond the suggestion that streamflow equaled 2 cfs before it entered Rock Creek Meadows. Gurrieri and Furniss (2004) indicate that Rock Lake has substantial groundwater inflow and outflow, and that during late summer and fall, the groundwater inflow/outflow components of the water budget exceed the surface water inflow and outflow. The surface water section (SDEIS, p 262) mentions a water balance but does not provide it.

Response: The effect on Rock Lake was revised in Section 3.11.4.4.4 of the SDEIS and again in the FEIS. Effects were shown in terms of change in lake level and volume, and surface area changes (in the FEIS) that reflect the loss of baseflow to the stream flowing into Rock Lake, loss of deep bedrock groundwater flow into the lake, and loss in storage from the lake. It was assumed for the two time periods evaluated that deep bedrock groundwater would be the only source of water supply to the lake (which would be the case during dry periods when there is no precipitation and no snowmelt runoff or flow from shallow deposits above the lake, or in the winter when the lake is frozen), so the analysis presents a worst case scenario of effects from mining to the lake. During the rest of the year, runoff from precipitation and snowmelt runoff provides most of the water to the lake.

200-4 Many of these wilderness lakes depend on groundwater for recharge. Once the groundwater flow has been disrupted, there would no foreseeable solution to restoring pre-mining condition. How will the agencies be able to protect or restore the hydrology of the wilderness lakes given the extraordinary and inevitable impacts from the mine?

333-5 The SDEIS does not discuss the hydrogeology of Cliff or Copper Lakes, other than to mention their presence in glacial cirque basins (DSEIS, p 197). The SDEIS has added no additional information about Rock Lake or Libby Lake, even though the EPA had requested such information in their comment

letter (EPA 2009). Gurrieri and Furniss (2004) present data that proves that Cliff Lake has groundwater inflow and outflow indicating that it is hydraulically connected to the groundwater system, but that Copper Lake is perched.

Response: Discussion about Cliff and Copper Lakes was added to Section 3.11.2 of the FEIS. These lakes are outside the analysis area because the 3D model did not predict they would be affected by the project. As discussed in Section 3.11.2.3 of the FEIS, the Libby Lakes are at an elevation of about 7,000 feet, perched above the groundwater table, and they likely would not be affected by mining activities. Additional information on effects on Rock Lake was added to Section 3.11.4.4.4 of the SDEIS, including estimated change in lake volume and lake levels during two different periods for various project phases. Section 3.11.4.4.4 of the FEIS was revised to include estimated change in Rock Lake surface area.

Streamflow

35-11 The estimates of flows ($7Q_2$ and 7Q10) should be provided as a range of flows to indicate the potential variability, and that should also be provided in the calculation of estimated dewatering rates. This would provide for a best case and worst case range of potential impacts.

Response: The ranges of $7Q_2$ and $7Q_{10}$ flows were added in Section 3.8.3 of the FEIS; the error range recognizes the natural variability of streamflow. The agencies discussed in Section 3.11.2.3.1 of the FEIS that some of the lowest measured flows were close to or lower than the low estimated $7Q_{10}$ flow. The analysis of effects on streamflows used the estimated $7Q_{10}$ flow, consistent with the approach that DEQ used for MPDES permitting for all parameters in the effluent mixing zone except nutrients. The agencies used single, average values for estimated $7Q_2$ and $7Q_{10}$ flows in the analyses of effects, and discussed in the FEIS the variability in natural conditions and the uncertainty inherent in all predictions.

152-7 There should be a table in the document showing the measured baseflow, estimated $7Q_{10}$ values, the modeled pre-mine baseflow, the mining baseflow, and the post-mining baseflow. This would allow the public to compare the values.

152-7 The existing data reported in the Surface Water Hydrology section (DEIS, Tables 84 to 86, Figure 76) could be used in a regression analysis with the gaged data to estimate baseflow.

Response: Section 3.8.3 of the SDEIS and FEIS included tables with modeled pre-mine baseflows and estimated $7Q_{10}$ values. Because none of the analysis area streams have been continuously gaged for more than 2 years, hydrographs have not been developed and baseflow and average low flow values have not been estimated. Section 3.10.4 of the SDEIS and FEIS provided tables showing effects on estimated baseflows during the various mine phases. Section 3.11.3 of the SDEIS and FEIS provided a table with minimum streamflows measured at numerous locations. Tables showing analyses of effects on low flows ($7Q_{10}$ and 7Q2) during the various mine phases were provided in Section 3.11.4 of the SDEIS and FEIS, but measured baseflows are not provided in any of the analysis tables because they have not been estimated based on actual measurements at many locations. The modeled baseflow values are the best available estimates of existing baseflow. Appendix C of the FEIS provided a detailed discussion of the agencies' conceptual monitoring plans for Alternative 3 and includes baseflow-period surface water monitoring (Section C.10) that would be conducted during the Pre-Evaluation and Evaluation Phase to assess, with more certainty, the effects of mine inflows on stream baseflows.

331-4 Absent in the SDEIS are the potential impacts to the main channel of Bull River from the perpetual dewatering of the EFBR. The SDEIS should have included the percentage of the flow in the Bull River that is contributed from the East Fork. Why was this not included in the analyses of dewatering impacts?

Response: The Bull River is outside of the analysis area for surface water hydrology because anticipated effects would be negligible. Effects on potentially affected water rights in the Bull River below the confluence of the East Fork Bull River were added to Section 3.12.4.3.5 of the FEIS.

333-10 When considering the drawdown effects on streams, it would useful to consider the percent change in the baseflow (SDEIS Tables 86 through 89) and then estimate the changes in streamflow using the percent change in simulated baseflow and the estimated streamflows.

Response: SDEIS Tables 86 through 89 disclosed predicted changes to baseflow, using model-predicted pre-mining baseflow as a basis of comparison. Section 3.11.4 disclosed predicted changes to streamflow, using, in most cases, estimated $7Q_{10}$ and $7Q_2$ flow as a basis of comparison. Section 3.11.3.1 of the FEIS was revised to discuss three components of streamflow. Drawdown effects on streams would affect one of the three components.

333-20 The method for estimating baseflow for ungaged streams, described in the SDEIS, could be used to estimate additional discharge points and flow rates.

Response: The method for estimating flows in ungaged streams mentioned in the FEIS is the USGS (Hortness) method for estimating low flow frequency statistics such as $7Q_{10}$ flows, but not baseflow. In addition, as described in Section 3.8.3 of the SDEIS and FEIS, the USGS equations may not yield reliable results for sites with characteristics outside the range of near the minimums and maximums of the equation variables. The drainage area from the USGS study region ranged from 3 to 2,443 square miles, and the mean annual precipitation ranged from 25 to 69 inches. The mean annual precipitation for the monitoring sites in the analysis area is greater than 69 inches at higher elevations, such as within the CMW, and the drainage areas for the upper watersheds is typically 3 square miles or less. More streamflow and spring flow data are currently being collected in the analysis area, including during baseflow periods, and more data would be collected in the Pre-Evaluation and Evaluation phases, as discussed in Section C.10 of the FEIS.

334-12 Adequately evaluating the quantitative effect of large-scale water table alteration on the second and third components of streamflow will require a greater base of empirical field data for the streams in question, including data that could be gained from synoptic flow measurements of surface waters, piezometric measurements across and along valley gradients, and stable isotope characterization of water sources and their seasonal flux. Although not trivial to conduct, such a study is feasible and would lend some semblance of certainty about the possible range of flow effects on the affected streams. Considering the critical importance of the streams in question to bull trout conservation, such a study absolutely should be conducted before a decision about permitting this project is made.

Response: Appendix C of the SDEIS and FEIS provided a detailed discussion of the agencies' conceptual monitoring plans for Alternative 3 and includes surface and groundwater monitoring (Section C.10) that would be required to be conducted during the Pre-Evaluation and Evaluation Phase to assess the effects of mine inflows on groundwater levels and streamflows, as well as effects on surface water and groundwater quality. As discussed in Section 3.8.2 of the FEIS, the Construction Phase would begin after MMC analyzed the data from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase. MMC would update the mine area and impoundment area 3D models after additional data were collected during the Evaluation Phase.

3801 Mine and Adit Areas (Mine and Adit Inflows): Suggested new mitigation

152-9 The agencies should analyze alternatives to prevent this discharge to the EF Bull River after mine closure.

Response: Any flow of water toward the East Fork Bull River after mine closure would be due to the location of the water-filled mine void relative to the East Fork Bull River; this would not change under any alternative. Section 3.13.4.2.3 of the SDEIS and FEIS discussed mitigation to minimize the effect on East Fork Bull River and East Fork Rock Creek streamflow and water quality after mine closure.

3803 Mine and Adit Areas (Mine and Adit Inflows): Comment about analysis-mine

ECAC Analysis/Appendix H

260-1 Tables H-l, H-2, H-3, and H-4 include the abbreviation PFI. PFI is not listed in the Glossary. The Final EIS should indicate whether PFI stand for peak flow increases. If PFI does not mean peak flow increases, the correct interpretation of PFI should be included in the Final EIS.

Response: The footnotes for the tables in Appendix H were revised in the SDEIS to indicate that PFI = percent peak flow increase.

260-1 Aquatics/ECAC model issues: This model is not cited in the reference section in Appendix H. The Final EIS needs to indicate whether there is an ECAC manual associated with the model available for review by the public.

Response: Information regarding the ECAC model is available in the project record at the KNF.

Water Needs

182-16 Rain on snow from above, artesian from below, mill tailings waste water in between. Whole lotta water! In 1981 the Asarco Troy tailings impoundment overtopped during a rain-on snow event. The reality and confluence of these effects should be a reasonably foreseeable event and needs to be addressed.

Response: Chapter 2 of the FEIS described water management, including during wet years and high flow events.

321-1 The DEIS does not address the fact that the daily operation of the mine would require more water, by many gallons per minute, that can presently be supplied. If such amounts are needed to run the mine, then the issue needs to be addressed as to from where it will come.

Response: MMC applied for new surface water and groundwater rights using the project components of Alternative 3. These applications were discussed in section 2.5.4.3.2 of the FEIS. Section 3.12 of the FEIS was revised to disclose the effect of MMC's requested water rights on other water rights in the analysis area.

Rock Lake

310-8 During Operations, MMC predicts a decrease of 47 acre-feet per year of groundwater going into Rock Lake. However, the SDEIS claims that "the effect on lake volume and levels would be negligible."

Response: The effect on Rock Lake was discussed in detail in Section 3.11.4.4.4 of the SDEIS and FEIS. The effect during Operations would be negligible because 47 acre-feet is 3% of the estimated total lake volume of 1,302 acre-feet. The effect on lake volume, levels and surface area during a 2-month summer fall period would be below what can be calculated accurately.

328-7 Overall, it is disturbing that the area of greatest drawdown (greater than 1000 feet), and 100 feet of permanent drawdown even after recovery, is within several hundred yards of Rock Lake. Given the uncertainties in the model, as well as the uncertainties in the Rock Lake water balance, drawdown of the lake level by only 1.2 feet may be a real underestimate.

333-14 The predictions discussed for Rock Lake do not comport with the water budget presented for Rock Lake, (Geomatrix 2011, Table F1), even with all of its problems. Geomatrix shows that groundwater inflow to Rock Lake is 954 af/y. If the water table falls below the lake bottom, this inflow would decrease to zero. This is much higher than the depletions discussed below. Even Geomatrix's water budget indicates that the decrease in groundwater inflow would be about 13 percent of the total inflow to the lake. That is a substantial decrease. An additional problem with the predicted depletion is that it depends on the conductance the modeler used to control the flow through the bottom of the lake. The value is not

calibrated because there are no data to calibrate it to, hence the uncertainty; Geomatrix presents no information regarding this conductance. As conceptualized elsewhere in this review, lowering the water table in the fault zone could create storage into which the lake could drain. At the least, the lake could drain fast enough to maintain a contact with the water table which the model otherwise simulates as falling below the lake level. The impacts on the lake presented in the SDEIS are a very low end estimate with the actual impacts being potentially much

Response: The 3D model results, discussed Section in 3.10.4.3 of the SDEIS and FEIS, provide the best currently available information regarding potential effects to Rock Lake. The 3D model would be revised and updated after obtaining additional information during the Pre-Evaluation and Evaluation Phases.

331-13 The Libby adit is flooded with approximately 33 million gallons of water. What is the source of that water? Has there been any monitoring of Libby Lakes to determine if the Lakes could be a source of the adit water? The DEIS mentions that random fractures could impact water levels in Libby Lakes, but this analysis was improperly omitted from the SDEIS. The impacts to Libby Lakes should not have been disregarded by the SDEIS.

Response: Section 3.10.3.1.1 of the SDEIS and FEIS discussed the hydraulic connection between the adit and Libby Creek, which is the source of water to the adit. As discussed in Section 3.11.2.3 of the FEIS, the Libby Lakes are at an elevation of about 7,000 feet, perched above the groundwater table, so they likely would not be affected by mining activities. Lower Libby Lake is being monitored by the KNF (since October 2010) and, as described in Appendix C.10 of the FEIS, would continue to be monitored during the Evaluation, Construction and Operations phases. The water level data collected to date do not indicate any loss of water to the Libby Adit.

333-12 Groundwater inflow and outflow dominate the water budget during the late summer snow free period (Gurrieri and Furniss 2004). Annual or steady state water balance calculations for such a lake are inaccurate because they ignore critical low flow periods. Geomatrix (2011) considered only an annual water balance for the lake, to which they compared the effects of dewatering. They dismiss Gurrieri's (2001) estimate for groundwater inflow and outflow by claiming he ignored surface inflow from the sides of the lake, which is not true –

333-13 The agencies adapted the Geomatrix water balance for Rock Lake (SDEIS, p 262), including the inference there is not groundwater outflow from the lake, against which the SDEIS compares the projected changes in flux to the lake. The SDEIS acknowledges that if Gurrieri (2001) is correct, the "calculated effects on Rock Lake water levels would be somewhat greater than disclosed in this EIS" (SDEIS, p 262). Thus the agencies have rejected a water balance published in an international peer reviewed journal (Gurrieri and Furniss 2004) which considered critical baseflow period effects in deference to a steady state water balance based on average annual flux components, and acknowledge if the peer-reviewed article is correct, their SDEIS has underestimated the effects of the mine.

Response: The effect on Rock Lake was discussed in Section 3.11.4.4.4 of the SDEIS and FEIS. The agencies' analysis of effects on Rock Lake did not use Geomatrix's annual water balance. It was assumed for the two time periods evaluated (late summer/early fall and winter) that deep bedrock groundwater would be the only source of water supply to the lake. This would be the case during dry periods when there is no precipitation and no snowmelt runoff or flow from shallow deposits above the lake, or in the winter when the lake is frozen, so the analysis presents a worst case scenario of effects from mining to the lake. The FEIS indicated that with a groundwater outflow component hypothesized by Gurrieri, the estimated effects on Rock Lake water levels would be within the same range as disclosed in the FEIS. Gurrieri participated in the preparation of the DEIS, SDEIS, and FEIS (see section 4.1.1 of the DEIS, SDEIS, and FEIS).

335-15 The SDEIS does not provide sufficient analysis of the potential for these impacts to occur to wilderness lakes, and the efficacy of mitigation, due to the development of the proposed Montanore Mine or the cumulative effects of Montanore and Rock Creek.

Response: The effect on Rock Lake was discussed in Section 3.11.4.4.4 of the SDEIS and FEIS without and with mitigation. Effects are shown in terms of change in lake level, volume, and surface area changes. Section 3.11.4.9 of the SDEIS and FEIS disclosed that Rock Lake would not be affected by the Rock Creek Project. The only other wilderness lake expected to be affected by the Montanore mine is St. Paul Lake. Section 3.11.2.3.2 of the SDEIS and FEIS disclosed that St. Paul Lake is located within glacial moraine material, which causes the lake level to fluctuate to a much greater extent than does Rock Lake. St. Paul Lake may be affected by mining, but effects predicted by the 3D model would likely not be separable from the large natural lake level variations. If deep groundwater is a component of the inflow to St. Paul Lake, mine dewatering would unavoidably reduce this source of water to the lake, and the lake level may lower more quickly during dry years when the only source of water to the lake was bedrock groundwater.

Streamflow

122-6 As a general comment, the DEIS makes repeated statements with regard to the East Fork and other surface waters that flow reductions "may be difficult to measure," or "may be difficult to separate from natural variability." The DEIS should include appropriate clarifications to these statements to avoid misleading the public.

Response: Section 3.11.4.2.2 of the SDEIS and Section 3.11.4.4.6 of the FEIS described the accuracy and precision of measuring streamflows and the natural variability in streamflow, and explains how both may affect the ability to detect mining-induced changes in streamflow.

321-2 The DEIS fails to account for seasonal changes in water flow but opts to treat it as an annual flow. The fact that it varies greatly from season to season is vital and must be considered.

Response: Section 3.11.4 of the FEIS disclosed the effects of the project on low flows ($7Q_2$ and $7Q_{10}$), when impacts would be greatest and most measurable. Section 3.11.4 also disclosed the effect of the removal of vegetation for mine facilities to peak flow and annual water yields.

328-4 Although the 3D numerical model predicts changes in baseflow, the actual baseflow of the streams is unknown. $7Q_{10}$ and $7Q_2$ values are calculated using USGS regression equations for ungaged streams, but even this is problematic in the headwaters because the watershed area is smaller than the acceptable lower range of 3 square miles. The net effect seems like a house of cards: a model built with insufficient data and large uncertainty is used to predict changes in baseflow that are compared against other calculated parameters ($7Q_2$ and 7Q10), some of which have large (50%) standard error because the catchment is too small. We appreciate the fact that the agencies chose the lower of the calculated $7Q_{10}$ or simulated baseflow to analyze effects, but overall, this exercise may not do justice to reality, and the predictions based on it may not mean much.

333-9 The higher elevation sites, those that could be most affected by mine dewatering, have a drainage area too small for the USGS regression. There is too little flow data at high elevations to adequately consider the impacts at these elevations. The agencies should collect synoptic flow data at the high elevation sites and compare it to lower elevation flow data to estimate the $7Q_2$ and $7Q_{10}$ flows at those points. Rather than comparing baseflow reductions to the $7Q_2$ and $7Q_{10}$ flows, the percent reduction should be compared to the calibrated flow rates at the monitoring points.

Response: Section 3.10.4 of the SDEIS and FEIS compared model-predicted baseflow reductions to model-predicted baseflows at various locations. Section 3.8.3 of the FEIS disclosed that baseflows rather than $7Q_{10}$ flows were used in the effects analyses at two locations in upper Libby Creek (LB-300) and upper East Fork Rock Creek (EFRC-200). This is also noted in the tables in Section 3.11.4.4 of the FEIS, as is the uncertainty of the results of the 3D model. According to Hortness (2006), the equations developed by the USGS for $7Q_2$ and $7Q_{10}$ flows may not yield reliable results for sites with characteristics outside the range of or near the minimums and maximums of the equation variables. All of the upper elevation sites discussed in Section 3.8.3 of the SDEIS and FEIS have estimated annual precipitation that exceeds 69 inches. Four of the sites have drainage areas less than 3 square miles. Additional streamflow information, particularly during late summer/early fall, and from high elevation sites, would be collected by MMC

during the Pre-Evaluation and Evaluation phases, after which the 3D model would be refined and the uncertainty of the model results reduced. The effects on surface waters within the CMW would be re-evaluated by the 3D model prior to beginning mine construction.

331-10 It is also likely that the dewatering of Rock Lake would be considerably more than anticipated by the agencies. The average depth of Rock Lake is 30-feet; the deepest section of the lake is 70-feet. Water levels over the mine void nearest Rock Lake would remain greater than 100-1,000 feet below pre-mining conditions. At best, groundwater would be a minimum of 30-feet below the bottom of the lake. How is groundwater ever going to recharge Rock Lake? If the water table will permanently remain 30-feet below the bottom of the Lake, then the connection between groundwater and Rock Lake would be permanently severed.

Response: The effect on Rock Lake post-mining was discussed in Section 3.11.4.4.4 of the FEIS. At steady state conditions, without mitigation, the model predicted that the potentiometric surface would not recover completely to pre-mining conditions, resulting in less groundwater flow into the lake. Total groundwater inflow to Rock Lake would be permanently reduced by 24 acre-feet per year, about 2 percent of the estimated full lake volume. At steady state conditions, there would be slightly less baseflow (-0.01 cfs) at EFRC-50 upstream of Rock Lake. The 3D model predicted that the bulkheads would increase groundwater flow toward the lake by 0.01 cfs. The net result would be no change in the lake volume, lake level or surface area at steady state. The bulkheads would be designed, based on hydrologic data collected during mining, to minimize the flow of mine water to surface water. The mitigation of increasing the buffer zones near Rock Lake and the Rock Lake Fault, which was not modeled, may eliminate effects to Rock Lake during and after mining.

333-3 If the system does not capture as much water from precipitation and runoff in the impoundment as projected, either due to dry years or by underestimating the amount, the system will require make-up water. The SDEIS acknowledges this possibility, but does not analyze the effects of make-up water as part of alternative 3. The SDEIS should estimate a reasonable potential make-up water rate and disclose the impacts to groundwater in the area of the mill using this water would cause.

Response: Section 3.11.4.3 of the FEIS discussed make-up water needs for Alternative 2. Section 2.5.4.3 of the FEIS was revised to reflect MMC's water rights applications and the need to appropriate water during all mine phases except the Evaluation Phase in Alternatives 3 and 4. The groundwater, surface water hydrology, water rights, and water quality sections of the FEIS were revised to reflect the change in water management in Alternatives 3 and 4.

333-9 The SDEIS claims that "baseflow is not a component of the calculated $7Q_2$ and $7Q_{10}$ flows" (SDEIS, p 192, 193) because the USGS equations are based on "drainage area and mean annual precipitation (SDEIS, p 192). These two points do not relate at all, and the SDEIS's claim is simply wrong – drainage area and annual precipitation are probably the two most important controls on baseflow. Another would be geology, which would improve the estimate but the USGS did not include it in its regression relation.

Response: Section 3.8.3 of the FEIS was revised, and no longer says that baseflow is not a component of the calculated $7Q_2$ and $7Q_{10}$ flows.

152-8 The DEIS improperly downplays the predicted decreases in baseflow by comparing, for example, a 10-percent flow reduction to the flow measurement precision. While a 10-percent baseflow reduction may be difficult for the casual observer to "see", the reduction is real; baseflow occurs year-round, even as snowmelt and rainfall runoff is a much larger portion of the flow for parts of the year. Drawdown will most apparently affect the upstream end of the streams where they become perennial (the DEIS notes the springs and streams from the 5400 to 5600 foot elevation). Lowering the water table and base flow will also lower the elevation that the streams become perennial. Effectively the project will shorten the perennial streams.

333-11 The SDEIS downplays the projected reductions by comparing them to the variability in streamflow measurements (SDEIS, p 274-275). There is nothing wrong with the analysis, other than that it is irrelevant. Streamflow reductions are real whether they are within measurement accuracy or not.

Reduced streamflow during winter may mean more of the stream is frozen. Reductions during baseflow may render portions of the stream cross-section not usable as habitat. The threshold for either of these effects is difficult to ascertain.

Response: Section 3.11.4.4.6 of the FEIS (Section 3.11.4.2.2 in the SDEIS) pointed out the potential difficulties in measuring the effect of the mining project on streamflows due to measurement errors and natural streamflow variability. These issues are important to consider when designing a monitor plan that can effectively measure mine effects on streamflow. As discussed in Section 3.11.4.4.6, a sufficient number of streamflow measurements could be collected to determine whether the streamflow that may be affected by mining is statistically different from the natural variability of flow that occurred pre-mining, regardless of measurement error. Although mining-induced streamflow changes would initially be small and gradually increase, a trend should be observable given adequate streamflow monitoring before mining began, during all mining phases, and after mining ceased. In addition, Section C.10.3.3.2 of the SDEIS and FEIS discussed the monitoring of benchmark streams, lakes and springs located outside of the area of mine effects to help separate the mine effects on surface water from natural variability and the effects of climate change.

335-26 Provide analysis to indicate the estimated length of time in which discharges to East Fork Bull River, or other potential discharges could occur. The SDEIS should provide a range of potential impacts, and information concerning the margin of error or confidence levels associated with these projections.

Response: Section 3.11.4.4.4 SDEIS and FEIS disclosed that without mitigation, there is the potential for groundwater to permanently flow from the East Fork Rock Creek toward the East Fork Bull River watershed via the mine void because of the very high permeability void that would allow movement of water between the watersheds. Please see the 3D model report regarding the sensitivity analysis completed for the hydrologic model.

202-42 The agencies should have analyzed other options for the water in the flooded mine void.

Response: The 3D model predicted, without mitigation, a total flow of 0.07 cfs (32 gpm) to the East Fork Bull River and a total of 0.01 cfs (1 gpm) with MMC's modeled mitigation. The projected flow in either drainage would be very small and, consequently, the agencies did not analyze other options for post-closure water management. The agencies' mitigation was updated in Sections 2.5.2.6.5 and 2.5.4.1 of the FEIS. By the fifth year of operations, MMC would use updated hydrology modeling to assess the need for barrier pillars and/or bulkheads to minimize post-mining changes in East Fork Rock Creek and East Fork Bull River streamflow and water quality. MMC would update the closure plan, including long-term monitoring plan, during the Construction Phase in sufficient detail to allow development of a reclamation bond. A final closure plan would be submitted for the agencies' approval before final closure if modifications to the approved closure plan are determined to be appropriate at that time.

3804 Mine and Adit Areas (Mine and Adit Inflows): Comment about baseline data

162-1 All base line data relevant to the proposed operation of the mine, i.e. air quality, lake water levels, and water quality must be collected before construction begins, not just 1 year before operations begin. Also, with today's technology, data should be collected continuously; 24 hours a day all year.

331-45 As noted above, the SDEIS lacks a thorough analysis of baseline conditions for many resources (air, water, wildlife, etc.). This violates NEPA/MEPA. The establishment of the baseline conditions of the affected environment is a fundamental requirement of the NEPA process:

332-8 Summary: Baseline water quality estimates suffer from limited monitoring data and poor analytical detection limits. Baseline concentrations for certain parameters could be substantially lower than estimated in the DSEIS if detection limits were closer to modern, easily achievable lower values. Analytical detection limit strongly affect baseline water quality estimates, which in turn affect the non-degradation analysis and the mass-balance calculations. Because of these issues, the non-degradation analysis and mass-

balance modeling results could underestimate the potential for mine water and waste leachate to adversely affect groundwater and surface water resources.

335-11 Why hasn't the company been required to obtain flow data? This is important baseline data that should have been collected during the permitting process, and used to develop the information in this section.

335-13 The SDEIS does not contain sufficient baseline data or analysis of the impacts to springs, wetlands, and other groundwater dependent ecosystems, in the Wilderness Area that would be affected by drawdown. This is important baseline data that is missing from the SDEIS.

331-13 Baseline water quality data for Rock Lake are limited, SDEIS, page 319. Baseline data and information are critical to the NEPA process and the failure to have complete baseline information undermines the SDEIS and requires a new Draft SDEIS containing full baseline information and analysis for all potential affected resources (including, but not limited to, water quality and quantity for all waters, aquatic life, wildlife, air quality, etc.).

Response: Section 3.11.3 and 3.13.3 of the SDEIS and FEIS provided analyses and discussions of baseline surface water flow and baseline water quality conditions using information currently available for the analysis area. Baseline data collected for Rock Lake and other surface water and groundwater resources have been collected since 1986 and were discussed in Sections 3.11.3 and 3.13.3 of the SDEIS and FEIS, as well as in the Final Baseline Surface Water Quality Technical Report for the Montanore Project (ERO 2011c). Water quality data collected in recent years have achieved analytical detection limits consistent with current agency requirements. Appendix C of the SDEIS and FEIS provided a detailed discussion of the agencies' conceptual monitoring plans for Alternative 3 and includes surface water and groundwater monitoring (Section C.10) that would be conducted during the Pre-Evaluation and Evaluation Phase to assess the effects of mine inflows on groundwater levels and streamflows, as well as effects on surface water and groundwater quality. As discussed in Section 3.8.2 of the FEIS, the Construction Phase would begin after MMC analyzed the data from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase.

333-14 The monitoring plan describes data to be collected in a pre-evaluation phase (SDEIS, section C.10.3). This includes survey of springs in the area projected to be affected by drawdown, streamflow measurements, synoptic surveys to identify gain and losing stream reaches, groundwater-dependent wetlands, and lake water balance. This information could have been collected prior to releasing this SDEIS because it would not have been harmful to the Wilderness. Also, data collected to date should have been used in the SDEIS (p C-46).

Response: Some of the data listed were collected and used in Sections 3.10, 3.11 and 3.13 of the FEIS. The best available data were used in the FEIS.

333-20 Geomatrix (p 16) downplays the ability of their model to "accurately predict impacts to the uppermost reaches of these streams where baseflows are low and variable". These are streams for which understanding the impacts is most important. If there is little data, more should be collected.

340-2 Believes that the effect of the proposed mine on streamflows cannot be sufficiently understood at the present time. In the absence of a detailed, long-term hydrologic study and its relation to water tables in the streams of concern, the SDEIS's may underestimate the magnitude of loss of surface flow. The conclusions in the SDEIS appear to be based on less than two years of streamflow data and a simple baseflow discharge assumption could seriously underestimate the potential effects on bull trout, westslope cutthroat trout, and other aquatic life.

Response: Appendix C of the SDEIS and FEIS provided a detailed discussion of the agencies' conceptual monitoring plans for Alternative 3 and includes surface water and groundwater monitoring (Section C.10) that would be required to be conducted during the Pre-Evaluation and Evaluation Phase to assess the effects of mine inflows on groundwater levels and streamflows, as well as effects on surface water and groundwater quality. This includes data collection in the uppermost reaches of streams in the analysis area.

As discussed in Section 3.8.2 of the FEIS, the Construction Phase would begin after MMC analyzed the data from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase.

335-15 Information on stream flows, and their connection to regional groundwater systems should be included in the SDEIS.

Response: Discussion of the connection of surface water and groundwater was in Sections 3.10.3 and 3.11.3 of the SDEIS and FEIS.

331-12 Rock Lake will lose its major source of nutrients because the proposed mine would interrupt the flow of groundwater. If baseline data are limited, then how will changes in water quality be determined? Shouldn't baseline data be established to better recognize changes in the ambient water quality of Rock Lake?

Response: Section C.10 of the SDEIS and FEIS described water levels, water supply and water quality data to be collected and analyzed in Rock Lake during the Pre-evaluation and Evaluation Phases.

3805 Mine and Adit Areas (Mine and Adit Inflows): Comment about effect-mine

Streamflow

297-1 "With mitigation it will take 1,322 years for the groundwater levels to reach equilibrium. Water levels near the mine void would permanently remain greater than 100 feet below pre-mine conditions. (page 248) A change in groundwater flow path between watersheds would occur because the mine void connects the two watersheds. (page 250) Baseflow of the East Fork of the Bull River, which flows into the Bull River, would reduce flow by 17%. (page 243)" What would reducing the baseflow of the East Fork of the Bull River do to the Bull River Valley? What would redirecting water from one watershed to another do? What would be the effect on streams and vegetation in the watershed with lessened flow?

Response: Section 3.10.4.3 of the SDEIS and FEIS disclosed that at steady state post-mining, baseflow in the East Fork Bull River would increase slightly (0.05 cfs/22 gpm) due to the model-predicted potential for groundwater to flow from the East Fork Rock Creek watershed to the East Fork Bull River. This would result in a slight decrease (-0.03 cfs/13.5 gpm) in the baseflow of the East Fork Rock Creek and Rock Creek. With mitigation, it is predicted that baseflow in the East Fork Bull River would decrease slightly (-0.01 cfs) and would increase slightly in the East Fork Rock Creek and Rock Creek (0.01 cfs). The effect on streamflow and riparian vegetation would be minor. Section 3.13.4 and 3.23.4 were revised in the FEIS to better disclose the potential effects of streamflow changes.

335-27 "Groundwater drawdown during mine operations may indirectly impact aquatic habitat and associated ecological processes within the CMW, potentially resulting in seasonal reductions in Rock Creek water levels and streamflow in the upper reaches of EFRC and EFBR. Reductions in streamflow and lake levels may reduce habitat for fish and other aquatic life." This statement is inconsistent with other portions of the SDEIS, which predicts that there will be long-term and even permanent impacts from mining operations.

Response: Section 3.24.4.1 of the FEIS was revised to reiterate the streamflow effects described in Section 3.11.4 of the SDEIS and FEIS. Section 3.11.4.4 described the maximum effects on Rock Lake that would occur without mitigation during two seasons (late summer/early fall and winter) when the only source of supply to Rock Lake is assumed to be deep bedrock groundwater. With mitigation, there would be no permanent effect on Rock Lake.

Rock Lake and other CMW Lakes

152-9 The model suggests that during dry years, drawdown could prevent bedrock groundwater discharge to the upper reaches of the East Fork Bull River which could affect St. Paul Lake. The agencies acknowledge the seriousness of the changes in water balance on the river and lake, but downplay them due to the uncertainty in the model. Rather than downplaying the impacts, the industry should take steps to mitigate them, meaning preventing the impacts because the sites are within wilderness and there is no applicable physical mitigation (such as replacing the water). Prevention is the only acceptable mitigation. The agencies should determine what level of mine development would not extend the drawdown into this watershed and require the mine stop at that point.

Response: St. Paul Lake is located within glacial moraine material, which causes the lake level to fluctuate to a much greater extent than does Rock Lake. St. Paul Lake may be affected by mining, but effects would likely not be separable from the large natural lake level variations. Increasing the buffer zone between the mine and the Rock Lake fault, discussed in Section 3.10.4.3.3 of the SDEIS and FEIS, may mitigate effects on St. Paul Lake. During the Evaluation Phase, after additional surface water and groundwater data have been collected, MMC would evaluate, using the 3D model, the size of the buffer zone that would be needed to mitigate effects on CMW waters. As discussed in Section 3.8.2 of the FEIS, the Construction Phase would begin after MMC analyzed the data from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase. This would include an analysis of the needed size of the buffer zone.

152-10 The agencies' analysis somewhat concludes that there will be no effects on the high wilderness lakes. But their consultant's analysis throws huge uncertainty over that conclusion: In determining whether surface water would be affectedly mine dewatering, another consideration is to what degree the hydrogeology of the area is heterogeneous versus homogeneous. The agencies' numerical model assumed homogeneous conditions because of the lack of specific data on this issue. If ground water flow is dominantly controlled by heterogeneous conditions, then potential impacts to surface water would be focused along structural trends, rather than being distributed evenly among all drainages. It is not possible to predict how this condition might affect creek base flow with the currently available data. (ERO Resources, 2008, page vi) The agencies treat the fracture systems as homogeneous, but the reality is they are anything but homogeneous. If there are significant fracture systems responsible for most of the flow from shallow to deep bedrock, these systems may be at least intermittently saturated to the surface where they support lakes/streams. If the mine intercepts these fractures, it could drain them and lower the water table in the fractures. The conceptual model as discussed above supports the idea that the mine will drain or significantly lower the lakes' water level.

Response: Section 3.11.4 of the SDEIS and FEIS was revised and disclosed effects on Rock Lake during the mine phases; the maximum predicted effect would occur after mine closure. The FEIS disclosed that effects on St. Paul Lake would be similar, and that other lakes in the CMW are not within the area predicted to be affected by mining. The uncertainty of effects on Rock Lake would be reanalyzed after additional surface water, groundwater and geologic data are collected during the Pre-Evaluation and Evaluation phases, as discussed in Section C.10 of the FEIS.

182-4 Increased groundwater inflows or fluctuations in Rock Lake levels need to be addressed in a substantially more significant way than monitoring. More appropriate is a cessation of activity within a prescribed distance (1000 ft. or more) of the area in question.

327-6 Because Rock Creek is the sole tributary for Rock Lake, and because the above-mentioned 500-foot drawdown in the water table in this area is below the depth of the lake, Rock Lake would almost certainly be completely drained.

331-10 The SDEIS states that Rock Lake would return to pre-mining conditions when steady state is achieved. The SDEIS also says that surface water contribution to Rock Lake from the EFRC above the Lake would be reduced by approximately 50%, while groundwater inflow would be permanently reduced

by 24 acre-feet per year. The SDEIS trivializes the impacts and seems to consider the dewatering as temporary. The dewatering impacts to Rock Lake would be perpetual and permanent.

Response: The effect on Rock Lake post-mining was discussed in Section 3.11.4.4.4 of the SDEIS and revised in the FEIS. Without mitigation, when the potentiometric surface decreased below the lake surface, the groundwater flow direction would reverse. As a result, water would flow out of the lake toward the mine void, resulting in a loss of lake storage. The model predicted that this would occur for about 130 years after mining ceased (Tallman 2012).

With MMC's modeled mitigation, the 3D model predicted less of a reduction in the potentiometric surface at Rock Lake. The estimated reduction in lake volume, surface area and lake level would be greatest 16 years after mining ceased and the adits were plugged. At that time, the volume of the lake would be reduced by an estimated 2 percent, the surface area would be reduced by an estimated 1 percent, and the lake level would decline by 0.5 foot. At steady state conditions, there would no change in the lake volume, lake level or surface area at steady state. Stage changes in Rock Lake were measured from mid-June through mid-October in 1999; the total decrease in lake level during that time was 1.29 feet (Gurrieri 2001). The agencies' analysis of precipitation within the watershed above Rock Lake that considered possible losses prior to runoff reaching the lake showed that there is enough water even in a very dry year to refill Rock Lake many times during both the snowmelt runoff period and the fall rainy period. The predicted depletions to water stored in Rock Lake via bedrock fractures are very small compared to the total volume of water that can be stored in Rock Lake and the amount of precipitation runoff available annually to Rock Lake. In addition, increasing the buffer zone between the mine and the Rock Lake Fault, discussed in Section 3.10.4.3.3 of the FEIS, may mitigate effects on Rock Lake.

331-9 Numerous springs that are located above Rock Lake likely contribute water to the lake, and would dry up because of the massive dewatering. All of these cumulative and perpetual mine related hydrologic impacts would cause significant degradation to Rock Lake.

Response: The effect on Rock Lake post-mining was discussed in Section 3.11.4.4.4 of the SDEIS and revised in the FEIS. The only springs above Rock Lake that supply deep bedrock groundwater to Rock Lake are those located along the Rock Lake fault. Other springs, such as SP-1R, would not be affected by mine dewatering.

331-13 The agency acknowledges that St. Paul Lake may be impacted by the proposed Montanore Mine, but have decided to not pursue that possibility further. St. Paul Lake is within the boundary of the Cabinet Mountains Wilderness and any impact is unacceptable. Loss of Lake values would violate the Wilderness Act, CWA, Organic Act/228 regulations, and the NFMA.

Response: Section 3.11.2.3.2 of the SDEIS and FEIS disclosed that St. Paul Lake is located within glacial moraine material, which causes the lake level to fluctuate to a much greater extent than does Rock Lake. St. Paul Lake goes dry in some years. As a result, effects predicted by the 3D model would likely not be separable from the large natural lake level variations.

3810 Mine and Adit Areas (Mine and Adit Inflows): Comment about cumulative effect

Rock Lake

335-19 What are the impacts to Rock lake's water quality and biological productivity, resulting from the combined Montanore Mine and Rock Creek mines?

Response: The 3D model predicts that the Rock Creek mine would not affect Rock Lake. The effect on the water quality of Rock Lake due to the Montanore mine was discussed in Section 3.13.4 of the SDEIS and FEIS.

Streamflow

335-19 The cumulative effects of Rock Creek and Montanore on surface water hydrology are only provided for water stations RC-2000 and EFBR-500. Why doesn't the DSEIS include the predictions for other stations on Rock Creek and EFBR?

Response: Section 3.11.4.9 of the SDEIS and FEIS provided 3D model results for sites on Rock Creek and the East Fork Bull River where the cumulative effects on these two streams would be greatest at the sites for which 3D model results were provided by MMC. The analysis was revised in the FEIS to include cumulative effects at the East Fork Bull River at its mouth.

3817 Mine and Adit Areas (Mine and Adit Inflows): Comment about mitigation-mine

109-5 The use of buffer zones at Montanore to protect Wilderness lakes does not appear to have been consistently addressed with the use of buffer zones at the Rock Creek Project. Please explain why mining and drilling below the Libby Lakes area appears to not require a buffer zone.

Response: As discussed in Section 3.11.2.3 of the SDEIS and FEIS, the Libby Lakes are at an elevation of about 7,000 feet, perched above the groundwater table, and they likely would not be affected by mining activities. For this reason, and due to the large distance between Libby Lakes and the ore body (3,500 feet or more), a buffer zone would not be needed to protect the Libby Lakes.

122-7 The DEIS has identified no mitigation measures that could be implemented to prevent degradation of the lake [Rock Lake] once the mine cavity has-been dug, nor is it likely that any such measures even exist. DEQ cannot permit the mine unless and until it can ensure that standards will not be

182-6 If hydrologic modeling during initial mine operations (Year 5) determined that one or more bulkheads would be necessary to minimize changes in East Fork Rock Creek and East Fork Bull River streamflows, MMC would submit a plan for bulkheads to the agencies for approval. The permitting agencies should insist on bulkheads regardless of hydrologic modeling.

Response: The agencies' mitigation was updated in Sections 2.5.2.6.5 and 2.5.4.1 of the FEIS. By the fifth year of operations, MMC would use updated hydrology modeling to assess the need for barrier pillars and/or bulkheads to minimize post-mining changes in East Fork Rock Creek and East Fork Bull River streamflow and water quality. If needed, MMC would submit a revised mine plan with one or more barrier pillars with constructed bulkheads at access openings to the agencies for approval. One or more barriers would be maintained underground, if necessary based on the hydrologic monitoring, after the plan's approval. Section 3.10.4.3.3 of the FEIS described the mitigation that would minimize effects on Rock Lake. Currently, there is insufficient information regarding subsurface conditions to determine whether bulkheads would be beneficial with respect to controlling the direction of groundwater flow. The modeling suggests this is the case, but the modeling was based on limited hydrologic information. The mitigation would be buffer zones (where mining would not occur until additional data collection) between the mine void and Rock Lake fault of 300 feet and between the mine void and Rock Lake of 1,000 feet, and use of barrier pillars, bulkheads, or some other method to limit mine inflows within mine unless future modeling provided certainty that mining closer to the Rock Lake fault and Rock Lake would not result in significant reductions in stream baseflow or lake level.

182-18 23. P. 505-6. "If the modeling indicates that surface water standards would be exceeded in the East Fork Bull River, mitigation measures would be implemented prior to completing the mine." This is much like saying once the horse is out of the barn we (mine owners / DEQ) figure how to get the horse back into the mine. It's hard to conceptualize DEQ thinking that once the mining is completed and the mine void fills with water (70 yrs.) any mitigation measures could ever be incorporated to avoid detrimental effluent from reaching surface waters of the E. Fork Bull River. Gigantic antacid pills dropped into the mine through a wishing well?

Response: Section 3.13.4 of the FEIS disclosed that with mitigation (grouting and use of barrier pillars, bulkheads, or some other method to limit mine inflows within the mine), a minimal flow of water from the mine void toward the East Fork Bull River. The agencies' mitigation was updated in Sections 2.5.2.6.5 and 2.5.4.1 of the FEIS. By the fifth year of operations, MMC would use updated hydrology modeling to assess the need for barrier pillars and/or bulkheads to minimize post-mining changes in East Fork Rock Creek and East Fork Bull River streamflow and water quality. If needed, MMC would submit a revised mine plan with one or more barrier pillars with constructed bulkheads at access openings to the agencies for approval. One or more barriers would be maintained underground, if necessary based on the hydrologic monitoring, after the plan's approval.

310-10 Streams and portions of streams that are located within the Cabinet Mountain Wilderness (CMW) also qualify as ORWs. The most devastating impacts to ORW streams would be to the East Fork Bull River, East Fork Rock Creek (Rock Creek meadows and Libby Creek above the adit in the CMW. Sections of the East Fork Bull River and East Fork Rock Creek will lose 100% of their base flow and not recover until the groundwater reaches steady state 1300 years later.

328-4 The impacts to the headwaters of the East Fork Bull River and East Fork Rock Creek are substantial, and they would last for decades, if not centuries until water levels in the aquifer recover. Water levels in the Rock lake area would likely never recover completely. This is not an acceptable impact, and the SDEIS does not explain how this loss could be fully mitigated.

389-9 East Fork Bull River is a highly valued trout fishery with a genetically-pure bull trout population. Any alterations to this watershed should be avoided. It merits notice that the headwaters of this river are located in the CMW and are classified as Outstanding Resource Waters. Therefore, any changes permitted by the project are also illegal.

Response: Section 3.10.4.3.3 of the FEIS described the mitigation of effects on the East Fork Bull River, East Fork Rock Creek and Rock Lake, and the effectiveness of such mitigation.

3833 LAD Areas (Wastewater Discharges): Comment about analysis-mine

4-17 Other mines have had problems with LAD in the past. The CSPP guidelines for LAD suggest that LAD should only be used when there is no better method for treatment available. It seems that it would be better to fully anticipate the efficacy of this method, rather than waiting until water quality standards are violated to act.

74-19 Water quality stands to be majorly affected by the LAD application. It is irresponsible to consider LAD application without a thorough assessment of its effects and a backup plan in place, in case water quality standards are violated. The permit to degrade issued to MMC by the BHES, now the Board of Environmental Review, (DEIS, Appendix A) has already allowed standards that are substantially less stringent than those currently in place in Montana. These standards at minimum cannot be breached.

74-17 The idea of applying excess water via snow machines in the winter months also needs further analysis with regards to its potential hydrologic impacts, particularly the possibility of creating toxic runoff.

74-16 If too much water is applied to an LAD plot, it can result in toxic runoff that will contaminate surface water, or pollutants seeping into the groundwater. Furthermore, in the case of nitrates, LAD is only able to remove 50 percent of nitrate contamination from water, whereas 80 percent of contamination needs to be removed in order to meet the water quality standards set forth in the 1993 BHES permit to degrade.

182-18 21. P. 491. "It is not possible to estimate actual removal rates for total dissolved solids nutrients, and metals until mine wastewater application to the LAD areas occurs and monitoring data are collected. Depending on the effective porosity of the aquifer under the LAD areas (which is unknown, but estimated) and the actual flow path, the water treated at the LAD areas may take from less than a year to 10 years to reach receiving streams." Sufficient time has elapsed between Noranda and the crafting of this DEIS to have secured some if not all of this type of information. It's ludicrous to believe the regulatory agencies will be making the crucial decision to permit this mine without sufficient information in several critical

202-3 The essential elements which would flow into the streams via ground water, would be replaced by nutrients and metals from the LAD, including chromium, copper, iron, manganese, and zinc.

202-4 Land application—the limited and ambiguous options for winter discharge, and discharge during extended rainy periods that would occur much of the year, need extensive clarification and in some instances need to be reconsidered.

Response: Sections 3.13.4.3 and 3.13.4.4 of the SDEIS and FEIS disclosed that land application of mine wastewater would not occur in Alternatives 3 and 4. For the agencies' preferred alternative, the agencies recognized the uncertainties in effective operation of LAD areas and adequate treatment of mine wastewater by land application (including land application during the winter).

74-17 In the Montanore plan, LAD is a secondary method of water treatment, with the primary method being their Libby treatment plant. However, the amount of water that this primary treatment facility can accommodate, combined with the amount the LAD treatment can process, has not been compared to the amount the project is expected to generate. Montanore proposes to construct an additional treatment plant "if necessary"; it would be useful to have an idea of whether or not this will be necessary so that the construction and location of the facility could be included in the DEIS.

Response: Section 2.5.4.3 of the FEIS was revised to indicate the Water Treatment Plant would be modified to increase capacity to accommodate the wettest year in a 20-year period, and as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits. In 2015, MMC requested that the general variance for both total nitrogen and total phosphorus be incorporated into the MPDES permit and indicated that the facility design flow is less than 1.0 million gallons per day (mgd). In the draft renewal MPDES permit, the DEQ preliminarily granted the variance request for total nitrogen of 15 mg/L, and preliminarily determined that a variance for total phosphorus was not necessary because the facility did not show reasonable potential to violate this nutrient standard. The DEQ would require the completion of an optimization study/nutrient reduction analysis to optimize nutrient reduction with existing infrastructure and analyze other cost-effective methods of nutrient load reductions. MMC would comply with the BHES Order limit of 1 mg/L total inorganic nitrogen. The increased capacity and treatment modifications would be in place at mill startup.

122-9 With regard to Table 104, it is not clear why many of the predicted in-stream concentrations of contaminants for Alternative 3 are so much lower than for Alternative 2. The difference between the alternatives appears to be that in Alternative 3, MMC would have the ability to pre-treat the effluent to achieve higher pollutant removal before land application. However, it does not appear that MMC would have any legal obligation to actually provide this level of treatment. Rather, the legally enforceable criteria appear to be the same in all action alternatives – i.e., the criteria set forth in the 1992 BHES Order.

Response: The comment refers to tables in the DEIS that provided predicted concentrations with land application for Alternatives 2 and 3. This is no longer relevant because, as was discussed in Sections 3.13.4.3 and 3.13.4.4 of the SDEIS and FEIS, land application of mine wastewater would not occur in Alternatives 3 and 4. The agencies recognize the uncertainties in effective operation of LAD areas and adequate treatment of mine wastewater by land application. DEQ's MPDES permit for mine discharges regulates the quality of all discharges. Mine wastewater treated at the Water Treatment Plant would be below BHES Order limits or would not result in significant changes in existing water quality as per nondegradation criteria.

105-2 Mentioned in the Draft EIS is the increased concentrations total dissolved solids, antimony, manganese, nitrate and zinc are predicted to exceed ground water standards or BHES order nondegradation limits in one or more phases of mining. I could not find any measures described in the Draft EIS to prevent this or mitigate for the potential negative impacts of changing water chemistry.

Response: Sections 3.13.4.3 and 3.13.4.4 of the SDEIS and FEIS discussed that land application of mine wastewater would not occur in Alternatives 3 and 4, so the exceedances described due to land application would not occur except under Alternative 2. Section 3.13.4.2 disclosed that in Alternatives 3 and 4, seepage reaching groundwater would be collected by the pumpback system and would not reach surface water. In

Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. Seepage pumpback wells could be installed along the downstream toe of the tailings dam. The discharge to groundwater beneath the impoundment would be authorized by a DEQ Operating Permit and a seepage recovery zone would encompass the impoundment footprint and extend to the pumpback wells. DEQ's MDPES permit for the Water Treatment Plant outfall would regulate the quality of any Water Treatment Plant discharges. Surface water discharges would meet nondegradation criteria or BHES Order limits at the end of the mixing zone in Libby Creek.

3865 Impoundment Areas (Diversions, Interceptions and Seepage): Comment about effect-mine

331-25 In Alternative 3, flow in Little Cherry Creek would increase slightly during the Construction Phase from surface water diverted around the impoundment. What surface water is to be diverted? Is the source of the surface water an ephemeral stream, a spring, snowmelt water or rain run off? More explanation is needed as to the source of this surface water. Depending on the source, the surface water that is to be diverted will likely contain sediment. That sediment needs to be contained before entering Little Cherry Creek and the habitat of the Redband Trout.

Response: Section 3.11.4.4 of the SDEIS and FEIS disclosed that flow within the watershed above the Poorman Tailings Impoundment would be diverted either to Poorman or Little Cherry Creek and would increase the watershed of both creeks by about 3 percent. Flows above the impoundment are intermittent; most of the water would be snowmelt during the spring. Section 3.13.4.3.3 of the SDEIS and FEIS disclosed that the small amount of water diverted around the Poorman Tailings Impoundment Site from the small watershed above the impoundment would not measurably affect the water quality of Little Cherry or Poorman creeks. Surface water routed around the impoundment would be managed with BMPs to minimize sediment delivery to Little Cherry or Poorman creeks.

152-24 The DEIS also acknowledges that the tailings seepage will degrade surface water: "Seepage from the tailings impoundment would have to be captured prior to entering the creek to avoid water quality exceedances in former Little Cherry Creek" (DEIS, page 503). The discussion in the remainder of the DEIS indicates that they will NOT capture the tailings seepage, therefore this statement acknowledges the project, at least as proposed (alternative 2), will degrade surface water.

Response: Section 3.11.4.2 of the SDEIS and FEIS discussed the use of pumpback wells to capture all tailings seepage in all of the action alternatives. The effectiveness of the pumpback well system would be monitored and the system modified as necessary to ensure that no tailings water reached Libby Creek in any alternative. For Alternatives 2 and 4, no discharge of water from the impoundment could occur to Little Cherry Creek.

310-15 The filling and diversion of a major stream in order to accommodate the volume of tailings should not be approved by the agencies. Moreover, the presence of sensitive and threatened fish species habitat should preclude any discharge of tailings into the Libby Creek drainage.

Response: The agencies' preferred alternative (Alternative 3) is the Poorman Tailings Impoundment site, which would avoid the filling and diversion of a major stream. This site would avoid the placement of tailings into sensitive fish species habitat.

342-4 The use of wells for recovery of contaminated water leaching from the tailings impoundments will also result in drawdown of groundwater under LPMC lands and further loss of water from Libby Creek.

Response: Section 3.11.2.4.3 of the FEIS described the mitigation of effects due to use of the pumpback wells below the tailings impoundment. Effects on Libby Creek flows would be mitigated by discharges of treated water from the Water Treatment Plant during and after mining.

182-17 16. P.469. "After the impoundment was reclaimed and runoff was no longer subject to ELGs, runoff from the reclaimed tailings impoundment surface and the watershed west of the impoundment would

be routed toward Bear Creek." It's bad enough this proposal envisions impacts to Libby, Ramsey, Little Cherry, Rock Creek and the East Fork Bull River. Adding an additional creek to the impacts at closure is unacceptable.

Response: In Alternative 2, which is not the agencies' preferred alternative, water quality changes to Bear Creek are not predicted to occur, but changes in streamflow would occur. Section 3.13.4.2 of the SDEIS and FEIS disclosed that effect for Alternative 2. After the impoundment was reclaimed and runoff met water quality standards, runoff from the reclaimed tailings impoundment surface and the watershed west of the impoundment would be routed toward Bear Creek. The water quality of Bear Creek would not be degraded by the runoff. MMC would design a riprapped channel to Bear Creek. The design would incorporate features that provide for stability of a transition zone so that sediment delivery was minimized. A small, rock-filled check dam would be located just beyond the northwest end of the reclaimed impoundment. The check dam would be designed for the 100-year storm event. Sediment would be removed from behind the dam, if necessary. These measures would minimize the amount of sediment reaching Bear Creek. Section 3.11.4.3 of the SDEIS and FEIS provides information on flow changes that would occur in Bear Creek. In the agencies' preferred alternative (Alternative 3), Bear Creek would not be affected.

200-7 Runoff from the tailings pile would be allowed to enter the diverted channel of Little Cherry Creek, which feeds Libby Creek, which flows into the Kootenai River. What impacts on water quality impacts will there be from runoff that would include copper, cadmium, iron, lead, silver, manganese, and aluminum? Nitrate and ammonia concentrations also would be elevated.

Response: This comment refers to Alternative 2, which is not the agencies' preferred alternative. Section 3.13.4.2 of the SDEIS and FEIS disclosed that in Alternative 2, water in Little Cherry Creek above the tailings impoundment would be diverted to Libby Creek via a 10,800-foot long Diversion Channel to ensure that it would not contact any mine wastewater, waste rock or tailings. Runoff from the tailings impoundment would not be allowed to enter the diverted channel of Little Cherry Creek.

200-7 Part of the seepage (36,000 gallons per day) from the tailings will not be collected and will be allowed to enter groundwater. What will prevent the metals and nutrients in this discharge from entering adjacent creeks and streams, including Libby Creek? If and when they do seep how will that affect the fish?

Response: Section 3.11.4.2 of the SDEIS and FEIS disclosed that most seepage from the tailings impoundment would be intercepted by a Seepage Collection System, but a small amount of seepage would not be collected by this system. The remaining seepage would be captured by a pumpback well system operated to prevent any seepage from the tailings impoundment from reaching surface streams.

202-6 After mine closure and during storm events, runoff from the tailings impoundment would enter Little Cherry Creek. What would the long-term impacts be from this discharge on all downstream waters? What are the potential impacts from the sediment, nutrients, and metals on the water quality and fisheries from tailings runoff on not only Libby and Little Cherry Creek, but also on the Kootenai River? These discharges must be regulated under the MPDES Permit.

Response: This comment refers to Alternative 2, which is not the agencies' preferred alternative. Section 3.11.4.3 of the SDEIS and FEIS disclosed that stormwater flow would be managed at the Little Cherry Creek Impoundment Site in the same manner as the Ramsey Plant Site. Stormwater runoff would be collected in ditches and directed to one or more sediment ponds. The ponds would be designed to contain runoff from a 10-year/24-hour storm. In the case of storms larger than a 10-year/24-hour storm, runoff would flow out of the sediment ponds and enter nearby surface streams. Streamflow would be very high during such an event, with discharges to area creeks likely less than 5 percent of the flow from a 10-year/24-hour storm. Any discharges from stormwater retention ponds would be sampled and regulated under the MPDES permit. Section 3.13.4.2 of the SDEIS and FEIS disclosed that after mine closure, after the impoundment was reclaimed and runoff met water quality standards, runoff from the reclaimed tailings impoundment surface and the watershed west of the impoundment would be routed toward Bear Creek.

The water quality of Bear Creek, Libby Creek, Little Cherry Creek, and the Kootenai River would not be affected by the runoff.

310-15 Part of the seepage (36,000 gallons per day) from the tailings will not be collected and will be allowed to enter groundwater. What will prevent the metals and nutrients in this discharge from entering adjacent creeks and streams, including Libby Creek?

Response: Section 3.13.4.2 disclosed that in Alternatives 3 and 4, seepage reaching groundwater would be collected by the pumpback system and would not reach surface water. In Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. Seepage pumpback wells could be installed along the downstream toe of the tailings dam.

331-25 During the closure and post-closure phases, the surface run off from the tailings impoundment is designed to flow into Little Cherry Creek and ultimately be diverted into Libby Creek. Would this water be treated? The SDEIS mentions sediment increases to the creeks, but metals could become an issue and treatment may be needed. Surface runoff from the Poorman tailings impoundment would be directed toward Little Cherry Creek, and may likely cause short-term increases in stream sedimentation during construction of a diversion channel to Libby Creek.

Response: Section 3.13.4.3 of the SDEIS and FEIS disclosed that a channel would be excavated through the tailings and Saddle Dam abutment at the Poorman Impoundment to route runoff from the site toward a tributary of Little Cherry Creek. Measures described in section 2.5.5.1.3 of the SDEIS and FEIS would be implemented to minimize erosion and sedimentation of Little Cherry Creek. After the impoundment was reclaimed, runoff water would be considered stormwater runoff and would not need to be treated.

Surface Water Quality

3900 General: Suggested new information/analysis

General

122-9 The EIS fails to adequately address the potential for exceedance of nondegradation standards for arsenic in surface and groundwater… The agencies should address this issue in more detail, ensuring they use the most up-to-date data and information, including existing ambient data for groundwater, which appears to be absent from the DEIS. All data should reflect current detection limits for arsenic.

122-9 Finally, the EIS fails to adequately address the potential for exceedance of nondegradation standards for arsenic in surface and groundwater in the watersheds of Libby Creek and tributaries.

Response: Section 3.13.4.2 of the FEIS was revised to indicate that there would be a potential for concentrations of some parameters to exceed the BHES Order limit or ambient concentrations in groundwater beneath the LAD areas or tailings impoundment in Alternative 2, which is not the agencies' preferred alternative. Appendix K-4 of the FEIS provided ambient groundwater concentrations at various locations. Section 3.13.4 of the SDEIS and FEIS provided analyses of other effects on surface water and groundwater quality, including effects on streams due to land application and discharge from the Water Treatment Plant, and seepage to groundwater from the tailings impoundment.

122-9 Another problem with Tables 101 and 104 is that the predictions of in-stream concentrations appear to be based on discharge from the LAD system alone, and do not take into account seepage from the tailings impoundment and waste rock facilities, both of which are predicted to discharge elevated levels of metals and nitrates to groundwater that is connected to Libby Creek and/or tributaries. The analysis must consider the effects of these discharges.

Response: Section 2.5.3.4 of the SDEIS and FEIS was revised and disclosed that in the agencies' preferred alternative and Alternative 4, waste rock facilities would be lined, or waste rock would be stored in the

tailings impoundment area. There would be no seepage from waste rock to area streams. Section 3.13.4.2 disclosed that in Alternatives 3 and 4, seepage reaching groundwater would be collected by the pumpback system and would not reach surface water. In Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. Seepage pumpback wells could be installed along the downstream toe of the tailings dam. In Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. Seepage pumpback wells could be installed along the downstream toe of the tailings dam.

141-5 It would seem imprudent to create another source of pollution or toxins in an area where the public health has been compromised. These concerns may be outside of the analysis area, but they are in the same bioregion. The water from the project area will eventually end up in Libby.

Response: As discussed in Section 3.13.2.2.2 of the SDEIS and FEIS, the MPDES permit for surface water discharges would regulate the quality of any wastewater discharges to surface water. Surface water discharges would meet the requirements of the nondegradation rules or BHES Order limits at the end of the mixing zone in Libby Creek.

Sewage Treatment

141-4 I found little information in the DEIS about how the sewage requirements for this project would be handled. 450 miners working 350 days a year will generate considerable sewage. Where will these facilities be, how will this sewage be treated, and what effects will this have on water quality?

Response: Section 2.5.4.4 of the SDEIS and FEIS was revised to provide additional information about sewage treatment. In the agencies' preferred alternative and Alternative 4 during the Evaluation and Construction Phases, MMC would use an on-site sewage treatment and disposal system at the Libby Adit Site. During Operations, MMC would use a similar system consisting of septic tanks for primary treatment, followed by discharge to the tailings impoundment for final disposal. Any water stored in the tailings impoundment would be treated at the Water Treatment Plant before being discharged to Libby Creek.

3902 General: Suggested new monitoring

62-13 I don't believe that there's a monitoring protocol in place or a monitoring plan for water quality in wilderness. And these are outstanding resource waters and, thus, are subject to the highest level of protection under the law. I think that these are things that need to be considered.

Response: Section C.10 of the SDEIS and FEIS provided the agencies' conceptual monitoring plan for surface water and groundwater. The plan included monitoring in the CMW.

74-11 The monitoring plan needs to establish mitigation measures should trigger levels for nutrients be reached and provide a plan of action. Furthermore, a time frame for the monitoring plan that runs for the life of the mine and into the future 70 years or more should be added to the current plan.

74-11 In the case that Outstanding Resource Waters were affected by this mine, attempts to clean up the damage would most likely be delegated as part of the Reclamation process and covered under the Reclamation bond. Mitigation would be triggered by presence of levels of contaminants in water according to findings as outlined by the monitoring plan. These triggers are not outlined in the current monitoring plan, and mitigation measures have not been determined.

Response: Section C.10.7 of the SDEIS and C.10.8.3 of the FEIS discussed the agencies' preliminary action levels or some measureable change in a monitoring parameter in surface water or groundwater that would require action by MMC, and what the action would be. The water resources monitoring plan described in Section C.10 of the SDEIS and FEIS is for the life of the mine and after mine closure. As discussed in Section 3.11.1 of the FEIS, under the Montana Water Quality Act, no authorization to degrade may be obtained for outstanding resource waters.

74-14 A stringent monitoring plan for water quality resources within Wilderness (both surface and groundwater) that complies with the Wilderness Act needs to be designed and made open for public review.

Response: Appendix C of the SDEIS and FEIS contained the agencies' conceptual monitoring plans for Alternative 3. The plan was made available in the SDEIS for public review and comment. Section C.1 disclosed that MMC would develop final monitoring plans for the agencies' approval before the Evaluation Phase for the selected alternative in the KNF's ROD. Each plan would include a section on quality assurance measures that ensure the reliability and accuracy of monitoring information as it was acquired. For example, surface water quality sampling would follow DEQ's Quality Assurance Project Plan (QAPP), Sampling and Water Quality Assessment of Streams and Rivers in Montana, 2005. Each plan would describe data quality objectives for sampling, which would include specific methods for analysis and quantification, and criteria for assessment of the data. All plans would identify action levels, which when reached would require MMC to implement a corrective measure. MMC would submit the final plans to the agencies early enough so at least 1 year of data could be collected before additional dewatering and extension of the Libby Adit started.

74-14 Monitoring plans should not be conducted by the mining company or funded directly through the mining company, to ensure impartiality.

Response: Section C.10.9 discussed how the Water Resources Monitoring Plan would be overseen, approved and reviewed by DEQ and the KNF. MMC's monitoring reports would be posted on MMC's website.

109-25 Please discuss the specific monitoring and mitigation that the Forest Service has developed to minimize these risks and impacts (potential impacts to surface water associated with the proposal to stockpile waste rock just upstream from KNF land after the adit is dewatered and extended an additional 13,000 feet). What safeguards will the FS require to prevent more water quality violations? Has MMC submitted water treatment plant designs and test work to the FS and Montana DEQ for review and approval? If yes, did the FS and DEQ approve those submittals? If they have not been submitted, when will MMC submit such designs and test work to the FS?

Response: Collection of additional data as specified in the geochemistry sampling and analysis plan provided in Section C.9 of Appendix C would allow MMC to appropriately modify waste rock and water management plans prior to beginning mining operations so effects on water quality would be minimized. The MPDES permit for mine discharges would regulate the quality of any mine discharges. Section 3.13.4.3 of the FEIS disclosed that excess water in Alternatives 3 and 4 would be treated at the Water Treatment Plant and discharged to one of three outfalls at the Libby Adit Site. Mine and adit water treated at the Water Treatment Plant would be below groundwater BHES Order limits or would meet the requirements of the nondegradation rules, so if the water were discharged to groundwater via the percolation pond, groundwater quality would not be adversely affected. If discharges were made directly to Libby Creek, the discharge would meet the requirements of the nondegradation rules or BHES Order limits at the end of the mixing zone in Libby Creek.

153-1 The project proponent could be required to implement a comprehensive hydrological modeling and monitoring program to assess the differences between actual project impacts as opposed to natural variability, with required mitigation measures commensurate with project impacts.

Response: Appendix C of the SDEIS and FEIS provided a detailed discussion of the agencies' conceptual monitoring plans for Alternative 3 and includes surface water and groundwater monitoring (Section C.10) that would be required to be conducted during the Pre-Evaluation and Evaluation Phase to assess the effects of mine inflows on groundwater levels and streamflows, as well as effects on surface water and groundwater quality. After additional baseline information is collected by MMC during the Pre-Evaluation and Evaluation phases, the 3D model would be refined and the uncertainty of the model results reduced. The effects on surface waters within the CMW would be re-evaluated by the 3D model prior to beginning mine construction. Section C.10 describes monitoring of a benchmark lake and benchmark streams outside the area of mine influence to separate the effects of the mine from natural variability. Section C.10 also

discussed the development of new treatment or mitigation measures based on monitoring of effects on surface water and groundwater.

248-9 The Agencies should assume that sampling stations LB-1000, LB-800, RA-600 (and possibly a sampling station in Poorman Creek) will not be available in connection with a water monitoring program for the Project.

Response: All monitoring sites on private property other than MMC's property in the DEIS were relocated to public land in the SDEIS and FEIS.

264-2 Water quality measurements continually taken at all points of discharge to the ground or surface waters. Data can be collected in real time and spills or accidental emissions can be discovered and remedied.

Response: Water quality monitoring at the points of discharge would comply with requirements of the MPDES permit.

74-19 A monitoring plan to be conducted by an unbiased party.

327-31 The Agencies should review all components of the plan which involve self-monitoring by MMI and revise them so that independent entities, chosen by the Agencies or environmental organizations but paid for by MMI, take full responsibility for them. The Agencies should also review all components which require Agency monitoring, and consider hiring outside entities as well.

Response: Section C.10.2 disclosed that MMC would fund monitoring that may include independent collection or analysis of surface water, groundwater, or aquatic life samples, independent interpretation of monitoring data, or other activities the agencies deemed necessary to verify MMC's monitoring. C.10.9 discussed how the Water Resources Monitoring Plan would be overseen, approved and reviewed by DEQ and the KNF. MMC's monitoring reports would be posted on MMC's website.

332-8 The reporting limit for arsenic in the monitoring plan should be lowered to at least 1 µg/L to allow detection of arsenic at lower levels, as discussed in the previous section, and to establish an action level for arsenic, which does not currently exist for groundwater (DSEIS, Appendix C, Table C-15).

Response: Table C-15 of the FEIS providing action levels was revised. Because arsenic is a carcinogen and changes in ambient concentrations are not allowed under Montana's nondegradation rules, the action level would be a trend analysis showed increasing concentration trend exceeding 0.05 mg/L. Table C-11 requires a reporting limit for arsenic of 0.001 mg/L (1 µg/L) for groundwater.

328-9 The monitoring plan for streamflow as described in Appendix C seems reasonable. In fact, it would have been preferable to have a monitoring effort of this magnitude to inform the EIS and the decision of whether or not to permit the mine. Given the current lack of data in the headwater regions of EFRC and EFRR, and given inherent year-to-year variability, it will be very difficult to define a meaningful indicator of significant change. Furthermore, even if this threshold can be determined, it's not clear that an effective remedy would be possible because of the lag time of 5-10 years, as demonstrated by the groundwater model. The SDEIS lacks discussion of this problem.

Response: Appendix C of the SDEIS and FEIS provided a detailed discussion of the agencies' conceptual monitoring plans for Alternative 3 and includes surface water and groundwater monitoring (Section C.10) that would be required to be conducted during the Pre-Evaluation and Evaluation Phase to assess the effects of mine inflows on groundwater levels and streamflows, as well as effects on surface water and groundwater quality. As discussed in Section 3.8.2 of the FEIS, the Construction Phase would begin after MMC analyzed the data from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase. Section 3.11.4.4.6 of the FEIS disclosed the potential difficulties in measuring the effect of the mining project on streamflows due to measurement errors and natural streamflow variability. These issues are important to consider when designing a monitor plan that can effectively measure mine effects on

streamflow. As discussed in Section 3.11.4.4.6 of the FEIS, a sufficient number of streamflow measurements could be collected to determine whether the streamflow that may be affected by mining is statistically different from the natural variability of flow that occurred pre-mining, regardless of measurement error. Although mining-induced streamflow changes would initially be small and gradually increase, a trend should be observable given adequate streamflow monitoring before mining began, during all mining phases, and after mining ceased. In addition, Section C.10.3.3.2 of the SDEIS and FEIS discussed the monitoring of benchmark streams, lakes and springs located outside of the area of mine effects to help separate the mine effects on surface water from natural variability and the effects of climate change.

332-8 There is very little mention of adaptive management in the DSEIS or the monitoring plan (DSEIS, Appendix C). An adaptive management plan should be required with the EIS that includes specific actions that will occur if unexpected (but predictable, based on other mines) issues arise.

Response: Section C.1 of the SDEIS and FEIS disclosed that all final monitoring plans would identify action levels, which when reached would require MMC to implement a corrective measure. The agencies' preliminary action levels for hydrology were discussed in Section C.10.7.3 of the SDEIS and C.10.8.3 of the FEIS.

3903 General: Comment about analysis-mine

Subsidence

74-6 Potential changes to water quality due to subsidence have not been measured or modeled.

Response: Section 3.14.3.1 of the SDEIS and FEIS discussed the potential effect of subsidence on groundwater flow. It is expected that any subsidence effect on groundwater flow would be very minor and short-lived, so there would be no effect on groundwater quality. Section 3.14.3.1 of the SDEIS and FEIS disclosed that surface subsidence is not expected, so there would be no effect on surface water quality.

Streamflow

152-26 The stream flows used for mixing analysis correspond to the 10-year 7-day low flow and the average annual flow. The 10-year 7-day low flow is the average flow that occurs for 7 consecutive days with a 10-year return interval for recurrence. On average, an average 7-day flow will be less than this value only once every ten years; in any given year, the probability the 7-day flow will be less than this value is 0.1. The values presented in Geomatrix (2007a) were originally determined for the 1992 EIS. Geomatrix (2007a) does not explain how the values were determined or present the data used to determine them. However, they present a table with the Q7D10Y flow along with the observed low flows (Geomatrix, 2007a, Table 25) which shows how the low flows are grossly overestimated for Poorman Creek and Libby Creek.

Response: As discussed in section 3.8.3 of the SDEIS and FEIS, 7-day, 10-year ($7Q_{10}$) low flows derived for analysis in the SDEIS and FEIS were estimated using a USGS method developed for ungaged watersheds (Hortness 2006). The $7Q_{10}$ values provided in Geomatrix's 2007 report were not used in the SDEIS or FEIS.

248-25 Water quality predictions for $7Q_{10}$ flows are calculated based on existing conditions and does not account for changes in low flow regime due to mine dewatering of the groundwater reservoir and subsequent stream depletion. Consequently, impacts to the water quality of streams will be much higher than predicted.

342-22 Water quality predictions for $7Q_{10}$ flows are calculated based on existing conditions and does not account for changes in low flow regime due to mine dewatering of the groundwater reservoir and subsequent stream depletion. Consequently, impacts to the water quality of streams will be much higher than predicted.

Response: The water quality predictions for $7Q_{10}$ and $7Q_2$ flows accounted for changes in low flow regimes due to mine inflows and other surface water depletions for various mining purposes. Appendix G presented the derivation of the flows used in the water quality predictions.

Rock Lake and other CMW Lakes

74-10 Part of the ore deposit slated to be mined by MMC is located proximal to Rock Lake in the CMW. There is a ventilation adit located about 500 feet downgradient from Rock Lake. Adits can be subject to acid rock drainage, meaning that as draw down groundwater rebounds the adit may start discharging water contaminated with mine wastes. The DEIS claims that the potential for this in the Rock Lake adit is low because of the drawdown cone created by the mine. Gurrieri's report explains that the Troy mine (considered in some ways an analog for the proposed Montanore project) has experienced discharge from plugged mine voids contaminated by dissolved copper, which is extremely toxic to aquatic life.

Response: The Rock Lake ventilation adit would daylight several hundred feet above and east of Rock Lake on MMC's private land. Even if the mine void completely filled, which is not expected, the regional potentiometric surface would be below the adit. Consequently, the adit would not be a source of potential discharge to Rock Lake.

182-12 P. 255. "Rock Lake and St. Paul Lake may become more dilute, with lower dissolved mineral concentrations (Gurrieri 2001)." Explain how this is possible?

Response: As discussed in Section 3.13.3.1.3 of the SDEIS and FEIS, lakes located in or near the CMW are quite dilute; the primary source of dissolved solids and nutrients is bedrock groundwater. As discussed in Section 3.13.4.2 of the SDEIS and FEIS, if less groundwater were contributed to Rock Lake or St. Paul Lake, the lakes would have lower dissolved solids concentrations. It is not predicted that the mine project would introduce mine related nutrients and minerals to Rock Lake.

186-3 Was a water mass balance calculated for all lakes within the "maximum area potentially affected by mine induced changes in ground water hydrology?" If not, why not, and when will one be performed?

Response: Section 3.11.2.3 of the SDEIS and FEIS described the water balance completed for Rock Lake during two time periods to estimate effects of the mine to the lake. The effects on other lakes were also described in this section.

200-5 Rock Lake would be dewatered as a result of the interception of groundwater by the mine void. It is also likely that the dewatering would impact the water quality of Rock Lake through the introduction of metals and or nutrients. Perpetually dewatering and polluting a wilderness lake does not appear to be allowable under the protection (noted above) afforded "Outstanding Resource Waters."

202-35 Rock Lake would be dewatered because the mine cavity would intercept groundwater the lake needs to maintain water levels. It is also likely that the dewatering would impact the water quality of Rock Lake. Is perpetually dewatering a wilderness lake allowable under the protection afforded "Outstanding Resource Waters?" Would it be allowable for the Montanore mine to degrade Rock Lake either through dewatering and the withholding of necessary minerals and nutrients, or through the introduction of deleterious metals and or nutrients? If these changes were to occur during the operation of the mine, and the degradation was inherent to the project and became worse over time, what options would be available to the agencies to protect Rock Lake?

202-36 Rock Lake is an "Outstanding Resource Water." Would it be allowable under the protections afforded a wilderness lake to introduce mine related nutrients and minerals that would degrade an "Outstanding Resource Water" and its fisheries?

Response: Effects on Rock Lake water supply were described in Section 3.11.4.4.4 of the SDEIS and FEIS. During periods when bedrock groundwater was the only source of water to Rock Lake, the maximum effect predicted by the 3D model would be less than a 10 percent change in the lake volume, lake level, and lake surface area. After additional data collection at Rock Lake occurred during the Pre-Evaluation and

Evaluation phases, which would be used to refine the 3D model and reduce model uncertainty, effects on Rock Lake would be re-evaluated and DEQ will determine the significance of the effects on Rock Lake. Both surface water and groundwater are sources of supply to Rock Lake. Bedrock groundwater has higher dissolved solids concentrations than surface water, and a reduction in groundwater discharge to Rock Lake would result in Rock Lake having lower dissolved solids concentrations. This was discussed in Sections 3.13.4.2 and 3.13.4.3 in the SDEIS and FEIS. Based on the 3D model results, it is not expected that water from the mine void would flow into Rock Lake, so metal and nutrient concentrations would not increase in Rock Lake. Increasing the buffer zones between the mine void and Rock Lake fault of 300 feet and between the mine void and Rock Lake of 1,000 feet, discussed in Section 3.10.4.3.3 of the FEIS, would help to mitigate effects on Rock Lake. After additional data collection at Rock Lake occurred during the Pre-Evaluation and Evaluation phases, which would be used to refine the 3D model and reduce model uncertainty, MMC and the agencies would evaluate the size of the buffer zones needed to minimize effects on Rock Lake.

202-36 Conflicting statements are found in the DEIS and require further explanation. Reducing the flow of deeper ground water into Rock Lake would "reduce the introduction of certain minerals considered to be necessary for potential populations of organisms." (DEIS, Section, 3.10.4, Pg. 434) The DEIS (Section 3.6.4, Pg. 312) also states that "as a result of mining, Rock and St. Paul lakes may have higher dissolved mineral concentrations, which may decrease algal and macroinvertebrate production in both lakes, and potentially reduce the fishery of Rock Lake. Are these minerals that would normally not be present in the lake, but could be introduced as a consequence of the mining activity beneath Rock Lake? The disruption of deep groundwater inflow to Rock Lake by mining would lower lake levels and reduce the volume of minerals essential for much of the lakes' organisms. It appears mining would also potentially introduce metals that would be harmful to the lake's organisms.

Response: Discrepancies in the DEIS on this issue were corrected in the SDEIS. As discussed in Section 3.13.3.1.3 of the FEIS, lakes located in or near the CMW are quite dilute; the primary source of dissolved solids and nutrients is bedrock groundwater. As discussed in Section 3.13.4.2 of the FEIS, due to mine inflows, it is predicted that there would be less bedrock groundwater flowing to these lakes, so the lakes would have lower dissolved solids concentrations. It is not expected that mining would introduce metals to Rock Lake.

331-10 Why was Joe Gurrieri's approach to the connectivity of shallow and deep groundwater systems water balance not adequately considered in this SDEIS? Rock Lake is an "Outstanding Resource Water"; a conservative approach that leaned toward protecting these waters is needed. If the SDEIS had explored Joe Gurrieri's method, how would the predicted dewatering impacts differ from the modeling submitted by the MMC's contractors (ERO and Geomatrix)? The agency has a responsibility to explore other estimations of the dewatering impacts. The SDEIS needs to include the water loss estimations using Joe Gurrieri's analysis.

Response: Mr. Gurrieri was part of the interdisciplinary team and assisted with the Rock Lake analysis presented in the SDEIS and FEIS. For clarification, ERO is a contractor to DEQ and the Forest Service, and is not a contractor to MMC. Section 3.11.1.2.3.2 of the FEIS was revised to indicate with a groundwater outflow component, the estimated effects on Rock Lake water levels would be within the same range as disclosed in the FEIS.

Water Quality

152-27 The tailings seepage is underestimated. The LAD application rate is highly uncertain. The analysis uses incorrect As concentration for tailings seepage to surface water. Predicted nitrate and ammonia concentrations for all sources of water are artificially lowered. The stream flow rates are grossly underestimated. All of these factors result in the concentrations predicted for discharges of groundwater to surface water to be much too low.

Response: The agencies used the best available information and methods to evaluate potential impacts to water resources, and acknowledge the uncertainties. Section 3.13.4.5 provides a discussion of the uncertainties associated with the water quality assessment. Land application of mine wastewater would not occur in Alternatives 3 and 4; the agencies recognize the uncertainties in effective operation of LAD areas and adequate treatment of mine wastewater by land application. The expected arsenic concentration in tailings seepage was estimated using Troy mine tailings water quality data and was updated in the FEIS. All tailings impoundment seepage would be captured and treated; none of the seepage water would reach surface water. Section 3.13.4.2 disclosed that in Alternatives 3 and 4, seepage reaching groundwater would be collected by the pumpback system and would not reach surface water. In Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. Seepage pumpback wells could be installed along the downstream toe of the tailings dam. The discharge to groundwater beneath the impoundment would be authorized by a DEQ Operating Permit and a seepage recovery zone would encompass the impoundment footprint and extend to the pumpback wells. DEQ's MDPES permit for the Water Treatment Plant outfall would regulate the quality of any Water Treatment Plant discharges. Discharges would meet nondegradation criteria or BHES Order limits at the end of the mixing zone in Libby Creek. See previous comment response 105-2 (p. M-360).

309-2 The ore separation process will leave health-threatening amounts of such chemicals as antimony and manganese in the groundwater. Exposure to antimony, according to the National Institutes for Health, can cause a litany of health issues, including heart and kidney disease. Continuous exposure to higher levels of manganese can adversely affect the central nervous system in humans and animals.

Response: Sections 3.13.4.3 and 3.13.4.4 of the SDEIS and FEIS discussed that land application of mine wastewater would not occur in Alternatives 3 and 4, so the exceedances described due to land application would not occur except under Alternative 2. Section 3.13.4.2 disclosed that in Alternatives 3 and 4, seepage reaching groundwater would be collected by the pumpback system and would not reach surface water. In Alternative 2, MMC committed to implementing seepage control measures, such as pumpback recovery wells, if required to comply with applicable standards. Seepage pumpback wells could be installed along the downstream toe of the tailings dam. The discharge to groundwater beneath the impoundment would be authorized by a DEQ Operating Permit and a seepage recovery zone would encompass the impoundment footprint and extend to the pumpback wells. DEQ's MDPES permit would regulate the quality of any mine discharges. Section 3.13.4.3 of the SDEIS and FEIS disclosed that in Alternatives 3 and 4 mine wastewater would be treated at the Water Treatment Plant and discharged to one of three outfalls at the Libby Adit Site. Discharges would meet nondegradation criteria or BHES Order limits at the end of the mixing zone in Libby Creek.

332-2 Stream standards in Montana are based on unfiltered, total recoverable rather than dissolved concentrations (MDEQ, 2010), and the high concentrations of copper and lead in adit discharge are a concern for surface water, especially during spring snowmelt. If Troy is a good environmental analogue for the Montanore deposit, one must also assume that high concentrations of base metals will be released under snowmelt conditions at the Montanore Project.

Response: Untreated mine and adit wastewater would not enter surface streams. The MPDES permit for mine discharges would regulate the quality of any mine discharges. Discharges would not result in significant changes in existing water quality as per the nondegradation criteria or would not exceed BHES Order limits at the end of the mixing zone in Libby Creek.

333-3 The water balance misses several important points, or, in part, depends on certain assumptions being true. If the dewatering rate is higher than projected, 480 gpm, there will be excess water in the system. If that occurs, the water treatment system capacity will be exceeded and the discharge to Libby Creek will be higher than projected, and possibly not treated to standards. The water discharge system should have a larger capacity to accommodate dewatering. The FS should establish an upper limit for dewatering discharge to avoid damage to surface water habitat.

Response: Section 2.5.4.3 of the FEIS was revised to indicate the Water Treatment Plant would be modified to increase capacity to accommodate the wettest year in a 20-year period, and as necessary to treat parameters such as nutrients or metals to meet MPDES permitted effluent limits. MMC would seek authorization from the DEQ to amend its MPDES permit to discharge at a higher rate than 500 gpm considered in the draft renewal MPDES permit. MMC would comply with the BHES Order limit of 1 mg/L total inorganic nitrogen. If additional water volumes exceeded the capacity of the treatment plant, MMC would implement measures to reduce inflows or manage excess water.

333-14 Libby Creek could be affected by discharge of groundwater that was contaminated by seepage from the Poorman Creek tailings. The SDEIS suggests that pumpback wells will prevent this discharge. However, pumpback wells do not capture all of the water they are designed to capture, primarily because some flow will miss the wells due to preferential flow. The second reason is that, as discussed in the water balance section, the actual seepage rate could different from the projected value by several times, and the company would not even know it.

Response: Section 3.13.4.2 of the FEIS disclosed that compliance wells would monitor groundwater levels and quality at several compliance points to monitor the effectiveness of the pumpback well system. This monitoring was discussed in Section C.10 of the SDEIS and FEIS. If monitoring showed incomplete capture (such as due to preferential flow or a greater seepage rate than expected), the pumping rate would be increased and/or an additional pumpback well or wells would be installed to attain complete capture.

57-1 Water from the mine cavity should be captured, treated and prevented from being discharged into the East Fork of Bull River.

74-10 Groundwater quality may also be affected post-mine. When a mine is completed, it leaves a subsurface void. Over time (in this case, estimated at about 70 years), the void will fill with water. Water from the mine void may be contaminated with heavy metals, as in the case of the Troy mine, or ammonium nitrate residues from the blasting agents used to create the mine void.

202-7 After the mine void fills, the DEIS predicts that water from the mine would begin discharging in perpetuity into the East Fork of Bull River. The possibility of metals and nutrients from this flooded mine cavity entering into the East Fork Bull River is not considered with any degree of certainty. The fate and transport of dissolved metals within the flooded mine void cannot be predicted without significant uncertainty. (DEIS, Vol. 1, page 311).

200-8 The flow would be significant enough to increase the volume of water in the East Fork of Bull River post mining. (DEIS Vol. I, Page 309) Once the mine cavity is created, it is highly questionable whether measures could ever be taken that would prevent water that collects in the cavity from leaking into the Bull River watershed and other water bodies within the wilderness, including Rock Lake.

202-9 The acid generating potential of the ore body also creates potential long-term impacts because of the possibility that ARD will develop over time and be present in the seeps and spring associated with the mine void. If the ore body were acid generating, the mine void and its subsequent discharge would place the region's water quality at risk. The acid generating potential of the ore body and the impacts on the region's water quality, may not be apparent until many years after mining in completed, but the risk of perpetual impacts is real. Metals leaching is already a concern for places like the East Fork of Bull River; the presence of ARD would serve to exacerbate this threat to water quality by making the metals more soluble.

331-18 Water in the mine void will likely require treatment in perpetuity because the partially filled void will continuously be subject to a combination of anaerobic and aerobic conditions. If ARD develops, the agencies need to present a detailed plan on how this very serious issue would be handled. Protecting all surface water from ARD and metals leaching, and from dewatering must be a priority and is required by the CWA and other laws noted herein. It appears there are no options for protecting these surface waters if the mine void is ever created.

335-26 There is no analysis to demonstrate that water quality in Rock Lake and EFBR will not be adversely affected. The SDEIS also fails to analyze the potential for mine void water to discharge to other outlets in the wilderness area when the adits are plugged.

335-27 How will the mine discharge from the adits at Montanore differ from the Rock Creek Mine? If water treatment in perpetuity is expected at Rock Creek, why would it be different at Montanore? If the mine plan incorporates the use of mitigation measures such as grouting or bulkheads, which require maintenance after mine closure, who would be responsible for monitoring and maintenance? If the void was filled, how would the work be performed?

Response: Because the proposed mine would be located very deep with respect to surface water resources, there would be limited potential flow paths from the mine void. The three Montanore adits would decline at a 5.5% slope from the portal to the ore body; the adits at Rock Creek would incline up to the ore body. MMC would place two or more plugs in each adit to isolate the adits hydraulically from the mine void and to ensure any diversion of water from Libby and Ramsey creeks would flow into the adits and not the mine void. As discussed in Section 3.10.4.3.2, the 3D model indicates that there would be the potential for water to move from the mine void toward East Fork Bull River, assuming there was sufficient fracture permeability between the mine void and the surface, a minimum vertical distance of 3,000 feet. As discussed in Section 3.10.4.3.2 of the SDEIS and FEIS, the agencies' mitigation (bulkheads and/or barrier pillars) would significantly reduce or eliminate this potential flow. The bulkheads and/or barrier pillars would not be maintained after mine closure, but water quality monitoring would continue until MMC's final bond was released. Water quality effects on Rock Lake due to mining were described in Section 3.13.4 of the SDEIS and FEIS.

309-3 Among the mine's numerous harmful impacts, it would ….Perpetually discharge 13 million gallons of polluted water a year; and

335-16 Where is the analysis that demonstrates that groundwater quality wouldn't be degraded by the discharge from the water treatment plant into groundwater via percolation ponds?

344-4 "Increased concentrations of some metals, total dissolved solids, and nutrients as a result of 402-permitted discharges during all phases except Operations would occur in the Libby Creek drainage". Why is a little pollution for a long time a suitable future condition?

Response: The MPDES permit for mine discharges would regulate the quality of any mine discharges. Section 3.13.4.3 of the SDEIS and FEIS disclosed that excess water would be treated at the Water Treatment Plant and discharged to one of three outfalls at the Libby Adit Site. Concentration of all parameters in water treated at the Water Treatment Plant and discharged would meet BHES Order limits or applicable nondegradation criteria.

74-6 It is uncertain how waters will be affected because: 1). Very little baseline data seems to exist for ground and surface water quality and hydrology in Wilderness. 2). The DEIS monitoring plan fails to set trigger levels of concern for nutrient changes in groundwater within Wilderness, and for Outstanding Resource Waters. While no change is acceptable in Outstanding Resource Waters under Montana water law, without comprehensive baseline data or trigger levels set, it will be difficult to hold MMC accountable in the case that changes do occur. 3). Much of the data pertaining to water quality in Wilderness that does exist was collected specifically for this project. Therefore it is either 20 years old or 5 years old. There is not a continuous record of water quality data for any of the bodies of water that stand to be affected. 4). Potential changes to water quality due to subsidence have not been measured or modeled.

Response: Appendix C of the SDEIS and FEIS provided a detailed discussion of the agencies' conceptual monitoring plans for Alternative 3 and includes surface water and groundwater monitoring (Section C.10) that would be required to be conducted during the Pre-Evaluation and Evaluation Phase to assess the effects of the mine to surface water and groundwater quality. Section C.10.3.3.2 of the SDEIS and FEIS discussed the monitoring of benchmark streams, lakes and springs located outside of the area of mine effects to help separate the mine effects on surface water from natural variability and the effects of climate change. As discussed in Section 3.8.2 of the FEIS, the Construction Phase would begin after MMC analyzed the data

from the Evaluation Phase, collected the necessary data for final design, submitted final design plans to the agencies, and received agency approval to implement the Construction Phase. Section C.10.7.2 of the SDEIS and C.10.8.3 of the FEIS provided action levels for groundwater compliance wells. Action levels would provide an early detection of adverse groundwater conditions. Exceedance of these levels would require action by MMC. Section 3.14.3.1 of the SDEIS and FEIS discussed the potential effect of subsidence to groundwater flow. It is expected that the effect on groundwater flow would be very minor and short-lived, so there would be no effect on groundwater quality. Section 3.14.3.1 disclosed that surface subsidence is not expected, so there would be no effect on surface water quality.

310-7 The diversion of ground water into the mine void also would result in the introduction of pollutants (metals and nutrients) that would alter the chemistry of affected lakes and streams.

Response: Bedrock groundwater has higher dissolved solids concentrations than surface water, so a reduction in groundwater discharge to streams and lakes (Rock Lake and St. Paul Lake) may result in surface waters having lower dissolved solids concentrations. This potential effect was discussed in Sections 3.13.4.2 and 3.13. 4.3 in the SDEIS and FEIS.

74-10 Groundwater often feeds into surface water sources. In the case of the Montanore mine, the surface water source of most concern with regards to water quality within Wilderness is the East Fork Bull River, because there is a possibility that groundwater contaminated with mine wastes will drain towards it once the mine void fills. While the mining company admits that water quantity in Rock Lake will likely change, they assert that the quality of the water will not be impacted because models in the DEIS show that Rock Lake is not fed substantially by groundwater from the area to be mined.

182-14 7. P. 433. “After the regional water table recovered, the agencies’ numerical model predicts there would be a slight increase in ground water contribution to portions of the East Fork Bull River compared to pre-mining conditions (ERO Resources Corp. 2008b)” Does this also mean an increase in post mine water constituents such as heavy metals?

200-8 After mine closure, water from the region would be diverted into the mine cavity. This water would contain nutrients (ammonia, nitrates), and dissolved metals including copper, arsenic, cadmium, lead, cadmium, selenium, and others. The mine effluent would exit through seeps and springs into the region’s surface water, it is likely that the discharge would be into ORWs in the wilderness area. This discharge may well become acidic over time. The DEIS suggests that this water would be allowed to exit the mine cavity and enter the Bull River without any long-term treatment. The quality of the water that would exit the mine cavity post-mining and enter the Bull River drainage cannot be predicted with any degree of certainty but it will definitely contain some level of the pollutants mentioned above. We believe the uncertainties associated with pollution levels in the water that will accumulate in the mine cavity and the risks associated with it being discharged to surface water are reason enough to not approve or permit this mine.

310-15 After mine closure, water from the region would be diverted into the mine cavity. This water would contain nutrients (ammonia, nitrates), and dissolved metals including copper, arsenic, cadmium, lead, cadmium, selenium, and others. The mine effluent would exit through seeps and springs into the region’s surface water, it is likely that the discharge would be into ORW’s in the wilderness area. This discharge may well become acidic overtime. The DEIS suggests that this water would be allowed to exit the mine cavity and enter the Bull River without any long-term treatment. The quality of the water that would exit the mine cavity post-mining and enter the Bull River drainage cannot be predicted with any degree of certainty but it will definitely contain some level of the pollutants mentioned above. We believe the uncertainties associated with pollution levels in the water that will accumulate in the mine cavity and the risks associated with it being discharged to surface water are reason enough to not approve or permit this mine.

309-3 The proposed scheme is to intercept groundwater and divert it into the mine cavity. From there it would, after mining ceased, be discharged without treatment into the East Fork Bull River. The agencies admit in the DEIS that the quality of this water cannot be predicted with any degree of certainty, yet treatment is not being required as part of the mine’s permit. WHY NOT?

331-18 When the mine void fills with water in approximately 500-years, it is likely that it will begin discharging in perpetuity into the region surrounding the mine cavity. The possibility of metals and nutrients from the flooded mine cavity entering into the EFBR, EFRC, Rock Lake, and other surface water from seeps and springs during the post-closure is a very real possibility. The DEIS recognized this possibility, but the SDEIS fails to adequately address the issue. Has the analysis of the hydrology changed?

182-18 22. P. 497. "All groundwater in the analysis area is the result of infiltration of precipitation and the reported water quality indicates that percolating ground water gradually becomes more mineralized as it moves through the various geologic formations, without changing water types." P. 505. "After the mine void filled, water traveling to the surface would move through about 3000 feet or more of fractured bedrock material. Nutrient and metal concentrations in water in the mine void would decrease before reaching the surface due to dilution and sorption." These two explanations need to be reconciled. Water percolating through a mineralized zone isn't going to absorb minerals going one way and decrease them (dilution / sorption) going the other way. If nothing else water in the mine going through the barren zones that contain sulphides will probably absorb those sulphides and appear as acid mine drainage. The regulatory agencies need to reconcile these two competing statements and provide some truthful information.

Response: The discussion about groundwater becoming more mineralized in the DEIS referred to the general increase in total dissolved solids and major cations and ions. The discussion was revised in the SDEIS. The discussion on post-mining water quality was revised to indicate that any flow from the mine void would mix with groundwater in saturated fractures, react with iron oxide and clay minerals along an estimated 0.5-mile or greater flow path, undergo changes in chemistry due to sorption of trace elements and mineral precipitation. The model predicted flow from the mine void is very low (32 gpm without mitigation and 5 gpm with mitigation). See comment response 202-42 on p.M-353. In both situations (rainwater infiltrating into undisturbed bedrock, or mine water flowing away from the mine void into non-mineralized bedrock and up into shallow bedrock where it would mix with oxygenated water that has recently infiltrated from precipitation), the chemistry of the groundwater would be reaching equilibrium with the bedrock it is flowing through

Storm Flow Effects

152-24 The plan for the LAD Area ponds to be designed for the 10-year return interval storm event virtually guarantees the design capacity will be exceeded once or more during the project life of 16 years (DEIS, page S-9).

202-41 The resistance on the part of DEQ to require that storm overflow ponds, ditches and other facilities that will discharge to ground or surface waters during high flow events be designed to at least a 100 year storm event is baffling.

335-5 Given the sensitivity of bull trout to sediment, the SDEIS should include analysis of the efficacy of designing storm controls for 10-year, 25-year and100-year storm event requirements.

344-5 Since these facilities will be here for decades it seems likely that a 10 year 24-hour storm could occur. also seems likely that a much larger storm is possible. Why is this design only for a 10 year event, especially if the consequences from a larger event would be significant?

389-5 Proposed sediment ponds may not be adequate in light of increased incidence of heavy precipitation events projected to occur as a result of climate change.

389-6 To determine whether these ponds will be adequate to contain the resulting runoff, the Forest Service should use existing climate models to anticipate the effects of climate change on precipitation patterns in the project area. If the Forest Service does not conduct such analysis, it should analyze potential impacts of frequent runoff from the sediment ponds to affected streams.

Response: Design of stormwater control facilities for the 10-year, 24-hour event in Alternative 2 is based on 40 CFR 440.130(b) and (c). Water control facilities in Alternatives 3 and 4 were modified in the FEIS; MMC would design all ditches and sediment ponds that would contain process water or mine drainage for a 100-year/24-hour storm. Overflows from the sediment ponds would only occur during high flow events

when there would already be naturally elevated sediment loads in streams. As required by the MPDES permit, all discharges containing sediment from the Montanore Project via stormwater or the Water Treatment Plant would be monitored and sediment concentrations would be reported to DEQ. Any failure of sediment BMPs would require MMC to implement corrective measures in accordance with the MPDES permit. In addition, the tailings impoundment would be designed to retain runoff from the 2-week Probable Maximum Precipitation event plus snowmelt under all alternatives.

347-1 The designs for the starter dam, the ventilation adits and the seepage collection pond do not account for potential rain on snow events. The designs for the ditches will not accommodate 100 year storm events.

Response: The effects of stormwater runoff from storms exceeding the 10-year 24-hour storm were discussed in Sections 3.13.4.2, 3.13.4.3 and 3.13.4.4 of the SDEIS and FEIS. Alternatives 3 and 4 were modified in the FEIS; MMC would design all ditches and sediment ponds that contain process water or mine drainage for a 100-year/24-hour storm. In addition, all point source discharges containing sediment from the project would be monitored and sediment concentrations reported to DEQ, as discussed in the previous response.

Hazardous Materials

182-3 Is Percol listed as a hazardous material? If so it should be so noted in this document. How well has DEQ monitored hazardous materials at the analog (Troy) mine?

327-9 Another toxic substance that the Montanore proposal would release into the ground water, according to the SDEIS, is polyacrylamide, a hydrogel used in mining operations to thicken the waste ore slurry that is headed for a tailings impoundment. After about 5 years of decomposition in a tailings impoundment, the chemical structure of polyacrylamide breaks down, releasing acrylamide in the process, a deadly poison and carcinogen. Humans, fish, and mammals can inhale acrylamide or intake the toxin through the skin. The chemical is water soluble, meaning it can freely disperse within a watershed.

Response: Section 3.13.4.2 of the SDEIS and FEIS disclosed that in all alternatives, MMC would use non-hazardous and small amounts of hazardous materials in its operations, including reagents during milling (potassium amyl xanthate, methyl isobutyl carbinol and polyacrylamide), lubricants, fuel, and blasting agents. Section 2.4.2.2.1 of the DEIS and FEIS discussed that a polyacrylamide flocculant such as Percol 352 would be used to assist the settling of the concentrate and the fine fraction from the final tailings in their respective thickeners. Some residual milling reagents and nitrogen compounds from blasting would remain in the tailings and be stored in the tailings impoundment. Polyacrylamide is a polymer of acrylamide widely used as a flocculant in municipal water treatment, pulp and paper applications, and mineral processing. It is not a regulated substance. The agencies are not aware of any information that suggests that polyacrylamide decomposes in a tailings impoundment. The agencies' monitoring plan (Appendix C) would include analysis of acrylamide in tailings impoundment water and groundwater downgradient of the tailings impoundment during operations.

152-16 The MPDES permit for outfall 06 must reflect discharge to Little Cherry Creek and the mixing analysis, as discussed below, must be adjusted accordingly.

393-8 An MPDES permit specific to the tailings impoundment must be applied for. MMC will use hazardous materials in its operations. This material and its disposal must be accounted for as required by law. An absolute prohibition disposing of hazardous material or any other material contaminated by its use in the tailings impoundment must be part of any permitting; and it must be monitored and enforced.

Response: Section 3.13.4.2 of the SDEIS and FEIS disclosed that in all mine alternatives, a MPDES permitted outfall would not be required for the tailings impoundment seepage because seepage reaching groundwater would be collected by the pumpback system and not discharged to surface water. The discharge to groundwater beneath the impoundment would be authorized by a DEQ Operating Permit and a seepage recovery zone would encompass the impoundment footprint and extend to the pumpback wells. See the above comment response 327-9 (p. M-375).

Water Supply

186-3 If inflows to the mine are less than the agencies' "numerical modeled inflows of 450 gpm" will all make-up water be derived from Libby Creek? If so how many wells will be needed and what is the potential impact to fisheries in Libby Creek?

333-18 It would be preferable for makeup water to come from the pumpback wells.

Response: Proposed water management in Alternatives 3 and 4 was revised in the FEIS. Water for mill operations would come from three sources: intercepted precipitation at the tailings impoundment, groundwater intercepted by the pumpback wells, and groundwater withdrawn from Libby Creek alluvium. Interception of surface water and groundwater at the impoundment would occur year-round. Groundwater withdrawn from Libby Creek alluvium would occur during high flows, when Libby Creek above Bear Creek had a flow of 40 cfs or more or generally between April and July. Section 3.6.4 was revised in the FEIS to reflect the effect of revised water management on fisheries.

Sewage Treatment

327-10 The chemicals used in treating the sewage would degrade water quality, since a minimum of 25 gallons per minute—as stated in the SDEIS—would seep from the tailings impoundment into Libby Creek. Additionally, treated or not, the presence of human waste solids in the waterways would be not only a health hazard but unsightly and nauseating. We urge the permitting agencies to completely rule out the Montanore plan to treat and dispose of raw sewage as described in the SDEIS.

Response: Section 2.5.4.4 of the FEIS disclosed that in the agencies' preferred alternative and Alternative 4, sanitary wastes would be treated and disinfected on-site and then discharged into the tailings impoundment. Water from the tailings impoundment would be treated at the Water Treatment Plant before being discharged. All seepage from the tailings impoundment would be captured by a seepage collection system and pumpback wells, and none of the seepage would reach Libby Creek.

3910 General: Comment about cumulative effect

Reasonably foreseeable actions

141-4 What effect would a significant and large fire event (say 30,000 acres) centered on the mine and Libby Creek have on water quality when the mine was perhaps 1/2 thru its life cycle? What if this were followed a few years later by a major rain or snow event, or 1,000 year flood?

Response: It is well documented that fires and floods can affect the water quality of streams where such events occur. These events are not considered to be reasonably foreseeable actions (see Section 3.3 of the FEIS), and were not discussed in Sections 3.11.4.9 or 3.13.4.9 of the FEIS. Reasonably foreseeable actions are those that are likely to occur or probable, rather than those that are merely possible.

Climate Change

389-6 Similarly, wildfires are projected to occur more frequently and become more severe as a result of climate change. Erosion is a common incident of wildfire. In the case of wildfire combined with these extreme precipitation events, will these sediment ponds be adequate? Climate modeling is needed to address this question.

Response: Section 3.10.3.4 of the FEIS described the climate studies that have been completed for northwest Montana. Due to the possible range of effects on surface water hydrology due to climate change, it is not possible to quantify the effects of climate change. Wildfires are not considered reasonably foreseeable actions and were not included in Section 3.11.4.9 and 3.13.4.9 of the FEIS (cumulative effects on surface water hydrology and quality). See previous responses regarding stormwater pond size and regulation of sediment discharge from stormwater outfalls in the project area.

74-18 Climate change stands to substantially change hydrologic cycles (we are already seeing this happen). Hydrologic cycles playa key role in mine processes, particularly tailing treatment. They are also a major player in maintaining a habitable environment for aquatic life (including the Threatened bull trout). Changes to hydrological processes that could result from climate change may alter dynamics anticipated by current models, increasing risk of damage to Outstanding Resource Waters.

74-19 A thorough environmental analysis would include: Climate change impacts to hydrological cycles.

389-5 The SDEIS considers some effects of the project on climate change but does not analyze the effects of climate change on the project. (SDEIS, § 3.3.3.4, pp 117). Serious concerns exist. For instance, climate analyses anticipate that water cycles will be affected. The impacts to these water cycles should be considered when constructing the mine workings. High elevations, such as those in the CMW where Rock Lake is situated, risk to be more impacted by the effects of climate change.

Response: The effects of climate change on surface water hydrology (Section 3.11) and water quality (Section 3.13) were discussed in the following sections of the FEIS: 3.11.3.5, 3.11.3.1, 3.11.4.4.5, 3.13.3.4, 3.13.4.2.4, and 3.13.4.3.6.

3911 General: Comment about mitigation-mine

344-3 I think a specific post closure time frame for achieving the required water quality would be in the public interest and should be required—not more than 10 years—with substantial penalties for noncompliance. Good mitigation would be to restore water quality to near original conditions shortly after closure - penalties would provide financial incentives to do so.

Response: It is not possible to determine when water treated from the tailings impoundment and pumpback wells after mine closure would meet BHES Order limits or nondegradation criteria without treatment. In addition, as discussed in Section 3.13.2.2.2 of the SDEIS and FEIS, the MPDES permit for discharges would regulate the quality of any discharges to surface water. Discharges would meet nondegradation criteria or BHES Order limits at the end of any mixing zone. Water quality would not be degraded and would not need to be restored to near original conditions.

3912 General: General comment about regulatory compliance

MPDES Permit

109-15 The FS must also consider whether MMC has the necessary permits to treat and discharge water…. Under what authority does MMC propose to discharge and treat water?

Response: Section 1.3.2.3 of the DEIS, SDEIS, and FEIS discussed that NMC's DEQ Operating Permit #00150 and MPDES permit were not terminated because reclamation of the Libby Adit was not completed. Both permits transferred to MMC when it acquired Noranda Minerals Corp.

122-3 If constructed as described in the DEIS, the mine would require MPDES authority for multiple point-source outfalls, including the LAD system, the seepage from the tailings impoundment and waste rock piles to hydrologically-connected groundwater, and the underground mine workings themselves, which are predicted to become a source of metals and nitrogen to surface water. The DEIS cannot properly analyze the impacts of the mine's discharges until the specific number, location, and nature of these outfalls, as well as the enforceable conditions applicable to each, are specifically described in a proposed permit and fact sheet.

331-19 The SDEIS also does not discuss the fact that the discharges from the road culverts must obtain the required NPDES permit.

122-9 Is MMC making a legal commitment to meet the higher treatment levels set forth in Alternatives 3? If so, under what legal authority will it be required to do so, and what will be the enforcement mechanism? If not, the DEIS should be revised to reflect the assumption that under all alternatives, MMC would not treat the effluent to a degree than required to meet the BHES criteria.

Response: Section 3.13.1.2 of the SDEIS and FEIS disclosed that MPDES permits, issued by the DEQ, are required for discharges of wastewater and stormwater to state surface water or groundwater. Within the mine operating permit boundary, all stormwater runoff from roads and mine facilities would be captured by ditches and sediment ponds designed in Alternatives 3 and 4 for process water or mine drainage for the 100-year/24-hour storm, and directed to MPDES-permitted outfalls. MPDES permits regulate discharges by imposing, when applicable, technology-based effluent limits and water quality-based effluent limits, which include numeric and narrative requirements, nondegradation criteria, and TMDLs. For parameters listed in the BHES Order, MMC would need to meet BHES Order limits at the end of the mixing zone. The potential discharges for Alternatives 3 and 4 described in the DEIS were changed in the SDEIS and FEIS. Discharges at the LAD Areas would not occur in Alternatives 3 and 4 because all wastewater would be treated and discharged at the Water Treatment Plant. Tailings seepage into groundwater would be covered by a DEQ Operating Permit. In 2010, MMC applied to the DEQ to renew the existing MPDES permit and requested the inclusion under the permit of five new storm water outfalls needed for Alternative 3 for the next 5 years. In 2011, the DEQ determined the renewal application was complete and administratively extended the permit (ARM 17.30.1313(1)) until MMC receives the renewed permit. The MPDES permit includes the three existing outfalls and approves five stormwater-only outfalls. The DEQ will issue the final MPDES permit with its ROD.

141-4 Please require that the mine meet all discharge requirements at their point of discharge.

Response: The draft renewal MPDES permit contains effluent limits for each outfall in the permit. The DEQ will issue the final MPDES permit with its ROD.

182-4 P. 73. The North Saddle Dam would be removed and the surface runoff from the reclaimed tailings impoundment surface would flow overland via a diversion ditch toward the northwest and ultimately into Bear Creek. Another situation requiring an MPDES permit.

Response: As Section 3.13.4 of the SDEIS and FEIS disclosed, after the impoundment was reclaimed and runoff met water quality standards, runoff from the reclaimed tailings impoundment surface and the watershed west of the impoundment would be routed toward Bear Creek in Alternative 2, and in Alternative 3, runoff would flow toward the existing Little Cherry Creek. In Alternative 4, runoff would flow toward the Diversion Channel (new Little Cherry Creek) and then to Libby Creek. The water quality of any receiving creek would not be degraded by the runoff.

182-4 P.62. Water collected by the underdrain system would flow beneath the tailings dam, down a short segment of the former Little Cherry Creek. This is a direct discharge and should require and MPDES permit. It is also a mechanism whereby discharge water can find its way directly to Libby Creek w/o treatment through mechanisms of the former streambed.

Response: Water collected by the underdrain system would be captured. Section 3.11.4.2 of the SDEIS and FEIS discussed the use of pumpback wells to capture all tailings seepage not captured by the underdrain system. Monitoring would ensure that no seepage water would reach Libby Creek; therefore, an MPDES Permit would not be required for seepage from the tailings impoundment.

335-20 The MPDES is not included for analysis in the SDEIS, therefore there is no information on the size of the mixing zone, or predicted concentrations within the mixing zone.

Response: Section 3.13.1.1.2 of the SDEIS and FEIS discussed the status of the MPDES permit. All water treated and released would meet BHES Order limits or nondegradation criteria at the end of a mixing zone in accordance with the MPDES permit. The SDEIS and FEIS provided, in Section 3.13.4 and Appendix G, predicted concentrations within mixing zones. In the draft renewal MPDES permit, the DEQ preliminarily determined the size, configuration, and location of the mixing zones in Libby Creek for Outfalls 001, 002, and 003. The chronic groundwater mixing zone for Outfalls 001 and 002 authorized in the 1997-issued MPDES permit and continued in the 2006-issued MPDES permit was retained in the draft renewal MPDES permit. The mixing zone for Outfalls 001 and 002 extended from their point of discharge to Libby Creek downgradient to monitoring station LB-300 for these parameters: nitrate + nitrite, total inorganic nitrogen,

chromium, copper, iron, lead, manganese, and zinc. For Outfalls 001, 002, and 003, the DEQ preliminarily authorized a chronic mixing zone, at 25 percent of the 7Q10, from the point of discharge two stream widths for the following parameters: nitrate + nitrite, total inorganic nitrogen, chromium, copper, iron, lead, manganese, and zinc. For Outfalls 001, 002, and 003, the DEQ also preliminarily authorized a nutrient mixing zone, at 100 percent of the 14-day, 5-year low flow (14Q5), from the point of discharge two stream widths for the following parameters: total nitrogen, and total phosphorus. MMC did not request a mixing zone for any discharges from Outfalls 004 through 008; any applicable effluent limitations must be met at the end-of-pipe discharge. DEQ did not authorize a mixing zone for any parameters discharged from Outfalls 004 through 008 in the draft renewal permit. The draft renewal permit (DEQ 2015b) contains the water quality assessment required before the DEQ could authorize a mixing zone. The DEQ will issue the final MPDES permit with its ROD.

109-3 The Project was previously shut down for water quality violations impacting Libby Creek. What safeguards will be put in place to prevent more water quality violations. The water treatment plant design & test work needs to be submitted and approved by MDEQ & USFS before mine dewatering occurs. Please explain how water quality will be protected.

335-4 If monthly monitoring indicates elevated metals, how will MMC manage the water until modifications to the treatment system are in place? The water treatment analysis in this section is quite speculative, with insufficient information to analyze whether wastewater will be effectively treated. Given the uncertainties associated with water management at the Poorman tailings impoundment, there needs to be further discussion about how the water will be stored until additional water treatment is in place, if needed.

Response: If discharge from the Water Treatment Plant did not meet the MPDES permit effluent limits, the project would not be in compliance with the permit and MMC would follow non-compliance reporting requirements specified in the permit, which includes a discussion of steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. A Water Treatment Plant is currently operational. The increased capacity and treatment modifications would be in place at mill startup.

111-2 The DEIS states that degradation of surface water and ground water is expected to exceed permitted levels at some points of operation. This is not acceptable for aquatic life or downstream communities. How will the DEQ and other permitting agencies ensure watershed health in the face of excessive nitrates and increased sedimentation from the mine and proposed transmission lines that cross numerous watersheds in the affected area?

Response: Under the agencies' preferred alternative, mine discharges would not exceed MPDES permit effluent limits. All discharges containing sediment from the Montanore Project via stormwater or the Water Treatment Plant would be monitored and sediment concentrations reported to DEQ. In addition, the MPDES permit specifies maximum daily and average monthly TSS limits for Water Treatment Plant Outfall 003. Any failures of sediment BMPs would require MMC to implement corrective measures in accordance with the MPDES permit.

MMC would implement a Stormwater Pollution Prevention Plan (SWPPP) to minimize erosion and sedimentation from disturbed areas during construction and operations. In addition, under the agencies' preferred alternative, road closures and BMP implementation would greatly reduce sediment loading from roads to streams. This was described in Sections 3.13.4.2 and 3.13.4.3 of the SDEIS and FEIS.

202-8 Overall, the eventual discharges must be regulated under the MPDES Permit. All CWA and Montana requirements discussed herein would apply to these discharges. Further, the agencies should not allow perpetual discharge(s) from any mine workings (including these), as such a practice violates the USFS' duties to protect water quality and fisheries, as well its duty to ensure proper reclamation, under the Organic Act, 36 CFR Part 228

Response: All discharges of stormwater and wastewater would be regulated by the MPDES permit. The only predicted perpetual flow from the mine may be to the East Fork Bull River after the mine closed. As

discussed in Section 3.10.4.3.2, mitigation would minimize post-mining changes in East Fork Rock Creek and East Fork Bull River streamflow and water quality.

202-11 The USFS must comply with all standards at all times, and may not rely on "mitigation" that may alleviate the problem in the future. See Sierra Club v. Union Oil Co., 813 F.2d 1480, 1489 (9th Cir. 1987) (water quality standards must "be met at all times"). See also Hells Canyon, 2006 WL 2252554, at *5 (rejecting USFS argument that future mitigation would comply with CWA). The USFS violates the CWA, the Organic Act and Part 228 regulations when it fails to ensure that water quality standards and fisheries will be protected at all times.

Response: Any proposed mitigation to protect water quality and aquatic life would be implemented to protect these resources at all times. For mine discharges, as discussed in Section 3.13.2.2.2 of the SDEIS and FEIS, The MPDES permit for discharges would regulate the quality of discharges of wastewater to surface water. Discharges would meet nondegradation criteria or BHES Order limits at the end of any mixing zone.

202-12 The diversion channels around Libby Creek and other areas prevents the maintenance and achievement of all numeric and narrative water quality standards, as well as failing to maintain and protect all beneficial uses (such as aquatic life) at all times. The agencies cannot approve a project that so substantially alters the hydrologic regime, including the manipulation of entire streambeds, and still meet these requirements. In addition, the downstream discharges from the diversion channels must be regulated as point source discharges into their receiving waters (such as Libby Creek), with the associated requirements that these discharges comply with all standards, etc. See Friends of Pinto Creek v. EPA, 504 F.3d at 1015-1016. Any eventual MPDES permit (if one could be legally issued, which is not the case here now) must include these sources as regulated outfalls and be subject to public comment on a revised permit.

Response: The agencies' preferred alternative would not require the construction of a diversion channel because the tailings impoundment would not be located within a streambed. Any discharge after mine closure from diversion channels to streams would not occur until when such discharge met applicable water quality standards.

Effluent Limits

182-15 10. P.435. Ground Water Levels and Flow. "Some of the seepage may flow to Libby Creek via a buried channel beneath the impoundment site. Klohn Crippen (2005) estimated 80% of the existing ground water flows toward Little Cherry Creek and 20% flows toward Libby Creek via the buried channel." Diverting Little Cherry Creek will not remove the channel that conveys its water. It is inconceivable that a pump-back system or under-drain can completely stop discharge through the dewatered Cherry Creek channel. The dewatered Cherry Creek streambed will need to be considered an Outfall and permitted under MPDES.

202-11 First, the agencies have not ensured that federal Effluent Limitations, including New Source Performance Standards for froth-floatation copper/silver mines, will be met. For example, under 40 CFR 440.104, the agencies cannot authorize any discharge from process wastewater from the Project (with the only exception being for net precipitation allowance which has not been demonstrated here). The term "process wastewater" is broadly defined at 40 CFR 401.11(q). The revised Draft EIS must detail how the Project complies with this strict "zero discharge" requirement, which has yet to be shown.

243-6 The DEIS predicts at least 25 gallons per minute (13 million gallons per year) of wastewater will leak from the tailings impoundment -- perhaps in perpetuity. This is in direct contradiction the Montana Supreme Court's constitutional standard as set out in the so-called MEIC ruling (MEIC, et al vs. DEQ, 1999 Mt 248, paragraph 77) that requires State actions to be "anticipatory and preventative" in dealing with environmental harm. Perpetually degrading water quality is neither.

331-47 The agencies failed to require that the operator meet the zero-discharge requirements of EPA's New Source Performance Standards for copper milling operations using froth-flotation (the milling method here).

335-22 Any discharge from the mill would violate the new source performance standard in the CWA requirement and could not be authorized. Please demonstrate how the proposed project meets the New Source Performance Standards for copper milling operations using froth-flotation.

Response: Section 3.13.1.2.1 of the SDEIS and FEIS discussed that federal ELGs apply to mine drainage and process wastewater that discharge to surface water. Mine drainage is "any water pumped, drained, or siphoned from a mine" (40 CFR 440.132). Process wastewater is "any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate produce, finished product, by-product, or waste product" (40 CFR 401.11). In terms of the ELG requirements for copper mines that use froth flotation for milling, tailings water is considered process wastewater. Process wastewater from copper mines that use froth flotation for milling is not allowed to be discharged to state surface waters except in areas of net precipitation where precipitation and surface runoff within the impoundment area exceeds evaporation and except for bleed-off water. Because precipitation and surface runoff within the impoundment area would not consistently exceed evaporation, the impoundment in all alternatives would be designed as a zero-discharge facility though the use of a seepage collection system and pumpback wells. The discharge to groundwater beneath the impoundment would be authorized by a DEQ Operating Permit and a seepage recovery zone would encompass the impoundment footprint and extend to the pumpback wells. Compliance wells would monitor groundwater levels and quality at several compliance points upgradient of the permit area boundary to monitor the effectiveness of the pumpback well system (see Appendix C). If monitoring showed incomplete capture, the pumping rate would be increased and/or an additional pumpback well or wells would be installed to attain complete capture.

3913 General: Comment about nondegradation

122-4 As discussed in more detail in the following sections, this means that several of the discharges described in the DEIS are subject to current non-degradation standards even if the 1992 order is deemed to apply to the current project.

Response: Correct. The nondegradation rules apply to all water quality parameters not listed in the BHES Order. The water quality analysis, Section 3.13.4 of the FEIS, was revised and applied the nondegradation rules in the analysis of effects.

122-6 There can be no argument that the discharges of metals and nitrogen to the East Fork Bull River are authorized by the BHES' 1992 order. Even if Noranda had not waived any right to rely on that order, the order makes no mention of the East Fork of the Bull River. Moreover, there is nothing in the record of the proceedings to indicate that BHES ever considered impacts to that river, or that Noranda even petitioned for authorization to degrade it. Therefore, it is not within the scope of the authorization to degrade, and is subject to Montana's current non-degradation policy, which allows no degradation of the East Fork of the Bull River. Therefore, it is not within the scope of the authorization to degrade, and is subject to Montana's current non-degradation policy, which allows no degradation of the East Fork of the Bull River.

Response: The effect on East Fork Bull River was updated in section 3.13.4 of the SDEIS and FEIS. If mine void water flowed to the East Fork Bull River after mine closure, it is not likely that changes in water quality in the river would be detectable. The effect cannot be accurately quantified without additional information from the underground mine. To develop a quantitative estimate of the actual effect, MMC would monitor the chemistry within the underground workings, evaluate downgradient groundwater flow and chemistry within bedrock fracture systems, and monitor baseflow in the East Fork Bull River (see Appendix C, Water Resources Monitoring). The agencies' mitigation was updated in Sections 2.5.2.6.5 and 2.5.4.1 of the FEIS. By the fifth year of operations, MMC would use updated hydrology modeling to assess the need for barrier pillars and/or bulkheads to minimize post-mining changes in East Fork Rock Creek and

East Fork Bull River streamflow and water quality. If needed, MMC would submit a revised mine plan with one or more barrier pillars with constructed bulkheads at access openings to the agencies for approval. One or more barriers would be maintained underground, if necessary based on the hydrologic monitoring, after the plan's approval.

122-7 Under Montana law, any lowering in the quality of the existing physical or biological characteristics of Outstanding Resource Waters is defined as degradation, and may not be allowed. See ARM §17.30.702(4), MCA 75-5- 103(5), MCA 75-5-316(2)(a), and ARM17.30.705(2)(c) . This prohibits the flow reductions predicted in the DEIS. As discussed further in the following section on Rock Lake, the current Outstanding Resource Water provisions of Montana's non-degradation policy would apply to this dewatering even if the discharges of pollutants from the mine were not considered "new or increased sources" under ARM § 17.30.702(16).

Response: ARM17.30.705 (2) (c) prohibits, in outstanding resource waters, any permanent change in water quality resulting from a new or increased point source discharge. Flow reductions do not result from a discharge and are therefore not subject to this requirement. However, flow reductions may constitute significant degradation. See ARM 17.30.715

122-7 "Mine dewatering and the resulting drawdown of bedrock ground water could result in subtle changes in water quality of various water bodies, such as Rock Lake…Assuming these water bodies receive water from both shallow and deep ground water sources, reducing the source of deeper ground water could reduce the introduction of certain minerals considered to be necessary for potential populations of organisms (Gurrieri 2001, 2004)." (DEIS at p. 434) Although this passage understates the likelihood of impacts stated in the Gurrieri report, it nevertheless confirms that at best, DEQ does not have sufficient information to allow the mine to go forward, since it cannot be reasonably certain that the non- degradation standards applicable to the lake will be met.

122-7 Once again, there can be no reasonable argument that the mine's impacts to Rock Lake are not governed by Montana's current non-degradation law. First, as already noted, the 17-year-old authorization to degrade that BHES granted to Noranda cannot be deemed to apply to MMC's current proposed mine. Second, even if it could, there is no evidence that Noranda asked for, or that BHES granted, authorization to degrade Rock Lake.

122-7 Rock Lake is located in the Cabinet Mountain Wilderness and is classified as an Outstanding Natural Resource Water. As discussed above, Montana's non- degradation law prohibits any activity that will change the existing chemical, physical, or biological conditions of the lake. As discussed below, there can be no question that current nondegradation policy applies to the mine with regard to Rock Lake, because the proposed activities that would affect the lake fall within the plain language of the definition of "new or increased source" set forth in ARM 17.30.702(16).

202-18 Is the DEIS considering allowing streambed modification of the East Fork of Bull River within the wilderness boundary? How would this be consistent with the protection afforded "Outstanding Resource Waters?"

122-8 Note that even if the BHES order applied to MMC's proposed mine, the excavation of the mine cavity would not qualify for an exception to non-degradation review under subsection (a) of the "new source" definition, which applies to discharges approved prior to April 29, 1993. That subsection states: The term ["new or existing source"] does not include the following: (a) sources from which discharges to state waters have commenced or increased on or after April 29, 1993, provided the discharge is in compliance with the conditions of, and does not exceed the limits established under or determined from, a permit or approval issued by the department prior to April 29, 1993. §17.30.702(16) (emphasis added). The excavation of the mine cavity – which is the proposed "activity" that would affect water quality in Rock Lake – is not a "source from which a discharge to state waters has commenced." Rather, it is just the opposite – an activity that would reduce flows to state waters.2 (Gurrieri 2001) Therefore, it is outside the plain language of the exception, and is subject to the 1994 rule.3 Again, that rule prohibits any degradation of Rock Lake

182-22 Appendix A: Board of Health and Environmental Sciences / Noranda Petition for Change in Quality of Ambient Waters. This BHES decision was made prior to Bull Trout listing and other considerations (large scale dewatering), is it possible that it is outdated and should be reconsidered in light of its out-dating?

Response: ARM 17.30.715 (1) (a) contains significance thresholds for flow. This threshold is applicable to streams but not to lakes. The remainder of the threshold in ARM 17.30.715 are applicable to both flowing and non-flowing water bodies.

243-5 The 1993 degradation permission will result in degradation of ground and surface waters and may well lead to violation of standards beyond that which would be allowed under current degradation rules. It will also inevitably lead to a violation of MEIC's members' fundamental constitutional Right To a Clean and Healthful Environment found in Article II, Section 3 of the Montana Constitution, and a violation by DEQ and MMC of their duties under Article IX, Section 1 and 2 of the Constitution.

Response: Montana's nondegradation statutes and rules have both historically and currently allowed an applicant to obtain an authorization to degrade as long as certain criteria are met. The BHES Order (pages 10-11) meets the conditions applicable to that Order by finding that "the construction and operation of the Montanore project will have beneficial economic and social impacts in Lincoln and Sanders Counties during the 18 years of its operation" and that the "mining project will benefit the impacted area" so "degradation resulting from the Montanore Mining Project is justified." An agency must comply with the statutes it administers and does not have authority to determine their constitutionality.

310-7 Wilderness waters impacted by dewatering include Rock Lake, St. Paul Lake, the East Fork of Bull River, and potentially Libby Lakes are Outstanding Resource Waters, e.g., waters located wholly within the boundaries of areas designated as national parks or national wilderness areas or other waters approved by the legislature-- are afforded the highest level of protection possible. Apart from non-significant activities, the state may not authorize any degradation of an ORW (MCA § 75-5-316(2)).

328-5 Uncertainty in the 3-D numerical model and baseflow calculation notwithstanding, the SDEIS predicts that drawdown will result in reductions in the $7Q_{10}$ flows the Outstanding Resource Waters ("ORW") of the East Fork Bull River that exceed the 10% threshold outlined in Montana's nondegradation policy. These streamflow alterations are "degradation" as defined in Montana statute, and therefore violate Montana's nondegradation policy, which prohibits any degradation of ORW. Furthermore, the Forest Service is required to ensure the project is in compliance with water quality standards, including a state's anti- degradation policy.

331-27 The SDEIS predicts that drawdown will result in reductions and/or increases in flows in the $7Q_{10}$ in a number of Outstanding Resource Waters ("ORW") that exceed the 10% threshold outlined in Montana's nondegradation policy. These streamflow alterations are "degradation" as defined in 75-5-103(7), and therefore violate Montana's nondegradation policy, which prohibits any degradation of ORW. ARM 17.30.705(2)(c). Furthermore, the Forest Service is required to ensure the project is in compliance with water quality standards, including a state's anti- degradation

335-17 The SDEIS predicts that drawdown will result in reductions and/or increases in flows in the $7Q_{10}$ in a number of Outstanding Resource Waters ("ORW") that exceed the 10% threshold outlined in Montana's nondegradation policy. These streamflow alterations are "degradation" as defined in 75-5-103(7), and therefore violate Montana's nondegradation policy, which prohibits any degradation of ORW. ARM 17.30.705(2)(c).

390-2 Many of the creeks that would be affected by the mine are listed as Outstanding Resource Waters, and are subject to the non-degradation rules in the Clean Water Act that apply to such listed creeks. The United States Forest Service has a duty to comply with these rules before permitting a mining operation.

Response: As discussed in Section 3.11.1 of the FEIS, under the Montana Water Quality Act, no authorization to degrade may be obtained for outstanding resource waters, such as surface waters within a wilderness. After additional baseline information was collected by MMC during the Pre-Evaluation and Evaluation phases, the 3D model would be refined and the uncertainty of the model results reduced. The

potential effects on surface waters within the CMW would be re-evaluated by the 3D model prior to beginning mine construction. The DEQ will determine whether the mine would degrade state waters in the CMW. Section 3.13.1.2 of the FEIS discussed that MPDES permits, issued by the DEQ, regulate discharges of wastewater by imposing, when applicable, technology-based effluent limits and state surface water quality standards, which include numeric and narrative requirements, nondegradation criteria, and TMDLs.

332-5 Unlike the limits set for a number of potential contaminants from the Montanore Project, arsenic concentrations are not allowed to increase in groundwater, unless MMC obtains an agreement from the Montana DEQ (DSEIS, Section 3.13).

Response: For arsenic and all other carcinogenic parameters and parameters with a bioconcentration factor of greater than 300, discharges resulting in concentrations outside of a mixing zone less than ambient surface water or groundwater concentrations would be nonsignificant as defined in the nondegradation rules (ARM 17.30.715). The nondegradation criteria apply to all parameters not listed in the BHES Order, such as arsenic. Section 3.13.4 of the FEIS applied the nondegradation criteria in the analysis of effects.

202-11 The dewatering/lowering of flows and levels in streams and lakes affected by the Project (including the wilderness lakes), violates the duty to protect beneficial uses of these waters. These beneficial uses, such as the protection of aquatic life, are recognized as water quality standards and cannot be impaired.

Response: Section 3.6.4.3.2 of the EIS indicates the beneficial uses of streams and lakes affected by the project would be maintained and protected.

3914 General: Comment about new sources

122-5 Although there may be some attenuation of pollutants due to the 3,000 foot distance from the mine cavity to the river, this attenuation will likely be minimal since the substrate is bedrock rather than soil or alluvium. The only possible mitigation identified in the DEIS is the installation of barrier pillars or bulkheads to try to reduce the volume of flow toward the river. However, the DEIS predicts that such barriers or bulkheads will reduce the volume of contaminated flow by only 50%. (DEIS at p. 442.) The DEIS does not predict what the resulting concentrations of contaminants will be in the East Fork Bull River, other than to say that "[the fate and transport of dissolved metals within the flooded mine void cannot be estimated without significant uncertainty, particularly considering the relatively low surface water standards." However, it is certain there would be some increase in metals and nitrogen, which is absolutely prohibited by current non-degradation law. Moreover, even if current non-degradation law did not apply, it appears highly plausible that in-stream concentrations would violate chronic aquatic life standards for various metals, including copper (.003 ppm), which is impermissible under the Water Quality Act. Absent some means of assuring that water quality standards will not be violated, this discharge cannot be permitted.

Response: The water quality analysis of effects to the East Fork Bull River was revised in the SDEIS and FEIS. The agencies disclosed in Section 3.13.4.3 of the SDEIS and FEIS that post-mining, water may begin to flow out of the underground mine workings and may mix with groundwater in saturated fractures, react with iron oxide and clay minerals along an estimated 0.5-mile or greater flow path, undergo changes in chemistry due to sorption of trace elements and mineral precipitation, and, without mitigation, flow at a predicted rate of 0.07 cfs (32 gpm) as baseflow toward the East Fork Bull River. The agencies' mitigation was updated in Sections 2.5.2.6.5 and 2.5.4.1 of the FEIS. By the fifth year of operations, MMC would use updated hydrology modeling to assess the need for barrier pillars and/or bulkheads to minimize post-mining changes in East Fork Rock Creek and East Fork Bull River streamflow and water quality. If needed, MMC would submit a revised mine plan with one or more barrier pillars with constructed bulkheads at access openings to the agencies for approval. One or more barriers would be maintained underground, if necessary based on the hydrologic monitoring, after the plan's approval. Section 3.10.4.3 of the FEIS disclosed that the potential direction of post mining groundwater flow direction within the mine void would

be better defined using all hydrologic data collected during mining. The low permeability barrier design would be based on analysis of these data.

122-8 Third, even if the BHES order had somehow granted authorization to degrade Rock Lake, that grant would be superseded by the enactment of ARM §17.30.705(2)(c) in 1994, which prohibits any degradation of Outstanding Natural Resource Waters by any "new or increased source." That term is broadly defined as any "activity resulting in a change of existing water quality occurring on or after April 29, 1993." ARM § 17.30.702(16). Since the excavation of the Montanore mine workings would obviously occur well after April 29, 1993, and would change existing water quality in Rock Lake (and other Wilderness waters), it would constitute a "new source."

Response: ARM § 17.30.705(c) states that for outstanding resource waters, no degradation is allowed.

182-21 2. Figure 20: Post mining topography, Little Cherry Creek tailings impoundment site. The streambed of the former Little Cherry Creek passing through the center of the tailings impoundment in effect constitutes a natural conduit for effluent from the tailings impoundment regardless of the fact the upper drainage of Little Cherry Creek has been diverted. The former Little Cherry channel must be designated as an outfall for MPDES

Response: In Alternative 2**,** the former Little Cherry Creek would not pass through the center of the tailings impoundment. Figure 19 shows that surface water runoff from the impoundment following reclamation would flow toward Bear Creek. Section 3.11.4.3 of the SDEIS and FEIS disclosed that water in Little Cherry Creek above the tailings impoundment would be diverted around the tailings impoundment down to Libby Creek via a 10,800-foot-long Diversion Channel. Precipitation and runoff captured by the tailings impoundment and the Seepage Collection Dam, would no longer flow to either the diverted or former Little Cherry Creek, and mine wastewater stored in the tailings impoundment would not flow into the former Little Cherry Creek.

3915 General: Comment about BHES Order

122-3 As a general matter, however, we strongly disagree with the contention that MMC is entitled to rely on a 17-year-old authorization for a project that its predecessor not only failed to construct, but affirmatively abandoned.

122-4 Noranda removed any conceivable doubt about intentions in 2002, when it declared to both DEQ and the Forest Service that it was closing the Montanore Project. By so doing, Noranda waived any right to build the mine under the conditions in the 1992 approval.

122-8 The various mine activities that would discharge pollutants to state waters would likewise fail to be exempted by ARM § 17.30.702(16)(a), because even if the MMRA permit were considered an "approval" for purposes of the rule, that permit was not issued until May 14, 1993.

243-5 But this DEQ-sanctioned scheme is belied by MMC's clearly stated intent: "MMC proposes to construct. operate and reclaim a new mine." (DEIS S-3.) There is no authority under the Montana Water Quality Act for DEQ's position that the 1993 degradation authorization decision is 'grandfathered." given the fact that MMC's predecessor, Noranda expressly abandoned the project in 2002.

243-6 Even if the 1993 authority to degrade is considered valid, the State has a duty to modify and update it. Under the State's non-degradation policy, § 75-5-303, MCA, authority to degrade will not be granted unless the State has affirmatively demonstrated that there is "no economically, environmentally and technologically feasible alternatives to the proposed project that would result in no degradation." What was "economically, environmentally and technologically feasible" in 1993 is not the same as in 2009. It is for that reason that the Legislature has included a provision allowing DEQ to modify a degradation authority where an "economically, environmentally and technologically feasible" modification to the development exists, § 75-5-303 (6), MCA. While that section is couched in permissive language, DEQ's constitutional duty to eliminate pollution requires, under these circumstances, that the 1993 authority to degrade be modified and updated. Therefore, at a minimum, DEQ must implement its authority under § 75-5-303, MCA.

243-6 There is no legal authority for the State to rely on the sixteen year old decision by the BHES authorizing levels of pollution far exceeding those allowable today. There are many reasons, both legal and public policy, that require DEQ to initiate non-degradation review of the new project. Accordingly, MEIC requests that DEQ reconsider its decision to allow the project to move forward.

248-6 There is no authority under the Montana Water Quality Act for DEQ's position that the 1993 degradation authorization decision is somehow "grandfathered," given the fact that MMC's predecessor, Noranda, expressly abandoned the project in 2002.

248-7 DEQ's duty compels that the 1993 authority to degrade be modified and updated.

248-7 The 1993 decision only applies to those parameters of concern specifically addressed in the 1993 decision. All other parameters in the discharge must meet current water quality and non-degradation standards.

311-2 There is no legal authority for the State to rely on the sixteen year old decision by the BHES authorizing levels of pollution far exceeding those allowable today. LPMC requests that DEQ reconsider its decision and initiate non-degradation review for this project.

331-27 For these reasons, the BHES order should no longer apply. The permitting process should be based on current water quality standards and should also consider the listing of bull trout.

335-20 The SDEIS improperly relies on an authorization to degrade, issued in 1992 to another company (Noranda) that subsequently abandoned the project. How can a BHES Order issued in 1992 properly evaluate water quality impacts of mine-related discharges that were not considered in the 1991, 1997, and 2006 versions of the MPDES? Cumulative impacts from the multiple discharges, many of which have yet to be permitted, were not considered when the 1992 BHES Order was issued.

335-20 Much of the surface water impacted by the BHES Order now provides habitat for the threatened species of bull trout. The 1992 Order does not authorize the degradation of bull trout habitat.

Response: Section 1.3.2.3 of the DEIS, SDEIS, and FEIS disclosed that MMC's DEQ Operating Permit #00150 and MPDES permit were not terminated because reclamation of the Libby Adit was not completed. MMC later purchased Noranda Minerals Corporation and assumed these permits. Section 3.13.1.1.1 of the FEIS discussed that, according to the BHES Order, it "shall remain in effect during the operational life of this mine and for as long thereafter as necessary." The 1993 changes in the nondegradation law were made in Chapter 595, Laws of 1993. Section 10 of Chapter 595 provides that Chapter 595 "applies to all requests to degrade state waters filed with the department after [the effective date of this act]." Chapter 595 became effective April 29, 1993. Therefore, petitions received before April 29, 1993, and pending on that date were to be processed and issued under the law as it read prior to Chapter 595. If the Legislature intended for those authorizations to be issued under the prior law, it could not have intended that passage of Chapter 595 would invalidate authorizations granted before the effective date of Chapter 595. The authorization to degrade for the Montanore Mine was issued on November 20, 1992. The Order established numeric standards for total dissolved solids, chromium, copper, iron, manganese, and zinc in both surface water and groundwater, nitrate (groundwater only), and total inorganic nitrogen (surface water only). For these parameters, the limits contained in the authorization to degrade apply. For the parameters not covered by the authorization to degrade, the applicable nonsignificance criteria established by the nondegradation rules apply, unless MMC obtained an authorization to degrade under current statute. As shown in Section 3.13.3 of the FEIS, some of the BHES Order limits are stricter than current water quality standards.

122-5 There can be no argument that the discharges of metals and nitrogen to the East Fork Bull River are authorized by the BHES' 1992 order. Even if Noranda had not waived any right to rely on that order, the order makes no mention of the East Fork of the Bull River.

Response: Section 3.13.4.2.3 of the FEIS indicated that during the post-closure phase any flow of water toward the East Fork Bull River would not likely result in detectable changes in water quality. Flow of water toward the East Fork Bull River resulting from the Montanore Project would only occur during the post-closure phase of the project

122-4 EPA and the state of Montana have invested a huge amount of research in developing scientifically-based numeric standards for nitrates, one of the primary pollutants the mine would generate. Much more is known about the impacts of nitrates in high mountain streams like Libby Creek and its tributaries, and it is likely that a present-day non-degradation analysis would find greater impacts than in 1992. Likewise, the effectiveness of land application systems in treating mine effluent has improved, and the 80% standard the BHES set in 1992 is likely no longer the state of the art. In addition, a great deal has been learned about the sensitivity of the wilderness lakes overlying the Montanore deposit, and about the effects the mine would likely have on them. (Gurrieri 2001), The BHES did not have this information in 1992.) For DEQ to deny its own ability to take this information into account because of a 17-year-old authorization for an unbuilt project that was abandoned by the permittees is contrary with the entire approach of the Montana Water Quality Act and federal Clean Water Act, which are designed to ensure that projects are reviewed using the best currently-available science and information.

243-5 Under the 1993 Order, existing levels of N03 + N02 as N are 0.13, but the Order allows degradation to the 5 mg/l for surface and 10 mg/l for groundwater. A footnote shows that the highest allowable level that will not-cause undesirable harm to aquatic life in surface water is 1 mg/l. Thus, the Order allows five times the level of nitrates in surface water than that which is viewed as harmful to aquatic life. The DEIS indicates numerous potential violations of standards, depending upon which alternative is chosen. (DEIS pp. 504-505.) Moreover, the Order noted that under the rules then existing, industrial wastes must be treated using best practicable control technology available (BPCTCA). The Board then defined land application as the applicable BPCTCA here. However, METC believes based societal changes and on recent decisions by the Board that were the degradation authorization to be issued today, the BPCTCA would likely be much more stringent.

Response: The BHES Order indicated a limit for TIN (nitrate+nitrite+ammonia) of 1 mg/L in surface water. Section 3.6.4.2.3 of the SDEIS was revised to address nutrient concentrations. The SDEIS disclosed that the BHES Order discussed protection of beneficial uses. On page 5, the Order states that "surface water and groundwater monitoring, including biological monitoring, as determined necessary by the Department [DEQ], will be required to ensure that the allowed levels are not exceeded and that beneficial uses are not impaired." Further on page 7, the Order indicates that the limit of 1 mg/L for TIN "should adequately protect existing beneficial uses. However, biological monitoring is necessary to insure protection of beneficial uses and to assure compliance with …applicable standards." The applicable state standards for total nitrogen and total phosphorus protect beneficial uses, and prevent nuisance levels of bottom-attached algae. According to the reopener provisions of MPDES permits described in ARM 17.30.1361(2)(b), "permits may be modified during their terms if…the department [DEQ] has received new information …indicating that cumulative effects on the environment are unacceptable, or (c) the standards or requirements on which the permit was based have been changed by amendment or judicial decision after the permit was issued." Consequently, the TIN limit for ambient surface waters set in the BHES Order could be modified in the MPDES permit issued by DEQ at any time if nuisance algal growth caused by MMC's discharge was observed. The DEQ in the draft renewal MPDES permit preliminarily granted a variance of 15 mg/L for total nitrogen; the variance would be reviewed every 3 years by DEQ and the variance concentration reduced if new, low cost nutrient removal technologies have become widely available. The general variance for total nitrogen may not exceed 20 years, and the standard of 0.275 mg/L for total nitrogen must be reached at the end of the mixing zone when it is technologically and economically feasible to do so. To address the uncertainty regarding the response of area streams to increased nutrient concentrations, MMC would implement the water quality and aquatic biology monitoring described in Appendix C.

248-6 The Order allows five times the level of nitrates in surface water than that which is viewed as harmful to aquatic life. The DEIS indicates numerous potential violations of standards, depending upon which alternative is chosen. (DEIS pp. 504-505.) Moreover, the Order noted that under the rules then existing, industrial wastes must be treated using best practicable control technology available (BPCTCA). The Board then defined land application as the applicable BPCTCA here. However, were the degradation authorization to be issued today, the BPCTCA would likely be much more stringent.

Response: The BHES Order did not allow the concentrations of nitrate in surface waters discussed in these comments. The adopted limit was 1.0 mg/L for total inorganic nitrogen (nitrate+nitrite+ammonia). The BHES Order indicates that the limit of 1 mg/L for TIN "should adequately protect existing beneficial uses. However, biological monitoring is necessary to insure protection of beneficial uses and to assure compliance with …applicable standards." The applicable state standards for total nitrogen and total phosphorus protect beneficial uses, and prevent nuisance levels of bottom-attached algae. According to the reopener provisions of MPDES permits described in ARM 17.30.1361(2)(b), "permits may be modified during their terms if…the department [DEQ] has received new information …indicating that cumulative effects on the environment are unacceptable, or (c) the standards or requirements on which the permit was based have been changed by amendment or judicial decision after the permit was issued." Consequently, the TIN limit for ambient surface waters set in the BHES Order could be modified in the MPDES permit issued by DEQ at any time if nuisance algal growth caused by MMC's discharge was observed. The DEQ in the draft renewal MPDES permit preliminarily granted a variance of 15 mg/L for total nitrogen; the variance would be reviewed every 3 years by DEQ and the variance concentration reduced if new, low cost nutrient removal technologies have become widely available. The general variance for total nitrogen may not exceed 20 years, and the standard of 0.275 mg/L for total nitrogen must be reached at the end of the mixing zone when it is technologically and economically feasible to do so. Sections 3.13.4.3 and 3.13.4.4 of the SDEIS and FEIS discussed that land application of mine wastewater would not occur in Alternatives 3 and 4. The agencies recognize the uncertainties in effective operation of LAD areas and adequate treatment of mine wastewater by land application. The MPDES permit for mine discharges would regulate the quality of discharges. Discharges would meet the requirements of the nondegradation criteria or BHES Order limits at the end of the mixing zone in Libby Creek.

202-2 Mines Management (MMC) is currently (2009) engaged in the MPDES permitting process with MDEQ. The company is applying to have additional discharges related to the Montanore Mine included in the MPDES permit. How can a BHES Order issued in 1992 properly evaluate water quality impacts of mine-related discharges that were not considered in the 1991, 1997, and 2006 versions of the MPDES? Cumulative impacts from the multiple discharges, many of which have yet to be permitted, were not considered when the 1992 BHES Order was issued. It is likely that the baseline water quality of the region also has changed from 17 years of activity that includes timber harvest and other commercial activities.

Response: Section 3.13.1.1.1 of the FEIS discussed that the BHES Order remains in effect for the operational life of the project and for as long as necessary thereafter. The BHES Order did consider cumulative impacts of all discharges from the Project because it set limits on ambient quality of groundwater and surface water affected by the project. By setting limits on ambient quality in affected water rather than specifying effluent limitations for specific outfalls, the Order limited the impact of the entire project, regardless of the number of outfalls in the MPDES permit. Section 3.13.1.2 of the FEIS discussed that MPDES permits, issued by the DEQ, regulate discharges of wastewater and stormwater by imposing technology-based effluent limits and state surface water quality standards, which include numeric and narrative requirements, nondegradation criteria, and TMDLs.

335-20 The BHES order establishes degradation limits that would allow total copper concentrations up to 0.003 mg/L in all surface waters affected by the project (BHES 1992.) This is a significant increase in copper concentrations in the area streams, and would allow degradation of high quality waters to the chronic aquatic life standard of .00285 mg/1.

Response: It is correct that the BHES Order limit for copper is 0.003 mg/L for surface water. In Alternatives 3 and 4, all non-stormwater discharges would occur from the Water Treatment Plant. Such discharges would be regulated by the MPDES permit issued by DEQ. Effluent limits are based on water quality standards, nondegradation criteria, or BHES Order limits. In the case of copper, the chronic aquatic life standard of 0.00285 mg/L would be the limiting concentration.

3916 General: Comment about TMDLs

122-10 The state may not permit any new point sources that will add pollutants to an impaired waterbody unless and until such discharges are incorporated into a valid TMDL for that waterbody demonstrating that

water quality standards will be met. 40 CFR § 122.4(i); Friends of Pinto Creek v. EPA, 504 F.3d 1007, 1011-1015 (9th Cir. 2007); Friends of the Wild Swan v. EPA, 130 F. Supp.2d 1207, 1209-11 (D. Mont. 2000). The DEIS should note that permitting of the mine, whether under the applicable general permit programs or individual MPDES permits, may not go forward until these requirements are complied with.

122-10 The DEIS describes various aspects of the project that would discharge sediment to Libby Creek and tributaries during and following construction. As the DEIS notes, a downstream segment of Libby Creek is listed in Montana's 303(d) submittal as impaired by excessive levels of sediment. The DEIS makes no effort to analyze the obvious possibility that discharges from mine activities would increase sediment concentrations in this downstream impaired stream segment.

182-17 A condition of the application from the moment a ROD is approved must be that TMDL's for the analysis area be established before mining may commence.

202-11 The DEIS has not shown how the Project will comply with the strict protections for impaired water under the CWA, including CWA Section 303(d) and EPA regulations at 40 CFR 122.4. Under the CWA and EPA regulations, no new discharge is allowed which will not ensure compliance with, or may cause or contribute to a violation of, water quality standards. Here, due to the impaired nature of Libby Creek and other waters (including listing on Montana's 303(d) list), as well as the failure of the agencies to have any plan to ensure achievement of water quality standards at all times, no new discharge can be allowed into these waters that may affect the pollutants or limitations for which the stream is impaired. See Friends of Pinto Creek v. EPA, 504 F.3d 1007 (9th Cir. 2007) (voiding EPA-issued NPDES permit which had authorized new copper discharges into a stream that was impaired for copper).

331-9 The agencies cannot authorize or allow any discharge into an impaired water body, including those listed under Section 303(d) of the Clean Water Act (CWA), when the discharge(s) may impair or exacerbate conditions which caused the water to be so impaired. See, Friends of Pinto Creek v. U.S.EPA, 504 F.3d 1007 (9th Cir. 2007)(rejecting discharge permit for discharges of copper into a stream impaired for copper). This is a mandate under the CWA to MDEQ, as the NPDES agency under the CWA, and to the USFS, pursuant to CWA Section 313 (prohibiting the USFS from allowing any operation that may violate water quality protections or standards, including the protection of beneficial uses such as aquatic life and its habitat).

Response: The mine project is not expected to impair or exacerbate conditions that caused Libby Creek or the Fisher River to formerly be on the 303(d) list. The discussion of TMDLs in Section 3.13.1 of the FEIS was updated. In 2014, the DEQ and EPA issued TMDLs and a water quality improvement plan for the Kootenai River-Fisher River project area, which includes Libby Creek and the Fisher River. The DEQ performed updated assessments on Libby Creek and the Fisher River for metals impairment and did not identify metals impairment conditions in Libby Creek or the Fisher River in the reassessment (DEQ and EPA 2014). The impairment cause for the 1-mile section of Libby Creek (mercury) and the Fisher River (lead) were removed from the 2014 Water Quality Integrated Report. All discharges containing sediment from the Montanore Project via stormwater or the Water Treatment Plant would be monitored and sediment concentrations reported to DEQ. In addition, the MPDES permit specifies maximum daily and average monthly TSS limits for Water Treatment Plant Outfall 003. Any failures of sediment BMPs would require MMC to implement corrective measures in accordance with the MPDES permit.

182-18 P. 484. "TMDLs are not required on Rock Creek because no pollutant-related use impairment has been identified." CRG believes this to be an incorrect statement.

Response: The discussion of TMDLs in Section 3.13.1 of the FEIS was updated. In 2010, the DEQ issued sediment TMDLs and a framework for water quality restoration for the lower Clark Fork River tributaries, which included Rock Creek. The DEQ concluded Rock Creek's impairment is not a pollutant and does not require a TMDL.

3917 General: Comment about 401 Certification

122-11 In addition, the DEIS predicts that the excavation of the mine activity will affect water quality in the East Fork Bull River by discharging metals and nutrients to the river after mining is complete, as

already discussed. This discharge would appear to be a point source, and therefore would require an MPDES application which should be analyzed in the DEIS. If DEQ does not consider it to be a point source, it will require 401 certification pursuant to §17.30.101.

122-10 The DEIS's discussion of certification under Section 401 of the Clean Water Act is limited to the issuance of Section 404 wetland fill permits by the Army Corps of Engineers. This scope is too narrow. The excavation of the mine cavity approval also requires 401 certification because it will affect the quality of Rock Lake, and cannot go forward without approval of a valid plan of operations by the Forest Service. Moreover, as discussed below, DEQ lacks authority to waive 401 certification for this activity.

122-11 As discussed in previous sections, the excavation of the mine cavity will likely affect water quality and the aquatic ecosystem in Rock Lake by reducing the flow of water and micronutrients from the underlying groundwater system. Therefore it is subject to 401 certification pursuant to ARM §17.30.101. This impact cannot be considered de minimis, since it will violate state non-degradation standards. Moreover, the mine excavation will not be subject to MPDES approval, since it is not a discharge to state waters. Therefore, DEQ may not waive certification for this activity.

331-48 Additionally, the USFS cannot approve the Plan of Operations without the required Certification under Section 401 of the CWA. This requirement applies to not only the Section 404 permit, but the Plan of Operations as well. Thus, all potential discharges must be included in the Section 401 review and MDEQ cannot issue the Certification if any potential discharge may violate any water quality requirements at any time – including discharges that may not occur for many years.

335-22 Additionally, the USFS cannot approve the Plan of Operations without the required Certification under Section 401 of the CWA. This requirement applies to not only the Section 404 permit, but the Plan of Operations as well.

Response: Section 1.6.2.1.2 of the DEIS, SDEIS, and FEIS discussed that DEQ will determine whether to provide a 401 certification (with or without added DEQ conditions), deny the certification, or to request more information. The DEQ may deny the certification if the discharge would result in a violation of Montana water quality standards. The DEQ may also waive certification if the activity would cause minimal or no effects to state water quality or if the activity would require a MPDES permit. Section 1.6.1.1.1 of the FEIS was revised to discuss that if the Forest Service approves a Plan of Operations in the ROD, it will indicate that any activity that may result in any discharge into navigable waters cannot proceed until MMC obtained a 401 certification from the DEQ, unless the DEQ waived its issuance.

3920 Metals: Suggested new information/analysis

152-16 The DEIS must use total recoverable concentration, not dissolved, for metals and metalloids reaching surface waters.

152-26 An error is that Geomatrix (2007a) uses dissolved values where total recoverable values should be used.

Response: Section 3.13.4 of the SDEIS and FEIS used total recoverable metal concentrations in the analysis of effects on surface water. The only exception was for cadmium, chromium and mercury concentrations in the mine water. The estimate of mine water quality came from data collected at the Troy mine, which was the best available information. No total recoverable data for these three metals were available from the Troy mine.

152-17 The agencies should require a series of compliance point wells across the prime transect of the flow; compliance should be based on each of the monitoring wells not exceeding standards.

Response: Section 3.13.4.2 of the SDEIS and FEIS disclosed that compliance wells would monitor groundwater levels and quality at several compliance points to monitor groundwater quality and the effectiveness of the pumpback well system. This monitoring was discussed in Section C.10 of the SDEIS and FEIS.

3923 Metals: Comment about analysis-mine

182-12 P. 256. Metals. “Manganese was not included in the assessment, although it does have a BHES order nondegradation limit in surface waters. Manganese is not discussed further. This gibberish is indefensible. The Troy mine used between 20-40,000 tons of manganese iron mill grind balls per year at a production rate of 7500 tons per day of ore. The Montanore project proposes a production rate of 10-20,000 tons per day. This literally means that a couple million tons of iron-ore / manganese concentrate will deliver to the tailings impoundment. This material will oxidize out just as it is happening at the Troy Mine. Further discussion is warranted.

Response: Section 3.13.4 of the SDEIS was revised to include an analysis of changes in manganese concentrations in analysis area surface water and groundwater.

389-8 Further, it omits analysis of effects on Libby Creek from the higher levels of copper that may occur as a result of the mine because it lacks sufficient baseline data to do the analysis. This is not a legally-valid reason for such an omission, particularly in light of the other potential for degradation.

Response: Sections 3.13.4.2 and 3.13.4.3 of the SDEIS discussed the changes in copper concentrations that could occur to Libby Creek and its tributaries. Appendix K of the SDEIS and FEIS provided ambient water quality data for Libby Creek and the various mine water sources. The baseline data were adequate for the analysis.

332-7 The basis for the “representative” arsenic concentration in tailings seepage is not discussed in the DSEIS or Enviromin (2007). This value is below the current reporting limit for arsenic (0.003 mg/L), below the measured arsenic concentration in Troy tailings impoundment water of 0.02 mg/L total arsenic and <0.005 mg/L dissolved arsenic (Enviromin, 2007; Table 3-3),

Response: A description of how representative concentrations were derived for water stored in the tailings impoundment and for other surface water, groundwater and wastewater is discussed in the Baseline Surface Water Quality Technical Report for the Montanore Project (ERO Resources Corp. 2011c) and also described in Section 3.13.2.2.2 of the FEIS. Representative concentrations for all receiving and wastewaters were updated in the FEIS to reflect data through 2012. Tailings impoundment water quality was estimated from samples collected from the Troy mine decant pond. Eight samples had reported dissolved arsenic concentrations, four of which were below the detection limit. The representative arsenic concentration is <0.0017 mg/L. The current reporting limit for arsenic is 0.001 mg/L.

332-7 With all the uncertainty noted above and the lack of adequate geochemical testing of the tailings, especially leach tests, it is not supportable to assume that a 1-ug/L difference between background groundwater arsenic concentrations and tailings leachate concentrations meets non-degradation requirements. The results of the mass-balance modeling show that tailings leachate would dilute arsenic concentrations in groundwater under the proposed Poorman impoundment. This is an unsupportable outcome, and the mass balance modeling should be rerun using more realistic arsenic concentrations in the tailings leachate, including seasonal higher concentrations of arsenic in tailings impoundment water.

Response: The mass balance calculations for the tailings impoundment provided in Appendix G of the FEIS show that projected final mixing concentration under the tailings impoundment during operations and after mine closure would not result in an increase in the ambient dissolved arsenic concentration because the ambient dissolved groundwater concentration is greater than the tailings water dissolved arsenic concentration. See Appendix K-4 for the ambient dissolved arsenic concentration used for the tailings impoundment location (LCC Area Well; well LCTM-8) and Appendix K-9 for the representative dissolved arsenic concentration used for the tailings impoundment water. Section C.10 of Appendix C of the SDEIS and FEIS described baseline monitoring of groundwater quality that would occur downgradient of the tailings impoundment prior to construction to establish pre-operation conditions. Monitoring of groundwater quality downgradient of the tailings impoundment would occur during and after mine operations to ensure that groundwater quality degradation would not occur.

3925 Metals: Comment about effect-mine

327-9 The agencies must not allow Montanore Minerals to proceed with its plan to surpass legally mandated levels of antimony, manganese, and other contaminants in the natural water system of the Kootenai National Forest.

Response: The MPDES permit for discharges would regulate the quality of any discharges to surface water.

202-10 The DEIS states that antimony, barium, beryllium, nickel, selenium, and thallium would be analyzed during the initial production year. (DEIS, Sect. 1.5.5, C 23) Due to its toxicity to fish and birds, selenium is of particular concern. What will be done if selenium releases occur?

Response: Data have been collected for barium, beryllium, nickel, selenium, and thallium, but predicted concentrations of these metals were not developed because they are not be expected to be present in the adit, mine, waste rock, or tailings water at concentrations above ambient concentrations or above standards. An analysis of changes in antimony concentrations was provided in Section 3.13.4 of the SDEIS and FEIS.

327-10 We believe that the SDEIS does not provide adequate data for determining whether potential heavy metal contamination would occur should the project be permitted to begin operations. Basing "scientific" projections on data from other mines not located in close proximity to the Montanore deposit is unacceptable and irrelevant.

Response: Troy Mine water quality data are the best available data (see Section 3.9). In addition, water quality data collected from the Libby Adit were used in the water quality analyses provided in Section 3.13.4 of the SDEIS and FEIS. As described in Sections C.9 and C.10 of the SDEIS and FEIS, mine water quality and hydrogeologic data would be collected to evaluate potential effects on surface water of possible post-mine flow from the mine void.

3943 Nutrients: Comment about analysis-mine

122-5 With regard to nutrients, the DEIS states at page 309 that "no changes in nutrient concentrations within the Rock Creek and East Fork Bull River drainages are predicted to occur with any of the alternatives . . . " This appears to been error. As discussed above, the DEIS predicts that all action alternatives will result in mine water reaching the East Fork Bull River, and this water will have highly elevated levels of nitrate/nitrite as compared to background levels in the river. DEIS at Table 103. This will necessarily cause an increase in concentrations of nitrogen in the river.

Response: Section 3.13.4.2 of the SDEIS and FEIS disclosed that if the mine void water flowed toward the East Fork Bull River after mine closure, it is not likely that changes in water quality in the river would be detectable. The 3D model estimated that water may begin to flow out of the mine void and mix with groundwater in saturated fractures, react with iron oxide and clay minerals along an estimated 0.5-mile or greater flow path, undergo changes in chemistry due to sorption of trace elements and mineral precipitation, and, without mitigation, flow at a predicted rate of 0.07 cfs (32 gpm) as baseflow to the East Fork Bull River. The agencies' mitigation was updated in Sections 2.5.2.6.5 and 2.5.4.1 of the FEIS. By the fifth year of operations, MMC would use updated hydrology modeling to assess the need for barrier pillars and/or bulkheads to minimize post-mining changes in East Fork Rock Creek and East Fork Bull River streamflow and water quality. Given the amount of dilution that would occur in the flooding mine void prior to the initiation of outflow from the mine void, dilution with ambient groundwater along the flow path, and ultimately dilution by surface water mixing with the theoretical groundwater flow rate, it is very unlikely that nitrate levels in groundwater would remain highly elevated by the time flow reached surface water.

182-18 P. 487. "Noranda started Libby Adit construction and discharges in January 1990, and nitrate and ammonia concentrations in Libby Creek may have been affected by discharges through December 1995, and were not used in the analysis. DEQ should be honest and tell the public that Noranda exceeded its exploration permit discharge levels for nitrates for18 months with DEQ complicity and there's no "may have been affected" about it.

Response: The discussion of receiving water quality was revised in the SDEIS. Chapter 1 disclosed that NMC ceased adit construction due in part to nitrate concentrations in Libby Creek. The Final Baseline Surface Water Quality Technical Report (ERO 2011c) prepared for the FEIS described the elevated nitrate concentrations that occurred in Libby Creek downstream of the adit discharge location between 1990 to 1995. The Libby Creek nitrate data collected during this period were not used in the FEIS analysis because they do not represent natural water quality conditions in Libby Creek. The water quality analysis calculated changes to ambient surface water quality. Since 1995, Libby Creek has had very low nitrate concentrations similar to those measured before any adit discharge.

335-29 The SDEIS does not analyze the impacts to Rock Lake from the loss of nutrient load due to reduction inflow from surface water during important summer/fall period. Given the uncertainty associated with the effects of drawdown on Rock lake, the SDEIS should provide a range of potential impacts to surface water from the loss of nutrient load.

Response: Section 3.13.4 of the SDEIS and FEIS discussed the effects on the water quality of Rock Lake. Section C.10 of the SDEIS and FEIS described water levels, water supply and water quality data to be collected and analyzed in Rock Lake during the Pre-Evaluation and Evaluation Phases. Using this information, MMC would evaluate the size of the buffer zone that would be needed to mitigate effects on Rock Lake.

182-6 P. 114. MMC expects nitrate concentrations in pumped adit and mine inflows range from 15-25 mg/l. These concentrations are lower than measured in adit discharges from the Libby Adit when it was initially driven by Noranda between 1989 and 1991. MMC expects lower concentrations than experienced by Noranda because of its plans to use explosive emulsions and better housekeeping. While noble in expression this usually fails in application due to human variables.

152-26 Concentrations are based on an artificially low nitrate and ammonia concentration from several sources. Geomatrix (2007a) justifies using a lower concentration for nitrate and ammonia than was used in the 1992 EIS because they claim Montanore will handle the explosives better. “Management of explosives and use of emulsions would reduce nitrate concentrations expected during construction and operation of the Montanore Mine by Mines Management” (Geomatrix 2007a, page 49). The basic claim is that they would use emulsions rather than the basic dry fuel/nitrate mix which would reduce the residual nitrate pollution. Based upon this speculation, they have chosen to reduce the nitrate concentrations from adits, mine workings, and tailings impoundments to 15 and 25 mg/l from 23.5 and 40.7 mg/l used in the 1992 EIS, respectively, for construction and operations. Ammonia was reduced to 5 and 10 mg/l from 15.7 and 26.9 mg/l, respectively. This Montanore DEIS has inappropriately assumed away from 36 to 68 percent of the nitrate and ammonia loading with this unjustified speculation.

Response: Section 3.13.2.2.2 of the SDEIS and FEIS disclosed that nitrate and ammonia concentrations of the wastewater from the mine and adits are not known. Section 3.13.2.2.2 of the FEIS was revised to better describe the data and methods used in developing representative concentrations. MMC anticipates and the agencies concur that proper management of explosives and use of emulsions would reduce nitrate concentrations from those detected during the initial Libby Adit construction. Additional data on nitrate and ammonia concentrations would be collected during the Evaluation Phase. In the agencies’ mine alternatives (Alternatives 3 and 4), LAD Areas would not be used and all wastewater would be treated at the Libby Adit Water Treatment Plant before discharge. All discharges would be subject to MPDES permitted effluent limits. It is anticipated that treatment for nitrate would be necessary to comply with effluent limits.

3963 Sediment: Comment about analysis-mine

202-13 Will the agencies calculate the sediment based on acres disturbed?

331-20 What are the time frame parameters for the short-term exemption? Was the expected increase in turbidity included in sediment predictions for surface water? It would seem the sediment predictions included in the SDEIS would be seriously flawed if the agency permitted MMC to exempt sediment increases occurring during this waiver from the mine sediment analysis. The activities included in the waiver, including the tailings impoundment, are those that would be predicted to produce the most

sediment. The waiver does not preclude an analysis of how much sediment would be generated during the activities granted under the exemption. We need to know how much sediment would be generated during this turbidity.

331-40 Sediment delivery to streams would increase as a result of transmission line construction. The exact amount of sediment created is somewhat ambiguous because of the variable nature of the modeling used to predict the sediment. The accuracy of the model used for sediment predictions would vary ±50%. A more precise model needs to be used.

Response: The Northern Region of the USDA Forest Service selected the WEPP Model more than 10 years ago as the preferred tool to predict sediment loading from roads to project area streams. This model provides a method of estimating sedimentation risk to surface waters from roads and potential benefits of implementing best management practices. The model is currently fully supported and maintained by the Rocky Mountain Research Station of the USDA Forest Service. The WEPP model results show that due to upgrading roads, putting roads into long-term storage, and implementing BMPs on access and transmission line roads, the amount of sediment to streams in the analysis areas (including the transmission line alternatives) would decrease substantially from existing conditions. The WEPP model is best used as a comparative tool between different road designs. It is not an exact numeric predictor. Any predictions of runoff or erosion by any model will at best be within only ± 50 percent of the true value because erosion rates are highly variable. Replicated research has shown that observed values vary widely for identical plots spatially and temporally. In addition, there is considerable variability in soil properties, which adds to the complexity of erosion prediction. Actual sediment delivery rates to streams would be highly variable spatially and temporally due to large variations in local topography, climate, soil properties, and vegetation properties; predicted rates are only an estimate of a highly variable process. The model does not model changes in stream turbidity. Although MMC would implement BMPs to reduce sedimentation, MMC may request and the DEQ may authorize a short-term exemption from surface water quality standards for total suspended sediments and turbidity for construction of the powerline, access roads, the tailings impoundment, and other stream crossings. If authorized, the exemption would include conditions that minimize, to the extent practicable, the magnitude of any change in water quality and the length of time during which any change may occur. Any exemption would ensure that existing and designated beneficial uses of state water were protected and maintained upon completion of the activity. The length of exemption is determined by the length of the activity for which the exemption was requested.

331-40 Predictions of the volume of sediment generated from the construction and maintenance of the transmission lines are at best rough estimates. Access roads for transmission lines are expected to be within 100 ft. of surface waters. That close proximity would create a short pathway for sediment delivery to streams.

Response: The WEPP model was used to evaluate sediment delivery from existing and proposed transmission line roads. The model showed that for new roads, buffers of 40 to 60 feet between the road and stream would reduce sediment delivery to a stream to zero. For new and existing roads, the model showed that reducing the contributing road length by using drain dips, surface water deflectors or open top box culverts to route the water off the road away from drainages or wetlands would be very effective in reducing sediment loads from roads and buffers. Implementation of a SWPPP and use of BMPs, Environmental Specifications, 318 authorization and 404 permit conditions, and other design criteria would minimize sediment and dust reaching area streams during construction and decommissioning under most conditions. After construction was completed, disturbed areas would be stabilized and revegetated. Erosion and sediment delivery would decrease after vegetative cover was re-established. The DEQ would require on-site inspections of perennial stream crossings to determine the method that would result in minimizing impacts to stream banks and water quality.

260-1 Aquatics/WATSED model issues: If there is a WATSED III Version, the Final EIS should indicate whether this Version was used and indicate the month and year this Version was released.

260-1 Concerning sediment routing, it is not clear in Appendix H if the R-I WATSED model was used for any sediment routing calculations. The Final EIS should include information that describes the model being used for sediment routing analysis associated with Alternative 4.

Response: Section 3.11.2.3 of the FEIS disclosed that the R1-WATSED model was used to provide water yield estimates; there is not a newer version of the model. Information on the WATSED model is available in the project record. The WEPP model was used to estimate sediment delivery from roads in the SDEIS and FEIS.

331-19 It is predicted that during the evaluation and construction phase of the project, the mine would generate approximately 3.18 tons of sediment. In contrast, the proposed Rock Creek Mine is projected to introduce into Rock Creek 1,415 tons of sediment per year for a total of over 7,000 tons generated during that proposed mine's construction phase. Why the dramatic difference? Why is Montanore projected to generate so little sediment? How were the projected sediment numbers generated? Why wasn't the "Washington Method" employed when evaluating the sediment delivery to regional streams from the proposed Montanore Mine?

Response: In both projects, sediment production from roads would be reduced from existing conditions due to the use of BMPs. Section 3.13.4.2 was revised in the FEIS to reflect a revised WEPP analysis. For access roads located outside of the mine permit area boundary, the WEPP model showed that reducing the road length contributing to the nearest RHCA by adding drain dips, surface water deflectors or open top box culverts that would route the water off the road away from drainages or wetlands would reduce the average annual sediment leaving the road buffer and entering RHCAs by about one-third. Reducing the contributing road length to less than 150 feet would reduce sediment delivery further. The sediment runoff from roads outside of the permit area boundary would be minimized through the use of BMPs in all alternatives. Various studies have shown that BMPs implemented to reduce sediment movement from roads, cutslopes and fillslopes to drainages are effective in reducing sediment by 70 to 100 percent. Appropriate BMPs would be determined on a site- specific basis and would be monitored to determine their effectiveness. Within the mine permit area boundary, all stormwater runoff from roads would be captured by ditches and sediment ponds sized to contain the 10-year/24 hour storm. Any discharges from the ponds would be routed toward MPDES permitted outfalls. All alternatives include implementation of BMPs to reduce sediment delivery to streams.

For the Rock Creek mine project, possible effects on streams due to the movement of sediment from roads and mine facilities during construction were described in the 2001 FEIS. The WATSED model was used to quantify sediment impacts; the model results suggest that sediment mitigation of 400 tons per year reduction would result in no net increase, or an actual long-term reduction, in sediment in Rock Creek. The proposed sediment mitigation would reduce sediment yield to streams to less than existing conditions.

331-21 The SDEIS expresses concerns that storm events could produce a significant source of sediment during the construction of the various transmission line alternatives. Was this source of sediment included in the analysis of the predicted volume of sediment? This sediment would impact fisheries in adjacent streams. We are concerned about impacts to redband and Westslope cutthroat trout, as well as to the population of sculpin that provides a winter food base for bull trout. In the event that a large runoff-producing storm occurred during the initial reclamation period, soil losses along roads and road cuts may be locally moderate to severe. SDEIS, page 163

Response: Section 3.13.4.7 was revised in the FEIS and states that implementation of a SWPPP and use of BMPs, Environmental Specifications, 318 authorization and 404 permit conditions, and other design criteria would minimize sediment and dust reaching area streams during construction and decommissioning under most conditions, including large runoff-producing weather events.

3970 Sediment: Comment about cumulative effect

202-14 The DEIS establishes that the mine would measurably impact the East Fork of Rock Creek and exacerbate the dewatering issue in the main stem of Rock Creek. This dewatering of the mainstem of Rock Creek was determined in the 2006 Bi-Op for the Rock Creek mine to be the limiting factor for fish in this drainage. It is likely that the dewatering would be perpetual. Would the dewatering of the main stem Rock Creek from the Montanore Mine exacerbate the impacts from the sediment that is predicted to enter the stream from the proposed and permitted Rock Creek mine?

Response: The cumulative hydrology effects analysis was revised in the SDEIS. Section 3.11.4.9 of the SDEIS and FEIS disclosed that at the mouth of Rock Creek, the predicted reductions in low flows may not be measurable in the stream because the creek is often dry during baseflow periods (the flow reduction would be to subsurface flow in the stream alluvium). The 3D model predicted a cumulative 8% reduction in the $7Q_{10}$ flow in Rock Creek at the mouth without mitigation, and a cumulative 2% reduction with mitigation. It is unlikely that sediment increases to Rock Creek from the Rock Creek mine activities would be exacerbated by these streamflow reductions to Rock Creek.

389-8 Because the SDEIS fails to sufficiently analyze the effects of climate change, it anticipates the likelihood of such sedimentation as small and does not respond to potential impacts of the sedimentation.

Response: The effects of climate change on surface water hydrology (Section 3.11) and water quality (Section 3.13) were discussed in the following sections of the FEIS: 3.11.3.5, 3.11.3.1, 3.11.4.4.5, 3.13.3.4, 3.13.4.2.4, and 3.13.4.3.6. It is possible that climate change may result in a greater frequency of larger storms that proposed sediment ponds are not designed for, or climate change may result in a decrease in the frequency of larger storms. Section 3.13.2.2.2 of the SDEIS and FEIS disclosed that stormwater runoff events associated with storms exceeding the 10-year 24-hour storm (the design capacity of the stormwater retention ponds) were not analyzed. The water quality of both the storm runoff and the storm flows of the receiving streams are unknown. A qualitative analysis of possible changes in stream water quality during storm runoff events was completed. Streamflow would be very high during such an event, with discharges to creeks likely a small percent of the stream's peak flow. Any discharges from stormwater retention ponds would be sampled and regulated.

Water Rights

3990 Suggested new information/analysis

342-5 A detailed analysis needs to be conducted in advance of EIS acceptance regarding if acquiring all of the water rights is even possible, and demonstrate how purchasing specific water rights protects other senior users. It is also important for MMC to demonstrate that once the mine begins operations how it will protect existing users who experience harm since it not always possible to "shut off' a mine impact once it starts.

342-22 The SDEIS simply assumes that MMC can/will acquire senior water rights without providing any analysis of whether these water rights can be acquired. The Agencies need to perform a detailed analysis in advance of the Final EIS to determine if the acquisition of water rights by MMC is even possible and to demonstrate how purchasing specific water rights protects other senior water right users.

327-7 The SDEIS predicts that water demand for processing ore may require drilling auxiliary wells to supply up to 150 gallons per minute of "make-up water." This excessive groundwater drawdown is unacceptable in terms of runaway public resource consumption as well as in regard to resource preservation.

Response: Section 3.12.4.3 and Section 2.5.4.3.2 of the FEIS was revised and discussed the three water rights (formally called beneficial water use permits) for which MMC submitted applications to the DNRC. The applications include a mitigation plan to avoid adverse effects to senior water rights on the mainstem of Libby Creek. Section 3.12.4.3 also describes how MMC would avoid adverse effects to senior water rights on Ramsey and Swamp creeks. The Montana Water Rights Bureau will review MMC's submitted water rights applications and determine whether to issue the beneficial water use permits based on whether water is physically and legally available at the proposed point of diversion in the amounts requested.

3993 Comment about analysis-mine

248-25 The Libby Creek watershed may be over appropriated with respect to surface water. Currently there are over 11,000 acre feet of surface water appropriations, with the time of diversions focused on the irrigation season, which coincidences with the lower flow season. The DEIS is flawed because it only

considers impacts within the limited "zone of influence" and ignores downstream water resource impacts and harm to other water

321-1 The DEIS does not address the fact that the daily operation of the mine would require more water, by many gallons per minute, than can presently be supplied. If such amounts are needed to run the mine, then the issue needs to be addressed as to from where it will come.

342-5 The supplemental draft EIS misidentified or grossly underestimates the active water rights on Libby Creek. The supplemental draft EIS states that the active water rights total a diversion of 2.5 CFS from Libby Creek. However, data from the DNRC water rights data base indicates that there are 39.51 CFS total water rights diversions (plus 2 additional rights that do not specify diversion rates) from Libby Creek. In addition, the U.S. Forest Service holds about 40 CFS of in stream flows water rights. These total about 80 CFS, which is of course much greater than 2.5 CFS.

342-22 • The SDEIS misidentifies and grossly underestimates the active water rights on / Libby Creek. The SDEIS states that the active water rights total a diversion of 2.5 CFS from Libby Creek. Montana DNRC data indicates that there are 39.51 CFS of total water rights diversions from Libby Creek (not including 40 CFS in stream flow water rights held by the U. S. Forest Service).

311-1 and 342-18 The Agencies also fail to fully address and evaluate the impact of the Montanore Project on existing senior water rights.

342-15 What impact would these "acquired water rights" have on existing senior water rights? The Agencies fail to address this key aspect of the Montanore Project.

347-1 Not addressed is how changes in water flow will impact senior water right holders.

Response: MMC applied for new surface water and groundwater rights using the project components of Alternative 3 (MMC 2012). These applications were discussed in section 2.5.4.3.2 of the FEIS. Section 3.12.3 of the FEIS was updated to include a discussion of all surface water rights in the Libby Creek watershed. In the analysis of effects (Section 3.12.4 of the FEIS), all downstream water rights are considered. The effects of MMC's water rights that would need to be acquired for the mine project are discussed in Section 3.12.4 of the FEIS. Any adverse effects to existing water rights would need to be mitigated; the mitigation is discussed in Section 3.12.4.

342-4 Since the agency model appears to underestimate the flow reductions because of the flawed conceptual and numeric models, the harm to LPMC water rights will be much greater than implied in the supplemental draft EIS. In addition, the downstream water rights on Libby Creek will also be harmed. Based on existing appropriations, the Libby Creek watershed may currently be over appropriated with respect to surface water.

Response: As discussed in Section 3.11.2.3 of the SDEIS and FEIS, with the data currently available, the model results provide a potential range of dewatering rates and streamflow impacts. They are the best currently available estimates of impacts and associated uncertainty that can be obtained using currently available data in the groundwater models. The 3D groundwater flow model would be refined and rerun after data from the Pre-Evaluation and Evaluation Phase were incorporated into the model (see section C.10 in Appendix C of the SDEIS and FEIS). Following additional data collection and modeling, the predicted impacts on surface water resources in the project area may change and the model uncertainty would decrease. Section 3.12.4 of the FEIS discussed effects on downstream water rights and how such effects would be mitigated. The Montana Water Rights Bureau will review MMC's submitted water rights applications and determine whether to issue the beneficial water use permits based on whether water is physically and legally available at the proposed point of diversion in the amounts requested.

3995 Comment about effect-mine

327-8 We draw our drinking water from a well that is 275 feet deep. Even a nominal alteration in the groundwater level due to MMC water consumption would almost certainly render our well dry.

Response: Section 3.13.4 of the SDEIS and FEIS indicated that there are no domestic wells within the predicted area of drawdown due to mine dewatering or pumpback well operation.

248-25 The DEIS model predicts flow reductions in Ramsey and Libby Creek at the point of diversion for LPMC water rights, which are for 1 cfs at each point of diversion. The DEIS indicates low flows at the PODs are about 1 cfs, therefore, any reduction in flows will harm LPMC water rights. Due to the use of unrealistic models the flow reductions are underestimated, therefore, the harm to LPMC water rights will be much greater than implied in the DEIS.

Response: Effects on LPMC water rights and the mitigation to protect these water rights were discussed in the revised Section 3.12.4 of the FEIS.

327-8 KNF and the other lead agencies cannot legally allow the Cleveland's senior water rights to be superseded by those of the proposed Montanore Mine.

Response: As discussed in revised Section 3.12.1 of FEIS, the Montana Water Rights Bureau, within the Water Resources Division of the DNRC, administers the Water Use Act and assists the Water Court with the adjudication of water rights. An Application for Beneficial Water Use Permit requires proof that there is water physically and legally available at the proposed point of diversion in the amount requested. If senior water users would be adversely affected by a new use, the application must include a mitigation plan with specific conditions that the new water user is willing to accept to eliminate or mitigate potential adverse effects on senior water rights. Section 3.12.4 of the FEIS discussed mitigation plans to protect senior water users, including the water rights owned by the Clevelands.

Land Use

4000 Suggested new information/analysis

19-1 Alt D did not take into account the subdivided land parcel in Miller Creek Section 22 nor the recently approved subdivision at the mouth of Miller Creek Section 30

248-6 Most of the private land found in the mine facilities and permit area in the Libby Creek drainage is land owned by LPMC.

248-8 Revise the above referenced Figures so that all the figures in the DEIS are presented in a consistent manner so as to accurately depict the correct land status to reflect the presence of LPMC private land in the Analysis Area.

Response: The transmission line alignments were shifted in the SDEIS to increase distance from and reduce impacts to private lands in the Miller Creek drainage. Many of the figures were revised to show private land parcels.

4003 Comment about analysis-mine

243-1 The DEIS does not — in any way — evaluate the impacts of the mine proposal to private lands which lie adjacent to and down gradient from the proposed land application disposal sites. It's a basic requirement of both the National Environmental Policy Act (NEPA) and the Montana Environmental Policy Act (MEPA) that agencies must look at all direct, indirect, and cumulative impacts of a proposed project. In other words, NEPA analysis doesn't stop at the federal/private property line. The Agencies' failure to evaluate the many and various impacts of this proposed mine has resulted in a fatally flawed DEIS.

248-6 The Agencies need to address the impacts of the Montanore Project on LPMC land in the Libby Creek drainage. The DEIS analysis is deficient in its handling of the impact of the proposed Project relative to LPMC's private land.

248-26 LPMC owns 1,060 acres in the Libby Creek drainage, straddling Libby Creek and the confluences of Libby Creek with Ramsey Creek and Poorman Creek. The DEIS does not—in any way—evaluate the

impacts of the mine proposal to LPMC's lands which lie adjacent to and down gradient from the proposed land application disposal sites.

248-27 LPMC owns property adjoining the proposed Montanore Project. Two of the proposed land application areas are immediately adjacent and upstream from LPMC's land. These lands will certainly be impacted by the project. Additionally, other impacts to LPMC's lands include reduction in its property value due to proximity to an industrial mining operation, noise and lighting impacts during construction, increased traffic and related dust on roads that run through our adjacent to LPMC's land and impacts to the scenic views from the property. None of these impacts were evaluated. All these impacts to LPMC's private property must be evaluated fully under NEPA and MEPA before the Agencies reach a decision.

311-1 The Agencies have failed to address impacts to LPMC lands were from the Montanore Project.

Response: The effects of the mine alternatives on adjacent private lands are described in detail in the Air Quality, Hydrology, Aquatic Life and Fisheries, Scenery, and Sound sections of the DEIS, SDEIS, and FEIS. The land use discussion in Section 3.15.4 of the FEIS was revised to further describe and cross-reference the potential effects of mine development on adjacent private lands.

4010 Comment about cumulative effect

201-1 The greatest adverse environmental impact of the west fisher Alt. E. transmission line will be making power readily available to four undeveloped sections of Plum Creek land. Today, Plum Creek is a land development company and the West Fisher is the only undeveloped drainage in Lincoln County. In fact, the west fisher Plum Creek sections are the only private lands available in and adjoining the cabinet wilderness. That said, development of the west fisher sections of Plum Creek land is not feasible without power.

19-1 If you consider the impact on those properties, and the likelihood that those will be developed long before the mine starts construction, the effect to small private property owners is higher in Alternative D. Alternative D also crosses more Plum Creek Land than Alternative E. Because of the Conservation Easement on Plum Creek lands in Section 30 and 31, the potential for new subdivisions under the Alternative E powerline near the Fisher River and Highway 2 is unlikely, while the potential is almost assured for the Miller Creek route.

Response: The indirect or cumulative effect of increased private land development resulting from transmission line installation is speculative, and was not analyzed.

4019 Comment about regulatory compliance

202-31 The DEIS admits that: "the lead agencies did not identify an alternative that would be in compliance with all KFP standards (see section 2.13.2.1, Forest Plan Consistency)." DEIS at 31 (emphasis added). As discussed above, there is no "mining exemption" from the duty to comply with the NFMA and all Forest Plan/INFISH standards. Thus, at the outset, the Project cannot be approved, due to the admitted failure to comply with all

202-33 The DEIS proposes to amend the Kootenai Forest Plan (KFP) to allow the projected use of forestlands that would be required for the Montanore project. The agency cannot change the allocation of lands in the 1987 KFP simply to accommodate the needs of a mining proposal. If changing the allocation of federal lands can be done at any time depending on the needs of particular projects, what is the purpose of a forest plan?

Response: As described in the DEIS, SDEIS, and FEIS, the Kootenai Forest Plan (KFP) establishes management direction in the form of prescriptions consisting of goals, desired conditions, objectives, standards, and guidelines. This direction may be established to apply throughout the forest plan area (forest-wide direction) or they may be established for only a part of the forest plan area, a geographic area or management area. The KFP was amended in 1992 to accommodate the then-approved Montanore Project. The FEIS was issued after the 2015 KFP was adopted. It would be amended to accommodate the Montanore Project. The amendment would be completed in accordance with the regulations governing Forest Plan amendments found in 36 CFR 219 and Forest Service Manual 1921.03.

Recreation

4031 Suggested New Mitigation

17-1 Keep the road prism in place so they can be used as trails. If culverts are removed, there should be a constructed trail through.

Response: At closure, reclamation of the Bear Creek Road, new roads, currently open roads, and all new bridges used in Alternative 3 would be the same as Alternative 2 (Road management post-closure in all alternatives is discussed in Section 2.4.3.1.7 in the FEIS). Generally, the approach is as follows: 1) the Bear Creek access road (NFS road #278), from US 2 to south of the tailings impoundment, would not be returned to its pre-mine width and the roadway would remain 20 to 29 feet wide; 2) all new roads, except the Bear Creek access road, constructed for the project would be reclaimed, which includes grading to match the adjacent topography, obliterating the road prism (including all roads constructed for the project; 3) reclamation of open roads upgraded for operations previously open to the public use would be completed to allow the road to be retained and used in a manner consistent with the pre-operational conditions (the bridge on NFS road #6210 would be removed and would be reclaimed consistent with open roads; 4) closed roads used for mine operations would be reclaimed to pre-mine conditions (access restrictions would be upgraded or installed (gates, kelly humps, etc.) as required by the KNF, and the road surface would be scarified and seeded).

19-2 A trail be designed and constructed through the culvert removal area.

19-2 For any alternative that closes road #4725 to enlarge core, we would like assurance that the road template remains in place and would prefer that none of the culverts be removed.

Response: Road #4725 is currently gated. Under mine alternatives 3 and 4 and transmission line Alternatives D-R, and E-R, this road would have barriers put in place before the construction phase and would be restricted year-long to all motorized vehicles.

4033 Comment about analysis-mine

344-4 In the SDEIS all forest values lumped under recreation (hunting, fishing, fire-wood cutting, berry-picking, riding thru the countryside, or just being on the land in general) are second order to business demands. These attributes are never assigned any economic value and the cost of public lands loss or degraded is never calculated.

389-4 The Forest Service must respond to the following. How will recreational use be affected and what data support that determination? How much recreational use does the wilderness receive?

Response: Effects on recreation near the Montanore Mine would occur, and were disclosed in Section 3.16.4 of the DEIS and FEIS. As discussed in Section 3.16.3 of the DEIS and FEIS, much of the recreational use (including camping, hiking, fishing, and driving) is dispersed and is not tracked by managing agencies (KNF and FWP). Relevant recreation use numbers, where available, were presented in Section 3.16.3 of the DEIS and FEIS. Estimated annual visitation to the entire CMW (12,100) was reported in the 2009 Cabinet Mountains Wilderness Management Plan, and was added to Section 3.16.3 of the FEIS.

4035 Comment about effect-mine

54-1 In essence, the presence of the Montanore Mine would create a 16-year long closure (at a minimum) of public (taxpayer-owned) roads in the Upper Libby Creek area, the Poorman Creek area, and the Ramsey Creek area. Currently, taxpayers use all three of these roads to access and recreate within the Cabinet Mountains Wilderness Area. The only ways that the public can access the Libby Creek, Ramsey Creek, and Poorman Creek headwaters are via the roads that will be closed.

Response: The only outright closure of access would be in Ramsey Creek under Alternative 2. Otherwise, recreational access to the CMW would remain available in all three drainages. Access to the Poorman Creek drainage would remain the same (snow vehicles only) under Alternative 2. The Poorman and

Ramsey Creek access would change from restricted (snow vehicles only) to foot traffic only in Alternatives 3 and 4. The Libby Creek Road would remain open to public vehicle traffic except during Evaluation Phase snow plowing. The upper Libby Creek drainage would remain restricted to public vehicle traffic. Figures 29 and 38 in the FEIS showed the roads proposed for use for Alternatives 3 and 4.

297-2 How will dried up streams and watersheds affect our recreation and tourism?

Response: Sections 3.6.4 (Aquatic Life and Fisheries) and 3.11.4 (Surface Water Hydrology) discussed the impacts of the proposed project on streams. None of the hydrologic impacts are anticipated to affect water-based recreation or tourism.

344-4 While increased use may diminish primitive recreation opportunities in some areas (particularly near the wilderness boundary), it would not substantially affect the ability of some visitors to find high-quality opportunities for primitive recreation within the wilderness". P496. While some visitors could still find high quality opportunities somewhere within the CMW, many more might not". A broad spectrum of wilderness attributes would be diminished by this project.

Response: See comment response 4703 (p. M-420).

344-5 Recreational Values. The proposed discharges at the tailings impoundment area would reduce public recreational access. Snowmobile and cross-country skiing use of the Libby Creek road and parts of Upper Libby Creek Road during construction, and of the Bear Creek Road during mine life would be eliminated. Road closures also would be implemented throughout the Permit Area to mitigate for the effects on the grizzly bear. The overall character of the trail user experience would be reduced in the Libby Creek drainage due to noise, traffic, and visual effects associated with the proposed facilities. These effects, combined with increased knowledge of, and access to, the general analysis area, would likely displace some dispersed recreation (hunting, hiking, and camping) to other areas of the forest. Individuals who are currently accustomed to these areas may use other areas of the forest with fewer visitors and developed facilities. P983 The last is a big loss for the community and another example of diverting public resources to industry. Basically the only mitigation the FS offers for these impacts is for those affected to go somewhere else. These attributes should not be dismissed so readily.

366-2 Mitigation of loss and Little Cherry Creek Loop Road and the closure of others roads affected by mine operations will directly affect OHV use and other multiple land users.

389-5 How would the mine affect opportunities for primitive recreation such as fishing, hunting, horse packing, backpacking, and backcountry skiing?

Response: Effects on recreation near the Montanore Project were disclosed in Section 3.16.4 of the DEIS and FEIS. The proposed mine and associated facilities in all alternatives would reduce public recreational access due to road closures. Public motorized and non-motorized access would be restricted to mine and agency personnel in all permit areas. The improvements to the Bear Creek Road would improve recreational access to the area and would safely accommodate mine-related and public traffic. Because the Bear Creek Road would be plowed in the winter, it would improve winter recreation access to the analysis area. Similarly, the Libby Creek Road would be plowed for 2 to 3 years during construction, improving winter recreation access to areas off of the road. Snowmobile and cross country skiing use of the Libby Creek Road and parts of Upper Libby Creek Road during the Evaluation and Construction Phases, and of the Bear Creek Road during the Operations Phase, would be eliminated. In Alternatives 3 and 4, MMC would fund access changes on numerous roads for wildlife mitigation. These closures would eliminate motorized recreational access and use, such as camping and hunting, in these locations, but would not affect the overall quality or accessibility or recreation in the analysis area. Non-motorized access would be maintained. Other access changes, such as changing access restrictions from a gate to a barrier or converting restricted roads to trails, would not affect recreation access.

389-8 The SDEIS also suggests that lower macroinvertebrate production as a result of nutrient changes in Rock Lake may affect fisheries. (SDEIS § 3.6.4.2.3, pp 222). Yet it states that opportunities for primitive recreation will not be affected in the CMW. This is contradictory.

Response: Section 3.6.4 of the DEIS and FEIS discussed potential effects on fisheries in Rock Lake, finding that any effect would be minimal. A corresponding impact on primitive recreation (fishing) is speculative and was not analyzed.

4047 Comment about mitigation-mine

327-25 We also fail to appreciate the value of MMC becoming involved in any way in other recreational areas of the KNF. For example, the idea of MMC "funding a volunteer camp host…at Howard Lake Campground" is horrifying. We frequent the lake during the summer months and would consider any MMC presence at the lake or surrounding campground distressing and invasive. By the way, how can one "fund" a volunteer?

Response: The proposed involvement of MMC in supporting recreational activities, including the funding of a campground host, would occur at the KNF administrative level. The funding or involvement of MMC in these activities would be indistinguishable to visitors who would benefit from these activities.

366-2 There needs to be mitigation that addresses the loss of road system and gives OHV enthusiasts a place to recreate in its first setting where they feel some level of solitude and isolation away from on-highway vehicles.

Response: As discussed in Section 3.16.4 of the DEIS and FEIS, effects to recreation near the Montanore Mine would occur. While most road closures would be mitigated by reroutes to facilitate recreational use, some loss of existing recreational opportunities would occur.

Scenery

4060 Suggested new information/analysis

141-6 This area often has cloud and snow cover. As such it may have a significant indirect light pollution foot print under some conditions. How far away will this project be visible at night?

Response: The distance from which project facilities would be visible was not determined and not needed to disclose effects on scenic resources.

141-6 What surveys have been conducted on the nighttime visual quality of this region and how will these attributes be impacted by mine activity?

Response: No surveys were conducted on the nighttime visual quality. Current sources of night lighting are activities at the Libby Adit and limited residential development on private land. Section 3.16.4 of the DEIS, and section 3.17.4 of the SDEIS and FEIS disclosed the effects on users of increased night lighting.

4061 Suggested new mitigation

141-6 Whatever alternative is chosen, please consider using light pollution reducing lighting throughout the project area.

142-2 Will the Montanore mine use covered outdoor lighting structures, with "full cutoff" design, to illuminate only the area below, and not the sky above? Will the mine use high pressure sodium light bulbs that give off a yellow color, not a glaring fluorescent light? What light-density restrictions, and energy-saving light curfews would be implemented?

Response: As part of the agencies' mitigation, MMC would shield or baffle night lighting at all facilities.

4064 Comment about analysis-transmission line

141-6 The scenic assessment of this project seems based in large part on data gathered at key observation points along main roads used by the people of Libby, Troy, and Eureka. This is OK as a starting point but not as a destination.

Response: Section 3.17.2.2 of the SDEIS was revised to provide a description of the key observation points and the reason for their use in the analysis. The scenic assessment was based on change in line, color, texture, form and character of the landscape, and compliance with the 2015 KFP's Scenic Integrity Objectives. Effects also were assessed quantitatively by determining mine facilities and miles of transmission line visible from key observation points, important travel corridors, and the CMW.

4065 Comment about effect-mine

312-2 In addition to environmental concerns and risks there is much to be lost in the realm of the scenic quality of the area. Figure I-1 and I-2 in SDEIS vol. 2 depict a visual simulation of what the Poorman and Little Cherry Creek impoundments would look like. In my opinion, the scar that will be left on the land forever as a result of these mining activities is disgraceful and will forever define this beautiful area of Lincoln County. The results of the Montanore project will be a greatly diminished scenic experience for everyone who admires the view of the Cabinet Mountains from the Libby Creek road. Furthermore, the visual confirmation of the size of these impoundments drives home reality of how severe the consequences of a pipeline or impoundment failure would be.

Response: Section 3.16.4 of the DEIS and Section 3.17.4 of the SDEIS and FEIS disclosed the anticipated effects on scenic resources. Section 3.14.3.2 disclosed the consequences of a pipeline or impoundment failure.

389-5 What visual impacts will be caused by the mine?

Response: Section 3.16.4 of the DEIS and Section 3.17.4 of the SDEIS and FEIS disclosed the anticipated visual effects of the mine alternatives.

4070 Comment about cumulative effect

327-40 Visual pollution would also be multiplied times two, with such visuals as double power line corridors, twin tailings pipes, and matched towering tailings impoundments balancing each other on either side of the Cabinet range creating an unsightly industrial wasteland in place of coniferous forests and pristine alpine lakes.

Response: Section 3.17.4.11 of the FEIS was revised to describe the cumulative effect of the Montanore and Rock Creek Projects. There would not be a considerable cumulative effect on scenery..

4072 Comment about effect-transmission line

110-3 We also strenuously object to the imposition of unsightly high voltage lines on our pristine views of the national forest from every vantage point on our forty acres. Such towers, whether they be aluminum or wooden, cannot be anything other than objectionable intrusions, cutting wide swaths through the beauty of our forests, as disfiguring as a bright pink scar on an otherwise flawless face. We consider the imposition of power line towers within sight of our property to be a particularly objectionable example of visual pollution which we will not accept.

Response: The alignments of transmission line alternatives C-R, D-R and E-R were modified in the SDEIS and again in the FEIS to reduce effects on private land.

236-2 This can be partially achieved, by using any of my suggestions on alignment, and retaining cover, where ever possible along the entire routes. Anything that will breakup the continuous view of a power line, from any vantage point, being that of a hiker in the wilderness, or an airplane passenger should be design criteria for the final location, per recommendations of the project landscape architect.

Response: Section 2.5.3.7.3 of the SDEIS and FEIS was revised to include additional mitigation measures to reduce effect on scenic resources.

4077 Comment about mitigation-mine

327-25 MMC would design and construct a scenic overlook with information and interpretive signs on NFS road #231 (Libby Creek Road) downstream of the Midas Creek crossing with views of the tailings impoundment. MMC would develop two interpretative signs, one on the mining operation and another one on the mineral resource and geology of the Cabinet Mountains. Parking would be developed in cooperation with the KNF. (p. 43, SDEIS, Volume 1). Rather than an added bonus to the wholesale destruction of the Kootenai National Forest within the proposed Montanore operational boundaries and beyond, we consider such a concept to be invasive and extremely ill-thought-out. Who would want a bird's eye view of a toxic dump site?

Response: Mineral development on public lands is an appropriate use. The pullout and interpretative signs would provide the forest user with information about the mining project and the geology of the Cabinet Mountains. Not all users would appreciate such information.

4078 Comment about mitigation-transmission line

141-7 The visual or scenic attributes of this area are being afforded scant protection. Much of the mitigation seems to involve simply changing the VQO guidelines from a scenic designation to a VQO with maximum modification solely to comply with the forest plan. This meets the legal requirements of the forest plan but provides inadequate protection to the visual resource. Because scenic resources cannot easily be assigned a monetary value, they are not sufficiently valued and often sacrificed. I think the current visual attributes are substantial and dismissed too easily.

Response: Section 3.16.4 of the DEIS and Section 3.17.4 of the SDEIS and FEIS disclosed the anticipated visual effects of the mine and transmission line alternatives.

Socioeconomics

4100 Employment and Income: Suggested new information/analysis

347-1 Also of particular concern to CRG members is the invalid information used to determine the socio/economic impacts. Data gathered in 2005, when the construction and housing industry was booming and economy in general was more stable, is obviously no longer valid in today's economic climate. We need new information that is current and applicable to the specific area. The present Troy community should be studied to determine the socio/economic impacts of the Troy Mine. This determination could provide information that will be helpful if the Rock Creek and Montanore mines are developed.

Response: Based on factors presented in section 3.17 in the DEIS and section 3.18 in the FEIS, the socioeconomic analysis area for the proposed project was Lincoln County and the Towns of Libby, Troy, and Eureka. Affected jurisdictions in the analysis area included the incorporated municipalities of Libby and Troy as well as the Libby, Troy, and Eureka School Districts. Section 3.18.3 in the FEIS presented updated demographic and economic data based on the 2010 Census. In addition, the USDA Forest Service completed an updated analysis of potential employment and labor income effects from the proposed Montanore Project. The updated analysis was incorporated into Section 3.18.4.2 in the FEIS. Analysis of the socioeconomic effect of the Troy Mine is outside the scope of the Montanore Project EIS.

4101 Employment and Income: Suggested new mitigation

97-5 Ensure a major percent of workers for/at the Montanore project are local residents. . . Ensure that a goodly percent of development costs goes towards local job training. . . Ensure that experienced "foreign" mining personnel do mentor the local workforce . . .Ensure that sound equity is given local property owners for lands used for Montanore.

Response: The analysis assumed 80 percent local hiring**.** Sections 3.17.4.2.1 through 3.17.4.2.3 in the DEIS (now Sections 3.18.4.2.1 through 3.18.4.2.3 in the FEIS) discussed employment effects. Section 3.17.4.2.4 in the DEIS (now Section 3.18.4.2.4 in the FEIS) discussed population effects including in-migration into Lincoln County. Additional information on local hiring was presented in Section 2.4.2.9 of

the FEIS. The only private property physically affected by the project would be lands owned by MMC or Plum Creek Timber Company. MMC's use of Plum Creek lands would be a private transaction between the two companies; MMC would either purchase or acquire an easement before accessing such lands. MMC also would purchase or acquire a conservation easement on private land for grizzly bear mitigation.

4103 Employment and Income: Comment about analysis-mine

74-17 This considers recreation alone. The effect would be compounded were the mines to act as a deterrent to individuals exploring the purchase of a second home. The DEIS also excludes this factor. It does not analyze whether or not this will occur, but rather makes the assumption that: "The Montanore Project would have relatively minor effects on social well being and quality of life in the analysis area. Mining and other natural resource development has been an important part of the local economy for many years." (DEIS 3.17.4.2.8, pg 592).

Response: Information on the impacts to property values was modified in Section 3.18.4.2.8 of the FEIS to reflect that projections for increased housing demand during mine development and operation suggesting that most property values (including second homes) in the area would increase, but the value of some specific parcels or types of properties could be affected negatively for some periods during mine construction, operation, and reclamation. It is also possible that the use of a parcel to its current owner, that is its ability to serve the specific purposes for which the property was purchased, may be impacted negatively even though its potential market value may not decrease.

74-17 The Socioeconomic Impact section of the EIS (3.17, pg 572) stresses the benefits that the project will provide, in terms of stimulating the local economy. However, its analysis of the costs is not nearly as thorough. For example, the section cites recreation as a major source of revenue in Libby. It also states that a large population of part-year residents own second homes in the area. The analysis does not do a thorough job of highlighting impacts loss of tourism might have on the Libby economy. It mentions that in 2002 about 1.1 million visitors used the KNF for recreation and that about 25 percent of 1,302 visitors interviewed said that the KNF was their primary destination. In a typical year, the DEIS states, visitors to the KNF spend an average of $2,024 on outdoor recreation activities. Do the math and you find that, if this were universally true, the recreational use economy in Libby would then be valued at around $2,000,000,000. The impact to this clearly substantial sector of the economy should recreation be reduced by the combined visual and auditory disturbance of 3 mines, is not assessed.

Response: Section 3.18.3.4.1 in the FEIS was revised to incorporate new visitation data for the KNF. The KNF encompasses over 2.2 million acres. Access into the Forest is via U.S. Highways 2 and 93 and Montana State Highways 37, 56, 200, and 508. It would be incorrect to assume that all visitor spending occurs in Libby. Section 3.15.4 of the DEIS (now Section 3.16.4 in the FEIS) discussed impacts to recreation, which is considered the basis for tourism in the analysis area. Sections 3.17.3.8 and 3.17.4.2.8 of the DEIS (now Sections 3.18.3.8 and 3.18.4.2.8 of the FEIS) gave added emphasis to the ongoing national and regional growth of recreation and tourism. It is expected that recreation/tourism would continue to be an important component of the economy in the analysis area. The referenced sections indicated that mine development could produce some effects and some recreation resources may be subject to increased use due to better road access and familiarity among mine employees in the area. While the combination of mine development and improved recreational access may displace some dispersed recreation activities (such as hunting, hiking, and dispersed camping) within the analysis area to other portions of the KNF, the overall effect on recreation use and opportunity in the KNF would be negligible (Section 3.16.4 in the FEIS). The project is unlikely to have any effect on the recreation and tourism sectors of the economy in Libby.

74-18 Finally, at no point in the Socioeconomic Impact Analysis (SIA) does the project compare the estimated value of the ore deposit with the benefit of the project to Libby. How does the benefit to Libby compare with the benefit to the mining company? How do the potential costs to Libby compare with the costs to the mining company? Who is ultimately assuming responsibility here, and is it fair and just?

Response: The above comments reflect on matters pertaining to the Hard Rock Mining Impact Act, which is designed to assist local governments in handling financial impacts caused by large-scale mineral

development projects. The socioeconomic analysis in the DEIS and FEIS provided an overview of the fiscal implications for local government of the project alternatives. Readers desiring a more detailed analysis of the fiscal implications of the project should review the project Hard Rock Mining Impact Plan (Western Economic Services, LLC 2005), which was completed with the cooperation of the affected local governments.

74-18 The DEIS is not fully compliant with CEQ guidance, nor does it provide the information necessary for a citizen to make a full, informed decision about the impacts the mine will have. Rather, the analysis seems slightly biased towards the mine. It does not consider the mine's impact to recreation-based tourism Libby's economy.

Response: Section 3.15.4 of the DEIS (now Section 3.16.4 in the FEIS) discussed impacts to recreation, which is considered the basis for tourism in the analysis area. Sections 3.17.3.8 and 3.17.4.2.8 of the DEIS (now Sections 3.18.3.8 and 3.18.4.2.8 of the FEIS) gave added emphasis to the ongoing national and regional growth of recreation and tourism. It is expected that recreation/tourism would continue to be an important component of the economy in the analysis area. The referenced sections indicated that mine development could produce some effects and some recreation resources may be subject to increased use due to better road access and familiarity among mine employees in the area. While the combination of mine development and improved recreational access may displace some dispersed recreation activities (such as hunting, hiking, and dispersed camping) within the analysis area to other portions of the KNF, the overall effect on recreation use and opportunity in the KNF would be negligible (Section 3.16.4 in the FEIS). The project is unlikely to have any effect on the recreation and tourism sectors of the economy in Libby.

74-18 Without an idea of the value of the ore deposit, it is also impossible to determine whether the Montanore project is compliant with legislation (the Mining Act and the Wilderness Act) outlining the profit margin required to make the mine legal. It is difficult to determine, based on this DEIS, the long-term viability of the mine. The SIA states that if the mine were forced to temporarily cease operations (as the Troy mine has been due to financial concerns), it would have a vast impact on an entire sector of the economy-yet the potential for this has not been quantified.

Response: Section 1.6.1 of the DEIS and the FEIS summarized the applicable major laws pertaining to the Montanore Project. KNF Supervisor will issue a decision on MMC's proposal in a ROD. The decision objective is to select an action that meets the legal rights of MMC, while protecting the environment in compliance with applicable laws, regulations, and policy including the 1872 General Mining Law, Multiple Use Mining Act, and the Wilderness Act. Socioeconomic effects associated with Montanore Project were presented in Section 3.17.4 of the DEIS and updated in the FEIS (now Section 3.18.4). The employment and income effects were based on four project phases including: construction, production, closure, and reclamation. Project employment and income and the duration of the mine-life phases could vary from projections, depending upon construction progress and the resources applied by MMC toward full-scale operations. Mineral and input market conditions could cause operations to be curtailed or shut down on short notice at any point during projected mine life. Any shutdown of operations for a few weeks or months would cause a sudden drop in local area income. Gross proceeds from the mine may fluctuate from year to year, depending on factors such as the quality of ore, production levels, production costs, and world metals prices.

On January 1, 1984, the CMW was withdrawn from mineral entry under provisions of the Wilderness Act, subject to valid existing rights. The Wilderness Act requires federal agencies, such as the KNF, to ensure that valid rights exist prior to approving mineral activities inside a congressionally designated wilderness. To establish valid existing rights, mining claimants must show that they have made a discovery of a valuable mineral deposit on the claim(s) prior to the withdrawal date, and have maintained discovery. In 1985, the Forest Service verified that valid rights to the minerals patented on HR 133 and HR 134 claims have been established within the CMW. Those rights are currently held by MMC. The role of the KNF under its primary authorities in the Organic Administration Act, Locatable Regulations 36 CFR 228 Subpart A, and the Multiple Use Mining Act is to ensure that mining activities minimize adverse environmental effects on National Forest System lands and comply with all applicable environmental laws. The KNF has no authority to unreasonably circumscribe or prohibit reasonably necessary activities under

General Mining Law that are otherwise lawful. MMC's Preliminary Economic Assessment provided an economic assessment of the Montanore Project, subject to the limitations of the analysis (Mine and Quarry Engineering Services 2011). The Preliminary Economic Assessment is a publicly available report.

4105 Employment and Income: Comment about effect-mine

74-19 A thorough analysis of the mine's possible effects on the tourism industry in Libby.

Response: Section 3.15.4 of the DEIS (now Section 3.16.4 in the FEIS) discussed impacts to recreation, which is considered the basis for tourism in the analysis area. Sections 3.17.3.8 and 3.17.4.2.8 of the DEIS (now Sections 3.18.3.8 and 3.18.4.2.8 of the FEIS) gave added emphasis to the ongoing national and regional growth of recreation and tourism. The referenced sections indicated that mine development could produce some effects and some recreation resources may be subject to increased use due to better road access and familiarity among mine employees in the area. While the combination of mine development and improved recreational access may displace some dispersed recreation activities (such as hunting, hiking, and dispersed camping) within the analysis area to other portions of the KNF, the overall effect on recreation use and opportunity in the KNF would be negligible (Section 3.16.4 in the FEIS). The project is unlikely to have any effect on the recreation and tourism sectors of the economy in Libby.

74-20 Financial justification for the mine that makes it clear what the profit margin will be and who the beneficiaries are.

Response: The above comment reflects on matters pertaining to the Hard Rock Mining Impact Act, which is designed to assist local governments in handling financial impacts caused by large-scale mineral development projects. The socioeconomic analysis in the DEIS and FEIS provided a correct overview of the fiscal implications for local government of the project alternatives. Readers desiring a more detailed analysis of the fiscal implications of the project should review the project Hard Rock Mining Impact Plan (Western Economic Services, LLC 2005), which was completed with the cooperation of the affected local governments.

279-2 The corporation boasts that the project would create hundreds of jobs for local residents, yet states in its own annual report that importing outside workers will be necessary.

Response: Sections 3.17.4.2.1 through 3.17.4.2.3 in the DEIS (now Sections 3.18.4.2.1 through 3.18.4.2.3 in the FEIS) discussed employment effects. Section 3.17.4.2.4 in the DEIS (now Section 3.18.4.2.4 in the FEIS) discussed population effects including in-migration into Lincoln County.

4112 Employment and Income: Comment about effect-transmission line

102-1 We also have great concern over our property value.

110-3 Furthermore, in consequence of the serious problems which would be caused by following power line placement alternatives B, D, or E, the value of our 40 acres will be significantly compromised. Real estate professionals, even those performing studies on behalf of the power line companies themselves, will attest that power lines are bad for property values. On the case value law front there is continuing support for the admissibility of expert appraisal evidence based on "fear in the market place."

127-1 As we were searching for places to buy, before we found our dream home here, we found but turned down a very nice house/land for a very good price located between Columbia Falls and Hungry Horse after realizing that these same kind of transmission Lines ran through the area. that's when we realized why that place for sale was such a good price (and these transmission lines weren't even in view of the house/land, just too close). In fact, there were other very nice places in the 'below market value' price range that we found had either these transmission lines nearby or missile silos and because of that fact we did not even look into buying them

327-20 The value of our 40 acres will be significantly compromised. Real estate professionals, even those performing studies on behalf of power line companies themselves, will attest that power lines are bad for property values.

Response: Information on the impacts to property values was modified in Section 3.18.4.2.8 of the FEIS to reflect that projections for increased housing demand during mine development and operation suggesting that most property values (including second homes) in the area would increase, but the value of some specific parcels or types of properties could be affected negatively for some periods during mine construction, operation, and reclamation. It is also possible that the use of a parcel to its current owner, that is its ability to serve the specific purposes for which the property was purchased, may be impacted negatively even though its potential market value may not decrease.

Energy Supply and Allocation

4180 Suggested new information/analysis

48-2 How will having another large power consumer on this line affect the cost and amount of power available to the aluminum plant? Will it be competing with Montanore for the same pool of available power?

Response: Columbia Falls Aluminum Company (CFAC) is a Direct Service Industry (DSI) customer of BPA. In contrast, the Montanore Project would be a customer of Flathead Electric Cooperative, Inc. (FEC). FEC would supply the electricity for the Montanore Project. Since CFAC is not an FEC customer, the Montanore Project load would have no impact to the cost and amount of power available to the aluminum plant.

48-3 If the power supply is finite, especially hydropower, would it be cheaper and more efficient for the BPA to simply redirect the additional amount of power required for the Montanore project to the aluminum plant?

Response: Analysis addressing BPA redirecting power to CFAC is beyond the scope of this EIS.

52-1 Is there any way these new 16 miles of 230 KV line could facilitate the rerouting of power around a damaged line in an emergency or provide any redundancy in the distribution system? If there are any benefits would these be cost effective?

Response: The Montanore Project would pay for and own the 230-kV line to its mill, which would be a radial line. This line would not provide any redundancy to FEC's distribution system or be able to reroute power around a damaged line. An interconnection between the 230-KV line and the possible buried 34.5-kV line from Libby would require an additional step-down transformer. Such an interconnection was not part of the proposed action and was not included in any of the agency alternatives because such a connection may extend the life of the transmission line beyond the end of the mine.

52-2 Assuming the CFAC does resume fill production, how much electricity would be required to supply them and MMC when both are at full production? Would it be more cost effective for the BPA to simply supply the power the Montanore Project would require to CFAC instead, using the existing infrastructure?

Response: CFAC is not expected to resume full production. CFAC has a capacity of 5 pot lines, each at about 70 MW for a total of 350 MW and the Montanore Project is anticipated to be 27 MW at peak production. Thus, the two entities combined would total approximately 377 MW if CFAC returned to full production. Analysis regarding supplying the power that would be required by the Montanore Project to CFAC instead is beyond the scope of this EIS.

52-2 As I understand it, MMC. will pay the cost of power line's construction. Is this the full and nonrefundable cost? Will MMC receive any type of credits, rebates, or incentives for line they construct which could be applied to reduce future power costs? In other words are they paying in advance for costs which may be in part or all refunded latter?

Response: MMC would pay for, own, and operate the 230 kV line. The Montanore Project would not receive any type of credits, rebates, or incentives from FEC to reduce future power costs for the proposed transmission line.

52-2 Certainly the local dams within the BPA system will supply some of Montanore's power requirements. Will accommodating such a large power consumer have any effect on short term or mean annual reservoir levels, or stream flow within Montana?

Response: Effect on short-term or mean annual reservoir levels, or streams on the BPA system is difficult to answer in specific, as FEC would be supplying the electricity to the Montanore Project. FEC uses a small portion of BPA's supply and owns some of its own generation. Given that the mine is less than one tenth of FEC's entire peak load, the effects on the BPA system as a whole (as far as water levels are concerned) would be negligible.

52-2 Could you provide any insight into BPA's off-site costs, and the resources required to supply power to its customers? On average, how many acre feet of water does it take to produce a megawatt of hydropower from the dams in the BPA system? Likewise, could you also estimate the kind and amounts of fossil fuel required to generate a megawatt of power from thermal generation facilities the BPA might use to supply the Montanore project. I realize this varies, but perhaps you could use nearby dams and facilities as an example.

Response: Analysis addressing "off-site costs" is beyond the scope of this EIS. The Montanore Project has not yet asked FEC to secure any power for any load and thus the source of power is unknown. The amount of water to produce 1 MW varies by project, location in system, the head of the project, and the amount of time the 1 MW is produced. Using the Libby project as an example, and assuming at-site generation only, the water used would be approximately: 2,621 acre-feet to produce 1 average MW for a month, or 31,889 acre-feet to produce 1 average MW for a year. This computation assumes the current elevation of Libby at 2,441 feet (18 feet from full). Analysis dealing with the kind and amounts of fossil fuel required to generate a MW of power from thermal generation facilities the BPA might use to supply the Montanore project is beyond the scope of this EIS.

52-2 Montanore proposes working 3 shifts per day 350 days per year. Could you explain how the power for this large and continuous load typically might be derived? On average, what percentage of the electricity supplied by the BPA for this project would be generated by 1 hydropower, 2 fossil fuels, 3 nuclear, and 4 other sources?

Response: The Montanore Project has not yet asked FEC to secure any power for any load and thus the source of power is unknown.

52-2 What amounts of line loss typically occurs within the BPA system and how much would you expect to incur from supplying a customer using 406,000 megawatts annually? I realize this varies with distance but since this project will likely draw on generating facilities near and far could you give me a system average? How much electricity would actually have to be produced to supply this amount?

Response: Since there would be no transformation involved with 230 kV delivery to the Montanore Project transmission line from BPA's Libby-Noxon #1, 230 kV transmission line (with generation coming from either Noxon, Libby or both), the transmission losses would be less than 1 percent of the mine load as served from either Libby or Noxon generation sources. The current information BPA has on the size of the load indicates that the Montanore Project load would gradually increase over 5 years to a maximum demand of about 27 MW. Given a typical high-load factor industrial load of 90 percent, at peak production of 27 MW, the annual energy consumed by the Montanore Project load would be about 213,000 megawatt-hours (MWh). Losses would be less than 1 percent of this, or less than 2,130 MWh annually. So, the estimated total annual energy consumed by the Montanore Project load would likely be no more than 215,130 MWh annually.

52-3 Will MMC, being a new customer, receive Tier 1 or Tier 2 power rates from the BPA, and will this change after October 2011? What effect could Montanore's energy demands in a more competitive and finite market place have on the wholesale power costs of FEC?

Response: After October 1, 2010, BPA allocated priority firm (PF) power (the rate that applies on sales on BPA's preference customers) from the federal hydro system to the public utilities and DSIs. Thus, all new loads on FEC's system after October 1, 2010 would have to be served with non-PF BPA power or a Tier II power supply. The FEC Board has been looking at several power supply options for this Tier II power supply. FEC would be serving any new Montanore Project load after October 1, 2010 with Tier II power supply, not BPA PF power. The low-cost federal power from BPA constitutes Tier I power. All new load growth beginning October 2010 would come from new Tier II power supplies, which are likely to be more expensive than Tier I. In other words, FEC's wholesale power costs will likely increase in the future. Thus, any increase in FEC's wholesale power costs associated with the Montanore Project would be paid for by Montanore Project and not any of FEC's other members. The Montanore Project should have little or no effect on current FEC customers.

141-2 …for slightly over 3 times the mine's predicted power consumption FEC supplies all its residential, commercial, and industrial accounts in Libby, Troy, the entire Flathead Valley, as well as its customers along the MT WY border.

Response: Thank you for your comment.

142-2 I would like to inquire about the energy saving measures that this proposed project would implement.

Response: MMC did not identify any specific energy-saving measures.

4182 Comment about analysis

344-5 How long could the pump back wells and water treatment plants be without electrical power, both during operations and post closure before pollution would begin to escape containment? What would be the effects of a sustained power outage on water quality?

Response: Backup generators at the Libby Adit would be available for pumping should the transmission line be unable to provide power. Groundwater pumping would create a large cone of depression downgradient of the impoundment (see Figure 72). Groundwater levels are predicted to recover in 13 years after pumping ceased, assuming pumpback wells operated at 250 gpm until all pumping ceased. A rather long power outage would be necessary before groundwater levels recovered sufficiently to allow tailings seepage to reach surface water.

344-5 There doesn't really seem to be any plan B should pump back wells or water treatment be insufficient. Many of the safety features are active and require a constant supply of electricity. These power demands may persist for decades, perhaps into perpetuity which is as long as it gets. During operations, generators at the mine may supply these facilities during a power outage. How long will the 230 kV lines remain in place after mine closure?

Response: Section 2.8.3 of the DEIS and FEIS discussed that the transmission line would be one of the last facilities to be reclaimed. Section 3.1.1 disclosed that MMC would maintain and operate specific facilities, such as the Water Treatment Plant or the seepage collection system at the tailings impoundment, until water quality standards were met in all receiving waters from the specific discharge. MMC also would continue water monitoring as long as the MPDES permit is in effect. As long as post-closure water treatment operated, the agencies would require a bond for the operation and maintenance of the water treatment plant. Backup generators would be onsite for use at any facility throughout the closure period. The length of time that the second phase of closure activities would occur is not known, but may be decades or more.

Sound

4305 Comment about effect-mine

248-30 Have the Agencies quantified the level of noise from ventilation equipment needed to vent the exhaust?

389-5 What audible impacts will be caused by the mine?

Response: Effects of all project facilities on sound levels were described in Section 3.19.4 of the DEIS and Section 3.20.4 of the FEIS.

4310 Comment about cumulative effect

327-39 The cumulative noise of two mines blasting tunnels and running heavy machinery 24 hours per day, seven days per week would be deafening compared to the quiet that currently reigns over these wilderness areas. We believe that a study of the noise levels of both operations combined is possible and indeed absolutely necessary to the agencies' informed consideration of permitting a second mine to delve beneath protected wilderness.

331-41 Industrial noise would impact Rock Lake, one of the most popular destinations in the region. If both Rock Creek and Montanore were allowed to operate simultaneously, the noise and visual impacts would spread well beyond Rock Peak and associated ridgeline. MMC is also proposing a ventilation fan adjacent to Rock Lake, while the Rock Creek project is proposing a fan on the slopes of St. Paul Peak. The noise and visual impacts to the Cabinet Mountains Wilderness would be significant and should not be trivialized by the USFS.

Response: Section 3.20.4.4 was revised in the FEIS to indicate the Rock Creek and Montanore projects would not have cumulative noise effects. MMC's proposed ventilation fan on private land adjacent to Rock Lake would be for air intake. The air-intake fan associated with the Rock Lake Ventilation Adit would be located inside the mine, and not at the portal. The walls of the raise and adit would reduce the noise from the fan at the surface. Noise level at the portal of the Rock Lake Ventilation Adit is estimated to be 16 dBA and would not be audible over ambient noise levels (Big Sky Acoustics 2006).

4312 Comment about effect-transmission line

110-3 As for the noise pollution created by high voltage power lines, all three proposed routes—B, D, and E - would bring lines close enough to our private property boundaries that the continual buzzing and other noises generated by the lines would be a clear nuisance and threat to our daily enjoyment of our environment. Sound travels for miles in the clear mountain air and bounces back off the peaks of the majestic Cabinets to the west of our ridge. Furthermore, the noise pollution generated during the construction, maintenance and deconstruction periods created by the helicopters proposed by DEQ and MMC/MMI as a "less invasive" method of installing the power line towers will be extremely invasive to us, disturbing our quality of life on a daily basis. We are by no means willing to tolerate the noise pollution from high voltage power lines and their installation imposed by a for-profit corporation on private landowners.

327-20 As for the noise pollution created by high voltage power lines, the preferred alternative would bring lines close enough to our private property boundaries that the continual buzzing and other noises generated by the lines would be a clear nuisance and threat to our daily enjoyment of our environment. Sound travels for miles in the clear mountain air and bounces off the peaks of the majestic Cabinets to the west of our ridge. Furthermore, the noise pollution generated during construction, maintenance and deconstruction periods created by helicopters proposed by DEQ and MMI as a "less invasive" method of installing the towers will be extremely invasive to us on a daily basis, and to recreational users of the forest

Response: The agencies' transmission line alignments were revised in the SDEIS and again in the FEIS to be farther from private residences. All residences are more less 450 feet of the centerline of the agencies' alternatives. As part of these alternatives, the centerline would be no closer than 200 feet from any

residence during final design. Section 3.19.4.1.7 of the DEIS and 3.20.4.1.7 of the FEIS disclosed that expected noise levels at a residence 200 feet from the centerline during a light rain would be about 42 dBA and less than 40 dBA at 300 feet (HDR, Inc. 2007) and probably would not be noticeable over existing noise levels.

4317 Comment about mitigation-mine

142-2 What preventative measures would Montanore take to eliminate noise impacts on wildlife and humans?

Response: Preventative measures that MMC would implement to minimize noise impacts on wildlife and humans are presented in their Plan of Operations and discussed in a Noise Technical Report (Big Sky Acoustics 2006).

Electrical and Magnetic Fields

4334 Comment about analysis-transmission line

110-2 Each of the alternatives would route the high voltage lines to within less than a quarter mile of our property boundaries. The health effects of living in such close proximity to the electromagnetic field created by high voltage power lines have been increasingly substantiated by factual data as more scientific studies are completed.

290-1 Adverse health effects-Spontaneous Abortion, Childhood Leukemia, Effects on Implantable Medical Devices and Pacemakers, etc. by the conflicting and outdated health reports on the electrical and magnetic fields exposure from these high powered transmission lines.

290-3 We are requesting unbiased, up-to-date, health report on the health effects of these particular high powered transmission lines.

327-19 In the SDEIS, the Agencies continue to rely on one-sided interpretations of outdated science when dealing with safety issues regarding EMFs.

360-2 Some of my concerns are that the transmission line will be a tremendous eye sore, I have great fear of the electro-magnetic field produced by the line as research suggest it may be cancer causing and my wife recently recovered from cancer. Studies also suggest the energy produced causes soft tissue decomposition and miscarriages in pregnant women.

Response: The agencies' analysis of EMF in the DEIS (Section 3.19), SDEIS, and FEIS (Section 3.20) was based on the best available science. The agencies completed an independent analysis (Asher Sheppard Consulting 2007; updated 2012) that addressed the current status of scientific knowledge concerning potential health effects from exposure to transmission line EMFs, and assessed the risk associated with the transmission line alignment alternatives.

Transportation

4400 Congestion: Suggested new information/analysis

200-16 Estimates for how much traffic there will be as a result of the various phases of mine construction and operation and the duration (month/years) of those levels of traffic should be disclosed.

Response: Section 2.4.2.2.1 of the DEIS and FEIS disclosed that the mill would operate 7 days per week, 350 days per year. Section 2.4.1.6 was revised in the FEIS to provide anticipated mine-related traffic during full operations.

248-19 The DEIS discusses in various places the use of Libby Creek Road #231 and the Bear Creek Road #278 for access to MMC's proposed facilities in the Libby Creek drainage. The increased traffic projected for these roads will result in a variety of adversely impacts to LPMC property, including, but not limited to:

increased traffic volume and traffic congestion; increased the risk for accidents; increased the risk of vandalism; increased risk of trespass; increased litter; increased noise levels and increased fugitive dust.

248-23 The Libby Creek Road #231 therefore needs its own science based transportation analysis for the impact of MMC related use during the Adit Evaluation period as well as the one or two year reconstruction of the Bear Creek Road #278.

Response: Section 3.21.4.1.2 was revised in the FEIS to discuss transportation effects during the Evaluation Phase and the 1-year period during Bear Creek Road reconstruction. Section 3.4.4.2.1 was revised in the FEIS to discuss potential increase in dust on Libby Creek Road (NFS road #231). Section 3.19.4.1.2 of the DEIS and Section 3.20.4.1.2 of the FEIS disclosed the potential to increase noise along the Libby Creek Road during the Evaluation Phase and the 1-year period during Bear Creek Road reconstruction.

4401 Congestion: Suggested new mitigation

248-20 There is no discussion of a Road Management Plan in the DEIS for the Evaluation Period.

248-23 The "final" Road Management Plan needs to be developed and disclosed now, not at some time in the future. Furthermore, if there is to be a "final" road management plan, there is presumably a "preliminary" Road Management Plan. Where is it?

Response:

4403 Congestion: Comment about analysis-mine

34-1 1. The Montanore Summary DEIS notes that the company plans to mine 7 million tons/year, or 20,000 tons per day. Assuming 20 ton trucks, that's1000 trips per day, or 42 trucks per HOUR. Yet elsewhere in the main DEIS they talk about hauling 420 tons per day and 21 truck trips per DAY. Can you explain the discrepancy?

Response: MMC would mine and mill up to 20,000 tons per day of rock, which would result in up to 420 tons per day of concentrate. The remaining rock would be disposed of as tailings.

34-1 2. The DEIS also talks about using both 20 ton and 40 ton trucks. Is one of these incorrect, or are they using the two different truck sizes for different tasks?

Response: The discussion of 40-ton trucks in the DEIS was regarding backfilling of tailings, which was eliminated from detailing analysis. The discussion was eliminated in the FEIS by referring the reader to the *Tailings Disposal Alternatives Analysis* (ERO Resources Corp. 2011a). MMC would use 20-ton trucks for concentrate shipment.

Vegetation

4504 Vegetation Communities: Comment about analysis-transmission line

310-6 There is no information provided in the SDEIS regarding the number of acres that would be cleared/ logged using helicopters for yarding and/or other methods for the TL alternatives.

Response: Sections 3.22.1.4.5 through 3.22.1.4.9 of the SDEIS and FEIS discussed the amount of vegetation that would be cleared for each transmission line alternative. The number of acres cleared by helicopter was not calculated separately. Figure 44 of the SDEIS and FEIS indicated areas where use of helicopters would be required in the agencies' transmission line alternatives.

327-19 Permitting above ground high voltage power lines for the Montanore Project—from Highway 2 through the Miller Creek wilderness area, past the Howard Lake recreational area and across Libby creek will significantly raise the risk of wildfire in the Kootenai National Forest. The Agencies must consider this very real possibility, which would strengthen an already ironclad case for burying the transmission lines.

Response: Because of the transmission line clearing and annual inspections described in Section 2.8.4 of the DEIS and FEIS, none of the alternatives would significantly raise the risk of wildfire in the Kootenai National Forest.

4505 Vegetation Communities: Comment about effect-mine

297-1 "With mitigation it will take 1,322 years for the groundwater levels to reach equilibrium. Water levels near the mine void would permanently remain greater than 100 feet below pre-mine conditions. (page 248) A change in groundwater flowpath between watersheds would occur because the mine void connects the two watersheds. (page 250) Baseflow of the East Fork of the Bull River, which flows into the Bull River, would reduce flow by 17%. (page 243)" After the 1,322 years it will take for the water levels to reach equilibrium, what will happen to the area around the mine void where the water levels will never return to normal, remaining permanently 100 feet below pre-mine conditions? Would not everything in that area die from lack of water? What will the effect on a waterless area be on other systems?

Response: Upland vegetation communities rely on precipitation for hydrologic support and would not be adversely affected by drawdown of groundwater. GDE monitoring was discussed in Sections C.4, C.10.3.2.2, C.10.3.2.3, and C.10.5.4.2 of the FEIS. A discussion of indirect and cumulative effects on wetland and riparian vegetation from groundwater drawn down and changes in flows was added to Section 3.23.4 of the FEIS.

4512 Vegetation Communities Comment about effect-transmission line

236-1 Tower to tower site clearing of every twig to bare grown, and then treated with herbicides every 3 years for the life of the project as is being done with the Nixon Conkelly line is unacceptable in the 21st century.

Response: Vegetation clearing and noxious weed treatment was described in Section 3.22.4 of the SDEIS and FEIS. Additional clearing requirements were described in Section 2.9 of the agencies' Environmental Specifications (Appendix D) that accompanied the DEIS, SDEIS, and FEIS. Clearing of all vegetation to bare ground would not be necessary. A Vegetation Removal and Disposition Plan, the goal of which would be to minimize vegetation clearing, particularly in riparian areas, would be followed during construction of all mine and transmission line facilities. The plan would identify areas where clearing would be avoided, such as deep valleys with high line clearance, and measures that would be implemented to minimize clearing. It would evaluate the use of monopoles to reduce clearing in select areas, such as old growth. The plan also would evaluate the potential uses of vegetation removed from disturbed areas, and describe disposition and storage plans during life of the line. Herbicide use would be in accordance with the approved Weed Control Plan discussed in Section 2.5.5.2.5 of the DEIS and Section 2.5.2.3.2 of the FEIS and in Section 4.4 of the Environmental Specifications (Appendix D) that accompanied the DEIS, SDEIS, and FEIS. MMC would implement all weed BMPs identified in Appendix A of the KNF Invasive Plant Management Final EIS (KNF 2007a) for all weed-control measures.

4523 Old Growth: Comment about analysis-mine

Changes in Management Area designation

202-30 It is calculated that 175 acres of old growth habitat would be impacted as a result of the agencies' preferred alternative. The actual acreage impacted remains ambiguous because of the agencies' decision to reallocate and reclassify designated old growth habitat (MA13) within areas of the operating permit to mineral development (MA31). Is impacted old growth habitat not being accounted for because of a classification change?

202-31 The agencies also propose to change the classification of an additional 182 acres from old growth (MA13) to mineral development (MA31). The claim is that there would be no physical loss of old growth from this reclassification, then why is the classification change being made? Would the reclassification simplify the process by which 182 of old growth acres could be developed for future mine considerations?

310-32 The actual acreage impacted remains ambiguous because of the agencies decision to reallocate and reclassify designated old growth habitat (MA13) within areas of the operating permit to mineral development (MA31).

343-1 Language related to the destruction of old growth being replaced should be changed. You cannot replace old growth with new old growth The plan simply requires purchase of existing old growth (old growth?) from land owners so that it can be added to public lands. The statement should admit that old growth will simply be destroyed.

Response: Impacts on old growth were described in Section 3.22.2.4 of the FEIS. Old growth under the 2015 KFP is no longer designated or managed with a specific management area. Under the 2015 KFP, all stands meeting Green et al. criteria in the forest old growth spatial data are considered effective old growth inventory and support the habitat conditions described in Green et al. (1992, errata corrected through 2011). Recruitment potential old growth stands do not meet minimum characteristics to be currently considered old growth, but are expected to become old growth in time. These stands will be added to the forest old growth inventory to manage for old growth recruitment potential over the long term.

As described in Section 2.12, each mine and transmission line alternative would require an amendment to the KFP in order for the alternative to be consistent with the KFP. The amendment would be completed in accordance with the regulations governing Forest Plan amendments found in 36 CFR 219 and FSM 1921.03. The analysis disclosed in the FEIS satisfies the requirements for an evaluation for the amendment. With the adoption of the 2015 KFP, reallocation of certain areas to a different management area is no longer needed.

Analysis of edge effects

389-13 The proposed logging will create edge effects that alter microclimates within adjacent old-growth stands, extending the impacts of the project beyond the proposed project area. The extent of these edge effects is not fully disclosed in the SDEIS.

Response: The potential influence of timber harvest on microclimates was described in Section 3.22.2.3.1 of the FEIS. The increase in edge habitat and loss of interior old growth from all action alternatives were disclosed in section 3.22.2.4.

4525 Old Growth: Comment about effect-mine

202-31 Another statement in the DEIS appears a desperate attempt to redefine old growth habitat and simplify the replacement of established old growth that is lost: Replacement old growth stands do not have enough old growth characteristics to be considered old growth, but are expected to become old growth in time. (DEIS Vol. 2 page 666) This statement is ridiculous and is recognition that old growth in the Kootenai National Forest is limited. The agencies do, however, recognize the amount of time that is required for old growth characteristics to develop: Given the recovery time of old growth forest, edge effects would likely require centuries following disturbance to be eliminated. (DEIS Vol. 2 page 524)

310-32 Although both PSUs would still meet the KNF FP standard for the required amount of old growth in a PSU, the reduction in old growth may adversely impact old growth dependant species. Furthermore, the inclusion of ROG in the calculation for existing old growth raises the question of whether there is enough existing true old growth to support viable populations of old growth species in either PSU and whether the removal of true old growth, particularly in the Crazy PSU, will adversely impact old growth dependant species.

Response: Effective old growth and recruitment old growth were defined in Section 3.22.2 of the FEIS. All stands meeting Green et al. criteria in the forest old growth spatial data are considered effective old growth inventory and support the habitat conditions described in Green et al. (1992, errata corrected through 2011). Recruitment potential old growth stands do not meet minimum characteristics to be currently considered old growth, but are expected to become old growth in time. These stands will be added to the forest old growth inventory to manage for old growth recruitment potential over the long term. Effects on Forest

sensitive species and state species of concern associated with old growth (pileated woodpecker, flammulated owl, fisher, and northern goshawk) were disclosed in sections 3.25.3 and 3.25.4 of the FEIS.

4530 Old Growth: Comment about cumulative effect

389-7 f. The Forest Service should factor the carbon cycles affected by proposed logging in old-growth into its analysis of the effects of the project on climate change. Old-growth forests sequester enormous amounts of carbon. Disturbance to these forests will not be easily reversible as it takes a long time for a forest to reach an old-growth state. How much carbon will be lost as a result of this logging? How will disturbance affect forest carbon sequestration?

389-13 Logging old-growth to build the transmission line may also result in net-loss of carbon stored in the forest, an effect that is not analyzed in the SDEIS.

Response: Potential effects of tree removal on climate change cannot be quantified due to the uncertainties associated with predicting changes and the effects.

4537 Old Growth: Comment about mitigation-mine

Effectiveness of old growth designation

200-22 The agencies' solution to mitigate for the loss of the old growth will not compensate for the industrialization! destruction of this habitat. The agencies propose to designate 657 acres elsewhere on the forest as old growth so it would be managed to retain and develop old growth characteristics. Several problems with this approach are apparent, including the fact that the classification as old growth (MA13) failed to protect the acreage of habitat that would be harvested as a direct result of the Montanore mine. The agency also recognizes that the 657 acres will not replace the old growth that is lost because in actuality no new old growth would have been created. The replacement acres are not old growth, but will be managed "to retain or develop old growth characteristics." Another statement in the DEIS appears a desperate attempt to redefine old growth habitat and simplify the replacement of established old growth that is lost.

202-30 The agencies' solution to mitigate for the loss of the old growth will not compensate in any way for the industrialization of this habitat. The agencies propose to designate 657 acres elsewhere on the forest as old growth so it would be managed to retain and develop old growth characteristics. Several problems with this approach are apparent, including the fact that the classification as old growth (MA13) failed to protect the acreage of habitat that would be harvested as a direct result of the Montanore mine. Why would classifying 657 acres as old growth provide any additional future security? The agencies also recognize that the 657 acres will not replace the old growth that is lost because in actuality no new old growth would have been created. The replacement acres are not old growth, but will be managed "to retain or develop old growth characteristics."

310-33 The agencies' solution to mitigate for the loss of the old growth will not compensate for the destruction of this habitat. The classification as old growth (MA13) failed to protect the acreage of habitat that would be harvested as a direct result of the Montanore mine. The agency also recognizes that the 700+ acres will not replace the old growth that is lost because no new old growth will have been created. Depending on the stands selected, it could take centuries for the replacement old growth to become viable habitat for old growth dependant species. Given the recovery time for old growth, it also could take centuries following disturbance for the edge effects in the Crazy PSU to be eliminated.

344-9 Not a single OG dependent species that is alive today will likely derive any additional benefit from this designation.

344-9 This does nothing to mitigate for the loss of OG attributes during the time the mine will be in actual operation. Expecting young, marginal, and suboptimal stands to function as effective OG anytime soon is unrealistic.

344-10 Watching trees grow, especially little ones is not OG mitigation. It would be better to have less real and effective OG than twice the amount that isn't and say that it is.

389-13 If the Forest Service can simply disturb old-growth and designate some land elsewhere to attain old-growth characteristics, it seems uncertain that the "replacement" old-growth will actually receive any guarantee of protection.

331-42 The agencies propose to designate approximately 700 acres elsewhere on the forest as old growth so it would be managed to retain and develop old growth characteristics. Why would classifying 700 acres as old growth provide any additional future security? The agencies also recognize that the 700 acres will not replace the old growth that is lost because in actuality no new old growth would have been created.

Response: Impacts on old growth were described in Section 3.22.2.4 of the FEIS. Old growth under the 2015 KFP is no longer designated or managed with a specific management area. Under the 2015 KFP, all stands meeting Green et al. criteria in the forest old growth spatial data are considered effective old growth inventory and support the habitat conditions described in Green et al. (1992, errata corrected through 2011). Recruitment potential old growth stands do not meet minimum characteristics to be currently considered old growth, but are expected to become old growth in time. These stands will be added to the forest old growth inventory to manage for old growth recruitment potential over the long term.

As described in Section 2.12, each mine and transmission line alternative would require an amendment to the KFP in order for the alternative to be consistent with the KFP. The amendment would be completed in accordance with the regulations governing Forest Plan amendments found in 36 CFR 219 and FSM 1921.03. The analysis disclosed in the FEIS satisfies the requirements for an evaluation for the amendment. With the adoption of the 2015 KFP, designation of replacement old growth is no longer necessary.

4538 Old Growth: Comment about mitigation-transmission line

141-6 The strategy to mitigate the loss of Old Growth habitat from power line and facility construction may be inadequate. The reduction of old growth would be mitigated in Alts C, D, and E by the designation of undesignated old growth. This does nothing to actually create a single OG attribute. These undesignated old growth stands may or may not be currently OG, may display little evidence of ever having been OG, or may be in a state of decline or disturbance unlikely to result in significant OG attributes any time soon. Most importantly they may not be the best stands to set aside or of similar habitat types or species.

Response: See above response.

4540 Sensitive and State-Listed Species: Suggested new information/analysis

158-1 Any final document (EIS) should have an extensive inventory of all sensitive and endangered species found in the [area] to be disturbed wetlands and an action plan to remedy any habitat loss for said species.

Response: Information on existing and proposed inventories for state-listed and other sensitive plant species was in Sections 2.5.3.1, 3.21.3.2, and 3.21.3.4.6 of the DEIS. The effects of all alternatives on sensitive plant species was discussed in Section 3.21.3.4 of the DEIS and Section 3.22.3.4 of the FEIS. Alternative 3 would not affect any state-listed or other sensitive plant species and mitigation would not be needed. Some areas in the mine area and along the transmission lines were not surveyed for state-listed and other sensitive plant species, inventories would be completed before construction as discussed in Section 2.5.3 of the FEIS. If populations are found during pre-construction inventories, mitigation would be developed. Information on mitigation of state-listed and other sensitive plant species was in Section 3.21.3.4.6 of the DEIS and Section 3.22.3.4.6 of the SDEIS, and the same information is in in Section 3.22.3.4.6 of the FEIS.

4545 Sensitive and State-Listed Species: Comment about effect-mine

158-1 The DEIS gives little mention to issues surrounding sensitive plants and specific plans for their protection/management. We urge the Forest Service to include four specific goals that pertain to the conservation of local native plants: (1) protect all sensitive plant species and the habitat that supports them, (2) curtail weed invasions by limiting road use and construction and immediately revegetating disturbed soils, (3) protect any tracts of old-growth forest, and (4) protect the hydrological and ecological integrity of wetlands and riparian areas.

Response: See comment responses 4540 (sensitive plants, p. M-414) and 4560 (noxious weeds, p. M-418). The effects of all alternatives on old growth was discussed in Section 3.21.2.4 of the DEIS and Section 3.22.2.4 of the FEIS. Effects on wetlands and riparian areas were discussed in Section 3.23.4.3.1 and 3.23.4.3.2 of the FEIS. Effects on wetlands and riparian areas were avoided and minimized, and when necessary, mitigated.

4560 Noxious Weeds: Suggested new information/analysis

158-1 A detailed weed management should also be included in the FEIS.

Response: Section 2.5.5.2.5 of the DEIS and Section 2.5.2.3.2 of the FEIS disclosed that MMC has a Weed Control Plan approved by Lincoln County Weed Control District. The plan would be modified as described in the FEIS and submitted to the lead agencies during final design for their approval. Following KNF's and DEQ's approval of the final Weed Control Plan, MMC would submit it to the Lincoln County Weed Control District. A final Weed Control Plan would be incorporated into the Final Environmental Specifications of the transmission line. The plan would include the measures described in Section 2.5.5.2.5 of the DEIS and Section 2.5.3.2.5 of the FEIS.

4561 Noxious Weeds: Suggested new mitigation

19-2 We recommend the amount of slash retained under the powerline be in the 15 tons/acre range vs. the proposed 30 tons/acre due to the potential fire hazard and to make it more accessible for control of noxious weeds.

Response: Section 2.9.6.1 of the SDEIS and FEIS discussed the amount of slash to be retained under the transmission line corridor, which would vary from 5 to 30 tons depending on the Vegetative Response Unit.

4565 Noxious Weeds: Comment about effect-mine

19-2 We would like assurance that noxious weeds will be managed within the mine facilities sites, access roads, stored roads, and the powerline corridor; and that every precaution be taken to reduce the risk of new weed species introduction during mine facility and powerline construction and

Response: See previous comment response 4560.

Wetlands and Waters of the U.S.

4600 Suggested new information/analysis

158-1 Although they have a relatively small areal extent, wetlands and riparian areas harbor a large number of plant species found in no other habitat. Wetland and riparian dependent species can be very sensitive to changes in hydrologic regime. Timber removal, roads and other disturbances should be minimized in proximity to surface water, and hydrologic effects should be analyzed on a watershed basis.

Response: Effects on wetlands and riparian areas have been avoided and minimized to the maximum extent practicable. Alternative 3, the preferred alternative, has fewer wetland impacts than the other action alternatives. Additional information on indirect effects on wetlands and riparian vegetation from groundwater draw down and changes in stream flow was added to Section 3.23.4 of the FEIS.

4603 Comment about analysis-mine

327-14 The Montanore SDEIS does not describe any efforts the mining corporation has made or intends to make to avoid or minimize its destruction of KNF wetlands.

Response: Sections 2.5.7.1 and 2.5.7.2 of the FEIS was revised to provide additional detail on the agencies' mitigation for all unavoidable adverse effects on jurisdictional and isolated wetlands and waters of the U.S.

331-14 Little information is available on the amount of wetlands lost to dewatering. The SDEIS includes details on the expected impacts to regional surface waters, but does not address indirect consequences to wetlands. The lack of information on indirect impacts raises the question of the reliability of the predictions of the impacts to Rock, St. Paul, and Libby Lakes.

Response: Section 3.23.4 of the FEIS was revised to include a discussion on indirect effects on wetlands from dewatering.

4604 Comment about baseline data

331-15 Unavoidable wetland direct effects would be determined during final design. SDEIS, page 403. This is unacceptable from a NEPA standpoint and violates NEPA's "look first, permit second" requirements.

Response: The effects on wetlands from the transmission lines presented in Sections 3.23.4.5 – 3.23.4.9 of the SDEIS and FEIS were worst case scenarios for each alternative because total wetland area within the transmission line clearing area were calculated as a potential impact. The actual area of wetland impact would be reduced or eliminated by placing transmission structures outside of wetlands and other waters. Only if transmission structures could not be placed outside of wetlands and other waters would wetland impacts occur.

4605 Comment about effect-mine

331-7 Rock Creek meadows would likely dry up during the lengthy post-closure phase. The loss of the wetlands adjacent to this section of stream would likely be irretrievable.

Response: Effects on Rock Creek Meadows were determined to be minimal because water sources other than groundwater provide the hydrologic support to wetlands and other aquatic resources. Section 3.23.4 of the FEIS was revised to provide a discussion on Rock Creek Meadows.

4617 Comment about mitigation-mine

Mitigation for Wetlands in CMW

186-4 Wetlands lost from the CMW cannot be mitigated for by creating offsite wetlands. More measures need to be instituted to protect resources in the CMW.

331-14 The SDEIS states that projects that implement mitigation prior to project losses would have a lower mitigation requirement than projects that implement mitigation after wetland losses have occurred. Why not implement mitigation for expected losses and then additional mitigation for subsequent damage? Losses of any wetlands within the Cabinet Mountains Wilderness cannot be mitigated.

Response: Section C.10 of the EIS was reworded to make it clear that the monitoring program is intended to detect stress, so that measures can then be taken to reduce stress to flora and fauna from mine dewatering. If such effects were unavoidable, MMC would develop mitigation to compensate for lost functions and services.

4619 Comment about regulatory compliance

202-12 The Project does not comply with the CWA Section 404(b)(1) Guidelines and other requirements regarding the destruction of wetlands and related waters under CWA Section 404. Here, the agencies have not shown that there are no practicable alternatives to the wetlands destruction, especially since under the 404 program, it is presumed that such a non-water-dependent project has practicable alternatives to the wetlands filling/destruction. Relatedly, it has not been shown the Project complies with Executive Orders protecting wetlands or that the Project minimizes wetlands impacts, as required by federal laws including the CWA.

Response: Several alternatives were screened for practicability and many were dismissed because of the failure to pass the screening criteria. Alternative 3 was selected as the preferred alternative because it had the fewest impacts on aquatic resources. The lead agencies' 404(b)(1) analysis was updated for the FEIS (Appendix L). MMC is responsible for demonstrating compliance with the 404(b)(1) Guidelines. The Corps will conduct a 404(b)(1) compliance determination on MMC's 404 permit application for the Montanore Project and discuss compliance with the Guidelines in its decision document on MMC's 404 permit. The Corps' findings regarding the least environmentally damaging practicable alternative and compliance with the 404(b)(1) Guidelines is subject to EPA's review. In Section 3.23.4.12 of the SDEIS and FEIS, the KNF indicated that there was no practicable alternative to new construction located in wetlands, and that Alternative 3 included all practicable measures to minimize harm to wetlands.

4667 Wetland Function and Values: Comment about mitigation-mine

389-9 Are human-created wetlands equally ecologically valuable as naturally-occurring wetlands?

Response: Human-created wetlands have the potential to replace all functions and services as naturally occurring wetlands. Some of those human-created wetlands would take many years to achieve the functions and services currently found in naturally occurring wetlands. Functional assessments of impacted wetlands and wetlands being created for compensatory mitigation were conducted and Section 3.23.3.1.2 of the FEIS was updated with information on functions and services of wetlands.

Wilderness and Inventoried Roadless Area

4703 Comment about analysis-mine

General

183-3 The DEIS should be clearer on whether the mining claims and proposed activities meet the requirements of section 4(d)(3), 5(a) and 5(b) of the Wilderness Act. Specifically, the claim history of the area and any "rights" the claimant may have are not discussed in the wilderness section of the DEIS as it applies to section 4(d)(3) of the Wilderness Act. Questions such as was subsurface ingress and egress enjoyed prior to designation need to be asked. In essence, there is not a clear showing in the DEIS of compliance with the Wilderness Act.

Response: MMC's mineral rights were discussed in Section 1.3.1 of the DEIS, SDEIS, and FEIS.

327-38 We believe that the Montanore project, from start to finish, would certainly have a substantially negative effect on the integrity of the CMW, and that the SDEIS does not give sufficient attention to measures that would avoid or minimize this effect.

354-2 Two terms that ought to be in the glossary, and defined, are "roadless area" and "inventoried roadless area".

Response: "Inventoried roadless area" and "unroaded areas" were added to the glossary.

389-1 We find the Wilderness analysis contained in the Draft Environmental Impact Statement and Supplemental Draft Environmental Impact Statement (hereafter cumulatively referred to as the SDEIS) inadequate.

Response: See responses below. Section 3.24.1.4 was revised in the FEIS to describe the effects on wilderness character.

Wilderness wildlife and other resources

74-6 It does not assess cumulative impacts to Wilderness character in terms of transboundary effects to wildlife populations, ecological integrity and the potential effects of subsidence within the CMW.

74-14 The extent of the impacts it will, or may, have has not been thoroughly evaluated in the DEIS-the analysis of impacts to Wilderness focused on human perception of wildness and naturalness, rather than ecological dynamics. Viewed in light of its large destructive potential with regards to resources protected under the Wilderness Act, the CWA, the ESA, and USFS guidances, this mine should not be permitted to progress past these preliminary stages.

389-3 c. The SDEIS does not sufficiently address the effects of increased wildlife presence in the CMW. The SDEIS correctly considers the potential impacts on wildlife outside of the CMW as causing impacts inside the wilderness. However, it does not consider the effects of these impacts. Specifically, the SDEIS contemplates that some wildlife species may spend more time inside the wilderness as a result of the activities outside of the wilderness. Is the wilderness suitable habitat for these species? Will their presence increase human wildlife conflicts? How will displacement and disturbance impact their fecundity? These issues will affect the qualities wilderness was designated to protect.

310-36 Noise and visual mine related impacts to the wilderness would further degrade the wilderness character of the region. Noise related impacts would be created by the constant operation of heavy equipment, the blasting of rock, generators, ventilation fans, and around the clock heavy truck traffic.

310-36 Visual impacts to the wilderness would also be significant and include a massive 647-acre, 318' high tailings pile, a 310' high dam to contain the tailings, as many as 16 miles of power line construction, the presence of industrial equipment and facilities, and a ventilation adit adjacent to Rock

Response: The effects of the alternatives on wildlife, vegetation, geology, hydrology, noise, scenery and other resource elements were analyzed in detail in their respective EIS sections. Section 3.24.1.4 was revised in the FEIS to describe the effects on wilderness character. None of the surface impacts of the proposed alternatives would occur within the CMW boundary, and the FEIS discussed the potential indirect effects on ecological processes within the CMW.

Wilderness character

183-1 Preserving the area's wilderness character is the Forest Service's overarching mandate in the Cabinets: should have been the overriding issue analyzed in the DEIS. While the DEIS analyzes four components of wilderness values (incidentally, those used in the monitoring, protocol for wilderness character), the term wilderness character never appears in the DEIS. This is a serious omission and renders the DEIS legally inadequate.

183-2 Even regarding visitor impacts, the analysis does little to suggest the severity of the impact. There is no mention of the loss of wilderness character from having a mine and mine tunnels in the Wilderness or what that may mean for the subsurface Wilderness, whether that be in terms of visitors impacts or other wilderness attributes that affect wilderness character.

183-2 The DEIS ignores cumulative impacts to the wilderness and wilderness character. Section 3.3 does not address wilderness character. What are the combined impacts of this project and others? Could important wilderness values be lost as a result of cumulative impacts? These questions were not addressed in the wilderness section.

183-2 The DEIS does not discuss the impacts to wilderness character in any substantive way. Though it makes mention of the four qualities for measuring wilderness character utilized in the protocol mentioned above, the analysis largely ignores three of the four attributes (see 3.23A. 1.2). For example, will the free play of wildlife in the Wilderness be hampered by this mine? If wildlife don't have freedom of movement outside of the Wilderness, it could constrain their actions in the Wilderness. That would affect wilderness

character. Endangered species like grizzlies provide important wilderness values and impacts to this species will affect wilderness character. What about fish moving in and out of the Wilderness? These factors all influence the area's wilderness character, yet are not analyzed or described. The impacts from outside activities are noted in relation to visitor use only. The impacts to wilderness character with the Cabinet Mts. Wilderness from activities outside the Wilderness must be addressed.

389-4 These, and other resources easily available at www.wilderness.net appear to have been completely discounted. Finally, "apparent naturalness" is not the only quality the Forest Service must protect; it also is mandated to protect actual naturalness, which is not analyzed in any sort of depth in either the DEIS or the SDEIS.

Response: Section 3.24.1.4 was revised in the FEIS to describe the effects on wilderness character. Although none of the surface impacts of the proposed alternatives would occur within the CMW boundary, the DEIS and FEIS disclosed the potential indirect effects on ecological processes within the CMW. The effects of the alternatives on vegetation, wildlife, geology, hydrology, and other resource elements were analyzed in detail in their respective EIS sections.

Proposed Rock Lake ventilation adit

183-2 There are also questions about the actual impacts to the surface. The DEIS notes an air vent will be constructed on an inholding within the Wilderness, yet the map suggests the private land may not be an inholding. The DEIS is also not clear whether sounds from. mining would be noticeable to wildlife or visitors. Even if surface structures/impacts are precluded--and that is not entirely clear--does not mean that there will be no impacts to the surface from subsurface activities.

Response: Section 3.24.1.4 of the FEIS clarified that the ventilation adit would be on private land outside of the CMW boundary.

Short-term and long-term impact definitions

327-37 These impacts would be short term and would not impact the natural integrity of the CMW over the long term. (p. 416) The vagueness of this statement is unacceptable. If a professional document expects to use phrases such as "short term" and "long term," is needs to quantify what each of these phrases mean in terms of time.

Response: "Short term" and "long term" are both defined in the Glossary (Chapter 7) of the EIS.

Outstanding Resource Waters

335-27 "Groundwater drawdown during mine operations may indirectly impact aquatic habitat and associated ecological processes within the CMW, potentially resulting in seasonal reductions in Rock Creek water levels and streamflow in the upper reaches of EFRC and EFBR. Reductions in streamflow and lake levels may reduce habitat for fish and other aquatic life." This statement is inconsistent with other portions of the SDEIS, which predicts that there will be long-term and even permanent impacts from mining operations.

389-3 The SDEIS does not assess how groundwater drawdown will affect wilderness character or recreational opportunities. The SDEIS contemplates that groundwater drawdown from the mine might affect water levels and species habitat/composition in Rock Lake, East Fork Bull River and East Fork Rock Creek. Are these changes permissible in Outstanding Resource Waters? How will this affect naturalness? What about perceived naturalness? Will it affect recreational opportunities for fishing? Can an ecosystem bearing these impacts be characterized as untrammeled? The SDEIS neither contemplates these questions nor responds to them.

Response: The effects of the alternatives on hydrology and other resource elements were analyzed in detail in their respective EIS sections. Section 3.24.1.4 was revised in the FEIS was revised to ensure it was consistent with the hydrology analysis. Section 3.24.1.4 was revised in the FEIS to describe the effects on wilderness character.

Monitoring of wilderness character

389-2 a. The Kootenai National Forest does not employ a Wilderness Manager and the wilderness analysis in the SDEIS is inadequate. From reviewing the analysis and list of preparers, it appears the Forest Service has not employed a wilderness specialist in its assessment of this project. This is a significant shortcoming given the potential for significant impacts to the Cabinet Mountains Wilderness and the challenges of assessing those impacts. But the Forest Service must be able to independently determine that the analysis is adequate, a task not achievable when the agency staff involved lack the expertise to make the determination. Moreover, while ERO Resources Corp may be qualified to analyze wilderness impacts, its analysis is inadequate when it is not derived from data obtained through wilderness monitoring and analysis. None of the materials presented for public review show that such monitoring and analysis was either conducted or considered in the SDEIS process. As an illustration, we refer the reader to § 3.24.4.1, pp 416-419, in which the SDEIS briefly considers the proposed mine's impacts to the Cabinet Mountains Wilderness

389-3 e. The SDEIS relies on no quantitative or qualitative data about wilderness experiences. It cites no academic literature. It fails to employ a discernable analytic framework and makes baseless assertions about effects on wilderness. The SDEIS states: "Apparent naturalness would not be substantially affected by the proposed mine disturbances outside wilderness boundaries." (SDEIS, § 3.24.4.1, pp 416). This assertion appears to be baseless. First of all, elsewhere the SDEIS states that some of the mine works, including threaded situated on private property within the wilderness boundary and the transmission line, would be both visible and audible from the wilderness. Second, it is unclear whether any indicia are actually used to assess "naturalness" and wilderness experience of visitors in this wilderness. Have data documenting user experience in the CMW been collected? None of the appendices display any such references and no academic literature about wilderness is cited. This appears to be an arbitrary assertion with no basis in measurable fact. This is particularly troubling as the Forest Service, through Aldo Leopold Wilderness Research Center, has published a wealth of articles guiding decision-making processes in federally-designated wilderness and wilderness character monitoring. See e.g., Peter Landres, et al. Technical Guide for Monitoring Selected Conditions Related to Wilderness Character. USDA Forest Service, General Technical Report WO-80. US Government Printing Office, Washington, DC. (2009); Peter Landres, et al.

389-4 The factual assertions in this document with regards to effects on wilderness character are supported by no data. They do not appear to have been considered according to any ordered framework, including those recommended by the Forest Service. It is unclear whether the KNF engages in any monitoring of its wilderness resource and if so, how the results of that monitoring have been considered in the decision-making process around this mine. Statements about how wilderness character will be affected by the mine when no actual baseline data about wilderness experiences has been collected do nothing to aid the public in understanding the consequences of this mine.

389-4 f. The Forest Service must respond to the following. The Forest Service should respond to the following: How does the KNF monitor wilderness character in the CMW and what are the results of that monitoring? What wilderness experiences do users value? How will increased access to the wilderness (that the SDEIS suggests will occur) affect wilderness experiences and what is the basis for that assessment?

389-4 Applying the concept of wilderness character to national forest planning, monitoring, and management. Gen. Tech. Rep. RMRS-GTR-217WWW. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. (2008); Peter Landres,. A Framework for Evaluating Proposals for Scientific Activities in Wilderness. In: McCool, Stephen F.; Cole, David N.; Borrie, William T.; O'Loughlin, Jennifer, comps. 2000. Wilderness science in a time of change conference— Vol. 3: Wilderness as a place for scientific inquiry; 2000 May 23–27; Missoula, MT. Proceedings RMRS-P-15-VOL-3. Ogden, UT: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. 239- 245.

389-5 What publications have the preparers of the SDEIS relied on to make their determinations about impacts on wilderness character?

183-1 The analysis in the EIS should use as a basis the Interagency strategy for monitoring wilderness character (see Keeping It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System. USDA General Technical Report RMRS-GTR-212, July 2008).

Response: Several of the referenced guidance documents were consulted during the wilderness analysis process. While the referenced documents provided a framework for monitoring wilderness character, directing wilderness management, and evaluating the effects of projects within wilderness boundaries, they are less applicable to the analysis of the Montanore Project alternatives and the effects of a project outside of wilderness. While the consideration of these guidance documents to monitor and manage wilderness character is important, it has limited utility for the analysis. The NEPA process guidance provided in Gen. Tech. Rep. RMRS-GTR-217WWW (Landres et al. 2008) is similar to the overall planning and evaluation process that occurred during the development of the DEIS, SEIS, and FEIS for the Montanore Project. Based on the public comments and the existing guidance, the revised analysis in Section 3.24.1.4 of the FEIS further describes the effects on wilderness character. Section 3.23 of the DEIS and Section 3.24.1 FEIS discussed the varied and subjective nature of the wilderness experience and wilderness character, particularly related to the indirect effects of development outside of the wilderness. Considering the location of the project outside of wilderness and the subjective nature of the wilderness experience, the revised analysis in Section 3.24.1.4 of the FEIS provides an adequate disclosure of the potential effects on wilderness.

4705 Comment about effect-mine

62-13 I'm concerned about some of the wilderness impacts of the mine and the fact that I don't believe that the Wilderness Act as stated is a legal context and under which the Forest Service is operating within the EIS. I do think that there are going to be impacts to the wilderness area in the form of subsidence. There's going to be disturbances to wildlife, despite the mitigation measures which I think are pretty admirably designed. But still, there are going to be impacts.

74-6 The Montanore mine will impact the natural quality of A). Wildlife species and their habitats outside of Wilderness will be significantly affected, changing their presence and viability within Wilderness and B). Water quality within Wilderness, specifically in Rock Lake, Rock Creek and the East Fork Bull River, may be impacted.

74-10 Despite a well-designed mitigation plan that holds MMC accountable for the adverse consequences its actions will have on public lands and resources, the proposed mine violates the KFP, and therefore NFMA, the Wilderness Act (to the extent that Wilderness populations of grizzlies will be affected), the USFS guidance on Wilderness management (2320).

74-11 Permitting a project that creates the potential for this kind of degradation is irresponsible from a Wilderness management standpoint because it may compromise the natural quality of the CMW and trammel its hydrologic processes. While water quality of surface water resources within Wilderness is unlikely to be directly affected by runoff from the mine, it may be impacted through groundwater. Water levels undoubtedly will be affected. This will degrade Wilderness character. Furthermore, the effects that these changes may cumulatively have on sensitive fish populations will degrade Wilderness character and contradict the KFP, which lists among its objectives meeting or exceeding Montana water quality standards and protecting endangered species, and thus, NFMA. There also seems to be some risk that it will violate the CWA and MCA.

74-11 The wells to be drilled within Wilderness to monitor groundwater quality in order to ensure a properly stringent monitoring protocol run counter to Wilderness principles and will degrade the Wilderness. This contradicts FSM 2320, which states that monitoring in Wilderness should be carried out according to Wilderness principles. If the wells are not drilled and water quality is not monitored adequately, the KNF will be ducking its mandate to protect Wilderness character. The water quality risks of this project are considerable and constitute a Catch-22 with regards to Wilderness character.

74-11 It should be stressed that if wells are not drilled, if groundwater quality baseline data do not exist and if groundwater cannot be monitored, this project cannot proceed ethically or legally.

74-12 The DEIS states that while chimney subsidence is unlikely to create surface disturbances due to the depth of rock overlying the proposed Montanore mine (500 feet), it may occur below ground and the impacts to groundwater as a result "should be evaluated." (3.9.3.1.2, pg 396). Trough subsidence "cannot be entirely dismissed at the current level of design." (396). Whereas chimney subsidence is a more localized effect, trough subsidence can occur on a scale of many acres. Either would involve a substantial disturbance to the CMW.

74-12 While the DEIS states that "none of the mine and transmission line alternatives would physically disturb any land within the CMW" and that "the Wilderness Act does not regulate activities outside the Wilderness" (3.23.4.4, pg 711), there would clearly be substantial indirect impacts on Wilderness solitude. By permitting reduction of Wilderness solitude, the agency is allowing degradation of Wilderness character.

74-12 [Noise] would not only change visitor experience and reduce the recreational and scenic values of the CMW, but also adversely affect wildlife populations. Less wildlife presence would add to the reduction of these human values, as well as subtract from the quality of the land as wildlife

74-14 If subsidence occurs in the CMW, the Forest Service will have violated its mandate to protect Wilderness character, and the Wilderness Act. If subsidence exacerbates the mine's effects on water quality or quantity within Wilderness it will magnify the already-considerable impacts the degradation of these attributes has on Wilderness character.

74-20 [The] DEIS [is] a very thorough analysis-I do not believe that anyone wants to harm the already-impaired environment in Libby, or affect public resources in ways that would prohibit their use for future generations. Yet what struck me most was that the issue that seems to present the central philosophical and legal issue with this mine, that it will be occurring beneath Federally designated Wilderness, is not thoroughly examined in the document. It is a mystery to me how this oversight happened, given the degree of interpretation of the Wilderness Act that is available to interested parties, and the level of public value that Wilderness has.

106-1 This proposal is illegal because it violates the Wilderness Act of 1964. In particular this proposal will cause water quality and quantity problems in the Cabinet Mountains Wilderness, for streams and lakes, including the East Fork of Bull river and Rock Lake.

183-2 Further, the entire analysis is based on the false premise that the mining will not occur within the Wilderness. Nothing in the Wilderness Act that designated and governs the administration of the Cabinet Mountains Wilderness provides support for the mistaken notion that the Wilderness is restricted to the surface of the mountain. The Wilderness extends as deep into the Earth as does the territorial boundary of the United States. Thus, all of the impacts that will occur within that boundary are direct impacts to the Cabinet Mountains Wilderness.

183-3 It should be emphasized the agency's duties under the Wilderness Act are not overridden by any "rights" the applicants may have under the 1872 mining law. Compliance with the Wilderness Act's provisions must be met. In a similar instance, the courts are clear in ruling that prohibitions under the ESA must be enforced, even to deny mining operation and: "of course, the Forest Service would have the authority to deny any unreasonable plan of operations or plan otherwise prohibited by law. E.g., 16 U.S.C. 1538 (endangered species located at the mine site).• The Forest Service would return the plan to the claimant with reasons for disapproval and request submission of a new plan to meet the environmental concerns."

200-21 The mining operation would be located inside the Cabinet Mountains Wilderness, directly beneath Rock Lake. The Kootenai National Forest is 2.2 million acres; the 94,000 acre Cabinet Mountains are the only protected wilderness in the forest. As described above, severe impacts to wilderness lakes are likely, including Rock and St. Paul Lake and possibly even the high alpine chain of Libby Lakes. The mine cavity will divert groundwater that these lakes depend on for recharge. Once the cavity beneath the wilderness is created, the consequences will be irreversible. Impacts to wilderness streams and creeks are also expected, including the East Fork of Bull River, which is essential for the survival of the threatened bull trout in the region. Most of the impacted tributaries in the Libby Creek drainage find their origin within the boundary

of the Cabinet Mountains Wilderness. Subsidence and/or collapses in the subsurface cavity and tunnels occur frequently in deep underground mines. If any such failure were to happen beneath the wilderness, surface impacts would be expected. Noise and visual mine related impacts to the wilderness would further degrade the wilderness character of the region. Noise related impacts would be created by the constant operation of heavy equipment, the blasting of rock, generators, ventilation fans, and around the clock heavy truck traffic. Visual impacts to the wilderness would also be significant and include a massive 647-acre, 318' high tailings pile, a 310' high dam to contain the tailings, 16 miles of power line construction, the presence of industrial equipment and facilities, and a ventilation adit adjacent to Rock Lake.

202-34 Andrus, 487 F. Supp. at 448 (emphasis added). Here, any adverse impact to the water levels or uses of the wilderness lakes and streams would violate the USFS' duties to protect these resources.

202-39 None of the alternatives would directly affect the wilderness attributes of the Cabinet Mountains Wilderness. (DEIS Vol 1 page S-55) How can this statement be made by the agencies? Do impacts and displacement from habitat of several wilderness wildlife species not affect wilderness attributes? Do impacts to the hydrology of wilderness lakes and streams not affect wilderness attributes? This mine would directly impact numerous alpine wilderness lakes including Rock Lake and St. Paul Lake and wilderness stream reaches including the East Fork of Bull River. The impacts would include dewatering that would lower lake levels.

291-1 Alternative One is the only plan that fulfills the purpose and need to comply with laws protecting the wilderness area designated by federal law and regulations.

291-1 DEQ must cancel the operating permit since it is invalid within the designated protected wilderness areas.

243-6 The DEIS indicates that the proposed mine will intercept ground water in the region, and divert it into the mine's underground tunnels. Streams and lakes that rely on this groundwater will suffer the consequences, including overlying alpine lakes within the Cabinet Mountains Wilderness that are designated Outstanding Natural Resource waters.

389-5 How might subsidence affect the wilderness, particularly in light of the subsidence that has occurred at the Troy mine, which has been used as an analog for the proposed Montanore mine?

389-3 Since steady state groundwater conditions are not projected to be reached for 1200 to 1300 years and the mine void and adits are not expected to fill for 490 years, it seems arbitrary and erroneous to characterize the disturbance involved with monitoring and maintaining the adits as "short term." Further, failure to conduct this sort of long-term monitoring would be impermissible in light of the Wilderness Act's mandate that the Forest Service ensure "naturalness" in wilderness.

Response: Section 3.24.1 of the DEIS and FEIS discussed the existing laws and policies which direct that mining operations can occur within wilderness, subject to management requirements for the protection of wilderness character. This is based on Section 4(d)(3) of the Wilderness Act, the 1872 General Mining Law, and Forest Service Regulations. Note that FWM 2320 also states that it is the objective of the Forest Service to "ensure that mineral exploration and development operations conducted in accordance with valid existing rights for federally owned, locatable, and leasable minerals (FSM 2810 and FSM 2820) and for non-federally owned minerals (FSM 2830) preserving the wilderness resource to the extent possible."

The effects of the alternatives on wildlife, vegetation, geology, hydrology, and other resource elements were analyzed in detail in their respective EIS sections. These detailed discussions addressed issues such as subsidence, wildlife impacts, and groundwater impacts. Although none of the surface impacts of the proposed alternatives would occur within the CMW boundary, the FEIS described the potential indirect effects on wilderness values and ecological processes within the CMW. Section 3.24.1.4 was revised in the FEIS to describe the effects on wilderness character.

109-13 Under what legal authority is MMC authorized to access, rehabilitate, and extend the Libby Adit under the Cabinet Mountain Wilderness?

Response: Based on Section 4(d)(3) of the Wilderness Act, the 1872 General Mining Law, and Forest Service Regulations, Section 3.24.1 of the DEIS and FEIS discuss the existing laws and policies that direct how mining operations can occur within wilderness, subject to management requirements for the protection of wilderness character.

182-2 P. 44. In MMC proposal, the mill and mine production adits would be located in the upper Ramsey Creek drainage, about 0.5 mile from the CMW boundary. While there is no official or legal requirement regarding buffer zones in either the Wilderness Act or the 1872 Mining law, it is ludicrous to think that citing a major industrial facility operating 24/7/365 within 0.5 miles of a wilderness boundary would not impact the purpose of the area.

183-2 For example, will water flow within the wilderness or the hydrology be affected by this activity? What about subsidence? What about subsurface life? Is there any chance it may be affected by the mine?

Response: See above responses. Section 3.23.1 of the DEIS and Section 3.24.1 of the FEIS discussed that the Wilderness Act does not regulate activities outside the wilderness.

202-34 Noise and visual mine related impacts to the wilderness would further degrade the wilderness character of the region and would continue through the 16-19 year life of the mine. These impacts would not only be significant for wildlife, but also would seriously affect the "wilderness experience" sought by hikers, wildlife enthusiasts, hunters and fishers.

Response: Section 3.24.1.4 was revised in the FEIS to describe the effects on wilderness character. Both the recreation and wilderness sections of the DEIS and FEIS described potential effects on wilderness visitors, noting in Section 3.24.1.4 that the adverse effects on the wilderness experience would vary by location and by individual visitor.

335-30 The SDEIS states that, "none of the alternatives would result in an irreversible and irretrievable commitment of resources within the CMW." Page 418. This is inconsistent with the SDEIS.

Response: See above responses. None of the surface impacts of the proposed alternatives occur within the CMW boundary and indirect impacts to wilderness character would diminish or disappear over the long term.

389-5 How will the mine affect the wilderness's untrammeled quality?

Response: None of the alternatives would result in surface impacts within the CMW boundary. Indirect impacts to wildlife and ecological processes outside of the CMW may occur, and are described in their respective sections of the EIS. Section 3.24.1.4 was revised in the FEIS to describe the effects on wilderness character.

389-5 What impacts from climate change on the wilderness risk to be exacerbated by the effects of this project (i.e., water scarcity)?

Response: The potential project effects associated with climate change are described in section 3.6, *Aquatic Life and Fisheries*, section 3.10, *Groundwater Hydrology*, section 3.11, *Surface Water Hydrology*, section 3.11, *Water Quality*, and, for those wildlife species potentially affected, in section 3.25, *Wildlife.* Due to the uncertainty and possible range of effects on surface water hydrology due to climate change, it is not possible to quantify the cumulative effects of the Montanore Project and climate change. The reduction in low flows may be cumulatively greater and reductions in the Rock Lake volume and water level may be larger. Alternatively, an increase in winter rain might result in a smaller reduction in the volume and water level of Rock Lake during the winter.

389-5 How would changes in water quality and quantity caused by the mine affect the wilderness?

Response: As described in Section 3.24.4.1 of the FEIS, groundwater drawdown during mine operations may indirectly impact aquatic habitat within the CMW due to reductions in streamflow and lake levels.

335-27 "Groundwater drawdown during mine operations may indirectly impact aquatic habitat and associated ecological processes within the CMW, potentially resulting in seasonal reductions in Rock Creek water levels and streamflow in the upper reaches of EFRC and EFBR. Reductions in streamflow and lake levels may reduce habitat for fish and other aquatic life." This statement is inconsistent with other portions of the SDEIS, which predicts that there will be long-term and even permanent impacts from mining operations.

389-5 How will the mine affect both actual and perceived naturalness within the wilderness?

Response: As disclosed in the DEIS and in the Section 3.24.1.4 of the FEIS, naturalness within the CMW would not be affected by mine disturbances outside of the wilderness boundary. Those disturbances could affect the perception of naturalness, though those perceptions are highly personal and individual and the perceived effect would differ by location and among individuals.

389-5 How would the mine affect opportunities for solitude, particularly in light of increased helicopter presence and improved recreational access?

Response: Potential effects of mine development and operation outside of the CMW on opportunities for solitude within the CMW were described in the Section 3.23.4 of the DEIS and Section 3.23.4 of the FEIS. Effects on solitude would potentially stem from visual and noise impacts. Increased recreational access may affect wilderness solitude in some areas, but would not affect the ability of visitors to find opportunities for solitude.

4710 Comment about cumulative effect

74-14 The proposed Montanore mine will do serious, irreversible damage to the Wilderness character of the CMW, particularly in concert with the Rock Creek mine. All four FS-formed pillars of Wilderness character may be negatively affected. Causing resource degradation and failing in the Wilderness Act's mandate to preserve Wilderness for the American people in perpetuity.

186-4 The agencies seem to have forgotten that wilderness is an experience to be managed for. The Rock Creek Project, Snowshoe Project, and the Montanore Project all jeopardize the wilderness experience on the KNF. The CMW is the only wilderness area in NW Montana.

200-21 Numerous other mining interests have claims for the ore beneath the wilderness, including the proposed Rock Creek project. If one project is permitted, it will be difficult to deny other interests from accessing the ore. The consequence would be a wilderness that would be honeycombed from extracted ore, rimmed with the operating and abandoned mining infrastructure, and scarred by discarded tailings.

202-35 All of these impacts would severely diminish the wilderness attributes of the CMW. Alone, and in combination with impacts from the Rock Creek mine, they would remove enjoyment of this wilderness from a segment of the population that would no longer visit the CMW.

389-5 How might these effects be exacerbated in combination with the proposed Rock Creek Mine?

Response: Section 3.23.4 of the DEIS and Section 3.24.4 of the SDEIS discussed cumulative effects of the Montanore project on wilderness when combined with the effects of other proposed projects, noting that the combined projects might contribute to a loss of wilderness attributes desired by some individuals.

4755 Inventoried Roadless Areas: Comment about effect-mine

106-1 There are also roadless lands that will suffer the same unacceptable environmental impacts due to the development of this proposed hard rock mine.

186-4 Even though Ramsey Lake "receives very little recreational use" does not mean that people don't enjoy it and access to the lake can be restricted. Locating the mine plant 1,000 feet from Ramsey Lake is appalling. Every effort should be made to reduce the impact on the CMW and adjacent IRA's. No IRA's should be reduced or compromised to accommodate the proposed MMI mine.

202-35 The proposed mine also would be located adjacent to Inventoried Roadless Areas, including the Cabinet Face East and Barren Peak IRA's. These areas include old growth and core grizzly bear habitat. (DEIS Vol. 3 figure #47)

Response: The KNF is required by law to allow reasonable access to valid mineral rights on NFS lands, subject to certain measures to protect resources and minimize impacts. The effects of the proposed alternatives on attributes of the Cabinet Face East IRA, including Ramsey Lake, were disclosed in Section 3.23.4.2 of the DEIS and Section 3.24.4.2 of the FEIS.

Wildlife

4804 Key Habitats: Comment about analysis-transmission line

Snag diameters considered for snag densities

202-23 A statement is made in the DEIS that "Snag densities and quantities of downed wood would remain above KNF-recommended levels and would be sufficient to sustain viable populations of cavity-dependent species in the KNF (S-62). While they may or may not be sufficient to maintain populations of smaller cavity nesters, snag requirements of Pileated Woodpeckers are for large diameter trees. It appears that KNF conducted sampling of snags in old growth, but Table 152 indicates that the analysis was based on snags per acre greater than 10" diameter, and there is no indication of what percentage of these are at least 20" dbh. Optimum habitat exists when the average of all snags over 20" dbh is 30". Habitats without suitably sized snags are unsuitable (Schroeder 1982). The USDA Forest Service has several publications on managing and monitoring Pileated Woodpeckers (Bull et al. 1991) including a protocol for sampling snags (Bate et al. 2002).

331-38 A statement is made in the DEIS that "Snag densities and quantities of downed wood would remain above KNF-recommended levels and would be sufficient to sustain viable populations of cavity-dependent species in the KNF (S-62). While they may or may not be sufficient to maintain populations of smaller cavity nesters, snag requirements of Pileated Woodpeckers are for large diameter trees. It appears that KNF conducted sampling of snags in old growth, but Table 152 indicates that the analysis was based on snags per acre greater than 10" diameter, and there is no indication of what percentage of these are at least 20" dbh.

Response: The effects of the action alternatives on pileated woodpecker, and methods used in the effects analysis, are described in Section 3.25.3.4 of the FEIS. Project impacts were evaluated based on impacts to important attributes of pileated woodpecker habitat. Specific features of old growth stands evaluated for project impacts included those evaluated when determining designations for old growth in the KNF, including preferred nest tree species, preferred nest tree size, down logs (both size and quantity), basal area, and canopy closure.

As described in Section 3.25.2, the estimated average density of snags at least 20 inches in diameter was 1 snag per acre. As disclosed in the FEIS, the agencies agree that the action alternatives would result in the loss of snags greater than 20 inches diameter at breast height (dbh) and down logs greater than 10 inches dbh that provide potential nesting and foraging habitat for pileated woodpeckers. The 2015 KFP also includes a desired condition that "snags occur throughout the forest in an uneven pattern, provide a diversity of habitats for wildlife species, and contribute to the sustainability of snag dependent species. Snag numbers, sizes, and species vary by biophysical setting and dominance group…Over time, the number of large-diameter snags (20 inches in DBH or greater) increases in all biophysical settings" (FW-DC-VEG-07).

4805 Key Habitats: Comment about effect-mine

Effect of hydrologic changes on wildlife

182-15 "Flow from springs hydraulically connected to the deeper groundwater flow path (below an elevation of about 5,600 ft. or 5,625 in the case of the East Fork Rock Creek) would be reduced. Reduction or dewatering of springs above this elevation might have a significant impact on wildlife that migrates to and above this elevation to secure whatever their needs are. How does this stress them or make them vulnerable to other influences, i.e. predation, body fat buildup, etc.?

335-27 What are the possible effects of dewatering GDEs on grizzly bears or other threatened and endangered species and other wildlife within the project area?

389-5 How will wildlife within the wilderness be affected by the long-term hydrologic changes caused by the mine?

Response: Potential changes to surface water flows due to the Montanore Project would primarily affect species dependent on wetland and riparian habitats. As described in Appendix C, in the agencies' alternatives, MMC would be required to monitor water resources, including groundwater and surface water flows, wetlands and riparian habitats, aquatic species (including amphibians) populations, and aquatic community composition at various stages of the project, including Pre-Evaluation, Evaluation, Construction, Operations, Closure, and Post-Closure phases. Terrestrial species populations may also be monitored, to be determined in the Final Monitoring Plan. A GDE inventory and subsequent monitoring would be completed of a selected area overlying the proposed mine and adits and used to evaluate effects of mine drawdown on wetlands and riparian habitats (see section C.10, Water Resources of Appendix C). The plan's objective is to effectively detect stress to flora and fauna from effects on surface water or groundwater due to mine dewatering so that such mitigation can be implemented to minimize such stress. The plan would be submitted to the agencies for approval after the GDE inventory was completed and early enough for at least 1 year of data to be collected before additional dewatering and extension of the Libby Adit started. The Monitoring Plan also includes action levels, or some measurable change in a monitoring parameter that would require MMC action.

Other Comments

389-3 Since steady state groundwater conditions are not projected to be reached for 1200 to 1300 years and the mine void and adits are not expected to fill for 490 years, it seems arbitrary and erroneous to characterize the disturbance involved with monitoring and maintaining the adits as "short term." Human presence to conduct this monitoring will affect wildlife in the CMW.

Response: The duration of post-closure monitoring of the mine void and adits cannot be determined at this time. The agencies' water resources monitoring plan is described in appendix C. The post-closure monitoring plan would include measuring water levels in the mine void through the Rock Lake Ventilation Adit. Mine water quality and geochemical analysis of rock surrounding the mine void would be made during the Operations Phase. Hydrologic data would be collected in all phases through the Operations Phase, and would be integrated into the groundwater model. The need for continued monitoring beyond the Closure Phase would be based on these data.

4821 Management Indicator Species: Suggested new mitigation

236-3 Murphy Lake, which is critical elk winter range, it was a local requirement, that when there were harvest activities in elk range, that it would be limited to the December to March period, so as to provide extra feed from the top moss. I would encourage use of that component of habitat feed at any opportunity, instead of limiting that use.

Response: Murphy Lake is important white-tailed deer winter range. Winter harvest has been allowed for reasons other than deer forage, but deer have taken advantage of the lichens/moss/green needles on the down trees in the winter. The same phenomenon of harvesting activities creating a congregation of deer at the active logging site has not been seen for elk at the Murphy Lake winter range area. It is suspected this is

a combination of factors, such as white-tailed deer being more tolerant, differences in foraging behavior, and also that the area is not a major elk winter range. Elk are sometimes displaced from harvest areas, however the distance appears to be minimum required to avoid contact with people and equipment.

As discussed in the FEIS, section 2.9.6.3, MMC would not conduct transmission line construction or decommissioning activities in elk, white-tailed deer, or moose winter range between December 1 and April 30. These timing restrictions may be waived in mild winters if MMC could demonstrate that snow conditions were not limiting the ability of these species to move freely throughout their range. MMC must receive a written waiver of these timing restrictions from the KNF, DEQ, and FWP, before conducting construction or decommissioning activities on elk, white-tailed deer, or moose winter range between December 1 and April 30. Timing restrictions would not apply to substation construction. The agencies believe that benefits of requiring that transmission line construction not occur during the winter are greater than those that may be offered by providing additional forage.

Grizzly bear mitigations in the agency-mitigated alternatives also would include restrictions on the timing of transmission line construction and decommissioning. These restrictions would apply to National Forest System and state trust lands. This grizzly bear mitigation would require that MMC be restricted to June 16 to October 14 for conducting these activities. No waiver of winter range timing restrictions would be approved on NFS or state trust lands where the grizzly bear mitigations would apply.

4823 Management Indicator Species: Comment about analysis-mine

74-7 Furthermore, while the Land Application Disposal (LAD) method of water treatment for the mine tailing water has been assessed, the health effects of eating vegetation in the LAD areas to wildlife have not been documented. Unless the LAD areas will be completely closed off, the high levels of heavy metals and nitrates in the soil and plant life could have an effect on herbivores and scavengers.

Response: Neither of the agencies' mine alternatives would include LAD. The potential effects of Alternative 2 LAD on wildlife were discussed in Section 3.25 of the FEIS.

389-2 b. The SDEIS incorrectly characterizes disturbances to wildlife caused by this project as "short term." The SDEIS characterizes the disturbances to wildlife caused by blasting during the construction of the Rock Creek and Libby ventilation adits and the use of helicopters as "short term. "However, this characterization is erroneous.

Response: Effects of blasting and helicopter use on mountain goats are disclosed in Section 3.25.3.3.4. The agencies maintain that effects from blasting and helicopter use would be short-term. For all transmission line alternatives, helicopter activities during line-stringing would last up to 10 days. Except for annual inspection and infrequent maintenance operations, helicopter use and other transmission line construction activities would cease after transmission line construction until decommissioning. Blasting would likely be mostly underground at the Libby Adit, where a maximum of two rounds of blasting would occur at the surface. The Ramsey Adits would probably require a maximum of two rounds of surface blasting per adit. The ventilation raise would be constructed from inside the mine and would not require any surface blasting, except for creation of the surface opening.

4825 Management Indicator Species: Comment about effect-mine

Effects on mountain goats

200-20 Mountain goats are a USFS indicator species. The direct impacts from the Montanore mine include but are not limited to displacement from habitat due to mine related activities such as blasting and road building. The mining process will likely increase stress levels resulting in low reproductive rates. Long-term disturbance on 5,656 seems conservative because of the invasive nature of the activities within their habitat. It is likely that the goat would be forced to vacate its historic range.

202-22 Mountain goats are a USFS indicator species. The direct impacts from the Montanore mine include, but are not limited to; displacement from habitat due to mine related activities such as blasting and road building. The mining process will likely increase stress levels resulting in low reproductive rates. Long-term disturbance on 5,656 acres seems conservative because of the invasive nature of the activities within the habitat. It is likely that goats would be forced to vacate their historic range.

310-31 The estimated long-term disturbance on 5,656 acres seems low due to the invasive nature of the activities within their habitat. It is likely that mountain goats would be forced to vacate their historic range.

Response: See comment response 185-11.

The impacts of human activity on mountain goats are disclosed in Section 3.25.3.4.3. Noise and human activity associated with plant construction could cause goats inhabiting surrounding areas to move to other portions of their home range for the duration of construction activities, but the agencies do not anticipate that mine construction or operations would cause the mountain goat to vacate its historical range. Most disturbances to goats would be short-term, and long-term disturbance would increase on a relatively small proportion (less than 0.01 percent) of goat habitat in the analysis area. The combined agencies' alternatives also would include funding for monitoring of mountain goat responses to mine-related impacts. If, in consultation with the FWP, mine disturbance were found to have a substantial impact on goat populations, mitigation measures would be developed to reduce the impacts of mine disturbance. In all combined action alternatives, some disturbance effects would be offset by access changes (installation of gates or barriers and public access restrictions) and habitat acquisitions planned as mitigation for the impacts to grizzly bear. Acquired parcels would be managed for grizzly bear habitat and use in perpetuity, and could improve or contribute suitable mountain goat habitat depending upon where the parcels were located and if the acquired parcels provided appropriate habitat characteristics.

Effects on pileated woodpecker

202-23 The projected loss of Old Growth habitat would impact this Forest Management Indicator Species by resulting in habitat loss and fragmentation and the loss of nesting cavities and feeding substrates. Fragmentation is especially problematic for this species given its large territory size and birds would be vulnerable to predation as they fly among fragmented habitat. Pileated Woodpeckers have strong year-round pair bonds (Kilham 1979) and site fidelity, occupying the same location in successive years (Kilham 1959). Pileated Woodpeckers are dependent on suitable snag densities, requiring large, tall snags usually with decaying heartwood (McClelland 1979). In studies conducted in Oregon by Bull (1987) the mean dbh was 84m and the mean tree height was 28m. In Washington, mean dbh and height were 97 cm and 41 m; (K. Aubry and C. Raley unpubl. data). In Montana, McClelland (1979) reported a mean dbh and height of 29.5 and 92 respectively. Clearly, snags of this size are uncommon outside of old growth and displaced pairs may not find suitable nesting cavities.

310-34 The absence of these species from the analysis area is indicative of a lack of adequate habitat and/or disturbance levels that preclude them from utilizing the habitat that is available. The Montanore project will reduce available old growth habitat and greatly increase disturbance levels.

Response: See comment response to issue 4804, p. M-429.

4830 Management Indicator Species: Comment about cumulative effect

Cumulative effects on mountain goats

202-22 The Rock Creek EIS states that the Montanore mine would have the most direct cumulative impact on mountain goats. The goats use the head end of Libby, Ramsey, West Fisher, and Poorman Creek. The DEIS states that these drainages are the population epicenter for the mountain goat herd in the southern Cabinet Mountains.

331-36 Cumulative impacts to mountain goat from the Montanore and Rock Creek Mines should have been included in the SDEIS. The Rock Creek EIS looked at the joint impacts and recognized the regional impacts from these two mines, as did the Montanore DEIS. Why were cumulative impacts not considered

in the SDEIS? The Rock Creek EIS states that the Montanore mine would have the most direct cumulative impact on mountain goats. The goats use the head end of Libby, Ramsey, West Fisher, and Poorman Creek. The DEIS states that these drainages are the population epicenter for the mountain goat herd in the southern Cabinet Mountains.

Response: Cumulative effects of the project on mountain goats were disclosed in Section 3.25.3.3.4.

264-3 How can two huge developments, one at Rock Creek and one on the Libby side of the Cabinet Wilderness not have an anticipated and unacknowledged impact on the wildlife and the island ecosystem?

Response: Cumulative effects on wildlife resources, including the effects of the Rock Creek and Wayup Mine/Fourth of July Road Access projects, are disclosed for each wildlife resource evaluated in Section 3.25.

Cumulative effects of climate change

389-6 c. The SDEIS should consider the effects of climate change on wildlife in combination with the proposed mine.

111-1 The permitting agencies have not required the regulatory agencies to consider the effects of this project on resilient habitats in the decades of global warming to come.

Response: Potential effects of climate change on wildlife cannot be quantified due to the uncertainties associated with predicting changes and the effects. The potential project effects associated with climate change for those wildlife species potentially affected are described in section 3.25, *Wildlife.*

4832 Management Indicator Species: Comment about effect – transmission line

236-2 Herbicides: Timing of the use of herbicides if needed at all should be considered, and use limited during the last decade of the life cycle of the project. Again, a very light foot print of herbicide should be the rule. A continuous open, clearing corridor, from the Sedlak sub-station to the Libby creek sub-station and beyond, will also serve as a wild life security impediment. Clearings are an impediment to ruminant security travel. Any angle in alignment, is better than an engineer's straight line, needed to break the straight line effect. Any clumps of vegetation that can be left outside of the bottom of the vertical curve would be beneficial for wild life security if it will not exceed the 20 years of growth height of the project term. The width of the clearing should also vary, with the widest point at the bottom of the vertical curve, to the narrowest point at the towers, and back again. This would help to break up the continuous sight line effect.

Response: The transmission line alternatives development process was described in Section 2.2 of the DEIS, SDEIS, and FEIS. Transmission line alternatives were developed based on requirements for alternatives under regulations and rules implementing NEPA, MEPA, MFSA, and Section 404 of the Clean Water Act. As described in Section 2.8, for all alternatives, some areas within the 150-foot clearing area would not require clearing, such high spans across valleys. Actual acreage cleared would be less and would depend on tree height, slope and line clearance above the ground. Clearing would produce a "feathered" edge on the right-of-way clearing, with the width of right-of-way clearing varying along the line. Implementation of the Vegetation Removal and Disposition Plan included in the agencies' alternatives would reduce clearing along the transmission line.

The impacts of the transmission line alternatives on elk and white-tailed deer, including elk security habitat, were disclosed in Section 3.25.3.

As described in Section 2.5.3.2.5, all herbicides used in the project area would be approved for use in the KNF, and would be applied according to the labeled rates and recommendations to ensure the protection of surface water, ecological integrity, and public health and safety. Herbicide selection and application timing would be based on target species on the site, site factors (such as soil types and distance to water), and with

the objective to minimize impacts to non-target species. MMC would coordinate with the KNF Weed Specialist for use of biocontrol agents as they become available.

4837 Management Indicator Species: Comment about mitigation-mine

Mitigation for cumulative effects to mountain goat

200-20 How do the agencies plan on protecting the mountain goat population from displacement from both the Montanore mine and Rock Creek mines? How will the agencies protect goat habitat from the impacts from other projects such as the Wayup and Fourth of July mines? Other projects in the area would displace goats from an additional 4561 acres of habitat. (DEIS Vol 2 page 777)

310-31 How do the agencies plan on protecting the mountain goat population from displacement as a result of the cumulative effects of the Montanore and Rock Creek mines? Other projects, such as the Wayup and Fourth of July mines, in the area would displace goats from an additional 4561 acres of habitat according to the Montanore DEIS.

Response: Cumulative effects of the project on mountain goats were disclosed in Section 3.25.3.4.3. Some cumulative human-caused disturbance effects would be offset by road access changes (installation of barriers and gates and public access restrictions). Habitat acquisitions planned as grizzly bear mitigation for the Montanore and Rock Creek projects could also reduce cumulative effects, depending upon where the parcels would be located and if management for grizzly bears benefited goats. The agencies' alternatives also would include funding for monitoring of mountain goat responses to mine-related impacts. If, in consultation with the FWP, mine disturbance were found to have a substantial impact on goat populations, mitigation measures would be developed to reduce the impacts of mine disturbance. Some unavoidable cumulative disturbance effects on mountain goats could last until mine closure and reclamation; however, adequate amounts of mountain goat habitat would continue to be provided for mountain goats.

Other Comments

141-6 The proposed mitigation of monitoring road-killed animals to determine if improved access results in increased mortality, will do little to reduce it. There is ample evidence that increased access may and often does result in increased mortality.

Response: Mine related traffic during mine operations and other phases was disclosed in Section 3.21.4 of the SDEIS and FEIS. The agencies believe that the effects of increased traffic on wildlife were adequately disclosed in section 3.25 of the SDEIS and FEIS.

All action alternatives include the development of a transportation plan and limiting concentrate haulage to daylight hours during the day shift to reduce mine traffic. The agencies' wildlife mitigation plan described in section 2.5.7.4.1 of the FEIS required MMC to remove big game animals killed by any vehicles daily from road rights-of-way within the permit area and along roadways used for access or hauling ore, monitor the number of animals killed by vehicle collisions on these roads, and report findings annually. The numbers of animals killed by vehicle collisions would be reviewed by the KNF, in cooperation with the FWP, and if necessary, mitigation measures would be developed and implemented to reduce mortality risks to grizzly bear. Other wildlife would benefit from grizzly bear mitigation measures, because grizzly bear mortality risk would be affected by animals killed by vehicles.

The agencies' alternatives includes other measures that would reduce the risk of wildlife mortalities from increased traffic, including the use of highway safety signs such as "Caution – Truck Traffic" to slow public traffic speeds and requiring that MMC stage shipments of supplies in a general location prior to delivery to the mine site to reduce traffic and deer mortality risk.

4838 Management Indicator Species: Comment about mitigation-transmission line

Effectiveness of land acquired for grizzly bear mitigation in reducing impacts to other wildlife

141-5 All power line alts will disturb winter habitat for deer, elk, and moose and decrease big game security areas in general. The proposed land acquisition programs proposed by MMC may do little to mitigate impacts to big game in the project area. What land is firmly committed, where are the forest and resource surveys to ascertain comparable effectiveness, who will retain ownership, and what management activities will be allowed on these acquisitions? The agencies anticipate additional land beyond that proposed by MMC would be necessary to mitigate all effects. Will this additional mitigation be required?

344-8 All of the above statements are speculation and there is no way for the public or any group to test the reliability of these assumptions. Also, the authors seem under the impression that mitigation measures for grizzly bears will also accommodate most big game, endangered species and OG forest. I disagree with this idea. It may. It may not, it all depends. It doesn't warrant the high degree of optimism and certainty assigned to it in

Response: Habitat acquisition for habitat physically lost due to the transmission line alternatives is minimal due to the low acreages affected (see Section 3.25.5.2.4, Objective 1 discussion). Alternative B would result in the physical removal of 20 acres within BMUs 5 and 6 and would provide habitat compensation of 20 acres to offset the loss of these 20 acres. Alternative B did not require habitat compensation for habitat physically lost outside of the recovery zone. Alternative 2B would have timing mitigation for grizzly bears in Midas and Miller Creeks. preventing construction activities during the spring use period, and during the winter on big game winter range.

The agencies alternatives result in a range of 2 acres (Alternative C-R), 7 acres (Alternative E-R), and 9 acres (Alternative D-R) of habitat being physically lost within BMUs 5 and 6. Within the BORZ, Alternatives C-R and D-R each result in 2 acres of habitat physically lost. Habitat compensation at a 2:1 ratio would be required for the habitat physically lost due to the agency transmission line alternatives. The agency alternatives do not require habitat compensation for displacement effects from the transmission line (but do require compensation for the mine and associated facilities long-term displacement effects). Short-term displacement effects to grizzly bears from the agency alternatives transmission line construction and decommissioning activities would mitigated for by restricting these activities to between June 16 and October 14 on all NFS lands within the recovery zone and on affected state trust lands. This mitigation would also benefit big game. The waiver for activity on big game winter range would not occur on NFS lands within the recovery zone, BORZ, or state trust lands. Also see response to issue 4861 under comments concerning "Land acquisition program" (p. M-441) for discussion of the habitat acquisition program for mitigation for mine effects.

Most of the grizzly bear mitigation measures described in Section 2.5.7.2 of the SDEIS and 2.5.7.4 of the FEIS would also benefit other wildlife. The acquisition of grizzly bear habitat required to compensate for habitat physically lost and long-term displacement effects from the mine would prevent private development of these parcels, many of which provide suitable habitat for other species. Habitat parcels identified as potential replacement habitat for mitigating effects to grizzly bear are prioritized based on their value as grizzly bear habitat. However, overall road densities would likely improve through the agencies' proposed land acquisition requirement for grizzly bear mitigation, as described in section 2.5.7.2.1 of the SDEIS and in section 2.5.7.4.1 of the FEIS, thereby benefitting elk, white-tailed deer, moose, and other wildlife. As described in the agencies' Wildlife Mitigation Plan (Section 2.5.7.4 of the FEIS), many other measures would minimize impacts to wildlife, such as the development and implementation of a wildlife awareness plan; funding of a Habitat Conservation Specialist and Law Enforcement Officer; monitoring of wildlife mortalities due to vehicle collisions, and if appropriate based on monitoring, mitigation of vehicle-related wildlife mortality.

4839 Management Indicator Species: Comment about regulatory compliance

310-31 NFMA requires the Forest Service to maintain viable populations of native species, and in particular MIS species. The potential extirpation of mountain goats would violate this requirement.

Response: Effects of the project on mountain goats were disclosed in Section 3.25.3.3.4. Some human-caused disturbance effects would be offset by road access changes (installation of barriers and gates and public access restrictions) and habitat acquisitions planned as mitigation for the Montanore, Rock Creek, and other projects. The agencies' alternatives also would include funding for monitoring of mountain goat responses to mine-related impacts. If, in consultation with the FWP, mine disturbance were found to have a substantial impact on goat populations, mitigation measures would be developed to reduce the impacts of mine disturbance. Although, some unavoidable disturbance effects on mountain goats could last until mine closure and reclamation, as described in Section 3.25.3.3.4, adequate amounts of mountain goat habitat would continue to be provided for mountain goats.

4840 Sensitive Species: Suggested new information/analysis

248-28 A bald eagle nest exists in a snag approximately 250 meters west of Libby Creek in the Analysis Area in a 1988 vintage cutting unit between the lower portion of Forest Service road 6212M and Forest Service road 6212H.

Response: No bald eagle nest has been identified by FWP or the KNF in this location near the confluence of Libby and Little Cherry creeks.

4841 Sensitive Species: Suggested new mitigation

310-35 Surveys should be conducted to determine whether the areas impacted by the TL alternatives contain suitable species' habitat for flammulated owl, black-backed woodpecker, and northern goshawk and other sensitive species. The surveys should determine which species are present and the existence and location of nesting sites. If surveys indicate that nesting sites are located within the areas of impact, those areas should be avoided.

Response: The agencies' wildlife mitigation plan was described in Section 2.9.6.4 of the FEIS and requires that MMC fund and initiate annual monitoring of migratory birds, including flammulated owl, black-backed woodpecker, and northern goshawk, within 1 mile of mine facilities or transmission lines and at more distant reference sites. The monitoring effort would continue to provide data to the Integrated Monitoring in Bird Conservation Regions project that would allow inferences to avian species occurrence and population trend from both the local level, such as the PSUs where project activities are proposed, to Bird Conservation Regions scales, facilitating conservation at local and national levels. In the agencies' alternatives, MMC would be required to construct the transmission line from June 16 to October 14, which would reduce potential impacts to nesting migratory birds.

4843 Sensitive Species: Comment about analysis-mine

310-33 The goshawk is considered to be an indicator species for the adequacy of old growth habitat. The fact that it is not on the KNF's list of Management Indicator Species for old growth does not eliminate its role as such.

Response: The 2015 KFP does not contain Management Indicator Species for old growth. Impacts to the northern goshawk were evaluated and are described in 3.25.6 of the FEIS.

4844 Sensitive Species: Comment about analysis-transmission line

310-35 The potential for impacts to these and other sensitive species from the construction of the TL alternatives must be disclosed in the FEIS.

Response: Impacts of transmission line construction on sensitive species were described in Section 3.24.4 of the DEIS and Section 3.25.4 of the FEIS

4845 Sensitive Species: Comment about effect-mine

141-6 What effects are anticipated on the birds, bats, amphibians, and other nocturnal species in this area?

Response: Impacts on sensitive birds, amphibians, and bats were described in Section 3.24.4 of the DEIS and Section 3.25.4 of the FEIS. The flammulated owl, western toad, Townsend's big-eared bat, wolverine, and fisher are among the Forest sensitive species included in the impacts analysis that are active at night.

142-2 Also, how will they deal with the disturbance caused by insect-eating bats in the area?

Response: It is not clear if the commenter is asking about impacts to bats or impacts caused by bats. Impacts on Townsend's big-eared bat were described in Section 3.25.4. Impacts caused by bats are unlikely.

4850 Sensitive Species: Comment about cumulative effect

Cumulative effects on wolverine

200-20 A forest sensitive species, the wolverine would be cumulatively affected by the Montanore and Rock Creek mines. Impacts would include a reduction in travel and dispersal capabilities because of a reduction in remote areas and a constriction of the Cabinet Mountains Wilderness. An increased trapping risk from both mines and an increase in local human populations would cumulatively increase the risk that trapping that could exceed the ability of the wolverine to maintain population numbers. (Rock Creek EIS 4-172)

202-22 The wolverine could become listed as a threatened species in the near future because of a small and isolated population, degradation of habitat, and sensitivity to human disturbance. How would the management of this species change if it became listed? With the Rock Creek mine already permitted, are the cumulative impacts going to be considered?

310-31 An increased trapping risk from both mines and an increase in local human populations would increase the risk that trapping that could exceed the ability of the wolverine to maintain population numbers. The cumulative impacts of both projects on the wolverine must be considered.

331-37 The wolverine could become listed as threatened in the near future because of the existence of small, isolated populations, the degradation of habitat, and their sensitivity to human disturbance. How would the management of this species change if it became listed? With the Rock Creek mine already permitted, would the cumulative impacts be considered?

Response: On August 13, 2014, the USFWS withdrew its proposal to list wolverine under the Endangered Species Act (USFWS 2014d), and as a result of this action the wolverine returned to the R1 Sensitive Species list. Proposed activities in addition with past, present, and reasonably foreseeable actions would not negatively impact the wolverine. Although individual wolverines may be impacted by the project, the effects would not impact the population given the availability of high quality habitat adjacent to the analysis area within the Cabinet Mountains, the mobility of the species, the large size of home ranges, and their apparent ability to coexist with human disturbance.

Cumulative effects on black-backed woodpecker

202-25 Since this species is limited to early post-fire forests, impacts would result from the loss of potential habitat with the removal of forest habitat and with fire suppression on MMC project lands. This project would impact black-backed woodpeckers cumulatively from fire suppression, logging activities, especially post fire salvage logging, and snag removal by woodcutters on both Forest Service land and private lands. The DEIS acknowledges cumulative impacts (Pg 806), but does not address a solution. Continuing to authorize projects that will impact sensitive species is contrary to the Forest Service's duty to maintain viable populations of sensitive species and prevent a trend towards ESA listing.

Response: As described in Section 3.25.4.3 of the FEIS, while prescribed burns associated with the Miller-

West Fisher Vegetation Management Project would consume some snags and down wood, it also would create snags and down wood by killing live trees. Snags and down wood created in burned areas would provide both feeding and nesting habitat for the black-backed woodpecker. In combination with other reasonably foreseeable actions, the combined mine-transmission line alternatives may impact individuals or their habitat, but will not likely contribute to a trend toward federal listing or cause a loss of species viability.

As described in Section 3.25.4.3.3 of the FEIS, all action alternatives would be consistent with KFP direction for snags and down wood. In all combined mine-transmission line alternatives, a wide range of successional habitats, and associated amounts of down wood would be available. The action alternatives would be consistent with KFP direction to maintain diverse age classes of vegetation for viable populations (KFP Vol. 1, II-1 #7).

4857 Sensitive Species: Comment about mitigation-mine

186-4 The Little Cherry Creek drainage is identified as western toad habitat yet it is proposed to eliminate this drainage. Additionally the Little Cherry Creek impoundment will eliminate "37 acres of wetland habitat providing potential breeding habitat for the western toad." Offsite wetland replacement isn't a justifiable substitution for natural wetlands.

Response: Impacts to western toad, including loss of habitat at the Little Cherry Creek impoundment, are disclosed in Section 3.25.4.11. Although implementation of Wetland Mitigation Plans and the Environmental Specifications (Appendix D) would help minimize impacts to western toad breeding habitat, some impacts would be unavoidable. Irreversible and irretrievable commitment of resources, including long-term loss of wetlands and riparian habitat, and unavoidable adverse environmental impacts, including loss of sensitive species habitat, are described in sections 3.25.10.

310-35 Avoiding clearing of vegetation during the nesting season would not eliminate the impacts to sensitive avian species.

Response: Impacts to migratory birds, including loss of habitat, are disclosed in Section 3.25.8. Irreversible and irretrievable commitment of resources, including long-term loss of wetlands and riparian habitat, and unavoidable adverse environmental impacts, including loss of sensitive species habitat, are described in sections 3.25.10.

4859 Sensitive Species: Comment about regulatory compliance

Cumulative effects on species viability

310-35 The absence of any evidence that the goshawk, flammulated owl and black-backed woodpecker exist or are nesting in suitable habitat in the project area brings into question the viability of these species in the project area. Under these circumstances, the Forest Service cannot approve actions that would further degrade suitable habitat for these species.

331-39 The DEIS acknowledges cumulative impacts (Pg 806), but does not address a solution. Continuing to authorize projects that will impact sensitive species is contrary to the Forest Service's duty to maintain viable populations of sensitive species and prevent a trend towards ESA listing.

Response: Forest Plan Consistency was addressed for black-backed woodpecker, flammulated owl, and goshawk in sections 3.25.4.3.4, 3.25.4.6.4, and 3.25.7.3 of the FEIS, respectively. All action alternatives would be consistent with KFP direction to maintain a minimum of 10 percent old growth below 5,500 feet in elevation in each third order drainage or compartment, or a combination of compartments and with KFP direction for snags, snag replacement trees, and down wood (KFP Vol. 1, II-1 #8 and II-7; Vol. 2, Appendix 16). Mitigation measures for the action alternatives and other reasonably foreseeable actions, such as improvement harvest and prescribed burning, and habitat acquisitions and road access changes, would offset some habitat impacts. Impacts on general forest foraging habitat in the agencies' alternatives would be minimized through implementation of the Environmental Specifications (Appendix D) and a

Vegetation Removal and Disposal Plan. The action alternatives could impact individuals and/or their habitat, but would not contribute to a trend toward federal listing for black-backed woodpeckers, flammulated owls, or goshawks. Sufficient habitat within the in the analysis area would likely remain to support existing populations.

4860 T&E Species (grizzly bear): Suggested new information/analysis

Analysis of grizzly bear displacement

200-14 No information regarding the specific impacts to security levels from construction and operation of the mine are provided in the grizzly bear effects analysis. Likewise no information is included regarding the number of acres of grizzly bear habitat within and outside the RZ from which bears would be displaced during construction and operation of the mine.

200-15 Displacement into habitat less secure from humans can result in increased mortality for bears (USFWS 1993). DEIS at 878. Again, neither the area nor the duration of displacement from mine construction and operation is quantified in the DEIS.

200-15 Due to the magnitude and duration of the disturbance at the Ramsey Plant Site, Libby Plant Site, and Libby Adits, and the limited amount of foraging options available to bears in the spring, changes in spring habitat use may have adverse consequences for grizzly bear survival DEIS at 878. The number of acres from which bears would be displaced and the duration of the displacement are not provided. This is a rather large gap in the information that ought to be included in the grizzly bear effects analysis, for both public and agency review.

Response: The analysis of displacement effects was updated in the SDEIS and FEIS and displacement effects of all alternatives, including the duration of the effects, within the recovery zone, outside the recovery zone, in the Cabinet Face BORZ, and in spring and denning habitat were evaluated quantitatively and disclosed in Section 3.25.5. Displacement effects were evaluated for the worst-case scenario, which would generally be during mine and transmission line construction and the duration of displacement effects was disclosed. Displacement effects along a narrow, northwest trending corridor, hereafter referred to as the north-south movement corridor are described in detail in Section 3.25.5 of the FEIS.

Comment about display of access changes

200-19 We request that the final EIS include detailed (pre-project, during and post-project) maps showing the changes in access proposed in each alternative being considered and how it will affect Core, OMRD and TMRD in affected BMUs. The maps should also display the areas from which bears will be displaced during construction and operation of the mine and the transmission line.

310-28 We request that the final EIS include detailed (pre-project, during and post-project) BMU maps that show the changes in access proposed for mitigation, and how the changes will affect core. Maps should also show the areas of displacement and habitat removal for each combined mine and TL alternative and indicate changes in core and OMRD and TMRD for each alternative and as a result of the mitigation in affected BMUs.

182-7 P.140-1. Tables 24-5; Proposed access changes for GB mitigation prior to Libby adit Evaluation Program. While the table is good, there is no correlating map within the DEIS or for that matter in the official map provided by the KNF that can be used to secure an overall picture of what is being closed to access.

310-28 Existing roads and changes in access being proposed in the area of impact are not included. Maps of existing (open and closed) roads and proposed new roads should have been included for each alternative.

Response: Figure 35 of in the FEIS displays grizzly bear mitigation road access changes. Maps displaying the effects of road access changes and new roads on core, OMRD, and TMRD are in the project file. Detailed maps of Alternative 3D-R road access changes, their effects on core, OMRD, and TMRD, and displacement effects are provided in the Biological Assessment.

Other Comments

35-1 If the alternatives to the proposed action (P: 136) require 23,000-27,000 replacement acres, then what acreage does 2B require?? There seems to be no comparable figure for 2B.

Response: Alternative 2B is MMC's proposed mine and transmission line alternative. MMC did not propose mitigation to replace habitat from which grizzly bears might be displaced.

182-11 P. 219. In cooperation with the USFWS and the Forest Service, 10-15 sub-adult male or female, or appropriate adult females, will be relocated from other areas (Yellowstone, NCDE or Canada) within the next 3-5 years. The transplants have been dying almost as fast as they've been transplanted, which amounts to a significant loss from the transplant area. Have these losses been counted and attributed to which area?

Response: Cabinet-Yaak Ecosystem grizzly bear mortalities, including mortalities of bears translocated into the Cabinet-Yaak Ecosystem, are disclosed in Section 3.25.5 of the FEIS. Fifteen bears have been added to the Cabinet Mountains population since 1990 (11 females and 4 males). Four female bears left the Cabinet Mountains area (one was recaptured and released again) and 4 bears are known to be dead. One of the bears that is known to be dead survived for 16 years in the Cabinet Mountains and produced at least 9 young. Those offspring are known to have produced at least 8 young. Bears transplanted to the Cabinet Mountains under the population augmentation program were counted as mortalities in their place of origin and are not counted toward recovery goals in this recovery zone (Kasworm et al. 2012).

4861 T&E Species (grizzly bear): Suggested new mitigation

Effects on grizzly bear movement

331-46 There are numerous Inventoried Roadless Areas directly adjacent to the Cabinet Mountains Wilderness that would, if protected as wilderness, provide true mitigation for wildlife impacts from the proposed Montanore mine. Protecting some of these IRAs would also provide real mitigation for the grizzly bear from expected impacts from the adjacent proposed Rock Creek Mine. The Cabinet Face East IRA is 50,326-acres of which a portion has already been recommended as wilderness. Barren Creek is 14,533-acres and Allan Peak is 29,636-acres. These two IRAs would provide security for the species on the southeast corner of the Cabinet Mountains Wilderness. The Galena and McKay Creek IRAs would protect an additional 34,500-acres. Lastly, the Rock Creek IRA may only be 800-acres, but in combination with the other IRAs, would provide real security and mitigation for the loss of habitat for the species. Other IRAs would provide additional secure habitat in the southern Cabinets.

389-11 Because of the danger of misleading the public, the project should not be implemented until suitable replacement habitat has been procured and the public has had the opportunity to comment on its suitability. To fulfill the public notice and comment requirements mandated by NEPA, the public must be informed of the nature and location of the lands to be purchased.

389-12 A better process for this would be for the Forest Service first to purchase the lands and then to disclose their intention to designate the already purchased lands as replacement habitat. Such action would be more compatible with NEPA but would still not adequately compensate for the net loss of grizzly habitat this action will entail.

Response: The agencies' grizzly bear mitigation plan, which would apply to all agency alternatives, including the preferred alternative, is described in 2.5.7.4.1 of the FEIS. The plan was revised in the SDEIS, primarily to reflect modifications to the transmission line alternatives and to more accurately consider existing displacement effects. The plan was further revised in the FEIS to reflect revisions in the impacts analysis based on more recent data and the grizzly bear mitigation plan in the Biological Assessment and to incorporate Reasonable and Prudent Measures in the Biological Opinion.

The agencies' grizzly bear mitigation plan requires that MMC fund the acquisition of habitat to mitigate impacts on grizzly bear. Compared to MMC's proposed mitigation plan, the agencies' grizzly bear mitigation plan includes additional measures to avoid, minimize, and mitigate impacts, including the acquisition of additional habitat and implementation of road access changes. All replacement habitats

would be in place prior to agency approval to proceed with the associated phase of the mine, with all mitigation habitat acquired and recorded prior to the construction phase of the mine.

The process to be used for acquiring lands, including measures implemented to ensure that the specified acres of mitigation properties were managed for grizzly bear habitat in perpetuity, is described in detail in the agencies' grizzly bear mitigation plan.

The mitigation plan relies on the Montanore Mine Potential Habitat Replacement Lands Assessment (final November 2013 (Kasworm et al. 2013) and the north-south corridor Mitigation Credit Assessment, final December 2013 (Kasworm et al. 2013)). These assessments would ensure that the 1,273 acres acquired adequately reduces the potential for fragmentation of the north-south corridor. The USFWS, including the grizzly research group, and KNF were involved in the development of the Habitat Replacement Assessment and the Mitigation Credit Assessment, which identifies potential mitigation habitat parcels and prioritizes them according to location, development potential, and potential contribution to maintaining and improving connectivity in the north-south corridor. The Mitigation Credit Assessment further prioritizes those lands within the north-south corridor based on biological importance and potential to improve grizzly bear habitat conditions. MMC would be required to follow the priority list. In the agencies' mitigation plan, first choice for replacement habitat required for habitat physically lost would be within the disturbed BMUs (5, 6, or 2 in order of priority) and within the north south movement corridor. If adequate replacement acres were not available in those BMUs or north south movement corridor, then lands may be located in other BMUs (4, 7, and 8) within the Cabinet Yaak Recovery Zone. The first 500 acres of replacement habitat required for displacement would be within the north-south corridor within impacted BMUs (5, 6 or 2) due to evaluation adit displacement. The remaining 2,573 acres required for displacement could be in or outside the north south corridor within the Cabinet Yaak Recovery Zone, with up to one-half (1,286 acres), in the habitat linkage zone along US 2. The habitat linkage zone along US 2 is briefly described in Section 3.25.5 of the FEIS and is described in detail in the Biological Assessment.

Prior to initiating the Evaluation Phase, the Forest Service, DEQ, FWP and MMC would participate in the development of a Memorandum of Understanding (MOU). The MOU would establish roles, responsibilities, and timelines of an Oversight Committee comprised of members of the Forest Service, FWP, and other parties deemed appropriate by the parties named. The USFWS would be an ex-officio, non-voting member of the Oversight Committee, with advisory responsibilities. As described in the Biological Assessment, the MOU would specify that mitigation properties would be selected on a priority basis with biologically justifiable rationale. The USFWS would be requested to advise the Forest Service if it believed the proposed mitigation properties met one or more of the criteria specified in the plan. Due to their sensitive nature, details, including locations and owners, of properties considered for mitigation would be withheld from public disclosure until acquisitions were finalized. Measures to be used to ensure compliance with the Montanore Grizzly Bear Mitigation Plan and effectiveness of the Management Plan are described in detail in the agencies' grizzly bear mitigation plan in section 2.5.7.4.1 of the FEIS.

Land acquisition program

19-1 We would also like to strongly encourage the Montanore Project to purchase Section 3 in the West Fisher for wildlife and human health mitigation

150-6 All replacement acres must be replaced at 100 percent, not the watered down 50 percent we see here.

182-5 P.89. Completion of the acquisition program would be a provision of project approval and failure to comply could result in project shutdown. Could needs to be changed to would and the acquisition program needs to be completed prior to initiation of mine operation.

248-30 Require the land acquisition program to be completed (or at least identified and supported by signed option agreements) prior to the initiation of mine construction activities?

248-30 How was the value of $2,000 per acre determined?

248-31 The Agencies need to reevaluate the acreage acquisition budget and increase it to a more realistic level (e.g., $5000/acre).

Response: See response to issue 4861 under comments concerning "Effects on grizzly bear movement" (p. M-440) for responses to comments on grizzly bear habitat compensation, selection of grizzly bear mitigation lands, and grizzly bear movement.

As described in section 2.5.7.4.1 of the FEIS, the analysis of habitat displacement estimated the extent of the displacement, or zone of influence, and the degree to which suitable grizzly bear habitat is used. The extent of a zone of influence was determined based on the type of activity, as recommended in the Cumulative Effects Analysis Process. The degree of habitat use was estimated based on disturbance coefficients and compensation levels assigned to different human activities. Methods used to estimate displacement effects from the Montanore Project and corresponding habitat compensation are described in greater detail in the *Revised FEIS Analysis of Grizzly Bear Displacement Effects* (ERO Resources Corp. 2015a).

In Alternative 2, MMC's proposed mine alternative, MMC would provide a $6,217,200 bond, based on $2,000 per acre, to the Forest Service to ensure adequate funding would be available for the required land acquisition. In the agencies' alternatives MMC would be required to acquire all replacement grizzly bear habitat prior to agency approval to proceed with the associated phase of the mine, with all mitigation habitat acquired and recorded prior to the construction phase of the mine.

Removal of roadkill

150-9 "minimalist thinking" permeates the DEIS. A classic example is the commitment to "Remove vehicular-killed big game animals daily from road rights-of way… Road-killed animals would be moved at least 50 feet beyond the right-of-way clearing or as far as necessary to be out of sight from the road." First, if a deer is killed at 8 AM, and the "daily" pickup isn't until 4 PM, how does that not attract carnivores to the roadway? Second, do MMC and the Kootenai National Forest really believe a carcass 50 feet beyond the right-of-way or just barely out of sight, won't still attract carnivores to the

150-9 To be effective, all carcass removal must happen within an hour of occurrence. All carcasses must be removed from the project site and access roads to an off-site disposal facility.

182-7 P.132. Road killed animals would be moved at least 50 feet beyond the right-of-way clearing or as far as necessary to be out of sight from the road. This action would not preclude predators from crossing the road one way or the other to access road-kill. Animals need to be removed from the scene period. Perhaps they could be frozen and later air dropped into avalanche chutes to attract predators away from the road area.

322-10 (b) To be effective, the commitment of "prompt removal of roadkill" must mean as soon as it's discovered, and must be completely off-site - not simply out of sight of the roadway as stated in previous documents.

Response: Data to support the commenter's statement about conditions necessary for carcass removal to be effective are lacking. Relative to the risk of attracting predators, it would not be reasonable to require MMC to patrol access roads for animals killed by vehicle every hour without data to support such a measure. As described in Section 2.5.7.4.1 of the FEIS and in the grizzly bear mitigation plan included in the BO, in the agencies' alternatives, the numbers of animals killed by vehicle collisions would be reviewed by the KNF, in cooperation with the FWP, and if necessary, mitigation measures would be developed and implemented to reduce mortality risks to grizzly bear. The agencies maintain that removing animal 50 feet beyond the right-of-way clearing or as far as necessary to be out of sight from the road would adequately minimize attracting carnivores to the road. If a T&E species mortality occurred, and the grizzly bear specialists or law enforcement officer felt it were necessary to avoid grizzly bear or other T&E species mortality, MMC would be required to haul the road-killed animals to a disposal location approved by FWP.

Other Comments

182-7 P.133. T&E. The position will work with Lincoln and Sanders counties planning staff to ensure that county land use decisions consider current wildlife information. This mitigation measure should then be incorporated into the metal mine mitigation plan that counties sign of on with the mine before permitting is completed, otherwise it is just a waste of time and words.

Response: As described in Section 2.5.7.4.1 of the FEIS, if the Montanore and Rock Creek Projects were implemented concurrently, MMC would be required to provide funding for the Habitat Conservation Specialist position prior to the Evaluation Phase. The agencies are unclear what the commenter means by the "metal mine mitigation plan". As discussed in Section 1.6.2.3, MMC is required to prepare a local government fiscal Impact Plan, called a Hard Rock Mining Impact Plan. In the plan, the developer is to identify and commit to pay all increased capital and net operating costs to local government units that will result from the mineral development. The plan does not include stipulations for wildlife mitigation.

238-1 Turn the area of Alt Line C into a refuge after it's ran. 'no hunting' to protect Grizzly bear from unethical hunters, poachers, stiffer fines for unethical hunters poachers.

Response: The Forest Service does not create wildlife refuges, but can manage forests to provide habitat security. Section 2.5.7.4.1 of the FEIS describes the agencies' wildlife mitigation plan, which includes measures to reduce impacts to elk and grizzly bear security habitat, such as access changes (installation of barriers or gates and public access restrictions) in several roads.

344-9 What might provide some actual, indirect, and short term mitigation within the project area would be delaying or reducing the Miller-West Fisher Project. It would disperse and spread out impacts. This would reduce edge effect on OG stands and generally reduce traffic and disturbance within the analysis area. It would provide at least partial mitigation for many aspects of the Montanore Project. Why is this not under consideration?

Response: Cumulative effects of reasonably foreseeable actions, including the Miller West Fisher Project, and the Montanore Project on grizzly bear and other wildlife are disclosed in the cumulative effects analyses for each wildlife resource considered in Section 3.25 and for old growth in Section 3.22. The cumulative effects analysis for the grizzly bear in Section 3.25.5 evaluates the contribution to impacts on grizzly bear during Phase I and Phase II of the Miller West Fisher Project. The Miller West Fisher FEIS evaluated the cumulative impacts of reasonably foreseeable actions, including the Montanore Project, on wildlife resources, including the grizzly bear. Modifying alternatives considered in the Miller West Fisher Project NEPA analysis is beyond the scope of the Montanore Project EIS.

4863 T&E Species (grizzly bear): Comment about analysis-mine

Road density and core habitat (Access Amendment) impact assessment criteria

150-3 In reporting on access management standards for the CYE, the DEIS claims that research conducted by Wakkinen and Kasworm (1997) is considered "best science" in terms of the Montanore project. However, that is not the case. The referenced standards – 33% Open Motorized Route Density (OMRD), 26% Total Motorized Route Density (TMRD), and 55% Core – are based on a very small sample size of six, incomplete consideration of data, and were struck down by the District Court in Missoula in December 2006 (Cabinet Resources Group v. U.S. Fish and Wildlife Service). And, while the USFS has recently released a Draft SEIS to address the problem, we find nothing in that document to suggest that has actually happened. In addition, the above 55% Core standard contains no minimum acreage for blocks or continuity of Core in each BMU, meaning they might be the large blocks that grizzlies actually need, or smaller "habitat postage stamps" spread all over a BMU. As noted by the DEIS (P: 867), "Small isolated blocks of core habitat may provide lower quality habitat than large, interconnected blocks."

200-12 The 1995 Amended BiOp is not the best available science. It was issued 2 years before the 1997 Wakkinen/ Kasworm Study so it did not incorporate any of the findings in the later study. Furthermore, in 1995, existing evidence indicated that the population was increasing and mortality rates were decreasing.

USFWS 1995 BiOp/TTS at 8. Research since then indicates that the population is in decline, mortality rates skyrocketed for several years and reproduction goals are not being met. See USFWS 2006, Cabinet-Yaak Research Update at 13, 61. Thus the Forest Service is applying standards without analyzing their adequacy in light of new information that has come to light since 1995 regarding habitat requirements, population trend, mortality data, and reproductive success.

200-12 The 1998 Rule Set was very weak. It merely established a "goal" of no net increase in OMRD and TMRD within the CYRZ but failed to establish firm thresholds for allowable road densities, and the core criteria was merely a goal to be achieved in a few BMUs.

200-13 The DEIS indicates that the "KNF Objective" for core is >- 55% or less and for OMRD and TMRD it is "no net increase at closure." Summary at S-42. First, the 55% core standard and the 33% standard for OMRD are not based on the best available science, as claimed by the DEIS. Second, the life of the mine from the beginning of construction through operations is estimated to be 19 - 22 years.

200-13 The application of only these three standards ignores the scientific recommendations and available evidence regarding a minimum core size preferred by bears and minimum duration for core habitat. The 1994 IGBC Task Force Report recommended that the Forest Service use a minimum ten year duration standard for core. The 2006 Rule Set criteria does not include a standard for minimum core size and duration.

322-4 Further, the Forest Service continues to misrepresent what the 33/26/55 standards mean. The OMRD standard means that 33% or less of a BMU has open road densities of 1 mi/sq.mi. Thus, all numbers less than 33% meet the standard rather than exceeding it, and the Service doesn't get to allow additional habitat degradation until 33% is reached. At a minimum, all OMRD below 33%, TMRD below 26%, and Core above 55%, must be maintained - and preferably improved upon.

322-4 The fact that OMRD/TMRD/Core numbers still meet standards is irrelevant, since those standards, as noted earlier are resulting in 60% Female Mortality, 78% probability of decline, and no recovery standards being met.

Response: The Forest Service issued a Final SEIS on Forest Plan amendments in the Idaho Panhandle, Kootenai, and Lolo national forests for motorized access management within the Selkirk and Cabinet-Yaak Grizzly Bear Recovery Zones (the Access Amendment) and a ROD in 2011 (USFS 2011a, 2011b). The Access Amendment changes Forest Plans for the Kootenai, Lolo, and Idaho Panhandle National Forests by amending the objectives, standards, and guidelines that address grizzly bear management within the Selkirk and Cabinet-Yaak recovery zones. The 2015 KFP retained the Access Amendment.

The Access Amendment includes motorized access and security guidelines to meet USFS responsibilities under the ESA in order to enhance recovery of grizzly bears. The Access Amendment amended the 1987 KFP and replaced Habitat Effectiveness and linear ORD standards with benchmark numerical standards for OMRD, TMRD and Core. Access Amendment standards specific to each BMU were established to reflect the biological and non-biological attributes unique to that BMU, such as habitat quality, sightings of family groups, human caused mortality, adjacency to BMUs occupied by females with young, ties to linkage areas, proximity to highways, access to inholdings, and access to popular recreation areas. The scientific basis for the use of numerical standards for OMRD, TMRD and Core is described in the Final SEIS for the Access Amendment and the Biological Assessment for the Montanore Project. The analysis of effects of the Montanore Project on the grizzly bear was updated in Section 3.25.5 of the Montanore Project FEIS (*Threatened, Endangered, and Proposed Species*) to incorporate Access Amendment objectives, standards, and guidelines. In addition to road densities, impacts to grizzly bear were evaluated based on other criteria, including displacement effects, impacts on core area, including core block size, effects to grizzly bear movement between habitat areas, and seasonal impacts. Methods and criteria used to assess impacts to grizzly bear are described in detail in Section 3.25.5 of the FEIS (*Threatened, Endangered, and Proposed Species*).

The USFWS is responsible for ensuring compliance with the Endangered Species Act (ESA). In accordance with Section 7 of the ESA, the KNF submitted a final Biological Assessment for effects on federally listed species to the USFWS in September 2013. The assessment indicated the agencies' preferred

alternatives may affect and are likely to adversely affect the grizzly bear. The wildlife mitigation plan (see Section 2.5.7.4.1) includes grizzly bear mitigation similar to mitigation measures proposed for the Rock Creek Mine, as well as some additional measures. The KNF believes the wildlife mitigation would be adequate to minimize or avoid adverse effects to the grizzly bear. The USFWS issued a Biological Opinion in March 2014. In its Biological Opinion, the USFWS determined that the preferred alternative, Alternative 3D-R, is not likely to jeopardize the continued existence of the grizzly bear and that since no critical habitat has been designated for this species, none would be affected. The USFWS also identified reasonable and prudent measures necessary and appropriate to minimize incidental take of grizzly bears, and terms and conditions that implement them. The reasonable and prudent measures and the Terms and Conditions in the Biological Opinion will be incorporated into the Selected Alternative in the ROD.

Analysis of displacement effects

150-4 DEIS P: 45, Table 5 lists the "Disturbance Area" for the project as 2582 acres (Alt. 2B) or 2254 acres (Alt. 4D), which includes only the surface area physically modified. However, federal and state bear managers have known for 20 years that grizzlies are displaced from habitat within 500 m of roads (Mace and Waller 1997), and that the displacement occurs even at very low traffic volume (0.5-1.9 vehicles per hour) (McLellan and

200-14 The impacts on bears due to displacement as a result of construction and operation of the mine, separately from the transmission line impacts, are not clearly set forth in the Grizzly Bear analysis section of the DEIS. The DEIS does include an analysis of the effects on security levels (measured by Habitat Effectiveness (HE), OMRD, TMRD and Core) in grizzly bear habitat from three alternatives for Construction and Operation of the mine combined with four Transmission Line alternatives.

322-6 In addition, Mattson and Knight (1991) reported that grizzlies were displaced for 3 km around major developments, or 6952 acres around the Montanore facilities - not the 2582 acres shown for Alternative 2 (MMC), or the 1539 acres for Alternative 3 (KNF).

Response: Table 5 of the DEIS displayed proposed mine surface disturbance. Grizzly bear transmission line displacement effects were disclosed in section 3.24.5 of the DEIS. The grizzly bear impacts assessment was revised in Section 3.25.5.2 of the SEIS to better describe grizzly bear displacement effects from the transmission line and combined (mine and transmission line) action alternatives. The analysis of grizzly bear was further revised in the FEIS to incorporate the 2015 KFP, including the incorporated Access Amendment objectives, standards, and guidelines, including the updated BORZ areas, and minor modifications to the alternatives.

As described in section 2.5.7.4.1 of the FEIS, the analysis of habitat displacement estimated the extent of the displacement, or zone of influence, and the degree to which suitable grizzly bear habitat is used. The extent of a zone of influence was determined based on the type of activity, as recommended in the Cumulative Effects Analysis Process. The degree of habitat use was estimated based on disturbance coefficients and compensation levels assigned to different human activities. Methods used to estimate displacement effects from the Montanore Project and corresponding habitat compensation are described in greater detail in the *Revised FEIS Analysis of Grizzly Bear Displacement Effects* (ERO Resources Corp. 2015a).

To evaluate compliance with MFSA, transmission line grizzly bear displacement effects were analyzed separately. Combined mine-transmission line displacement effects were analyzed to take into account the full range of impacts of the project. A separate analysis of mine impacts was not necessary because the effects of the mine are adequately disclosed in the combined mine-transmission line alternatives.

Analysis of effects of mine traffic

74-7 The Montanore mine will increase road density and traffic in the Recovery Zone designated within KNF (despite proposed road decommissioning), particularly during the construction phases of the mine.

Biologists anticipate that these will lead to increased wildlife mortalities. Reporting and monitoring these fatalities would be the province of the mining company.

310-21 The SDEIS does not disclose the levels of mine related traffic during mine operations or other phases. The FEIS should include estimates for how much traffic and industrial machinery disturbance there would be as a result of all active phases of the mine, including evaluation, construction and operation and the duration of those levels of traffic and disturbance. Disclosing this information for BMUs 5 and 6 is especially important to get a clear picture of the impacts of these factors on grizzly bears. This information is essential in order for the public and the regulatory agencies to assess the extent of the impacts from displacement of grizzlies and other wildlife from mine-related activities.

Response: Mine related traffic during mine operations and other phases was disclosed in Section 3.21.4 of the SDEIS and FEIS. The agencies believe that the effects of increased traffic on wildlife were adequately disclosed in section 3.25 of the SDEIS and FEIS. For example, as described in Section 3.25.5.2, the combined action alternatives may increase grizzly bear mortality due to increased traffic volumes and speeds. The agencies' alternatives described in the SDEIS and FEIS included measures to minimize grizzly bear and other wildlife fatalities from vehicle collisions, including the removal of road-killed animals from roads and the development of a transportation plan to reduce mine traffic. See also comment response 141-6, p. M-434.

310-25 Thus the concepts of "temporarily removing habitat," and "temporary displacement from habitat" which imply that the impacts would persist only during the time that the actions that cause the displacement are actually occurring, is not based on the best available science. The impacts on bears as a result of displacement from habitat and the physical loss of habitat, even when mitigated by closing roads or acquiring land, would be long term, perhaps over several generations of grizzlies, not short term, as assumed in the SDEIS.

Response: As described in section 3.25.5.2 of the SDEIS and FEIS, the majority of displacement effects would be due to helicopter activity associated with transmission line construction. The transmission line alternatives would cause short-term, new displacement effects to grizzly bears for up to 2 months. In the agencies' alternatives, transmission line construction and removal on National Forest System and State lands located within the recovery zone and the Cabinet Face BORZ would occur between June 16 and October 14, minimizing displacement effects by avoiding activity during grizzly bear spring and denning seasons. Timing restrictions were described in detail in section 2.5.7.

The agencies also maintain that construction and improvement of access roads for transmission line construction would result in the temporary removal of grizzly bear habitat. As described in Section 3.25.5.2, all areas physically disturbed during transmission line construction, such as access roads, pulling and tensioning sites, and transmission line clearing areas, would be seeded with grass and shrub species after transmission line construction. Areas where trees were trimmed, but otherwise were not disturbed, would be allowed to establish naturally as grassland or shrubland. Once vegetation was re-established, disturbed areas disturbed areas of the transmission line would provide additional forage habitat as forage species become established.

The agencies agree that displacement effects of mine operations would be long-term, as described in Section 3.25.5.2. The agencies' wildlife mitigation plan includes measures to compensate for estimated displacement effects from the mine, including habitat compensation. Short-term displacement effects due to construction or decommissioning of the transmission line are mitigated with the timing restriction requiring activity to occur between June 16 and October 14.

Cumulative effects analysis

182-20 Impacts, impacts, and more impacts. Because the permitting agencies so deliberately opportuned themselves of the small window when only one mineral development proposal was active, these impacts do not include the cumulative impacts of the Proposed Rock Creek Project. This disservice to the grizzly bear, ESA and the public will hopefully emerge in a legal criticism of the dis-functional attitude taken by the

agencies. The purported decrease in TMRD in BMU during all phases of the proposed project does not take into consideration road access built into private properties within the BMU as a result of projected population increases related to job seekers, etc.

310-28 The SDEIS does not adequately address the cumulative impacts of the two mining projects should their implementation occur simultaneously, or sequentially.

310-28 In order to adequately address and analyze the cumulative impacts of the Rock Creek Mine proposal, combined with the Montanore proposal on grizzly bears, the agencies and MMC must disclose and consider the specific areas and types of impacts, i.e., acres of secure habitat from which grizzlies would be displaced, acres of grizzly bear habitat that would be removed and decreases in security due to reductions in core and increases in road densities, that would occur if both mines are implemented.

322-5 The "reasonably foreseeable conditions" which result in these new figures, however, include the Wayup Mine/Fourth of July Road Access Project, unspecified Plum Creek Activities, the Rock Creek Mine Project, and the Miller-West Fisher Vegetation Management Project. Unfortunately, all of these projects involve intrusions into, and degradations of, habitat vital to grizzlies, not improvements to security. In addition, claimed benefits are too often the result of phony road closures "secured" by gates, and/or purchase of "mitigation habitat" already used by, or available to, bears. We recommend that the Kootenai remove the confusing Table 211 along with its patently false claims on benefits.

322-5 It's important to remember that in its 2006 Biological Opinion for the Rock Creek Mine Project, USFWS said that if both Montanore and Rock Creek went forward at the same time - as presumed here - it would cut off 22% of the ecosystem and 31% of its grizzlies, leaving a population too small to be viable (USDI 2006). Yet today, the Kootenai has approved the Rock Creek Mine with demonstrably ineffective mitigation plans.

Response: To evaluate various scenarios for timing of reasonably foreseeable actions, the description of cumulative effects in Section 3.25.5.2 was revised for the FEIS to include an analysis of impacts to grizzly bears during different phases of the Miller-West Fisher Project. The agencies maintain that cumulative impacts to grizzly bears, such as effects on road densities, habitat security, and core habitat were adequately disclosed in Section 3.25.5.2 of the FEIS.

With regard to effectiveness of mitigation for cumulative impacts, please see responses to comments in category 4877.

Other comments on grizzly bear analysis

142-2 I would like you to specifically address the issue of grizzly bear recovery, a threatened species, and the impact of the mine on their habitat, in light of the concurrent DEIS for the Selkirk and Cabinet-Yaak Recovery Zones.

Response: See responses to comments in category comment 4863 under comments concerning "road density and core habitat (Access Amendment) impact assessment criteria".

322-6 NOTE: None of the above figures appear to include the standard 500 m displacement on either side of road # 278 (Bear Creek Rd.) for it's reported 16.2 miles. This adds 6428 acres of displacement from this road alone.

Response: As described in section 2.5.7.4.1 of the FEIS, influence zones, disturbance coefficients, and compensation levels for mine facilities and roads were based on the Cumulative Effects Analysis Process. Methods used to estimate displacement effects from the Montanore Project and corresponding habitat compensation are described in greater detail in the *Revised FEIS Analysis of Grizzly Bear Displacement Effects* (ERO Resources Corp. 2015a). Based on the most current information from District transportation specialists, the KNF considers FS Road #278 to currently be a high-use road. However the mine would add additional traffic and a 24 hour activity. Thus, in accordance with the CEM, the categorization of existing roads was changed from "high motorized linear use" (a 0.3 disturbance coefficient) to using the "motorized point 24 hour disturbance coefficient (0.1). According to the CEM, the increase in road use from "high

linear motorized use" to "motorized 24 hour" was expected to decrease the ability of the influence zone to support grizzly bears from the existing 70 percent by another 20 percent, or by a total of 90 percent. In other words, with the effects of the proposed action, the ability of the influence zone to support grizzly bears would be reduced to about 10 percent of its potential. The analysis of displacement effects was updated in section 3.25.5.2 of the FEIS to include additional displacement effects from increased traffic on FS Road #278.

322-11 Given the "best available science" on grizzly bear ecology, the "might have adverse consequences" must be changed to "will have adverse consequences."

Response: Timelines for the Montanore, Rock Creek, Miller-West Fisher, and other reasonably foreseeable actions cannot be determined, thus it is uncertain which, if any of these projects will occur concurrently. In addition, given the variation in grizzly bear response to similar activities recorded in the literature, grizzly bear response these activities cannot be predicted with certainty. The agencies believe that the use of "might" in this case is appropriate.

331-36 Also, why is the acreage impacted different in the SDEIS from what was calculated in the DEIS? The SDEIS should have explained in detail what changes were made from the DEIS.

Response: Changes between the DEIS and the SDEIS are summarized in Section 1.1 of the SDEIS, and include analysis of revised transmission line alternatives. As explained in Section 1.1, the grizzly bear impacts analysis (section 3.25.5.2) in the Wildlife section was presented in its entirety to reflect additional information on the agencies' revised mitigation plans and the revised grizzly bear displacement analysis.

335-32 It appears that there is an error in this paragraph, stating that 166 bears are in the Cabinet portion of the Cabinet-Yaak ecosystem. (p. 477)

Response: The error was corrected in the FEIS base on the most current data available.

343-1 For instance, a poster illustrating grizzly bear habitat displacement has a bar graph that separates data representing present disruption from data representing additional disruption These are in fact additive numbers of acres and should be represented together on a single bar. Present disruption and additional disruption could be indicated by different colors. Additional bars should indicate number of acres remaining disrupted following

Response: Comment noted.

4864 T&E Species (grizzly bear): Comment about analysis-transmission line

322-8 First, an examination of Figure 3, P: 18 from the Servheen report clearly shows that the area analyzed along Hwy. 2 doesn't even start until well north of the Montanore Mine location, and many of its associated facilities, and only looked at movement corridors across the highway itself, not areas 5-10 miles to the west. Second, the report was based on density of homes and developments along the roadway, and didn't consider the mine, which was not actively being pursued at the time. Most importantly, the SDEIS claim ignores the presence of a known linkage zone immediately north of Sedlak Park (Jim Williams, FWP, pers. comm.) and running from Teeters and Barren Peaks west of Hwy. 2, through Kenelty, Fritz, Satire, and Calix Mountains to the northeast. Both the mine, transmission line, and increased traffic on Highway 2 present a clear and present danger to this linkage zone between the Cabinets and the Northern Continental Divide Ecosystem.

Response: Please see response to comment 185-3 and responses to comments in category 4864 under "*analysis of effects on grizzly bear movement in linkage zone*", p. M-449.

310-6 It also appears that Alternative D-R would require opening fewer closed roads to construct the TL than the other alternatives. SDEIS at S-14. This information, along with number of acres logged in each alternative, should have been provided in the SDEIS.

Response: Please see response to comment 185-4. Impacts to vegetation, including clearing of coniferous forest, were disclosed in Section 3.22.1.4 of the SDEIS and FEIS.

310-18 Security levels are inadequate for grizzly bear survival and the risk of mortality is higher in those areas.

Response: As described in Section 3.25.5.2 of the SDEIS and FEIS, the effects of the alternatives on grizzly bears outside the grizzly bear Recovery Zone, including changes in road densities, were evaluated. The agencies' wildlife mitigation plan was described in Section 2.5.7.2 of the SDEIS and in Section 2.5.7.4 of the FEIS, and includes road access changes in the BORZ to offset the impacts of the agencies' transmission line alternatives on linear ORD and TRD. The agencies' mitigation plan would also require MMC to construct and remove the transmission line on National Forest System and State lands located within the recovery zone and the Cabinet Face BORZ between June 16 and October 14 and provide funding for fencing and electrification of garbage transfer stations in grizzly habitat in and adjacent to the Cabinet-Yaak Ecosystem, reducing the availability of food attractants and reducing mortality risks for the grizzly bear.

322-9 Finally, the claim that transmission line disruption will end during operations is pure myth. In fact, the open transmission line route will likely become a path of least resistance for increasing numbers of people - legally and illegally.

Response: Mortality risks due to improved hunter or poacher access created by the transmission line corridor were disclosed for each alternative in Section 3.25.5.2 of the SDEIS and FEIS. The agencies agree that clearing of the transmission line corridor may improve access for forest users on foot or horseback, increasing mortality risk; however some areas within the transmission line right-of-way, such as valleys or currently open habitat where past regeneration harvest has occurred, would not be cleared. Forest cover would return slowly after the line was decommissioned. In the agencies' alternatives, MMC would fund a bear specialist, law enforcement, and habitat conservation biologist positions. Public education about grizzly bears, enforcement of laws protecting grizzly bears, and management of lands to benefit the grizzly bear would reduce mortality risks.

Please also see responses to comments in category 4863, under *analysis of duration of impacts*.

Analysis of effects on grizzly bear movement in linkage zones

150-7 The claim that the MMC proposal would not affect the described linkage zone simply fails to pass the most basic "biological straight face test." Remember that Kasworm and Wakkinen have already reported that since 1982 they have no evidence of any grizzlies crossing Hwy. 2 between the Cabinet and Yaak portions of the ecosystem. By damaging habitat and displacing bears on 27,116 – 28,749 acres, Montanore cannot help but make that worse throughout the Fisher River Valley. In addition, the Servheen analysis didn't take into account the affect of a fully operational Montanore Mine and traffic along NFS #278, because no mine was actively proposed in 2003.

150-7 When the 10- mile "linear fracture zone" along Bear Creek Road is added, the Montanore Project would seriously fragment no less than five creek corridors, creating additional displacement and mortality zones for an already stressed species.

344-9 This route crosses 4-5 sections, and is within a linkage corridor already protected by a conservation easement. Why does MWFP support degrading this easement? Almost all the power lines alternatives are already in a prime linkage area "that extend east between the Cabinet-Yaak Ecosystem and the Northern Continental Divide Ecosystem."

Response: See response to comment 185-3. Questions for FWP should be directed to that agency.

Short-term displacement effects in the BORZ from new access roads, helicopter use, and other transmission line construction activities, as well as the effects of right-of-way clearing on habitat, were described in Section 3.25.5.2 of the SDEIS and FEIS. In the agencies' alternatives, transmission line construction and

removal on National Forest System and State lands located within the recovery zone and the Cabinet Face BORZ would occur between June 16 and October 14, minimizing displacement effects. Displacement effects would be further minimized through road access changes in the BORZ. Given that the area of the US 2 linkage zone potentially affected is generally heavily roaded and has been logged in the past 20 to 30 years, especially on private land, and because of the short-term nature of human-caused disturbance, it is not likely that grizzly bear movement within the linkage zone would be greatly affected by the transmission line alternatives.

Cumulative effects of the Montanore Project in combination with other actions, including the Rock Creek Project, on grizzly bears were disclosed in Section 3.25.5.2 of the SDEIS and FEIS.

4865 T&E Species (grizzly bear): Comment about effect-mine

Effects on road densities and core habitat

150-6 "In BMU 5, TMRD would increase the most during construction and operations of Alternative 2B to 26 percent." After reclamation, TMRD would be better than existing densities in BMU 5 for Alternative 2B." (Again, this is only after 16-19 years of habitat destruction and ignores the fact that over half of the claimed road closures may not legitimately be counted under IGBC and KNF standards).

150-6 "All combined action alternatives would increase OMRD in BMU 5 during construction and operations…OMRD in BMU 5 would improve compared to existing densities after reclamation." (Note: This last claim, used in several places, forgets that this reclamation only occurs after 16-19 years of bear-displacing habitat destruction, and the closure of a few roads, and planting of a few trees and shrubs will do little to restore Habitat Quality).

310-20 Under MMC Alternative 2B: TMRD would increase in BMU 6 from 33% to 34% during construction and operations. Under Alternative 3D-R: TMRD would decrease 33% to 32% during all phases. This minor improvement will not compensate for the negative impacts of reducing security otherwise.

310-20 As discussed above the, the 2006 Rule Set standards represent the status quo and the CY grizzly population has been, and continues to be in decline as a result of status quo core, OMRD and TMRD levels. Furthermore, whether the standards are being met is irrelevant – all alternatives would reduce security levels in BMU 5, adversely impacting bears.

322-3 While BMU 5 currently meets the weak 33/26/55 standards, its important to remember that under these standards female mortality is 60% (1999-2011), and probability of decline is 78%. Therefore, anything that weakens these numbers - as Montanore does - makes the situation even more dire for grizzlies.

322-4 BMU 6:Percent Core: 54% (55% or more)Percent OMRD: 35% (33% or less)Percent TMRD: 33% (26% or less)Percent HE: 66% (70% or more)**Clearly, BMU 6 is already in trouble with No mine, and meets none of the access standards.

Response: See response to issue 4863 under comments concerning "road density and core habitat (Access Amendment) impact assessment criteria", p. M-443.

Effects of the action alternatives on OMRD, TMRD, and core habitat were disclosed for each project phase in Section 3.25.5.2 of the SDEIS, and revised in the FEIS to reflect the most current information. The scientific basis for the use of numerical standards for OMRD, TMRD and Core is described in the Final SEIS for the Access Amendment. The analysis of effects of the Montanore Project on the grizzly bear was updated in Section 3.25.5 of the Montanore Project FEIS to incorporate Access Amendment objectives, standards, and guidelines.

As described in Section 2.5.7.4 of the SDEIS and FEIS, MMC would implement or fund access changes on several roads prior to the either the evaluation phase or the start of the construction phase in the agencies' alternatives. All access changes would be in place prior to agency approval to proceed with the associated

phase of the mine. In addition to road access changes, the agencies' alternatives require that MMC implement or fund monitoring of the effectiveness of closure devices at least twice annually and complete any necessary repairs immediately.

MMC would contribute funding to support monitoring of bear movements and population status for native Cabinet Mountain bears as well as grizzly bears trans-located into the Cabinet Mountains to confirm the effectiveness of mitigation measures. The Forest Service would ensure that adequate funding, provided by MMC, is available to monitor bear movements and use of the Cabinet Mountains to confirm the effective implementation of mitigation measures. Information gained would be useful in determining whether the mitigation plan was working as intended. The Comprehensive Grizzly Bear Management Plan developed by the Oversight Committee would include all provisions of the mitigation plan for grizzly bears, except where superseded by the USFWS' Biological Opinion, and would include provisions for adaptive management. For comments related to mitigation plan implementation and the Oversight Committee, see responses to issue 4877 under *effectiveness of Oversight Committee*, p. M-465.

The USFWS is responsible for ensuring compliance with the Endangered Species Act (ESA). The USFWS issued a Biological Opinion in March 2014. In its Biological Opinion, the USFWS determined that the preferred alternative, Alternative 3D-R, is not likely to jeopardize the continued existence of the grizzly bear and that since no critical habitat has been designated for this species, none would be affected.

Effects of increased human presence

150-8 "The combined action alternatives could result in increased grizzly bear mortality due to increased traffic. Because roads in the operating permit area would be closed to the public, the risk of mortality from poaching would be minimized." (Note: This is only true within the permit area, not along approach roads like NFS # 278, and only if every employee and private citizens vehicle is searched daily for prohibited weapons – an unlikely occurrence).

202-20 The massive migration also would significantly increase the number of hunters in the field. Statistically, 24% of Montanans hunt. The mines would increase the number of big game hunters in the region by approximately 600 for the fall big game and spring bear seasons. The DEIS acknowledges that most human-caused grizzly bear mortalities on the KNF are the result of interactions between bears and big game hunters (Kasworm and Manley 1988). With 600 new and inexperienced bear hunters wandering the field, cases of mistaken identity will increase significantly.

310-25 The project will increase the mortality risk to grizzlies due to increased human presence in the area, displacement from disturbance to areas where the risk of mortality is high, creating new hunter and recreational access to grizzly habitat and project-wide reductions in security.

322-8 During full operation, Montanore is projected to employ 450 people. It's safe to say that many of these employees will bring families with them, and that additional individuals and business will move into the area to provide services to the mine and miners. When these "multiplier effects" are factored in, it's not unreasonable to expect that the mine will result in a surge of 1200-1500 people living and working in the area - many of them new arrivals. This number of new people, hunting, hiking, and driving Highway 2 and forest roads cannot help but increase bear-human conflicts and fracture already stressed linkage zones.

322-9 First, the above intrusions would displace grizzlies from a key habitat type – particularly females with cubs - with impacts to both female nutrition and cub survival. Second, all of these habitat disruptions create linear fracture zones, where increases in bear mortality are likely to occur. Mattson et al. (1996) has noted that grizzly mortality is driven by frequency of human contacts, and the lethality of those contacts.

Response: Impacts from increased human presence and traffic and increased mortality risks are described in Section 3.25.5 of the FEIS. The agencies' agree that increased recreational activity and increased traffic volumes and speeds in bear habitat may increase human-grizzly conflicts and grizzly bear mortality. Because roads in the operating permit areas would be closed to the public, the risk of mortality from poaching would be minimized. Although new transmission line access roads would be gated or barriered

after transmission line construction, mortality risks could increase due to improved hunter or poacher access.

As described in the agencies' grizzly bear mitigation plan in Section 2.4.6.3 of the SDEIS and FEIS, in the agencies' alternatives, MMC would fund a bear specialist, law enforcement, and habitat conservation biologist positions. Public education about grizzly bears, enforcement of laws protecting grizzly bears, and management of lands to benefit the grizzly bear would reduce mortality risks. Food attractants would be minimized through the use of bear-resistant garbage containers, prohibiting the feeding of bears by mine employees The agencies' alternatives also include measures to minimize grizzly bear and other wildlife fatalities from vehicle collisions, including the removal of road-killed animals from roads and the development of a transportation plan to reduce mine traffic. See also comment response 141-6, p. M-434.

Displacement effects

309-3 *Destroy 27,000 acres of critical grizzly bear habitat. Only 10-15 grizzly bears now inhabit the Cabinet Mountains Wilderness, and a mere 30-35 are in the entire Cabinet-Yaak Ecosystem. The loss of 27,000 acres of habitat is a death sentence for these bears.

310-27 Though the levels of mine traffic and number of workers would be substantially reduced post-closure, the fact that the disturbance related to post-closure mining activities may go on for "decades or more" means that grizzly bears will avoid, e.g. be displaced from the area of impact in BMU 5 that much longer. As discussed above, it will take them many years to begin to use the area again once all mine-related activities in BMUs 2, 5 and 6 have ceased, but this will extend the impacts from displacement in BMU 5 for many more years.

322-11 (10) According to the Montanore DEIS, P: 56, there would be 420 tons of ore concentrate hauled from the site daily in 21 truck-loads - or 42 one-way trips per day. On their 24 hours per day schedule, that's 1.75 trucks per hour, way more than enough to displace any grizzlies for at least 500m on either side of the roads shown for up to 20 years. Displacement of that magnitude, for that length of time, would effectively remove that habitat from the "institutional memory" of the resident grizzly population – particularly all-important females. Mace and Waller (1997) noted that even minimal motorized use was enough to displace grizzlies.

327-11 The majority of displacement effects from all combined action alternatives would be due to helicopter activities." First of all, how can there be "displacement effects" to habitat? Will the choppers pick up squares of habitat and move them somewhere else?

331-32 The SDEIS fails to adequately address the importance of habitat from which the grizzly bear would be displaced. The document only considers and requires mitigation for habitat that would be physically lost. Table #208 lists the various mine and transmission line alternatives and corresponding habitat from which the bear would displaced. Table #208 also lists the habitat compensation amount for each alternative. How was the compensatory acreage determined?

389-3 The CMW's struggling grizzly population may be affected by both the physical and noise disturbances in ways that may have long term consequences, particularly in light of grizzlies' known sensitivity to noise disturbances and the population's downward trend. Further, the SDEIS completely fails to consider the long-term necessity for monitoring and maintaining the adits.

Response: Physical loss of grizzly bear habitat and displacement effects to grizzly bear, expressed as acres likely to be influenced by human activity, were displayed separately in Section 3.25.2 of the SDEIS and FEIS. The grizzly bear impacts assessment was revised in Section 3.25.5.2 of the FEIS to better describe grizzly bear displacement effects from the transmission line and combined (mine and transmission line) action alternatives. The analysis of grizzly bear was further revised in the FEIS to incorporate Access Amendment objectives, standards, and guidelines, including the updated BORZ areas, and minor modifications to the alternatives.

As described in section 2.5.7.4.1 of the FEIS, the analysis of habitat displacement estimated the extent of the displacement, or zone of influence, and the degree to which suitable grizzly bear habitat is used. The

extent of a zone of influence was determined based on the type of activity, as recommended in the Cumulative Effects Analysis. The degree of habitat use was estimated based on disturbance coefficients and compensation levels assigned to different human activities). Methods used to estimate displacement effects from the Montanore Project and corresponding habitat compensation are described in greater detail in the *Revised **FEIS** Analysis of Grizzly Bear Displacement Effects* (ERO Resources Corp. 2015a).

To evaluate compliance with MFSA, transmission line grizzly bear displacement effects were analyzed separately. Combined mine-transmission line displacement effects were analyzed to take into account the full range of impacts of the project. A separate analysis of mine impacts was not necessary.

As described in section 3.25.5.2 of the SDEIS and FEIS, the majority of displacement effects would be due to helicopter activity associated with transmission line construction. The transmission line alternatives would cause short-term, new displacement effects to grizzly bears for up to 2 months. In the agencies' alternatives, transmission line construction and removal on National Forest System and State lands located within the recovery zone and the Cabinet Face BORZ would occur between June 16 and October 14, minimizing displacement effects by avoiding activity during grizzly bear spring and denning seasons. Timing restrictions were described in detail in section 2.5.7.4.

The agencies' grizzly bear mitigation plan requires that MMC fund the acquisition of habitat to mitigate the effects of displacement on grizzly bear. Acquired parcels that might otherwise be developed in a manner inconsistent with bear needs would be managed for grizzly bear use in perpetuity, and could improve conditions on additional spring habitat where conditions were appropriate. Compared to MMC's proposed mitigation plan, the agencies' grizzly bear mitigation plan includes additional measures to avoid, minimize, and mitigate impacts, including the acquisition of additional habitat. All replacement habitats would be in place prior to agency approval to proceed with the associated phase of the mine, with all mitigation habitat acquired and recorded prior to the construction phase of the mine.

The USFWS is responsible for ensuring compliance with the Endangered Species Act (ESA). The USFWS issued a Biological Opinion in March 2014. In its Biological Opinion, the USFWS determined that the preferred alternative, Alternative 3D-R, is not likely to jeopardize the continued existence of the grizzly bear and that since no critical habitat has been designated for this species, none would be affected.

Other Comments

111-1 Why are the effects of this project on resilient habitats and migration corridors not covered in the DEIS?

Response: Impacts on grizzly bears and lynx, including effects on movement corridors and other important habitats, were disclosed in Section 3.24.5 of the DEIS and Section 3.25.5 of SDEIS and FEIS.

322-11 It should be remembered as well that Kasworm (2009) has repeatedly noted that from 1983 to the present there's been no record of native CYE grizzlies moving across the Highway 2 corridor, railroad, and Kootenai River between the two halves of the ecosystem. The near certain demise of the Cabinet population caused by mines like Montanore will guarantee that this isolation will become permanent, "leaving a grizzly population too small to remain viable" in the Yaak portion of the ecosystem as well.

322-11 From the above analysis, it's clear to us that Baseline Conditions are inconsistent with the survival of the Cabinet grizzly bear population. In particular, we remind the Kootenai of the critically small size of this population; its isolation from the Yaak; its 78% probability of decline (Kasworm 2009); and its excessive female mortality levels since 2000 (60%). It's equally clear that the Montanore Mine will make all of these conditions significantly worse.

Response: See response to issue 4864 under *analysis of effects in grizzly bear movement in linkage zone*, p. M-449. Effects to Grizzly bear movement corridors and habitat linkage zones from the mine and transmission line alternatives were discussed in section 3.25.5.2 of the SDEIS and FEIS. The agencies' grizzly bear mitigation plan, discussed in Section 2.5.7.4, includes habitat acquisition and protection to

mitigate impacts to grizzly bear movement. The agencies' mitigation plan, would require that MMC first attempt to acquire mitigation lands in the north south corridor. The first 500 acres of replacement habitat required for displacement would be within the north south corridor within impacted BMUs (5, 6 or 2). The remaining 2,573 acres required for displacement could be in or outside the north south corridor within the Cabinet Yaak Recovery Zone, with up to one-half (1,286 acres), in a habitat linkage zone along US 2.

The USFWS issued a Biological Opinion in March 2014. In its Biological Opinion, the USFWS determined that the preferred alternative, Alternative 3D-R, is not likely to jeopardize the continued existence of the grizzly bear and that since no critical habitat has been designated for this species, none would be affected. The USFWS also identified reasonable and prudent measures necessary and appropriate to minimize incidental take of grizzly bears, and terms and conditions that implement them. The reasonable and prudent measures and the Terms and Conditions in the Biological Opinion will be incorporated into the Selected Alternative in the ROD.

4870 T&E Species (grizzly bear): Comment about cumulative effect

Potential isolation of grizzly bear populations

322-11 From a cumulative effects standpoint, it's abundantly clear that the Montanore Mine and the Bear Creek Road, when coupled with the Rock Creek Mine, will sever the Cabinet portion of the ecosystem in half, "leaving a population too small to remain viable", as correctly noted by the U.S. Fish and Wildlife Service (2006).

331-35 The cumulative impacts from all mining in the grizzly bear recovery zone need to be assessed. The impacts to grizzly bears and their habitat from the Montanore and Rock Creek mines need to be considered in conjunction with mines such as the 4th of July and Way-up mines.

109-8 The Rock Creek Project has been approved with the final EIS issued in September 2001, the final Record of Decision in June of 2003 and the revised Biological Opinion issued in October 2006. RC Resources Inc. is preparing for start of construction of Phase I in 2009. Please ensure that analysis of impacts to threatened or endangered species gives proper consideration to the Rock Creek Project with regard to its environmental baseline priority. The October 11, 2006 Rock Creek Biological Opinion states "After reexamining the issue and our original rationale, we conclude that our decision to remove the Montanore mine project from the environmental baseline is correct and therefore, impacts from the Mines Management Incorporated's proposed Montanore Mine are not included in the baseline of the biological opinion." Please explain how the Montanore Project will be analyzed and mitigated with respect to the grizzly bear movement corridor as was defined and mitigated in the Rock Creek Project Biological

109-16 The FS must fully evaluate the impacts of the Libby Adit development (including road use and associated impacts on grizzly bears. This evaluation must include the cumulative effects of such development taking into account projects such as the Montanore Mine, the Rock Creek evaluation adit, and the Rock Creek Mine.

150-4 Under "Cumulative Effects" on DEIS P: 880-881 the Kootenai says, "Road status information is available for the current and reasonably foreseeable Wayup Mine/Fourth of July Road Access Project, Plum Creek activities, the Rock Creek Project, and the Miller-West Fisher Vegetation Management Project." Such a three paragraph listing of additional, habitat-fragmenting projects is in no way the comprehensive Cumulative Effects Analysis required by federal law.

150-4 In its 2006 Biological Opinion for the Rock Creek Mine, FWS has said that if both Rock Creek and Montanore go forward, it would cut off 22% of the CYE recovery zone and 31 % of its grizzlies, leaving a recovery area too small to support the desired (and required) population (USDI 2006). Given Revett's clear intention to mine Rock Creek, and the repeated approval of Rock Creek Mine by the Kootenai National Forest – only turned back by court rulings – this "cumulative impact" must be acknowledged and fully accounted for.

150-8 In addition, if the Rock Creek Mine with even more employees is approved, extinction will be just around the corner for the CYE grizzlies.

162-1 And I question, if both mines become operational, whether the loss of twenty-thousand plus acres of habitat can be mitigated at all.

182-20 Because the permitting agencies so deliberately opportuned themselves of the small window when only one mineral development proposal was active, these impacts do not include the cumulative impacts of the Proposed Rock Creek Project. This disservice to the grizzly bear, ESA and the public will hopefully emerge in a legal criticism of the dis-functional attitude taken by the agencies.

195-1 I am writing to express my concerns with the proposed Montanore Mine in NW Montana, which puts wilderness, water quality and wildlife at risk . . . I am also concerned that the beleaguered population of grizzly bears in the Cabinet Mountains Wilderness cannot withstand the effects of one mine, let alone two. Bear biologists say the proposed Montanore mine will displace the bears from another 13,000 acres of their remaining habitat . . . The Wilderness Area, and surrounding Cabinet Yaak Ecosystem, provide critical habitat for threatened grizzly bears, and other important wildlife. We urge the Forest Service and MT DEQ to protect these valuable resources against the proposed Montanore Mine.

200-10 The proposed Montanore and Rock Creek Mines are the major threats to the grizzly bears in the Cabinet Mountains portion of the CYRZ. If either of the mines gets final approval and becomes operational, there will be extraordinarily negative impacts on grizzly bears. If they both get approved and are constructed, and/or if only the Montanore mine gets final approval, the impacts would likely jeopardize the continued existence of grizzlies in the Cabinets, and therefore the CY population. In its 2006 Biological Opinion on the Rock Creek Mine, the U.S. Fish and Wildlife Service noted that if both mines operate at the same time, it will cut off 22% of the ecosystem and 31% of its grizzlies, leaving too small a population to remain viable (USFWS 2006). The Cabinet grizzly population is estimated to be about 10 - 15 bears which is likely one third of the entire CY population.

200-19 The proposed Rock Creek mine would impact 7,044 acres of grizzly bear habitat added to the approximately 27,000 acres of habitat (DEIS, Vol. I, Page 136) impacted by Montanore. This habitat loss would be concentrated in the southern end of the Cabinets that is a prime area of use by grizzlies. This degree of habitat loss cannot be mitigated.

202-20 Highway 2 is already problematic for bears traveling between the Yaak and Cabinet portions of the recovery zone. The mine related human migration to the Troy and Libby areas and the accompanying development would serve to permanently sever the travel corridor between the Cabinets and the Yaak. The construction of the Rock Creek and Montanore mines also would render unsuitable the narrow habitat connecting the southern portion of the Cabinet Mountains Wilderness from the larger northern segment. The result of mine related impacts would likely be three disjunct and isolated grizzly bear populations. How are the agencies going to improve the connectivity between the three regions?

202-21 The grizzly bear faces the loss and fragmentation of its habitat because of mine construction, operation, and the rapid and substantial increase of human intrusion into its historic range. Mine related impacts to the grizzly must be inclusive of both the Rock Creek and Montanore projects. The impact analysis also should include the prospects of additional mining projects including the Libby Creek Ventures and Wayup mines, both of which would occur in the grizzly recovery zone. Why are the cumulative impacts from all reasonably foreseeable mining operations in the region not being analyzed? All of these projects would impact the narrow band of wilderness between Elephant and Carney peaks. The industrialization of this one half mile wide region of wilderness would eliminate the north-south corridor for the grizzly bear. If the north-south corridor were severed, how would the bear's recovery be affected?

202-40 These requirements are in addition to the DEIS' failure to review the cumulative impacts from all "past, present, and reasonably foreseeable future actions" under NEPA/MEPA. 40 CFR § 1508.7. In this case, the DEIS' analysis of cumulative impacts consists largely of a listing of the number of acres affected by the past, present, and reasonably foreseeable future surface disturbances for the cumulative impact areas. See DEIS at 216-223. Although the DEIS contains a short paragraph or two discussing cumulative impacts to some resources, the document provides no additional information on the actual cumulative impacts.

310-23 The cumulative impacts on spring habitat along with all other impacts on grizzly bear security and habitat from the Montanore mine and other foreseeable projects, particularly the Rock Creek mine, that will occur simultaneously and/or sequentially in the Cabinet portion of the CYRZ will no doubt adversely affect grizzly bears, and are likely to jeopardize the Cabinet population and eliminate the possibility of recovery for the Cabinet-Yaak population.

310-27 If both the Rock Creek and Montanore projects are approved by the agencies and go forward within the same timeframe (simultaneously or sequentially), the combined impacts would likely jeopardize the grizzly population in the Cabinets.

310-28 If both mines get approved and are constructed concurrently or sequentially, the impacts would likely jeopardize the continued existence of grizzlies in the Cabinets, and therefore the CY population.

310-28 The proposed Rock Creek mine would impact 7,044 acres of grizzly bear habitat in addition to the approximately 27,000 acres of habitat impacted by Montanore, and that this habitat loss would be concentrated in an area of the Cabinets that is a prime area of use by grizzlies, is indicative of an unacceptable level of devastating impacts to the small number of grizzlies that inhabit the Cabinet portion of the CYRZ. The impacts from such a large reduction in secure habitat loss cannot be mitigated.

310-36 Before issuing decisions and permits, the Forest Service and Montana DEQ must take a hard look at the long term cumulative/combined effects of the Montanore and Rock Creek mining projects on native species, including threatened, sensitive and MIS species that inhabit the project area.

331-33 The DEIS does not preclude the simultaneous or sequential operations of the Rock Creek and Montanore mines. Cumulative impacts would be significant. The non-jeopardy opinion in the 2006 Bi-Op for the Rock Creek mine seems to be based on Noranda's forfeiture of the project. According to the Rock Creek 2006 Bi-Op, the abandonment of the Montanore mine project improved the baseline for grizzly bears within the

331-34 The migration of workers, their families, and others seeking employment to the region of the Cabinet Mountains Wilderness, will cause a population increase likely to exceed 2,500, and may go significantly higher. The following totals are for the Rock Creek Mine only. The potential operation of both projects could be responsible for the immigration to the region surrounding the Cabinet Mountains Wilderness of 4,000-5,000 new residents. This massive and rapid migration to the region will have devastating impacts on the grizzly bear. Many who relocate to the area will not be willing toad just their lifestyle to avoid conflicts with grizzly bears. Outreach by mitigation mandated MFWP staff would be ineffective due to a culture intolerant of grizzly bears.

335-34 Although the Rock Creek mine is recognized as a reasonably foreseeable activity, the SDEIS fails to provide sufficient analysis of the cumulative effects on grizzly bears in the Cabinet-Yaak ecosystem from the proposed Rock Creek Mine, Montanore Mine, climate change, etc…

389-6 It is unclear whether the KNF's grizzly population relies on whitebark pine as a food source, but that species is also particularly vulnerable to climate change. That effect should be considered as part of the analysis of the effects of displacement on the KNF's grizzly population.

Response: Cumulative effects to Grizzly bear movement corridors and habitat linkage zones from the mine and transmission line alternatives in combination with reasonably foreseeable actions were discussed in section 3.25.5.2 of the SDEIS and FEIS. Cumulative impacts of mine and transmission line alternatives in combination with reasonably foreseeable actions to other wildlife resources are disclosed in sections 3.25.1, 3.25.2, 3.25.3, 3.25.4, 3.25.6, and 3.25.7 of the FEIS. Reasonably foreseeable actions considered include Bear Lakes blasting, Wayup Mine/Fourth of July Road Access Project, Plum Creek activities, the Rock Creek Project, and Phase I and Phase II of the Miller-West Fisher Vegetation Management Project. Land acquisition and access changes associated with mitigation for the combined action alternatives and reasonably foreseeable actions, especially the Rock Creek Project, would reduce impacts on bears. Acquired parcels that might otherwise be developed in a manner inconsistent with bear needs would be managed for grizzly bear use in perpetuity. The agencies' grizzly bear mitigation plan, discussed in Section 2.5.7, includes habitat acquisition and protection to mitigate impacts to grizzly bear movement. The agencies' mitigation plan, would require that MMC first attempt to acquire mitigation lands in the north

south corridor. The first 500 acres of replacement habitat required for displacement would be within the north south corridor within impacted BMUs (5, 6 or 2). The remaining 2,573 acres required for displacement could be in or outside the north south corridor within the Cabinet Yaak Recovery Zone, with up to one-half (1,286 acres), in a habitat linkage zone along US 2.

To evaluate various scenarios for timing of reasonably foreseeable actions, the description of cumulative effects in Section 3.25.5.2 was revised for the FEIS to include an analysis of impacts to grizzly bears during different phases of the Miller-West Fisher Project. The agencies maintain that cumulative impacts of the Montanore mine and transmission line alternatives in combination with other reasonably foreseeable activities to grizzly bears, such as effects on road densities, habitat security, and core habitat were adequately disclosed in Section 3.25.5.2 of the FEIS.

The combined agencies' alternatives and the reasonably foreseeable actions, especially the Rock Creek Project would include measures to counteract the increased risk of grizzly bear mortality, such as busing employees to the project site, educating employees about the biology and behavior of grizzly bears, and equipping project sites and surrounding areas with bear-resistant garbage containers. The new law enforcement and bear specialist positions included in the combined action alternatives and the Rock Creek Project would help deter illegal killing of grizzly bears in the area, increase public awareness, and help increase acceptance and support of grizzly bear management. The combined agencies' alternatives would include funding for a habitat conservation biologist who would focus on promoting land use decisions that would benefit bears.

The USFWS is responsible for ensuring compliance with the Endangered Species Act (ESA). In accordance with Section 7 of the ESA, the KNF submitted a final Biological Assessment for effects of the Montanore Project on federally listed species to the FWS in September 2013. Because other reasonably foreseeable federal actions such as the Miller-West Fisher Vegetation Management Project and the Rock Creek Mine Project had already undergone Section 7 consultation, they were considered in the baseline conditions for the Montanore Project Biological Assessment. The Biological Assessment indicated the agencies' preferred alternative 3D-R may affect, is likely to adversely affect the grizzly bear. Since all the agency alternatives incorporate the same mitigation plan as 3D-R, the agencies expect similar effects for grizzly bears from their other alternatives. The FWS issued a Biological Opinion in March 2014. In its Biological Opinion, the FWS determined that the preferred alternative, Alternative 3D-R, is not likely to jeopardize the continued existence of the grizzly bear and that since no critical habitat has been designated for this species, none would be affected. The FWS also identified reasonable and prudent measures necessary and appropriate to minimize incidental take of grizzly bears, and terms and conditions that implement them. The reasonable and prudent measures and the Terms and Conditions in the Biological Opinion will be incorporated into the Selected Alternative in the ROD.

Potential effects of climate change on grizzly bears and their food sources, including whitebark pine, cannot be quantified due to the uncertainties associated with predicting changes and the effects.

The response to issue 5000 under *KNF's Libby Adit Evaluation Program Environmental Assessment* (p. M-472) explains why the Libby Adit was not evaluated through a separate environmental assessment, but instead included in the analysis of the effects of the Montanore project disclosed in the DEIS, SDEIS, and FEIS.

4872 T&E Species (grizzly bear): Comment about effect-transmission line

150-8 "Although new transmission line access roads would be gated or barriered after transmission line construction, mortality risk could increase due to improved hunter or poacher access. Mortality risk due to improved hunter or poacher access would increase more for Alternative 2B than for other combined action alternatives because more new roads would be built…" In addition, it's important to remember both the U.S. Forest Service and private NGO's have repeatedly found that gates fail, in the vast majority of cases, to keep unauthorized vehicles out (Predator Project 1995, Swan View Coalition et al 2005). It's one of the reasons that no gated roads are

Response: The agencies' grizzly bear mitigation plan described in Section 2.5.7.4 of the FEIS requires MMC to implement or fund monitoring of the effectiveness of closure devices installed in roads where access would be changed to mitigate for effects to grizzly bears at least twice annually, and complete any necessary repairs immediately.

4877 T&E Species (grizzly bear): Comment about mitigation-mine

Effectiveness of land acquisition in mitigating habitat loss and displacement effects

74-9 The habitat protection and acquisition part of the plan relies on road closures, combined with MMC agreeing to purchase 2,826 acres of private land within 6 years as mitigation for habitat losses. These lands have been prioritized by the Forest Service and are not listed in the DEIS for obvious reasons. However, whether high priority lands will be available for purchase within the time frame specified is questionable.

74-9 While the plan seems fairly comprehensive and would provide the Forest Service with needed funds to manage their bear population, it has a few flaws: There is no guarantee that replacement habitat purchased by MMC will be of equal or greater quality than the habitat destroyed.

74-14 A plan for land acquisition that requires lands purchased be of equal quality for grizzly habitat as those destroyed should be inserted into the Grizzly bear Mitigation plan.

74-19 A land acquisition plan as part of the Grizzly bear mitigation plan.

109-6 The Rock Creek Project requires 153 acres of mitigation land for Phase I of the Project of which 100 acres must be contained entirely within the north-south grizzly bear corridor. Phase II of the Project requires an additional 2297 acres of mitigation land to be acquired or set aside from development through permanent conservation easement along with 5.2 miles of road closures, funding for employees for MFWP for the life of the project, bear proof garbage containers, etc. Please explain the rationale used to determine 24 acres of replacement grizzly bear habitat and "enhance grizzly bear habitat on 11,324 acres of private lands in the CYE along with associated road closures.

150-5 The above statement is incorrect for at least two reasons. First, grizzlies are a wide-ranging species, and in all likelihood are already using the proposed mitigation properties, contrary to the DEIS' unsupported assertion to the contrary. Thus these lands are not brand new habitat to replace what MMC proposes to destroy. Second, while purchase may in fact prevent development of these mitigation acres, this simply maintains the status quo (Baseline condition), which we already know is not favorable to grizzly survival. Therefore, the land acquisition program in no way replaces lands lost to the mine and transmission line.

150-6 First, as noted above, many of these acres are already available to grizzlies and so mitigate nothing. Second, on P: 139, the DEIS attempts, through a statistical slight of hand, to dramatically reduce these acreages when it says, "Because core habitat provides the highest quality conditions and would be better than the non-core areas affected by the project, mitigation credit is given at 2:1 ratio. Therefore, the 4631 and 5650 acres of core created also count as 9262 and 11,300 acres respectively, of mitigation toward the disturbance mitigation acre requirement (see Table 22)."

162-1 The concern is that the same parcel of land would be offered as mitigation by both projects resulting in a net shortage of actual acreage. The EIS states that any land parcel presented as part of the mitigation must be accepted by the lead permitting agencies. What criteria will they use? For instance, at what distance can a parcel be considered for mitigation?

182-19 27. P.865. "MMC's land acquisition program would, in the long term, result in additional habitat available for grizzly bear use." Grizzly bear currently use the area so it would not add a single acre. It may protect available habitat from long-term degradation but this aspect is not comparable for purposes of habitat that is used during the life of the mine.

200-17 Thus mitigation for the impacts of the project on grizzly bears would include securing approximately 4,400 acres of undeveloped habitat. However, the agencies have not yet determined whether

and where the additional 4,400 acres of suitable habitat exists and if it is available for acquisition. Furthermore if it does exist it may already be occupied by grizzlies. Thus, this mitigation would not create additional suitable habitat and therefore would not compensate for the thousands of acres from which grizzly bears would be displaced under any and all alternatives.

202-20 The replacement acres required to mitigate for impacts to the grizzly bear depends on which option is chosen. The amount of habitat acres impacted varies from 23,260 acres for option 3C to 27,107 for option 4E. (Table 22, page 136 Volume 1 DEIS). It appears that MMC must secure 4,470 acres, but there is confusion about this because the DEIS states that the secured parcels could in fact be used by MMC for purposes other than protecting grizzly bear habitat. Any of the following could occur with the acquired parcels, including mill site or mining claims that MMC might patent as a result of the Montanore Project. (DEIS, Vol.1, pg. 89) Is the DEIS allowing mitigation acreage that was secured as bear habitat to be industrialized in the future?

310-22 This amount of displacement from preferred habitat cannot possibly be mitigated by MMC purchasing other undisturbed or disturbed property or closing roads. First, properties that are currently undisturbed are likely to be utilized already by grizzly bears and thus would not provide additional areas that would compensate for mine related displacement. Secondly, areas that are already disturbed, while not currently being used by grizzlies, would have to be undisturbed for a long period of time before grizzlies would be inclined to utilize them. See Dr. Lee Metzgar's comments on grizzly bear use of rehabilitated areas below. To make matters worse, much of the habitat from which bears will be displaced is high value spring habitat.

322-6 This is phantom mitigation at its worst, since many/most of these acres, if close enough to serve as mitigation, are already being used by grizzlies, so they're not new acres, and therefore, don't replace those lost. In addition, buying acres that might be developed merely preserves the current habitat situation, under which habitat is too small, the Cabinet bears are isolated, and mortalities are already excessive.

322-6 Therefore, the REAL acres that MMC needs to compensate for are as follows: MMC Alternative 2B = 39,683 acres - 2582 shown in SDEIS = 37,101 Acres (16,427+9876+6428+6952-2582) KNF Alternative 3 D-R = 34,846 acres - 1539 shown in SDEIS = 33,307 Acres (13,347+8119+6428+6952-1539).

322-6 The low number of compensation acres is caused by KNF incorrectly counting Core acres purchased on a 2:1 basis, thereby letting MMC off the hook for replacing every last acre they damage. Since all acres damaged must be replaced by acres of equal or greater quality, all acres compromised must be fully replaced on a 1:1 basis. With the viability of Cabinet grizzlies on the line, the Kootenai should not be greasing the skids for mining corporations at the expense of grizzly habitat security.

322-7 Finally, in its FSEIS for Motorized Access in the CYE/SE (USDA 2011a), the Forest Service claims that the ecosystems do have a number of large Core areas with better security levels than those being used by grizzlies in Wakkinen and Kasworm (1997), but that the study grizzlies weren't using them despite the fact that they were 1-10 miles away. If true, this completely undermines the MMC/USFS claim that "mitigation habitat" effectively makes up for the documented damage that a Montanore - or Rock Creek - Mine will do (USDA 2011a, Appendix C). As we have noted before, grizzlies are not pawns that can be moved at will around a habitat chessboard.

322-7 (1) The claim of Core creation rests on access management changes that will be instituted by KNF. But a check of Tables 22 & 23 shows that 26% of these closures would be accomplished by gates, which are totally ineffective (Bertram 1992, USDI 1994, Predator Project 1995, Swan View Coalition 2005), and not permitted in Core areas. Therefore, at least 26% of the claimed 6447 acres of new Core (1676 acres) are likely Phantom

322-8 (3) Even if 6447 acres of functional, connected Core could actually be created, and grizzlies somehow managed to find them, these acres pale in comparison to the habitat loss shown under #3 above - 37,101 acres for MMC's alternative, and 33,307 acres under the KNF alternative.

322-8 (2) In addition, as noted in #4 above, USFS itself claims that grizzlies will not automatically use nearby existing Core, even if it's more secure. How then, can the Kootenai claim that any alternative can

create new Core, and that in the midst of the extensive habitat fragmentation and loss caused by Montanore, grizzlies will find it and move there? Such assertions suggest that the Forest Service understands little about a grizzly's bond to its home range - particularly among females.

327-14 According to the SDEIS, the mine project would destroy 1,537 acres of grizzly bear habitat, for which the corporation proposes trading 3,074 acres of private land. (p. 63) This land would not be adjacent to lost habitat, nor would Montanore Minerals Corp. purchase all of it; rather, the corporation would theoretically acquire use of the land through conservation easements or lease agreements with private landowners. The SDEIS does not explain how threatened species like grizzlies, Canada lynx and bull trout would relocate to these new digs as their established habitats fall under the blade of Montanore's backhoe.

331-40 The SDEIS need to clarify and define habitat enhancement. What would this enhancement entail and when and where would this enhancement take place? Before habitat enhancement is considered a legitimate mitigation in the SDEIS, more detail is needed.

344-9 Most importantly the Libby Creek drainage is a known grizzly bear crucial area. The land acquisition will do little to mitigate for grizzlies here. The mitigation proposed may not even be on this forest apparently. For mitigation to be effective for the Montanore Project it needs to be more local. Much of the two-for-one habitat mitigation Montanore proposes seems to be designed to bypass the Endangered Species Act. The 3,074 acres of private land proposed for exchange would not be adjacent to lost habitat, nor would Montanore Minerals Corp. purchase all of it. I believe that for a real easement to be effective compensation for lost public lands, the government should actually acquire a clear title with full management control.

389-11 e. It is unclear whether the lands proposed to be procured will be equally valuable as habitat, and whether they will be available. Because the Forest Service cannot disclose where the proposed "replacement habitat" is located, the public cannot analyze whether the lands are comparable. The public also cannot speculate as to how the replacement habitat might change the situation of the grizzly bear population. It is far from clear that these lands will actually be available if the project moves forward. Finally, if so-called core habitat can simply be destroyed at will through arbitrary Forest Plan amendments meant to facilitate resource extraction projects, it is unclear that replacement habitat procured will actually enjoy any long-term protection. Will timber harvest be permitted in replacement habitat? What guarantee is there that these lands will actually be preserved for use by the grizzly bear?

331-46 There are numerous Inventoried Roadless Areas directly adjacent to the Cabinet Mountains Wilderness that would, if protected as wilderness, provide true mitigation for wildlife impacts from the proposed Montanore mine. Protecting some of these IRAs would also provide real mitigation for the grizzly bear from expected impacts from the adjacent proposed Rock Creek Mine. The Cabinet Face East IRA is 50,326-acres of which a portion has already been recommended as wilderness. Barren Creek is 14,533-acres and Allan Peak is 29,636-acres. These two IRAs would provide security for the species on the southeast corner of the Cabinet Mountains Wilderness. The Galena and McKay Creek IRAs would protect an additional 34,500-acres. Lastly, the Rock Creek IRA may only be 800-acres, but in combination with the other IRAs, would provide real security and mitigation for the loss of habitat for the species. Other IRAs would provide additional secure habitat in the southern Cabinets.

Response: See comment response to issue 4870 on p. M-457.

In the agencies' grizzly bear mitigation plan, land acquisition would be focused on protecting and improving habitat in key linkage areas, in particular the north-south corridor and the habitat linkage zone along US 2 described in Section 3.25.5 of the FEIS. The first 500 acres of replacement habitat required for displacement would be within the north-south corridor. MMC would be also required to secure or protect through conservation easement or acquisition about 5 acres of replacement habitat near Rock Creek Meadows that would enhance the north-south habitat corridor in the Cabinet Mountains. All replacement habitats would be in place prior to agency authorization to proceed with the associated phase of the mine, with all mitigation habitat acquired and recorded prior to the construction phase of the mine.

In the agencies' alternatives, 2 acres of habitat would be acquired for every acre of grizzly bear habitat physically lost. Acquired parcels that might otherwise be developed in a manner inconsistent with bear

needs would be managed for grizzly bear use in perpetuity. The agencies' land acquisition requirement would protect habitat from habitat alteration resulting from regional increases in land development and would likely improve grizzly bear habitat quality and increase core habitat over the long term through road access changes and elimination of sources of grizzly bear disturbance. In the agencies' alternatives, transmission line construction and removal on National Forest System and State lands located within the recovery zone and the Cabinet Face BORZ would occur between June 16 and October 14, minimizing displacement effects in the linkage zone along US 2. The agencies' mitigation plan requires MMC to contribute funding for ongoing monitoring of bears to assess and identify key connectivity lands between the NCDE and Cabinet Mountains. Comments about mitigation of effects in linkage areas are further addressed in the response to issue 4861 under "effects on grizzly bear movement," p. M-440.

As described in Section 2.4.6.3 of the SDEIS and FEIS, in the agencies' alternatives, to maintain habitat effectiveness and core habitat, MMC would implement or fund access changes on several roads prior to the either the evaluation phase or the start of the construction phase. All access changes would be in place prior to agency authorization to proceed with the associated phase of the mine. In addition to road access changes, the agencies' alternatives require that MMC implement or fund monitoring of the effectiveness of closure devices at least twice annually and complete any necessary repairs immediately.

MMC would contribute funding to support monitoring of bear movements and population status for native Cabinet Mountain bears as well as grizzly bears trans-located into the Cabinet Mountains to confirm the effectiveness of mitigation measures. The Forest Service would ensure that adequate funding, provided by MMC, is available to monitor bear movements and use of the Cabinet Mountains to confirm the effective implementation of mitigation measures. Information gained would be useful in determining whether the mitigation plan was working as intended.

Prior to initiating the Evaluation Phase, the Forest Service, DEQ, FWP and MMC would participate in the development of a Memorandum of Understanding (MOU). The MOU would establish roles, responsibilities, and timelines of an Oversight Committee comprised of members of the Forest Service, FWP, and other parties deemed appropriate by the parties named. The FWS would be an ex-officio, non-voting member of the Oversight Committee, with advisory responsibilities. As described in the Biological Assessment, the MOU would specify that mitigation properties would be selected on a priority basis with biologically justifiable rationale. The USFWS would be requested to advise the Forest Service if it believed the proposed mitigation properties met one or more of the criteria specified in the plan. The Oversight Committee would be responsible for the development of a Comprehensive Grizzly Bear Management Plan and its implementation. The Comprehensive Grizzly Bear Management Plan developed by the Oversight Committee would include all provisions of the mitigation plan for grizzly bears, except where superseded by the FWS' Biological Opinion, and would include provisions for adaptive management. Measures to be used to ensure compliance with the Montanore Grizzly Bear Mitigation Plan and its effectiveness were described in detail in the agencies' grizzly bear mitigation plan in the FEIS and the Biological Assessment.

Effectiveness of land acquisition in mitigating impacts to grizzly bear movement

182-8 P.142. T&E(D). To address habitat constriction…. Purchase or conservation easement on 5 acres in Rock Creek meadows, remedial action on motorized trail #935 (actually road bed up to RC meadows). These are both bogus mitigations! Trail #935 hasn't been used as a motorized route by public for decades. Maps indicate no private property up or near RC meadows. There may be the Heidelberg mill site and if such should be so stated. The only real-time core habitat protection for this area would involve inclusion in the Cabinet Mountains Wilderness as wilderness.

200-18 In order "to address habitat constriction that reduces the potential to achieve Cabinet-Yaak Ecosystem grizzly bear recovery goals (by impacting individuals in the Cabinet Mountains) and to avoid jeopardy, MMC would acquire 5 acres of mitigation habitat required that would enhance the north-south corridor in the Cabinet Mountains." DEIS at 142. The parcel is described as "about 5 acres near Lake Meadows." Id. It seems unlikely that 5 acres of secured habitat is going to offset the project's profound impacts on the north-south wildlife travel corridor in the Cabinets, which is essential for grizzly movement in the cabinets.

310-24 It seems unlikely that acquiring this 5 acre piece is going to offset the impacts of the Montanore project, especially when combined with the impacts from the Rock Creek project, on the north-south movement of grizzlies in the Cabinets.

Response: See response to issue 4877 under "effectiveness of land acquisition in mitigating habitat loss and displacement effects" p. M-458 and the response to issue 4861 under "effects on grizzly bear movement," p. M-440. In the agencies' mitigation plan, As described in Section 2.4.6.3 of the SDEIS and FEIS, in the agencies' alternatives, to maintain habitat effectiveness and core habitat,

Effectiveness of access changes in mitigating impacts to habitat security and core habitat

150-5 First, Roads 231 and 2316 are to be "gated seasonally" despite standards from the Interagency Grizzly Bear Committee (IGBC) and the Kootenai's own FEIS on Access Management that "Core areas do not contain any gated roads…" Second, Roads 4776A, 4778C, 4776C, 4776F, 6200, 6200D, 6200E, 6200F, 6214, and 6214F are open to snowmobiles from Dec.1 to March 31 – despite the fact that many male grizzlies begin emerging from dens by March 15th or earlier. Again, both IGBC standards and those for the Kootenai National Forest are clear that roads open for any portion of the "nondenning season" are to be counted as "Open", rather than "Restricted." The result is that of 51 miles of claimed road closures, 27 miles (53%) are an illusion.

182-4 P. 68. Table 9. Note all areas are currently open to snowmobile traffic. Would road closures extend to this activity as well????

182-7 P.139. T&E. Roads shown in Table 24 that would be seasonally gate would provide 1,810 acres of spring grizzly bear habitat. Security needs to necessarily involve over the snow vehicle access as well!

200-13 Road access changes are proposed as part of the mitigation for the adverse impacts of the proposed Montanore project on grizzlies. The Forest Service relies on the 2006 Rule Set for its determination that the access changes will offset the negative impacts of mine construction and operation. As stated above, the 2006 Rule Set is not based on the best available science. Therefore there is no scientific basis for concluding that the mitigation measures will reduce the impacts of the project enough to avoid jeopardizing the CY grizzly bears.

200-18 Therefore the DEIS lacks scientific evidence that would support the conclusion that the mitigation plan will succeed in compensating for the detrimental impacts of the Montanore project on grizzly bears and their habitat. The Forest Service assumption that bears will adapt rapidly to changes in secure habitat and use temporary or new secure areas created to compensate for a loss of security soon after the changes are made is

200-18 A major flaw in the mitigation plan is the Forest Service reliance on achieving standards set forth in the 2006 Rule Set to offset the impacts of the mine. As stated above, the 2006 standards that purportedly will maintain adequate security for grizzly bears are not based on the best available

245-1 And DON'T piggy back more road closures (directed at unroading therefore wilderness) in the Cabinets.

310-19 A major flaw in the Montanore SDEIS mitigation plan and grizzly bear analysis is the reliance on achieving standards set forth in the 2006 Rule Set to offset the impacts of the mine. The 2006 standards that purportedly will maintain adequate security for grizzly bears are not based on the best available science. Essentially they represent the status quo in terms of grizzly bear security, i.e., road densities and core. As discussed above, the CY grizzly population has been in decline as a result of these levels of security.

331-32 The SDEIS states that proposed road closures are meant to serve as mitigation. How is the Forest Service going to enforce these road closures? What plans are in place to keep ORV's from circumventing gates or barriers? Will there be any mine traffic on these roads? If roads are to be used as mitigation for grizzly bears then they should be removed, not gated. Would mitigation lands behind gated roads be protected from future timber sales? Are there mineral claims on any of these lands? Will they be permanently removed from future activities and motorized access? If so, why not remove the roads?

331-32 We also question the legitimacy of the land acquisition mitigation used to compensate for the habitat physically lost. The 3,074-acres secured and protected from "development in a manner inconsistent with bear needs" creates no new habitat for the bear. The habitat that would be secured is already available to the grizzly bear. Would these mitigation lands be permanently protected from future mining, logging, road building, or other development activities?

331-43 Are gates that are installed to protect areas set aside as grizzly bear mitigation the responsibility of MMC? MMC neither has the motivation nor the authority to keep the local population from breeching these gates with ORVs. Keys to these gates will be readily available if gates are open to mine employees. Gates would need to be policed every weekend to keep snowmobiles and ORVs from intruding. During hunting season, the gates need to be monitored daily. The lax monitoring requirement points to the ineffectiveness of gated roads as grizzly bear mitigation.

344-8 This shouldn't be relied on as mitigation in advance since nothing is tangible.

389-12 If they do so, there is no guarantee that "core habitat" will be protected by that designation and the term loses its meaning. Similarly, there is no guarantee that the lands the Forest Service proposes to acquire for grizzly bear use "in perpetuity" will actually enjoy adequate protection.

322-4 The claimed improvements to Core and TMRD rely heavily on road closures by KNF, but since at least 26% of these rely on totally ineffective gates, they are illusions (Predator Project 1995, Swan View Coalition 2005). Also, since the Kootenai recognizes no minimum Core size, the "improvements" to Core could be in totally ineffective blocks of 50 or 100 acres with no linkage between them.

322-5 Once again, claimed improvements are illusory, since many rely on ineffective closures by gates.

Response: See response to issue 4877 under "effectiveness of land acquisition in mitigating habitat loss and displacement effects" p. M-458.

Section 2.5.7.4 of the FEIS described the agencies' wildlife mitigation plan, including measures that would be implemented to mitigate for impacts to core. To prevent motorized access, MMC would implement or fund access changes, on several roads prior to the either the evaluation phase or the start of the construction phase. All access changes would be in place prior to agency approval to proceed with the associated phase of the mine. Barriers would be installed on roads designated for access changes for core habitat mitigation. In addition to road access changes, the agencies' alternatives require that MMC implement or fund monitoring of the effectiveness of closure devices at least twice annually and complete any necessary repairs immediately. As described in Section 2.5.7.4, in the agencies' grizzly bear mitigation plan roads that would be seasonally gated would improve conditions on an estimated 808 acres of spring grizzly bear habitat, but because these roads would not be gated for the entire active bear season, habitat improved through these seasonal road access changes would not contribute to core habitat. Of the access changes described in the agencies' mitigation plan, restrictions to over-the-snow vehicles would be applied to a total of 37.2 miles, minimizing disturbance to denning and spring habitat.

Other comments regarding mitigation of effects to grizzly bear habitat through road access changes are addressed in the response to issue 4863 under "road density and core habitat (Access Amendment) impacts assessment criteria," p. M-443.

In addition to road densities, impacts to grizzly bear were evaluated based on other criteria, including core area and block size. Methods and criteria used to assess impacts to grizzly bear were described in detail in Section 3.25.5 of the FEIS.

Effectiveness of wildlife specialists in reducing grizzly bear mortality

150-8 The DEIS repeatedly claims that such increased risk would be mitigated by the presence of new conflict resolution specialists and wardens. One need look no further than the nearby NCDE to see the reality of the situation. Despite the presence of five Bear Conflict Resolution Specialists doing fantastic work, and even more Wardens, illegal mortality is the #2 cause of grizzly bear deaths in the NCDE (USDI

2008). The #1 cause of NCDE mortalities is management control of habituated and food conditioned bears, and if MMC moves in with 300-450 workers and their families, the new conflict resolution/enforcement staff will simply be overwhelmed.

150-8 Finally, even the education/enforcement positions claimed above may be fictional, as DEIS P: 133 notes that funding may be used for "new or existing" positions (emphasis added). Thus while MMC offers "new" positions to mitigate damage with its right hand, it functionally takes them away with its left. New habitat destruction and new mortality risks require new FWP positions.

202-19 This massive and rapid migration to the region will have devastating impacts on the grizzly bear. Many who relocate to the area will not be willing to adjust their lifestyle to avoid conflicts with grizzly bears. Outreach by mitigation mandated MFWP staff would be ineffective due to a culture intolerant of grizzly bears. As mitigation for the Rock Creek mine a "specialist" was hired to protect the bear, but failed to protect the recently transplanted grizzly that was poached in Nixon in 2008. The death of this bear and a recent human/bear conflict in the Bull River area both involved unsecured garbage. This problem was to be addressed by the hiring of the conflict specialist.

322-10 While all of these measures are excellent, and need to be done even if there is no Montanore Mine, we're concerned that the KNF somehow believes that they will magically make the mine's impacts go away - They will not. In fact, they amount to "plugging holes in the dike" - holes that Montanore will make dramatically larger. For proof, one need look no further than the NCDE, where Montana Fish, Wildlife and Parks (FWP) employs some of the best Bear Conflict Resolution Specialists available. Yet humans continue to cause 90-95% of all NCDE grizzly mortalities; the #1 cause of mortalities is management control of habituated/food-conditioned bears; and #2 is poaching. At best, similar positions in the CYE will race to keep up with the escalating conflicts and mortalities caused by Montanore.

322-10 (c) While the prohibition of employees feeding bears is important, it only applies on the jobsite. Once employees head home, to be joined by hundreds of family members flooding into nearby communities, it's "reasonably foreseeable" that attractant problems will escalate significantly, with Conflict Resolution Specialists hard pressed to keep up with mine-generated conflicts and mortalities - many in the Highway 2 linear fracture zone, which will expand due to new developments.

322-9 All combined action alternatives increase both of these factors through a dramatic increase in human populations associated with the mine, as well as access for hunters, poachers, and recreationists. The SDEIS claims that the carrying of weapons by employees will be prohibited, but will MMC conduct daily searches of all employee vehicles, or prohibit employees and family members from carrying firearms on their days off – Highly unlikely and probably illegal?

322-10 (d) It's not clear if the "habitat conservation biologist" is in addition to the bear specialist and law enforcement officer, but it needs to be - although it's unclear who this person will work for, or how they might improve the quantity, quality, or security of grizzly bear habitat in the face of Montanore and Rock Creek Mines.

109-16 The Rock Creek TTES Mitigation Plan (at 1) provides that new projects proposed in the Cabinet-Yaak Ecosystem "that have adverse effects on grizzly bear" could be required to participate in funding certain items in that mitigation plan. How does the Forest Service propose to analyze and implement this provision? Is it even feasible for the Forest Service to implement this provision within an EA, given that the Biological Opinion on the Rock Creek Project has taken nearly seven years to complete and the Forest Service worked well over a decade on the 4-volume Rock Creek EIS covering over 6,000 public comments?

389-10 If there is a need for additional law enforcement and monitoring activities, the Forest Service should seek additional funding from other sources to conduct these activities. Requiring the mining company to pay for enforcement and monitoring that should already be taking place does little to improve the situation of the grizzly bear.

Response: See comment response to issue 4870 on p. M-457. In the agencies' alternatives, MMC would fund a bear specialist, law enforcement, and habitat conservation biologist positions. Public education about grizzly bears, enforcement of laws protecting grizzly bears, and management of lands to benefit the

grizzly bear would reduce mortality risks. The roles of the bear specialist, law enforcement, and habitat conservation biologist positions and their importance in reducing grizzly bear mortality were described in detail in the Biological Assessment for the Montanore Project. In the agencies' grizzly bear mitigation plan described in the BA and the FEIS, it is assumed that MMC would be responsible for funding of mitigation plan measures. However, should a permitted project be implemented or a project proposed that would have adverse effects on the grizzly bear in the Cabinet-Yaak Ecosystem, funding for some of these measures could be required of those projects, potentially changing the funding required by MMC.

As described in Section 3.25.5 of the FEIS, the Montanore Project would result in increased human presence and an increased potential for human-bear encounters. Requiring MMC to fund additional law enforcement position is an appropriate measure for reducing these effects.

Effectiveness of Oversight Committee

182-8 P.143-6 T&E(D). MOU & establishment of Oversight Committee. This is really bogus just like P.142 above. Committee has no power other than advisory, etc. The process of an Oversight Committee can be utilized by MMC or predecessors in the process to obstruct GB mitigation and

Response: The role of the Oversight Committee, its members, and the process for forming the committee were described in the description of the agencies' grizzly bear mitigation plan in Section 2.5.7.2 of the SDEIS and Section 2.5.7.4 of the FEIS. Prior to initiating the Evaluation Phase, the Forest Service, DEQ, FWP and MMC would participate in the development of a Memorandum of Understanding (MOU). The MOU would establish roles, responsibilities, and timelines of an Oversight Committee comprised of members of the Forest Service, FWP, and other parties deemed appropriate by the parties named. MMC would have a participating role on the Oversight Committee. The Oversight Committee would be responsible for the development of a Comprehensive Grizzly Bear Management Plan and its implementation. The Comprehensive Grizzly Bear Management Plan would focus on the Cabinet portion of the Cabinet-Yaak Ecosystem and would fully include all provisions of the mitigation plan for grizzly bears, except where superseded by the FWS' Biological Opinion and would include provisions for adaptive management. Measures to be used to ensure compliance with the Montanore Grizzly Bear Mitigation Plan and its effectiveness were described in detail in the agencies' grizzly bear mitigation plan and the Biological Assessment.

Effectiveness of mitigation for cumulative impacts

310-25 The Montanore SDEIS does not discuss or reference any valid scientific evidence to support its conclusion that the proposed mitigation for the project's impacts on grizzly bears will succeed in reducing the project's impacts on the Cabinet population of grizzly bears and eliminate the probability of jeopardy, should both the Rock Creek and Montanore projects proceed simultaneously or sequentially.

109-16 Has the FS prepared a Terrestrial Threatened and Endangered Species mitigation plan for the Libby Adit, as it required for the Rock Creek evaluation adit and mine? If yes, Revett requests a copy. If no, when will the FS prepare such a plan?

Response: With regard to effectiveness of mitigation for cumulative impacts, please see responses to issues 4877, under *effectiveness of land acquisition in mitigating habitat loss and displacement effects, effectiveness of wildlife specialists in reducing grizzly bear mortality, and effectiveness of Oversight Commmittee,* beginning on p. M-458. ESA compliance is addressed in response to issues 4879 under *ESA compliance and Section 7 consultation with the USFWS (Biological Opinion),* p. M-466.

As described in section 3.24.5.2 of the DEIS, and section 3.25.5.2 of the SDEIS and FEIS, mitigation requirements measures for the combined action alternatives and reasonably foreseeable actions, especially the Rock Creek Project, would reduce cumulative impacts to grizzly bears. These mitigation measures include land acquisition, road access changes, and funding of new law enforcement, bear specialist, and conservation biologist positions, and funding of research to evaluate the effectiveness of mitigation.

Mitigation for effects from evaluation phase activities at the Libby Adit are included in the agencies' wildlife mitigation plan described in Section 2.5.7.4. For the grizzly bear, acquisition of mitigation lands and road access changes would be in place prior to agency authorization to proceed with the associated phase of the mine. Comment response 5000 *under KNF's Libby Adit Evaluation Program Environmental Assessment* (p. M-472) explains why the Libby Adit was not evaluated through a separate environmental assessment, but instead included in the analysis of the effects of the Montanore project disclosed in the DEIS, SDEIS, and FEIS.

Other Comments about Mitigating the Effects of the Mine on Grizzly Bears

150-3 The DEIS notes that mine construction by MMC cannot begin until six females have been augmented into the Cabinets, and says that all bears brought in since 2005 (four) will count toward that goal. However, as should be obvious, only live grizzlies (two) can count toward a functional augmentation of the population. And, since female mortalities continue at 2-3 times allowable levels, the above science requires the augmentation of 13- 24 live females, not a token six.

Response: See comment response to issue 4870 on p. M-457. As described in the BO, "The proposed action is not associated with and does not affect the State's plan to augment the CYE."… "Montana Fish, Wildlife and Parks will continue to augment the population if the Service monitors the augmented bears (ibid, Jim Williams pers. comm. 2013)."

The Service's current monitoring effort in the CYE was expanded to include monitoring all grizzly bears augmented into the Cabinet Mountains as a result of FWP's effort. However, annual federal funding for such monitoring is not assured and dependent upon annual federal budgets. The agencies' alternatives described in Section 2.4.6.3 of the FEIS would require that MMC contribute funding to support monitoring of bear movements and population status for native Cabinet Mountain bears as well as grizzly bears trans-located into the Cabinet Mountains to confirm the effectiveness of mitigation measures. Augmentation of the grizzly bear population in the Cabinet Mountains as part of FWP's effort, along with the maintenance and improvement of effective habitat and reduced grizzly bear mortality through mitigation plan measures, would over time improve conditions for the CYE grizzly bear population. The improved grizzly bear population status would offset any loss of reproductive potential in the female grizzly bears displaced from areas surrounding the mine.

4878 T&E Species (grizzly bear): Comment about mitigation-transmission line

322-9 (c) The SDEIS contains the welcome commitment that, "MMC would provide funding to monitor bear movement along US 2 between the Cabinet Mountains and the Yaak River and/or the area between the Cabinet-Yaak Ecosystem and Northern Continental Divide Ecosystem." However, as noted in 7(a) above, the mine and transmission line are likely to sever a known linkage zone between the CYE and NCDE, and monitoring its demise- caused by Montanore - will do nothing to help grizzlies.

Response: See comment response to issue 4877 under *effectiveness of land acquisition in mitigating habitat loss and displacement effects* (p. M-458) and issue 4861 under *effects on grizzly bear movement,* p. M-440.

4879 T&E Species (grizzly bear): Comment about regulatory compliance

ESA compliance and Section 7 consultation with the USFWS (Biological Opinion)

74-10 Will violate the ESA regardless of the Biological Opinion issued. (The Fish and Wildlife Service Biological Opinion on the wildlife analysis is considered the legal standard and has not yet been issued at this time).

200-11 Reliance on the 2006 Rule Set would violate sections 7 and 9 of the ESA. The Kootenai National Forest ("KNF") adopted the 2006 Rule Set without fulfilling the consultation requirements in ESA Section 7. The failure to consult on the 2006 Rule Set prior to adopting it forest-wide is a repeat of the situation

when the Forest Service adopted the 1998 interim access management Rule Set without initiating Section 7 consultation or conducting a NEPA analysis.

310-26 Though these are all worthwhile steps to take to avoid an increase in mortalities as a result of mine related actions and the huge increase in human intrusion into grizzly bear habitat, they would not guarantee that bears will not be killed as a direct or indirect result of mine related actions.

310-36 Likewise, the US Fish and Wildlife Service must take a hard look at the cumulative impacts of both projects when determining whether the Montanore project would jeopardize the Cabinet grizzly bears and Lower Clark Fork bull trout.

322-6 The lack of BORZ compensation comes from KNF illegally providing less protection for bears and occupied habitat outside the Recovery Zone. Under the ESA, all grizzlies, and the habitat they occupy, are required to receive the same protection regardless of their location. The ESA includes no exception for listed species outside of politically contrived Recovery Zones.

109-6 Road use impacts from development of the Montanore Project to grizzly bears (threatened species) needs to be fully evaluated. USFWS has already stated it does not concur with the USFS Biological Assessment on MMC's proposed road use for the Libby Creek Adit. Why then is USFS proposing road closures, etc. without concurrence from USFWS on the road use BA or associated mitigation? Please explain.

150-1 It is clear to NRDC that Proposed and Preferred Alternatives 2B and 4D – in fact, all of the "action alternatives"- violate both of these sections [Sections 7 and 9 of the Endangered Species Act], and cannot be legally approved. Our opinion is grounded in an assessment of both the current baseline conditions for grizzlies, and the likely impact to those conditions of authorizing the Proposed Alternative.

200-14 The proposed alternative, "Alt. 2-transmission line B" would reduce core in BMUs 5 and 6, increase OMRD during construction and operations in BMU 5, and increase OMRD in BMU 6 during construction. Summary at S-42-43. Increasing road densities and reducing core in BMUs in order to implement shorter term projects such as timber sales. (which are generally active for 3-5 years) results in a 'take' of grizzly bears. The impacts of the proposed mine and transmission line plans would result in a long term 'take' of bears which would likely jeopardize their survival.

202-19 There are varying estimates of the number of bears in the Cabinet/Yaak ecosystem. The census total in the DEIS is 40-45, with 35-40 estimated in the Rock Creek Bi-Op. With 10-15 bears inhabiting the Cabinet Mountains Wilderness and only 3-5 females, how can the bear survive the mine related impacts?

322-7 As bad as current conditions are for grizzlies in the Cabinet-Yaak Ecosystem, the following "Statement of Findings" from the SDEIS demonstrates that all action alternatives would make those conditions demonstrably worse - in clear violation of the law.

322-12 As we noted in our opening comments, it's clear that all Action Alternatives in the Montanore SDEIS violate the Endangered Species Act Section 7(a)(2) because they would "authorize" activities "likely to jeopardize the continued existence" of the Cabinet grizzlies, and "result in the destruction or adverse modification of habitat of such species…" In addition, it is clear that all Action Alternatives would violate ESA Section 9(a)(B) because they would also result in an additional "Take" of grizzlies, both directly, and through "Harm" to their habitat.

182-2 P.28. Construction and operation of mine and transmission line facilities may result in the loss of grizzly bear habitat or increase mortality and displacement. This would be a violation of the ESA.

182-20 Statement of Findings. "All of the action alternatives may affect and are likely to adversely affect, the grizzly bear." This was not the conclusion found in the Proposed Rock Creek Mine ROD for that project, why the difference or does it take into consideration the cumulative affects of two mines.

327-15 We understand that the final word on threatened species issues will be rendered by the U.S. Fish and Wildlife Service, but we also point out that this biological assessment report is not anywhere near completion as of December 21, 2011.

Response: The See comment response to issue 4870 on p. M-457.

Compliance with KFP

182-20 29. P.884. "None of the action alternatives would comply with KFP direction on threatened and endangered species that applies to the grizzly bear." The KNF has seen this train wreck approaching and essentially stuck its head in the sand, especially with its decision to seek a singular BO on the Rock Creek Project knowing full well and with credible assertions (MMC) that a second mineral development proposal was imminent.

194-1 The Forest Service has a responsibility under its own laws and the Endangered Species Act to not further imperil the grizzly bear to produce minerals with a comparatively miniscule economic value. The government, when it pushed forward the delisting of the grizzly, committed to managing its own lands and resources in a manner consistent with its continued persistence and recovery. The proposed Montanore mine is a gross violation of the government's obligations to the grizzly bear.

335-32 None of the action alternatives comply with the Kootenai Forest Plan direction on threatened and endangered species. The Forest Service cannot simply amend Forest Plan requirements for protection and conservation of threatened and sensitive species simply to enable a mining project to proceed as the mining company prefers. The Forest Service must oversee and manage all activities on its lands (including mining) in compliance with other laws such as the Endangered Species Act and the National Forest Management Act.

389-10 This habitat disturbance is not consistent with the objectives set forth in the Forest Plan. The Forest Service correctly acknowledges that to achieve consistency with the Forest Plan, the project would require the Plan to be amended. The Forest Service proposes that the analysis in the SDEIS should suffice to amend the Forest Plan. However, it is unclear how a provision buried in a lengthy EIS devoted to a mining project suffices to fulfill the notice and comment requirements NEPA imposes, particularly where the existence of a charismatic species is at stake.

389-12 The proposed project is illegal because it does not comply with the Forest Plan's requirements.

389-12 The Forest Service cannot, consistently with preserving the public resource they are required to protect, simply move designated core habitat from one place to another.

389-12 It is unclear how amending the Forest Plan as a side note, brought up in an SDEIS is compatible with the open and transparent public notice and comment process required by NEPA. This process appears to be unlawful. If the project is inconsistent with management direction set forth in the Forest Plan, it should not move forward. If the project will disturb resources the Forest Service must protect, it is illegal.

389-12 If the Forest Service can easily amend the Forest Plan in a way that will affect grizzly core habitat for the purposes of allowing a proposed project to move forward, it is unclear how designating such habitat complies with the requirements of the Endangered Species Act.

Response: Consistency with KFP direction for the grizzly bear was described in section 3.25.5.2 of the FEIS. The agencies' preferred alternative, Alternative 3D-R, would be consistent with 2015 KFP direction following adoption of the 2015 KFP amendments.

4883 T&E Species (lynx): Comment about analysis-mine

327-13 Because aboveground power lines placed along the Miller Creek corridor would require regular maintenance and repair, and because the only way to access Miller Creek road during the winter months would be either by helicopter or plowing the access roads, this placement of power lines would further adversely affect the resident Canada lynx population in the area.

327-13 We have first-hand observational knowledge that our property and the surrounding environs do indeed comprise prime Canada lynx habitat and that this power line alternative would most certainly further threaten this fragile species. In the absence of current scientific data from the KNF, we believe that our observations are germane to the lynx discussion. We believe that the data upon which the SDEIS bases its conclusions regarding endangered Canada lynx is flawed, outdated, or both.

Response: Impacts of the transmission line alternatives on the Canada lynx, as well as impacts analysis methods, were described in Section 3.25.5 of the FEIS. The analysis of impacts to Canada lynx was based on the most current information available at the time, and was updated in the FEIS to incorporate revised lynx habitat mapping and modifications to the agencies' wildlife mitigation plan, described in section 2.5.7 of the FEIS. Short-term disruption of lynx activity in the transmission line corridor may occur during transmission line construction, but would not likely impede lynx movement in the analysis area. In Alternative B, transmission line construction could occur during the winter period, but there is no evidence that packed snow routes negatively affect lynx or lynx populations (USFWS 2003b). The agencies' wildlife mitigation plan requires MMC to conduct transmission line construction activities between June 16 and October 14, avoiding impacts to lynx in winter.

The USFWS is responsible for ensuring compliance with the Endangered Species Act (ESA). In accordance with Section 7 of the ESA, the KNF submitted a final Biological Assessment for effects on federally listed species to the FWS in September 2013. The assessment determined the agencies' preferred alternative 3D-R may affect, is not likely to adversely affect, the Canada lynx. Since all agency alternatives incorporate the same mitigation measures for lynx, the agencies expect similar effects for their other alternatives. In the FWS transmittal letter for its March 2014 Biological Opinion, the FWS acknowledged they had reviewed the Biological Assessment and additional information and agreed with the KNF's determination that Alternative 3D-R may affect, but is not likely to adversely affect the threatened lynx. The FWS acknowledged that the KNF made a determination of no effect for designated critical habitat for the lynx. Therefore, pursuant to 50 CFR 402.13 (a), formal consultation on this species and critical habitat is not required.

4885 T&E Species (lynx): Comment about effect-mine

Loss of habitat

200-20 Lynx would lose considerable habitat as a result of the Montanore mine. Construction of the transmission lines and the tailings facility would impact approximately 629 acres of habitat, including denning habitat for the lynx. Is it not likely that the volume of lynx habitat impacted will be much greater because the species will be displaced by industrialization? Should it not be expected that human activity, traffic volumes, and noise would drive the lynx to other drainages?

202-22 Lynx would lose considerable habitat as a result of the Montanore mine. Construction of the transmission lines and the tailings facility would impact approximately 629 acres of habitat, including denning habitat for the lynx. Isn't it likely that the volume of lynx habitat impacted will be much greater because the species will be displaced by the industrialization? Shouldn't it be expected that human activity, traffic volume, and noise would drive the lynx to other drainages?

Response: Impacts analysis methods and impacts of the transmission line alternatives on the Canada lynx were described in Section 3.25.5 of the FEIS. The analysis of impacts to Canada lynx was based on the most current information available at the time, and was updated in the FEIS to incorporate revised lynx habitat mapping and modifications to the agencies' wildlife mitigation plan, described in section 2.5.7.4 of the FEIS. The Final EIS for the Northern Rockies Lynx Management Direction (Lynx Amendment) was completed in 2007 with the ROD signed on March 23, 2007. The NRLMD is incorporated into the 2015 KFP: it provides lynx habitat management goals, desired conditions, objectives, standards, and guidelines. The analysis of effects to Canada lynx follows the goals, desired conditions, objectives, standards, and guidelines established in the Lynx Amendment. The effects of the alternatives on habitat loss or degradation and lynx activity was described in Section 3.25.5 of the FEIS.

Potential effects of increased trapping

310-29 Lynx would lose considerable habitat as a result of the Montanore mine. Construction of the transmission lines and the tailings facility would impact approximately 629 acres of habitat, including denning habitat for the lynx. It is likely that the volume of lynx habitat impacted will be much greater due to displacement from suitable habitat due to the noise and high levels of human activity. As a consequence

of increased access into lynx habitat as a result of the project, it is expected that there will be an increase in incidental take of lynx by trapping.

331-37 Lynx would lose considerable habitat as a result of the Montanore mine. Construction of the transmission lines and the tailings facility would impact approximately 629 acres of habitat, including denning habitat for the lynx. Isn't it likely that the volume of lynx habitat impacted will be much greater because the species will be displaced by the industrialization? Shouldn't it be expected that human activity, traffic volume, and noise would drive the lynx to other drainages? As a consequence of increased access into lynx habitat, it is expected that there will be an increase in incidental take of lynx by trapping.

Response: See comment response to issue 4833 on p. M-469. The analysis of effects of the alternatives on lynx was described in Section 3.25.5 of the FEIS. Grizzly bear habitat security for bears is maintained by controlling and/or managing road access, which also maintains and improves Canada lynx habitat use by reducing the risk of displacement effects and poaching. The agencies' wildlife mitigation plan (see Section 2.5.7.4.1) includes road access changes to mitigate for the effects to grizzly bears that would provide additional secure habitat for lynx where the access changes occurred in LAUs. Impacts on lynx could be reduced in all alternatives through MMC's and the agencies' land acquisition program for grizzly bear mitigation. Some of the parcels identified for potential acquisition occur within the directly affected LAUs or in areas identified as important for linkage outside of LAUs. Acquired parcels would be managed for grizzly bear use in perpetuity. Dependent upon the actual location of the acquired mitigation lands, any additional reductions in wheeled motorized access and increase in secure habitat for grizzly bears, in turn could provide higher levels of security for lynx and potentially reduce risk of displacement and potential poaching.

Hunting and trapping is likely to continue to occur on all lands throughout the life of any of the alternatives. Hunting activities are regulated by the FWP. The Forest Service influences hunter access through road management. Such activities always carry the risk of accidental mortality from non-target trap captures, misidentified targets or from malicious killings. Potential human-caused mortality is a function of other factors such as hunting or trapping regulations that are outside the authority of the Forest Service control. This risk of mortality on other lands would be independent of the action alternatives.

Effects of climate change

389-5 The SDEIS considers some effects of the project on climate change but does not analyze the effects of climate change on the project. (SDEIS, § 3.3.3.4, pp 117). Serious concerns exist. effects on snowshoe hare populations stemming from climate change have been documented—these in turn affect the sensitive Canada lynx. Those impacts are absent from the analysis in the SDEIS.

389-6 How will changed precipitation patterns affect snowshoe hare, and thus, Canada lynx populations on the KNF? Climate modeling is needed.

Response: The effects of the climate change on lynx were described in Section 3.25.5 of the FEIS. Climate change over time may change lynx habits and habitat, but the scope and scale of such changes are currently unknown, and any effects on lynx would likely be variable across the landscape.

4890 T&E Species (lynx): Comment about cumulative effect

Cumulative effects of Montanore and Rock Creek mines

200-19 The tailings impoundment alone would impact over 400 acres of lynx habitat and 647 acres of moose wintering range. Lynx is s a newly listed threatened species and long-term loss of lynx habitat from the Montanore mine is a concern. (DEIS Vol. 1, Page 200) Lynx were listed as a threatened species in 2000. The Kootenai National Forest is within a core lynx area. Long-term losses of lynx habitat are expected to occur as a direct consequence of the Montanore mine. The impacts on lynx from the proposed mine include, but are not limited to, loss and degradation of habitat, degradation of habitat for a major food source, increased mortality from vehicular collisions, and the risk of incidental take from trapping. Cumulative impacts from the Rock Creek mine will have significant impacts on travel and dispersal

capabilities because of a reduction in remote areas and a constriction of the Cabinet Mountains Wilderness. (Rock Creek EIS Section 4, Page J 72)

202-22 Lynx were listed as a threatened species in 2000. The Kootenai National Forest is within a core lynx area. Long-term losses of lynx habitat are expected to occur as a direct consequence of the Montanore mine. The impacts on lynx from the proposed mine include, but are not limited to, loss and degradation of habitat, degradation of habitat for a major food source, increased mortality from vehicular collisions, and the risk of incidental take from trapping. Cumulative impacts from the Rock Creek mine will have significant impacts on travel and dispersal capabilities because of a reduction in remote areas and a constriction of the Cabinet Mountains Wilderness.

Response: Cumulative effects of the alternatives on lynx, including effects on lynx movement, were described in Section 3.25.5.3 of the FEIS. The Rock Creek Project was among the reasonably foreseeable actions considered in the cumulative effects analysis.

4897 T&E Species (lynx): Comment about mitigation-mine

327-14 The SDEIS does not adequately address the negative effects that the Montanore high-voltage transmission line alternative C-R would bring to bear on the threaten Canada lynx species. We strongly suggest that the agencies and Montanore Minerals Corp. return to the drawing board, do on-site research, and format a viable plan that would protect the resident lynx population.

Response: The agencies' wildlife mitigation plan is described in Section 2.5.7.4 of the FEIS. In the agencies' alternatives, MMC would fund habitat enhancement on lynx stem exclusion habitat at a 2:1 ratio (2 acres treated for every acre lost) to mitigate for the physical loss of suitable lynx habitat due to the construction of project facilities and transmission line. The comment response to issue 4885 under *potential effects of increased trapping* (p. M-469) summarizes the benefits to lynx from grizzly bear mitigation measures. The KNF believes the agencies' wildlife mitigation plan would be adequate to minimize or avoid adverse effects to the Canada lynx. See response to issue 4833 on p. M-469.

4920 Migratory birds: Suggested new information/analysis

142-2 How will the mine address the harm done to migrating birds that confuse the suddenly brightly lit area, disrupting their migration paths?

Response: Section 3.25.6 of the FEIS was updated to include a description of impacts to migratory birds from mine facility lighting. Although no major migratory corridors have been identified in the analysis area, when the weather is inclement, lighting from mine facilities could disrupt movements of some nocturnally migrating birds. In the agencies' alternatives, MMC would use fixture baffles and directional light sources to minimize ambient light emanating from the mine facilities during operations.

4925 Migratory birds: Comment about effect-mine

202-24 The DEIS acknowledges that songbirds, including forest sensitive species, would be impacted by all action alternatives, and for alternatives 3 and 4 proposes mitigations encompassing surveys for active nests of sensitive species, not removing vegetation during the breeding season, and conducting annual monitoring. While conducting monitoring is useful for obtaining baseline data and for analyzing population trends, it does not mitigate for impacts. These surveys also do not track mortality. Mortality in songbirds is extremely difficult to document. Birds displaced from their habitat likely are unable to breed or, worse, perish if suitable habitat with vacant territories is unavailable. Also, some displaced individuals may be forced to locate to less desirable locations, such as along roads, were mortality rates are higher.

Response: The analysis of effects to migratory birds and the agencies' wildlife mitigation plan were updated in Section 3.25.6 of the FEIS. Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds, requires analysis of effects of federal actions on migratory birds as part of the environmental analysis process. In 2008, the USDA Forest Service and USFWS signed an MOU outlining the responsibilities of both parties in implementing the Executive Order. In accordance with the MOU, the

Forest Service evaluated the effects of the alternatives on migratory birds, focusing first on species of management concern along with their priority habitats and key risk factors.

The agencies' wildlife mitigation plan was described in Section 2.9.6.4 of the FEIS and requires that MMC fund and initiate annual monitoring of migratory birds within 1 mile of mine facilities or transmission lines and at more distant reference sites. The monitoring effort would continue to provide data to the Integrated Monitoring in Bird Conservation Regions project that would allow inferences to avian species occurrence and population trend from both the local level, such as the PSUs where project activities are proposed, to Bird Conservation Regions scales, facilitating conservation at local and national levels. In the agencies' alternatives, MMC would be required to construct the transmission line from June 16 to October 14, which would reduce potential impacts to nesting migratory birds.

4930 Migratory birds: Comment about cumulative effect

331-38 Under the description of alternatives in 3.24.6.4, it is stated: Alternative 2 would result in localized impacts to birds associated with forest and shrub field habitats, it would not result in widespread changes in bird communities on the KNF. The DEIS then goes on to say that impacts would be less for Alternatives 3 and 4. While changes in composition of communities in the forest overall may not change, bird abundance would be affected with less breeding pairs present. The cumulative loss of habitat for breeding pairs is what contributes to declining bird populations. In continuing to permit every mine proposed, the Kootenai should begin assessing cumulative impacts and deny permits for projects such as this which has widespread impacts on a multitude of species including sensitive species, management indicator species, and threatened species.

Response: Cumulative effects to migratory birds were described in Section 3.25.6 of the FEIS, to big game and other species were described in in Section 3.25.3 of the FEIS, and to Forest Sensitive species were described in Section 3.25.4 of the FEIS.

4940 Other Species of Interest: Suggested new information/analysis

142-3 Should the pika be placed on the Endangered Species list, how would the US Forest Service handle that situation with regards to the Montanore mine?

Response: In their 12-month finding issued in 2010, the USFWS found that listing of the pika was not warranted. The KNF provided the USFWS with a Biological Assessments for the Montanore Project and entered into formal consultation on the project's effects on threatened and endangered species. The USFWS' Biological Opinions concluded formal consultation on the actions outlined in the BAs. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and a new species is listed or critical habitat designated that may be affected by the action.

Other Issues

5000 Issues Outside of Scope of EIS: Comment about issues outside EIS scope

KNF's Libby Adit Evaluation Program Environmental Assessment

109-2 It is fundamentally unfair and indeed a violation of Federal law (including, without limitation, the National Environmental Policy Act and its implementing regulations for the FS to attempt to shortcut the NEPA process and evaluate the comparable Libby Adit through an abbreviated, expedited environmental assessment.

109-4 The FS has not complied with its scoping duties for the Libby Adit, as set forth in FSH 1909.15. That handbook makes scoping a vital component of the NEPA process for the Libby Adit.

109-4 Pursuant to FSH 1909.15, Revett requests that the FS provide it with: (a) timely notice once a draft NEPA document is prepared for the Libby Adit; and (b) a copy of the draft and an opportunity to submit comments on that draft prior to any Forest Service decision on the Libby Adit.

109-5 Commenter is concerned about scoping notice for the Oct 9, 2007 scoping meeting and requests information on the date it was published and where it was published (if notice was issued prior to October 3, 2007).

109-5 Commenter is concerned that the FS did not send out notice about scoping meetings.

109-5 FS has also violated its scoping duties by prematurely deciding that it will prepare an EA for the Libby Adit.

109-6 The FS's premature commitment to prepare an EA for the Libby adit makes illegal its Sept. 7, 2007 scoping notice for that adit.

109-6 Revett has serious concerns that the above deficiencies (scoping issues and EA) result directly from the FS's prior commitments to MMC that it would move quickly on this project.

Response: The Libby Adit was not evaluated through an environmental assessment. Instead, the potential effects of the exploration were disclosed in the DEIS, SDEIS, and FEIS for the Montanore Project. In 2008, the KNF decided the best approach for disclosing the environmental effects of the Libby Adit evaluation program was to consider this activity as the initial phase of the overall Montanore Project. The Libby Adit evaluation program would be the first phase of the Montanore Project in Alternatives 3 and 4.

109-7 In its Sept. 7, 2007 scoping notice, the FS fails to identify the specific documents that comprise MMC's plan of operations.

Response: MMC's Plan of Operations was disclosed in the DEIS, SDEIS, and FEIS for the Montanore Project. Section 4.2 of the DEIS, SDEIS, and FEIS provided the website address where MMC's Plan of Operations could be downloaded. The scoping notice for the exploration phase is no longer relevant because the potential effects of the Libby Adit were disclosed in the DEIS, SDEIS, and FEIS for the Montanore Project.

109-10 The FS must consider whether it can approve MMC's proposed plan of operations for the Libby Adit in absence of a valid state operating permit.

Response: The KNF has not approved any activities at the Libby Adit that may affect National Forest System lands. In 2006, MMC submitted, and the DEQ approved, two requests for minor revisions to DEQ Operating Permit #00150 (MR 06-001 and MR 06-002). The revisions involved reopening the Libby Adit and re-initiating the evaluation drilling program that NMC began in 1989. The key elements of the revisions include: excavation of the Libby Adit portal; initiation of water treatability analyses; installation of ancillary facilities; dewatering of the Libby Adit decline; extension of the current drift; and underground drilling and sample collection (See Section 1.3.2.4 in the DEIS, SDEIS, and FEIS).

327-3 The Agencies should at the very least recognize that the freedom of expression and access to the process as defined in NEPA and MEPA as they relate to the Montanore Project have been shut off for many people. We hope that you will do more. We believe that the actions of MMI, MMC and some of their allies should be investigated by agencies outside of Lincoln County. The Montana Attorney General should be encouraged to look into the actions of these entities to determine the extent and effects of their impact on the rights of citizens to freely engage in the public comment process. If further actions such as indictments and prosecutions are warranted, the AG should proceed with all deliberate speed. We also believe that the corporation(s) and accomplices should be investigated under the Racketeering Influenced and Corrupt Organizations (RICO) Act, and that as agencies of government you should use your positions to encourage a Justice Department investigation of their activities.

Response: Public comment periods were noticed and public hearings were held for the Montanore Project EIS in compliance with NEPA and MEPA. Notice of the beginning of the 60-day public scoping period for the Montanore Project and public scoping meetings was published on July 14, 2005 in the Federal Register

(70 FR 40686). Issuance of the DEIS was announced in the Federal Register (74 FR 8939; correction in 74 FR 9817) and made available to the public for a 90-day comment period from February 27, 2009 to May 28, 2009. Requests made to extend the 90-day comment period were granted, extending the comment period an additional 60 days until July 27, 2009 (74 FR 24006). A public hearing, where members of the public had the opportunity to submit written and oral comments, was held in Libby, Montana on April 16, 2009. Issuance of the SDEIS was announced in the Federal Register (76 FR 62405) and made available to the public for a 45-day comment period from October 7, 2011 to November 21, 2011. Requests made to extend the 45-day comment period were granted, extending the comment period an additional 30 days until December 21, 2011 (76 FR 70130). A public hearing, where members of the public had the opportunity to submit written and oral comments, was held on October 25, 2011. Investigations under the RICO Act are beyond the scope of this EIS.

Grizzly bear mitigation measures for the Libby Adit

109-3 MMC has not made commitments that are even close to those made by Revett for protection of the grizzly. Indeed the grizzly bear mitigation measures identified in your scoping notice for the Libby Adit include no commitments by MMC and are limited instead to burdens imposed by the Forest Service on the public through road closures and other restrictions on public access to Federal lands. This inadequate commitment by MMC is further reflected in the FWS's recent letter dated July 23, 2007 regarding effects of the "Montanore Minerals Corps Libby Adit - Evaluation Drilling Program." In that letter, FWS reports that it has reviewed the Forest Service's Biological Assessment and revised BA for the Libby Adit and concludes this action may affect, is likely to adversely affect the grizzly bear. MMC should be required to implement all necessary measures to protect the grizzly. Further, MMC should not obtain the benefits of Revett's commitments by way of abbreviated expedited and segmented NEPA review of the Libby Adit by the Forest Service.

109-11 The FS cannot approve development of the Libby Adit until the USFWS issues a BO and the KNF adopts a comprehensive mitigation plan for the grizzly bear in its ROD for the Montanore Mine.

Response: The agencies' Wildlife Mitigation Plan for the Montanore Mine, which includes grizzly bear mitigation measures, was discussed in Section 2.5.7.2 of the SDEIS and Section 2.5.7.4 of the FEIS. The plan includes mitigation measures in addition to road closures. The requirement for MMC to implement the mitigation requirements, as identified in the agencies selected alternative, would be specified in the Montanore Project ROD. The Libby Adit evaluation program would be the first phase of the Montanore Project if either Alternative 3 or 4 were selected. The USFWS issued BOs for the KNF's preferred alternative 3D-R in 2014. Compliance with the USFWS' terms and conditions will be discussed in the KNF's ROD.

Other Comments

182-4 P. 66. Records would be kept on disposal of materials underground and would include general types of material disposed and the location of the disposal area in the mined out areas. Is this being done at Troy, and why not???

Response: The handling of disposed materials at the Troy Mine is not relevant to an environmental analysis of the Montanore Project. Section 2.5.4.5 of the FEIS was revised to restrict on-site burial of waste to only reinforced concrete on National Forest System lands under certain conditions. All other demolition materials, whether originating above or below ground, would be disposed of off National Forest System lands in an approved, off-site waste disposal facility.

6000 Other Issues: Comment about Rock Creek Mine EIS/permitting

321-1 Nowhere does the DEIS make consideration for the cumulative effects of three mines in this one area…….Troy, Montanore, Rock Creek. The effects cannot be viewed or analyzed on a mine-by-mine basis. They have an effect which is not simply additive, but increase by multiples of greater than one.

347-1 Every issue of concern will be magnified by the ignored fact of the cumulative effects of two mines operating in close proximity. The agencies have not done an analysis of the synergistic effects of

Rock Creek and Montanore simultaneously or sequentially operating as required by MEPA and NEPA - a clear violation of the law.

Response: Section 3.3.1.1 of the DEIS and FEIS disclosed that the agencies considered the Rock Creek Project to be a reasonably foreseeable future action. As such, the cumulative effects of the Rock Creek Project and the Montanore Project were analyzed in each resource section. The on-going operation of the Troy mine was added to Section 3.2.1 of the FEIS. There would be no cumulative effects from the continued operation of the Troy Mine and the operation of Montanore Project.

6001 Other Issues: Comment about other issues

182-21 1. Figure 5: Ramsey Plant site, Alt. 2. What is the significance of the line from the tailings thickener towards Ramsey Creek? Is it misdrawn, does it indicate an overflow line or is a partial line from some other plant site feature?

Response: The figure was incorrect and revised in the FEIS.

Comment about Mining Claims

202-45 Any activity that is not proposed for valid claims should be reviewed and approved/disapproved under the Forest Service's discretionary authority under the NFMA, Organic Act, and FLPMA, and their implementing regulations (e.g., rights-of-way for electrical transmission lines, roads, and various pipelines).

202-45 The Forest Service has improperly processed the entire mining proposal under the auspices of the 1872 Mining Law and the 36 CFR Part 228 regulations, when in fact, only the activities proposed on valid claims themselves are arguably entitled to the statutory protections identified by the agency.

202-47 By failing to require a ROW application for MMC's pipelines, roads, and other uses of public lands not covered by valid mining or millsite claims, the KNF failed to protect the public interest and the public treasury.

331-47 Further, water pipelines, transmission lines, and other conveyances cannot be authorized by the 36 CFR Part 228 plan of operations approval process. Instead, the USFS must require the company to submit right-of-way or other special use permit authorizations and require that all mandates of FLPMA Title V and its implementing regulations are adhered to (e.g., no permit can be issued unless it can be shown that the issuance of the permits is in the best interests of the public). This is required because the approval of transmission lines, pipelines, etc., is not a right covered by the 1872 Mining Law (i.e., water and waste transportation is not part of the implied right of access to mining claims) – even if the company could show that its claims were valid, which it has not done. Further, even if the USFS could ignore its duties under its multiple use and other mandates and assume that the company had a right under the Mining Law (which as noted above is wrong), such rights do not attach to the right-of-ways and other FLPMA approvals needed for the pipelines, transmission lines, etc. Because the USFS failed to review these proposed facilities under the correct permitting regime, its review and approval of the Project cannot stand.

331-47 It appears that the vast majority, if not all, of the facilities on USFS-administered land are covered by unpatented mining and/or millsite claims. Yet the federal government has not inquired, let alone verified, that any of these claims are valid under the 1872 Mining Law. As such, the USFS' position that the company has a right to develop/use these lands is erroneous. Only upon verification that the company does indeed possess rights to the use of valid claims can the agency make this assumption. Absent valid claims under the Mining Law, the USFS must regulate the proposed operations under its multiple use authority, which it failed to do. Relatedly, absent evidence that the project facilities are located on valid claims, the agency must charge fair market value for the use of federal lands under FLPMA, again a requirement the agency violated here.

Response: Section 1.3.1 of the DEIS, SDEIS, and FEIS discussed MMC's mineral rights. Section 1.3.1 was revised in the FEIS to indicate MMI has unpatented mining, mill site claims, and tunnel claims on the National Forest System lands that cover the proposed mine development. Section 1.6 of the DEIS, SDEIS and FEIS disclosed that Operations under the Forest Service's mineral regulations are defined as all

functions, work, and activities in conjunction with prospecting, exploration, development, mining or processing of mineral resources, and all uses reasonably incident thereto, including roads and other means of access on lands subject to the regulation in this part, regardless of whether said operations take place on or off mining claims (36 CFR 228.3(a)). Section 1.6 of the DEIS, SDEIS, and FEIS also disclosed that MMC's use of National Forest System lands would be covered by an approved Plan of Operations. Special Use permits, road use permit, mineral material permit, or timber sale contract may be needed if a necessary activity was not covered by an approved Plan of Operations.

109-5 Also, as shown on the drawing above (area highlighted in red), MMC is proposing to drill in areas outside of the extra-lateral rights lines. Please explain how the agencies plan to address these issues.

109-14 MMC is also proposing to drill areas outside of the extra-lateral rights lines, as shown on Exhibit 20. Revett is not aware of anything showing that MMC owns minerals in area. Please explain the factual and legal basis, if any, that would entitle MMC to conduct such drilling.

Response: The Forest Service can approve MMC's use of areas outside of its valid existing rights in the CMW if the Forest Service determines that doing so would minimize impacts on National Forest System surface resources and the activity is reasonably required for MMC's mining operations associated with its valid existing rights. Such use could not include the mining and milling of ore that occurs outside of MMC's valid existing rights. The FEIS was revised in Section 2.5.2.2 to indicate in Alternatives 3 and 4 that MMC would not explore or mine for any ore outside of its extralateral rights. MMC would notify the KNF within 48 hours when ore was encountered during either the extension of the Libby Adit, development of any drifts, or exploration drilling. MMC would manage any ore encountered outside of its extralateral rights as waste rock, and would be prohibited from milling it. The role of the KNF under the Organic Administration Act, Locatable Regulations 36 CFR 228 Subpart A, and the Multiple Use Mining Act is to ensure that mining activities minimize adverse environmental effects on National Forest System lands, and comply with all applicable laws.

97-4 What the USDA Forest Service, who is presently undergoing review of the Montanore project with the Montana Department of Environmental Quality, fails to acknowledge is that the primary permit (or permission) comes from the property owners of the unpatented mines. Noranda terminated its 14-year lease with local folks several weeks before that extended family "had to scramble" to prepare documents for its mining claims with the Montana BLM. Financial and other preparations were hastily made for assessment work required by state and federal laws. Noranda in pulling up stakes quit-claimed assay reports and other valuable information to a third party, Mines Management, when this information was property of those mining claim holders.

109-13 Please explain how MMC can gain access to the Libby adit through Libby Creek Ventures' claims.

120-1 I feel I should be compensated as everyone else who has claims.

124-1 Claim owner on Libby Creek. If MMI is using all the mining claims I think claim holders should be compensated for easements.

132-1 Is it right for the Forest Service to let MMI shove an 84 old lady off the mt which she worked 25 years to keep these claims.

144-1 I am asking the Forest Service for their help to force the laws for us people. They don't seem to acknowledge that I own the adit on Libby Creek.

248-8 What impact will the proposed impoundment facility have on LPMC's 75% mineral right interest in the Hogum and Comet patented claims?

Response: The Forest Service and the DEQ do not have the authority to adjudicate conflicting mining claims, compel payments for easements, or to enforce property rights. These matters are properly addressed by a state or federal court. The Forest Service and the DEQ are aware that federal and state courts have issued rulings addressing some of these issues.

119-1 I would certainly hate to believe that the Forest Service is letting MMI operate without permits on my mining claims.

Response: Before the construction and operation of the proposed project could begin, various permits, certificates, licenses, or approvals would be required from the KNF and the DEQ (lead agencies) and other agencies. Section 1.6 of the DEIS, SDEIS, and FEIS discussed the major decisions to be made by these agencies. Each agency's regulations provide the conditions that the project must meet to obtain the necessary permits, approvals, or licenses and provide the conditions under which the agency could deny MMC the necessary permits or approvals.