8.0 DRAFT EIS COMMENTS AND RESPONSES

8.1 INTRODUCTION

On November 14, 2003, the United States Environmental Protection Agency (USEPA) published a notice in the *Federal Register* (Volume 68, Number 220, page 64622) announcing the availability of the Draft Environmental Impact Statement (DEIS). The U.S. Army Corps of Engineers (USACE) published notices in the Spokane, Washington, *Idaho Spokesman-Review* (November 26 and December 3, 2003), the Coeur d'Alene, Idaho, *Coeur d'Alene Press* (November 26 and December 3, 2003), and the Fernwood, Idaho, *St. Maries Gazette* (November 26 and December 3, 2003) to announce the availability of the DEIS and invite comments on the document. These notices also announced the locations and times of one open house and one public hearing at which USACE would receive oral and written comments. All the notices stated that the period in which USACE would accept comments on the DEIS would extend through December 29, 2003.

On December 9, 2003, USACE and Emerald Creek Garnet, Ltd. (ECG) hosted an open house at the offices of ECG in Fernwood, Idaho. A total of 44 individuals were present at the open house. On December 10, 2003, USACE held a public hearing at USACE offices in Coeur d'Alene, Idaho, at which participants were invited to make oral comments. A total of 44 individuals were present at the public hearing, and two people asked questions and made a statement. Twenty-seven individuals, organizations, and agencies submitted written comments during the public comment period (two agencies submitted two letters each). Although written comments were stamped as having been received on December 30, they were all postmarked on or before December 29. The delayed receipt stamp was due to the holiday period.

This chapter identifies the commenters, presents the individual comments received, and describes how USACE responded to the comments, including changes made in the FEIS. USACE carefully reviewed each comment received on the DEIS, both oral comments from the public meeting, and written comments received during the public comment period. USACE assigned each separate comment a comment number in order to facilitate the preparation and organization of responses. Table 8-1 identifies the individuals, organizations, and agencies that provided oral or written comments during the comment period. This table also lists the number assigned to each separate comment. Table 8-2 presents each individual comment and describes how USACE responded or intends to respond to the comment.

Appendix A presents a copy of each written comment letter. Volume I Appendix B contains the transcript of the public meeting in Coeur d'Alene. Volume I Appendix D contains consultation and coordination letters received during development of the DEIS.

Table 8-1. Individual and Organizational Commenters on the Draft EIS

Commenter	*Comments*	*Name of individual/organization submitting comments*
1	1 – 10	John M. Olson, USEPA Region 10 Idaho Operations Office
2	11 – 27	Judith Leckrone Lee, USEPA Region 10
3	28 – 34	Alfred M. Nomee, Coeur d'Alene Tribe
4	35	June Bergquist, Idaho Department of Environmental Quality (letter dated December 29, 2003)
5	36 – 45	June Bergquist, Idaho Department of Environmental Quality (letter dated October 15, 2003)
6	46 – 48	Charles E. Corsi, Idaho Fish and Game
7	49 – 50	Shirley Watson, Idaho Transportation Department
8	51 – 54	Susan Pengilly Neitzel, Idaho State Historical Society (letter dated December 15, 2003)
9	55 – 56	Susan Pengilly Neitzel, Idaho State Historical Society (letter dated December 17, 2003)
10	57 – 78	Mike Mihelich, Kootenai Environmental Alliance
11	79	Steve Klett, Bemis Company
12	80	Casey Irgins, C.H. Robinson Company
13	81	Jane Reichold, Ferrellgas
14	82 – 83	Terry (sp?) Moate, Custom Building & Supply
15	82 – 83	Randy (sp?) M. Moate, Custom Building & Supply
16	82 – 83	Marjorie Moate, Custom Building & Supply
17	82 – 83	Robert T. Moate, Custom Building & Supply
18	82 – 83	Robert T. Moate, Custom Building & Supply
19	85 – 89	Anonymous
20	90 – 98	John E. Bentley
21	99 – 100	Nancy Corbin
22	101 – 102	Anna Hollis
23	103 – 104	Jackson (no first name provided)
24	105 – 106	Mark Lewis
25	107	Mike Pitkin
26	108	Jerry Sines
27	109	Terry Stevens
28	110	Mike Stoltey
29	111 – 114	Bernie Weber
30	115 – 119	Mike Mihelich, commenter at Coeur d'Alene public meeting

Table 8-2. Comments on the Draft EIS and USACE Responses

Comment No.	*Commenter No.*	*Comment*	*Response*
1	1	The U.S. Environmental Protection Agency (USEPA) has participated in discussions regarding this project and the analysis of its environmental impacts since 1996 when it was determined that an Environmental Impact Statement (EIS) would be prepared for the project. We appreciate the efforts you have made to include USEPA in reviewing information and especially in discussing and addressing issues which we have raised during the preparation of the Draft EIS.	Thank you for your comment.
2	1	There will be temporal impacts (especially in forested and scrub-shrub wetlands) and secondary impacts (primarily disturbance) to the wetland communities in the project area. Even with completely successful reclamation efforts, these temporal and secondary impacts will adversely affect the functioning of these wetlands for some time. We recognize that ECG proposes additional mitigation in the form of additional wetland acres recreated on ECG property and the planting of additional trees within the area. However, we do not believe these additional measures are sufficient for providing mitigation for the uncertainty of wetland reclamation and the temporal and secondary impacts to wetlands.	See comments 3 through 5 and USACE responses.
3	1	One additional mitigation measure would be the permanent protection of the wetlands that will be reclaimed on the ECG property. While we understand that ECG has committed to providing long-term perimeter fencing on ECG ownership "as long as ECG owns the property, or until a change in land use activity occurs" (Draft EIS, pg. A-43), we believe that commitment is not adequate to mitigate the wetland impacts. Protection of these wetlands should be permanent. An appropriate real estate mechanism should be put in place to accomplish that protection. Such a mechanism would only affect the wetland portions of the property; land use changes could still occur in the upland areas, and sale of the property could still occur so long as the protection provision remains in place.	ECG would provide permanent protection for 79.4 acres it owns, including ≈47.76 acres of wetlands, through a conservation easement. The following specific areas would be protected by ECG: 1) 55 acres of ECG-owned land, including 37.36 acres of wetlands (westernmost area of ECG land directly south of State Highway 3 and north of the Saint Maries River in Mining Area F, Figure 2-1); 2) 10.5 acres of ECG-owned land, including 6.4 acres of wetland (westernmost area of ECG land directly north of State Highway 3 in Mining Area B, Figure 2-1); and 3) 13.9 acres of ECG-owned land, including 4.0 acres of wetlands (easternmost area of

Comment No.	*Commenter No.*	*Comment*	*Response*
			ECG land directly north of the Saint Maries River and west of Emerald Creek in Mining Area C, Figure 2-1). The 13.9 acres mentioned above would serve as a corridor between the Saint Maries River and existing upland outbuildings needed to perform the requisite mining operations. ECG would protect all practicable aquatic resources, including wetlands, on lands it currently owns. This permanent protection adequately offsets the temporal impacts to wetlands in the area.
4	1	A second additional mitigation measure that we believe should be required as part of any permit for mining in the entire 133 acre wetlands is the planting and permanent protection of a riparian buffer area along the St. Maries throughout the entire project area. This riparian buffer should be established on both the ECG property as well as the leased property. We realize that according to the information in the Draft EIS such a permanently protected buffer is not included under the lease arrangement between ECG and the property owners. However, we believe that the value of this mitigation measure is so important that ECG needs to re-negotiate this aspect of the lease arrangement. Planting and protecting a buffer along the river can mitigate for some of the temperature impacts, corridor impacts, and streamside habitat impacts. Permanent protection of this buffer would ensure that this very important area would continue to provide its ecological functions.	ECG would provide such a permanent riparian buffer along the St. Maries River on the land it owns on the western end of the project area. This would be part of the permanently protected lands noted in the response to Comment 3. ECG approached the other landowners concerning establishing a buffer on their lands, but the other landowners would not agree.
5	1	If the above additional mitigation measures [as suggested in comments 3 and 4] can not be incorporated into the project, then we believe that the extent of mining in the wetland areas should be reduced so that the most important wetland areas (i.e., the oxbow wetland complexes) are not mined. This reduction in mining would then ensure that more wetland resources remain untouched, and consequently, less wetland mitigation would be required.	As described above, the mitigation measure suggested in comment 3 is in large part being incorporated into the project, and the measure suggested in comment 4 is being incorporated on ECG-owned lands on the western end of the project area. USACE believes the preferred action includes

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			sufficient mitigation to balance the potential impacts to wetlands, and that avoidance of the oxbow complexes is not necessary. There would be more wetlands after mining than before, and some of the restored or newly created wetlands as well as portions of the riparian zone would have permanent protection. This represents a substantial improvement over the current conditions, which includes no protection of any of the lands.
6	1	USEPA also believes that any permit should be conditioned to require specific approval of annual operating plans. This approval would need to be based on a determination that mining plans include all required components, that all other required approvals are in place, and that the reclamation of previously mined areas is proceeding as required. Connecting the approval of annual operating plans to the success of the reclamation effort is extremely important because so much of the mitigation for this project is based on the successful reclamation of these wetland complexes… Ensuring that the replacement efforts are successful before allowing additional mining could best be done through careful review and approval of the annual plans.	ECG would submit annual mining/reclamation plans to the Idaho Department of Lands (IDL) and USACE for review. After review of the operation USACE may notify ECG of any proposed suspension or modification of the permit for a specified mining area should any portion of the plan not meet the terms and conditions of the permit. ECG, USACE and IDL would meet and attempt to resolve the concern regarding the plan. An interagency group including USACE, USEPA, IDL, DEQ, USFWS would meet at least annually to review the operation. This annual review would determine whether mitigation is working properly and whether areas of improvement are required.
7	1	Plant Option 2 (Replanting of Pre-Mining State) as described in Appendix D of the Draft EIS is the planting option that should be used in the reclamation process. This planting scheme would provide a higher chance of success for reclamation in a shorter time than using Plant Option 1.	Plant Option 1 is the program that has been used successfully by ECG for the past 9 years on Emerald and Carpenter Creeks. It is substantially less expensive that Option 2; more important, it is formulated to provide an optimum mix of immediate sod-building (and erosion-reducing) capability and quick transition to native species. Further discussions among ECG, USACE, and USEPA determined that Option 1 would be the preferred option, with ECG being able to adjust the program as necessary in response to the annual reclamation review (see response to comment 6).

Comment No.	*Commenter No.*	*Comment*	*Response*
8	1	The Reclamation Assurance Plan as described in Appendix D of the Draft EIS provides performance standards for monitoring wetland, upland, and riparian areas. These performance standards establish a numerical standards to be met at the end of the five-year monitoring period while observing "a continual increase in cover percentage, plant species diversity, and plant age/size class diversity throughout the five year monitoring period." We believe that interim performance standards should also be established for the reclamation effort. These interim performance standards would establish a benchmark for measuring the progress of the reclamation effort. These benchmarks are especially important…because the approval of annual operating plans should be dependent on the success of ECG's reclamation efforts… We suggest an interim performance standard of establishing at least 60 percent aerial cover at the end of three years.	As noted in the response to comment 6 above, ECG would submit annual mining operating plans documenting the progress of reclamation efforts. These plans would be reviewed by USACE for approval. In addition, ECG would submit annual monitoring reports documenting compliance with the mitigation performance standards as described in the Reclamation Assurance Plan. USACE agrees that interim performance standards should be established, and coordinated with USEPA to arrive at appropriate standards. The EIS has been revised (Appendix A) to include these interim standards.
9	1	We believe that the monitoring effort as described in Appendix D of the draft EIS should use random sampling in addition to sampling at permanent plots.	USACE believes the use of permanent plots would provide more useful data on vegetation succession and success. The types and amounts of vegetation in a given area can be significantly different in different portions of the same small plot, and random sampling could result in data that are not comparable. In addition, the areas of concern are relatively small and visual observation, a key part of the program, would likely identify problems more readily than sampling. Visual observation would also ensure that the success of the permanent plots is matched by success in other areas.
10	1	[ECG proposes to mine] …areas currently separated from the majority of the mining lands by the St. Maries River. As noted on [Figure 2-1 of the Draft EIS], these areas have been included in the analysis of areas to be mined, wetland impacts, and mitigation…. ECG proposes to mine these areas (1) if access on ownership on the west can be acquired, or (2) if the meander channel is cut off by normal channel dynamics, or (3) if the river	[Note: the areas are identified as Areas #1, #2, and #3 on Figure 2-1 of the EIS.] Discussions in the FEIS reflect the following: 1. ECG would access the area to the south of the St. Maries River via existing county roads and approximately 0.25 miles of an existing logging road. This logging road would be improved using the

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		can be bridged cost-effectively. Although these environmental impacts of mining these three areas are analyzed in the Draft EIS, the specific means of accessing these three areas are not addressed in the environmental analysis. We believe the Department of the Army permit for mining garnet should specifically exclude the three areas on the left side of the St. Maries River until access to these areas can be identified and properly analyzed. Such an analysis perhaps could be done through a request for a permit modification since the environmental analysis of the mining itself has already been done. The permit modification could focus on the proposed access. We believe it is important to separate out these areas because the potential methods/routes of accessing these areas would have impacts that need to be carefully considered. If access is through the property on the west, the routes need to be identified and impacts (including any impacts to other waters or wetlands) analyzed. With regard to the second means of access, we believe that it is highly unlikely that normal channel dynamics will cut off the meander channel. Even if the existing channel was no longer the primary channel, it would continue as a secondary channel with important ecological and hydrologic functions. Access to the areas to be mined by crossing this channel would still be problematic. The third potential access to the three areas is by bridging the river. The impacts of bridge construction and bridge location have not been analyzed. These impacts can be substantial and need to be fully evaluated.	same techniques described in the EIS for other access and haul roads, and potential effects would be the same as described for other roads and access. Therefore, USACE considers that access to the areas has been evaluated. 2. USACE agrees that it is unlikely that the large meander channel [around Area #3 on Figure 2-1] referred to by the commenter would be cut off. Should such a cutoff occur, however, the effects of mining the area inside the newly created oxbow, as well as the area inside the oxbow that surrounds 3 sides of Area #1, would be the same as for other oxbows evaluated in the EIS, and would not require separate NEPA evaluation. USACE agrees that gaining access to these areas (the areas within the two meanders/oxbows) would be substantially different than gaining access to other areas that are evaluated in the EIS, and so ECG would be required to submit a permit modification to gain access to the areas and the potential effects of the access would be evaluated under NEPA. In addition, USACE has determined that should ECG wish to mine either of the oxbow channels, a permit modification would be required, and this would trigger a NEPA analysis of the potential effects. 3. USACE agrees that potential effects of bridging the St. Maries River have not been analyzed, and such bridging is not a component of either the proposed action or alternatives. Should ECG wish to bridge the river in the future, a separate §404 permit or permit modification would be required.
11	2	The St. Maries River watershed is listed on Idaho's 303(d) list for not meeting water quality standards for sediment, temperature, habitat alteration, nutrients, pathogens, and dissolved oxygen. USEPA is concerned that mining activities in the floodplain may	USACE believes that the mitigation measures described in Volume I Appendix F and Volume II Appendix D of the EIS, and additional information such as that provided in responses to comments 3

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		increase sediment and temperature levels in St. Maries River without adequate mitigation. USEPA believes that a high level of protection should be implemented in order to promote the designated beneficial uses listed in the EIS for the St. Maries River. This includes adequate riparian protection, containment of mining sediment, and contingency planning.	and 4 above, would provide enhanced protection to the riparian area and would contain mining sediment. Volume II Appendix A describes how the facility would operate, including shutdown procedures in case of flooding. In addition, the facility is required to maintain a Stormwater Pollution Prevention Plan, which also provides for some contingencies. Additional detail on pollutant trading is provided in responses to comments 36, 45, and 95.
12	2	USEPA is also concerned with the environmental impacts associated with the alternatives that do not avoid the oxbow complexes. Oxbow complexes have a high ecological value because of their mosaic of habitat types and hydrologic regimes; consequently, USEPA recommends avoiding these complexes. Three of the action alternatives (8, 9, and l0) avoid the oxbow complexes. The three oxbow avoidance alternatives are stated to not be practicable because they do not meet the purpose and need, and Alternatives 8 and 9 are stated to be economically unpractical. USEPA is unclear how this determination was made. Furthermore, if an alternative is selected that does not avoid oxbows, USEPA recommends providing the highest level of mitigation and reclamation for impacts to wetlands.	The determination that Alternatives 8 and 9 would not be economically practical was based on a comparison of the costs of mining the remaining garnet and the economic benefit of mining the garnet. The oxbows that would be avoided under Alternatives 8 and 9 contain substantial amounts of garnet that could be mined very economically. Not mining this garnet would increase the per-unit cost of mining other areas. In addition, avoiding these oxbows would make some areas too difficult to reach for mining and drive up the costs of mining other areas. Alternatives 8 and 9 would make the project economically impractical. Alternative 10 does not meet the project purpose because, like Alternatives 8 and 9, it constrains ECG's longevity in the marketplace and limits mining efficiency. As described in sections 2.5.4.1, 2.5.4.2, and 2.5.4.3, Alternatives 8, 9, and 10 do not meet the purpose and need for the project because they constrain ECG's longevity in the marketplace, would constrain garnet products for target markets, and would limit mining efficiency.
13	2	The EIS states that the St. Maries Watershed is listed under Clean Water Action 303(d) as not meeting Idaho's water quality standard for sediment, temperature, habitat alteration, nutrients,	As described in the EIS, the mitigation measures and BMPs currently being used during mining and post-mining reclamation would continue to be

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		pathogens, and dissolved oxygen. The Total Maximum Daily Load (TMDL) was established for the St. Maries River Subbasin in the year 2003. USEPA strongly supports actions that improve water quality and aquatic resources and that meet the TMDL established to restore beneficial uses for St. Maries River. USEPA supports using mitigation measures during mining and post-mining Reclamation and Best Management Practice (BMPs) that have proven to be effective in past Emerald Creek Garnet's projects.	implemented for this mine expansion.
14	2	The EIS does not fully discuss contingency planning that may be necessary during or after mining. USEPA is concerned with the inherent risk of unforeseen flood events, which may cause the berm to fail. The EIS does not discuss Emerald Creek Garnet's ability to respond to any such unpredictable event and ability to restore stream function and berm construction potentially disturbed from erosion. USEPA recommends that a contingency plan, including a financial assurance component, be included in the EIS.	The plan of operations in Volume II Appendix A provides pre-flood shutdown procedures that ECG would follow. The plan of operations allows the operator to respond quickly and effectively to unforeseen and unpredictable events, but the shutdown would not mean that mining panels would be closed. USACE agrees that, while no mining panel larger than 300 x 80 feet would be open at any given time, extremely high flood events could overtop the berm and possibly cause the berm to fail (see the response to comment 59, however). In such an extreme storm event, water from the panels would simply join the flooding river and would likely not contribute substantially to any change in stream function. Before it would issue a §404 permit, USACE would require the operator to prepare a contingency plan that describes conditions under which the operation would shut down, notification and reporting requirements, and startup conditions. In case of berm failure, the plan would have to address how repairs to the berms, and if necessary the riverbank, would proceed before startup.
15	2	The EIS discusses the use of sedimentation berms to contain process water and stormwater runoff from mining panels. However, the flood frequency that the berms are designed to	USACE agrees that the discussion of flood frequency and flood events is confusing and has revised section 3.1.2 of the EIS to clarify the

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		protect against is confusing. The EIS states on page 3-14 and 3-15 that BMP's would reduce further sedimentation from a 25-year flood event. However, on page 3-16 the EIS state, that the constructed berms would reduce sedimentation from a 5-year flood event. USEPA recommends that this discrepancy be explained.	discussion.
16	2	USEPA recommends implementing the 5-year flood event frequency in planning to ensure that the stream channel is protected from further degradation.	It is not clear how planning for a 5-year return event could protect the stream channel itself. Regardless, the discussion of flood events has been clarified in the FEIS (section 3.1.2).
17	2	Tables 2-4 and 2-5 contains a Cost/Valuation (CV) index that is applied to each alterative. The EIS states that a CV of below 85 is economically practical. Alternatives 2 and 3 and 10 received a CV below 85 making them practical. Alternatives 8 and 9 have a CV above 85 making them not feasible. Additionally, Table 2-5 lists another CV value for Alternatives 8, 9, and 10, which is a CV index specifically for the oxbow complex. Each of these values exceeds 85. It is unclear how the two CV values relate to one another and how these two values together result in an overall determination of economic feasibility. The EIS should better explain how these values were determined and how they relate to the determination of economical feasibility.	In Table 2-5, the "CV Index of Project Minus Avoidance Acreage" row is the cost/valuation of mining the area outside the oxbows under Alternatives 8 – 10 (i.e., the remainder of the proposed mining area minus the oxbows). The "CV Index of Oxbow Complex" illustrated the cost/valuation of mining the oxbows as discrete units. Since the oxbows would not be mined under these alternatives, the line has been removed from the table in the FEIS. As described in section 2.4 of the EIS, the CV indices were developed by comparing the costs of mining costs to the return generated by mining. (It should be noted that the CV values are based on the costs only of mining the oxbows, not any additional costs that might be caused by the mining.)
18	2	The explanation of why the alternative is or is not feasible in Table 2-5 is very confusing. It states that for Alternatives 8 and 9, avoidance is not practical when the remainder of the project becomes impractical, and when mining oxbows is profitable. For Alternative 10 the EIS states that avoidance is practical when the remainder of the project remains practical, even when mining oxbows is not profitable. The EIS should more clearly and thoroughly explain why an alternative is or is not feasible.	The language in the "Practical" row of Table 2-5 has been clarified to read: (Alternative 8) "Oxbow avoidance is not practical because it results in the overall alternative becoming economically impractical (CV=0.94)." (Alternative 9) "Oxbow avoidance is not practical because it results in the overall alternative becoming economically impractical (CV=0.91). (Alternative 10) "Avoidance results in a CV of 0.83,

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			less than the 0.85 threshold for economic practicality. However, Alternative 10 constrains ECG's longevity in the marketplace and limits mining efficiency. "
19	2	The EIS states that Alternative 10 would be economically practical, but is not consistent with the purpose and need because the remainder of the project is not economically practical. However, in the determination of whether or not Alternative 10 is economically practical the EIS states that it is. The EIS should clarify this discrepancy.	The CV index for Alternative 10 is 0.83. As indicated in section 2.4, CV indices of less than 0.85 are considered economically practical. However, the CV index only provides an indication of economic feasibility. There are other factors not tied to the CV index (i.e. road accessibility) that cause Alternative 10 to be impractical due to decreased mining efficiency. Alternative 10 is logistically impractical because it would require three additional road access points across the railroad right-of-way. It would result in a patchwork mining approach that would necessitate additional road construction and frequent shutdown periods to move mining around inaccessible areas, thereby limiting mining efficiency. Because of these factors, Alternative 10 constrains ECG's longevity in the marketplace and limits mining efficiency.
20	2	The EIS states that Alternative 10 constrains the ability to compete in a natural fine market. The EIS states that fine garnet can be obtained by crushing coarse garnet. The EIS should explain why competition in the natural fine market is constrained when fine can be obtained by crushing coarse fragment. If fine can be obtained by crushing coarse garnet, it appears that that Alternative 10 is feasible to carry forward.	Natural fine garnet and fine garnet made from crushing coarse garnet fill different market niches, and are not interchangeable. In addition, as indicated in section 1.2.3, crushing coarse garnet to supply fine garnet to the jet cutting industry would limit the supply of coarse garnet for the oil industry market. In contrast, providing naturally fine garnet to the jet cutting industry would retain the availability of coarse garnet for the oil industry. Also, there would be additional costs associated with crushing.
21	2	This USEPA letter repeated comments that were in comment letter 1. See comments 1 – 10 above.	See responses to comments 1-10.
22	2	The EIS states that potential impacts to earth resources are	USACE notes that ECG reclamation for the past

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		sediment and erosion. The EIS does not discuss direct impacts to soils such as level of productivity and compaction. One of the major components of this project, next to garnet recovery, is ECG's proposed mitigation activities and reclamation of wetland functions. Soil productivity is necessary for wetland function and healthy riparian vegetation. USEPA recommends that the ElS further discuss soil function in the project area and potential impacts to productivity and how the impacts will be mitigated and reclaimed.	nine years has been effective in restoring soil function, as witnessed by the successful development of wetland and riparian vegetation communities. USACE believes the current practices, which would continue to be implemented, provide sufficient mitigation and reclamation. The EIS now includes USACE conclusion that there should be no adverse impact on soil function or productivity.
23	2	USEPA is concerned that be EIS does not adequately disclose tribal consultation activities as directed by Executive Order 13175. The EIS states that an archeological survey has been completed and that compliance of Section 106 of the National Historic Preservation Act (NHPA) is underway. The EIS also states that Native American consultation has been initiated, However, USEPA recommends that compliance with Section 106 of the NHPA be done concurrently with the NEPA process and that the EIS disclose not only the tribes that are being consulted, but how consultation has occurred, and potential impacts to cu1tural resources. This provides the public and decision maker with a clear understanding of the planning process for the project.	An archaeological survey and consultation, in compliance with Section 106 of the NHPA, has been completed for this project. This information has been added to the text in section 3.9.1.2 and the Executive Summary. As indicated in section 3.9.2.2, USACE has contacted the Confederated Salish and Kootenai Tribes of the Flathead Reservation, the Coeur d'Alene Tribal Council, the Spokane Tribe of the Spokane Reservation, the Kalispel Indian Community of the Kalispel Reservation, and the Nez Perce Tribal Executive Committee regarding the proposed action. The Coeur d'Alene Tribe responded with an interest in the project and provided comments on the DEIS. Their comment letter is contained in Volume I Appendix A. Responses to their comments are found in this table as responses to comments 28-34.
24	2	**[**On the] Cover Page, USEPA is listed as a cooperating agency on the EIS. The EIS should be corrected as USEPA is not a cooperating agency on the project.	This was an error in a few copies of the DEIS, including those that went to USEPA. This was corrected in most copies before distribution.
25	2	[On] page ES-4, A Cost/Valuation (CV) index is identified for Alterative 8. The EIS does not explain how this number is obtained nor is the index used in the discussion of the other	The derivation and use of the CV index is explained in the body of the EIS in sections 2.4 and 2.5. A summary of this information has been added to the

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		alternatives. USEPA recommends explaining this index and demonstrating how it can be used in the decision process while applying it similarly to each alternative so that the reviewer can adequately compare alternatives with the CV.	Executive Summary for each alternative.
26	2	[On] page 2-25 the EIS states that the wet/dry mining technique is used as the basis for evaluating Alternatives 8, 9, and 10 because mining impacts and wetland impacts are the same regardless of mining methodology. The EIS does not explain how wet, dry, or wet/dry mining techniques would cause the same impacts. USEPA recommends that the EIS explain this statement.	These two methods are different only in the size of the mining unit (dry panels are smaller) and in the fact that water is not added to dry mining panels (although they are at least partially full of water from shallow groundwater). This has been added to Chapter 2 of the FEIS.
27	2	USEPA is concerned that the alternatives have not been adequately compared and contrasted in Table 2-7. In discussing "Potential Indirect Wetland Impacts" the EIS states that the potential for indirect impacts is the same for all alternatives. However, Table 2-7 does not list any of these impacts. Under direct impacts to wetlands the impacts are identified as the same. This is also true for "Potential indirect impacts to wildlife" and "Impact to soil/earth resource." It is unclear how all the impacts could be the same among alternatives, which utilize different wetland acres and techniques. This table should contain concise analyses of impacts in order for the reviewer to get a clear understanding of impacts and compare alternatives easily. USEPA recommends that the EIS modify the table to contain more specific information related to the comparison of alternatives and environmental impacts for wetlands.	The commenter appears to be referring to Table 2-8, which compares impacts among the alternatives. Additional detail regarding potential direct and indirect impacts has been added to Table 2-8.
28	3	The [Coeur d'Alene Tribe] is very concerned with any loss of wetland function, value, and acreage and is particularly concerned with such losses occurring within areas that could affect the natural resources within the boundaries of the Coeur d'Alene Reservation and their aboriginal territories. Removal of the mature wetland plant community will take many years to recover even under the best mitigation plan. Numerous studies have shown that most compensatory mitigation projects do not perform at a fully successful level (references provided upon	USACE requested, but did not receive, a copy of the references from the commenter. In the course of preparing this EIS, USACE reviewed the literature concerning mitigation project success. USACE is aware that many projects have not been fully successful, and this awareness has been taken into account in designing the mitigation and monitoring that are part of the current wetland reclamation and creation projects. USACE is

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		request).	confident that the overall project can achieve its goals, and that the proposed monitoring would ensure the mitigation projects perform successfully or are corrected as necessary. In addition, Volume II Appendix L is a report prepared for USEPA that documents ECG's nine years of successful riparian reclamation in the vicinity of the proposed project.
29	3	The avoidance of impacts is clearly the intent of the 404 permitting process, as well as the Corps first course of action. Alternatives 8, 9, and 10 as outlined in the Draft Environmental Impact Statement (DEIS) attempt to minimize some of these impacts by avoiding certain oxbow complexes. While these alternatives may reduce the overall percentage of wetland that is directly affected, they still represent a significant impact to the overall wetland community. The Tribe asserts that additional measures to avoid these negative impacts must be fully explored by the applicant before the application is approved.	During extensive interagency planning meetings held as part of the process leading up to the preparation of this EIS, a wide range of potential mitigation measures were discussed. Those carried forward for analysis in the EIS both met the purpose and need of the project and provided adequate environmental protection measures. Volume II Appendix M documents the collaborative alternative formulation and review process among ECG, USACE, IDEQ, USEPA, the USFWS, and the Idaho Department of Lands.
30	3	The DEIS states that the proposed project is likely to affect Townsend's big-eared bat and westslope cutthroat trout. It also states that individuals from such species as boreal toad, fisher, northern goshawk, northern pygmy owl, upland sandpiper, wolverine, and bull trout may be adversely affected. Any project that has the potential to negatively affect such a large number of endangered, threatened and special status species needs to be carefully studied to determine the extent of such effects. The Tribe would like to know if such studies have been conducted, and requests the results of these studies be submitted to the Tribe for review and comment.	USACE has coordinated with the USFWS and provided the Biological Assessment (BA) prepared for this project for USFWS review. In response to this review, USACE submitted an amended BA to the USFWS and received USFWS concurrence with the amended BA Volume II of the DEIS included Appendix H, *An Evaluation of Threatened, Endangered, Sensitive, and Common Wildlife Species and Habitats on Properties Along the St. Maries River* and Appendix I, *St. Maries River Oxbow Fisheries and Habitat Assessment.* Volume II was provided to the Tribe along with Volume I of the DEIS.
31	3	The Tribe recommends that additional measures be evaluated to	USACE believes that the measures outlined in the

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		minimize any negative effects to endangered, threatened, and special status species as a result of this proposed project.	EIS would protect threatened, endangered, and special status species, and has coordinated with the USFWS to ensure the measures are protective. The project now includes additional conservation measures suggested by the USFWS. These measures are outlined in Volume I Appendix G, amendment to the Biological Assessment.
32	3	The Tribe recommends that all of the riparian shrub layer along the river, and in particular the stands of cottonwood, be protected, regardless of where they are located in relation to the buffer zones. The Tribe respectfully submits that the extensive functions of cottonwood stands (wildlife habitat, river bank stabilization, water filtration, shading) and the values that flow from these functions (aesthetics, clean drinking water, recreation) cannot be mitigated for in any reasonable fashion.	The mine operation would not remove any cottonwood stands that are located within 22.5 feet of the river. Other stands of cottonwood would need to be removed for the project. There are currently about 1,000 cottonwood trees in the 357 acres to be mined. Mining would require removal of less than one-third of these, leaving well over 650 cottonwoods (see Volume II Appendix A). As described in the mitigation plan for the proposed action (Volume II, Appendix A, section 3.3.3), woody habitats would be replaced with shrubs and trees, including cottonwood, aspen, alder, willow, dogwood, hawthorne, and rose. This would include planting over 530 cottonwoods to replace those removed for the mining. The established shrub habitat would have at least 15 percent aerial cover of all shrub species at the end of three years, and 30 percent after five years. The established forest habitat would have at least 15 percent aerial cover of all tree species after three years, and at least 30 percent after five years. Long-term cluster fencing would provide protection to all clusters of trees in annually reclaimed units. This fencing would remain in place for different lengths of time, depending upon stock size and growth rate. Cluster fencing duration would be based on the following stock size: 1 gallon cottonwood or aspen, 4' - 6' height (5-10 additional years); 5 gallon cottonwood

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			or aspen, 6' - 8' height (3-7 additional years); Cottonwood poles, 3" caliper, 5' above ground (3-5 additional years). At maturity, the reclaimed landscape would provide the same functions and values as the pre-mined landscape, and the riparian shrub layer along the river would be in better condition than it was prior to mining. Functional maturity would be realized incrementally over time, and fully realized in 20 years. A 20 year old tree would be the dominant canopy cover, and would have sufficient height to provide the same nesting and perching opportunities as an older tree. Also, as described in the response to comments 3 and 4, 79.4 acres under ECG ownership would be protected permanently.
33	3	Efforts also need to be coordinated with the Coeur d'Alene Tribe, Tribal Preservation Office and State Historic Preservation Office to determine if any impacted areas are culturally significant or may have the possibility of containing artifacts. All of the lands surrounding the project area are within the aboriginal territory of the Coeur d'Alene Tribe and are historical hunting and gathering areas. Tribal consultation needs to occur to determine if cultural resource surveys will be necessary in any locations.	In June 2002, USACE asked the Tribe if they would like to be a consulting party in the National Historic Preservation Act §106 process. In June 2002 and in April 2004, USACE provided to the Tribe a copy of the cultural resources survey report, and requested comments on the report on several occasions thereafter. In November 2003, USACE requested government-to-government consultation on the project. USACE also notified the Coeur d'Alene Tribe of the EIS process and requested comments on the DEIS. As noted in the responses to SHPO comments below (comments 53 and 56), a qualified archaeologist would assess the significance of any discovery during mining operations.
34	3	Any Tribal artifacts discovered during excavation or construction should be immediately reported.	As indicated in section 3.9.2.2 of the DEIS, if artifacts are uncovered during mining, project proponents would halt work in the general vicinity

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			and notify the SHPO.
35	4	We have received the public notice regarding the proposed mining of garnet sands in wetlands adjacent to the St. Maries River. Due to a lack of information, we cannot certify this permit within the 60 day deadline. We identified our information needs in a comment letter on the preliminary draft EIS dated October 15, 2003. The company did not have time to respond to our comments before the issuance of the draft EIS and public notice. For this reason, we are requesting an extension of 30 calendar days past our receipt of the FEIS as the certification deadline. If the necessary information is provided to us prior to the issuance of the FEIS, we will make an effort to evaluate it at that time.	USACE granted this request.
36	5	[The project] may be decreasing shade and contributing sediment to the St. Maries River (unspecified amounts). The TMDL [for the St. Maries] indicates a need to reduce these pollutants. Therefore, your analysis must include some approach, such as pollutant trading, that insures a net reduction of these pollutants in the listed watershed.	As described in the responses to other comments (comment 95, for example), DEQ is requiring pollutant trading to off-set any sediment discharges from the proposed operation. ECG has prepared for DEQ approval a workplan to identify, design, and implement specific sediment trading projects to offset predicted discharges of sediment that could occur during future storm events. As noted in the EIS, the project would not cause any increase in temperature in the St. Maries, so no pollutant trading would be necessary for temperature.
37	5	Section 3.1.1.1, *Stream Flow Characterization*, states that "… the St. Maries River at the project site can be expected to overflow for two year peak events. Does this mean that two year flood events will be in contact with the base of the berm surrounding the active mine site. How much of the outer berm is expected to wash away with the flood waters?	When the St. Maries overflows its banks, it may contact the berms. As noted in the EIS, the berm would be compacted and vegetated. USACE believes there would be little to no "washing away" of the berm except possibly in extreme storm events. Erosion of the berms would be estimated and accounted for in the workplan prepared for TMDL compliance (see response to comment 36), and would be offset by sediment reductions elsewhere.
38	5	Section 3.1 describes that active mine sites will be surrounded by	USACE agrees that the DEIS language concerning

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		an earthen berm designed to exclude floods up to the 5 year event (p. 3-16). In other sections of the document the berm is constructed to exclude a 25-year flood event. Which is correct? The concepts of storm events versus river flood event are not clearly separated in the discussion of water resources.	BMPs and concerning return intervals is unclear, and has clarified the language in the FEIS. As described in the DEIS, an 18-inch berm separating the mining panel from the river would exclude floods up to at least the 5-year riverflow event and contain water from the 25-year precipitation event. Other upgradient BMPs are intended to divert water from 25-year precipitation events from running onto the active mining unit. These design decisions were made prior to development and approval of the St. Maries TMDL and its requirement to offset any future sediment discharges. USACE and DEQ are evaluating berm designs and heights that best balance the need to avoid potentially large releases of water that could occur if a very high berm (which could contain much more water) failed and the need to avoid increases in sediment loads that could result if the river overtopped lower berms.
39	5	The discussion on page 3-13 fourth paragraph is confusing. What is meant by 25 year peak storm flows varying from 70 -100 cfs depending on alternative? Again, the concepts of storm, tributary and river flood events are unclear. This discussion might be better divided into subtopics: (1) river flood regime (2) tributary stream flood regime (3) stormwater and (4) groundwater, and how they interact within the project site. These analyses are very important to DEQ's review of the project.	USACE has modified the language in the FEIS to clarify the concept being discussed.
40	5	Stormwater quantity may also be affected by mining operations. A discussion of the potential loss of stormwater infiltration and storage capacity at active mine sites and reclaimed sites would be helpful to reveal potential water management problems.	The EIS discusses potential impacts on stormwater in Chapter 3. USACE is aware that devegetation, compaction, and other mining-related factors can reduce stormwater infiltration and storage capacity at active mine sites. That is not expected to be the case here. USACE does not expect there to be any significant change in stormwater infiltration or storage capacity due to mining operations or

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			reclamation, and has added this to the FEIS.
41	5	One of the most important BMPs utilized in this proposal is the berm surrounding the active mine site. The berm isolates approximately 2.2 million gallons of mine related process water from stormwater and floodwater. In the past there [have] been incidents of berm failure and subsequent degradation of water quality. We would like to see an accounting of these failures, what has been done to improve construction of the berm, and if we can expect these berms to perform any better than others in the past. At this time, failures have been frequent enough that we will be looking for the use of a higher level of knowledge-able and reasonable effort as provided for in the Water Quality Standards, for the construction, maintenance, and monitoring of sediment berms.	As noted in the response to comment 59, reliable records go back only to 1995 (shortly after the current owners took control of the operation). DEQ and company records show that the only berm failure that has occurred since that time was on Carpenter Creek on December 15, 1995. As a result of the 1995 failure, ECG made significant changes in berm construction and in operating practices. Berm construction improvements include: • *Uniformity:* prior to the 1995 failure, berms were not necessarily constructed the same way each time. Now, berms are made uniform in size, height, and width. • *Compaction:* Berms are now compressed and tamped with a backhoe bucket, which greatly improves bonding of the materials and results in a much stronger foundation. • *Construction Material Selection:* sticks, woody debris, large rocks, logs, root wads, and other objects with the potential to cause channeling are now excluded from berm construction materials. • *Inspection:* when berms are completed, they are now fully inspected by the company's environmental compliance manager, who orders corrections if construction standards are not met. • *Mulching and seeding:* the outer face of the berm is now seeded and mulched, which increases the strength of the berm on its most vulnerable area. This action slows and in most cases prevents erosion. When necessary to establish vegetation, the seeded berm face is irrigated to enhance growth.

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			The company also made a major operational change following the 1995 berm failure. At the time, the wet panels being mined measured up to about 1500 feet square, and this very large area made it nearly impossible to divert stormwater away from the mining operation. Since the failure, mine panels have been limited to about 300 feet square, which has made it practical to divert stormwater away from the active mining area. USACE believes these changes in construction and operating practices represent a "higher level of knowledgeable and reasonable effort," as provided by DEQ water quality standards.
42	5	Full compliance with the NPDES stormwater program for both construction and industrial [general] permits will be required prior to [Clean Water Act §401] certification.	USACE agrees, and cannot issue the §404 permit until DEQ makes the certification.
43	5	DEQ will require notification of water quality standards exceedances and sedimentation berm failures during the project. Notification should include why the berm failed and what will change to prevent it from happening again.	USACE agrees, and would require such notification.
44	5	There was very little description of what current land use activities are specifically affecting the oxbow wetlands. General descriptions of land use are provided but nothing that indicates if they are grazed, exclusion fenced, used for livestock, ATV recreation, etc.	USACE agrees that information on current land use should be included, and has added a new table (Table 3-7) and accompanying text to the FEIS. This table shows the current land use for the various areas proposed to be mined. In summary, of the 327.5 acres proposed to be mined: • 242.7 acres (or 74 percent) are used for grazing, with 137 of these acres also used for recreation along the river • 10.5 acres (3 percent) are used for cultivating livestock feed and for seasonal grazing; ATVs also use this area.

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			• 39 acres (12 percent) are fenced to exclude livestock and are used for industrial purposes (ECG's offices, parking lots, equipment repair, etc.) • 34.1 acres (10 percent) are used for cultivating livestock feed • 1.2 acres (< 1 percent) are fenced to exclude livestock and are not used for other purposes. Land use of wetlands and oxbows closely matches the pattern for the entire project area.
45	5	When developing your pollutant trading proposal please include the name of the model used to determine pollutant loading and load reduction, and clearly state the source of each pollutant discharge analyzed.	ECG has submitted to DEQ a workplan describing its pollutant trading methodology, describing the modeling approach to be used, and identifying the sources of sediment discharges that were evaluated.
46	6	The area to be mined constitutes floodplain habitat with a number of wetland and open water areas that support a variety of wildlife, including mammals, amphibians and birds. Wetland mitigation should at least replace these values.	As described in the EIS, wetland habitats and functions would be reclaimed by replacing the pre-mining plant structure and hydrologic regime. Wetland functions would be replaced at their pre-mining values, some nearly immediately, others over time. Hydrologic support and groundwater exchange functions would be replaced once wetland reconstruction has been completed. Natural biologic functions for aquatic organisms are replaced once wetland reconstruction has been completed and hydrologic stratification is present. The same functions for terrestrial organisms would be replaced over time as woody vegetation matures and stratifies. The woody component is likely to be functional within five years of wetland re-establishment.
47	6	Westslope cutthroat trout were recently petitioned for listing under the federal Endangered Species Act. This listing was avoided in large part because regulatory mechanisms are considered to be adequate to protect and restore the species. Thus we recommend mitigation include measures that meet	The response to comment 32 above summarizes plans for replacing cottonwood stands along the St. Maries River (also refer to Volume II, Appendix A, section 3.3.3). Reclamation designs would provide additional special habitat features to augment the

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		those criteria. These should include a mitigation program that will result in the restoration of cottonwood (and over the long term, western red cedar) stands along the St. Maries River. Large woody debris should also be incorporated into floodplain restoration on site, and at any off-site mitigation areas.	natural biologic functions of the reclaimed wetlands, including such features as downed logs and snags, which provide habitat for insects, small mammals, amphibians, and birds.
48	6	We recommend sediment retention berms and ponds be located well away from the river channel (recommend use of Forest Practices Act rules) to reduce the potential for water quality problems and further impacts to fish habitat in the St. Maries River.	The proposed minimum setback from the river of 22.5 feet was determined in consultation among ECG, USACE, and the Idaho Department of Lands. This setback provides adequate protection for water quality and fish habitat in the St. Maries River.
49	7	Idaho Transportation Department has reviewed the proposal by Emerald Creek Garnet, Ltd. for the discharge of dredged and fill material adjacent to SH3. The project should exclude mining on the state highway right-of-way. Mining adjacent to state right-of-way shall not be done in such a way that excavating endangers the highway's stability.	Mining under the proposed action and alternatives would not take place within the ITD right-of-way and would be completed in such a way that excavations do not endanger highway stability.
50	7	Access from SH3 shall be identified to lTD prior to work. An access permit may be required and/or a traffic control plan.	ECG would be required to comply with ITD requirements for an access permit and/or a traffic control plan for access from State Highway 3.
51	8	[SHPO letter dated December 15, 2003] After reviewing the [Draft EIS] document, we found that our last comments on this project were not reflected in the DEIS.	Prior to publishing the DEIS, USACE received one letter from the State Historic Preservation Office (SHPO). This letter, dated October 15, 1999, reviewed the cultural resources survey report for compliance with Section 106 of the *National Historic Preservation Act,* concurred with the findings, and recommended annual archaeological monitoring and cultural resources awareness training for mine workers. These comments were summarized in sections 3.9.2 and 3.9.3 of the DEIS. A copy of the letter was included in Volume II Appendix K of the DEIS and is included in Volume I Appendix D of the FEIS.
52	8	[SHPO letter dated December 15, 2003] In our letter of July 16, 2002, we requested information on	As indicated above, USACE received only one letter from SHPO prior to publication of the DEIS. A

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		historic buildings and structures within or adjacent to the project area. To date, we have not received a response. Once we receive the information, we can begin working with the Corps of Engineers to evaluate historic buildings and structures, if any exist, and assessing project effects.	cultural resources survey of the project area in 1999 did not locate potentially historic buildings within or immediately adjacent to the project area. As described in section 3.9.2.2 of the FEIS, visual impacts to historic buildings outside the project area are not expected. During the course of mining, the view would temporarily change from a natural-appearing landscape to a mining landscape, and then would be returned to a natural-appearing landscape. As described in section 2.2 of this EIS, mining would occur in panels of about 0.5 acre in size. Each panel would be mined and reclaimed, and then mining would move on to the next panel. In addition, mining is an existing activity in the immediate area, and views of a mining landscape would not be uncommon.
53	8	[SHPO letter dated December 15, 2003] We also recommended more rigorous archaeological monitoring of the excavation activities.	The monitoring recommendations provided by the SHPO in its October 1999 letter were included in both the Draft and Final EISs. In addition, the EIS states that if archaeological resources are discovered during mining, work would be halted at that location and the SHPO contacted. Work would resume after the find is evaluated by a qualified professional archaeologist.
54	8	[SHPO letter dated December 15, 2003] With regard to the DEIS, our July 16, 2002, comments should be summarized in Volume I and a full copy should be provided in Volume II.	SHPO comments from all three letters received by USACE are summarized in section 3.9.2 of the FEIS. Copies of the letters are included in Volume I Appendices A and D of this EIS: Appendix D contains the NHPA Section 106 compliance response letter and Appendix A contains the two letters commenting on the DEIS.
55	9	[SHPO letter dated December 17, 2003] A review of our records yielded no historic properties eligible for listing on the National Register. Therefore we feel the issuance of the Corps of Engineers permit will have no effect upon	USACE agrees with this assessment.

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		historic or archaeological properties.	
56	9	[SHPO letter dated December 17, 2003] If archaeological deposits are uncovered during construction, project proponents should be advised to halt work in the general vicinity until a qualified archaeologist has an opportunity to assess the significance of the discovery.	As indicated in section 3.9.2.2 of the EIS, if archaeological deposits are uncovered during mining, project proponents would halt work in the general vicinity, notify the SHPO, and resume work only after a qualified archaeologist has an opportunity to assess the significance of the discovery.
57	10	The Final EIS needs to provide expert agency comments, high quality information, and accurate scientific analysis, NEPA at 40 CFR 1500.1(b), that will indicate whether all mining activities associated with a selected Action Alternative would be in full compliance with all applicable Idaho WQS, including the TMDL requirements and Special Resource Water requirements.	All mining activities associated with the selected alternative would be required to be conducted in full compliance with all applicable Idaho water quality requirements, including the TMDL requirements and Special Resource Water requirements. An interagency group that includes USACE, DEQ, USEPA, and other agencies would oversee compliance of the various aspects of the operation, including water quality. As described in the EIS and in the response to comment 95, the USACE §404 permit would not be issued unless DEQ has certified under the Clean Water Act that issuance would not cause violations of applicable water quality standards.
58	10	40 CFR part 131, Subpart A concerns general provisions relating to water quality standards. 40 CFR 131.3(i) includes the following language. "Water quality standards are to protect the public health or welfare, enhance the quality of water and serve the purposes of the Act." The FEIS needs to provide expert agency comments, high quality information, and accurate scientific analysis that would confirm all applicable requirements of the CWA, including Section 303, would be met with the selected Action Alternative.	All mining activities would be required to be conducted in full compliance with all applicable requirements of the Clean Water Act, including §303. As noted in the responses to other comments (see comment 95, for example), DEQ is requiring pollutant trading to comply with §303.
59	10	There is no information supplied in Section 3 of the DEIS regarding any failures of BMPs and mining unit berms at the project area during storm events that have occurred over the past 20 years.	Reliable records go back only to 1995, shortly after the current owners took over the operation. The only berm failure since that time was on December 15, 1995, on Carpenter Creek. Following this event,

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		If any BMP or berms failures occurred, what were the results of the failures? Was any sediment released into the St. Maries River? It appears that BMPs and mining unit berms at the project site would not have withstood the storm event of 1996 that produced a flow of 8,050 cfs at the project site.	as described in the response to comment 41, there have been significant changes in mining operations and management practices that reduce the likelihood of failure, and that would reduce the impacts in case of failure. These changes are part of all the alternatives considered in the EIS. A search of DEQ records revealed no other records of failures. There was no berm failure in 1996, even during the high flow event cited by the commenter --- it should be noted that mining was on Carpenter Creek, not the St. Maries River itself. As a result of the high precipitation in 1996 that led to the extremely high flow event cited by the commenter, Carpenter Creek overtopped the berms by over five feet; when the water receded, the berms remained intact, with only minor erosion having occurred while they were submerged.
60	10	IDAPA at 58.01.02.200.08 has the following requirements regarding sediment. "Sediment shall not exceed quantities specified in Sections 250 and 252, or in the absence of specific sediment criteria, quantities which impair designated beneficial uses. Determinations of impairment shall be based on water quality monitoring and the FEIS needs to supply expert agency comments with high quality information regarding the volume of sediment that was released at the project area as a result of high flow events during the past 20 years. The FEIS needs to supply expert agency comments regarding the number of violations of the IDAPA sediment regulation that have occurred at the project site during the past 20 years.	As noted in the response to comment 59, the only berm failure on record was on Carpenter Creek in 1995. The exact volume of water and sediment released by the failure is not known. The operator notified DEQ when the event occurred. There have been no notices of violation or other enforcement actions --- for sediment or for any other environmental regulation --- by DEQ or other agencies since the current owners assumed responsibility for the operation.
61	10	In Volume II of the DEIS, Appendix F, Table E-1 on page E-1 lists the annual peak discharge of the St. Maries River at Santa between the years 1966-1996. Between the years 1980 and 1996, there are 17 incidents listed. Only three (3) incidents were less than the two-year event figure of 2,251 cfs, and there were five	The comment lists the number of occurrences between 1980 and 1996 of peak instantaneous runoff events measured in the St. Maries River that were below the expected two-year event, the number of events above the expected five-year

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		(5) incidents that produced flows in excess of the five-year figure of 3,805 cfs. The February 9, 1996 peak discharge of 12,300 cfs exceeded the flows that would be expected for a 200-year event. There is no discussion on page 3-14 of the DEIS of the February 9, 1996 event as it relates to the statement regarding compounding peaks being very unlikely. This statement implies that no event over the past 37 years has ever resulted in peak flows occurring simultaneously at the project area and the St. Maries River. The FEIS needs to provide high quality information with accurate scientific analysis that will indicate whether the statement made on page 3-14 of the DEIS regarding compounding peak flows is in fact scientifically accurate.	event, and an event occurring in 1996 that was above the expected 200-year event. The values estimated for these characteristic peak flows in the St. Maries River were determined using a log Pearson type III statistical distribution methodology as described by Barfield et al. (*Barfield, B.J., R.C. Warner, and C.T. Haan. 1981. Applied Hydrology and Sedimentology for Disturbed Areas. Oklahoma Technical Press., Stillwater, Oklahoma*) and shown in Appendix E. A T-year event (where T is equal to 2, 5, 10, 100, 200, etc.) is defined as an event of such magnitude that, over a long period of time (much, much longer than T years), it would occur on an average of every T years. This does not imply that a T-year event occurs only once every T years nor that there would only be one event of that magnitude in T years (Barfield et al., 1981). Since events between years are statistically considered independent of each other, the probability of a T-year event occurring in any given year is 1/T. For example, the probability of a 5-year peak flow event occurring in any given year is 1/5 or 0.05 (5%). The number of events that exceeded or did not exceed a specific magnitude in the seventeen-year period between 1980 and 1996 cannot be used to predict the number of occurrences of events of specific magnitude in the near future, except by applying a statistical methodology such as the log Pearson type III method. This is a well-accepted method for estimating occurrence intervals of peak flow events of specific magnitudes. The average time until peak flow occurs from a storm event at a specific location in a river was calculated using methods originally described by the

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			Soil Conservation Service (now known as the Natural Resource Conservation Service). The method and the assumptions used in applying this method are described by SCS (in "Hydrology" Section 4, Soil Conservation Service National Engineering Handbook, U.S. Department of Agriculture, 1972). These calculations are shown in Appendix E for the St. Maries watershed, and estimate that, on average, peak flow from a storm event occurring throughout the watershed would occur in 6.9 hours at the project site. Using the same method, peak runoff from the project area would be realized in the river in 0.35 hours, as discussed in Section 3.1.2.2, page 3-14 of the DEIS. Given these data, the EIS is correct in implying that expected peak runoff to the St. Maries River from the project area and the expected peak runoff in the St. Maries River as a whole occurring at the same time is highly unlikely. However, this statement assumes that rainfall always occurs at the same time and at the same rainfall rates throughout the watershed. They do not consider that peak runoff from the project area could still occur during periods of relatively high, out-of-bank, flows in the river. The discussion in the EIS has been modified and clarified to emphasize the expected impacts that could occur from a potential breach of the berms during high flows in the St. Maries River, regardless of timing.
62	10	The figure E1 does not display any years that are associated with the seven (7) months displayed at the bottom of the figure. It appears from Figure El that every single event listed in the Figure exceeded the 2-year flow figures. The addition of the year(s)s that are associated with each of the Months listed in Figure El would make the Figure easier to understand regarding	USACE has changed the labeling on this figure to clarify its meaning and purpose. The purpose of the graph is to show the periods in the year when extremely high flow events typically occur, and so the months on the x-axis are not associated with any particular year. Only flow events that exceed the 2-

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		the year(s) of the flows associated with 18 Feb, 20-Mar; and 19 April. The Figure El should be revised in the FEIS.	year return interval are plotted. The figure has been clarified by adding the specific year in which each high flow event occurred. The point illustrated in this figure is that extremely high flow events (specifically, those with a return interval equal to or greater than five years), occurred almost exclusively in late winter during the 1966-1996 period. Please note that the caption for this figure presented incorrect volumes for some return interval events. This has been corrected in the FEIS (specifically, volumes for the 2-year, 5-year, and 50-year events have been corrected).
63	10	On page ES-5 of the DEIS figures are given regarding that annual amount of water withdrawal that would occur in the spring and in the summer. The figures given for spring withdrawal are 588,00 cubic feet, and a withdrawal of 1,764,000 cu feet of water in the summer. It is stated these figures are 0.20 cfs and 0.40 cfs respectfully. According to Idaho Department of Water Resources information listed on their Water Conversion Factors information card, 1 cfs equals 448.83 gallons of water per minute. Therefore, 0.20 cfs equals approximately 89.76 gallons of water per minute and 0.40 cfs equals approximately 179.53 gallons of water per minute. The removal of 89.76 gallons of water per minute equals approximately 5,385.6 gallons per hour, or approximately 129,254.4 gallons of water per day being removed from the St. Maries River during the spring months. The removal of 179.53 gallons of water per minute is approximately 10,771.8 gallons per hour, or approximately 258,523.2 gallons of water per day that would be removed from the St. Maries River during the summer months.	The following information has been added to Chapter 2 of the FEIS: A typical wet panel is 300 feet by 80 feet in size. A bulldozer and excavator would remove the topsoil and overburden from the panel, usually to a depth of about six feet. In the process of stripping the overburden, the operator leaves a water barrier of undisturbed overburden every 100 feet. Water is then pumped into the first portion of the panel to be mined. Once it is filled, mining commences. When mining reaches the water barrier, it is breached to allow the water to flow into the next 100-foot block. The breached barrier is then mended and the remaining water in the old 100-foot block is pumped into the new block. The process water is continuously recycled in this manner, reducing the need for water withdrawal from the river. Make-up water would be added to replace infiltration and evaporation losses as needed, and withdrawals are very unlikely to exceed 1,551,000 cubic feet per year. Water appropriation during the summer months would take place after 6:00 pm in

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			the evening. (It should be noted that this is based on the following: total use of 8,640,000 to 11,632,000 gallons per year [11,632,000 gallons = 1,551,000 cubic feet], which is in turn based on withdrawals for 8 hr/day x 21 working days/month @ an average of about 0.21 cfs.) Because of the water recycling system, water withdrawal from the river is not continuous, but would be highest during the initial filling of a new panel and much lower thereafter.
64	10	Regarding the figure of 0.40 cfs cited on page ES-5, this figure is contradicted on page 3-14 of the DEIS. On page 3-14, there is a sentence that states there would be a 0.04 cfs withdrawal in the summer. The sentence reads "Based on the average monthly flows for the St. Maries River (refer to Figure 3.1-3), a 0.20 cfs withdrawal in the spring and a **0.04 cfs** withdrawal in the summer would reduce instream flows by 0.4 percent and 0.6 percent respectively." (Emphasis added). The FEIS needs to indicate whether the figure of 0.40 cfs is correct for summer withdrawal from the river. If the figure of 0.40 cfs is correct, the FEIS needs to supply accurate scientific analysis and high quality information regarding the impacts to the water temperature of the River below the project site during the months of August and September if nearly 259,000 gallons of water were to be removed from the River every day.	The correct number is 0.40 cfs withdrawal over the course of a year, and the EIS has been corrected. As described above, water withdrawal is not continuous, but is higher when filling a new panel. Initial withdrawal during opening a new panel could reach 2.0 cfs, for a matter of hours. The withdrawal of 0.40 cfs per year, which is far in excess of what is actually expected, should not have a measurable effect on river temperature during August and September. As noted above, water appropriation during the summer months would take place after 6:00pm in the evening to further reduce the potential for an increase in water temperature. USACE notes that mean daily low flow in the St. Maries River is approximately 34.2 cfs in August and 34.7 cfs in September (based on data from 1966 to 1996), and the lowest daily mean streamflow, measured at 19.2 cfs, occurred on several days in 1994. At times during these months when St. Maries flow is well below the respective month's long-term mean daily average, withdrawals would not exceed 1 cfs (and, as noted, they would occur at night).
65	10	The FEIS needs to supply accurate scientific analysis with expert	As noted above, the withdrawal of 0.40 cfs per year

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		agency comments that would support a contention there will be no low discharge conditions in the River during the months of August and September that would affect water temperatures due to the combined effects of low flows and water withdrawal associated with a Selected Alternative mining activities.	is a very small amount compared to river flow, and there should be no effects on river temperature during August and September. Water appropriation during the summer months would take place after 6:00 pm to further reduce the potential for an increase in water temperature.
66	10	NEPA at 40 CFR 1502.24 requires that "Agencies shall insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." There needs to be information provided in the FEIS that display the year(s) after 1966 in which the daily flows of the River during the months of August and September were below 45 cfs. There also needs to be information displayed for the lowest daily flow of the River that has been recorded at the project site after 1966.	The information requested by the commenter has been added to Volume II Appendix E.
67	10	There is an additional issue concerning water withdrawal and potential additional garnet mining in the cumulative effects analysis area. If additional mining were to occur on National Forest lands and on lands along the corridor from Cat Spur Creek above Clarkia downstream to Fernwood, have studies been undertaken that analyzed the potential cumulative impacts to increased water temperatures in the River when all ongoing and planned mining activities were operational at the same time?	USACE understands that the Forest Service is in the process of formulating its plans regarding allowing mining along the areas specified by the commenters, with no firm schedule for planning and decisionmaking. It would not be appropriate to evaluate cumulative impacts of what is now a speculative future action. As noted in other responses above, withdrawals by ECG during August and September would occur at night and would be a very small amount compared to river flow, which should ensure there are no impacts on water temperature.
68	10	Ondrecan 2002 is not listed in section 6 of the DEIS. The FEIS needs to supply the full cite for Ondrecan 2002 and describe the methodology that was used as part of the water supply analysis.	The Ondrecan reference is included in the personal communications list on page 7-6 of the DEIS: Ondrecan, Bill. 2002. Idaho Department of Water Resources. March 6. This expert from the Water Management Division of the Idaho Department of Water Resources provided information that the St. Maries River

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			watershed is one of the few remaining watersheds in Idaho that is not stressed by water usage. There are no large consumptive uses and mining activities have not substantially affected water supply.
69	10	The FEIS needs to better describe what is meant by the term "not substantially" concerning water withdrawal from the St. Maries River due to garnet mining activities.	Please see the response to comment 68 above. This information was provided by the Idaho Department of Water Resources.
70	10	There are no figures displayed in Chapter 3 regarding the volume of water presently being withdrawn monthly from the River for all ongoing mining operations. The FEIS needs to provide accurate information regarding the total volume of water that is being withdrawn from the River monthly due to ongoing mining operations, and the daily volume withdrawn during the months of August and September. If accurate figures do not exist, what is the estimated figure for gallons of water per day being removed during the months of August and September during a normal operating year?	ECG is not presently withdrawing water from the St. Maries River for mining or other operations, and this is noted in Chapter 3 of the EIS. See the response to comment 63.
71	10	There also needs to be water supply analysis information in the FEIS describing the results of the cumulative effects analysis, NEPA at 40 CFR 1508.7 and 1508.8, that analyzed the impacts to fisheries in the analysis area when low flow or very low flow conditions and higher than normal daytime temperatures occur on one or more days during the months of August and September.	ECG's proposed mining operations are not expected to affect water temperature and fisheries in August and September. Fish typically relocate to deeper pools and springs at this time of the year, and would not be affected by the limited water use during this period. Additionally, water withdrawals during August and September would take place after 6:00pm to further reduce the potential for impacts to water temperature. This has been added to chapter 3.
72	10	Volume I of the DEIS includes a page that includes the Abstract section. The second paragraph includes the following sentence. "The area proposed for garnet extraction contains wetlands that would be temporarily filled by construction of isolated berms, topsoil, overburden stockpiles, work pads and other discharges of dredged and fill material." However, on pages ES-3, ES-4, 2-3, 2-25, 2-31 of the DEIS and on additional pages in the DEIS it	The language in the USACE cover sheet abstract has been clarified to indicate that the proposed action would include land clearing and excavation activities prior to mining.

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		is mentioned that all wetlands or a portion of the wetlands would be mined depending upon the Action Alternative chosen. The Abstract that will be written for the FEIS should include language that will state wetlands would have land clearing and excavation activities as well as the activities described in the DEIS Abstract.	
73	10	The language in Chapters 2 and 3 concerning wetland reclamation activities after mining of wetlands implies that the biological integrity of the reclaimed wetlands is identical to biological conditions that were present in the wetlands before they were mined. What long-term scientific studies have been undertaken in the previously mined wetlands areas that indicate reclaimed wetlands contain the same biological features found in un-mined wetlands? The FEIS needs to provide high quality information with expert agency comments regarding the degree of biological integrity that has been found in the mined wetlands that have had restoration activities performed within the past 15 years.	Long-term scientific studies of reclaimed wetlands associated with placer mining are not known in the project region. However, in 2002 ECG prepared a riparian reclamation summary report for USEPA that documents and illustrates ECG's years of successful wetland reclamation (the report is provided as Appendix L in Volume II of the FEIS). USEPA acknowledged the success of past reclamation practices and was supportive of their continued use. Similar successful reclamation measures are planned for the proposed action and alternatives as described in Volume II Appendix A, Overview of Proposed Mining and Reclamation Methods.
74	10	In the USACE Public Notice, dated November 20, 2003, there are two sentences concerning Construction Period. The second sentence states that the permit would authorize discharges for a period of 20 years. NEPA at 40 CFR 1500.1(b) requires expert agency comments. Mining activities that would impact wetlands, fisheries, wildlife, and water quality for an additional 20 years in the project area should be described as long-term impacts. The FEIS should include language that will clearly indicate the differences between short-term effects and long-term effects to the environment as a result of mining activities.	It is not clear what the commenter means by the reference to "an additional 20 years…." USACE notes that the 20-year life of the entire operation (including 9 to 15 years of mining) includes mining in discrete areas each year, with areas mined in previous years being reclaimed as soon as mining is complete. Therefore, at any given time during the 20 years, there would be an active mining area that covers about 18 acres, multiple areas in various stages of succession following reclamation (or following wetland creation in the case of the mitigation wetlands), and other areas that had not yet been mined. It is important to note that at any given time during the mine's life, there would be more wetland acreage (undisturbed, newly

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			reclaimed, and newly created wetlands) than at project inception. Chapter 3 of the EIS includes descriptions of both short- and long-term effects. USACE notes that most impacts are short-term, with no significant adverse impacts of long duration.
75	10	The four needs for the project are listed on pages ES-1 and ES-2. All four needs exclusively concern ECG. The four needs indicate the underlying need of the project is that ECG continues to operate for another 15 years. There is no mention in the purpose and need section of the requirement that garnet mining activities must comply with the policies, regulations, and public laws of the United States that apply to the waters of the United States where water quality issues exist within and below the analysis area. There should be language in the purpose and need section in the FEIS that indicates compliance with the NEPA requirements of 40 CFR 1502.13.	As stated in the Executive Summary and in Chapter 1.0, the purpose of this EIS is to comply with NEPA in the identification of potential environmental impacts of the proposed action, and to evaluate reasonable and practical alternatives that meet the purpose and need of the mining project. It further states that USACE has determined that the evaluation and issuance of a §404 permit would be considered a major federal action significantly affecting the quality of the human environment, and therefore requires preparation of an EIS. The need for the proposed action, and the §404 permit, is to mine industrial garnet.
76	10	NEPA at 40 CFR 1506.5(c) includes the following statement. "If the document is prepared by contract, the responsible Federal official shall finish guidance and participate in the preparation and shall independently evaluate the statement prior to its approval and take responsibility for its scope and contents." It is not clear if any portion of the DEIS was produced by one or more contractors. If any portion of the FEIS will be prepared under contract, the section(s) of the FEIS produced under contract need to be noted in the FEIS.	As noted in Chapter 6.0 of the DEIS (Tables 6.1-1 and 6.2-1), the following private contractors were used in the preparation of this EIS and its supporting reports and documentation: DDH Geomanagement Ltd., Tom Duebendorfer, Karen Kuzis, Science Applications International Corporation (SAIC), Selkirk Environmental, and the Wildlife Habitat Institute. As noted in Table 6.2-1, USACE furnished guidance and participated in the preparation of the EIS, and independently evaluated the Draft and Final EISs prior to publication
77	10	Due to the degraded condition of the St. Maries River, water quality issues relating to sediment, temperature, and the destruction of wetlands associated with Alternatives 2, 3, 8,9, and 10, the No Action Alternative should be chosen.	Comment noted.

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78	10	We wish to be included on the mailing list to receive a copy of the FEIS when it is released, and request that The Lands Council and The Ecology Center be added to the FEIS mailing list.	The noted parties have been added to the mailing list.
79	11	I have witnessed firsthand how ECG does an outstanding job taking care of the land it mines. I have seen the transformation of a site from its natural state, to a mine, and back to a natural state. It is difficult to tell that the site has been mined.	Thank you for your comment.
80	12	Emerald Creek Garnet has been a shipping point and a customer of C.H. Robinson since 1994. We provide transportation in the form of rail containers and over the road trucks to/from their facility to many plants nation wide. During my time working Emerald Creek's account, l have used a multitude of transportation companies to pick up and deliver at their plant. Without having them as a shipper and a customer, I would lose one of my finest accounts. Transportation companies count on me to provide them with freight to haul locally and across the county and a good portion of that business comes from the mine in Fernwood. Without their product, I would lose the ability to do this. I am in favor of Emerald Creek mining additional lands and I am confident they will take excellent care of the land.	The economic effects of the No Action Alternative are discussed in section 3.10.2. Information on the need to retain large accounts such as ECG in order to supply smaller accounts in the area has been added to this EIS.
81	13	Emerald Creek Garnet has been a customer of ours since 1993. We provide Emerald Creek Garnet with propane to run their mill, jig plant, forklifts, and heating. They chose propane as a clean and efficient source of energy. Emerald Creek Garnet's account is one of our larger accounts. We deliver propane every week to Emerald Creek Garnet and that has allowed us to grow our business into smaller communities in Northern Idaho. The delivery frequency is often so that we are able to deliver to other small businesses and provide many local residents with propane as their source of heat. I am concerned that if Emerald Creek does not continue to do business in the years to come that unemployment in surrounding towns will skyrocket. This will have a huge trickle effect and	The economic effects of the No Action Alternative are discussed in section 3.10.2. Information on the need to retain large accounts such as ECG in order to supply smaller accounts in the area has been added to this EIS.

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		these once flourishing towns will become abandoned. If my company looses and account like Emerald Creek Garnet, I will have to heavily weigh the outcome. It would no longer be cost efficient for me to keep small accounts and provide residents with heat if we do not have the support of doing business with Emerald Creek Garnet. Emerald Creek Garnet provides job stability for my company, their employees and many local towns.	
82	14,15,16 17,18	We at Custom Building and Supply like to support other Businesses that produce goods and services in our local area. Emerald Creek Garnet provides much needed jobs in the St. Maries area as well as adding to the Benewah County Tax base.	Thank you for your comment.
83	14,15,16 17,18	As long as the wetlands being disturbed are restored according to the conditions of the permit in a timely manner we support issue of the permit.	Thank you for your comment.
84	19	I have witnessed first hand each phase of garnet extraction, processing and site reclamation. I am impressed with the end result of the reclamation process and proud to be a part of it. I believe ECG has proven its commitment to the environment, as evidenced by past, awards.	Thank you for your comment.
85	19	Not only has ECG been compliant with previous permit requirements, but has also corrected problems left behind by previous operators.	Thank you for your comment.
86	19	The continued operation of ECG is important to the local economy also. In these times of economic hardship the effects of the end of our operation would be hard felt, not only locally but by our suppliers and their suppliers, etc.	The economic effects of the No Action Alternative are discussed in section 3.10.2.
87	19	The stigma of "mining" was at one time well deserved. We are a smarter, environmentally conscientious people nowadays.	Thank you for your comment.
88	19	We are responsible company staffed by local people working in our own backyards. We are hunters, fishermen, and outdoor enthusiasts with a love and respect for where we live.	Thank you for your comment.
89	19	Emerald Creek Garnet is good for Benewah County!	Thank you for your comment.
90	20	It is my strongest opinion that that there are several areas that must be effectively addressed before any mining permit is granted by any public agency….	See the responses to other comments (91 through 98) by this commenter.

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91	20	I am encouraged by the level of reclamation that is advocated in this EIS. If the reclamation of the wetlands, oxbows and other mined lands is done as proposed, I feel much of the disturbance to these areas can successfully be alleviated. I further recognize the contribution of this project to the local area in terms of economic benefits.	Thank you for your comment.
92	20	…, I feel the suggested 18 inch berms are inadequate to prevent even moderately high river flow events from invading the mining units and associated mining activity areas. If a major storm event occurred, it seems probable that floodwater could, in fact, invade the mining operation. One must assume that the injection of floodwater into the wet panel mining units could result in the discharge of silt laden water back into the main river channel. Since most of this mining activity will occur laterally in and near the floodplain along a 3 mile stretch of the St. Maries River, it seems to me that there is perhaps a much greater threat of river flow entering the disturbed mining site rather than surface runoff leaving the mining site. In summary, I see virtually no attempt to prevent high river flow events from flooding the mining units and thus displace highly silted water back into the river channel. This is unacceptable.	USACE and the interagency group involved in planning for this EIS (including the USEPA, IDEQ, the USFWS, and the Idaho Department of Lands) considered the use of both higher and lower berms. It was determined that the use of an 18-inch berm would allow the floodwater to flow over and through the mining unit during very high flood events, which was intended to reduce the amount of water that could be released into the river in case of berm failure. The group concluded that 18-inch berms would best balance the need to isolate water in the mining panels with the desire to avoid potentially large releases in case of failure. These decisions were made prior to the development of the TMDL for sediment by DEQ. As part of the process of ensuring compliance with the TMDL, USACE and DEQ would evaluate how best to balance the need to avoid the release of larger quantities of water from higher berms (which could impound more water) and the need to avoid increasing sediment loads that could result if the St. Maries River overtopped lower berms.
93	20	The proposal that ECG will establish a "Surface Water Management Team", consisting apparently of only ECG employees, to determine if and when to temporarily suspend mining operations usurps the responsibilities of public agencies….the determination of suspending mining operations must surely be the responsibility of the Army Corps of Engineers or other recognized federal or state agency(s); not by a self	The purpose of the Surface Water Management Team is to deal with day-to-day events and ensure the operation is implemented as planned and approved. It is not intended to take the place of agency oversight. It is important to realize that ECG employees are on site at all times, including during storm events or other potential failure

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		appointed corporate management team. This determination should not be privy solely to the company, whose interest is to not inhibit such mining, thus setting up a serious opportunity for a conflict of interest.	situations, and thus can most quickly respond to such situations. Volume II Appendix A section 2.3.3 provides a detailed description of pre-flood shutdown criteria and procedures. The Operations Manager would monitor real-time storm and flood forecasting. The Field Supervisor and the Environmental Specialist would monitor the effective operation of the BMPs and alert the Operations Manager when the BMPs are near or at capacity. The Operations Manager would order implementation of the shutdown protocol when BMP conditions or forecasting information provide evidence that shutdown is necessary. As a safety margin, ECG would suspend all mining at least eight hours before a flood is expected. In addition, the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) general permit for stormwater would address accidental release of sediment-laden water during an extreme flood event.
94	20	Furthermore, it is extremely short-sighted to restrict temporary shut down to the single justification of the forecast of storm events. I can think of a number of situations that would warrant a temporary suspension of mining operations.	As described in Volume II Appendix A section 2.3.3, temporary shut down could also occur when BMPs approach capacity. Mining activities would be suspended if interceptor and/or diversion channels are not carrying all flow around the mining unit; culverts in interceptor and/or diversion channels are not passing all flow through the structures; settling and dispersion basins are not collecting bedload, suspended sediment, and organic debris; discharge from sediment basins is not spreading over the floodplain; or runoff originating from within the active mining unit is not contained within the mining unit. USACE would like to emphasize that there is no "single justification" for temporary shutdown; the intent is to allow flexibility

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			to allow the company (and agencies) to deal with unexpected or unusual circumstances.
95	20	During brief questioning at the public hearing, ECG vaguely suggested that if their mining operation was found to be contributing sediments to the main river, they would "off-set" this added pollution by, so to speak, buying pollution credits from some other land owner or public agency. The claim was made that there would be no net increase in sedimentation of the St. Maries River. However, one has to be exceptionally naive to believe this would, in actuality, produce a no net increase in pollution. When one reads the draft St. Maries River Subbasin Assessment and TMDL report, dated Aug. 1, 2002, it becomes glaringly clear that relying on someone else in this watershed to offset ECG pollution is extremely unlikely to produce the results promised. In this report (page 64), it shows that only 1 out of 10 stream segments of this river currently meet the sediment load capacity which is calculated to be 50 percent over background loads. As an example, in the vicinity of the ECG milling site at the St. Maries River and Emerald Creek, this TMDL report states that the background sediment load is 2,390 tons per year and thus the targeted load capacity of this section is 3,585 tons per year or 50% above background sediment loads. However, the existing sediment load for this section of the river is 5,098 tons per year or 113 percent over background. As stated, identified segments of this river exceed the calculated load capacity; some by major amounts. Now just where are private and public land managers going to off-set sediment loads within their jurisdictions to compensate for additional sediment loads caused by the ECG mining operation when they are far short of even approaching targeted TMDLs from their own non-point sources? ECG must be held accountable for their sediment contribution to this river system and not rely on some very questionable trading gimmick!	USEPA's pollutant trading policy (January 13, 2003) and DEQ's comments on the preliminary DEIS (comments 36 to 45) specifically require that there be no net increase in a pollutant that has been identified as a cause of impairment (as sediment and temperature have been on the St. Maries River). Before USACE can issue the §404 permit to ECG, Idaho DEQ would have to have certified under Clean Water Act §401 that permit issuance (i.e. garnet mining as described in this EIS) would not result in violations of applicable water quality standards. Before DEQ would make that certification, ECG is required to predict any potential sediment discharges over the mine's life. Further, ECG is required to commit to specific projects that would result in at least an equal reduction in sediment discharges during that same period. ECG is responsible for off-setting predicted sediment loads, not other entities (private and/or public land owners and managers, as mentioned by the commenter). USACE emphasizes that ECG would "be held accountable for their sediment contribution" and regrets that the commenter received a contrary impression at the public meeting.
96	20	My last concern, and this is a serious one, is the lack of any well defined water quality monitoring program. At the public	The description of the monitoring program has been expanded in the FEIS so that it provides more

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		meeting of Dec.10, 2003, I raised the question of whether periodic water samples would be taken in order to determine that the St. Maries River did not suffer more than it currently does of contamination of sediments and other pollution substances. The response was less than assuring that neither ECG nor the Army Corps of Engineers had prepared a well thought out scientific monitoring program. The Final EIS should describe, in detail, the mandatory water quality monitoring plans that would be required before a permit is considered to be issued. This information is necessary to comply with NEPA regulations 40 CFR 1500.1(b) which states, in part, "NEPA procedures must insure that environmental information (i.e. water monitoring) is available to public officials and citizens before decisions are made and before actions are taken." To do less reduces monitoring to a vague and subjective analysis.	details on the program. In summary, the program provides for two permanent sampling locations above and below the project area (one just downstream of the mouth of Emerald Creek and one just upstream of the mouth of Carpenter Creek) and a portable station immediately downstream of the active mining area. Instruments at the stations would automatically record data on total suspended solids (TSS), turbidity, stage height (from which flow would eventually be able to be calculated), and temperature. Depending on flow rates and data needs, data can be recorded at 15-minute or even shorter intervals. ECG would download data at approximately 30-day intervals and report the data as required by DEQ. In addition, at least twice monthly ECG would use a hand-held instrument to measure turbidity in the river. On a quarterly basis, they would sample and analyze stormwater for TSS, pH, nitrate, and nitrogen, and submit the data to DEQ.
97	20	I am troubled by lack of a clear delineation of who will be responsible for various aspects of oversight of this mining operation. It is totally unacceptable, as I said earlier, that ECG would be allowed to unilaterally decide if and when they would have to temporarily cease mining activities. That is the job of public agencies. The public deserves a very clear and concise commitment from both the state of Idaho and the federal government on who is in charge of this critical oversight function including the administration of the water quality monitoring program discussed above. I asked this very question of what agencies were responsible for various aspects of administering this project and received very indecisive speculation of just who was to do what in this regard. For the public agencies to duck this responsibility begs for public	Each of the federal and state agencies involved in overseeing various aspects of the mining operation has specific responsibilities in regard to the operation. In general, those responsibilities cannot be delegated to another agency. The agencies (including USACE, IDEQ, IDL, IDFG, USEPA, USFWS) have formed an interagency group to ensure that oversight is coordinated and effective. Among other activities, the interagency group would conduct an annual on-site review of mine operations to ensure compliance with applicable Federal and State regulations and permits.

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		intervention to force placement of this duty where it squarely belongs.	
98	20	… this mining proposal absolutely cannot and should not be permitted unless there are adequate plans put in place to assure that this river does not become the victim of additional degradation. The river has suffered enough.	The proposed operation has been required to develop, and would be required to implement, extensive plans and procedures to protect the St. Maries River, and the EIS describes those plans. Section 2.2 of the EIS summarizes mining operations, best management practices (BMPs), and mitigation measures. Volume II Appendix A provides a detailed description of the proposed mining plan and the proposed reclamation plan. The plans provide detail on BMP implementation and surface water management, including pre-flood shut-down criteria and procedures to ensure protection of the river. As noted in response to other comments (comment 95, for example), ECG would have to offset any increase in sediment load that the mine expansion would contribute to the St. Maries.
99	21	…my friend…and I like to drive back roads to see the beauty of our area. One Sunday, by chance, we happened on Emerald Creek's mining site. We were totally amazed. Within feet of their equipment, downstream from where they were mining, the little valley looked like an alpine meadow. What we didn't know was that what we were looking at had already had been mined and restored. Shortly afterward we were having breakfast at our local café when we met a young man who works for Emerald Creek Garnet. We told [him] about our experience at the mining site and our surprise at how clean it was. He shared with us the dedication they have to minimizing their impact on the environment. What they do to restore the area they mine is impressive. It's way beyond what is required. (He told us what is required and what they do.)	Thank you for your comment.
100	21	…judging from what we saw and heard, I can assure you that	Thank you for your comment.

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		when these people say, "Our mining is a no discharge event" you aren't just hearing management bologna. I do not think the Corps of Engineers would regret issuing these people a permit.	
101	22	I have enjoyed this area for the last 11 years, 3 of them right here in Fernwood. Emerald Creek Garnet has played a large role in this community in a positive way. It has contributed to this community financially and economically, and is a major source of the local residents' livelihood.	Thank you for your comment.
102	22	I have personally seen where Emerald Creek Garnet has mined and it is just as beautiful after they have mined it, as it was before.	Thank you for your comment.
103	23	I believe that ECG should be issued the permits to mine the St. Manes River Drainage. I have visited some of the sites that ECG has reclaimed. They are beautiful, because ECG cares about the land and the impact that mining has on it. They are to be commended for their work. It is evident that ECG strives to be compliant with permit requirements.	Thank you for your comment.
104	23	The impact on the environment will be nothing compared to the impact that the families, businesses - local and state wide - would suffer if the permits are not issued.	The economic effects of the No Action Alternative are discussed in section 3.10.2.
105	24	I have lived in Fernwood for 33 of my 37 years. I am an avid Hunter/Fisherman and thoroughly enjoy fishing the St. Maries River, particularly the stretch between Emerald Creek and Carpenter Creeks. I fish this stretch of river at least 3 times per summer. From year to year, every year my favorite fishing holes move and change due to the river's seemingly excessive erosion. Every summer I start at the bridge on Emerald Creek and fish my way to Fernwood and every year there are 5' to 7' chunks of vegetated shoreline that has been undercut lying under water. I remember wondering many times if the erosion could be slowed or stopped completely. I then thought, if there was something that could be done about the erosion someone probably would have done it by now. I am now the Operations Manager at Emerald Creek Garnet and have become somewhat educated on	Thank you for your comment.

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		channel stabilization and such. I wholeheartedly believe that Emerald Creek Garnet mining along the river will be a blessing for the small stretch of riparian area in question, if for nothing else the river bank stabilization.	
106	24	Keeping it short, I am extremely confident in the Emerald Creek Garnet employees with their absolute awareness and skill levels of working with environmentally sensitive areas. Their caring and vast knowledge is very impressive!	Thank you for your comment.
107	25	I would like to briefly touch on a subject that I don't believe anyone has brought up, to my knowledge, and that is the employees of Emerald Creek. I have a small group of twelve men, including myself, that is basically responsible for the destruction and reconstruction of all mined lands at Emerald Creek Garnet. As a group of twelve men, we have well over 100 years of combined experience in the mining industry and 97 years combined experience just with Emerald Creek Garnet. This group of men are among the most talented and versatile equipment operators I have ever known in my 62 years. Each one of these men can operation with precision and efficiency every machine Emerald Creek owns, plus they all hold commercial drivers license. They also have first aid certificates, and have Haz-Mat training. The point I'm trying to get across is that if there ever were a group of men to be selected as stewards of the land, these should be the men. They care about the land, they care about the community, as do all the employees of Emerald Creek. We have excellent technical and managerial support from our offices. Outstanding and responsible crews in our jig plants, shops and mill. In closing, I would just like to say I can't think of a more qualified team of people to better execute the terms of contract on this 404 permit than Emerald Creek Garnet.	Thank you for your comment.

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108	26	I am for the river permits. From what I've seen ECG does a very good job. The end results are usually better than before they started. Also the money they put into the economy around here is critical. North Idaho needs this, the people need this. The environmental impact I feel will be so negligible it won't even be noticed. The long term effect will be better for wildlife and for humans.	Thank you for your comment.
109	27	ECG is the largest employer in So. Benewah County and closing would put a severe crunch in an already tough job market and economic area.	The economic effects of the No Action Alternative are discussed in section 3.10.2.1 of this EIS.
110	28	I would like to support allowing Emerald Creek Garnet mine on additional 327.5 acres in Benewah and Shoshone counties of Idaho. I have been familiar with this operation for about 11 years now and have been impressed with the conscience and continued environmental improvement on this operation. I have a definite connection with this operation in that I not only have a business relationship with them through my work for UPS, but I am also a rancher in Benewah County. I am a firm believer that ECG works not only for profit but also for the long term betterment of the environment and the stability of the families and communities in the area. This operation has demonstrated the ability to work with timber companies and ranching operations along with the Corps of Engineers to balance profit and environmental concerns. I believe they will continue to work with all concerned to enhance logging, ranching and recreational opportunities in this area. Again, I support the proposal to allow ECG the additional 327.5 acres of mining reserves.	Thank you for your comment.
111	29	Emerald Creek provides a needed product to consumers.	Thank you for your comment.
112	29	I support Emerald Creek's acquiring this permit. This will allow Emerald Creek to remain in business and 35+ employees to remain employed. Emerald Creek supports a large part of the local economy. It helps the community here and creates jobs in other communities as well.	Thank you for your comment.

Comment No.	*Commenter No.*	*Comment*	*Response*
113	29	[Over] time I have seen enormous improvements in the way mining and reclamation is done. When dealing with wetlands, only small areas are mined at one time. These areas are reclaimed within the same year. They are only disturbed for a short time, not destroyed. Emerald Creek works with all government agencies involved to comply with all environmental issues. Each season shows more improvement. The permit for this river area is a good one. The river itself will not be mined, and a large barrier will be placed between the river and the mining process. Emerald Creek has had a previous permit to mine the dry lands near the St. Maries River. A mining operation was started in the spring. Wetlands were avoided, reclamation was completed as the production proceeded and when the operation was fulfilled, there were no visible signs that the ground had been disturbed. I feel the areas are improved from their previous conditions before operations started. The newer grasses provide more food for cattle grazing there than the older grasses before.	Thank you for your comment.
114	29	As well as being an employee of Emerald Creek, I am a land owner ¼ mile down river from Emerald Creek Mill. The mining will be visible from my kitchen window. I feel I will be one of the most affected by this mining procedure. Due to Emerald Creek's good management practices, I feel confident that the land will be left in better condition, more beautiful, and better suited for wildlife and cattle grazing upon reclamation completion. This land around me is precious to me and to the future of my children. I am an outdoorsman. I hunt, fish, swim, camp, and hike here and I want to see the land conserved, used responsibly, not hoarded for selfish reasons. Therefore, I support Emerald Creek acquiring this permit. I know Emerald Creek Garnet [will] pay extreme attention to Reclamation and the environment.	Thank you for your comment.
115	30	You say there will be no net increase in sedimentation for the St. Maries River. And if you do, and in your draft EIS there are	USEPA's pollutant trading policy (January 13, 2003) and DEQ's comments on the preliminary DEIS

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		places that you frankly state that there will be some introduction of sediment, how are you going to buy that back? Where are you gonna reduce sedimentation someplace else? It's now on a 303(d) list, as you know. And so I take it if you made that even worse, I'd like to know how you're gonna reduce sediment in one place to off-set where you're putting sediment in on another part of your mining project.	(comments 94 to 103) specifically require that there be no net increase in a pollutant that has been identified as a cause of impairment (as sediment and temperature have been on the St. Maries River). Before USACE could issue the §404 permit to ECG, Idaho DEQ would have to have certified under Clean Water Act §401 that permit issuance (i.e. garnet mining as described in this EIS) would not result in violations of applicable water quality standards. Before DEQ would make that certification, ECG is required to predict any potential sediment discharges over the mine's life. Further, ECG is required to commit to reducing sediment discharges from other sources by at least the amount of sediment predicted to be discharged by the operation.
116	30	You can add sediment to that section of the river that you have private property on the floodplain, and then the off-set can come from a different piece of land under totally different jurisdictions and ownership?	Yes. It has to be in the St. Maries watershed, but it can be on property under different jurisdictions and ownership. However, USACE emphasizes that ECG would be responsible for off-setting predicted sediment loads, not other entities.
117	30	You say you're gonna monitor. How will you monitor? I mean, specific -- are you gonna be able to actually tell numeric values of the sediment, say in the water column there? Or is this really subjective monitoring? Does it mean you will take water sample and measure the amount of sediment in the water?	See the response to comment 96.
118	30	There is a person's name, "Ondrecan 2002." …. I looked in the references and I can't find that listed. …I would suggest that they make sure that's in there.	The Ondrecan reference is included in the personal communications list on page 7-6 of the DEIS: Ondrecan, Bill. 2002. Idaho Department of Water Resources. March 6.

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119	30	Actually, the public doesn't have 45 days [to comment on the DEIS]. Seems like normally some of these NEPA documents you have 45 days to put comments in. And I believe it's this notice here says 39 days. ….[T]here's nobody I know that gets the federal register that knew this thing came out 'til we saw it in the paper…. I'll have my comments in by December 29.	The dates on which USACE published the DEIS and notices of its availability are provided in the text that begins this chapter (chapter 8). USACE is pleased the commenter was indeed able to submit written comments by the end of the comment period. USACE did not receive any requests for an extension of the comment period.