

APPENDIX D

RESPONSES TO COMMENTS ON THE DEIS

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The Draft Environmental Impact Statement (DEIS) for the proposed Idaho Cobalt Project (ICP) was noticed in the Federal Register on February 23, 2007. The public comment period ran from February 23 through May 24, 2007. Two public meetings were held to take comments on the DEIS; in Salmon on May 14, 2007 and Challis on May 15, 2007. A total of 173 comments and comment letters were received by the agencies. Each comment or comment letter was assigned a number to allow tracking of the input from each commenter. A commenter is anyone who submitted written comments in a personal letter, a form letter, a postcard, or a petition, and/or presented testimony at a public hearing on the DEIS. Table D-1 contains a list of comments received on the ICP DEIS and an identification number assigned to each comment or comment letter. The comment ID number makes it possible to track each comment and match it with a response.

Comments pertaining specifically to the Draft NPDES water discharge permit received by EPA will be addressed by EPA in issuing the Final NPDES permit.

Individual comments/issues within each comment or comment letter were assigned a code to identify the topic of the comment. Table, D-2, lists the categories and codes developed as part of the comment content analysis and to assigned to the comments; for example Geology, GEO 102, Tailings Facility Stability. Breaking the comments into categories allows similar comments to be grouped together. In cases where there are multiple comments address the same issue, a single response has been prepared to answer the multiple comments.

The comments are grouped by general topic in this response document, and further subdivided into subtopics with a header that also identifies the letter number(s) of the comment so that someone submitting a comment can track their comment to a response based on the comment code. The format of these responses to comments includes first a short description of the comment followed by the response. The comment short descriptions may not fully capture all of the content of the comment, but the responses are intended to address all substantive issues raised by the commenter. Some comments receive responses under more than one comment category. For example a comment that addresses water quality and potential impacts on fish may be addressed under both the water quality and fisheries sections.

Copies of all written comments and letters are on file at the Salmon-Challis National Forest office in Salmon, Idaho and are available for review. The agencies are not required to respond to every comment made by every person. However, "all substantive comments received on the draft statement (or summaries thereof where the response has been exceptionally voluminous), should be attached to the final statement whether or not the comment is thought to merit individual discussion by the agency in the text of the statement" (40 CFR 1503.5(b)). If a comment resulted in changes to the EIS text, then the fact that there has been a change is usually stated in the response. However, not all responses require that the text in the EIS be modified or supplemented. Where comments were of an editorial nature the response is typically listed as an "editorial correction."

TABLE D-1. Comments Received on Idaho Cobalt Project DEIS	
Commenter	Letter ID Number
Ahmed, Mustaque	70
Antonioli, Ted; Montana Mining Association	38
Arodzero, Anna	148
Baird, Joseph H; Attorney for FCC	111
Baird, Joseph H; Attorney for FCC	158
Baird, Joseph H; Attorney for FCC	159
Baldwin, Dennis	65
Baldwin, Dennis	92
Banks, R.E.	20
Barrett, Gary	28
Barrett, Lenore Hardy	89
Bartholme, Dan	141
Bearrett, William	119
Becker, Marta	131
Beke, Tony; Forest Engineer, SCNF	35
Bell, Jeffrey	22
Berry, Brent T.	55
Bilger, Lee	151
Blackadar, Bob	91
Bossert, Ray; Salmon School District 291	75
Briggs, Jack	72
Brown, Mark J.; Jenson Oil	39
Brunkow, Marlyn and Linda	152
Buntrock, William	83
Bush, James M; Lucky Friday Mine	12
Bush, Kenneth W.; Stillwater Mining Co.	13
Bush, Sharon; Essential Metals Corp	3
Bush, Timothy A.; Stillwater Mining Co.	11
Card, Bill	162
Carlson, Chris	143
Casey, Claire	90
Cleary, Brandon	86
Coates, Tom; Challis Chamber of Commerce	53
Craford, Kent	30
Dahle, Kent; Dahle Construction	124
Dahle, Norm	125
Dahle, Tyler K.	126
Davis, Stan; Mayor Salmon, Idaho	164
Davis, Stan; Mayor Salmon, Idaho	17
Davis, Stan; Mayor Salmon, Idaho	95
Dillard, Armina	142
Dizes, Ken	14
Dodd, Julie	84
Doll, Nikki	161
Edwards, Roger	123
England, Esther	135
England, Michael	140
Eppers, Kevin	96
Farnsworth, Dave; Monsanto	24
Fields, Ed	18

TABLE D-1. Comments Received on Idaho Cobalt Project DEIS (continued)	
Commenter	Letter ID Number
Fields, Ed	165
Flores, Jaime J.	62
Flynn, Roger; Attorney for Earthworks, BWCC	110
Flynn, Roger; Attorney for Earthworks, BWCC and ICL	157
Forshaw, Jacklyn	43
Forshaw, Paul	44
Forshaw, Zachary	45
Fournier, Rob; Atlas Copco CMT USA	116
Garrett, Theodore; Covington & Burling Attorney for BMSG	113
Gates, Edward	97
Gettier, David	2
Gilk, John	10
Gillerman, Virginia S.	81
Glaccum, Ellen	103
Golder Associates, Inc.	154
Grahn, Donald	71
Gunderson, Michael	73
Hager, Bill	129
Hall, Judy A.	138
Hall, Mark	153
Halton, David A.	130
Hamann, Laura	102
Hamilton, Jerry	169
Hammond, Brian F.	42
Hammond, Gordon	40
Harnish, Dale; Atlas Copco CMT USA	117
Hayball, Norm	9
Hayes, Justin; Idaho Conservation League	74
Heaps, Bret	147
Henry, Bill and Nancy	66
Hoven, Larry	61
Howell, Alan; A&D Specialists	23
Idaho Legislators	33
Irish, Michael	85
Jackson, David; BMSG	155
Jakovac, Donald	37
Johnsen, Chester	79
Johnson, Clayton	87
Johnson, Jay	172
Johnson, Marc	76
Johnston, Jim; IDEQ	15
Kaylor, Melva; Essential Metals Corp	34
Keen, Heather	150
Kendall, Messmore	69
Kesl, Thelma	57
Kesl, Thomas J.	60
Kimble, Mike and Linda	88
Kotek, John	104
Lambert, Tami	4

TABLE D-1. Comments Received on Idaho Cobalt Project DEIS (continued)	
Commenter	Letter ID Number
LaMoure, Charles P.	25
Lemhi County Commissioners	107
Lowell, Greg	31
Lukens, James R.; Salmon Regional Supervisor	93
Madsen, Dennis A.	80
Mayo, Dan; Salmon City Planner	171
Marsh, Adrienne	77
Marusa, Kiesha	48
McFarland, Annette	146
McFarland, Annette	174
McFarland, Mr. and Mrs. Don	50
McFarland, Norma	51
McFarland, Pete and Linda	49
Melvin, Rick	68
Merriam, Eric	137
Motloch, Chester; Motloch Consulting	56
Mulkey, Selway	82
Nafus, Steve and Rachel	128
Nicoll, Robert J.	132
NW Mining Association	156
Overacker, Mike; Lemhi County CWMA	167
Overacker, Shelly	118
Pace, Charles E.	114
Painer, Sid	163
Parker, Tom; Gold Crest Mines	99
Peden, Greg	144
Perry, Jerry; Perry Logging	100
Perry, Virginia; Perry Logging	101
Peters, Pete	27
Potts, Mike	106
Power, Paul	127
Rice, Tammy	41
Robison, John; Idaho Conservation League	67
Rosamond, Jean-Gilles; Atlas Copco CMT USA	105
Rosskelly, Mickey	160
Rowland, Sheila D.	139
Russo, James	59
Ryzak, David	63
Scales, W.G.; President FCC	115
Scheuering, Joe; FCC	168
Scheuering, Joe; Mine Manager, Formation Capital	21
Schneider, Lori, FCC	6
Schroeder, George; Wells Fargo Insurance	98
Schulte, Jim	78
Shea, Debbie; Montana Mining Association	145
Skaer, Laura; Northwest Mining Association	109
Skeen, Todd	29
Slavin, Chace; Lemhi Title Company	46
Sleeper, Preston; DOI Environmental Policy	64
Smith, Kristie	5

TABLE D-1. Comments Received on Idaho Cobalt Project DEIS (continued)	
Commenter	Letter ID Number
Stone, Fred; Essential Metals Corp	8
Stroud, Shirley	32
Sudbury, Ryan; Nez Perce Tribe	108
Swanson, John R.	54
Swanson, John R. (Minneapolis)	133
Swindle, Gail S.	122
Teeter, Don	52
Thompson, Paul	7
Thomsen, Curt	19
Thornton, Charlie	173
Torrey, Janice	136
US EPA	112
Van Bibber, Michelle	134
Vaux, Wallace; Vaux Enterprises	94
Vranes, Randy; Monsanto	26
Welch, Cynthia; Dos Hermanas	120
Wellard, Rulon	1
Westfall, Doug	166
Whitman, Adam	121
Williams, Eric	149
Wood, Tami	36
Woodward, Priscilla	58

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement

Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered
Geology	GEO-100	Geology and Mineral Resources	Water Resources (cont.)	WTR-300-2	Surface Water Quality and Quantity - and Quantity – Inadequate Analysis
	GEO-101	Earthquake		WTR-300-3	Surface Water Quality and Quantity – Downstream Impacts
	GEO-102	Mineral Rights		WTR-300-4	Surface Water Quality and Quantity - TMDL
	GEO-102-1	Mineral Rights - Claim Validity		WTR-300-5	Surface Water Quality and Quantity – Unacceptable Impacts
	GEO-103-1	Rock Characterization & Geochemistry – Arsenic		WTR-300-6	Surface Water Quality and Quantity - Sediment
	GEO-103-2	Rock Characterization & Geochemistry – ARD		WTR-300-7	Surface Water Quality and Quantity - Arsenic
	GEO-104	Stability/Engineering		WTR-301-1	Groundwater – Groundwater Capture
Soils	SOIL-100	Reclamation & Revegetation		WTR-301-2	Groundwater – Groundwater Quality
	SOIL-100-1	Reclamation & Revegetation – Contaminated Soil		WTR-301-3	Groundwater – ARD
Water Resources	WTR-300	Surface Water Quality and Quantity		WTR-301-4	Groundwater – Grouting
	WTR-300-1	Surface Water Quality and Quantity - Hardness		WTR-301-5	Groundwater – Impacts to Meadow Creek

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement (continued)						
Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered	
Water Resources (cont.)	WTR-301-6	Groundwater – Groundwater Regulation	Water Resources (cont.)	WTR-304-1	Water Treatment – WTP Waste	
	WTR-302	Water Monitoring		WTR-304-2	Water Treatment – WTP Waste	
	WTR-302-1	Water Monitoring – Monitoring Location and Number		WTR-304-3	Water Treatment – Alternative IV Inadequate Detail	
	WTR-302-2	Water Monitoring – Baseline		WTR-304-5	Water Treatment – Design and Operations Considerations	
	WTR-302-3	Water Monitoring –Increase Monitoring		WTR-305	Stormwater Management	
	WTR-302-4	Water Monitoring –Identifies Impacts After the Fact		WTR-305-1	Stormwater Management - Design	
	WTR-302-5	Water Monitoring –Reporting		WTR-305-2	Stormwater Management – More Detail	
	WTR-303	Water Use and Storage		WTR-306	Dynamic Systems Model	
	WTR-303-1	Water Use and Storage – Water Balance		WTR-306-1	Dynamic Systems Model - Calibration	
	WTR-303-2	Water Use and Storage – Potable Use		WTR-306-2	Dynamic Systems Model – Use of Model	
	WTR-304	Water Treatment		WTR-307	National Pollution Discharge Elimination Permit (NPDES)	

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement (continued)							
Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered	Subject Category	Category Code
Water Resources (cont.)	WTR-307-1	National Pollution Discharge Elimination Permit (NPDES) – Support Draft Permit	Water Resources (cont.)	WTR-307-9	National Pollution Discharge Elimination Permit (NPDES) – 401 Certification		
	WTR-307-2	National Pollution Discharge Elimination Permit (NPDES) – Nitrogen		WTR-308	Wetlands and Other Waters of the U.S.		
	WTR-307-3	National Pollution Discharge Elimination Permit (NPDES) – Flow		WTR-309	Federal Reserve Water Rights		
	WTR-307-4	National Pollution Discharge Elimination Permit (NPDES) – Metals		WTR-310	Bedrock Fracture Characterization		
	WTR-307-5	National Pollution Discharge Elimination Permit (NPDES) – Mixing Zone	Bio-Diversity	BIO-400-1	Wildlife Habitat – Inadequate Mitigation		
	WTR-307-6	National Pollution Discharge Elimination Permit (NPDES) – Sulfate		BIO-400-2	Wildlife Habitat – Wetlands		
	WTR-307-7	National Pollution Discharge Elimination Permit (NPDES) – Comments on Permit		BIO-401	Vegetation – Inadequate Mitigation		
	WTR-307-8	National Pollution Discharge Elimination Permit (NPDES) – Water Balance		BIO-401-1	Vegetation - Species of Special Concern, Ute Lady Tress		

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement (continued)					
Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered
Fisheries	FSH-600	General Fish Species and Habitat	Threatened & Endangered Species (cont.)	TE-502-2	Section 7 Consultation – More Detail
	FSH-600-1	General Fish Species and Habitat - Sediment	NEPA	NEPA-800-1	NEPA Process and Format - Editorial
	FSH-600-2	General Fish Species and Habitat – Inadequate Analysis		NEPA-800-2	NEPA Process and Format - General
	FSH-600-2	General Fish Species and Habitat – Fish Traps		NEPA-800-3	NEPA Process and Format – Future Design/Study
	FSH-601	Threats to Fisheries and Impacts – Spills		NEPA-800-4	NEPA Process and Format - Alternative to Roadless Impact
Forest Plan	FPL-700	Salmon-Challis National Forest Plan, FLPMA, Organic Act		NEPA-800-5	NEPA Process and Format - Assumptions Unsupported
Threatened & Endangered Species	TE-500-1	Terrestrial Species – Describe Effects		NEPA-800-6	NEPA Process and Format - Violation of Requirements
	TE-501	Aquatic Species		NEPA-800-7	NEPA Process and Format – Objectives
	TE-501-1	Aquatic Species – Inadequate Analysis		NEPA-801	EIS Purpose and Need Inadequate
	TE-501-1	Aquatic Species – Describe Effects		NEPA-802	EIS Alternatives
	TE-502-1	Section 7 Consultation – Adverse Impact		NEPA-802-1	EIS Alternatives – Inadequate Alternatives

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement (continued)					
Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered
NEPA (cont.)	NEPA-802-2	EIS Alternatives – Support Alternative II	NEPA (cont.)	NEPA-804-5	Mitigation Measures – Remove mitigation
	NEPA-802-3	EIS Alternatives – Support Alternative IV		NEPA-805	Legal Authority
	NEPA-802-4	EIS Alternatives – Support Alternative V	Transportation	ROAD-900	Proposed Access Route and Improvements
	NEPA-803	Cumulative Impacts		ROAD-900-1	Proposed Access Route and Improvements – Upgrade
	NEPA-803-1	Cumulative Impacts – Insufficient Analysis		ROAD-900-1	Proposed Access Route and Improvements – Upgrade
	NEPA-803-2	Cumulative Impacts – Dust		ROAD-900-2	Proposed Access Route and Improvements – Busing
	NEPA-803-3	Cumulative Impacts – BMSG		ROAD-900-3	Proposed Access Route and Improvements – Maintenance
	NEPA-804	Mitigation Measures		ROAD-900-4	Proposed Access Route and Improvements – Impacts
	NEPA-804-1	Mitigation Measures – Insufficient Detail		ROAD-900-5	Proposed Access Route and Improvements – Roads Analysis
	NEPA-804-2	Mitigation Measures – Effectiveness		ROAD-900-6	Proposed Access Route and Improvements – Safety Standards
	NEPA-804-3	Mitigation Measures – Upfront Mitigation		ROAD-900-7	Proposed Access Route and Improvements – Switchback Modifications
	NEPA-804-4	Mitigation Measures – Differentiate Alternatives		ROAD-901	Access Route through Blackbird Mine Site

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement (continued)					
Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered
Transportation (cont.)	ROAD-901-1	Access Route through Blackbird Mine Site – Impacts to BMSG	Wilderness and Roadless Areas	WLD-1200	Frank Church River of No Return Wilderness Area
	ROAD-902-1	Morgan Creek Road/Alternative Access Routes – Support Morgan Creek Route		WLD-1201	Roadless Areas
	ROAD-902-2	Morgan Creek Road/Alternative Access Routes – Impacts		WLD-1201-1	Roadless Areas – No Impacts to Roadless
	ROAD-902-3	Morgan Creek Road/Alternative Access Routes – Oppose MC Route	Scenic Resources	SCR-1300	Scenic Resources - Light
	ROAD-902-4	Morgan Creek Road/Alternative Access Routes – Inadequate Analysis	Cultural and Tribal Resources	CUL-1400	Cultural/Historic Resources – Impacts to Tribes
	ROAD-903	Road Reclamation		CUL-1401	Native American Rights – Consider Native American Rights
	ROAD-903-1	Road Reclamation – Switchbacks		CUL-1402	Tribal Consultation -
	ROAD-903-2	Road Reclamation – Reclaim Old Roads	Air & Climate	AIR-1500	Air Quality – Inadequate Analysis
	ROAD-904-1	Exploration Roads – Include Analysis	Health & Safety	HS-1600	Public Health – Fish Consumption
Powerline & Pipelines	PP-1000	Power Transmission Line and Pipeline		HS-1601	Forest Fires – Safety
Recreation	REC-1100	Recreation Mitigation		HS-1602	Materials/Chemicals/Concentrate Transport and Storage

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement (continued)					
Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered
Health & Safety (cont.)	HS-1602-1	Materials/Chemicals/Concentrate Transport and Storage – Spills	Socio-Economics (cont.)	SOC-1702-2	Cost/Benefit – Post Mine Bust
	HS-1602-2	Materials/Chemicals/Concentrate Transport and Storage – Relocate Roads		SOC-1702-3	Cost/Benefit – Not Balanced
	HS-1602-3	Materials/Chemicals/Concentrate Transport and Storage – Fuel Storage		SOC-1701-1	Community Services – Training
	HS-1602-4	Materials/Chemicals/Concentrate Transport and Storage – Ore Transport		SOC-1701-2	Community Services – Schools
	HS-1603	Public/Mine Traffic Conflicts		SOC-1701-3	Community Services – Regional Impacts
	HS-1604-1	Spill Prevention and Response Plan – Need Plan		SOC-1701-4	Community Services – Law Enforcement
	HS-1604-2	Spill Prevention and Response Plan – Plan Components	Reclamation Bond	RCL-1800	Reclamation Bond Calculation
Socio-Economics	SOC-1700-1	Employment and Local Economy – Job & Benefit to Area		RCL-1800-1	Reclamation Bond Calculation – Excessive
	SOC-1700-2	Employment and Local Economy – Support Project		RCL-1800-2	Reclamation Bond Calculation – Need Large Bond
	SOC-1701-5	Community Services – Request Contribution to Impacted Services		RCL-1800-4	Reclamation Bond Calculation – Roads
	SOC-1702	Cost/Benefit		RCL-1800-5	Reclamation Bond Calculation – Fire
	SOC-1702-1	Cost/Benefit – Project Economics		RCL-1800-6	Reclamation Bond Calculation – Include Bond Details in FEIS

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement (continued)					
Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered
Reclamation Bond (cont.)	RCL-1801	Reclamation Methods	Mine (cont.)	MINE-2005	Noise
	RCL-1801-1	Reclamation Methods – Adequate Reclamation a Primary Concern		MINE-2006	Closure and Long-Term Maintenance - Management
	RCL-1801-2	Reclamation Methods – Fish	Tailings Waste Rock Storage Facility	TWSF-1900	TWSF Capacity
	RCL-1801-3	Reclamation Methods – Use Native Species		TWSF-1900-1	TWSF Capacity – Permit Larger TWSF
	RCL-1802	Concurrent Reclamation		TWSF-1901	TWSF Design
Mine	MINE-2000-1	Underground Mine Backfilling		TWSF-1901-1	TWSF Design - Commingling
	MINE-2000-2	Underground Mine Backfilling – Slash Amendment		TWSF-1901-2	TWSF Design - Footprint
	MINE-2000-3	Underground Mine Backfilling – Complete or Maximize Backfill		TWSF-1901-3	TWSF Design – Cap
	MINE-2001	Surface Disturbance	Black Bird Mine Site	BMS-2100	Adjacent CERCLA Concerns
	MINE-2002	Agency Project Administration		BMS-2100-1	Adjacent CERCLA Concerns – Don't Impact CERCLA Cleanup
	MINE-2003	Project Infrastructure		BMS-2100-2	Adjacent CERCLA Concerns – Consider BMSG Impacts
	MINE-2004	Geomembrane Liners		BMS-2100-3	Adjacent CERCLA Concerns – Plan will Jeopardize BMSG Cleanup

TABLE D-2. Comment Codes for Comments Received on Idaho Cobalt Project Draft Environmental Impact Statement (continued)						
Subject Category	Category Code	Topics Covered	Subject Category	Category Code	Topics Covered	
Black Bird Mine Site (cont.)	BMS-2100-4	Adjacent CERCLA Concerns – Water Treatment	Miscellaneous (cont.)	MISC-2200-8	Miscellaneous – Firearm Policy	
	BMS-2100-5	Adjacent CERCLA Concerns – Sediment		MISC-2200-8	Miscellaneous – Firearm Policy	
	BMS-2100-6	Adjacent CERCLA Concerns – Inadequate Description				
	BMS-2100-6	Adjacent CERCLA Concerns – Cleanup Efforts Will Not Be Impacted				
Miscellaneous	MISC-2200-1	Miscellaneous – Protect Environment				
	MISC-2200-2	Miscellaneous – Cobalt Need and Use				
	MISC-2200-3	Miscellaneous – Lighting				
	MISC-2200-4	Miscellaneous – Wilderness				
	MISC-2200-5	Miscellaneous – Support Natural Resource Development				
	MISC-2200-6	Miscellaneous – Mancamp				
	MISC-2200-7	Miscellaneous – Oppose Mine				

The following are the individual coded comment items from the public comments on the Idaho Cobalt DEIS with the agency response to each comment.

GEOLOGY

Comment Code	Letter No.	Comment Subject
GEO-100	115	Geology and Mineral Resources

Comment: Errors and omissions in the description of Alternative II. Chapter 2, incorrect mineral resource description. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Incorrect mill recovery rate. (115)

Response: Editorial Correction. (115)

Comment: Errors and Omissions in describing the existing environment - add Congressional reservation of a portion of FCRONR for cobalt production. (115)

Response: A description of the Congressional reservation related to the Frank Church River of No Return Wilderness (FCRNRW) has been added to the discussion. (115)

Comment: Errors and omissions in the impact discussions - incorrect ICP ore reserves. (115)

Response: The June 2006 Plan of Operations states "There are 2.57 million tons of cobalt\copper reserves and resources...". The 3.78 million ton figure in the DEIS represents measured, indicated and inferred resources. The 2.57 million ton figure in the June 2006 Plan of Operations is the total measured and indicated resources. A Formation Capital Corporation press release dated September 21, 2006 announced a new measured and indicated resource calculation of 2.654 million tons based on new drilling results. The press release also updated the inferred resources to 1.122 million tons. (115)

Comment: FS acknowledgement of geologic probability that ore reserves will be expanded and additional waste disposal capacity needed. (115)

Response: Although the likelihood of finding additional cobalt/copper mineralization in the area of ICP's claims is high, the economics of mining those reserves is difficult to predict. The selection of a smaller TWSF facility in Agency Alternatives IV and V is intended to provide the required range of alternatives considered in the NEPA analysis and provides storage for the identified reserves. The alternatives are presented in such a fashion that selection of another option for the TWSF size would be possible in the Record of Decision. (115)

Comment Code	Letter No.	Comment Subject
GEO-101	110	Earthquake

Comment: The revised DEIS needs to describe how maximum probable earthquake estimates have been calculated and engineer the facility to withstand such an event for each stage of operations. (110)

Response: Earthquake design elements have been addressed in the design documents submitted by FCC and in a technical report titled Idaho Cobalt Project Geotechnical Environment (listed in Appendix A of the DEIS) that addresses the seismic design issue. In summary, this report explains that the International Building Code (IBC) shows the site to be within Seismic Zone 2, a zone of moderate seismic activity commonly called the Intermountain Seismic Belt. This report presents the existing data that is available for making predictions of seismic activity at the site and lists confidence or probability levels from 1 in 500 years to 1 in 5000 years for a range of peak seismic accelerations. Formation Capitol's stated design standard is the 1 in 500-year earthquake.

Forest Service Handbook 7109.21 does not provide specific seismic standards for mine waste dumps, but does require consideration of the critical pseudo seismic coefficient and the maximum credible earthquake in slope stability analyses. Maximum credible earthquake (MCE) estimates are not probabilistic but are deterministic, meaning that there is no way to express a "confidence level" or probability associated with their use. The MCE has not been calculated for this site because the applicable site geotechnical standards, which are listed in the technical report, are not compatible with a deterministic approach to design. For instance, the IBC includes detailed seismic standards for design of most building and facility structures that may be contemplated for the site, but IBC procedures do not make use of the MCE. For other structures at the site, such as hillside cuts or tailings piles, the applicable design standards for this project recommend the use of conservative pseudo seismic coefficients and factors of safety for design in lieu of the MCE.

Consistent use of the seismic standards contained in the IBC for design of mine buildings and facilities and the use of recommended pseudo static coefficients for design of earthen slopes will ensure that site facilities will withstand seismic forces safely during each stage of operation. (110)

Comment Code	Letter No.	Comment Subject
GEO-102	110	Mineral Rights

Comment: Violation of Organic Act, FLPMA, and Forest Service mining and special use regulations; incorrect assumptions of mining rights. (110)

Response: The ICP will not be required to obtain a right-of-way across public land for its associated facilities. The scope of the Forest Service special use regulations at 36 CFR 251.50 apply to uses of National Forest System lands except those authorized under other Forest Service authority, such as the minerals regulations at 36 CFR 228. The regulation at 36 CFR 228.5 requires operations to be conducted in accordance with an approved plan of operations. "Operations" is defined at 36 CFR 228.3 as "all functions, work and activities in connection with ...mining or processing of mineral resources, and all uses reasonably incident thereto, including roads...regardless of whether said operations take place on or off mining claims." Accordingly, the Forest Service has the authority to approve in the plan of operations all of the activities and facilities associated with mining, and is not required to grant permanent rights-of-way or easements for off-claim development.

The Secretary's special use regulations at 36 CFR 251, Subpart B exclude activities authorized under mining regulations at 36 CFR 228 Subpart A. In accordance with §228A regulations, facilities

reasonably incident to mining operations are authorized through approval of the Plan of Operations, and therefore a special use authorization is not required. (110)

Comment Code	Letter No.	Comment Subject
GEO-102-1	108, 110	Mineral Rights – Claim Validity

Comment: The FS should examine the validity of the mining claims; this assessment must include all present or future environmental protection, mitigation and reclamation costs. (108)

Response: The ICP mining claims are located on National Forest System lands that are currently open to entry and appropriation under the Mining Laws. There is no requirement under Federal laws or regulations to conclusively determine validity of mining claims before approving a proposed plan of operations on lands that are not withdrawn from mineral entry. The purpose of a validity examination would be to determine whether or not there was a discovery of a valuable mineral deposit on the claims. A valuable mineral deposit exists where minerals of such character have been found which a person of ordinary prudence would be justified in further expenditure of labor and means, with reasonable prospect of success, in developing a valuable mine. Idaho Cobalt's willingness to make substantial investment in development of a mine, based on exploration data that has been produced to date, is prima facie evidence that the test for discovery of a valuable mineral deposit has been met, and that these are valid mining claims. Further, a plan of operations may also be approved on unpatented mining claims on lands that are open to entry under the Mining Laws for exploratory work prior to the discovery of a valuable mineral deposit, or even prior to identification of any locatable mineral deposit at all. (108)

Comment: FS needs to perform validity assessment for FCC mining claims. (110)

Response: Although the US has the authority to examine unpatented mining claims to determine their validity at any time, the results of a mining claim validity exam on unpatented mining claims located on National Forest System lands open to mineral entry would have little or no bearing on a Forest's non-discretionary obligation under the 36 CFR 228 Subpart A regulations to process the proposed plan of operations. No law or Forest Service regulation supports a policy that plans of operation for lands open to mineral entry can only be processed where they involve mining claims determined to be valid under the 1872 Mining Law. (110)

Comment Code	Letter No.	Comment Subject
GEO-103-1	27, 166	Rock Characterization & Geochemistry – As

Comment: Have arsenic and iron components of ore been accounted for? Must assume that ARD will be produced. Need to bond for operational and long-term water treatment. (27)

Response: Geochemistry and acid-generation characteristics of ore was determined through geochemical testing as described in the Geochemistry section of Chapter 3 of the DEIS. Geochemical testing characterized the arsenic and iron contents of ore. All alternatives address the potential for ARD through a variety of control and mitigation measures including operational and long-term water capture and treatment. Bonding for all aspects of mine reclamation and closure would be required. (27)

Comment: What is source of arsenic and is it being considered. (166)

Response: Concentrations of arsenic in groundwater and surface water have been monitored routinely by FCC and BMSG as described in Chapter 3 of the DEIS and in the WRTR. Concentrations of dissolved arsenic are generally low in surface water and groundwater. Elevated concentrations of arsenic can occur in sediments as the result of both natural mineralization and historic mining at Blackbird as described in Section 3.7.3 of the WRTR. (166)

Comment Code	Letter No.	Comment Subject
GEO-103-2	110, 113, 115, 154	Rock Characterization & Geochemistry – ARD

Comment: Need thorough evaluation of material geochemistry and assessment of buffering capacity and ARD potential. (110)

Response: The information requested is contained in the Water Technical Report (Hydrometrics, 2006), which supplements the DEIS and is included in the administrative record. For example, Appendix B to the Water Technical Report contains an extensive discussion of the ICP geochemical testing program. Test results are described in detail and conclusions about ARD and metal leaching risk are described in detail. Additionally, the Water Technical Report contains detailed analysis of potential impacts to surface and groundwater resources downgradient of the proposed mine. Finally, Appendix A to the Water Technical Report contains a detailed description of the modeling approach and the specific predictive model used to assess potential impacts from the mine. Models such as the Dynamic Systems Model used to assess impacts from the ICP are site specific. Consequently, their application at other mines is not relevant since the accuracy of the model is dependent on the model design, implementation, and input assumptions used for the ICP. These values are unique to this mine. The EIS team has endorsed the concept of continuing to validate the predictive models as monitoring data is collected from the operational mine to better assess and improve model validity, and to re-visit post-closure model predictions. (110)

Comment: Need thorough evaluation of material geochemistry and assessment of buffering capacity and ARD potential - acid mine drainage concerns. (110)

Response: The Agencies agree that there are technical challenges faced by the ICP to adequately mix alkaline amendments with slash material underground. For this reason the DEIS required supplemental studies to be conducted during the early stages of mining. These studies will need to develop, demonstrate, and measure the performance of alkaline addition and blending to the satisfaction of the regulatory agencies. If adequate blending cannot be achieved, then other control technologies will have to be developed. It is important to remember that the alkaline amendment process is a redundant control technology that supplements to containment of load accomplished through the groundwater pumpback and water treatment systems.

There is a trade-off between maintaining a separate waste rock disposal area and commingling the waste rock within the tailings. A separate waste rock pile makes it easier to locate and treat or remove reactive waste rock if it causes environmental problems. However, commingling waste rock will greatly reduce the long-term acidification potential by reducing the supply of oxygen. A balance of these two measures would be to maintain a separate waste rock disposal “cell” but to encapsulate the cell with tailings. With any waste rock placement strategy, the primary means of environmental protection is the liner that will be constructed beneath and above the pile.

The operating plan will include the requirement that the waste rock pile will be regularly monitored for potential releases of metals or acidity, and the facility has been engineered to reduce or prevent releases of to the environment. Waste rock will not be used as general fill material at the ICP site.

The TWSF is not built to resemble original contours because this design approach conflicts with the primary purpose of the facility to reduce the potential for release of contaminants to the environment. If the facility were built to simulate original contour, it would need a much larger area to accommodate the requisite storage capacity resulting in more potential influx of meteoric water and more disturbance of natural features such as wetlands. (110)

Comment: Before evaluating the various alternatives, it is important to understand the water quality impacts that will occur if there is no mitigation or if the proposed mitigation is not successful at the ICP. The DSM used by the USFS was used to evaluate the impact of the ICP on Big Deer Creek and Panther Creek assuming the mitigation measures were ineffective. All the input values were unchanged except the groundwater capture efficiency was set to 0 percent and the pH in the Ram Slash and Backfill was set to 5.5, which is representative of moderately acidic conditions. A pH of 5.5 is less acidic than the pH 4.5 drainage that was observed within the 6930 portal at the Blackbird Mine. A pH of 5.5 or lower could be reached within the ICP mines if the proposed mitigation (amendments of the backfill) is unsuccessful. (113)

Response: We agree with the Golder Report's prediction that copper would reach the levels projected in their analysis **if the assumptions are correct**. However, we strongly disagree with the way that they have characterized their assumptions for three reasons. First, Golder implies that failure of **either** mitigation measure (e.g. the alkaline amendments or the solution recovery systems) would result in failure to protect water quality. This is untrue. **Both** systems would need to utterly fail for their analysis to be correct. The mitigation measures were designed to be redundant, providing a higher degree of protection than inter-dependent measures would.

The EIS team believes that the pH will be substantially higher than 5.5 in the underground mines. A pH of 5.5 would result in 8.9 mg/L predicted copper in the mine water. We stand by our assertion that pH in cemented tailings will be closer to 11 (Figure A) during mine life and will decrease to the range of 8.0 to 9.0 in the long-term owing to the cement addition to tailings (Figure B). Additionally, we believe that pH in slash will be closer to 8.5 during operation and 7.5 to 8.0 post closure because of alkaline amendment of slash. The resulting predicted copper levels in the underground mine (Figure B) range from 0.014 to 0.029 mg/L in backfilled tailings areas and are around 0.01 mg/L in slash zones. The overall predicted copper in the underground mine (when mine caused loads are added to background concentrations) are around 0.045 mg/L. These copper levels are more than 100 times lower than the levels predicted by Golder and are even higher than copper levels measured in the 6930 adit seep (<0.01 mg/L copper).

The groundwater recovery system is unlikely to fail as suggested by Golder because in Alternative IV, groundwater recovery would be provided by three separate recovery systems, if necessary. If the bedrock groundwater recovery system is unable to collect the requisite loads, then a second alluvial groundwater/surface water recovery system located in the lower Bucktail Creek drainage would be used to collect sufficient loads to off-set any releases from the ICP. If neither of these systems can be proven effective then the mines could be maintained in a dewatered condition post-mining. Thus, Alternative IV provides an essentially failsafe approach to post-mining groundwater containment. Under the proposed Alternative IV, the ICP essentially becomes a partner with BMSG in cleaning up Big Deer and Panther Creek, rather than a protagonist as suggested in the Golder analysis.

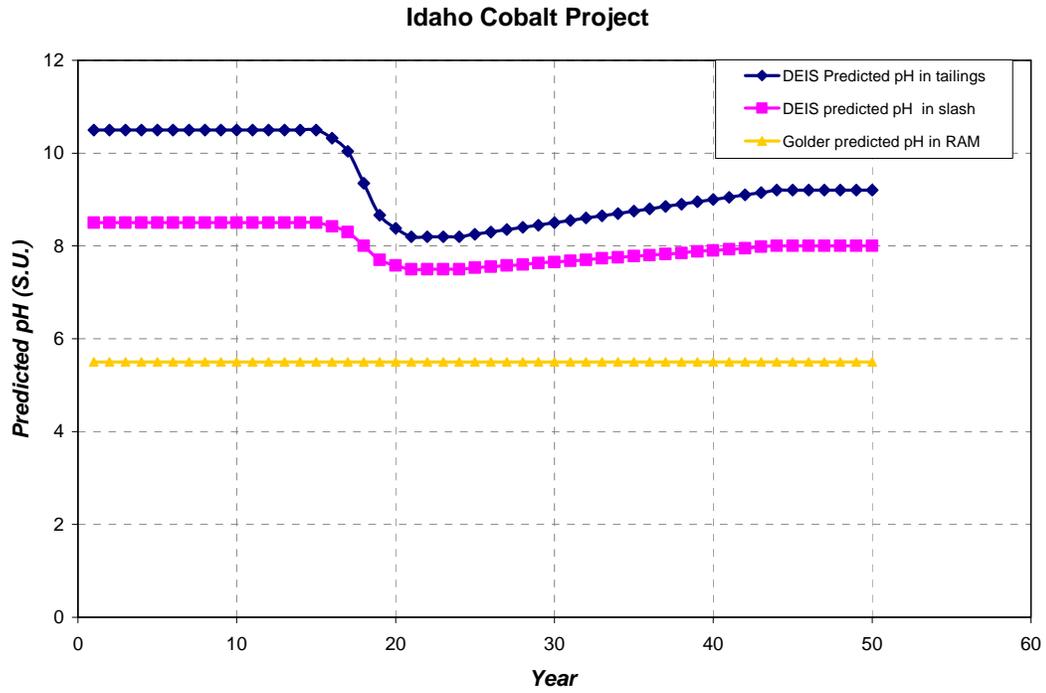


Figure A. Range of predicted copper from DEIS and Golder.

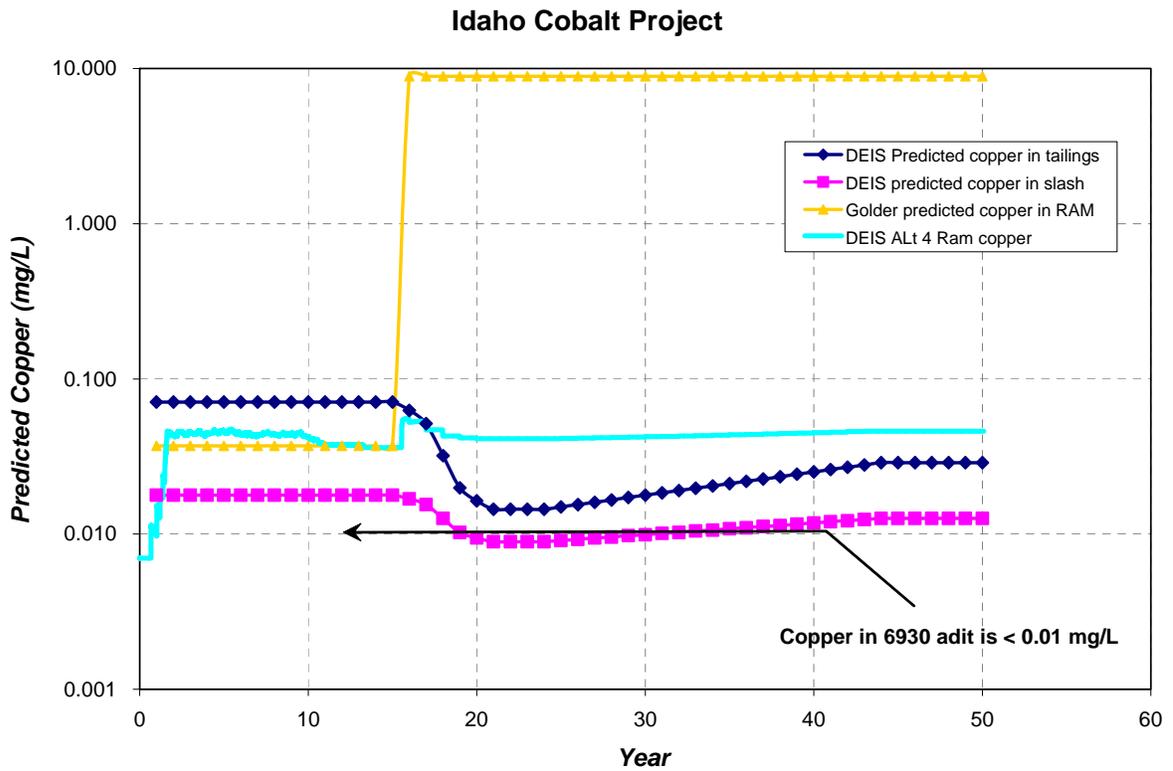


Figure B. Range of predicted copper in the Ram mine from DEIS and Golder.

Additionally, Golder erred when they performed this analysis using the ICP DSM. The ICP DSM was conducted as a stochastic analysis, meaning that a series of 30 individual model runs were performed to represent the range of conditions that may occur post-closure. Taken as a group, the model results depict the range (and probability) of potential impacts to receiving waters. Golder used a single iteration (realization 12) of the model out of this set of 30 model runs and used the single iteration as the basis for their analysis. Golder then mistakenly purports that the results from this sole run represent the expected water quality that would result if their assumptions were correct. In reality, this run represents one small portion of the range and distribution of potential outcomes if their assumptions prevail, and the results therefore can not be construed to be the expected case result even if their assumptions are correct.

Later in section 2.4 of the Golder Report they discuss five reasons why they believe that alkaline amendments will fail to control the pH in the mine. First, they assert that adequate mixing will not occur between either the tailings or slash and amendments. We concur with Golder that the degree of mixing is critical to the success of the approach. For cemented tailings, an intimate degree of mixing is readily achieved because of the fine particle size and moist condition of the tailings, which we believe will adequately insure pH control. For slash, mixing is more technically challenging. This is why Alternatives III, IV, and V require a definitive study, to be performed using actual slash at the site to develop and demonstrate successful pH control (see page 2-56 DEIS and Section 5.6.1 Water Technical Report). If the proponents cannot demonstrate successful pH control, then the regulatory agencies can require other measures to ensure environmental protection.

Golder also asserts that groundwater will bypass the underground mine void and will flow only within the unamended “damaged rock zone.” The DSM model results indicated that the chemical load that develops in the zone of fractured rock surrounding the mine void is very small in comparison to loads contained in backfilled materials. Consequently, we believe that the residual alkalinity contained in mine water will neutralize any contributions from this zone. However, if this is not the case, then the groundwater collection system provides a redundant means of protecting downgradient water quality.

Golder cautions that amendments may be consumed prior to providing the buffering required in the spot-closure period. The Forest Service will require use of amendments that have sufficiently low solubility and reserve buffering capacity to ensure its longevity. Use of an appropriate design factor of safety will account for uncertainty in measured acid generation risk in the slash material.

We also agree with Golder that alkaline amendments do not control all metals, however, the empirical equations developed by the EIS team clearly demonstrate this principal for elements such as arsenic. Therefore, Golder’s comment was clearly anticipated and addressed by the EIS team in their analysis of impacts from the ICP.

Finally, Golder asserts that the DSM is invalid because of the sensitivity of metal concentrations to pH. One of the values of a predictive tool such as the DSM is that it identifies the factor or factors that most strongly control the behavior of a complex system such as the ICP. Sensitivity analyses performed by the EIS revealed the importance of pH on metal behavior. It is precisely for this reason that the EIS team required alkaline amendments that are aimed at controlling the pH in the underground mine through buffering reactions. Therefore, rather than being a deficiency of the DSM, the fact that the importance of pH was recognized in fact is a strength of the DSM, and insures that the regulatory agency will focus their monitoring plan on the most important aspects of the mine.
(113)

Comment: Unsupported assertions - explain release of stored acidity. (115)

Response: The phrase used by the EIS team to describe the dissolution of accumulated reaction products from the mine as “stored acidity” may be a misnomer of sorts. The primary control on pH in the amended slash is the dissolution of sulfate ion. In a system that is controlled by the solubility of calcium carbonate, the equilibrium pH theoretically approaches 8.3 (at atmospheric carbon dioxide

levels). If sulfate is abundant enough for gypsum to also precipitate from solution, the calcium ion concentration is depressed, which causes the equilibrium pH to decline to around 7.5, the level projected to occur during the early stages of mine flooding. As sulfate is removed by rinsing, the equilibrium pH will tend to rise toward 8.3 in the long-term. This is exactly the shape of the pH curve proposed by the EIS team. The pH controls described above are consistent with an alkaline pH environment and are independent of NNP levels, unless the NNP approaches zero. At low NNP levels, very different geochemical processes would tend to control the pH at more acidic levels.

Conversely, the pH in the cemented tailings zone is initially dominated by soluble calcium aluminates and silicates (pH around 11 to 12), but as the cement cures, the system will off-gas carbon dioxide and will approach more of a calcium carbonate controlled pH. The gradual transition from very alkaline pH to a typical calcium carbonate pH endpoint was demonstrated in the amended tailings kinetic test conducted by Telesto at the request of the EIS team. Again, the proposed pH trends in backfilled tailings are consistent with this process.

Contrary to the comment, there are clear geochemical mechanisms that will tend to control the pH in the approximate pH range described in the DEIS. However, a variety of factors may slightly alter the pH environment. For example, elevated levels of carbon dioxide will shift the system toward a lower pH. Kinetic controls may limit the degree to which governing reactions occur, which may similarly influence the pH domain. This uncertainty is the reason that an envelope of pH conditions (e.g. ± 1 pH unit) were used in the stochastic model. (115)

Comment: All mining disturbs the ground and produces impacts on the local water resources. (154)

Response: The EIS team disagrees with this premise, which is the foundation of the assumptions used in the Golder Report. When Golder assumes that mining will inevitably cause impact to the environment, then it is understandable that they would disagree with EIS findings to the contrary. The EIS team endeavored to complete the technical analysis without the sort of bias reflected in the Golder report. The EIS team recognized that mine development has the potential to increase chemical loads in water, however, the EIS team completed technical analysis on mitigation measures that would minimize if not avoid increases in chemical loads to surface water. Additionally, when receiving waters already contain elevated concentrations of copper and other metals, as is the case at the Blackbird site, then opportunities exist for collection and removal of ambient loads. This is the approach relied upon by the EIS team to ensure that adequate chemical load is removed and treated so that the proposed action is protective of water quality in Big Deer Creek and Panther Creek. (154)

Comment Code	Letter No.	Comment Subject
GEO-104	110	Stability/Engineering

Comment: Unstable area; IDWR dam permit required. (110)

Response: There are no impoundments proposed that are of a size that falls under IDWR dam permitting requirements. (110)

SOILS

Comment Code	Letter No.	Comment Subject
SOIL-100	115	Interim Reclamation & Revegetation

Comment: TWSF closure cap, soil balance showing quantities needed and source is needed. (115)

Response: TWSF closure cap soils would be obtained by excavating soils within the proposed facility footprint. An adequate volume of soil is available to construct the proposed cap and design details including a soil balance will be developed prior to construction. (115)

Comment Code	Letter No.	Comment Subject
SOIL-100-1	112	Closure Reclamation & Revegetation – Contaminated Soil

Comment: The DEIS does not discuss whether any of the soils excavated for construction or roads or any other purpose related to the mine operation may be contaminated soil from historic mining operations that may require special handling to avoid increased erosional transport, worker protection, etc. Is it stated explicitly that all soils will remain on-site and not disposed of off-site? If there is a possibility of off-site disposal, would sampling occur to assure the soils were disposed of at an appropriate location? Recommend including a bulleted item for contaminated soils/tailings handling and disposal (Other Mitigation). (112)

Response: The EIS has been modified to include a specific mitigation requirement to address potential disturbance of historic mine waste contaminated with metals from the Blackbird or other historic mines. The ICP would develop a plan to identify and handle any historically contaminated soils encountered while facilities or road upgrades are being constructed, these soils would be disposed of in the TWSF once it has been constructed. Alternatives III-V have been revised to clarify this point. Given the location of the mine facilities and road upgrades relative to the location of historic contaminated soils in the area, it is not anticipated that FCC will encounter any significant quantities of this historic mine waste material. (112)

Comment: The subsection discussing soils in the DEIS should also address the need to have a soils management plan in place. (112)

Response: Soils management is an integral part of the reclamation plan and is addressed in Chapter 2, pages 2-34 and 2-35 of the FEIS. (112)

WATER RESOURCES

Comment Code	Letter No.	Comment Subject
WTR-300	113, 115	Surface Water Quality and Quantity

Comment: DEIS lacks serious analysis of the ICP effects on ESA-listed fish species. (113)

Response: Conceptual models were developed to encompass the hydrologic, climatic, geochemical and mine facility processes into a single, stochastic dynamic systems model (DSM). The model was used to evaluate the storage and process pond capacities and the cumulative effects of mining on

water flows and water chemistry within the Panther Creek watershed. Throughout the development of this model, water quality regulatory agencies (EPA and IDEQ) have provided valuable input to the design, application, and interpretation of model results with the EIS team. Output from the model was used to predict changes in water quality such as daily copper concentration. The output expressed a range of possible results from highest to lowest to describe predicted values. This range in values included model simulations referred to as “expected case” or 50th percentile results, “best case” or 10th percentile case, and “worst case” or 90th percentile case. The results predict that surface water quality within the Panther Creek drainage will not violate cold water aquatic life standards nor will it interfere with the attainment goals of BMSG. However, the DEIS did identify copper concentrations (worst case) that with ground water capture may not be sufficiently mitigated in Alternative II. Furthermore, an NPDES permit will be required for all action alternatives. Draft discharge limits have been established as end-of-pipe limits and most constituents (metals) have been set for protection of cold water aquatic life standards to protect against adverse effects due to human activities (See DEIS Tables 4-4 and 4-5).

The DEIS does acknowledge the possibility of adverse impacts associated with Alternative II especially in the 90th percentile (worst case) condition for Big Deer Creek. Text has been added under Alternative II that states that if water quality criteria (for copper) increase that rainbow trout and westslope cutthroat trout would likely avoid Big Deer Creek near South Fork Big Deer Creek confluence. It has also been stated the should this condition develop and proposed mitigation measures cannot meet water quality standards this alternative has the potential to have an adverse direct impact on fish and Forest Service sensitive species in Big Deer Creek. (113)

Comment: FS should withhold ICP approval. (113)

Comment: ICP would violate Federal and State anti-degradation requirements, streams have no excess assimilative capacity. (113)

Comment: IDEQ's draft ICP certification is arbitrary and unlawful. (113)

Response: Releases that have caused and continue to cause impairment to South Fork Big Deer and Big Deer Creeks related to historic mining activities are being addressed under separate CERCLA authority. The USFS will ensure that adequate financial assurance to cover costs of operating and maintaining the TWSF, reclamation of mine facilities and long-term water treatment should ICP's mining activities have the potential to further impact the impaired stream reaches. As described in Chapter 1 under the heading Idaho Department of Environmental Quality (IDEQ), additional metal load to the already impaired streams is not allowed under Idaho water quality regulations.

While an impaired stream may be said to have no excess assimilative capacity, the IDEQ believes the antidegradation provisions of the Water Quality Standards can still be met. This will be accomplished by the “pound-for-pound” removal of any copper additions from NPDES activities from other copper impacted areas in the Big Deer watershed under influence of the Idaho Cobalt Project. The framework for these actions are outlined as a condition in the §401 certification. (113 for all three above)

Comment: Approval of the ICP without a specific, demonstrated and binding plan to avoid water quality and other environmental impacts would violate FS, EPA and IDEQ requirements and thus would be unlawful. (113)

Response: The various design components, monitoring and mitigation measures incorporated in the agency alternatives are intended to reduce environmental impacts and the risk of such impacts by the proposed mining operation. All design features, plans and mitigation measures included in whatever alternative is selected in the Record of Decision will be required to be incorporated into the ICP Plan

of Operations. All of the components of the Plan of Operations are enforceable and must be implemented. The key design components included in the preferred alternative intended to protect water quality and to avoid adverse impacts to BMSG's activities are intended to provide multiple layers of protection. While both the backfill amendment and the groundwater capture and treatment systems may each alone be effective in achieving target water quality goals, the combination of systems is intended to assure that if one system does not function as predicted that there is a backup. Additionally, the application of the DSM modeling tool specifically looks at a range of effectiveness of key operating systems. (113)

Comment: Section 7 consultation process and environmental baseline. (113)

Response: The basis for the conclusions regarding avoidance of adverse impacts is described in the DEIS and the Water Resources Technical Report that is included by reference in the DEIS.

Pre-ICP (i.e., current) impacts on fish are described in the Aquatic Baseline condition Technical Report (Kuzis, 2005) and the Biological Assessment (Kuzis, 2007). These impacts are summarized in pages 3-56 through 3-60 of the DEIS. (113)

Comment: Errors and Omissions in describing the existing environment - assessment of gaining and losing reaches of a stream/alluvium flow systems. (115)

Response: Increases in streamflow are evidence of gaining streams. The agencies agree that surface water flow increases by themselves would not necessarily indicate gains or losses to the alluvial groundwater system. (115)

Comment: Errors and Omissions in describing the existing environment - seeps in Bucktail drainage likely affected by ore bodies before mining. (115)

Response: The effects of ore bodies on water quality absent mining is described in the DEIS (see for instance page 3-23 where it states that "[spring] water quality is naturally affected by proximity to the Ram ore body"). (115)

Comment: Unsupported assertions - unfounded conclusion re: unavoidable adverse effect of sulfate on fisheries. (115)

Response: Sulfate was not identified in the chapter 4 fisheries sections as an adverse impact and the sentence containing the reference to sulfate will be removed in the fisheries section under "Unavoidable Adverse Impact" pages 4-115, 116. (115)

Comment: Errors and omissions in the impact discussions - SO₄ and Agricultural Water Supply. (115)

Response: Tables and water quality standards in the DEIS match the draft NPDES permit and/or the accompanying Fact Sheet that was current at the time of the DEIS. (115)

Comment: Errors and omissions in the impact discussions - Ram Spring, no flow vs exceedance of WQ standards, Tables 4-8 and 4-9, inappropriate indicators. (115)

Response: Table has been modified to clarify impacts to Ram spring and attainment of water quality standards. Please see footnote (3), which clarifies that water quality standards do not apply to

Bucktail Creek due to the Use Attainability Analysis. Footnote has been modified to clarify that values are shown for comparison purposes only. (115)

Comment: Errors and omissions in the impact discussions - Alt. II cumulative effects re: low probability that could prevent attainment of WQ standards in Big Deer Creek. (115)

Response: As stated on page 4-95 (DEIS), Alternative II water quality impacts have the potential to become significant. This is discussed in the Direct Effects sections on pages 4-31, 4-32 and 4-33 of the FEIS. (115)

Comment: Errors and omissions in the impact discussions - Sediment section amended to include a discussion of reduction of sediment load re: Alt. II. (115)

Response: This section does say that “sediment yields will be reduced by 12 percent below baseline levels in Bucktail Creek.” It goes on to say “road density in Bucktail Creek will decrease in both the short and long-term due to road reclamation during the construction and post-mining period.” A statement has been added to acknowledge the upgraded road surfaces along the access route. (115)

Comment: Errors and omissions in the impact discussions - Correct Alt. II sediment addition statement in fisheries text. (115)

Response: Text has been revised for clarification as requested. (115)

Comment: Reference is made to projected copper concentrations in Panther Creek and that a potential increase would not be “measurable”, but could contribute to an exceedance of a WQS. If the increase is not measurable, it is not clear how an exceedance would be measurable. Please explain. (115)

Response: It is well established that the cumulative impacts of multiple pollution sources can sometimes cause an exceedance of water quality standards even though the individual sources do not cause exceedances individually. This is the basis of the federal Total Maximum Daily Load limitations. Similarly, cumulative impacts can be measurable even though individual impacts are not measurable individually. (115)

Comment: Blackbird Related Issues - Cleanup uncertainty/ICP impact assessment unfair. (115)

Response: The Water Resources Technical Report for the ICP (p. 4-4) recognizes there is uncertainty associated with cleanup activities and states that predictions of stream concentrations would be understated if the Blackbird cleanup doesn't meet expectations. The comment underscores the reason enhanced monitoring of the ICP activities will be included as mitigation in the approved plan of operations. The DEIS presents an analysis of effects and doesn't make judgments about the ICP or the ongoing BMSG cleanup. (115)

Comment: Blackbird Related Issues - ICP reduction in total copper load in Big Deer Creek prior to construction of BT-5 remedy. (115)

Response: Text (page 4-31) has been modified to clarify Blackbird impacts and ICP effects on copper load. (115)

Comment: Blackbird Related Issues - Continued WQ impact to Big Deer Creek is caused by Blackbird Mine pollution. (115)

Response: Text in the referenced paragraph and throughout Chapter 4 has been modified to more clearly identify the causes of existing and predicted future water quality conditions. (115)

Comment: BMSG diminution of flows in Big Deer Creek drainage. (115)

Response: The referenced section clearly states that “Blackbird cleanup actions are also expected to result in long-term decreases in streamflow in Bucktail Creek and South Fork of Big Deer Creek due to continued pumping and transport of groundwater and surface water...”. Determining the validity of water rights are beyond the scope of the EIS analysis as described on pgs 1-11 of the FEIS. (115)

Comment Code	Letter No.	Comment Subject
WTR-300-1	74, 110	Surface Water Quality and Quantity – Hardness Correction

Comment: Permit needs to utilize hardness values of 10 mg/l with regard to hardness dependent metals. (74, 110)

Response: The permit accurately reflects Idaho's EPA approved WQS at IDAPA 58.01.02.210.03.c.i: “For purposes of calculating aquatic life criteria for metals from the equations in Subsection 210.02, the minimum hardness allowed for use in those equations shall not be less than twenty-five (25) mg/l, as calcium carbonate, even if the actual ambient hardness is less than twenty-five (25) mg/l as calcium carbonate.” (74, 110)

Comment Code	Letter No.	Comment Subject
WTR-300-2	108, 115	Surface Water Quality and Quantity – Inadequate Analysis

Comment: The Tribe is not comfortable that potential impact from heavy metals has been adequately addressed in the EIS, nor adequately mitigated in the POO; potential to significantly reduce successful recruitment of fish species, potential to contaminate fish that currently reside in this area. (108)

Response: The Forest Service and EPA recognize the Tribe's position and interest with regards to fish consumption. The analysis of the ICP discharge (see Water Resources section of Chapter 4) predicts a decrease in copper and cobalt loads to the downstream fisheries during and following mining as a result of water treatment. Long-term improvements in water quality associated with the Blackbird cleanup should have a beneficial effect on fish and fish consumption.

The potential for leaching of heavy metals and ARD was one of the major concerns addressed by the EIS team. For example, in the first paragraph of Appendix B to the Water Technical Report states, “The geochemistry of mined rock material is one of the critical characteristics of the mine that has the potential to influence the environmental impacts associated with the ICP.” There is extensive analysis of the potential for elevated levels of heavy metals to exist in mine drainage or for ARD to occur. An extensive geochemical testing program (Chapter 3 & 4, Appendix B, Water Technical Report) was designed and implemented for the DEIS. Testing concluded, for example (Page 9, Appendix B, Water Technical Report), that “Overall, samples were very low in sulfide sulfur (Figure 9) with 50 % of the samples having no detectable sulfur (< 0.01 weight %) and 75 % of the samples with

less than 0.1 %. Sulfur concentrations were log-normally distributed. The highest sulfur levels in the Ram and Sunshine, which had similar sulfur distributions, were less than 2 %. Only about 5 % of the samples had more than 1 % sulfur, with many of these samples representing ore zones. The ANP of ICP samples (Figure 9) was also very low with 70 % of the samples having ANP values less than 3 kilograms/tonne (kg/t). This level of ANP would be neutralized when about 0.1% pyritic S oxidizes. About 1 % of the samples came from zones that had carbonate mineralization and yielded ANP levels in the range of 10 to 100 kg/t.” Additionally, on page 18, Appendix B, the EIS team stated, “Extensive geochemical testing conducted by FCC consultants (Telesto 2004) indicated those samples with more than about 0.15 % pyritic sulfur and a negative NNP are potentially acid generating (PAG). In this evaluation, a threshold pyritic sulfur level of 0.2 % and a negative NNP appeared to correspond to potentially acid generating waste rock. Overall, about 17% of 239 rock samples collected from the Ram and Sunshine deposits (Figure 15) were PAG while the remaining samples were either weakly acid neutralizing (80%) or uncertain (3%). All PAG samples were very low in ANP meaning they have little ability to neutralize acidity, and could become acidic quickly if there are sufficient sulfides to create acidic conditions. Kinetic testing, however, showed that chalcopyrite and cobaltite tends to oxidize slowly under oxidizing conditions. Tailings samples were non acid-generating according to the Sobek static test results.”

Despite the relatively low risk of ARD, several mitigation measures were employed to insure that release of ARD and metals were minimized. Among these measures were capture of outflow from the underground mines, perpetual water treatment (as needed base on monitoring results), commingling of tailings and waste rock, and addition of alkaline amendments to underground slash. (108)

Comment: Other - Alt II changes in WQ in Big Deer Creek are based on flawed analysis in subsequent sections. (115)

*Response: Please note that the referenced paragraph states: “It is **not** [emphasis added] likely that the model-calculated increase in copper would be measurable or would cause an exceedance of the water quality standard or cleanup goals in Panther Creek if it were to occur.” There is no contradiction in this statement, contrary to what is implied by the comment.*

It is well established that the cumulative impacts of multiple pollution sources can sometimes cause an exceedance of water quality standards even though the individual sources do not. This is the basis of the federal Total Maximum Daily Load limitations. Similarly, cumulative impacts can be measurable even though individual impacts are not. (115)

Comment Code	Letter No.	Comment Subject
WTR-300-3	108	Surface Water Quality and Quantity – Downstream Impacts

Comment: Tribe is particularly concerned about ICP and the likely impacts to water quality, fish species and human health; not just in project area but for a substantial distance downstream. Due to the inherent nature of hard rock mining, acid mine drainage will ultimately impact fish, animals, and plants not just in the project area, but also for a substantial distance downstream. (108)

Response: Although some hard rock mines generate acid mine drainage, acid mine drainage is not an inherent nature of hard rock mines. The potential for acid mine drainage from the ICP is addressed in the DEIS and in Appendix B of the Water Resources Technical Report. Alternative IV employs stringent water quality controls and therefore the potential for acid mine drainage impacts in and downstream of the project area are low. (108)

Comment Code	Letter No.	Comment Subject
WTR-300-4	110, 112	Surface Water Quality and Quantity - TMDL

Comment: 303(d) arsenic. (110)

Response: This comment is based on the assumption that the NPDES permit uses the wrong standard for arsenic. The permit accurately reflects the Idaho water quality criteria for arsenic. The permit limits will ensure compliance with the correct criteria set forth in Idaho's WQS.

The arsenic standard reported in Table 4 of the EPA fact sheet for the draft NPDES permit (50 µg/L) correctly reflects the arsenic human health criteria for recreational uses set forth in the Idaho WQS at IDAPA 58.01.02.210.01. Contrary to WMAP's assertion, Idaho's 50 ug/L criterion is effective for CWA purposes. The Idaho arsenic criteria were properly adopted under the Idaho Administrative Procedures Act and were submitted to EPA for approval as required by the CWA eight years ago, in April of 1999. This was before the May 30, 2000 "Alaska ruling". CWA regulations make it clear that water quality standards adopted and submitted to EPA before May 30, 2000 are applicable WQS for CWA purposes, unless or until EPA promulgates a more stringent standard [40 CFR 131.21(c)]. Consequently, the arsenic criterion is effective for CWA purposes, including the ICP permit. (110)

Comment: Page 3-10: This section should discuss more specifically the Idaho 303(d) listings in the surface waters in and around the ICP, including what constituents and standards are the streams listed as impaired for and what beneficial uses are not being attained. Likewise, if any state determinations have been made as to groundwater quality, it should be discussed too. (112)

Response: Table 3-3, Page 3-20 summarizes 303(d) listed streams in and around the ICP. No state determinations as to groundwater quality have been made. (112)

Comment Code	Letter No.	Comment Subject
WTR-300-5	110, 113	Surface Water Quality and Quantity – Unacceptable Impacts

Comment: The FS and EPA cannot approve ICP re: water quality violation predictions. (110)

Response: Regarding the exceedance of the drinking water standard for sulfate discussed on page 4-41, Alternative IV will include sulfate treatment if necessary to meet effluent limits established in the final NPDES permit.

Ram Spring - The DEIS says that Ram Spring will exceed the water quality standards for copper and sulfate post-mining. The current information is based on predictive modeling. Actual post-mining effects will be evaluated as information is collected and modeling is refined. If there is an exceedance of criteria based on the updated information, an NPDES permit may be required for the Ram Springs discharge.

Exceedance of the sulfate standard and possible anti-degradation for metals in groundwater is predicted post-mining upgradient of bedrock capture wells. The DEIS concludes that this is not significant because there is no domestic use of groundwater and existing groundwater exceeds standards. (110)

Comment: ICP will have unacceptable adverse water quality impacts. (113)

Response: Commenter correctly interprets the analysis presented in the DEIS that show potentially significant water quality impacts from the proposal as presented by the project proponent. However, the contention that the design components, monitoring and mitigation items contained in Alternative IV contain “serious flaws” in the “supporting science” are not substantiated in the letter or in the supporting document. Analysis of Alternative IV indicates that there would not be serious impacts to water quality in Big Deer Creek or to BMSG's ongoing cleanup actions. (113)

Comment: Absent effective mitigation, copper concentrations in Big Deer Creek would increase to over 50 ppb and concentration of copper in Panther Creek would increase to more than 8 ppb. (113)

Response: If the pH in the underground mines were to decline to 5.5 as assumed by the Golder technical report, and if there was no groundwater recovery employed, and if all metals were transported through the groundwater, alluvium and stream channel systems (as is conservatively assumed by the ICP dynamic systems model developed for the DEIS), we agree that downstream copper levels would increase by the amount described in the Golder report. However, the Agencies disagree with each of the assumptions made by Golder. Namely, the Agencies believe the pH will be substantially higher than 5.5, which would result in 8.9 mg/L predicted copper in the mine water. The Agencies believe that pH in cemented tailings will be closer to 11 (Figure A) during mine life and will decrease to the range of 8.0 to 9.0 in the long-term owing to the cement addition to tailings (Figure A). Additionally, the Agencies believe that pH in slash will be closer to 8.5 during operation and 7.5 to 8.0 post closure because of alkaline amendment of slash waste rock. The resulting predicted copper levels in the underground mine (Figure B) range from 0.014 to 0.029 mg/26L in backfilled tailings areas and are around 0.01 mg/L in slash zones. The overall predicted copper in the underground mine (when mine caused loads are added to background concentrations) are around 0.045 mg/L. These copper levels are more than 100 times lower than the levels predicted by Golder but are even higher than copper levels measured in the 6930 adit seep (<0.01 mg/L copper).

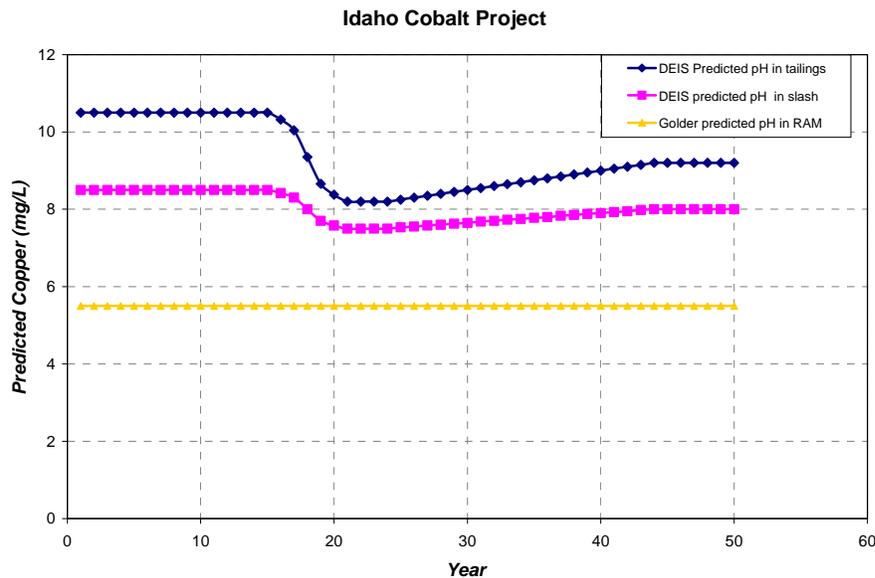


Figure A. Range of predicted copper from DEIS and Golder.

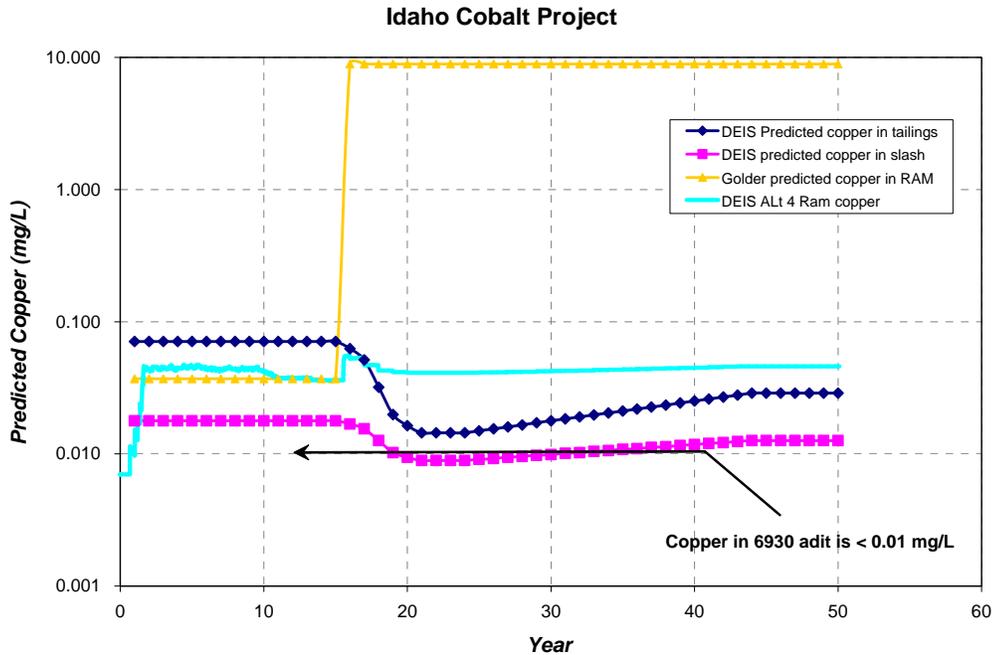


Figure B. Range of predicted copper in the Ram mine from DEIS and Golder.

The assumption made by Golder that no groundwater recovery will occur is entirely unreasonable and inconsistent with the requirements of the Plan of Operations as described in the EIS. The Agencies believe that most or all metal loads in groundwater can be intercepted and treated, if needed, and that even if some loads escaped the containment system, they would be unlikely to travel to the receiving water as was assumed in the model. Therefore, the EIS team adheres to the predictions about predicted copper levels in receiving waters described and documented in the DEIS.

Additionally, Golder erred when they performed this analysis using the ICP DSM. The ICP DSM was conducted as a stochastic analysis, meaning that a series of 30 individual model runs were performed to represent the range of conditions that may occur post-closure. Taken as a group, the model results depict the range (and probability) of potential impacts to receiving waters. Golder used a single iteration (realization 12) of the model out of this set of 30 model runs and used the single iteration as the basis for their analysis. Golder then mistakenly purports that the results from this sole run represents the expected outcome if their assumptions were correct. In reality, this run represents one small portion of the range and distribution of potential outcomes if their assumptions prevail, and the results therefore cannot be construed to be the expected case result even if their assumptions are correct. (113)

Comment Code	Letter No.	Comment Subject
WTR-300-6	112	Surface Water Quality and Quantity – Sediment

Comment: Sediment quality impacts and necessary measures to assure no further degradation or recontamination should be discussed. (112)

Response: Regarding sediment, effects in terms of sediment yield and sediment quality are described for each of the alternatives in Chapter 4 under the sub heading Sediment Yield and Sediment Quality. (112)

Comment Code	Letter No.	Comment Subject
WTR-300-7	16	Surface Water Quality and Quantity –Arsenic

Comment: What do we do with the natural occurring Arsenic? (16)

Response: Concentrations of arsenic in groundwater and surface water have been monitored routinely by FCC and BMSG as described in Chapter 3 of the DEIS and in the WRTR. Concentrations of dissolved arsenic are generally low in surface water and groundwater. Elevated concentrations of arsenic can occur in sediments as the result of natural mineralization and historic mining at Blackbird as described in Section 3.7.3 of the WRTR. Sediment remediation associated with the Blackbird CERCLA action has addressed arsenic and other metals contamination of sediment from the Blackbird Mine. (16)

Comment Code	Letter No.	Comment Subject
WTR-301-1	81, 110, 112, 113, 115, 146	Groundwater Quality, Quantity and Capture – Groundwater Capture

Comment: The pump back wells are good, but exact locations and procedures for discharge into streams may need adjusting to local conditions during implementation. (81)

Response: The comment states: “we believe the proposed treatment systems will not be sufficiently effective at capturing all contaminated groundwater flows” but gives no technical basis for this claim. The DEIS clearly states the potential difficulties in capturing groundwater, particularly from bedrock, and includes the following provisions in response:

- *Based on analysis of groundwater flow through the mine areas, projected general groundwater flow directions downgradient of the mines have been defined;*
- *Before the bedrock groundwater pumpback wellfield approach to groundwater containment as proposed by FCC can be considered for implementation, detailed field testing would be required. This would include installing wells along the proposed wellfield alignment and conducting long-term pumping tests to determine if a reversed hydraulic gradient can be induced between the entire capture well field alignment and Bucktail Creek.*
- *An alternative capture system (lower Bucktail surface water/alluvial groundwater capture system) has been incorporated into the EIS Alternatives IV and V in response to the potential difficulty anticipated with effective groundwater containment through the bedrock pumpback system. This system would be tested during the mine operational phase to verify the achievable capture efficiency.*
- *Additional monitoring wells would be installed in all directions peripheral to the Ram and Sunshine mine workings to monitor groundwater quality north, south, east and west of the mines, and to monitor groundwater drawdown patterns in response to mine dewatering. Groundwater drawdown patterns peripheral to the mines would help identify potential bedrock structures (i.e., the No Name Fault) which may act as groundwater flow conduits, with potential conduits showing a greater level of drawdown.*
- *Text has been added to Chapters 2 and 4 of the FEIS stating that required capture efficiencies for the groundwater capture systems would be significantly less than 100% for Alternative IV and V in order to maintain post-mining metals loading to Bucktail Creek from the Ram and Sunshine areas at pre-mining loading levels; thus making contaminant control through groundwater capture more viable.*
- *If adequate containment of potential groundwater contaminants cannot be achieved due to hydrologic conditions at the two proposed capture systems, or the existence of preferential groundwater flowpaths that would bypass the proposed capture systems (as determined through the operational phase groundwater level and mine inflow monitoring), the mines*

would be maintained in a partially or fully dewatered condition after closure to prevent groundwater outflow (see DEIS page 2-45, last paragraph). This stipulation provides a very high probability that potential contaminant migration through groundwater can be effectively controlled at the ICP mines.

Thus, the statement in the comment that “The agencies should also prepare for the eventuality that additional water interception locations and methods may be required” has already been considered in the EIS process.

Regarding the need for additional groundwater monitoring points, it is agreed that additional monitoring points and hydrologic testing will be required to verify the current hydrogeologic conceptual model and potential contaminant transport pathways prior to closure and reflooding of the ICP mine workings. See responses to WTR-302 and WTR-304.

The comment notes that “monitoring must continue throughout the mining operation and after reclamation.” Water resource monitoring would continue during mine reclamation and after mine closure. The EIS text has been revised to clarify that monitoring would continue after mining ceases. (81)

Comment: What if groundwater flow paths are different than anticipated? (110)

Response: The potential for groundwater flowpaths differing from those predicted in the DEIS, and ramifications of such a scenario, have been incorporated into the DEIS mine planning and impacts analysis. The potential for such a scenario would be determined through extensive monitoring, and potential ramifications would be addressed through inclusion of multiple groundwater containment options to insure post-mining groundwater control. See response to Comments WTR-302 and WTR-304 for discussion of measures taken in the EIS process to address the potential for groundwater flow patterns differing from those predicted in the DEIS. (110)

Comment: Page 2-38: It is our understanding that Alternative III assumes that the dewatering will be accomplished using wells drilled through the mine workings and completed at the lower levels of the workings. For clarity, the description of this dewatering technology should be provided in the text of this section. (112)

Response: As stated on page 2-38 of the DEIS, final designs and plans for the post-operational mine dewatering system(s) would be required prior to initial mine construction if Alternative III were selected. As described on FEIS page 2-39, the most likely method of post-operational mine dewatering would be through use of dewatering wells completed in the lower levels of the backfilled mine workings as referred to in the comment. (112)

Comment: Groundwater capture system is not feasible and treatment is not demonstrated. (113)

Response: Regarding the issue of the groundwater capture systems not being adequately defined in the DEIS to allow the Agencies to assess their effectiveness, this is addressed by requiring FCC to install and test the proposed bedrock groundwater capture systems and the Lower Bucktail surface water/alluvial groundwater capture system during mine development, to determine if they could adequately control contaminant migration. The only way the Lower Bucktail capture system may not effectively control contaminant migration is if one or more bedrock structures exist that could convey contaminants from the ICP mines directly to surface waters downstream of the capture system. This scenario would be evaluated and mitigated if necessary, through monitoring of mine inflows and groundwater drawdown peripheral to the mines during dewatering. If deviant flow paths were identified and contaminant migration could not be adequately controlled through grouting or

placement of additional capture wells, the mine(s) could be maintained in a fully or partially dewatered condition to prevent unacceptable impacts to downgradient water quality. Therefore, the overall groundwater capture plan (as described in the 2006 Water Resources Technical Report and 2008 Addendum) is believed to adequately assure containment of ICP-derived groundwater contaminants. It should also be noted that under Alternative IV or V, required capture efficiencies for post-mining groundwater contaminants exiting the ICP mines is less than 50% for the Ram Mine and less than 75% for the Sunshine Mine, based on a goal of maintaining post-mining copper loading to Bucktail Creek from the Ram and Sunshine orebody areas at pre-mining loading rates. The fact that the required capture efficiencies are less than 100% increases the likelihood that groundwater contaminants from the Ram and Sunshine Mine workings can be adequately controlled. The required capture efficiencies are discussed further in the 2008 Water Resources Technical Memorandum addendum.

Regarding the comment footnote stating that "it is equally likely that some contaminants will flow into the regional groundwater system and then into Big Deer Creek," this statement is incorrect. Although the potential for groundwater flow from the ICP mines to bypass Bucktail Creek and flow straight to Big Deer Creek cannot be entirely ruled out, the likelihood of this occurring is significantly less than the likelihood of groundwater following the steep topographic gradient towards Bucktail Creek. This is due to:

1. The very steep hydraulic gradient towards Bucktail Creek as compared to the gradient towards Big Deer Creek; and
2. The lack of evidence for the existence of high permeability structures trending to the north, despite the completion of numerous wells in the area, and completion of the 6930 Tunnel through a number of these structures.

Because the groundwater flow direction is dependent on the product of the hydraulic gradient and the corresponding hydraulic conductivity (permeability), the hydraulic conductivity would have to be much greater to the north (along the trend of bedrock structures and towards Big Deer Creek), as compared to the very steep gradient towards Bucktail Creek (0.33), in order for groundwater to flow to the north. Therefore, groundwater flow IS NOT equally as likely to occur to the north as towards Bucktail Creek. Nonetheless, numerous safeguards have been incorporated into the EIS to ensure that ICP-derived groundwater contaminants do not cause unacceptable water quality changes downstream of Bucktail Creek. These safeguards include monitoring/hydrologic testing requirements and multiple approaches to post-closure groundwater containment, including the possibility of maintaining the mines in a dewatered condition after closure.

In summary, the approach in the EIS process has been to:

1. Develop a reasonably representative conceptual site model of groundwater flow which, based on bedrock properties and other site characteristics, relies on the equivalent porous media (EPM) model approach;
2. Identify potential real world deviations from the conceptual model that could result in unacceptable impacts or risks to the environment (which this comment does a good job of outlining);
3. Implement monitoring/testing to evaluate the likelihood of such deviations actually occurring (to be completed during mine development and operations); and
4. Incorporate adequate safeguards/contingencies in the design and planning process to address potential deviations with a reasonably high likelihood of occurring, to ensure that unacceptable impacts to the environment do not result (i.e., multiple options for groundwater containment, including long-term mine dewatering).

This approach is consistent with bedrock groundwater characterization programs generally used at mine sites and other projects involving excavations into saturated bedrock, including the Blackbird Mine. If the commentor's contention is that groundwater cannot be adequately monitored or controlled in fracture flow systems, this would imply that development of all mines, tunnels, or any

other large excavations into saturated bedrock, cannot occur, which certainly is not the case. Additional detail on the appropriateness of the EPM approach at the ICP site is provided in Chapter 4 of the FEIS and in a 2008 water resources technical memorandum. (113)

Comment: Errors and omissions in the description of Alternative II. Summary Section, Table S1. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, General regarding bedrock extraction wells. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, incorrect characterization of post mining ground water capture. (115)

Response: Editorial Correction. (115)

Comment: Table 4-7, include FCC proposal for use of post mine bedrock capture wells re: copper standards. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the development of agency alternatives. Effects of Blackbird groundwater flows and fresh water. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the development of agency alternatives. Bedrock capture wells and/or alluvial water capture system discontinuation via monitoring results. (115)

Response: Editorial Correction. (115)

Comment: Errors and Omissions in describing the existing environment - replace Figure 3-6 with Appendix C POO. (115)

Response: Editorial Correction. (115)

Comment: Unsupported assertions - Table S-2 and text, basis for estimated effectiveness of bedrock capture wells. (115)

Response: Text in Table S-2 has been revised to change the phrase "unlikely to be effective" to "may not be effective."

The basis for the assumed capture system efficiencies are stated on pages 4-24 and 4-25 of the DEIS. The 75% and 90% capture efficiencies are based on "best professional judgment, in conjunction with knowledge of the localized hydrogeology" (i.e., fracture flow system), as well as the

four bulleted items on page 4-24. This is considered reasonable based on the locations of the capture systems, and the difficulties inherent to groundwater capture in fractured bedrock. The higher efficiency applied to the Ram capture system as compared to the Sunshine is based on the potential to induce a reversed hydraulic gradient between the Ram capture wellfield and Bucktail Creek, which most likely would not be possible for the Sunshine wellfield.

The 75% and 90% capture efficiencies provide a reasonable scenario for assessing potential environmental effects of the project, lacking specific information from the applicant regarding achievable capture efficiencies. The actual capture system efficiencies would be determined during the mine development/operational phase. The EIS Team believes this is a reasonable and justifiable approach to evaluate impacts from the project based on the ability to capture mine water through alternative capture systems (Lower Bucktail capture system or maintaining the mines in a dewatered state) if the bedrock groundwater capture wells prove incapable of adequately protecting downstream water quality. That being said, it should be noted that based on a target of maintaining post-mining copper loading to Bucktail Creek from the Ram and Sunshine areas at pre-mining loading rates, required capture efficiencies would be less than those assumed above for Alternative IV and V. Required groundwater capture efficiencies are described further in the 2008 Water Resources Technical Report Addendum.

Regarding the lack of DSM results for bedrock capture system alone, as described in Section 4.1.2 of the 12/06 WRTR (Water Resources Technical Report), two distinct post-operational groundwater management scenarios were modeled in the DSM: 1) no post-closure groundwater capture for Alternative 2, and 2) capture with the bedrock wells (assumed 90% capture efficiency for Ram, 75% for Sunshine) and with the Lower Bucktail system to capture all FCC loads. This was done to evaluate FCC's assertion that post-closure groundwater capture and treatment would not be needed (Alt 2 simulation), and to evaluate ramifications of operating both the bedrock and lower Bucktail capture systems on downstream flows and water quality. In this way, both ends of the groundwater capture spectrum were evaluated in the DSM. Actual groundwater capture requirements would be based on post-operational mine water and groundwater quality, and the proven bedrock groundwater capture system efficiency as determined through mine development/ operational phase testing. (115)

Comment: Errors and omissions in the impact discussions - Mine remaining dewatered indefinitely. (115)

Response: Keeping the mines dewatered after closure is not expected to significantly alter the mine water chemistry as compared to that estimated for Alternatives IV and V. This is because the mine inflow water would still have ample opportunity to interact with the backfill material after entering the backfilled workings and flowing towards the dewatering wells that would be completed in the lower portions of the backfill. As for groundwater impacts, this is accurately depicted in the DEIS since impacts to groundwater quantity and quality downgradient of the ICP mines would be identical after closure to those predicted for the operational period under Alternative III. (115)

Comment: Miscellaneous - Extraction wells vs. bedrock capture wells, alluvial water capture site vs. contingency water capture site. (115)

Comment: Miscellaneous - Title of backup capture system. (115)

Response: The Bucktail capture system is not a contingency; in fact the EIS analysis predicts that it will be necessary. However, since there is a possibility that the proposed bedrock capture system can be constructed to effectively capture alluvial as well as bedrock groundwater, the bedrock system will be installed and tested to determine if the Bucktail alluvial system is required. If the lower Bucktail system is not required there would be a slight decrease in road and pipeline impacts in the Bucktail drainage. (115 for both above)

Comment: In the effects comparison there is a statement that says "bedrock capture wells are unlikely to be effective at capturing required volume of groundwater necessary for metals load removal." (Alternative II) Do you have proof that this is the case? (146)

Response: Text has been revised to change the phrase "unlikely to be effective" to "may not be effective." (146)

Comment Code	Letter No.	Comment Subject
WTR-301-2	112, 115	Groundwater Quality, Quantity and Capture – Groundwater Quality

Comment: Page 3-18: References to contaminant levels in groundwater should be accompanied by relevant regulatory or risk-based standards to enable a comparison. (112)

Response: Table 3-1 includes Idaho groundwater standards for parameters of concern to allow comparison. (112)

Comment: Unsupported assertions - explain why copper concentrations in groundwater below Sunshine Mine are different in alternatives. (115)

Response: Addition of alkaline amendments to slash in Alternative IV and V increases pH and results in lower predicted long-term copper levels in the Sunshine mine. (115)

Comment: DSM Model Results and the ICP EIS - FEIS should focus less on model results and more on project design and adaptive management - need table showing where groundwater concentrations are being evaluated. (115)

Response: The location where the predicted groundwater concentrations apply is described in the Water Resources Technical Report (WRTR). For instance, page 4-22 of the WRTR states that the predicted groundwater concentrations downgradient of the Ram and Sunshine mines would apply to the entire area between the mine workings and Bucktail Creek. To clarify this, a footnote has been added to Table 4-7 describing where the predicted groundwater concentrations apply. (115)

Comment Code	Letter No.	Comment Subject
WTR-301-3	27, 108	Groundwater Quality, Quantity and Capture – ARD

Comment: Have arsenic and iron components of ore been accounted for? Must assume that ARD will be produced. Need to bond for operational and long term water treatment. (27)

Response: Geochemistry and acid-generation characteristics of ore was determined through geochemical testing as described in the Geochemistry section of Chapter 3 of the DEIS. Geochemical testing characterized the arsenic and iron contents of ore. All alternatives address the potential for ARD through a variety of control and mitigation measures including operational and long-term water capture and treatment. Bonding for all aspects of mine reclamation and closure would be required. (27)

Comment: Waste rock and mine tailings should be used to completely backfill the mine shafts; waste rock should be mixed with concrete so that potential groundwater contamination (acid mine drainage) is minimized. (108)

Response: All DEIS alternatives utilize declines rather than shafts to access the ore. The use of mine shafts was considered but dismissed as described in Chapter 2. Backfill of the mine declines was also considered and dismissed and the FEIS has been revised to describe the rationale for dismissal. In the agency alternatives III, IV and V (see Chapter 2 DEIS), the risk of ARD from waste rock is reduced through: 1) ongoing geochemical characterization program; 2) amendment of waste rock with alkaline materials (e.g. lime, limestone, cement) as needed to ensure long-term acid control; and 3) encapsulation of waste rock within low permeability tailings in the TWSF. (108)

Comment: The Tribe requests the FS to take stringent steps to maximize the avoidance of acid mine discharge; monitor surface water pH downstream; other monitoring and treatment measures. (108)

Response: As described above in response to the comment on Page 7, paragraph 4 of letter 108, a number of mitigation measures will be employed to reduce or eliminate uncontrolled discharge of ARD and metals. Additionally, the water monitoring program will be designed to detect sources of metals or acidity that escapes the mine water capture system. Finally, a plan is already in place to collect and treat mine water in perpetuity should this measure be necessary to protect water quality. (108)

Comment Code	Letter No.	Comment Subject
WTR-301-4	108	Groundwater Quality, Quantity and Capture – Grouting

Comment: Operator should grout the inside walls of mine shafts to help prevent groundwater seepage into the new mine shafts; reduce likelihood of further fracturing the bedrock and allowing cross-contamination with water from the Blackbird Mine. (108)

Response: Grouting of the mine workings has not been proposed in the agency alternatives because: 1) grouting would only reduce, but not prevent inflow to the mines, 2) mine inflow is predicted to be relatively small and to an extent is needed as makeup water for the process circuit; 3) grouting is not believed to be an effective method for preventing fracturing of the wall rock surrounding underground mine openings; 4) grouting (because it would only reduce the rate of flow) would not significantly change the possibility that there would be groundwater interaction between the ICP and the Blackbird mines. Groundwater flow from the ICP to the Blackbird is considered unlikely because of the existing and predicted groundwater gradients. Grouting would not change groundwater flow conditions except for a very narrow zone immediately around the mine openings. The ICP may use grouting during operations to control local groundwater inflows, but normal operational grouting would only be expected to reduce inflows not stop them completely. (108)

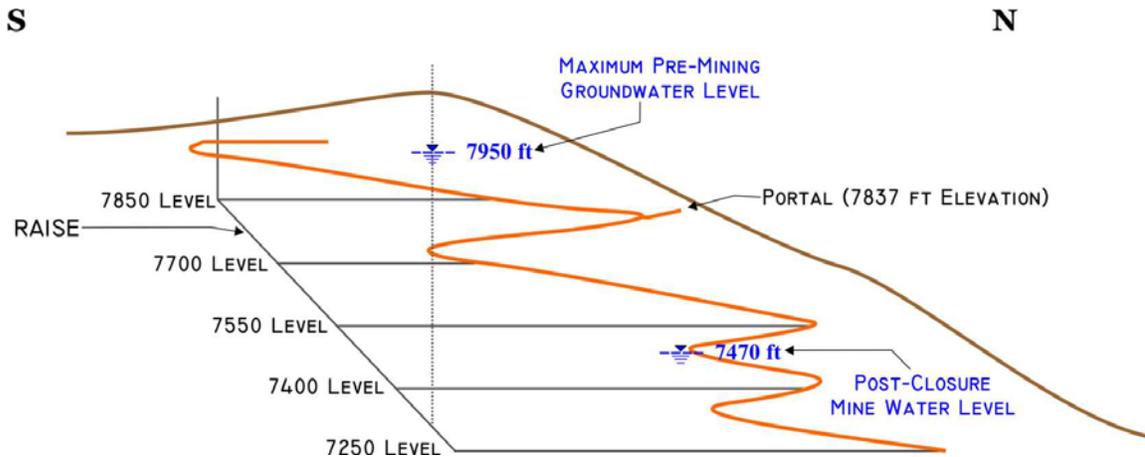
Comment Code	Letter No.	Comment Subject
WTR-301-5	112, 155	Groundwater Quality, Quantity and Capture – Impacts to Meadow Creek

Comment: Page 4-6, Item No. 4: This likely increase in copper concentrations for Alternatives IV and V should be described in the text. (112)

Response: The FEIS has been modified to include a discussion of the projected groundwater quality changes, which are also tabulated in Table 4-7. (112)

Comment: There is no evaluation in the DEIS on the potential for groundwater to migrate into the Meadow Creek drainage. (155)

Response: The potential for southward groundwater flow from the Sunshine Mine into the Meadow Creek drainage was evaluated by the EIS team and found to not be significant. This is based on the fact that only a small portion of the upper access decline tunnel would be located south of the topographic divide, and the post-mining reflooded portion of the Sunshine workings would all be located north of the topographic divide. As shown in the figure below, the Sunshine workings are predicted to refill with groundwater to an approximate elevation of 7470 feet amsl after mine closure. Based on this prediction, all of the flooded workings would be located north of the topographic divide, thus minimizing the potential for southward migration of mine water into Meadow Creek drainage. (155)



Comment Code	Letter No.	Comment Subject
WTR-301-6	109	Groundwater Quality, Quantity and Capture – Groundwater Regulation

Comment: Section 1-19 of the DEIS goes into detail on the Idaho Ground Water Quality Rule, but fails to mention the explicit policy of the Rule “to protect ground water and allow for the extraction of minerals above and within ground water.” IDAPA 58.01.11.006. In addition, the DEIS does not cite the explicit authorities under the Rule for developing site specific ground water quality levels, IDAPA 58.01.11.400.05, or for mineral extraction, IDAPA 58.01.11.400.06. The fact that these authorities were not mentioned gives the false impression that the Idaho

Ground Water Quality Rule does not recognize any policies or exceptions that lie at odds with the references included in the DEIS. (109)

Response: Note that the correct cite is page 1-19 not Section 1-19 of the DEIS. A short description and reference to IDAPA 58.01.11.006. have been added to the FEIS. (109)

Comment Code	Letter No.	Comment Subject
WTR-302	115	Water Monitoring

Comment: Errors and omissions in the description of Alternative II. Chapter 2, post mine water treatment and monitoring. (115)

Response: Editorial Correction. (115)

Comment Code	Letter No.	Comment Subject
WTR-302-1	81, 110	Water Monitoring – Monitoring Location and Number

Comment: The proposed [water quality] monitoring and coordination (Alt. IV) between the Forest Service, agencies, and company during and after the projects are the best way to catch any problems early on. (81)

Response: The agencies agree and have placed considerable emphasis on monitoring and reporting. (81)

Comment: Water quality impacts of the operation need to be monitored and mitigated as needed. (110)

Response: All action alternatives include water quality monitoring prior to, during, and after mine operation and reclamation as described in Chapter 2 DEIS. FCC has proposed a monitoring plan for Alternative 2 (FCC MPO, 2006). The Agency alternatives include additional monitoring requirements. The monitoring framework for Alternatives 3, 4, and 5 are described in Section 5.5 of the Water Resources Technical Report. This framework includes a requirement that ICP monitoring frequencies and methods would be similar to those employed for Blackbird Mine monitoring. Consistency in monitoring between the two sites will enhance the comparability of the data. Specific final monitoring requirements would be specified by the Agencies following the ROD.

All of the monitoring parameters requested except WAD cyanide are included in FCCs proposed monitoring plan. FCC has not proposed the use of cyanide at the ICP and no cyanide was detected during baseline monitoring. The draft NPDES permit includes effluent limits for nitrate and ammonia. Nitrate concentrations in streams resulting from the alternatives were evaluated with the DSM and are described in Table B-3a of Appendix B of the DEIS. Expected nitrate concentrations in Big Deer Creek are less than 0.2 mg/L for all alternatives. (110)

Comment Code	Letter No.	Comment Subject
WTR-302-2	64, 121, 165	Water Monitoring – Baseline

Comment: Page 3-16, Groundwater Quality, Table 3-1 Summary of 2002-2005 Groundwater Quality Monitoring Results . . . Substituting the analytical detection limit for below detection limit values when calculating descriptive statistics, such as the mean, is likely to result in a misleadingly high value for the 'background' concentration. . . . recommends that an alternative approach be used in generating descriptive statistics for the FEIS. Helsel and Hirsch (2002), Chapter 13 "Methods for Data Below the Reporting Limit," provides a detailed description of alternative approaches. (64)

Response: As discussed in the reference cited by the commenter (Helsel and Hirsch, 2002), there are a variety of methods for addressing below detection limit values when calculating summary statistics. These methods include simple substitution (using a constant such as the detection limit, ½ the detection limit, or some other value), as well as more computationally-intensive distributional and so-called "robust" probability plot methods. Helsel and Hirsch (2002) recommend against simple substitution because it has no theoretical basis. Other researchers have noted that simple substitution methods can perform as well as distributional or robust methods for statistical hypothesis testing of small data sets ("Evaluation of Censored Data Methods To Allow Statistical Comparisons among Very Small Samples with Below Detection Limit Observations," J.U. Clarke, *Environmental Science and Technology* 32:177-183 (1998)).

The substitution method selected for the Idaho Cobalt Project groundwater summary statistics (use of the detection limit to replace below detection limit values) was selected because it is a straightforward, readily implemented method of obtaining summary statistics for a set of data with multiple reporting limits. While a high bias for a calculated mean might be expected for a highly censored data set with many values below detection limits, the Idaho Cobalt groundwater data set has relatively low censoring rates. For the dissolved metals data in Table 3-1, the percentage of data below detection limits ranged from 11 to 36% for arsenic, 0 to 15% for cobalt, and 0 to 22% for copper. A comparison of ½-detection limit substitution with full detection limit substitution for the primary constituents of concern (cobalt and copper) was conducted for the areas with the highest percentages of below detect values (15% for cobalt in the Big Flat area data, and 22% for copper in the Sunshine area data). In both cases, the mean value reported in Table 3-1 for the parameter in question (0.009 mg/L cobalt for Big Flat, 0.013 mg/L copper for Sunshine) was unchanged whether the full detection limit or ½ the detection limit was used.

Furthermore, it is important to note that the data presented in Table 3-1 is intended to provide a summary of recent water quality data from the ICP site. The data is not intended to represent "background" or baseline conditions for future comparison to operational phase data. Establishment of a baseline water quality dataset for comparison to operational phase data is currently being completed by IDEQ. (64)

Comment: The definition of "ML" in the definitions section defines this term as similar to the concept of Practical Quantitation Limit (PQL), but without benefit of accounting for matrix effects of the solution being analyzed. The requirement of this analytical sensitivity may be impossible due to naturally occurring solution matrix interference. The laboratory's PQL determines the sensitivity of an EPA analytical method, when applied to the actual condition of the water being analyzed. The "Maximum ML" should be removed from the permit and replaced with PQL requirements that are relative to the specific constituent matrix of the liquid being analyzed. (121)

Response: NPDES monitoring requirements described in the DEIS match the draft NPDES permit that was current at the time of the DEIS. Requirements have been modified in the FEIS to match the NPDES requirements expected for the preferred alternative. (121)

Comment: Has there been groundwater monitoring and will EPA require cleanup to cleaner that existing groundwater? (165)

Response: There has been extensive groundwater quality monitoring at the ICP site both by FCC and by others parties involved with the Blackbird Mine cleanup. Table 3-1 summarizes groundwater quality data collected from 18 different monitoring wells by FCC from 2002 through 2005. Baseline groundwater monitoring has continued on a seasonal basis in 2006 and in 2007 under FCC's annual Baseline Monitoring program, under the direction of IDEQ, to assure that an adequate baseline database is established for comparison to future ICP Mine operational-phase water quality data.

The EIS assesses environmental impacts to groundwater from the various mine plan alternatives, the predicted mining-phase groundwater quality is compared to pre-mining, or current groundwater quality as well as to applicable groundwater standards. (165)

Comment Code	Letter No.	Comment Subject
WTR-302-3	74, 108, 110, 112	Water Monitoring – Increase Monitoring

Comment: Permit needs to call for more extensive network of groundwater monitoring wells. The draft permit at IID outlines requirements for surface water monitoring. A parallel permit condition needs to be created for groundwater monitoring. (74)

Comment: Groundwater monitoring network described in DEIS is not sufficient to ensure the contaminate plumes are detected. (110)

Response: Regarding the need for a more extensive network of monitoring wells, it is agreed that additional monitoring points ultimately will be required to adequately assess the hydrologic response to mining and potential contaminant transport pathways. Several additional wells are proposed for completion to increase the operational phase monitoring network. These include nine new wells recently completed or proposed for completion by FCC, and more than a dozen wells proposed by the EIS team for operational phase monitoring. Therefore, we believe that an adequate monitoring network will be in place prior to startup of mining operations.

Additional monitoring wells have been completed since preparation of the DEIS or are proposed for completion in 2007 by FCC. These include five additional wells around the Ram Mine, two additional wells at the Sunshine Mine, and two new wells in the Big Flat area. Several additional monitoring wells would be required for completion during the mine development and operational phase to evaluate various EIS-related issues. The EIS-proposed wells include two additional wells north of the Ram workings to evaluate potential groundwater flow and quality between the mine and Big Deer Creek, two wells south of the Ram to evaluate groundwater flow between the Ram and Blackbird Mine workings, at least one additional well downgradient of the Ram workings, at least four additional wells peripheral to the Sunshine Mine workings, and multiple testing wells at the locations of the proposed Sunshine Mine and Ram Mine bedrock groundwater capture systems and the Lower Bucktail surface water/alluvial groundwater capture system. The additional wells completed by FCC in 2006 have already expanded the groundwater monitoring network from that shown in the DEIS. The additional wells proposed by FCC and the EIS team will increase the groundwater monitoring coverage even further. In all, approximately 25 additional wells (beyond those shown in the DEIS) have been or will be completed prior to or during mine operations.

In addition to the monitoring wells, Section 5.0 of the WRTR outlines other recommendations for future monitoring. Specific goals of the monitoring program include: providing information on post-operational effects to groundwater; and providing information for post-operational water management planning and design (i.e., final groundwater capture design, if needed). Groundwater-related

elements of the monitoring program include monitoring of groundwater levels peripheral to the ICP mines in response to mine dewatering, and operational phase monitoring of the spatial and temporal distribution of groundwater inflows to the underground workings. (74, 110)

Comment: The Tribe requests the FS to take stringent steps to maximize the avoidance of acid mine discharge; monitor surface water pH downstream; other monitoring and treatment measures. (108)

Response: As described above in response to the comment on Page 7, paragraph 4 of letter 108, a number of mitigation measures will be employed to reduce or eliminate uncontrolled discharge of ARD and metals. Additionally, the water monitoring program will be designed to detect sources of metals or acidity that escapes the mine water capture system. Finally, a plan is already in place to collect and treat mine water in perpetuity should this measure be necessary to protect water quality. (108)

Comment: The draft permit fails to incorporate groundwater monitoring. (110)

Response: Groundwater monitoring is required under the Operating Plan, but not by the NPDES permit. (110)

Comment: The FS, EPA and IDEQ should require additional groundwater monitoring systems throughout the project area. (110)

Regarding the need for additional groundwater monitoring points, it is agreed that additional monitoring points and hydrologic testing will be required to verify the current hydrogeologic conceptual model and potential contaminant transport pathways prior to closure and reflooding of the ICP mine workings. See response to Comment Letter 110 above.

The comment notes that “monitoring must continue throughout the mining operation and after reclamation.” Water resource monitoring would continue during mine reclamation and after mine closure. The EIS text has been revised to clarify that monitoring would continue after mining ceases. (110)

Comment: Page 2-35: FCC's proposal is for three years ground and surface water monitoring following cessation of pumpback. It is unclear which section discusses monitoring for a longer period of time for Alternatives III, IV, and V. Monitoring would be required for significantly longer than three years. Please clarify in the EIS. (112)

Response: The Agencies have not finalized or approved a monitoring program at this time. However, a ten year post closure monitoring plan has been specified as one of the components of the post closure monitoring program. (112)

Comment Code	Letter No.	Comment Subject
WTR-302-4	113	Water Monitoring – Identifies impacts after the fact

Comment: After the fact approach to correcting effects to ESA-listed species. (113)

Response: As described in Item 1, top of page 4-7 of the DEIS, the changes in water quality in area streams, including Big Deer Creek, are not expected to be significant.

The impacts to water quality due to discharge of mine water from the ICP Alternatives II, III, and IV to Big Deer Creek during operations would be positive and would improve water quality in Big Deer Creek (see Tables 4-8 and 4-9 that shows concentrations for Alternatives II, III, and IV that are lower than Alternative I No-Action). Currently, Big Deer Creek does not meet water quality standards largely due to releases of contaminants from historic Blackbird Mine disturbances. The draft NPDES Permit requires that all water discharged from the ICP meet water quality standards prior to discharge, thus the ICP would dilute contaminant concentrations from Blackbird and natural sources and improve stream water quality.

During closure, impacts to area streams are not expected to be significant under Alternatives II, III, IV, and V (see Item 1, top of page 4-7 DEIS).

The comment erroneously states that mitigation measures are offered as “performance-based approach to compliance assessment” and references DEIS at 2-47. Please note that the “performance-based approach to compliance assessment” on page 2-47 (under the section titled “Water Monitoring”) refers to the Alternative IV changes to the water monitoring program, not mitigation measures designed to negate chemical mass loads to Big Deer Creek.

The groundwater capture and treatment systems to mitigate potential chemical mass loads from the mine workings are described on DEIS pages 2-45 and 2-46. Note that these measures would be constructed and tested during the first year of mine operations, not after-the-fact. Further, the mine workings would remain dewatered unless monitoring data indicates that no unacceptable effects to water quality objectives or cleanup goals would result from mine flooding (page 2-45 FEIS). (113)

Comment Code	Letter No.	Comment Subject
WTR-303	110, 115	Water Use and Storage

Comment: Insufficient information on specific source and validity of water rights; project should use low-flow water facilities. (110)

Response: Water use is discussed on page 2-22 of the DEIS and water rights described on page 2-30. Proposed water supply well locations are shown on Figure 2-1. The State of Idaho will determine the validity of any water rights and the Forest Service has no authority to require any specific standards for toilets or other facilities. (110)

Comment: Miscellaneous - explain moving of water management pond. (115)

Response: The pond location has been corrected in the FEIS. (115)

Comment: Miscellaneous - Requirement for a design to prevent ice damage to liners. (115)

Response: The agencies have had experience with ice damage to pond liners using similar lining material as proposed by FCC. The damage has occurred in the pond corners. The owner placed a rub sheet of liner material in the pond corners, which alleviated the problem. This is an example of a simple and relatively inexpensive solution to the ice damage issue. FCC’s pond design engineers may have alternative methods of protecting the liner against ice damage. (115)

Comment Code	Letter No.	Comment Subject
WTR-303-1	112, 157	Water Use and Storage – Water Balance

Comment: Page 2-24, Figure 2-8: The quantity of water and solids should be identified for each input and output shown on Figure 2-8. (112)

Response: The Figure has been revised as requested. (112)

Comment: Page 2-45 and Figure 2-13: The description of Alternative V does not address supply of clean and/or treated makeup water for the milling processes. (112)

Response: Alternative V is no different than the other alternatives in regard to makeup water for milling, as is indicated in the opening paragraph of the Alternative V description. (112)

Comment: Page 4-33 and page 4-40: The text regarding flows in Bucktail Creek during Ram operations and after BT-5 is constructed for Alternatives III and V is potentially confusing as written. (112)

Response: Referenced text and Table B-2 have been edited for clarification as requested. (112)

Comment: The Draft EIS says that only 51 gpm will be drained from the mine (43 from the Ram workings, 8 from the Sunshine workings). DEIS at 2-22. Where will the additional 24 gpm come from (75-51)? (157)

Response: The referenced flows are average values. FCC estimates that average annual mine water inflow rate (i.e., 50% exceedance probability) would be 51 gpm as described at DEIS 2-22. For water treatment and discharge engineering design and permitting purposes, FCC assumed and applied for a higher annual inflow value of 75 gpm that corresponds to a 500-year recurrence interval (i.e., 0.2% exceedance probability). EPA has used this value in the NPDES permit. (157)

Comment Code	Letter No.	Comment Subject
WTR-303-2	112	Water Use and Storage – Potable Use

Comment: This chapter discusses a few places that groundwater may be used for human use. The EIS should clarify that only groundwater meeting drinking water standards could be used for this purpose. (112)

Response: Where reference is made in the DEIS to use of groundwater for human consumption, such as the 4th full paragraph on page 2-22, it has been clarified that only water of suitable quality would be used. (112)

Comment Code	Letter No.	Comment Subject
WTR-304	113, 115	Water Treatment

Comment: Groundwater capture system is not feasible and treatment is not demonstrated. (113)

Response: Regarding the issue of the groundwater capture systems not being adequately defined in the DEIS to allow the Agencies to assess their effectiveness, this is addressed by requiring FCC to install and test the proposed bedrock groundwater capture systems and the Lower Bucktail surface water/alluvial groundwater capture system during mine development, to determine if they could adequately control contaminant migration. The only way the Lower Bucktail capture system may not effectively control contaminant migration is if one or more bedrock structures exist that could convey contaminants from the ICP mines directly to surface waters downstream of the capture system. As described in the preceding comment response, this scenario would be evaluated and mitigated if necessary, through monitoring of mine inflows and groundwater drawdown peripheral to the mines during dewatering. If deviant flow paths were identified and contaminant migration could not be adequately controlled through grouting or placement of additional capture wells, the mine(s) could be maintained in a fully or partially dewatered condition to prevent unacceptable impacts to downgradient water quality. Therefore, the overall groundwater capture plan (as described in the 2006 WRTR and 2008 addendum) is believed to adequately assure containment of ICP-derived groundwater contaminants. It should also be noted that under Alternative IV or V, required capture efficiencies for post-mining groundwater contaminants exiting the ICP mines is less than 50% for the Ram Mine and less than 75% for the Sunshine Mine, based on a goal of maintaining post-mining copper loading to Bucktail Creek from the Ram and Sunshine orebody areas at pre-mining loading rates. The fact that the required capture efficiencies are less than 100% increases the likelihood that groundwater contaminants from the Ram and Sunshine Mine workings can be adequately controlled. The required capture efficiencies are discussed further in the 2008 Water Resources Technical Memorandum addendum. Also see Comment Response 301-1.

Regarding the comment footnote stating that “it is equally likely that some contaminants will flow into the regional groundwater system and then into Big Deer Creek,” this statement is incorrect. Although the potential for groundwater flow from the ICP mines to bypass Bucktail Creek and flow straight to Big Deer Creek cannot be entirely ruled out, the likelihood of this occurring is significantly less than the likelihood of groundwater following the steep topographic gradient towards Bucktail Creek. This is due to:

- 1. The very steep hydraulic gradient towards Bucktail Creek as compared to the gradient towards Big Deer Creek; and*
- 2. The lack of evidence for the existence of high permeability structures trending to the north, despite the completion of numerous wells in the area, and completion of the 6930 Tunnel through a number of these structures.*

Because the groundwater flow direction is dependent on the product of the hydraulic gradient and the corresponding hydraulic conductivity (permeability), the hydraulic conductivity would have to be much greater to the north (along the trend of bedrock structures and towards Big Deer Creek), as compared to the very steep gradient towards Bucktail Creek (0.33), in order for groundwater to flow to the north. Therefore, groundwater flow IS NOT equally as likely to occur to the north as towards Bucktail Creek. Nonetheless, numerous safeguards have been incorporated into the EIS to ensure that ICP-derived groundwater contaminants do not cause unacceptable water quality changes downstream of Bucktail Creek. These safeguards include monitoring/hydrologic testing requirements and multiple approaches to post-closure groundwater containment, including the possibility of maintaining the mines in a dewatered condition after closure.

In summary, the approach in the EIS process has been to:

- 1. Develop a reasonably representative conceptual site model of groundwater flow which, based on bedrock properties and other site characteristics, relies on the equivalent porous media (EPM) approach;*
- 2. Identify potential real world deviations from the conceptual model that could result in unacceptable impacts or risks to the environment (which this comment does a good job of outlining);*
- 3. Implement monitoring/testing to evaluate the likelihood of such deviations actually occurring (to be completed during mine development and operations); and*
- 4. Incorporate adequate safeguards/contingencies in the design and planning process to address potential deviations with a reasonably high likelihood of occurring, to ensure that unacceptable impacts to the environment do not result (i.e., multiple options for groundwater containment, including long-term mine dewatering).*

This approach is consistent with bedrock groundwater characterization programs generally used at mine sites and other projects involving excavations into saturated bedrock, including the Blackbird Mine. If the commentor's contention is that groundwater cannot be adequately monitored or controlled in fracture flow systems, this would imply that development of all mines, tunnels, or any other large excavations into saturated bedrock, cannot occur, which certainly is not the case. Additional detail on the appropriateness of the EPM approach at the ICP site is provided in Chapter 4 of the FEIS and in a 2008 technical memorandum included as an addendum to the WRTR. (113)

Comment: Water treatment operation and maintenance costs are severely underestimated, capital costs for construction of a water treatment plant are not included. (113)

Response: The annual operating costs are based on the actual 2006 annual labor cost and power requirements of a mine water treatment facility having very similar operating requirements as the water treatment process proposed by the DEIS, vendor pricing for water treatment chemicals, actual electric rates provided by the local power company, and actual sludge disposal rates quoted by the Lemhi County Landfill. The water treatment system used as the labor cost basis is leased by a mine in northern Nevada, and operated on a contract basis by a private water treatment company. The annual operating costs are therefore current, and based on an actual case example. The flow rates and water treatment equipment hydraulic capacity are based on the water treatment flow capacity requirements used in the DEIS. The bond estimate includes \$25,000 per year for 100 years to cover equipment replacement, which will be adequate for the type of equipment used in the treatment process.

The water treatment plant will be built by, and costs incurred by FCC in order to start mining and milling activities. Therefore the capital cost of the water treatment plant is not included in the reclamation bond calculation. (113)

Comment: Object to assumption that BMSG will further reduce copper loadings or achieve compliance with water quality standards in the Bucktail drainage. Releases to BMSG collection system are unacceptable. (113)

Response: It is the FS understanding that the Blackbird cleanup is not currently required to achieve compliance with water quality standards in Bucktail Creek as a Use Attainability Assessment (IDEQ, 2002) was conducted and approved by IDEQ and EPA (see footnote 3, Tables 4-8 and 4-9, DEIS). The DEIS makes no assumptions that Bucktail Creek will achieve compliance with water quality standards.

It is the FS and EPA understanding that the Blackbird cleanup will include additional remediation actions that are expected to further reduce copper loadings in Bucktail Creek so that water quality

standards may be met, as required by the Unilateral Administrative Order, in South Fork Big Deer Creek, Big Deer Creek and Panther Creek. As summarized in the DEIS (p. 4-9) and described in the Water Resources Technical Report (page 4-2 through 4-4), the DSM assumed a future water quality condition based on the completion of the Blackbird Cleanup. These conditions include reductions in Blackbird loads to Bucktail Creek, the BT-5 pipeline, and compliance with water quality standards per the UAO. However, in no case, did the DSM or the water quality effects evaluation assume any capture and treatment of ICP chemical mass loads by BMSG. Any loads predicted to be released from the ICP were assumed to report to Big Deer Creek and Panther Creek. Thus, the DEIS does not assume capture and treatment of ICP loads by BMSG in order to meet water quality standards. (113)

Comment: Incomplete descriptions of Alternatives IV and V Water Treatment. (115)

Response: Alternative II proposes use of RO and management of the ensuing waste brine. The Water Resources Technical Report (Hydrometrics, 2006) page 4-16 states that this stabilized waste is predicted to be between 3,114 cubic yards (FCC estimate) to 26,000 cubic yards (Hydrometrics estimate) per year. Alternative IV has been modified in the FEIS and includes an ion exchange step, but no reverse osmosis. During operations the ion exchange waste solids would be handled in the same manner as the metals removal solids (disposal in the TWSF). Alternative IV requires FCC complete water treatability studies as part of the design process in order to confirm what treatment processes will be used to meet NPDES limits. This testing will determine the final water treatment process design details.

The revised description of water treatment for Alternative IV combined with the information established for Alternatives II and IV, provides sufficient information to evaluate the effects of water treatment and resulting waste. (115)

Comment: Effluent Water Quality. (115)

Response: Regarding Alternatives IV and V, the effects are predicted based on the analysis of a full-scale treatment plant operating at another mine site having similar wastewater characteristics, as stated in DEIS p 4-37. (115)

Comment: Water Treatment Waste Disposal. (115)

Response: The DEIS provides a qualitative evaluation of effects from Alternative IV and V water treatment wastes, using the data provided in the description of Alternative II as a basis. Alternative II results in a stabilized brine waste to be disposed in the TWSF, whereas Alternative IV will not. The Water Resources Technical Report (Hydrometrics, 2006) page 4-16 states that this stabilized waste is predicted to be between 3,114 cubic yards (FCC estimate) to 26,000 cubic yards (EIS Team estimate) per year. (115)

Comment: Lack of comparative analysis of effects, water treatment. (115)

Response: The agencies approach to water treatment for Alternatives IV and V was to not dictate what type of water treatment equipment or processes be used, but rather let the required water treatability testing and water treatment design professionals advance a treatment plant design best suited to the project with two goals: effluent must meet NPDES effluent limits, and minimize water treatment waste. The revised water treatment description provided in the FEIS (page 2-45) modifies and provides additional detail on the proposed water treatment system. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, post mine location of water treatment plant. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the impact discussions - Alt. II assumption that closure water treatment is not needed. (115)

Response: Alternative II was evaluated assuming that groundwater capture and closure water treatment would be employed as needed, however a DSM simulation of this condition was not run (see discussion page 4-31 and 4-32 FEIS). (115)

Comment: Other - Alt II changes in WQ in Big Deer Creek are based on flawed analysis in subsequent sections. (115)

*Response: Please note that the referenced paragraph states: "It is **not** [emphasis added] likely that the model-calculated increase in copper would be measurable or would cause an exceedance of the water quality standard or cleanup goals in Panther Creek if it were to occur." There is no contradiction in this statement, contrary to what is implied by the comment.*

It is well established that the cumulative impacts of multiple pollution sources can sometimes cause an exceedance of water quality standards even though the individual sources do not. This is the basis of the federal Total Maximum Daily Load limitations. Similarly, cumulative impacts can be measurable even though individual impacts are not. (115)

Comment: Bonding does not include worst-case contingencies - uncertainties about water treatment requirement. (115)

Response: The annual operating costs are based on the actual 2006 annual labor cost and power requirements of a mine water treatment facility having very similar operating requirements as the water treatment process proposed by the DEIS, vendor pricing for water treatment chemicals, actual electric rates provided by the local power company, and actual sludge disposal rates quoted by the Lemhi County Landfill. The water treatment system used as the labor cost basis is leased by a mine in northern Nevada, and operated on a contract basis by a private water treatment company. The annual operating costs are therefore current, and based on an actual case example. The flow rates and water treatment equipment hydraulic capacity are based on the water treatment flow capacity requirements used in the DEIS. The bond estimate includes a component to cover equipment replacement, which will be adequate for the type of equipment used in the treatment process.

The water treatment plant will be built by, and costs incurred by FCC in order to start mining and milling activities. Therefore the capital cost of the water treatment plant is not included in the reclamation bond calculation. (115)

Comment: Miscellaneous - confirmation of treatment process efficiencies. (115)

Response: The agencies approach to water treatment for Alternatives IV and V was to not dictate what type of water treatment equipment or processes be used, but rather let the required water treatability testing and water treatment design professionals advance a treatment plant design best suited to the project with two goals: effluent must meet NPDES effluent limits, and minimize water treatment waste. (115)

Comment: Miscellaneous - Removal of requirement for fill over water discharge pipeline to prevent freezing. (115)

Response: Water will freeze in pipelines when the temperature of water in the pipe drops below 32°F. As the pipeline will contain low spots in the profile, the pipeline cannot completely drain if flow in the pipeline stops. The potential for water to freeze during periods of no flow is real.

FCC has not provided a detailed design of the pipeline and there is no information to show that the line would be completely self-draining. If discharge were to be intermittent or to be temporarily suspended during cold winter weather low spots in the pipe could retain water and freeze. Even without low spots heat from the groundwater system would be dissipated rapidly from a surface pipe and freezing is a possibility. (115)

Comment Code	Letter No.	Comment Subject
WTR-304-1	146	Water Treatment – WTP Waste

Comment: There should not be much mine water since FCC is proposing to backfill with a cement paste so most of the mine tunnels will be full. Does it really matter what type of water treatment is employed as long as works? The NPDES permit requires certain levels in the water which FCC will have to meet. The main concern is how much and what type of waste will be a by-product of this process. With reverse osmosis the waste will be buried in the TWSF. Why isn't this placed in the backfill paste going into the mine? (146)

Response: Backfill of access tunnels (declines) with tailings is not proposed in any of the Alternatives, only the stopes would be backfilled. Backfill of stopes is not predicted to limit the amount of groundwater inflow into the mine workings.

All water treatment methods have advantages and disadvantages. As the comment identifies, one disadvantage of reverse osmosis is the generation of large amounts of waste, relative to some other water treatment technologies, such as those incorporated in Alternative IV. Disposal of reverse osmosis waste is a potential economic and environmental liability. To address these potential liabilities, alternative water treatment technologies were included in Alternative IV.

FCC did not propose placement of RO waste in the mine backfill paste and thus it is not included in Alternative II. Other Alternatives do not include RO and so they do not have RO waste to dispose. (146)

Comment Code	Letter No.	Comment Subject
WTR-304-2	8, 23, 68, 69, 70, 80, 83, 85, 96, 97, 98, 99, 100, 101, 102, 128, 136, 141, 142, 148	Water Treatment – Support RO

Comment: It makes more sense to handle water treatment in the manner the company has proposed, with reverse osmosis and placing the extremely clean discharge into Big Deer Creek. (8)

Comment: Support FCC design for pumpback wells and water treatment. (23)

Comment: Formation has proposed to treat its water using a state-of-the-art reverse osmosis technology that will leave the water cleaner than surrounding natural water. By comparison, the Forest Service's plan does not define a water treatment plan and may use a less efficient,

less effective method that will leave our lakes and streams polluted for years. (68, 69, 70, 83, 96, 97, 98, 99, 100, 101, 102)

Comment: Alternative II provides for a better and more thorough water treatment system. Alternative IV doesn't identify a specific water treatment plan and may propose something that is less effective. (80)

Comment: The water treatment defined in FCC's plan, Alternative II, uses reverse osmosis technology to treat the water used in the operations. Water discharged from the mine will be much cleaner than the water discharged from the old Blackbird Mine and will be even cleaner than the water in the immediate environment. (85)

Comment: It's nice to see Formation Capital is willing to spend the money to employ a water treatment system that will help support a strong fishery. (128)

Comment: The mine will treat the water used in their operations with a state-of-the-art reverse osmosis technology that will actually leave water cleaner than the natural water in the surrounding environment. By comparison, the Forest Service's plan does not define a water treatment plan and may use a less effective method that will leave our lakes and streams polluted. (136)

Comment: The mine will treat its water using a state-of-the-art reverse osmosis technology that will leave water cleaner than surrounding natural water. By comparison, the Forest Service's plan does not define a water treatment plan and may use a less efficient, less effective method that will leave our lakes and streams polluted for years. (141, 142)

Comment: The mine will treat the water used in the mine with a state-of-the-art reverse osmosis technology that will leave water cleaner than the natural water in the surrounding environment. By comparison, the Forest Service's preferred alternative does not define a water treatment plan and may use a less efficient method that will leave our lakes and streams polluted. (148)

Response: Support for the selection of water treatment as presented advanced by FCC and in Alternative II has been noted in the final analysis of this alternative. (8, 23, 68, 69, 70, 80, 83, 85, 96, 97, 98, 99, 100, 101, 102, 128, 136, 141, 142, 148)

Comment Code	Letter No.	Comment Subject
WTR-304-3	81, 109, 115	Water Treatment – Alternative IV Inadequate Detail

Comment: It was not clear to me that the Advanced Water Treatment Process (Alt. IV) is more feasible or better than the Reverse Osmosis system (Alt II). Sulfate could be a problem if the Advanced system does not remove it. Additional testing and design work seems reasonable. (81)

Response: The Alternative IV water treatment approach would include sulfate removal to the extent necessary to comply with NPDES effluent limits incorporating a mixing zone for sulfate. (81)

Comment: Alternatives IV and V state they to include water treatment plans that are different than the treatment plans in the Formation proposal. However, neither alternative contains a fleshed-out or explained water treatment plan. Instead, the DEIS contains several conditional statements, followed by a brief discussion of various water treatment processes that references the Water Resources Technical Report that may or may not be suitable for treating

ICP water. Neither the conditional statements, nor the discussion on water treatment processes amount to a complete water treatment system whose effects on the environment can be measured or analyzed. (109)

Response: The agencies approach to water treatment for Alternatives IV and V was to not dictate what type of water treatment equipment or processes be used, but rather let the required water treatability testing and water treatment design professionals advance a treatment plant design best suited to the project with two goals: effluent must meet NPDES effluent limits, and minimize water treatment waste. (109)

Comment: Incomplete descriptions of Alternatives IV and V Water Treatment. (115)

Response: Alternative II includes the use of RO and management of the ensuing waste brine. The Water Resources Technical Report (Hydrometrics, 2006) page 4-16 states that this stabilized waste is predicted to be between 3,114 cubic yards (FCC estimate) to 26,000 cubic yards (Hydrometrics estimate) per year. Alternative IV has been modified in the FEIS and replaces RO with ion exchange processes. Ion exchange waste solids will be handled in the same manner as the metals removal solids. Alternative IV requires FCC complete water treatability studies as part of the design process in order to confirm what treatment processes will be used to meet NPDES limits. This testing will determine final water treatment process train.

The revised description of water treatment for Alternative IV in the FEIS combined with the information established for Alternatives II and IV, provides sufficient information to evaluate the effects of water treatment and resulting waste. (115)

Comment: Water Treatment Chemicals (115)

Response: The FEIS has been reworded to more accurately describe the difference in effects between Alternatives II and IV in regards to water treatment chemicals. The chemical usage in Alternative IV would be no greater than that required for Alternative II. The risk evaluation provides the agencies with sufficient pertinent information to evaluate impacts, and is sufficient to comply with NEPA requirements. (115)

Comment: Effluent Water Quality (115)

Response: A revised description of water treatment and effluent water quality for Alternative IV is provided in the FEIS. (115)

Comment: Water Treatment Waste Disposal (115)

Response: Alternative II requires the use of RO and management of the ensuing waste brine. The Water Resources Technical Report (Hydrometrics, 2006) page 4-16 states that this stabilized waste is predicted to be between 3,114 cubic yards (FCC estimate) to 26,000 cubic yards (EIS Team estimate) per year. Alternative IV has been modified in the FEIS and replaces the RO treatment step with ion exchange (IX). The IX wastes would be handled in the same manner as the metals removal solids. (115)

Comment Code	Letter No.	Comment Subject
WTR-304-4	110	Water Treatment – Capacity

Comment: Treatment plant undersized if groundwater intercept approach is used. (110)

Response: Groundwater routed through the water treatment plant is not subject to the NSPS restriction. Based on the information presented in the baseline reports and evaluated in the DEIS, the capacity of the water treatment plant is considered adequate, even conservative. The public should understand that water treatment plants are not limited to a particular design capacity. In other words, if a water treatment plant is designed for 150 gpm, and an inflow of 175 gpm is realized, that does not mean that 25 gpm will not be processed by the treatment plant. That simply means that hydraulic residence times are reduced proportionally to the increased flow. The treatment plant operators would be aware of the plant inflow, and have the ability to modify chemical dosages and even water recycling within the plant to assure that effluent standards are met. (110)

Comment Code	Letter No.	Comment Subject
WTR-304-5	112, 121	Water Treatment – Design and Operation Considerations

Comment: Page 2-45: second full paragraph: The first sentence states that the treatment process be based on complying with New Source performance Standards. It should also be clear that the treatment system also be designed so that the discharge meets the effluent limits in the NPDES permit, which are based on meeting Idaho water quality standards in Big Deer Creek. (112)

Response: The requirement to meet discharge standards in Big Deer Creek is stated on page 2-42 of the DEIS. (112)

Comment: The water treatment process should not be limited to reverse osmosis. Any water treatment method that Formation Capital may choose should be allowed as long as discharged water meets the requirements of the applicable discharge permit. Reverse osmosis may be mandated as a last-resort barring any other treatment method meeting discharge permit requirements. (121)

Response: The agencies agree that any water treatment process that can meet effluent limits should be considered viable. However, the agencies are also concerned about the transport of chemicals required for the treatment system and the transport and disposal of water treatment waste products. To the extent that selection of a particular process can reduce the risk of spills to surface water along the transportation route or long-term operation and maintenance costs, there may be other factors that influence the selection of a preferred technology. (121)

Comment Code	Letter No.	Comment Subject
WTR-305	74, 110, 115	Stormwater Management

Comment: Permit needs to address Stormwater. (74, 110)

Response: Separate stormwater permits will be required for construction and operation of the ICP. (74, 110)

Comment: Errors and omissions in the impact discussions - Sediment section amended to include a discussion of reduction of sediment load re: Alt. II. (115)

Response: This section does say that “sediment yields will be reduced by 12 percent below baseline levels in Bucktail Creek.” It goes on to say “road density in Bucktail Creek will decrease in both the short and long-term due to road reclamation during the construction and post-mining period.” A statement acknowledging the upgraded road surfaces along the access route has been added to the FEIS. (115)

Comment Code	Letter No.	Comment Subject
WTR-305-1	110, 112	Stormwater Management - Design

Comment: The POO should design the facility to absorb a 1,000 year storm event during operation, reclamation, and perpetually after closure. (110)

Response: The Forest Service requirement for temporary stormwater conveyance structures upstream of the water management pond that will exist for the life of mine is to handle flow from the 25-year, 24-hour runoff event; a 100-year runoff event is required for conveyance facilities that will last beyond the life of mine. The baseline evaluations that concluded in DSM modeling used for the water management pond design used a 500-year return period, plus 2 feet freeboard (20% additional storage volume). The baseline hydrologic evaluations used as a basis for the DSM included worst-case hydrologic events including rain-on-snow events. The water storage ponds are primarily excavated, with a maximum 10 feet of fill on the downhill toe. This fill will be placed and compacted under design considerations that meet seismic loading conditions. A complete discussion of the design criteria for the water management pond can be found in Telesto 2004b. (110)

Comment: Page 2-29:... Chapter 4, environmental Consequences, barely discuss this issue (storm water management plan) and how it relates to surface water quality and sediment quality. (112)

Response: As described on page 2-29 of the DEIS, computerized soil erosion models were used to estimate sediment generation. Results of this evaluation are described on pages 4-32 and 4-33 of the DEIS in the “Sediment Yield” section for Alternative II. Other Alternatives are described on pages 4-11, 4-36, 4-41, and 4-42. Sediment chemical quality effects are described in the “Sediment quality” sections of each Alternative in Chapter 4. Effects of on sediment chemical quality of area streams is dominated by the historic Blackbird Mine impacts and improvements caused by cleanup actions. Sediment quality from the standpoint of effects to aquatic habitat is described in the Fisheries section of Chapter 4. (112)

Comment: Page 2-29: The text calls for clean water diversion channels using V-shaped channels with 1H:1V side slopes. Sideslopes this steep on an earthen diversion channel would not be stable in the long term. Side slopes no steeper than 2H:1V should be used on an earthen diversion channel. (112)

Response: The clean water diversion channels that extend beyond the life of mine are located in the Big Flat drainage, where ground slopes are not as steep as those on the Bucktail side of the project. The ditch side slope design is based on flow velocities using the 1991 COE Steep Method, as described in Telesto, 2006d. (112)

Comment Code	Letter No.	Comment Subject
WTR-305-2	112	Stormwater Management – More Detail

Comment: Page 4-27 and Page 4-35: to summarize, Table 1 indicates that reduced flows during baseflow conditions during Ram operations prior to the BT-% diversion. (112)

Response: Text and Table B-2 in the FEIS has been revised to include BMSG and EPA predictions of stream flow reductions resulting from BMSG cleanup activities. (112)

Comment Code	Letter No.	Comment Subject
WTR-306	115	Dynamic Systems Model (DSM)

Comment: Bonding does not include worst-case contingencies - re: DSM. (115)

Response: The inclusion of long term water treatment costs as part of the financial assurance calculation is not based on a “worst case” scenario. Analysis of the geochemical and hydrological characteristics of the ICP using the DSM model and other tools indicates that there is some uncertainty (see page 4-9 and 4-10 of DEIS) in predicting both chemical and hydrogeological conditions. Without collection and long term water treatment the DSM model predicts a slight and possibly measurable increase in copper concentration in Big Deer Creek following closure even under the expected case. In the 90th percentile case the DSM predicts a likely exceedance of water quality standards. The 90th percentile case is not a “worst case” or contingency condition, but a situation that is expected to occur one out of ten times and is therefore considered by the agencies in the context of risk to the environment as reasonably likely to occur. It is therefore entirely appropriate to require a bond or other financial assurance for long term water treatment until such time that it can be demonstrated that long term water treatment will not be needed. (115)

Comment Code	Letter No.	Comment Subject
WTR-306-1	16, 81	Dynamic Systems Model (DSM) - Calibration

Comment: Has there been baseline ground water monitoring done? (16)

Response: Yes, baseline groundwater monitoring is described in the Groundwater Resources section of Chapter 3 of the DEIS and in the WRTR. (16)

Comment: Company and agency proposed monitoring of groundwater will be an interesting study of the validity of the DSM model. (81)

Response: Yes, it will. (81)

Comment Code	Letter No.	Comment Subject
WTR-306-2	115, 154	Dynamic Systems Model (DSM) – Use of Model

Comment: DSM Model Results and the ICP EIS - FEIS should focus less on model results and more on project design and adaptive management. (115)

Response: We recognize that the predictions made by the ICP DSM model are exact. The fact that there is uncertainty regarding the conformance between modeled and actual behavior of the hydrologic system is why monitoring is required, why the decision preserves operational flexibility, and why contingency plans are required. The decision process followed by the EIS team did not rely solely on the results of the predictive model, though the comparative results of the model for various alternatives was one evaluation criteria. We endorse continued use of a predictive model for estimating effects in receiving waters, and anticipate that a model or models will be validated during mine operation.

This comment appears inconsistent with a subsequent comment by the commenter that “The DEIS in our opinion is over-reliant on modeling results in the analysis of potential impacts. The Final EIS should focus less on model results and more on project design and adaptive management.” We disagree that the comparison of alternatives presented in the DEIS would be better served by the aforementioned restructuring. We are aware that the DSM modeling results for Alternative II would have been different if some of the mitigation measures were applied to the proponents mine plan of operation. Additionally, the EIS team did not make an unsupported assumption that mitigation when applied to Alternative II would fail. In reality, the effects of post-closure water treatment were evaluated in an earlier version of the DSM model for Alternative II. More importantly, the decision by the EIS team to select Alternative IV was based on a decision matrix that factored many considerations other than merely the DSM model results. In truth, Alternative IV since it shares many elements with Alternative II, could be thought of as Alternative II with mitigation. So although we appreciate the difficulty in presenting the results of such a complex analysis, after having considered a number of organizational schemes for presenting the analysis, the EIS team stands by the current organization. (115)

Comment: DSM Model Results and the ICP EIS - separate DSM runs for Alt. IV. (115)

Response: Alternative IV incorporates a water capture system that includes bedrock groundwater capture wells, alluvial groundwater capture wells/trenches and Bucktail Creek surface water capture. Therefore, the DSM simulation for alternative IV assumed all components of the system would be available and functioning to accurately portray the alternative. (115)

Comment: DSM Model Results and the ICP EIS - What is "imperceptible predicted change"? (115)

Response: The DSM is very exact and in some cases calculates differences that are so exceedingly small that they cannot be shown using common conventions regarding the appropriate number of decimal places to display. The phrase was intended to convey that situation but could be misleading given the previous sentence. To clarify, the previous sentence has been revised to: “Alternative II causes insignificant, likely not measurable, direct effects to surface water quality...” (115)

Comment: A fundamental assumption in the DEIS (page 4-6) is that water quality standards in Big Deer Creek and South Fork Big Deer Creek will be consistently met during the life of the ICP as a result of the BMSG actions. No scientific basis is presented in the DEIS for this assumption. Based on the extensive site monitoring and studies conducted at the site by the BMSG, there is no valid basis for this assumption for copper. Moreover, the DEIS (Tables 4-8,

4-9, B-3g-i) appears to assume not only that the copper water quality standard will be met, but that it will be consistently maintained at 3.1 µg/L, which is actually lower than the minimum copper water quality standard of 3.5 µg/L. There is no basis presented for this assumption of a water quality “cushion.” (154)

Response: The US EPA, the Forest Service, the State of Idaho and NOAA oversee various aspects of the clean-up and restoration of the Blackbird mine site and have the authority to require the BMSG to employ additional actions to achieve the stated water quality goals. The projected water quality conditions in Big Deer Creek and in Panther Creek were the assumptions the EIS team used in the analysis. However, even if the aquatic life criteria for copper are not achieved in Big Deer Creek, the predicted copper levels for Alternative IV would be equal to or less than those under the no action alternative. This is because chemical loads are withdrawn from Bucktail Creek alluvium in Alternative IV, and a factor of safety is used to ensure that all of the loads from the mine are removed and treated. As a consequence, Alternative IV should not interfere with the attainment of clean-up goals by the BMSG, regardless of ambient water quality during the post-closure period. (154)

Comment Code	Letter No.	Comment Subject
WTR-307	74, 110, 113, 115	National Pollution Discharge Elimination Permit (NPDES)

Comment: Permit needs to address stormwater. (74)

Response: A separate stormwater permit will be required for construction and operation of the ICP. (74)

Comment: Permit fails to ensure that discharges into Big Deer Creek do not cause or contribute to violations of water quality standards for arsenic. (110)

Response: This comment is based on the assumption that the NPDES permit uses the wrong standard for arsenic. The permit accurately reflects the Idaho water quality criteria for arsenic. The permit limits will ensure compliance with the correct criteria set forth in Idaho's WQS. (110)

Comment: The draft NPDES permit violates the Zero-discharge requirement. (110)

Response: EPA does not agree. The regulations at 40 CFR §440.104(b)(2)(i) allow a volume of water equal to the difference between annual precipitation falling on the treatment facility and the drainage area contributing surface runoff to the treatment facility and annual evaporation to be discharged subject to the limitations set forth in 40 CFR §440.104(a). A complete explanation of the net precipitation calculation will be provided by EPA in the permit-specific Response to Comments, which will accompany the final NPDES permit upon issuance. (110)

Comment: Groundwater capture system is not feasible and treatment is not demonstrated. (113)

Response: Regarding the issue of the groundwater capture systems not being adequately defined in the DEIS to allow the Agencies to assess their effectiveness, this is addressed by requiring FCC to install and test the proposed bedrock groundwater capture systems and the Lower Bucktail surface water/alluvial groundwater capture system during mine development, to determine if they could adequately control contaminant migration. The only way the Lower Bucktail capture system may not effectively control contaminant migration is if one or more bedrock structures exist that could convey

contaminants from the ICP mines directly to surface waters downstream of the capture system. As described in the preceding comment response, this scenario would be evaluated and mitigated if necessary, through monitoring of mine inflows and groundwater drawdown peripheral to the mines during dewatering. If deviant flow paths were identified and contaminant migration could not be adequately controlled through grouting or placement of additional capture wells, the mine(s) could be maintained in a fully or partially dewatered condition to prevent unacceptable impacts to downgradient water quality. Therefore, the overall groundwater capture plan (as described in the 2006 WRTR and 2008 addendum) is believed to adequately assure containment of ICP-derived groundwater contaminants. It should also be noted that under Alternative IV or V, required capture efficiencies for post-mining groundwater contaminants exiting the ICP mines is less than 50% for the Ram Mine and less than 75% for the Sunshine Mine, based on a goal of maintaining post-mining copper loading to Bucktail Creek from the Ram and Sunshine orebody areas at pre-mining loading rates. The fact that the required capture efficiencies are less than 100% increases the likelihood that groundwater contaminants from the Ram and Sunshine Mine workings can be adequately controlled. The required capture efficiencies are discussed further in the 2008 Water Resources Technical Memorandum addendum. Also see Comment Response 301-1.

Regarding the comment footnote stating that "it is equally likely that some contaminants will flow into the regional groundwater system and then into Big Deer Creek," this statement is incorrect. Although the potential for groundwater flow from the ICP mines to bypass Bucktail Creek and flow straight to Big Deer Creek cannot be entirely ruled out, the likelihood of this occurring is significantly less than the likelihood of groundwater following the steep topographic gradient towards Bucktail Creek. This is due to:

1. The very steep hydraulic gradient towards Bucktail Creek as compared to the gradient towards Big Deer Creek; and
2. The lack of evidence for the existence of high permeability structures trending to the north, despite the completion of numerous wells in the area, and completion of the 6930 Tunnel through a number of these structures.

Because the groundwater flow direction is dependent on the product of the hydraulic gradient and the corresponding hydraulic conductivity (permeability), the hydraulic conductivity would have to be much greater to the north (along the trend of bedrock structures and towards Big Deer Creek), as compared to the very steep gradient towards Bucktail Creek (0.33), in order for groundwater to flow to the north. Therefore, groundwater flow **IS NOT** equally as likely to occur to the north as towards Bucktail Creek. Nonetheless, numerous safeguards have been incorporated into the EIS to ensure that ICP-derived groundwater contaminants do not cause unacceptable water quality changes downstream of Bucktail Creek. These safeguards include monitoring/hydrologic testing requirements and multiple approaches to post-closure groundwater containment, including the possibility of maintaining the mines in a dewatered condition after closure.

In summary, the approach in the EIS process has been to:

1. Develop a reasonably representative conceptual site model of groundwater flow which, based on bedrock properties and other site characteristics, relies on the equivalent porous media (EPM) approach;
2. Identify potential real world deviations from the conceptual model that could result in unacceptable impacts or risks to the environment (which this comment does a good job of outlining);
3. Implement monitoring/testing to evaluate the likelihood of such deviations actually occurring (to be completed during mine development and operations); and
4. Incorporate adequate safeguards/contingencies in the design and planning process to address potential deviations with a reasonably high likelihood of occurring, to ensure that unacceptable impacts to the environment do not result (i.e., multiple options for groundwater containment, including long-term mine dewatering).

This approach is consistent with bedrock groundwater characterization programs generally used at mine sites and other projects involving excavations into saturated bedrock, including the Blackbird Mine. If the commentor's contention is that groundwater cannot be adequately monitored or controlled in fracture flow systems, this would imply that development of all mines, tunnels, or any other large excavations into saturated bedrock cannot occur, which certainly is not the case. Additional detail on the appropriateness of the EPM approach at the ICP site is provided in a 2008 technical memorandum included as an addendum to the WRTR. (113)

Comment: EPA should not grant an NPDES permit. (113)

Response: EPA is developing the NPDES permit consistent with the Clean Water Act and the NPDES regulations. The permit limits will be based on the state water quality criteria. (113)

Comment: EPA should not grant an NPDES permit - Permit now, mitigate later approach is unacceptable and contrary to law. (113)

Response: The comment refers to the copper loading demonstration plan discussed on page 20 of the fact sheet. EPA is placing the requirement for a copper loading demonstration plan in the permit, so that there can be no discharge without a demonstration of a decrease or no change in the copper loading to the watershed. Regardless of the mitigation plan, copper limitations in the permit will have been calculated to meet the State's water quality standards at the end of the discharge pipe and will not cause or contribute to a violation of water quality criteria. (113)

Comment: Errors and omissions in the impact discussions - Clarify discharge rate for TWSF as average annual number. (115)

Response: The language in the DEIS matched the draft NPDES permit that was current at the time of the DEIS. This paragraph will be modified after EPA develops a new value for net precipitation based on Alternative IV, after receipt and acceptance of an updated NPDES permit application. (115)

Comment: Miscellaneous - Monitoring results turnaround to FS vs. EPA. (115)

Response: The Forest Service will require monitoring results within 10 days of the company's receipt of lab data to ensure timely response to any water quality issues. This is entirely independent from EPA's monthly reporting requirements. (115)

Comment Code	Letter No.	Comment Subject
WTR-307-1	34, 73	National Pollution Discharge Elimination Permit (NPDES) – Support Draft Permit

Comment: Please also advise the EPA that Formation Capital's NPDES (water discharge) permit application should also be approved. (34)

Comment: I support the company's proposal for a discharge permit as well. (73)

Response: The approval of the NPDES permit is dependent on the selection of an Alternative at the end of the EIS process. The Salmon-Challis National Forest and U.S. Environmental Protection Agency will take your comments into consideration during the NPDES review process. (34, 73)

Comment Code	Letter No.	Comment Subject
WTR-307-2	42	National Pollution Discharge Elimination Permit (NPDES) – Nitrogen

Comment: The proposed maximum daily limit for nitrate+nitrite . . . At outfall 001 is insufficient because it will not adequately protect cold water aquatic life in Big Deer Creek. Requests monitoring and amendment of permit. (42)

Response: This comment is still under consideration. The response will be provided in the permit-specific Response to Comments that will accompany the final permit at issuance. (42)

Comment Code	Letter No.	Comment Subject
WTR-307-3	72	National Pollution Discharge Elimination Permit (NPDES) – Flow

Comment: Realistically, flows from the TWSF should vary widely, with low flows of less than 10 gpm and high flows possibly exceeding 100 gpm. The permit should clarify that 38 gpm is an average annual flow, not a daily or other short term flow limitation. (72)

Response: EPA does not have adequate information to respond to the comment at this time. The value of 38 gpm was a modeled value representing average flows of net precipitation on an annual basis. The modeling was based on Alternative II, which was the alternative proposed in the NPDES permit application. Alternative IV was chosen as the preferred alternative in the DEIS, so FCC will be submitting a new NPDES permit application based on Alternative IV. From the new information, a new net precipitation value for the Alternative IV scenario will be developed and placed in the permit. A response to this comment and a complete explanation of the net precipitation calculation will be provided by EPA in the permit-specific Response to Comments, which will accompany the final NPDES permit upon issuance. (72)

Comment Code	Letter No.	Comment Subject
WTR-307-4	74, 108, 110	National Pollution Discharge Elimination Permit (NPDES) – Metals

Comment: It is clear that water quality standards applied in the NPDES permit for arsenic, methylmercury, and copper violates the CWA and Idaho water quality laws; agencies should revise the DEIS and NPDES permit and submit a new DEIS and new draft NPDES permit for public notice, review and comment. (108)

Comment: Permit conditions fail to ensure compliance with Idaho's water quality standard for methylmercury. We have several recommendations. (74, 110)

Comment: Request changes to NPDES permit including; fish tissue data, methylmercury criteria, mercury minimization plan, and bioaccumulation factor for mercury. (110)

Response: The Idaho Department of Environmental Quality's comments in the §401 certification, note that methylmercury is a State criteria but not recognized for NPDES purposes by EPA. The Idaho Cobalt Project will be required to comply with statewide methylmercury implementation strategy, collect fish information to compare with fish tissue standards and implement a mercury reduction plan. Copper effluent limits are consistent with Idaho WQS. In addition, comment

responses above outline additional steps to ensure WQS compliance with copper criteria. (74, 108, 110)

Comment: Permit fails to ensure that copper and arsenic levels in Big Deer Creek remain constant or decrease as required by Idaho's water quality rules. EPA needs to require demonstration of compliance with IDAPA 58.01.02.054.04. (74)

Comment: Draft NPDES permit fails to ensure that copper, sediment and pH discharges do not cause or contribute to violation of water quality standards - TMDL for Big Deer Creek has not been completed as required. (74, 110)

Response: The Western Mining Action Project's (WMAP) assertion that any discharge of pollutants is prohibited in a water body that is impaired under the Idaho Water Quality Standards is not correct. In fact, IDAPA 58.01.02.054.04 allows, for high priority impaired waters bodies for which a TMDL has not yet been prepared, new or increased discharges of pollutants which have caused the water quality limited listing as long as "interim changes, such as pollutant trading or some other approach for the pollutants of concern are implemented and the total load remains constant or decreases within the watershed." The 401 certification requires that, prior to discharge, Formation must have in place a plan approved by DEQ that ensures that the copper load added by Formation's discharge is offset by copper reduction so that the total load remains constant or decreases in the watershed. Contrary to WMAP's assertion, the 401 certification requirements relating to copper are consistent and ensure compliance with state Water Quality Standards applicable to impaired water bodies.

As a result of the 401 certification condition described above, Formation's discharge under the NPDES permit will not add any additional copper load to the Big Deer watershed. In addition, the copper concentration in Formation's discharge will meet state water quality criteria for copper and will be lower than the current levels of copper in Big Deer. Therefore, the discharge will not increase the concentration of copper in Big Deer. Since the discharge will not increase either the concentration or the load of copper in Big Deer, it will not cause or contribute to a violation of water quality standards for copper. WMAP asserts that any discharge of copper to Big Deer will violate state and federal anti-degradation provisions. The federal Clean Water Act and Idaho law does not, however, prohibit discharges of pollutants to impaired water bodies; instead, only discharges that reduce water quality to a point that impairs existing beneficial uses are prohibited. Idaho Sporting congress v. Thoman, 137 F.3d 1146, 1153 (9th Cir. 1998); Lands Council v. Vaught 198 F.Supp2d 1211 (E.D. WA 2002). Formation's discharge will meet state water quality criteria at the end of the pipe and will not increase either the load or concentration of copper in Big Deer. There is nothing that suggests that the discharge will have any additional adverse impact on the beneficial uses of Big Deer. Therefore, the discharge of copper will not violate state or federal antidegradation provisions.

WMAP next asserts that the Formation discharge will violate 40 CFR 122.4(i), which is the federal regulation that applies to discharges from new sources to impaired water bodies. But, 122.4(i) allows a new discharge of causative pollutants as long as the discharge will not cause or contribute to a violation of state Water Quality Standards. As discussed above, the ICP discharge will meet copper criteria at the end of pipe and will not increase the concentration of copper in Big Deer Creek. In addition, any small increase in the load of copper is allowed pursuant to Idaho WQS when there is an offset. Therefore, the ICP discharge will not cause or contribute to a violation of state WQS.

WMAP's reliance upon Hells Canyon Preservation Council v. Haines, 2006 WL 2252554 (D. OR) is misplaced. The court in Hells Canyon did hold that an increase in sediment from mining activities to an already impaired water body violated the CWA, notwithstanding the Forest Service's claim that any increase in sediment would be offset by reductions from other measures. The court's holding, however, was the result of the court finding that the offsetting measures were planned to occur some years in the future, that there was nothing that ensured there would actually be funding for the measures, and at any rate, no showing that the measures would bring the mining activity into compliance with state water quality law.

Contrary to the situation in Hells Canyon, Formation cannot discharge copper under its NPDES permit until it first puts in place a plan to offset the addition of copper to Big Deer. In addition, the discharge will comply with state water quality standards. The concentration in the copper will meet state water quality criteria, and the small load of copper associated with the discharge will be offset, exactly as allowed under IDAPA 58.01.02.054.

Finally, although Formation's discharge will not violate any state water quality standard or federal law that controls NPDES permits, WMAP still suggests that no new NPDES permits can be allowed in an impaired water body until a TMDL is developed. This suggestion is contrary to the U.S. Supreme Court's decision in *Arkansas v. Oklahoma*, 503 US 91, 112 S.Ct. 1046, 117 L.Ed.2d 239 (1992) where the court concluded there was nothing in the CWA that prohibited any new discharge under a NPDES permit to impaired water bodies. It is also contrary to the plain language of 40 CFR 122.4(i) that allows new source discharges to impaired water bodies when there is no TMDL. As the EAB held in *Carlota Copper*, 11 Env'tl. Admin. Decisions 692 (2004): "There is nothing in 40 CFR 122.4(i) providing that an impaired water segment needs to be restored prior to allowing new source discharges into the water body." The 9th Circuit has also recently reached this same conclusion in a review of a Forest Service logging project: "No substantive law requires such a determination and thus the district court's ruling that the Forest Service was required to await the completion of TMDLs (Total Maximum Daily Load) before implementing the Lolo Post Burn Project was without legal foundation and is therefore reversed." *Sierra Club v. USFS*, 2003 WL 22854670 (9th Cir. 2003). See also *Idaho Sportsmen's Coalition v. Browner*, No. C93-943WD, Order on Motions for Summary Judgment and Injunction in which the court denied the Plaintiffs request to prohibit all NPDES permits until TMDLs were completed for water quality limited segments in Idaho: "Plaintiffs' request for injunctive relief prohibiting EPA from approving any new point source discharges into any WQLS that lacks a TMDL is premature. The NPDES process itself involves water quality controls and it has not been shown that the issuance of any particular permit would result in a violation of water quality standards." Order at page 13.

WMAP asserts that Formation must comply with the WQS IDAPA 58.01.02.054 with respect to pH and sediment, in addition to copper, because these are pollutants for which Big Deer is listed on the 303d list. While these pollutants are on the current 303d list, DEQ has determined they are not pollutants that violate WQS or contribute to the impairment of uses in Big Deer Creek. Idaho's 1996 303(d) list identified pH, sediment and metals as impairments to Big Deer Creek. Since that listing, the Department, EPA and the responsible parties involved in the remediation of the site have intensely monitored Big Deer Creek and have refined the pollutants impairing the water. This investigation has identified only copper as the pollutant. Both pH and sediment have been remedied and details of the corrective actions taken are summarized in the Blackbird Mine Site Record of Decision (EPA 2003). Through the construction of dams on Bucktail Creek, low pH water as well as sediment generated from run off events is captured and managed prior to reaching Big Deer Creek. Also, monitoring data demonstrate Big Deer Creek does not currently experience any violations of Idaho's pH or turbidity numeric standards. In addition, the narrative criteria for sediment impairment is also not violated. As a result, DEQ is in the process of removing these pollutants from the 303d list. (74, 110)

Comment: Permit uses wrong water quality standard for Arsenic. (74, 110)

Response: The arsenic standard reported in Table 4 of the draft NPDES permit (50 µg/L) correctly reflects the arsenic human health criteria for recreational uses set forth in the Idaho WQS at IDAPA 58.01.02.210.01. Contrary to WMAP's assertion, Idaho's 50 ug/L criteria is effective for CWA purposes. The Idaho arsenic criteria were properly adopted under the Idaho Administrative Procedures Act and were submitted to EPA for approval as required by the CWA eight years ago, in April of 1999. This was before the May 30, 2000 "Alaska ruling." CWA regulations make it clear that water quality standards adopted and submitted to EPA before May 30, 2000 are applicable WQS for

CWA purposes, unless or until EPA promulgates a more stringent standard. 40 CFR 131.21(c). Consequently, the arsenic criteria is effective for CWA purposes, including the ICP permit. (74, 110)

Comment: Permit fails to ensure that discharges into Big Deer Creek do not cause or contribute to violations of water quality standards for arsenic. (110)

Response: This comment is based on the assumption that the NPDES permit uses the wrong standard for arsenic. The permit accurately reflects the Idaho water quality criteria for arsenic. The permit limits will ensure compliance with the correct criteria set forth in Idaho's WQS. (110)

Comment Code	Letter No.	Comment Subject
WTR-307-5	108, 110, 112	National Pollution Discharge Elimination Permit (NPDES) – Mixing Zone

Comment: The Tribe strongly supports the use of end-of-pipe discharge standards in the NPDES permit, as opposed to utilizing the regulatory flexibility of a mixing zone. (108)

Comment: Pleased to see that the NPDES permit will not utilize mixing zones. (110)

Response: A mixing zone was not included in Formation Capital Corporation's (FCC) original permit application. Since the issuance of the DEIS, FCC has applied for a mixing zone for sulfate. EPA and IDEQ will consider the mixing zone application and an analysis of the effects of the mixing zone are included in the FEIS. Following a careful evaluation of this proposal the EPA will respond to this comment in the permit-specific Response to Comments that will accompany the final NPDES permit upon issuance. (108, 110)

Comment: Additional new DEIS and NPDES permit water quality/fish requirements. (110)

Response: This comment is still under consideration relative to the NPDES permit. The response will be provided in the permit-specific Response to Comments that will accompany the final permit at issuance. (110)

Comment: Page 4-38, third paragraph and page 4-40, third paragraph: The text in these paragraphs refers to a mixing zone for sulfate. It should be clear that no mixing zone has been authorized by the state. (112)

Response: A mixing zone was not requested by Formation Capital Corporation prior to the draft permit. However, the company has since requested a mixing zone for sulfate from Idaho DEQ. The proposed mixing zone is currently under consideration and EPA will respond to this comment in the permit-specific Response to Comments that will accompany the final NPDES permit upon issuance. (112)

Comment Code	Letter No.	Comment Subject
WTR-307-6	74, 110, 121	National Pollution Discharge Elimination Permit (NPDES) – SO4

Comment: Draft NPDES permit fails to ensure that copper, sediment and pH discharges do not cause or contribute to violation of water quality standards - TMDL for Big Deer Creek has not been completed as required. (110)

Response: The Western Mining Action Project's (WMAP) assertion that any discharge of pollutants is prohibited in a water body that is impaired under the Idaho Water Quality Standards is not correct. In fact, IDAPA 58.01.02.054.04 allows, for high priority impaired waters bodies for which a TMDL has not yet been prepared, new or increased discharges of pollutants which have caused the water quality limited listing as long as "interim changes, such as pollutant trading or some other approach for the pollutants of concern are implemented and the total load remains constant or decreases within the watershed." The 401 certification requires that, prior to discharge, Formation must have in place a plan approved by DEQ that ensures that the copper load added by Formation's discharge is offset by copper reduction so that the total load remains constant or decreases in the watershed. Contrary to WMAP's assertion, the 401 certification requirements relating to copper are consistent and ensure compliance with state Water Quality Standards applicable to impaired water bodies.

As a result of the 401 certification condition described above, Formation's discharge under the NPDES permit will not add any additional copper load to the Big Deer watershed. In addition, the copper concentration in Formation's discharge will meet state water quality criteria for copper and will be lower than the current levels of copper in Big Deer. Therefore, the discharge will not increase the concentration of copper in Big Deer. Since the discharge will not increase either the concentration or the load of copper in Big Deer, it will not cause or contribute to a violation of water quality standards for copper. WMAP asserts that any discharge of copper to Big Deer will violate state and federal anti-degradation provisions. The federal Clean Water Act and Idaho law does not, however, prohibit discharges of pollutants to impaired water bodies; instead, only discharges that reduce water quality to a point that impairs existing beneficial uses are prohibited. Idaho Sporting congress v. Thoman, 137 F.3d 1146, 1153 (9th Cir. 1998); Lands Council v. Vaught 198 F.Supp2d 1211 (E.D. WA 2002). Formation's discharge will meet state water quality criteria at the end of the pipe and will not increase either the load or concentration of copper in Big Deer. There is nothing that suggests that the discharge will have any additional adverse impact on the beneficial uses of Big Deer. Therefore, the discharge of copper will not violate state or federal antidegradation provisions. Note: At the time the fact sheet was written, no mixing zones were proposed. Please see Response to Comment WTR-307-5 for a discussion of the sulfate mixing zone that is currently under consideration.

WMAp next asserts that the Formation discharge will violate 40 CFR 122.4(i), which is the federal regulation that applies to discharges from new sources to impaired water bodies. But, 122.4(i) allows a new discharge of causative pollutants as long as the discharge will not cause or contribute to a violation of state Water Quality Standards. As discussed above, the ICP discharge will meet copper criteria at the end of pipe and will not increase the concentration of copper in Big Deer Creek. In addition, any small increase in the load of copper is allowed pursuant to Idaho WQS when there is an offset. Therefore, the ICP discharge will not cause or contribute to a violation of state WQS.

WMAp's reliance upon Hells Canyon Preservation Council v. Haines, 2006 WL 2252554 (D. OR) is misplaced. The court in Hells Canyon did hold that an increase in sediment from mining activities to an already impaired water body violated the CWA, notwithstanding the Forest Service's claim that any increase in sediment would be offset by reductions from other measures. The court's holding, however, was the result of the court finding that the offsetting measures were planned to occur some years in the future, that there was nothing that ensured there would actually be funding for the measures, and at any rate, no showing that the measures would bring the mining activity into compliance with state water quality law.

Contrary to the situation in Hells Canyon, Formation cannot discharge copper under its NPDES permit until it first puts in place a plan to offset the addition of copper to Big Deer. In addition, the discharge will comply with state water quality standards. The concentration in the copper will meet state water quality criteria, and the small load of copper associated with the discharge will be offset, exactly as allowed under IDAPA 58.01.02.054.

*Finally, although Formation's discharge will not violate any state water quality standard or federal law that controls NPDES permits, WMAP still suggests that no new NPDES permits can be allowed in an impaired water body until a TMDL is developed. This suggestion is contrary to the U.S. Supreme Court's decision in *Arkansas v. Oklahoma*, 503 US 91, 112 S.Ct. 1046, 117 L.Ed.2d 239 (1992) where the court concluded there was nothing in the CWA that prohibited any new discharge under a NPDES permit to impaired water bodies. It is also contrary to the plain language of 40 CFR 122.4(i) that allows new source discharges to impaired water bodies when there is no TMDL. As the EAB held in *Carlota Copper*, 11 Env'tl. Admin. Decisions 692 (2004): "There is nothing in 40 CFR 122.4(i) providing that an impaired water segment needs to be restored prior to allowing new source discharges into the water body." The 9th Circuit has also recently reached this same conclusion in a review of a Forest Service logging project: "No substantive law requires such a determination and thus the district court's ruling that the Forest Service was required to await the completion of TMDLs (Total Maximum Daily Load) before implementing the Lolo Post Burn Project was without legal foundation and is therefore reversed." *Sierra Club v. USFS*, 2003 WL 22854670 (9th Cir. 2003). See also *Idaho Sportsmen's Coalition v. Browner*, No. C93-943WD, Order on Motions for Summary Judgment and Injunction in which the court denied the Plaintiffs request to prohibit all NPDES permits until TMDLs were completed for water quality limited segments in Idaho: "Plaintiffs' request for injunctive relief prohibiting EPA from approving any new point source discharges into any WQLS that lacks a TMDL is premature. The NPDES process itself involves water quality controls and it has not been shown that the issuance of any particular permit would result in a violation of water quality standards." Order at page 13.*

WMAP asserts that Formation must comply with the WQS IDAPA 58.01.02.054 with respect to pH and sediment, in addition to copper, because these are pollutants for which Big Deer is listed on the 303d list. While these pollutants are on the current 303d list, DEQ has determined they are not pollutants that violate WQS or contribute to the impairment of uses in Big Deer Creek. Idaho's 1996 303(d) list identified pH, sediment and metals as impairments to Big Deer Creek. Since that listing, the Department, EPA and the responsible parties involved in the remediation of the site have intensely monitored Big Deer Creek and have refined the pollutants impairing the water. This investigation has identified only copper as the pollutant. Both pH and sediment have been remedied and details of the corrective actions taken are summarized in the Blackbird Mine Site Record of Decision (EPA 2003). Through the construction of dams on Bucktail Creek, low pH water as well as sediment generated from run off events is captured and managed prior to reaching Big Deer Creek. Also, monitoring data demonstrate Big Deer Creek does not currently experience any violations of Idaho's pH or turbidity numeric standards. In addition, the narrative criteria for sediment impairment is also not violated. As a result, DEQ is in the process of removing these pollutants from the 303d list. (110)

Comment: Fact sheet does not include information on the current pollutant levels in Big Deer Creek. Of particular concern, there is no information about current levels of arsenic, and mercury in the receiving water. (74)

Comment: Permit process has failed to provide necessary information to reviewers. (110)

*Response: The regulations at 40 CFR §124.8 **Fact Sheet** and §124.56 **Fact sheets** specify the information that fact sheets shall contain. Section 124.8 applies to several types of federal draft permits and contains general information requirements. Section 124.56 is specific to NPDES draft permits and requires that fact sheets contain any calculations or other necessary explanation of the derivation of specific effluent limitations and conditions as required by 40 CFR §122.4 and reasons*

why they are applicable or if not, how the alternate effluent limitations were developed. The section also requires that for certain conditions in the draft permit, such as limitations to control toxic discharges, the fact sheet must contain an explanation of the reasons that such conditions are applicable.

Fact Sheet Appendix D (Calculation of WQBELs) contains explanations of the derivation of the effluent limitations. Appendix B (Basis for Effluent Limitations) contains the reasons that the permit conditions (the limits) are applicable. As explained in the fact sheet, the criteria are to be met at the end of the discharge pipe (i.e. there are no mixing zones). When there are no mixing zones, ambient pollutant levels are not factored into the development of permit limits. The permit limits are derived by using the criteria as the Wasteload Allocations (WLAs) to statistically determine maximum and average daily discharge levels that are protective of the criteria in the receiving water. Since the ambient receiving water quality was not required in the derivation of the limitations, it was not required information in the fact sheet and did not violate the public review requirements.

However, Page 10, Table 2 of the fact sheet contains water quality information for cobalt, copper and sulfate on Big Deer Creek. Receiving water information for arsenic was obtained for this response from IDEQ. Data collected by IDEQ or splits obtained from BMSG and analyzed by IDEQ on 32 dissolved arsenic samples from several sites on Big Deer Creek between 2000 through 2006 showed a maximum dissolved arsenic concentration of 5 ug/L and a mean concentration of 0.64 ug/L. Per IDEQ, there has been no true low-level mercury sampling on Big Deer Creek. EPA is requiring collection of this data in the permit. This data will become public information.

The final sulfate effluent limits might change if a mixing zone is granted. (74, 110)

Comment: The draft permit fails to incorporate groundwater monitoring. (110)

Response: The proposed permit covers the point source discharge from Outfall 001 to Big Deer Creek. EPA does not regulate groundwater in NPDES permits unless there is a discharge of pollutants from a point source via groundwater that has a relatively close hydrologic connection to surface water. This has not yet been demonstrated to be the case for the Idaho Cobalt Project. The USFS will require groundwater monitoring under its approval of the Plan of Operations for the ICP. (110)

Comment: Sulfate is a secondary drinking water constituent, the standard for which is based on color, taste and odor, not toxicity. Essentially is a standard for aesthetics. EPA itself identifies the 250 mg/l standards as recommended for drinking water aesthetics and identifies them as “non-enforceable guidelines.” The sulfate limit should be removed from the NPDES permit unless EPA and Idaho can clearly demonstrate a health reason for the limitation. (121)

Response: Effluent limits described in the DEIS match the draft NPDES permit that was current at the time of the DEIS. Limits have been modified in the FEIS to match the projected NPDES requirements of the preferred alternative. (121)

Comment Code	Letter No.	Comment Subject
WTR-307-7	74, 110, 113, 156	National Pollution Discharge Elimination Permit (NPDES) – Comments on Permit

Comment: Permit fails to integrate flow from groundwater interception wells. (74)

Response: The approval of the NPDES permit is dependent on the selection of an Alternative at the end of the EIS process. Water quality data for Big Deer Creek and groundwater inputs to surface water were considered in the analysis as displayed in the Water Resources Technical Report. The Salmon-Challis National Forest and U.S. Environmental Protection Agency will take your comments into consideration during the NPDES review process. (74)

Comment: NPDES permit as proposed violates the CWA, Idaho Water quality law, zero-discharge requirements, and effluent limitation. (110)

Response: The Department disagrees with the comment. A description of how the NPDES permit and §401 certification are consistent with WQS are outlined in responses above. (110)

Comment: Draft NPDES permit fails to ensure that copper, sediment and pH discharges do not cause or contribute to violation of water quality standards - TMDL for Big Deer Creek has not been completed as required. (110)

Response: The Western Mining Action Project's (WMAP) assertion that any discharge of pollutants is prohibited in a water body that is impaired under the Idaho Water Quality Standards is not correct. In fact, IDAPA 58.01.02.054.04 allows, for high priority impaired waters bodies for which a TMDL has not yet been prepared, new or increased discharges of pollutants which have caused the water quality limited listing as long as "interim changes, such as pollutant trading or some other approach for the pollutants of concern are implemented and the total load remains constant or decreases within the watershed." The 401 certification requires that, prior to discharge, Formation must have in place a plan approved by DEQ that ensures that the copper load added by Formation's discharge is offset by copper reduction so that the total load remains constant or decreases in the watershed. Contrary to WMAP's assertion, the 401 certification requirements relating to copper are consistent and ensure compliance with state Water Quality Standards applicable to impaired water bodies.

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violation of state Water Quality Standards. As discussed above, the ICP discharge will meet copper criteria at the end of pipe and will not increase the concentration of copper in Big Deer Creek. In addition, any small increase in the load of copper is allowed pursuant to Idaho WQS when there is an offset. Therefore, the ICP discharge will not cause or contribute to a violation of state WQS.

WMAF's reliance upon *Hells Canyon Preservation Council v. Haines*, 2006 WL 2252554 (D. OR) is misplaced. The court in *Hells Canyon* did hold that an increase in sediment from mining activities to an already impaired water body violated the CWA, notwithstanding the Forest Service's claim that any increase in sediment would be offset by reductions from other measures. The court's holding, however, was the result of the court finding that the offsetting measures were planned to occur some years in the future, that there was nothing that ensured there would actually be funding for the measures, and at any rate, no showing that the measures would bring the mining activity into compliance with state water quality law.

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is also not violated. As a result, DEQ is in the process of removing these pollutants from the 303d list. (110)

Comment: IDEQ cannot issue any Certification under Section 401 of the CWA. (110)

Response: The Department assumes the commenters refer to issuing a §401 certification for discharge into an impaired waterbody. The Department has conditioned the §401 water quality certification to ensure the project complies with state water quality standards, does not add pollution to the waterbody and ensures continued improved water quality in Big Deer Creek from the restoration activities outlined above. (110)

Comment: IDEQ should not certify compliance (NPDES permit). (113)

Response: The IDEQ believes when the conditions of the §401 water certification are met, compliance with Water Quality Standards will be attained. (113)

Comment: Comparison of model results leads to the misleading conclusion that Alternative IV produces superior water quality results as compared to Alternative II. The DSM runs for Alternative II were conducted without considering the effects of mitigation, while the model runs for Alternative IV did consider the effects of mitigation. Please modify the fact sheet to include appropriate narrative so that the reader can understand the model results presented. (156)

Response: The Fact Sheet is a document detailing the development of the draft permit and thus will not be modified. Explanations or revisions to the draft permit will be contained in the Response-to-Comments document that will accompany the final permit.

Alternative II was evaluated assuming that groundwater capture and closure water treatment would be employed as needed, however a DSM simulation of this condition was not run (see discussion bottom of page 4-30 and 4-31 DEIS). Moreover, the Fact Sheet (page 11) explicitly acknowledges the potential benefits of Alternative II mitigations. However, Alternative IV mitigations are predicted to perform better than Alternative II due to the benefits of waste rock slash amendment and improved groundwater capture. (156)

Comment: By choosing these definitions for best case and worst case, the EIS has selected high values for the worst case and low values for the best case, at least in terms of metals loading. EPA should reword this section to accurately portray the meaning of the 90th percentile and 10th percentile cases. (156)

Response: As noted above, the Fact Sheet will not be revised. For purposes of the Response to Comments, the worst case is defined to be the 90th percentile case, which means there is a 90% probability that values will be lower than the predicted value, and the best case is defined to be the 10th percentile, which means there is a 10% probability that values will be lower than the predicted value. (156)

Comment Code	Letter No.	Comment Subject
WTR-307-8	157	National Pollution Discharge Elimination Permit (NPDES) – Water Balance

Comment: The Draft EIS says that only 51 gpm will be drained from the mine (43 from the Ram workings, 8 from the Sunshine workings). DEIS at 2-22. Where will the additional 24 gpm come from (75-51)? (157)

Response: The NPDES permit assumption of 75 gpm is based on the application submitted by FCC. In addition to mine water, the ICP is allowed to discharge precipitation captured by the TWSF and other facilities that is in excess of evaporation. (157)

Comment: From DEIS figure 2-8, there is water going directly from the "Tails De-watering" and some from the "Process Water" pond into the water treatment plant and then eventual discharge, with no recycling back to the mill (although from Figure 2-8. some of the water from the process pond will go back to the mill). (157)

Response: Figure 2-8 is a diagram showing water flow. The NSPS at 40 CFR 440.104 (b)(2)(i) allow process water to be discharged equal to the net precipitation, as detailed in the response to the comment immediately below. The figure shows the pathways that might be used to do this. (157)

Comment: Regarding the other water in the discharge, the 38 gpm from the TWSF is, according to Formation and the draft NPDES permit, the "net precipitation." However, the TWSF in Alternative IV is only 36 acres (and the process ponds are only 6.6 acres). How was the 38 gpm calculated? (157)

Response: The value of 38 gpm was a modeled value representing average flows of net precipitation on an annual basis that was based on the acreages in Alternative II. The TWSF in Alternative II covered 55 acres. Since Alternative IV was chosen as the preferred alternative in the DEIS, FCC will be submitting a new NPDES permit application based on Alternative IV. From the new information, a new net precipitation value for the Alternative IV scenario will be developed and placed in the permit. A complete explanation of the net precipitation calculation will be provided by EPA in the permit-specific Response to Comments, which will accompany the final NPDES permit upon issuance. (157)

Comment Code	Letter No.	Comment Subject
WTR-307-9	113	National Pollution Discharge Elimination Permit (NPDES) – 401 Certification

Comment: IDEQ's draft ICP certification is arbitrary and unlawful. (113)

Response: As the commenter should be aware, releases that have caused and continue to cause impairment to South Fork Big Deer and Big Deer Creeks are being addressed under separate CERCLA authority. The USFS will require financial assurance to cover costs of long term water treatment should ICP's mining activities have the potential to further impact the impaired stream reaches. As described in the Water Technical Report, additional metal load to the already impaired streams is not allowed under Idaho water quality regulations. The IDQ supports the development and implementation of a plan to ensure zero net loading of copper is maintained. Failure on the part of the Idaho Cobalt Project to do so will result in administrative actions under the Department's enforcement provisions. (113)

Comment Code	Letter No.	Comment Subject
WTR-308	113, 115	Wetlands and Other Waters of the U.S.

Comment: DEIS fails to provide critical information on Section 404 permit. (113)

Response: The DEIS does not specifically address a 404 permit for the ICP because no application had been filed by the project proponent. Need for a 404 permit is identified as a result of projected crossing of apparent jurisdictional wetlands by access roads and a pipeline. If a 404 permit is required, it will be the Corps of Engineer's responsibility to determine the NEPA requirements for their permit actions. (113)

Comment: Practicable alternatives that do no involve wetland filling have not been evaluated. (113)

Response: A broad range of alternatives to the proposed action including options that reduce potential impacts to both jurisdictional and non-jurisdictional wetlands and waters of the US have been considered. Alternative V would locate the water treatment facilities in Blackbird Creek drainage and access to Big Deer Creek and associated stream and wetlands crossings would be eliminated. Alternative V has been identified as the environmentally preferred alternative. The agencies have no authority to require the ICP to obtain agreement to utilize existing Blackbird site infrastructure. If BMSG has a real concern about environmental impacts to aquatic systems and would like to offer access, this should be discussed directly with FCC. One of the objectives of Alternative IV has been to minimize impacts to isolated wetlands in the vicinity of the TWSF. (113)

Comment: BMSG request to review and comment on ICP 404 application and COE proposed response. (113)

Response: The BMSG's request to comment on a 404 permit application and the Corp's response should be directed to the Corps of Engineers. (113)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, Figure 2-1 wetland mitigation cells. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the development of agency alternatives - location, water source and design of constructed wetlands for Alternatives IV and V. (115)

Response: The Forest Service has included wetlands mitigation as proposed in FCC's plan in Alternatives IV and V to provide for the potential impacts to wetlands on the Big Flat as well as indirect impacts to Ram Spring wetlands and wetlands along the pipeline route. FCC would be required to submit a final design of the wetlands mitigation as part of the revised operating plan submitted to the Forest Service prior to initiation of construction activities. (115)

Comment: Unsupported assertions - measures to protect wetlands are probably doomed. (115)

Response: The existence of the referenced wetland vegetation is evidence that soils and hydrology of the site are capable of supporting a wetland given adequate water supply. Given that the wetland persists now, seven years after the 2000 fire, strongly suggests that the water supply is currently

adequate. The EIS team believes that the water supply is unlikely to be reduced by maturation of the forest canopy to the point that the wetland will disappear prior to TWSF construction. (115)

Comment: Errors and omissions in the impact discussions - Alt. II would result in more wetlands than Alt. III. (115)

Response: The agency alternatives include the objective of trying to minimize impacts to all wetlands including isolated non-jurisdictional wetlands that provide important habitat for a number of forest species. The isolated wetlands were identified following the 2000 fire and had characteristic wetlands vegetation assemblages at that time. They have also persisted for seven years following the fire including several drought years indicating that these are not likely to be temporary artifacts of the post fire conditions. Proposed artificial wetlands may not provide equivalent services as the original and have not been demonstrated to be permanent since they would receive water from the TWSF that would be greatly diminished post closure. The current constructed wetlands design would need to be revised taking into account final TWSF size and cap design. Further the quality of the water supplied by the TWSF seepage collection system may have chemical characteristics that limit wetlands functions. (115)

Comment Code	Letter No.	Comment Subject
WTR-309	110	Federal Reserved Water Rights

Comment: Failure to protect federal reserved water rights. (110)

Response: The Public Water Reserve No. 107 (PWR 107) does not apply to the project area. PWR 107 was for stockwater on Federal Public Land administered by the Bureau of Land Management. Public lands managed by the Salmon National Forest were placed in Forest Reserves much earlier than 1926 and are not covered by this Executive Order.

Downstream of the Idaho Cobalt Project area there is a Wild and Scenic River federal reserved water right for the Main Salmon River. As part of this federal reserved right there is a Stipulation for Future Use Subordination to allow for a certain level of new water uses upstream of the Main Salmon Wild and Scenic River. The proposed water use for the Idaho Cobalt Project would become part of the Future Use Subordination and would be tracked by the Idaho Department of Water Resources (IDWR). The Stipulation directs IDWR to deduct from the subordination amounts provided for in the Partial Decree the diversion rate for any new uses that fall under the subordination provisions, such as the Idaho Cobalt Project (Fifth Judicial District of the State of Idaho, Stipulation and Joint Motion for Order Approving Stipulation and Entry of Partial Decrees-Consolidated Subcase No. 75-13316-Wild and Scenic Rivers Act Claims, August 20, 2004). (110)

Comment Code	Letter No.	Comment Subject
WTR-310	113, 155	Bedrock Fracture Characterization

Comment: Groundwater monitoring is not feasible. (113)

Response: The comment states “At the ICP and Blackbird Mine, where groundwater flows through fractures that are not identified and understood, any given well is likely to completely miss zones of high groundwater flow, located only feet away.” However, a complete understanding and identification of individual fractures is virtually impossible to achieve no matter the level of study

applied to a bedrock groundwater system, nor is it necessary for an understanding and control of contaminant transport issues as long as:

1. The density and interconnectivity of fractures is sufficiently great that the system behaves as Adequate safeguards are available and implemented to address any uncertainties in potential an equivalent porous media, and/or;
2. contaminant transport pathways.

As described in the 2006 Water Resources Technical Report, detailed logging of drill core from the Ram and Sunshine areas show the bedrock in these areas to be highly fractured, with most fracture surfaces containing limonitic or other secondary mineral staining, indicating groundwater flow has occurred through the fractures. Based on the high fracture density, as well as the very steep hydraulic gradients from both the Ram and Sunshine Mine areas towards Bucktail Creek, the most likely scenario for groundwater flow and contaminant transport at the site is for groundwater to flow from the mines towards Bucktail Creek (as presented in the ICP conceptual model and impacts analyses). Additional detail on the appropriateness of the EPM approach at the ICP site is provided in a technical memorandum included as an addendum to the WRTR, and in Chapter 4 of the FEIS.

Equally as important, agency EIS Alternatives III, IV and V include additional monitoring provisions for improving the current level of understanding on groundwater flow through the bedrock system, including:

- Documenting the spatial and temporal distribution of groundwater inflow to the underground mine workings as they're developed. Recording the location and sustained rates of groundwater inflow to the workings would lead to a detailed understanding of potential preferential groundwater flow conduits coinciding with bedrock structures. Such structures may include the No-Name Fault which trends north-south through the Ram Mine area and could theoretically act as a conduit for groundwater flow from the Ram Mine to the north, or the Green Dyke Fault trending north-south through the Sunshine Mine area. Besides identifying potential groundwater conduits which may deviate from the general groundwater flow directions (towards Bucktail Creek), information from the mine inflow characterization program would be used to control such flows after mine closure if encountered, such as grouting of structures, placement of capture wells within conduits, or maintaining the mines in a dewatered or partially dewatered condition.
- Placement of wells peripheral to the mines for monitoring of the groundwater level response to mine dewatering. In addition to the upgradient and downgradient wells, monitoring wells would be placed north and south of the Ram Mine and east and west of the Sunshine mine, to document the rate of groundwater level drawdown in response to mine dewatering. If the equivalent porous media model is valid, groundwater drawdown peripheral to the mines should be relatively uniform, accounting for distortion resulting from the steep hydraulic gradients. If preferential flow paths do exist along bedrock structures, drawdown should be more pronounced along the structures.

Development of the approximately 38,000 feet of mine workings extending to 1,000 feet below ground surface at the Ram Mine, and 13,000 feet of workings extending to 750 feet below ground surface at the Sunshine Mine, provides a unique opportunity to gain detailed information on groundwater flow through the bedrock system during the 15-year mine operational phase. This information would be used to verify the validity of the equivalent porous media model, and to identify potential preferential groundwater flow paths deviating from the generalized groundwater flow patterns. If preferential flowpaths deviating from the general groundwater flow directions are identified through the operational phase monitoring, sufficient time would be available to take appropriate measures to control contaminant migration, such as grouting of structures, placement of capture wells within conduits, or maintaining the mines in a dewatered or partially dewatered condition, prior to mine reflooding. For these reasons, we believe the concerns raised in this comment have previously been identified and are adequately addressed in the EIS.

Finally, the comment notes that it is likely that contaminants in groundwater from the ICP mines will not be detected by the monitoring systems because it will flow through fractures in between the monitoring wells. This would not be the case provided an adequate number of properly located and completed monitoring wells are installed and the fracture system density and interconnectivity are great enough for the system to behave as an equivalent porous media (as expected).

Also, post-operational monitoring of contaminant loads exiting the mines via groundwater would not rely solely on downgradient groundwater monitoring. Determination of post-mine reflooding contaminant loads from the mines requires two pieces of information; the groundwater flow rate, or flux, and contaminant concentrations in the groundwater exiting the mine. The groundwater flux could be estimated as the steady state groundwater inflow rate to each mine when dewatered. For instance, if the inflow rate to the Ram Mine is 50 gpm as determined by mine pumping rates, the post-closure groundwater flux could be approximated as 50 gpm. This would overestimate the post-closure groundwater flux since inflow to the dewatered mine would be somewhat greater than the ambient groundwater flux through the mine area due to the steepened hydraulic gradients toward the workings, thus lending a level of conservatism to the flux estimate and loading calculations. Likewise, groundwater metals concentrations could be determined from monitoring wells completed within the backfilled mine workings to better record mine water, and thus downgradient groundwater concentrations. This approach, in conjunction with downgradient groundwater monitoring, can lead to reliable estimates of metals loading from the backfilled, reflooded mine workings. (113)

Comment: The release of ICP Waters to the Blackbird Mine collection and treatment systems is not acceptable. (155)

Response: The comment is correct in assuming that the estimated 5% or less of post-operational Ram Mine outflow potentially discharging to the BMSG Phase II capture system is based on a flow net analysis of the groundwater flow field between the Ram Mine and Bucktail Creek, and the percentage of the flow field area upgradient of the Phase II capture system. However, the DEIS analysis probably overestimates the potential for groundwater contaminants from the Ram Mine to mix with the BMSG Phase II capture system because the analysis assumes a uniform flow field exiting the mine. In reality, the majority of outflow from the Ram Mine will exit from the north half of the workings, due to the geometry of the workings and permeability of backfill material, with very little or no flow expected from the south portion of the workings which geographically overlap, and have the potential to mix with, the BMSG capture facilities. A more detailed description of outflow from the Ram and Sunshine Mines and potential for mixing with the BMSG capture facilities is included in the 2008 addendum to the Water Resources Technical Report.

The comment further states that the assumption that groundwater flow generally follows the topographic gradient is only valid if the groundwater system behaves as an isotropic porous media aquifer. This is only partially correct. In reality, the bedrock system need only have a sufficient fracture density and interconnectivity to act as an equivalent porous media aquifer for flow to generally follow topography. As stated in responses to other comments (see Comment Responses WTR 301-1 and WTR 310), adequate safeguards have been incorporated to ensure that contaminant migration through groundwater can be adequately controlled should contaminant pathways deviate significantly from those predicted by the equivalent porous media model. These safeguards include detailed characterization of bedrock groundwater flow through mine inflow and groundwater drawdown monitoring during the mine operational period, and the multiple approaches to groundwater containment incorporated into the plan, including bedrock groundwater pumpback wells downgradient of each mine, and/or backup groundwater capture system in Lower Bucktail drainage, or maintaining the mines in a dewatered condition if necessary. Based on these monitoring requirements and contingencies, the agencies believe that the quantity of Ram Mine-derived groundwater contaminants potentially reporting to the BMSG, if any, can be adequately quantified and controlled. (155)

BIODIVERSITY

Comment Code	Letter No.	Comment Subject
BIO-400-1	93	Wildlife Habitat – Inadequate Mitigation

Comment: Mitigation for impacts to terrestrial resources could include funds to acquire acceptable replacement habitats to compensate for habitat functionality losses incurred in the mine transportation corridor. (93)

Response: Acquiring habitat does not ensure that wildlife will benefit. Funding of habitat improvement work may be more effective than acquiring land and setting it aside for wildlife. However, the Agencies have not determined that terrestrial habitat impacts are significant and do not have the authority to require replacement habitat. (93)

Comment: We believe that the DEIS does not adequately mitigate the indirect/direct impacts (habitat effectiveness for T&E species, wild ungulates, etc.) of increased traffic to/from the project area on a year-round basis. Noise level and disturbance on the Williams Creek route will significantly increase for animals that currently use the adjacent habitat. (93)

Response: The Williams Creek Road has been an access route into the area for decades. During that period there has been traffic associated with mining, logging, recreation and other activities. Wildlife can and will adjust to ongoing activities associated with ICPs mining. If there is displacement/disturbance of wildlife it normally comes early on in development activities, not after the wildlife has had a chance to habituate. The increase in vehicular activity associated with the mining operations is not anticipated to have a detectable effect on wildlife use of habitat and, while individual wildlife mortality from vehicle collisions area expected, these mortalities are not anticipated to result in an affect on area wildlife at the population level.

The Forest Service does not have the authority to require acquiring replacement habitat and setting it aside for wildlife. Additionally, the level of impacts attributed to additional road use is not expected to have significant impacts to wildlife populations. (93)

Comment Code	Letter No.	Comment Subject
BIO-400-2	110	Wildlife Habitat – Wetlands

Comment: FS should require the creation of a substantial additional acreage of wetlands in order to assure that basic wetland functions in this will continue. (110)

Response: The wetlands that would be destroyed by the TWSF under Alternative II, or potentially by Alternative IV or V, if additional ore is discovered are non-jurisdictional (are not covered by Corps of Engineers 404 permitting requirements). The company has proposed constructed wetlands of a greater area than that impacted under their Plan of Operations as mitigation. Wetlands associated with a spring downgradient of the Ram mine are also predicted to be impacted by mine dewatering. The company proposal for a constructed wetland will be included in the plan of operations, but the Forest Service has no authority to require additional mitigation of wetlands. (110)

Comment Code	Letter No.	Comment Subject
BIO-401	115	Vegetation

Comment: Errors and omissions in the description of Alternative II. Incorrect acreage of disturbance. (115)

Response: Editorial Correction. (115)

Comment Code	Letter No.	Comment Subject
BIO-401-1	110	Vegetation - Plant Species of Special Concern, Ute Lady Tress

Comment: FS should conduct additional surveys this year when the probability of discovering the Ute Ladies' Tresses is highest. (110)

Response: The existing vegetation surveys have not identified Ute Ladies Tresses and additional survey has not been conducted. If Ute Ladies Tresses is identified within the project area in the future, the Forest Service will require ICP modify their activities to protect them. (110)

Comment Code	Letter No.	Comment Subject
BIO-401-1	16, 108, 110, 167	Vegetation- Noxious Weeds, Weed Plan

Comment: Spoke of weed concerns - we want it addressed. We believe dollars need to be set aside for prevention and treatment. (16)

Comment: This area will see dramatically increased motor vehicle use; the FS should be proactive about dealing w/noxious weeds; require noxious weed management plan and wash stations and monitoring. (108)

Comment: Comments regarding required noxious weed prevention measures for the operation. (110)

Comment: Supports project, make sure that spread of weeds is addressed. (167)

Response: The Salmon-Challis National Forest is required to manage undesirable plants on lands under their jurisdiction per the Federal Noxious Weed Act of 1974 as described in Chapter 1 of the FEIS. Under all alternatives presented in the FEIS, the ICP will prepare a weed control plan for Forest Service review and approval. The ICP shall use weed-free mulch and seed mixtures, promptly reclaim disturbed areas and control noxious weeds annually. Herbicide selection and use shall be in accordance with the approved State, county and Forest Service Weed Control Plans. (16, 108, 110, 167)

Comment: FS should require noxious weed management plan to include wash stations and monitoring. (108, 110)

The noxious weed management plan includes the requirement of annual monitoring. It is unclear what benefits would derive from wash stations as most of the common weed species are already

found both on the ICP site and along the access roads. The FS will consider the need for vehicle washdown in review of the weed management plan. (108, 110)

THREATENED AND ENDANGERED SPECIES

Comment Code	Letter No.	Comment Subject
TE-500-1	110	Terrestrial Species – Describe Effects

Comment: Agencies need to further describe the potential short and long-term effects on wildlife species, including T&E, sensitive, and MIS species. Suggest mitigation of roads to protect variety of resources. (110)

Response: Almost the entire area of direct impacts, where the mining and milling operations are located, is in an area that was severely burned in the 2000 Clear Creek fire. Nearly all proposed disturbance will be in areas of standing dead timber. Both cover and foraging habitat in these areas is generally lacking.

In time the habitat will become suitable for many species, but for the life of the mine much of the area will remain in an unsuitable condition for many species. Wildlife can and will adjust to noise and lights associated with the operations.

Vehicle collisions with wildlife always occur along highways or roads. The Plan of Operations will require that most workers be van pooled to the project area to reduce the total amount of vehicle traffic on access roads. From the Blackbird Mine gate to the project site vehicles will be required to travel at slow speeds.

Currently, habitat is generally lacking for forest carnivores in the project area. Until reestablishment of the forest habitat is further along and there is suitable prey base and cover the chances of any of these species occurring in the area are limited.

The Forest Service has complied with MIS species requirements. There are three MIS species listed by the USFS for the Salmon National Forest. All of these species are discussed in the MIS section of the EIS. Of these only the pileated woodpecker and northern spotted frog are found in the project area. The greater sage grouse is a sagebrush obligate species and there is no suitable habitat nor are any of these birds found along the access route or in the project area.

The pileated woodpecker is found in the area of the proposed operations, but suitable nesting was eliminated as a result of the 2000 Clear Creek Fire. During wildlife studies conducted for the project all pileated woodpeckers observed or heard were a mile or more from the project area. There are thousands of suitable acres of habitat for this species found well away from the project area. These birds will not be impacted by the proposed operations.

The northern spotted frog was observed in the project area. Safeguards to protect water bodies and wet areas used by these species are included in the plan of operations. The Plan of Operations will include construction of replacement wetlands for areas of wetland impacts.

As a result of the Clear Creek fire there is very little security cover for large species within the project area. New roads in the project area will not significantly adversely affect the available cover. The primary access roads Williams Creek and Panther Creek have been in existence for years and minor modifications to these corridors will have a negligible affect of habitat. The Plan of Operations will include the requirement that existing un-needed roads be closed and reclaimed. This will result in the project having a net decrease in road density both during and following mining that will provide habitat benefits and long-term protection of wildlife.

Nesting habitat in the immediate project area is lacking for raptors. The immediate project are also has limited suitable foraging habitat for raptor species. (110)

Comment Code	Letter No.	Comment Subject
TE-501	113	Aquatic/Fisheries Species

Comment: DEIS lacks serious analysis of the ICP effects on ESA-listed fish species. (113)

Response: Conceptual models were developed to encompass the hydrologic, climatic, geochemical and mine facility processes into a single, stochastic dynamic systems model (DSM). The model was used to evaluate the storage and process pond capacities and the cumulative effects of mining on water flows and water chemistry within the Panther Creek watershed. Throughout the development of this model, water quality regulatory agencies (EPA and IDEQ) have provided valuable input to the design, application, and interpretation of model results with the EIS team. Output from the model was used to predict changes in water quality such as daily copper concentration. The output expressed a range of possible results from highest to lowest to describe predicted values. This range in values included model simulations referred to as “expected case” or 50th percentile results, “best case” or 10th percentile case, and “worst case” or 90th percentile case. The results predict that surface water quality within the Panther Creek drainage will not violate cold water aquatic life standards nor will it interfere with the attainment goals of BMSG. However, the DEIS did identify copper concentrations (worst case) that with ground water capture may not be sufficiently mitigated in Alternative II. Furthermore, an NPDES permit will be required for all action alternatives. Discharge limits have been established as end-of-pipe limits (no mixing zone) and most constituents (metals) have been set for protection of cold water aquatic life standards to protect against adverse effects due to human activities (See DEIS Tables 4-4 and 4-5). (113)

The EIS acknowledges the possibility of adverse impacts associated with Alternative II especially in the 90th percentile (worst case) condition for Big Deer Creek. Text has been added in the analysis of Alternative II that states that if water quality criteria (for copper) increase that rainbow trout and westslope cutthroat trout would likely avoid Big Deer Creek near South Fork Big Deer Creek confluence. It has also been stated the should this condition develop and proposed mitigation measures cannot meet water quality standards this alternative has the potential to have an adverse direct impact on fish and Forest Service sensitive species in Big Deer Creek. (113)

Comment Code	Letter No.	Comment Subject
TE-501-1	113	Aquatic/Fisheries Species – Inadequate Analysis

Comment: DEIS lacks serious analysis of the ICP effects on ESA-listed fish species. (113)

Response: There has been considerable amount of research in evaluating potential changes to water quality as a result of the ICP alternatives (see Water Resources). Effects to fisheries resources and ESA-listed species is based on the foundation of the water resource effects that included environmental data collected by field and laboratory testing and measurement of water resource media (groundwater, surface water, climate, soils, geochemistry of mining-related rock) that are summarized in Chapter 3 and described in detail in the Water Resources Technical Report (Hydrometrics, 2006). In addition, modeling sediment dynamics (WEPP and BOISED) for the ICP project has provided input (road upgrades and BMP structures) to control sources of sediments to streams. The modeling predicts long-term beneficial effects by reducing delivery of sediment to streams. Reducing overall sediment delivery to streams is beneficial to ESA-listed fish. The NPDES permit will be required for all action alternatives. Discharge limits set forth in NPDES permit for the

outfall have been established as end-of-pipe limits (no mixing zone) and most constituents have been set for protection of “cold water aquatic life” standards, which protects against adverse effects due to human activities (See DEIS Tables 4-4 and 4-5). Cold water aquatic life would include protective measures necessary to protect ESA-listed salmonids (Chinook Salmon, Bull Trout, Steelhead, and Sockeye salmon). (113)

Comment: FS should withhold ICP approval. (113)

Comment: IDEQ's draft ICP certification is arbitrary and unlawful. (113)

Response: The Department disagrees with the comment and continues to support the development and implementation of a plan to ensure zero net loading of copper is maintained. Failure on the part of the Idaho Cobalt Project to do so will result in administrative actions under the Department's enforcement provisions. (113 for both above)

Comment: Section 7 consultation process and environmental baseline. (113)

Response: The basis for the conclusions regarding avoidance of adverse impacts is described in the EIS and the Water Resources Technical Report that is included by reference in the EIS.

Pre-ICP (i.e., current) impacts on fish are described in the Aquatic Baseline condition Technical Report (Kuzis, 2005) and the Biological Assessment (Kuzis, 2007). These impacts are summarized in pages 3-57 through 3-61 of the FEIS. (113)

Comment: After the fact approach to correcting effects to ESA-listed species. (113)

Response: As described in Item 1, top of page 4-7 FEIS, the changes in water quality in area streams, including Big Deer Creek, are not expected to be significant.

The impacts to water quality due to discharge of mine water from the ICP Alternatives II, III, and IV to Big Deer Creek during operations would be positive and would improve water quality in Big Deer Creek (see Tables 4-8 and 4-9 that show concentrations for Alternatives II, III, and IV that are lower than Alternative I No-Action). Currently, Big Deer Creek does not meet water quality standards largely due to releases of contaminants from historic Blackbird Mine disturbances. The draft NPDES Permit requires that all water discharged from the ICP meet water quality standards prior to discharge, thus the ICP would dilute contaminant concentrations from Blackbird and natural sources and improve stream water quality.

During closure, impacts to area streams are not expected to be significant under Alternatives II, III, IV, and V (see Item 1, page 4-7 FEIS).

The comment erroneously states that mitigation measures are offered as “performance-based approach to compliance assessment” and references DEIS at 2-47. Please note that the “performance-based approach to compliance assessment” on page 2-47 (under the section titled “Water Monitoring”) refers to the Alternative IV changes to the water monitoring program, not mitigation measures designed to negate chemical mass loads to Big Deer Creek.

The groundwater capture and treatment systems to mitigate potential chemical mass loads from the mine workings are described on FEIS pages 2-46 and 2-47. Note that these measures would be constructed and tested during the first year of mine operations, not after-the-fact. Further, the mine workings would remain dewatered unless monitoring data indicates that no unacceptable effects to water quality objectives or cleanup goals would result from mine flooding.

The basis for the conclusions regarding avoidance of adverse impacts is described in the DEIS and the Water Resources Technical Report that is included by reference.

Pre-ICP (i.e., current) impacts on fish are described in the Aquatic Baseline condition Technical Report (Kuzis, 2005) and the Biological Assessment (Kuzis, 2007). These impacts are summarized in pages 3-57 through 3-61 of the FEIS. (113)

Comment Code	Letter No.	Comment Subject
TE-501-2	110	Aquatic/Fisheries Species – Describe Effects

Comment: Section 7 consultation; FS should evaluate long-term biotic effects from increased heavy metal levels. (110)

Response: The agencies have undertaken extensive analysis of potential impacts to threatened and endangered species as part of the Biological Assessments for terrestrial and aquatic resources. Metals issues have also been considered in the Biological Opinion prepared to address risk of spills impacting surface waters and fisheries. (110)

Comment Code	Letter No.	Comment Subject
TE-502-1	108	Section 7 Consultation – Adverse Impact

Comment: The Tribe believes that this project has the potential to adversely affect the ESA listed species' critical habitat, while also impacting the non-listed but imperiled species habitat. (108)

Response: The potential impacts to ESA listed species are covered in the Biological Assessment completed for the ICP and submitted to the US Fish and Wildlife Service and National Marine Fisheries Service in October 2007. Impacts to terrestrial and aquatic habitats are discussed in the wildlife and fisheries technical reports and summarized in the EIS. (108)

Comment Code	Letter No.	Comment Subject
TE-502-2	112	Section 7 Consultation – More Detail

Comment: We understand that this was a draft document (BA) and therefore, we have questions regarding the accuracy of the determination and how the project area is defined. ... we recommend that these issues be addressed in the final EIS and that the final EIS include information to reflect the BA as well as NOAA and NMFS Biological Opinion. (112)

Response: BAs were submitted to USFWS and NMFS in December 2007 and the FEIS has been revised to address additional information contained in the BAs. The terms and conditions from the Biological Opinion will be included in the ROD. (112)

Comment: A conclusion of the fisheries resources section is that it is unlikely that there will be adverse impacts to fish in the area surface waters. In order to justify this conclusion, this section of the EIS should discuss the protectiveness of the criteria and cleanup goals specifically for the fish present in the streams. (112)

Response: The Biological Assessment completed in December 2007 indicates possible impacts to fish from transportation spills. The FEIS has been revised to address these potential impacts. The EPA and State of Idaho have established water quality criteria to be protective of fish and aquatic life. ICP discharges and cleanup goals for the BMSG (with the exception of Bucktail Creek) utilize these criteria in determining acceptable levels of impact to surface waters. (112)

FISHERIES

Comment Code	Letter No.	Comment Subject
FSH-600	110, 115	General Fish Species and Habitat

Comment: DEIS does not ensure that all requirements of the NFMA will be met at all times; project would violate INFISH standards MM-1, MM-2, and MM-3. (110)

Response: ICP structures/roads that fall within areas that may be considered RHCA's were associated with the pipeline to the NPDES outfall in Big Deer Creek. Page 2-71 of the DEIS summarizes the discharge location alternatives that were considered by the Forest Service. A no discharge option was dismissed due to the positive water balance at the site, and the option of using BMSG's water treatment plant is not within the jurisdiction of the Forest Service to require of FCC. This left no other option but to consider structures/roads within potential RHCA's. The structures/roads associated with the Big Deer Creek outfall have been designed to minimize impacts to the riparian area and inland native fish to the extent practicable. The DEIS analyzed the effects to riparian areas in Chapter 4 under Vegetation and Wetland Resources (page 4-49 to 4-52).

All road construction in RHCA's consists of either upgrading roads to mitigate sediment delivery to streams or tertiary site roads to be occasionally used by light vehicles.

In keeping with MM-1, practicable measures are being taken to minimize impacts to fish habitat. Sediment delivery to streams is being mitigated through road resurfacing and bussing of employees to minimize traffic.

Construction of the Project is consistent with INFISH Guideline MM-2. Access roads and site roads in RHCA's have been kept to a minimum and all existing exploration roads that are no longer useful will be obliterated during the construction of the Project. Realignment of the Project Access route to completely avoid RHCA's is infeasible.

Solid and sanitary waste facilities (i.e., the TWSF and septic system) are not located in RHCA's and therefore do not violate MM-3. The discharge pipeline for treated water is in part in a RHCA and must be in order to discharge to a stream. (110)

Comment: Road construction in RHCAs; no agency finding of no alternative to avoid. (110)

Response: Contrary to the commenter's assertion, constructing a maintenance road for the water treatment discharge pipeline would not be a violation of the roadless rule. FS roadless regulation at 36 CFR 294.12(b)(3) says a road may be constructed in inventoried roadless areas when the road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty. The General Mining Law of 1872 (17 Stat. 91, as amended) provides United States citizens a possessory right to prospect, explore and develop locatable minerals on public domain lands. This possessory right includes reasonable access to conduct locatable mineral activities. The Forest Service considers the construction of the maintenance road for the discharge pipeline as being reasonably necessary for the development of FCC's locatable mineral prospect and therefore exempt from the road prohibitions of the roadless rule. The commenter is also incorrectly infers that the DEIS rejected

alternate pipeline routes solely on the basis that they involved road construction in roadless areas. Minimizing road construction within inventoried roadless areas was only one of a number of factors considered by the FS in evaluating the best route for the discharge pipeline. (110)

Comment: Road construction in RHCAs; no agency finding of alternative to avoid - ROD violates other INFISH and Forest Plan requirements. (110)

Response: ICP structures/roads that fall within areas that may be considered RHCA's were associated with the pipeline to the NPDES outfall in Big Deer Creek. Page 2-71 of the DEIS summarizes the discharge location alternatives that were considered by the Forest Service. A no discharge option was dismissed due to the positive water balance at the site, and the option of using BMSG's water treatment plant is not within the jurisdiction of the Forest Service to require of FCC. This left no other option but to consider structures/roads within potential RHCA's. The structures/roads associated with the Big Deer Creek outfall have been designed to minimize impacts to the riparian area and inland native fish to the extent practicable. The DEIS analyzed the effects to riparian areas in Chapter 4 under Vegetation and Wetland Resources (pp. 4-49 to 4-52). (110)

Comment: Unsupported assertions - unfounded conclusion re: unavoidable adverse effect of sulfate on fisheries. (115)

Response: Sulfate was not identified in the Chapter 4 fisheries sections as an adverse impact and the sentence containing the reference to sulfate will be removed in the fisheries section under "Unavoidable Adverse Impact" (115)

Comment: Errors and omissions in the impact discussions - Correct Alt. II sediment addition statement in fisheries text. (115)

Response: Text has been revised for clarification as requested. (115)

Comment Code	Letter No.	Comment Subject
FSH-600-1	93	General Fish Species and Habitat - Sediment

Comment: Increased sedimentation is likely to occur in the Williams Creek watershed. We suggest these impacts by properly mitigated by Formation Capital Corporation. . . could include funds for onsite and offsite habitat improvement projects and/or assistance with area stream reconnection efforts. (93)

Response: Sediment control practices including BMPs described in the POO and Jersey Barriers and outsloped roads were evaluated by the Agencies. The agency evaluation concluded that maintenance issues associated with the Jersey Barriers would likely limit the effectiveness of stormwater dispersal, causing additional road erosion and stormwater management problems. Use of in-sloped roads and BMPs to control sediment is used in all alternatives to control road runoff (DEIS page 2-73). (93)

Comment Code	Letter No.	Comment Subject
FSH-600-2	108, 110, 112	General Fish Species and Habitat – Inadequate Analysis

Comment: The Tribe is not comfortable that potential impact from heavy metals has been adequately addressed in the EIS, nor adequately mitigated in the POO; potential to significantly reduce successful recruitment of fish species, potential to contaminate fish that currently reside in this area. (108)

Response: The Forest Service and EPA recognize the Tribe's position and interest with regards to fish consumption. The analysis of the ICP discharge (see Water Resources section of Chapter 4) predicts a decrease in copper and cobalt loads to the downstream fisheries during and following mining as a result of water treatment. Long-term improvements in water quality associated with the Blackbird cleanup should have a beneficial effect on fish and fish consumption.

The potential for leaching of heavy metals and ARD was one of the major concerns addressed by the EIS team. For example, in the first paragraph of Appendix B to the Water Report states: "The geochemistry of mined rock material is one of the critical characteristics of the mine that has the potential to influence the environmental impacts associated with the ICP." There is extensive analysis of the potential for elevated levels of heavy metals to exist in mine drainage or for ARD to occur. An extensive geochemical testing program (Chapter 3 & 4, Appendix B, Water Report) was designed and implemented for the DEIS. Testing concluded, for example (Page 9, Appendix B, Water Report), that "Overall, samples were very low in sulfide sulfur (Figure 9) with 50% of the samples having no detectable sulfur (< 0.01 weight %) and 75% of the samples with less than 0.1%. Sulfur concentrations were log-normally distributed. The highest sulfur levels in the Ram and Sunshine, which had similar sulfur distributions, were less than 2%. Only about 5% of the samples had more than 1% sulfur, with many of these samples representing ore zones. The ANP of ICP samples (Figure 9) was also very low with 70% of the samples having ANP values less than 3 kg/t. This level of ANP would be neutralized when about 0.1% pyritic S oxidizes. About 1% of the samples came from zones that had carbonate mineralization and yielded ANP levels in the range of 10 to 100 kg/t." Additionally, on page 18, Appendix B, the EIS team stated, "Extensive geochemical testing conducted by FCC consultants (Telesto 2004) indicated those samples with more than about 0.15% pyritic sulfur and a negative NNP are potentially acid generating (PAG). In this evaluation, a threshold pyritic sulfur level of 0.2% and a negative NNP appeared to correspond to potentially acid generating waste rock. Overall, about 17% of 239 rock samples collected from the Ram and Sunshine deposits (Figure 15) were PAG while the remaining samples were either weakly acid neutralizing (80%) or uncertain (3%). All PAG samples were very low in ANP meaning they have little ability to neutralize acidity, and could become acidic quickly if there are sufficient sulfides to create acidic conditions. Kinetic testing, however, showed that chalcopyrite and cobaltite tends to oxidize slowly under oxidizing conditions. Tailings samples were non acid-generating according to the Sobek static test results."

Despite the relatively low risk of ARD, several mitigation measures were employed to insure that release of ARD and metals were minimized. Among these measures were capture of outflow from the underground mines, perpetual water treatment (as needed base on monitoring results), commingling of tailings and waste rock, and addition of alkaline amendments to underground slash. (108)

Comment: Not only will this project likely impact recovery efforts (salmon and steelhead), the likely environmental effects have the potential to contaminate the fish that continue to currently exist in the basin, further diminishing what is left of Salmon river anadromous fish runs. (108)

Response: Information provided in the Water Resource Technical report (Hydrometrics, 2006) predicts that water quality conditions will not be adversely impact by ICP alternatives except for the potential worst case scenario for Alternative II (copper concentrations).

Evaluation of ICP alternative on ESA-listed species and critical habitat relied on predictions of water quality discussed in Water Resources (chapters 3 & 4) to determine the potential effects. Effects to ESA-listed species and their critical habitat designated in Panther Creek will not be affected by the ICP alternatives through changes in water quality, stream flow, and increased sediment delivery. Only minor changes are predicted (see Water Resource). Water quality standards through the NPDES permit will be monitored for compliance. There are also long-term benefits from upgrades to the transportation route that will decrease sediment delivery to area streams. Reduced sediment delivery to streams provides better conditions for area streams that support rearing of ESA-listed and Forest Service sensitive species. (108)

Comment: Insufficient baseline fisheries data. (110)

Response: Additional fisheries resource information has been added to Chapter 3 of the DEIS to describe the presence and abundance of salmonids in the ICP project area. We also refer readers to the more detailed information in the fisheries technical report (Kuzis, 2004), Biological Assessment (WPN, 2007), and other materials sited in fisheries section that have been collected and are part of the public record. (110)

Comment: We recommend that the final EIS section on fisheries include a more full discussion of summary information from the BA and that a summary table be included of the T&E species along with a column of potential effects among alternatives. (112)

Response: Summary tables have been created to identify the main issues/concerns (sediment, water quality, surface water flows, and hazardous spills) for fisheries resources. The tables will be inserted into the Chapter 4 fisheries section to help the reader identify the main issues. (112)

Comment Code	Letter No.	Comment Subject
FSH-600-3	164	General Fish Species and Habitat – Fish Traps

Comment: Would like to see use of satellite fish traps to ensure successful reproduction. (164)

Response: On several occasions since the 1980's, instream holding cages have been utilized to determine fish survival in lower mainstem Panther Creek waters below the confluence of Blackbird Creek. As these waters now fully support year-round populations of various trout species, efforts at documenting fish survival, abundance, and reproduction success within Panther Creek and its tributaries have shifted to snorkeling and electrofishing operations. Annual repetitions of these surveys by both Idaho Department of Fish and Game and the U.S. Forest Service fisheries survey crews allow not only determination of yearly reproduction success within these drainages, but additionally allow identification of trends in species population metrics, including population size, structure and growth, while avoiding the impacts to unhindered fish migration opportunities associated with the use of fish traps. (164)

Comment Code	Letter No.	Comment Subject
FSH-601	110, 113	Threats to Fisheries and Impacts - Spills

Comment: Revised DEIS needs to analyze threats to fisheries from spills along transportation route; FS should regulate all transportation contractors; FS should provide restrictions re: chemicals stored next to each other or transported together; transport route should be examined for particularly hazardous areas. (110)

Response: Risks to aquatic resources from hazardous material spills are addressed in the "Fisheries Resources" section in chapter 4. Hazardous materials spill prevention and response plans are in place. See "Spill Control" section under "Transportation of Personnel and Supplies" heading in Chapter 2, "Spill Control" heading in Chapter 2, "Spill Control" section under "Emergency Management, Spill Control and Fire" in Chapter 2, and "Fisheries Resources" section in Chapter 4.

Risk of a transportation related spill of hazardous materials is directly related to miles traveled. If supplies are delivered on a monthly basis instead of in logical load quantities, additional miles will be traveled and spill risks will increase. (110)

Comment: DEIS lacks serious analysis of the ICP effects on ESA-listed fish species. (113)

Response: There has been considerable amount of research in evaluating potential changes to water quality as a result of the ICP alternatives (see Water Resources). Effects to fisheries resources and ESA-listed species is based on the foundation of the water resource effects that included environmental data collected by field and laboratory testing and measurement of water resource media (groundwater, surface water, climate, soils, geochemistry of mining-related rock) that are summarized in Chapter 3 and described in detail in the Water Resources Technical Report (Hydrometrics, 2006). In addition, modeling sediment dynamics (WEPP and BOISED) for the ICP project has provided input (road upgrades and BMP structures) to control sources of sediments to streams. The modeling predicts long-term beneficial effects by reducing delivery of sediment to streams. Reducing overall sediment delivery to streams is beneficial to ESA-listed fish. The NPDES permit will be required for all action alternatives. Discharge limits set forth in NPDES permit for the outfall have been established as end-of-pipe limits (no mixing zone) and most constituents have been set for protection of "cold water aquatic life" standards, which protects against adverse effects due to human activities (See DEIS Tables 4-4 and 4-5). Cold water aquatic life would include protective measures necessary to protect ESA-listed salmonids (Chinook Salmon, Bull Trout, Steelhead, and Sockeye salmon). (113)

FOREST PLAN

Comment Code	Letter No.	Comment Subject
FPL-700	110, 115	Salmon-Challis National Forest Plan, FLPMA, Organic Act

Comment: Road construction in RHCAs; no agency finding of no alternative to avoid - ROD violates other INFISH and Forest Plan requirements. (110)

Response: ICP structures/roads that fall within areas that may be considered RHCA's were associated with the pipeline to the NPDES outfall in Big Deer Creek. Page 2-71 of the DEIS summarizes the discharge location alternatives that were considered by the Forest Service. A no discharge option was dismissed due to the positive water balance at the site, and the option of using BMSG's water treatment plant is not within the jurisdiction of the Forest Service to require of FCC.

This left no other option but to consider structures/roads within potential RHCA's. The structures/roads associated with the Big Deer Creek outfall have been designed to minimize impacts to the riparian area and inland native fish to the extent practicable. The DEIS analyzed the effects to riparian areas in Chapter 4 under Vegetation and Wetland Resources (pp. 4-49 to 4-52). (110)

Comment: Violation of Organic Act, FLPMA, and Forest Service mining and special use regulations; incorrect assumptions of mining rights. (110)

Response: The ICP will not be required to obtain a right-of-way across public land for its associated facilities. The scope of the Forest Service special use regulations at 36 CFR 251.50 apply to uses of National Forest System lands except those authorized under other Forest Service authority, such as the minerals regulations at 36 CFR 228. The regulation at 36 CFR 228.5 requires operations to be conducted in accordance with an approved plan of operations. "Operations" is defined at 36 CFR 228.3 as "all functions, work and activities in connection with...mining or processing of mineral resources, and all uses reasonably incident thereto, including roads...regardless of whether said operations take place on or off mining claims." Accordingly, the Forest Service has the authority to approve in the plan of operations all of the activities and facilities associated with mining, and is not required to grant permanent rights-of-way or easements for off-claim development. (110)

Comment: Failure to comply with FS regulation of mining. (110)

Response: The proposed plan of operations, with the changes and additions described in the selected alternative, satisfies the 36 CFR 228 requirements for approval of a plan of operations. (110)

Comment: Violation of FS duties under Organic Act and 228 regulations. (110)

Response: The proposed plan of operations, with the changes and additions described in the selected alternative, will minimize adverse environmental impacts to the extent feasible as required by the regulations. The analysis of effects in the EIS reflects that the preferred alternative is expected to reduce sedimentation to streams along the mine transportation route and otherwise have no measurable influence on the current conditions or naturally occurring processes of the area's aquatic habitat. In turn, this effect provides greater long term positive effect on fish reproduction capability, and therefore fisheries resources (DEIS; p.4-68). In addition, approved mining activity would result in a small loss of wildlife habitat, but would not result in local or regional impacts to wildlife (FEIS; page 4-56). The Biological Opinions (Appendix E, Appendix F) address fisheries impacts. (110)

Comment: Allowing discharges that pollute up to the maximum may not be a violation of the CWA, the failure to minimize adverse impacts by not requiring further actions to reduce pollution violates the agency's Organic Act and 22 regulatory duties. (110)

Response: The regulations require that mining operations be conducted to minimize adverse environmental impacts to the extent feasible. The plan of operations proposed for approval meets this requirement. The EPA is responsible for setting effluent limits in the proposed NPDES permit. (110)

Comment: Other - correct EIS/FLRMP tiering statement. (115)

Response: Editorial correction. The National Forest Management Act (NFMA) requires each National Forest Unit (Forest) to develop and implement a forest management plan. The Salmon National Forest Plan was developed through the EIS process and the preferred plan was approved in

a record of decision in 1988. The preferred plan prescribes management of Forest lands open to mineral entry as allowing “conventional exploration and development with appropriate stipulations to protect soils resources, water quality and other surface resources.” (115)

NEPA

Comment Code	Letter No.	Comment Subject
NEPA-800	113	NEPA Process and Format

Comment: BMSG request to review and comment on the BA and other evaluations under the ESA. (113)

Response: The Biological Assessment is a document available under FOIA should it be requested. The Biological Assessment forms the basis for a determination on listed species by the action agency and is submitted to the consultation agencies for their consideration. Additional information, clarification etc. is generally requested by the Consultation Agency who will issue a Concurrence or Biological Opinion on the Project. Inquiries for participation in that agencies decision should be directed to the appropriate agency. (113)

Comment: USFS, EPA, and IDEQ should revise and reissue DEIS. (113)

Response: The Agencies acknowledge that some of the required mitigation discussed in the EIS is will require detailed plans to be submitted for Forest Service approval. The NEPA process requires the environmental consequences of mitigation to be fairly evaluated, it does not require complete mitigation plans to be formulated and adopted. The EIS adequately describes the mitigation and relies upon generally accepted analytical and modeling methods to analyze their effects to ensure that environmental consequences have been fairly evaluated. For mitigation requiring submission of a detailed plan, the Forest Service (and other Agencies as appropriate) will review the plan to ensure the anticipated effects are within the range of alternatives analyzed in this EIS. If not, additional NEPA analysis would be conducted to address the specific proposal. Regardless, if the detailed plans do not reasonably demonstrate that they will accomplish the intended mitigation, the plan would not be approved and the related activity could not proceed.

The regulation 36 CFR 228.5(a)(3) directs the Forest Service to notify the operator of any changes in, or additions to, a plan of operations deemed necessary to meet the environmental protection requirements contained in §228.8. This obligates the agency to rely on mitigation measures in its decision-making process. Analysis conducted for the ICP EIS suggests that the selected alternative and its associated mitigation will satisfy the standards of the Forest Service 228A regulations to minimize adverse environmental impacts and comply with applicable Federal and State water quality standards. (113)

Comment: DEIS alternatives development and analysis is fundamentally flawed. (113)

Response: The EIS evaluates a reasonable range of alternatives that addressed the purpose and need as well as the significant issues identified through public scoping. Although the EIS considered the No Action alternative as required by 40 CFR 1502.14(d), the Forest Service is limited to selecting alternatives that satisfy its regulatory requirement to either: approve FCC’s plan of operation as proposed; or identify changes or additions to the plan needed to satisfy its regulations for environmental protection. (113)

Comment Code	Letter No.	Comment Subject
NEPA-800-1	112, 115	NEPA Process and Format – Editorial

Comment: The EIS should include a list of all of the pre-construction/pre-operational design documents that must be approved prior to mine operation start-up. (112)

Response: The FEIS contains a list of actions and documents required prior to initiation of mine construction. (112)

Comment: Figure 2-5: Reference to the water treatment plant with the mill should be made on this figure. (112)

Response: The water treatment plant is labeled on Figure 2-5. (112)

Comment: Page 3-81: Remedial Actions/last sentence: ...Since these actions are described as Contingent Actions in the ROD, this sentence should be deleted from the Remedial Actions section of the EIS. (112)

Response: Text revised as required in the FEIS. (112)

Comment: Table 4-6: Change "sulfite" to "sulfide." (112)

Response: Table 4-6 in the DEIS matches the draft NPDES permit that was current at the time of the DEIS and FEIS. Final effluent limits and monitoring requirements will be specified in the Final NPDES Permit. The Final Permit will incorporate changes as needed to address public comments on the Draft Permit and to match FCC's revised permit application. EPA will provide responses to public comments on the Draft Permit in the "Response to Comments" document that will accompany the final permit upon issuance. (112)

Comment: Prescriptive language - Mitigation Measures. (115)

Response: The Agencies recognize that the EIS does not authorize mitigation even though prescriptive language may be used in describing said mitigation. The Agencies believe it is clearly stated in the EIS and relatively well understood by the public that mitigation described in an EIS, regardless of the type of helping verbs used, is for the purpose of disclosure and only become agency direction when it is selected in the Record of Decision, and incorporated into the approved plan of operations that will implement the decision. No changes were made in the FEIS as a result of the comment. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, construction phase description missing components. (115)

Response: No changes made to FEIS. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, winter construction. (115)

Response: No changes made to FEIS. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, Table 2-1, delivery method for cement. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, Table 2-1, SWMP material transportation. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Incorrect acreage of disturbance. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the development of agency alternatives - no DEQ guidance. (115)

Response: No change to FEIS. (115)

Comment: Errors and Omissions in describing the existing environment - replace Figure 3-6 with Appendix C POO. (115)

Response: Editorial Correction. (115)

Comment: Other - correct EIS/FLRMP tiering statement. (115)

Response: Editorial Correction. (115)

Comment: Miscellaneous - Suggested wording change. (115)

Response: Editorial Correction. (115)

Comment: Miscellaneous - Vagueness of "range of possible outcomes." (115)

Response: Text has been revised to omit the phrase. (115)

Comment Code	Letter No.	Comment Subject
NEPA-800-2	10, 113	NEPA Process and Format – General

Comment: Long time awaited DEIS to the public. Eight years seems like an excessively long time for the processing of paperwork leading to the mining of such a strategically important material. My hope that any difference between the Preferred Alternative EIS and Formation Capitals Proposed Alternative can quickly be resolved so that mine operations can begin without further delay. (10)

Response: A description of activities that must be completed prior to commencement of mining operation is included in the DEIS, Chapter 1 under the heading Decisions to Be Made. (10)

Comment: USFS, EPA, and IDEQ should revise and reissue DEIS. (113)

Response: The Agencies acknowledge that some of the required mitigation discussed in the EIS is will require detailed plans to be submitted for Forest Service approval. The NEPA process requires the environmental consequences of mitigation to be fairly evaluated, it does not require complete mitigation plans to be formulated and adopted. The EIS adequately describes the mitigation and relies upon generally accepted analytical and modeling methods to analyze their effects to ensure that environmental consequences have been fairly evaluated. For mitigation requiring submission of a detailed plan, the Forest Service (and other Agencies as appropriate) will review the plan to ensure the anticipated effects are within the range of alternatives analyzed in this EIS. If not, additional NEPA analysis would be conducted to address the specific proposal. Regardless, if the detailed plans do not reasonably demonstrate that they will accomplish the intended mitigation, the plan would not be approved and the related activity could not proceed.

The regulation 36 CFR 228.5(a)(3) directs the Forest Service to notify the operator of any changes in, or additions to, a plan of operations deemed necessary to meet the environmental protection requirements contained in §228.8. This obligates the agency to rely on mitigation measures in its decision-making process. Analysis conducted for the ICP EIS suggests that the selected alternative and its associated mitigation will satisfy the standards of the Forest Service 228A regulations to minimize adverse environmental impacts and comply with applicable Federal and State water quality standards. (113)

Comment Code	Letter No.	Comment Subject
NEPA-800-3	110, 113	NEPA Process and Format – Future Studies/Design

Comment: Reliance on future mitigation plans (sediment/TSS) violates NEPA. (110)

Comment: For the critical issue of water quality, the mitigation measures for copper rely on a future, as-yet unsubmitted plan. (110)

Comment: The DEIS unreasonably postpones much of the needed analysis to future mitigation submissions. (113)

Response: The mitigation measures, final designs and detailed plans required by the Plan of Operations frequently contain a level of detail greater than that appropriate for an EIS. The POO and accompanying documents and EIS team technical reports contained in the Project Record supply additional detail on the contents of required future submittals. The NEPA analysis is based in part on agency experience with similar projects and activities and has required a sufficient level of detail for proposed mitigation measures to analyze potential impact. Submittal and agency approval of final plans and design details following completion of the EIS is consistent with the NEPA. The EIS has disclosed or described conceptual mitigation requirements in a level of detail adequate to understand the intent, components, potential problem areas and likely results. Where critical resource impacts are potentially affected, the agencies have required submittal and approval of specific plans prior to project initiation.

The Forest Service's approval of an ICP Plan of Operations is conditioned on the submittal of specific plans and designs for agency approval prior to initiating ground disturbing activities for the facilities to be constructed on the project including roads, tailings and waste rock facility, water treatment system

and other components. In addition, Quality Assurance Quality Control Plans covering construction and operational activities must be submitted to the agencies for their review and approval. The company will provide funding for independent technical review by a qualified third party for the underground backfill amendment plan, water treatment design and the model utilized to predict water quality at the end of mine life. An Interagency Task Force will be formed to administer the active operations, this concept has been used successfully by the agencies on operating mines to oversee operations and monitoring as well as implementing plan modifications for active mine operations and closure activities in Idaho.

Measures to ensure long term environmental and remediation cleanup goals are met include the posting of a bond to ensure vegetation success on the reclaimed portions of the project and a commitment for long term water treatment if necessary. (both 110 above, 113)

Comment Code	Letter No.	Comment Subject
NEPA-800-5	113	NEPA Process and Format – Assumptions Unsupported

Comment: Key assumptions have no basis in fact, are unsupported by technical analysis, and appear to be based on little more than speculation. (113)

Response: The analysis of impacts in this and any other EIS necessarily relies on a number of assumptions. The assumptions listed as unsupported are in fact discussed in detail in the Water Technical Report and in the EIS. Also see responses to comments GEO 103-2 and WTR 301-1, 301-2, 304, 306-2, 307. (113)

Comment Code	Letter No.	Comment Subject
NEPA-800-6	113	NEPA Process and Format – Violation of Requirements

Comment: DEIS does not properly consider violation of Federal or State environmental laws. (113)

Response: The agencies understand their requirements to evaluate compliance with other applicable laws and regulations and have included that evaluation in this analysis. (113)

Comment Code	Letter No.	Comment Subject
NEPA-800-7	112	NEPA Process and Format – Objectives

Comment: In describing Alternatives III, IV, and V, it is not clear in the DEIS that the agency modifications are adding operational objectives or reclamation objectives. (112)

Response: Alternatives III, IV and V include modifications to both operational and reclamation phases of the ICP. The text describing some of the operational and design components as well as mitigation measures has been modified in an attempt to clarify the differences between alternatives. (112)

Comment Code	Letter No.	Comment Subject
NEPA-801	113, 115	EIS Purpose and Need – Inadequate

Comment: Failure to discuss ICP purpose and need. (113)

Response: The Purpose and Need are discussed in Chapter 1. The need for the proposed action is specifically stated in the section referenced by the commenter: “The need for the proposed Federal actions is that the Forest Service is required to respond to a proposed plan of operations to conduct mining operations pursuant to the Mining Laws.” The FEIS has been revised to include an additional description of purpose and need as it relates to EPA’s actions. (113)

Comment: Purpose and Need - objection to DEIS description. (115)

Response: The proposed Federal action described in the DEIS is consistent with CEQ regulations (40 CFR 1508.18(b)(4)) and Forest Service guidance (FSH 1909.15.05) which dictate that the proposed action is “a proposal made by the Forest Service to authorize, recommend, or implement an action to meet a specific purpose and need.” Hence, the proposed action is for the Forest Service to approve the proposed plan of operations for construction, operation, and reclamation of a cobalt mine, and determine if changes or additions to the proposed plan are needed to meet the requirements for environmental protection set forth in regulations at 36 CFR 228 Subpart A. The recovery of metals and development of economically viable resources is the purpose of FCC’s mining proposal, not the purpose or need for the proposed Federal action, which is to review and approve the proposed plan of operations for the mine in accordance with the regulations at 36 CFR 228 Subpart A. (115)

Comment: Effect Analysis - flawed development and description of alternatives and Purpose and Need. (115)

Response: The agencies developed a reasonable range of alternatives that include design and operational components, monitoring and mitigation measures intended to reduce identified impacts or to address issues raised during scoping. FCC could have included any or all of these components in its Plan of Operations, but chose not to. The level of detail included in the Alternatives is adequate for the analysis and comparison of impacts. Assumptions made about the effectiveness of standard water treatment technologies are based in part on limited treatment testing done by FCC, on effectiveness of treatment on similar waste streams and on best professional judgment. The analysis presented is intended to provide agency decision makers adequate information to make informed choices between alternatives.

The purpose and need statement has not been revised and the alternatives developed to meet the required evaluation of FCC's Plan of Operations under 30 CFR 228A is presented in this FEIS. (115)

Comment Code	Letter No.	Comment Subject
NEPA-802	110, 113, 115	EIS Alternatives

Comment: The agencies violated NEPA by not considering a reasonable range of alternatives. (110)

Response: The proposed Federal action by the Forest Service is defined by the 1872 Mining Law, as amended, and the regulation at 36 CFR 228 Subpart A. The purpose and need for the Forest Service action are set forth in the law and regulations. The 1872 Mining Law provides FCC the right to

prospect, explore, mine, and all uses reasonably incident thereto, on its claims. The Forest Service mining regulations at 36 CFR 228A are designed to insure that surface uses incident to mining on National Forest System land are reasonably incident to mining, and are designed and carried out to minimize adverse environmental impacts to the extent feasible. As discussed on page 2-1 of the DEIS, the regulation at §228.5 does not provide for the denial of a proposed plan of operations, but instead directs the Forest Service to specify changes or additions to said plan that it deems necessary to meet the environmental protection requirements of the 228A regulations. The Forest Service and the other involved regulatory agencies have determined that the changes and additions to be incorporated into FCC's plan of operations under the selected alternative will ensure that all applicable State and Federal water quality standards will be met, and that surface uses will meet all other requirements of the regulations. (110)

Comment: Inadequate identification and analysis of an appropriate range of reasonable alternatives. (113)

Response: Bullet No. 1: The EIS analyzes the no action alternative, which would have impacts identical to an alternative that would disapprove the ICP plan of operations. The Agencies did not adopt the suggestion to discuss obtaining cobalt from an alternate source; reliance on metal recycling, or locating a cobalt mine where there are no impaired waters because these alternatives would not meet the stated purpose and need for the project.

Bullet No. 2: The Agencies are not required to consider in detail the suggested alternative because it is unreasonable. There is no regulatory requirement to support consideration of the suggested alternative and "proving" the effectiveness of site specific mitigation for a particular mining project before approval would essentially be impossible without implementing the project itself. Approval of the various permits and the plan of operations associated with the ICP is a binding commitment on FCC to implement the mitigation developed in the EIS. Should the required mitigation prove not to be effective, the Forest Service may request FCC to further modify its approved plan of operations to minimize any unforeseen environmental impacts in accordance with 36 CFR 228.4(e).

Bullet No. 3: The Agencies are not required to consider the suggested alternative because it is unreasonable and would violate existing legal agreements. The BMSG has a current legal obligation under a federal consent decree and administrative order to meet water quality requirements in the Bucktail/Big Deer drainage. Whether the BMSG should be relieved of its obligation to meet water quality requirements is a purely legal question not currently under review in any legal forum. It would be unreasonable for an EIS analysis to consider an alternative the implementation of which would be dependent upon the future occurrence of a legal outcome contrary to the current legal reality. Considering such an alternative is also not reasonable because relieving the BMSG of its obligations to meet water quality requirements would leave no mechanism for remediation of past mining effects to water quality for which the BMSG members are responsible, nor for restoration of natural resources injured as a result of past mining activities. Lastly, the EIS predicts that the preferred alternative will not jeopardize BMSG's ability to satisfy its cleanup requirements at the Blackbird mine site.

Bullet No. 4: The Agencies are not required to consider the suggested alternative for detailed study because it is speculative. Technical impracticability (TI) is one of the bases for waiving or modifying applicable and relevant or appropriate requirements (e.g. cleanup standards) under CERCLA and other environmental authorities. TI findings are made by regulatory authorities and are based upon a significant amount of data and analysis regarding the past performance of any applicable remedial systems, and upon a showing that no existing technologies can attain the relevant cleanup levels in a reasonable time period. The Agencies have no information to suggest that the regulatory authorities associated with the site have a TI proposal or inquiry under consideration with respect to the Blackbird remedy or more generally with respect to these waters, or that such would be appropriate. (If anything, the ongoing cleanup and restoration activities at the site indicate the contrary.) Therefore, it would be speculative, if not unreasonable, to consider an alternative in which Federal

and State regulatory agencies jointly declare that attainment of water quality at Bucktail and Big Deer Creeks is technically impracticable.

Bullet No. 5: The Agencies are not required to consider the suggested alternative for detailed study because it is speculative. FCC is not a party to either the 1995 Blackbird Mine Site Consent Decree or any subsequent Administrative Orders related to cleanup of the Blackbird Site. For such to occur in the future would require either an unlikely agreement on the part of FCC to bind itself in this fashion, or administrative and/or judicial action by entities seeking to impose such liability upon FCC. No such administrative or judicial action is underway. Therefore, it would be speculative for the Agencies to consider an alternative in which FCC is jointly and severally liable for Blackbird Mine compliance under the existing Consent Decree and Administrative Order related to the Blackbird Mine Site. Moreover, the Agencies do not believe that consideration of such an alternative would further the analysis of the environmental effects of the proposed action. (113)

Comment: Errors and omissions in the description of Alternative II. Summary section (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, TWSF reclamation (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, paste backfill cement addition (115)

Response: Editorial Correction. (115)

Comment: Table 4-7, include FCC proposal for use of post mine bedrock capture wells re: copper standards. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Raise existing road grade/Panther Creek. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the development of agency alternatives. Effects of Blackbird groundwater flows and fresh water. (115)

Response: Editorial Correction. (115)

Comment: Muddled application of mitigation measures to some but not all alternatives makes a comparison among each other difficult - reorganization of mitigation measures descriptions and effects. (115)

Response: Alternatives III, IV and V include modifications to both operational and reclamation phases of the ICP as compared to the company's proposal (Alternative II). The text describing some

of the operational and design components as well as mitigation measures has been modified in an attempt to clarify the differences between alternatives. (115)

Comment: Effect Analysis - flawed development and description of alternatives and Purpose and Need. (115)

Response: The agencies developed a reasonable range of alternatives that include design and operational components, monitoring and mitigation measures intended to reduce identified impacts or to address issues raised during scoping. FCC could have included any or all of these components in its Plan of Operations, but chose not to. The level of detail included in the Alternatives is adequate for the analysis and comparison of impacts. Assumptions made about the effectiveness of standard water treatment technologies are based in part on limited treatment testing done by FCC, on effectiveness of treatment on similar waste streams and on best professional judgment. The analysis presented is intended to provide agency decision makers adequate information to make informed choices between alternatives.

The purpose and need statement has not been revised and the alternatives developed to meet the required evaluation of FCC's Plan of Operations under 30 CFR 228A is presented in this FEIS. (115)

Comment: Unsupported assertions - Chapter 4, display effect of each alternative minus mitigation. (115)

Response: The agencies developed a reasonable range of alternatives that include design and operational components, monitoring and mitigation measures intended to reduce identified impacts or to address issues raised during scoping. FCC could have included any or all of these components in its Plan of Operations, but chose not to. The level of detail included in the alternatives is adequate for the analysis and comparison of impacts. Assumptions made about the effectiveness of standard water treatment technologies are based in part on limited treatment testing done by FCC, on effectiveness of treatment on similar waste streams and on best professional judgment. The analysis presented is intended to provide agency decision makers adequate information to make informed choices between alternatives. (115)

Comment: Unsupported assertions - explain why copper concentrations in groundwater below Sunshine Mine are different in alternatives. (115)

Response: Addition of alkaline amendments to slash in Alternative IV results in higher pH conditions and therefore lower predicted long-term copper levels in the Sunshine mine for Alternative IV. (115)

Comment: Errors and omissions in the impact discussions - Alt. I is no action and no Ram or Sunshine Mines to affect Bucktail Creek drainage WQ. (115)

Response: Editorial Correction. Text has been changed in the FEIS. (115)

Comment: Separation of Mitigation and Alternatives - CEQ regulations. (115)

Response: The inclusion of long term water treatment costs as part of the financial assurance calculation is not based on a "worst case" scenario. Analysis of the geochemical and hydrological characteristics of the ICP using the DSM model and other tools indicates that there is some uncertainty in predicting both chemical and hydrogeological conditions. Without collection and long term water treatment the DSM model predicts a slight and possibly measurable increase in copper concentration in Big Deer Creek following closure even under the 50% or expected case. In the 90th

percentile case the DSM predicts a likely exceedance of water quality standards. The 90th percentile case is not a "worst case" or contingency condition, but a situation that is expected to occur one out of ten times and is therefore considered by the agencies in the context of risk to the environment as reasonably likely to occur. It is therefore entirely appropriate to require a bond or other financial assurance for long term water treatment until such time that it can be demonstrated that long term water treatment will not be needed. (115)

Comment: Miscellaneous - confirmation of treatment process efficiencies. (115)

Response: The agencies approach to water treatment for Alternatives IV and V was to not dictate what type of water treatment equipment or processes be used, but rather let the required water treatability testing and water treatment design professionals advance a treatment plant design best suited to the project with two goals: effluent must meet NPDES effluent limits, and minimize water treatment waste. (115)

Comment: Miscellaneous - Colored shading add to Tables 4-8, 4-9, and all tables in Appendix B. (115)

Response: Tables have been modified. (115)

Comment: Miscellaneous - Section should be referring to Alt. III, not Alt. IV. (115)

Response: Editorial Correction. (115).

Comment Code	Letter No.	Comment Subject
NEPA-802-1	74, 108, 110, 113, 115	EIS Alternatives – Inadequate Alternatives

Comment: The DEIS fails to give a meaningful evaluation of alternatives to the proposed action. (108)

Comment: Effect Analysis - flawed development and description of alternatives and Purpose and Need. (115)

Response: The alternatives developed and analyzed in this EIS reflect not only the proponent's proposal, but scoping comments received from the public. The action alternatives analyzed represent a reasonable range of potentially viable design options for mining the identified ore body. Alternatives considered but dismissed include a broader range of options, but are generally not technically or economically feasible. Chapter 2 presents a detailed description of the alternatives and Chapter 4 contains the analysis of those alternatives.

The agencies developed a reasonable range of alternatives that include design and operational components, monitoring and mitigation measures intended to reduce identified impacts or to address issues raised during scoping. FCC could have included any or all of these components in its Plan of Operations, but chose not to. The level of detail included in the Alternatives is adequate for the analysis and comparison of impacts. Assumptions made about the effectiveness of standard water treatment technologies are based in part on limited treatment testing done by FCC, on effectiveness of treatment on similar waste streams and on best professional judgment. The analysis presented is intended to provide agency decision makers adequate information to make informed choices between alternatives.

The purpose and need statement has not been revised and the alternatives developed to meet the required evaluation of FCC's Plan of Operations under 30 CFR 228A is presented in this FEIS. (108, 115)

Comment: The DEIS has failed to consider a sufficiently broad array of alternatives including zero discharge and passive treatment. (74)

Comment: The agencies violated NEPA by not considering a reasonable range of alternatives. (110)

Response: The Forest Service believes the range of alternatives analyzed in the DEIS are compliant with NEPA's requirements in that they are reasonable, fulfill the purpose and need, and address the significant issues identified during scoping.

The 1872 Mining Law, as amended, and the regulation at 36 CFR 228.5 are the basis for the Forest Service purpose and need for proposals to explore and develop mineral deposits on unpatented mining claims. The 1872 Mining Law provides FCC the right to prospect, explore, mine, and all uses reasonably incident thereto, on its claims, subject to the Forest Service mining regulations at 36 CFR 228A. As discussed on page 2-1 of the DEIS, the regulation at §228.5 does not provide for the denial of a proposed plan of operations, but instead directs the Forest Service to specify changes or additions to said plan that it deems necessary to meet the environmental protection requirements of the 228A regulations. The Forest Service and the other involved regulatory agencies have determined that the changes and additions to be incorporated into FCC's plan of operations under the selected alternative will ensure that all applicable State and Federal water quality standards will be met.

In preparing the EIS, the Forest Service has complied with NEPA by considering a reasonable range of alternatives that fulfilled the purpose and need and addressed significant issues. Among the alternatives analyzed were a no action alternative (Alternative I), which analyzed the impact of not approving FCC's plan of operations; and utilizing the third-party Blackbird Treatment Plant to treat ICP mine water (Alternative V), which would be beyond the jurisdiction of the Forest Service to require. (74, 110)

Comment: The agencies violated NEPA by not considering a reasonable range of alternatives - should have developed an alternative for a water treatment discharge location to Panther Creek. (110)

Response: The FS considered but dismissed a discharge location to Panther Creek (see page 2-71 DEIS) due to: 1) the excessive length of the pipeline and associated costs and maintenance issues; and 2) greater impacts to Big Deer Creek due to the loss of treated water (reduced flows and higher metal concentrations).

As discussed on page 2-71 of the DEIS, a water discharge location in Panther Creek was considered but dismissed. This location was not considered because it would have required either an excessively long pipeline along an existing road, with associated cost and maintenance issues, or new access through an inventoried roadless area. In addition, it was determined that there would be less impact to area surface waters by returning treated mine waters to the basin from which it came. The commenter is incorrect in the assertion that road construction with an inventoried roadless area is illegal. The 2001 roadless area conservation rule provides seven exemptions from its road construction prohibition. The exemption at 36 CFR 294.12(b)(3) allows road construction associated with exercising of rights provided for by statute, which includes activities conducted under the 1872 Mining Law. (110)

Comment: EIS cannot justify an alternative without a specific plan. (113)

Response: The description of predicted effects of the operational and design modifications and mitigation measures that distinguish the alternatives have been discussed in sufficient detail in Chapters 2 and 4 of the EIS to ensure that environmental consequences have been fairly evaluated and disclosed. Final design level of detail is not required to illustrate alternatives under NEPA. Where submission of a detailed plan or design is required, the Forest Service will review the plan to ensure the anticipated effects are within the range of alternatives analyzed in this EIS. (113)

Comment: Inadequate identification and analysis of an appropriate range of reasonable alternatives. (113)

Response: The United States Mining Laws and Forest Service regulation at 36 CFR 228.5 form the basis for the Forest Service purpose and need for proposals to explore and develop mineral deposits on unpatented mining claims. This regulation does not provide for the denial of a proposed plan of operations, but instead directs the Forest Service to either approve the plan as proposed or specify changes or additions to said plan that it deems necessary to meet the environmental protection requirements of the 228A regulations. Consequently, the law and regulation influence the alternatives that the Forest Service analyzed in the EIS in detail. (113)

Comment: Cobalt recycle alternative to mining not evaluated. (113)

Response: An alternative to mining the Idaho Cobalt Project or substitutes for cobalt are beyond the scope of this EIS. The purpose and need for the EIS are grounded in the proposal to mine the resources identified by the project proponent. (113)

Comment: DEIS alternatives development and analysis is fundamentally flawed. (113)

Response: The EIS evaluates a reasonable range of alternatives that addressed the purpose and need as well as the significant issues identified through public scoping. Although the EIS considered the No Action alternative as required by 40 CFR 1502.14(d), the Forest Service is limited to selecting alternatives that satisfy its regulatory requirement to either: approve FCC's plan of operation as proposed; or identify changes or additions to the plan needed to satisfy its regulations for environmental protection. (113)

Comment Code	Letter No.	Comment Subject
NEPA-802-2	5, 16, 23, 47, 61, 76, 94, 105, 116, 138, 140, 143, 144, 145, 149, 152, 153	EIS Alternatives – Support Alternative II

Comment: Alternative II is stronger in terms of water quality because it has a better defined treatment system. (5)

Comment: Supports Preferred Alternative. Would like to see Formation involved in the Social-economics of Salmon. (16)

Comment: Support FCC design for pumpback wells and water treatment. (23)

Comment: I support Alternative 2 and I would encourage Formation and the Forest to exercise the proverbial bipartisan effort from both sides of the aisle to achieve a common denominator that would be beneficial to the community and to the environment. (47)

Comment: The proposed plan is superior. Some of the reasons why include: a better defined water treatment regime, properly segregating the waste rock from the tailings, a more reasonable approach to dealing with the roads to the mine . . . , planning for the future with a larger tailings and waste rock area that allows for future growth . . . (61)

Comment: Formation Capital's plan calls for the best water treatment processes. (76)

Comment: Formation Capital's plan has a very minimal above-ground footprint and manages waste rock separately to ensure it doesn't harm the environment. (94, 105)

Comment: Formation Capital's plan has a very minimal above-ground footprint and manages waste rock separately to ensure it doesn't harm the environment. Treated water will be cleaner than the natural water around it and reclamation is a main concern. (116, 143, 144)

Comment: I believe Alternative II is the better alternative for the environment as well as the economy. (138)

Comment: I support Alternative II, as the proposed action for this project, as I feel it better addresses some major environmental concerns, especially with regard to water. (140)

Comment: We believe that the superior option for the Salmon-Challis National Forest is to adopt Alternative II, as proposed by Formation Capital Corporation. (145)

Comment: I recommend that Alternative II, and the NPDES application as put forth by Formation Capital be selected and implemented. If those are not selected (If, for example, Alternative IV is chosen), I recommend you modify the Statement and Permit to be more closely aligned to the proposed action than say, Alternative IV currently does. (149)

Comment: I would like to express my support for alternative two proposed by Formation Capital which seems to be the best solution. (152)

Comment: Please move forward with permitting the Idaho Cobalt Project, preferably with Alternative II in the Draft EIS. (153)

Response: Your support for the selection of Alternative II as presented in the Draft EIS has been noted in the final review of this document and has been taken into consideration regarding the selection of the preferred alternative. (5, 16, 23, 47, 61, 76, 94, 105, 116, 138, 140, 143, 144, 145, 149, 152, 153 above)

Comment Code	Letter No.	Comment Subject
NEPA-802-3	18, 93	EIS Alternatives – Support Alternative IV

Comment: I endorse the development of the project and the alternative IV that has been selected. (18)

Response: Your support for the selection of an agency alternative as presented in the Draft EIS has been noted in the final review of this document and has been taken into consideration regarding the selection of the preferred alternative. (18)

Comment: Alternative IV and V both appear to be the best choices, as either option results in the smallest physical disturbance, would minimize the footprint and infrastructure requirements and include advanced water quality treatment. (93)

Response: Your support for Alternatives IV and V as presented in the Draft EIS has been noted in the final review of this document and has been taken into consideration regarding the selection of an appropriate alternative that meets all the goals of all parties as set forth in Chapter 1 of the DEIS. (93)

Comment Code	Letter No.	Comment Subject
NEPA-802-4	37, 110	EIS Alternatives – Support V

Comment: Supports moving forward with ICP. Supports Agency Preferred Alternative - would prefer Alt V in sense of efficiency, economics and more environmentally friendly. However, as expressed by the FS, one cannot force two parties to make one project. Cobalt is a strategic metal of growing demand and betterment of mankind. This is only known scalable deposit in North America and needs to be accessible for mining. (37)

Response: Your support for the selection of Alternative V as presented in the Draft EIS has been noted in the final review of this document and has been taken into consideration regarding the selection of the preferred alternative. (37)

Comment: The agencies violated NEPA by not considering a reasonable range of alternatives - Alt. V not viable because it requires an agreement between FCC and BMSG. (110)

Response: NEPA’s implementing regulations at 40 CFR 1502.14(c) directs federal agencies to consider reasonable alternatives that are not within the jurisdiction of the lead agency. The commenter was not clear what “suggestions” were to be incorporated nor did they mention what issues were not addressed with the existing alternatives as grounds to develop an additional alternative to be selected as the environmentally preferred alternative. No additional alternatives were developed for the FEIS as a result of the comment. (110)

Comment Code	Letter No.	Comment Subject
NEPA-803	115	Cumulative Impacts

Comment: Cumulative Impacts Analysis - incomplete analysis process. (115)

Response: The cumulative effects analysis has been revised (FEIS starting on page 4-99) to include updated information and to provide additional details on past and present activities that may cumulatively affect resources also impacted by the ICP. (115)

Comment: Errors and omissions in the impact discussions - Alt. I is no action and no Ram or Sunshine Mines to affect Bucktail Creek drainage WQ. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the impact discussions - Failure to discuss traffic cumulative effects in historic terms. (115)

Response: The EIS analyzes impacts due to operation of the ICP using baseline data which documents present conditions. Baseline data on transportation is further documented in the "Idaho Cobalt Project Transportation Baseline Report and Transportation Plan" contained in the project record. The historic use of the proposed access route is not a cumulative impact. (115)

Comment Code	Letter No.	Comment Subject
NEPA-803-1	108, 110, 113	EIS Cumulative Impacts – Insufficient Analysis

Comment: The Tribe is concerned about the lack of an adequate cumulative impacts analysis. (108)

Response: The cumulative impacts of the Blackbird Mine site as well as ongoing and proposed activities in the vicinity of the ICP were addressed for each alternative in the DEIS (see pp. 4-91 to 4-103). The commenter is also referred to page 4-101 of the DEIS which specifically discusses cumulative effects to fishery resources. (108)

Comment: Difficulty in quantifying cumulative effects does not obviate the FS legal obligation. (108)

Response: The Forest Service is aware that difficulty in quantifying effects does not change any legal obligations that exist. However, qualifying the analysis presented in the EIS is an appropriate disclosure to the public that may allow for a better understanding of the document. The cumulative impacts of the proposed activities in the vicinity of the ICP were addressed for each alternative in the DEIS (see pp. 4-91 to 4-103). (108)

Comment: Failure to fully review all cumulative impacts from logging, grazing, recreation, fire, and other uses; global warming must be factored into the CE analysis. (110)

Response: Cumulative impacts are described for each resource in Chapter 4. For certain species or resources there may be no cumulative impacts with regards to one or more of the reasonably foreseeable activities identified. The cumulative impacts section has been modified in the FEIS both to bring it up to date and by adding additional details on past and present activities that may cumulatively affect resources also impacted by the ICP. The range of activities considered in the cumulative impact analysis focuses on past present and future actions that effect the same resources potentially impacted by the ICP. Past and present impacts to the environment in and around the ICP are primarily incorporated as part of the baseline conditions. While these conditions certainly vary from what they would have been without past natural and cultural influences the individual impacts to the existing environment are not evaluated in detail.

The reasonably foreseeable impacts evaluated focus on activities in nearby National Forest lands and the ongoing Blackbird mine site cleanup. Issues such as regional growth and global warming are of sufficiently different scale and extent as to be generally beyond the scope of this EIS. For example, the ICP will have a very minor cumulative impact on global warming and effects of climate change on the various resources in the vicinity of the ICP are difficult to predict both in time and in scale. (110)

Comment: DEIS doesn't adequately assess the cumulative impacts to water quality, fish populations and fishery recovery from ICP, existing Blackbird impacts, and other watershed activities. (110)

Response: The cumulative impacts of the Blackbird Mine site as well as ongoing and proposed activities in the vicinity of the ICP were addressed for each alternative in the DEIS (see pp. 4-91 to 4-103). This section of the EIS specifically discusses cumulative effects to both water quality and fishery resources. (110)

Comment: DEIS does not meet CE judicial review standard. (113)

Response: With additional detail included in the FEIS to address the combined effects of past and reasonably foreseeable actions, the FEIS satisfies NEPA's requisite "hard look" at cumulative effects. (113)

Comment Code	Letter No.	Comment Subject
NEPA-803-2	108	EIS Cumulative Impacts – Dust

Comment: Tribe is significantly concerned about transportation-related impacts; road/sediment; accidentally spills; cumulative impacts from mine dust transportation route dust deposition. (108)

Response: The ICP proposes to resurface 10.9 miles of the Access route to mitigate sediment delivery to streams. The agencies propose under Alternatives III, IV and V to resurface the entire length of the Access route. The agencies also propose annual application of dust abatement treatments (see "Road Improvements" subsection under "Mitigation" in Chapter 2. Also see sections in Chapter 2: "Transportation of Personnel and Supplies," "Spill Control," "Other Mitigation"(bullet Enhanced emergency management capabilities..., and bullet Additional access road improvements), and "Spill Control" heading under "Emergency Management, Spill Control and Fire." (108)

Comment Code	Letter No.	Comment Subject
NEPA-803-3	108, 113	EIS Cumulative Impacts – BMSG

Comment: There is little discussion of full impacts from the nearby Blackbird Mine; details of this and other projects in the area need to be addressed. (108)

Comment: CE analysis flawed re: consideration of adjacent Blackbird Mine. (113)

Response: The past, present and future impacts of the Blackbird mine are carefully considered in the analysis of the ICP. The baseline conditions reflect both historic impacts and recent cleanup activities. Ongoing cleanup and future impacts from the Blackbird site are considered in the DSM analysis and described in the cumulative impacts section of Chapter 4. (108, 113)

Comment Code	Letter No.	Comment Subject
NEPA-804	113, 115	Mitigation Measures

Comment: Need for a specific, demonstrated, and binding mitigation plan. (113)

Response: Based on the analysis conducted for the ICP EIS, the Forest Service, EPA, and the Idaho DEQ have determined that the preferred alternative and its associated mitigation will satisfy their respective regulatory requirements. The Forest Service Record of Decision will require FCC to modify its plan of operations to incorporate the mitigation identified in the selected alternative before FCC's plan will be approved. This approach will bind FCC to perform the required mitigation before they proceed with the ICP. In addition, the selected alternative provides that the regulatory agencies and FCC will monitor effects and employ adaptive management procedures to make any needed adjustments to ensure compliance with environmental requirements. (113)

Comment: Need detail plans or solid guarantees for mitigation measures. (113)

Comment: Absence of solid, enforceable mitigation guarantees. (113)

Comment: Approval of the ICP without a specific, demonstrated and binding plan to avoid water quality and other environmental impacts would violate FS, EPA and IDEQ requirements and thus would be unlawful. (113)

Response: The various design components, monitoring and mitigation measures incorporated in the agency alternatives are intended to reduce environmental impacts and the risk of such impacts by the proposed mining operation. All design features, plans and mitigation measures included in whatever alternative is selected in the Record of Decision will be required to be incorporated into the ICP Plan of Operations. All of the components of the Plan of Operations are enforceable and must be implemented. The key design components included in the preferred alternative intended to protect water quality and to avoid adverse impacts to BMSG's activities are intended to provide multiple layers of protection. While both the backfill amendment and the groundwater capture and treatment systems may each alone be effective in achieving target water quality goals, the combination of systems is intended to assure that if one system does not function as predicted that there is a backup. Additionally, the application of the DSM modeling tool specifically looks at a range of effectiveness of key operating systems. (113 for all three above)

Comment: Muddled application of mitigation measures to some but not all alternatives makes a comparison among each other difficult - reorganization of mitigation measures descriptions and effects. (115)

Response: The FEIS has been modified to attempt to clarify mitigation components of the agency alternatives. (115)

Comment: Errors and omissions in the development of agency alternatives - unsupported alkalinity amendment to slash waste rock. (115)

Response: The Agencies are aware of a number of mining projects in which the average NNP of a waste rock facility was positive, yet the seepage from the pile was acidic. Early work with selective placement of alkaline waste rock as a mitigation measure was not always successful if the alkaline rock was placed as distinct alternating layers among acid generating waste rock. One problem with alkaline addition is that if acidic interstitial solutions form they can migrate into the alkaline rock unit and precipitate iron and aluminum oxyhydroxide precipitates on the carbonate minerals, which can reduce their reactivity. As a practical matter, acidic solutions may migrate through mixed acidic and

alkaline rock even when the overall average NNP is positive. As a consequence of concerns about the lack of success with some efforts to neutralize ARD potential, the Agencies are requiring a site-specific demonstration that the proposed style of mixing will successfully control pH. (115)

Comment: Unsupported assertions - Chapter 4, display effect of each alternative minus mitigation. (115)

Response: The agencies developed a reasonable range of alternatives that include design and operational components, monitoring and mitigation measures intended to reduce identified impacts or to address issues raised during scoping. FCC could have included any or all of these components in its Plan of Operations, but chose not to. The level of detail included in the Alternatives is adequate for the analysis and comparison of impacts. Assumptions made about the effectiveness of standard water treatment technologies are based in part on limited treatment testing done by FCC, on effectiveness of treatment on similar waste streams and on best professional judgment. The analysis presented is intended to provide agency decision makers adequate information to make informed choices between alternatives. (115)

Comment: Errors and omissions in the impact discussions - Alt. II cumulative effects re: low probability that could prevent attainment of WQ standards in Big Deer Creek. (115)

Response: As stated on page 4-95 of the DEIS, Alternative II water quality impacts have the potential to become significant. This is discussed in the Direct Effects sections on pages 4-30 and 4-31. (115)

Comment: Other - Alt II changes in WQ in Big Deer Creek are based on flawed analysis in subsequent sections. (115)

*Response: Please note that the referenced paragraph states: "It is **not** [emphasis added] likely that the model-calculated increase in copper would be measurable or would cause an exceedance of the water quality standard or cleanup goals in Panther Creek if it were to occur." There is no contradiction in this statement, contrary to what is implied by the comment.*

It is well established that the cumulative impacts of multiple pollution sources can sometimes cause an exceedance of water quality standards even though the individual sources do not. This is the basis of the federal Total Maximum Daily Load limitations. Similarly, cumulative impacts can be measurable even though individual impacts are not. (115)

Comment: Separation of Mitigation and Alternatives - CEQ regulations. (115)

Response: The inclusion of long-term water treatment costs as part of the financial assurance calculation is not based on a "worst case" scenario. Analysis of the geochemical and hydrological characteristics of the ICP using the DSM model and other tools indicates that there is some uncertainty (see pages 4-10, 4-11 FEIS) in predicting both chemical and hydrogeological conditions. Without collection and long-term water treatment the DSM model predicts that Alternative II would cause a slight and possibly measurable increase in copper concentration in Big Deer Creek following closure even under the 50% or expected case. In the 90th percentile case the DSM predicts a likely exceedance of water quality standards. The 90th percentile case is not a "worst case" or contingency condition, but a situation that is expected to occur one out of ten times and is therefore considered by the agencies in the context of risk to the environment as reasonably likely to occur. The Forest Service has determined that it is therefore entirely appropriate to require a bond or other financial assurance for long term water treatment until such time that it can be demonstrated that long term water treatment will not be needed. (115)

Comment Code	Letter No.	Comment Subject
NEPA-804-1	110	Mitigation Measures – Insufficient Detail

Comment: The DEIS relies on vague, untested, and unproven mitigation measures. (110)

Response: The mitigation measures identified for the ICP are based on agency experience with other mining operations throughout the country. The level of detail provided in the mitigation measures is appropriate for NEPA review and disclosure. Where additional detail is appropriate for the Plan of Operations, it will be required by the agencies. All components of the Plan of Operations will be covered by a bond or other financial assurance to ensure that agency requirements will be met. (110)

Comment Code	Letter No.	Comment Subject
NEPA-804-2	16, 113	Mitigation Measures – Effectiveness

Comment: I support the Project. Have the educational opportunities been explored? Working Laboratory High school students? College students? Is this type of opportunity being considered? (16)

Response: The agencies appreciate this comment which looks at opportunities potentially available through the ICP. However, the concept proposed is generally outside of the agencies authorities and would rely on the voluntary participation of FCC. The Forest Service is committed to working with the local community on this and other NFS projects and would consider participating in any educational activities associated with NFS resource development. (16)

Comment: DEIS fails to present specific plans, demonstrated effectiveness, and binding commitments to achieve the supposed effects of mitigation. (113)

Response: Approval of a Plan of Operations establishes an enforceable commitment on the ICP to achieve the stated goals and implement the Plan as described. The level of detail contained in the POO is necessarily greater than that contained in the EIS. The financial assurance required for the POO is intended to ensure the successful implementation of the Plan and accompanying mitigation measures. (113)

Comment Code	Letter No.	Comment Subject
NEPA-804-3	113	Mitigation Measures – Upfront Mitigation

Comment: Unacceptable postponement of mitigation until later stages of mine development. (113)

Response: The EIS identifies design components, mitigation measures and monitoring intended to reduce potential impacts from the ICP. The timing of implementation of these measures are specified in the Record of Decision and are intended to be protective of the environment. (113)

Comment Code	Letter No.	Comment Subject
NEPA-804-4	146	Mitigation Measures – Differentiate Alternatives

Comment: On the final EIS it would be helpful if the alternatives were stated with the facts of how they are to be carried out with out any mitigation. Mitigations measures should be separated out as a separate section for each alternative so the readers can easily differentiate between the alternatives. (146)

Comment: I found it difficult to determine what the impacts were when all of the alternatives (except for alternative II) included mitigation. There was an obvious effort in the DEIS to sway the readers opinion in favor of the Forest Service Alternative IV without any real science or evidence that the Formation Capital Alternative II would not work. There were allegations and statements, but no real scientific evidence shown in the report that proved Alternative IV was better than Alternative II. (146)

Comment: The sizing and location of the TWSF Formation Capital indicates that reserves are still open in strike and depth and there are likely several more years of reserves that have not been proven. The TWSF needs to be started in such a manner as to ensure it can easily be added to in the likely event more reserves are proven. If it is limited to only the current proven reserves, then the Forest Service is in effect creating the boom and bust outcome for the mine. (146)

Response: The FEIS has been revised in an attempt to more clearly differentiate design and operational components, monitoring and mitigation measures applied to agency alternatives. These additional Plan of Operation components are intended to address specific agency concerns and to meet the requirements of the 36 CFR 228A regulations. The level of detail provided for these additional components is intended to provide an adequate understanding of the project and to allow a decision maker to understand the benefits of the proposed modifications to the company's Plan. (146 for all above)

Comment: From an engineering standpoint the structure proposed by the Forest Service will need modification. Piles that are designed to come up to a narrow ridge or peak require a larger footprint in relation to the amount of actual tonnage you can store. Was there a stability analysis performed on this structure? (146)

Response: Yes, stability analyses were performed for the TWSF that covered both static and seismic design scenarios. (146)

Comment Code	Letter No.	Comment Subject
NEPA-804-5	109	Mitigation Measures – Remove mitigation

Comment: The DEIS contains a section called “Administration and Monitoring” beginning at DEIS 2-53. This section does not belong in an EIS. Instead of attempting to require certain processes, the EIS should simply state that the Forest Service and other agencies, as well as Formation Capital will comply with any and all legal requirements during the development and implementation of the ICP. Each agency should be free to administer its regulations and statutes in whatever way they see fit. Similarly, Formation Capital should be allowed to determine how they will comply with the applicable laws and regulations. This section of the DEIS should be removed. Also, in this other sections, the document appears to be a compliance order rather than a DEIS. NEPA is a procedural process; it is not a substantive process that requires a specific outcome. (109)

Response: The Forest Service is required by 36 CFR 228 regulations to approve the plan of operations as presented or to require changes that ensure the plan of operations complies with appropriate laws and regulations. The inclusion of plan requirements and mitigation measures that are necessary to achieve compliance with 36 CFR 228 and other federal and state requirements must be disclosed in the EIS in order to inform the applicant and the public of the changes in the company's proposal that the Forest Service feels are necessary. (109)

Comment Code	Letter No.	Comment Subject
NEPA-805	110, 111, 113, 115	Legal Authority

Comment: Perpetual water treatment needed; a violation of the Organic Act, 228 regulations and federal mining and public law. (110)

Response: Water modeling used to analyze the Project's impacts indicates the need for perpetual water treatment is a possibility, not a certainty. The Idaho Department of Environmental Quality and EPA both have concluded that the ICP can proceed in full compliance with water quality standards. No violations of law are contemplated or will be permitted. Under applicable regulations, reclamation includes isolation, removal, or control of toxic materials. Water treatment, if necessary, is an acceptable form of reclamation under the regulations. (110)

Comment: To the extent that either the USFS or EPA determines that the "legally applicable" standards for the Idaho Cobalt Project should be more stringent than an equivalent at the Blackbird Mine, then that more stringent standard would be applicable to the Blackbird Mine. (111)

Response: The 2003 Record of Decision for the Blackbird Mine Superfund Site and the supporting Administrative Record provide the technical basis and the rationale for the selected remedy for the Superfund Site. CERCLA and its implementing regulations do not apply to the review and approval process for a new mine operation nor permitting of new point source discharges under the Clean Water Act.

The USFS operating under the 36 CFR 228 regulations and required to maintain compliance with the Clean Water Act, and the Idaho Water Quality Standards and other laws and regulations has utilized the applicable standards in analysis of the Idaho Cobalt Project. (111)

Comment: FS obligation to protect the environment being severely compromised. (113)

Response: The Forest Service will only authorize a plan of operations in compliance with all applicable laws and regulations. (113)

Comment: Purpose and Need - objection to DEIS description. (115)

Response: The proposed Federal action described in the DEIS is consistent with CEQ regulations (40 CFR 1508.18(b)(4)) and Forest Service guidance (FSH 1909.15.05) which dictate that the proposed action is "a proposal made by the Forest Service to authorize, recommend, or implement an action to meet a specific purpose and need." Hence, the proposed action is for the Forest Service to approve the proposed plan of operations for construction, operation, and reclamation of a cobalt mine, and determine if changes or additions to the proposed plan are needed to meet the

requirements for environmental protection set forth in regulations at 36 CFR 228 Subpart A. The recovery of metals and development of economically viable resources is the purpose of FCC's mining proposal, not the purpose or need for the proposed Federal action, which is to review and approve the proposed plan of operations for the mine in accordance with the regulations at 36 CFR 228 Subpart A. (115)

Comment: Legal Requirements - inaccurate description of applicable law and agency jurisdiction, Table 1-1 corrections. (115)

Response: Table 1-1 has been edited in the FEIS to include many of the commenter's suggestions. However, the agencies do not agree with the commenter's assertion regarding EPA, as the EPA does have some oversight responsibility for CWA programs delegated to the State per 40 CFR Part 123, Subpart D. There is no mention of IDEQ's policy and rules with respect to mineral extraction as it would go beyond the purpose of the Table to identify needed permits, approvals, and consultations. (115)

Comment: Legal Requirements - incorrect description of decision process and application of NEPA, POO/ROD. (115)

Response: The ROD for the EIS satisfies the requirement of 40 CFR 1505.2 to document the rationale for the Forest Service decision to approve the plan of operations. The plan of operations will be executed subsequent to issuance of the ROD in order to implement the decision described in the ROD in accordance with 36 CFR 228.5. The signed plan of operations is the document, which will authorize FCC to use of National Forest System lands for mining operations. There may be some additional requirements prior to execution of the approval of the plan of operations, such as submission of required surety, revision of the Plan of Operations and submittal of certain designs or plans. Approval of subsequent supplements and modifications to the original plan of operations may require additional environmental analysis under NEPA if there are new operations proposed or new information not adequately considered in this EIS. (115)

Comment: Legal Requirements - incorporation by reference of Project Record. (115)

Response: The requirements of 40 CFR 1502.21 are satisfied as documents incorporated by reference are individually described throughout sections in the EIS where they are used. Furthermore, Appendix A provides a comprehensive list of all documents that were in the analysis of the ICP and alternatives. The page referenced by the commenter has been edited in the FEIS to reflect that while the project record includes information used in the decision-making process, not all documents in the project record are incorporated by reference. (115)

Comment: Legal Requirements - removal of "Administration and Monitoring" section from EIS. (115)

Response: We did not make any changes to the EIS as a result of the comment. Although the majority of discussion included in the referenced section is not a procedural requirement of NEPA, the Forest Service thought it appropriate to inform the public of how the regulatory agencies would interact in administering this complex project. (115)

Comment: Legal Requirements - no requirement for FS identification of an environmentally preferred Alt. (115)

Response: The commenter is correct in that the environmentally preferable alternative is only required to be identified in the Record of Decision per 40 CFR 1505.2(b). However, CEQ encourages agencies to make recommendations of the environmentally preferred alternative during EIS preparation (see Forty Most Asked Questions, Answer to Question 6b). This section has been edited in the FEIS to reflect this distinction. (115)

Comment: Legal Requirements - regulatory and legal mischaracterization of ICP waste materials. (115)

Response: The distinction between processing and beneficiating for the purposes of applying RCRA Subtitle C regulations is noted. The use of the term "processing" in the EIS is consistent with how the term was used in FCC's proposed plan of operations. The generic use of the term is adequate for the purpose of disclosing impacts in the EIS and is not meant to interpret the applicability of RCRA regulations. (115)

TRANSPORTATION

Comment Code	Letter No.	Comment Subject
ROAD-900	115	Proposed Access Route and Improvements

Comment: Access - arbitrary requirements. (115)

Response: The most recent available ADT data for the Williams Creek access route was acquired during the period of July 2003 to July 2004 (Table 3-13, DEIS). ADT during that period varied from 93 to 33 and averaged 66. Traffic associated with the ICP will add 34 ADT (Table 2-1, DEIS), increasing ADT 37% to 100% (average 52%). ADT data does not discriminate between permitted Forest road users and general public. The Forest Service and the Project will negotiate an agreement on sharing costs on specific items of Project Access route mitigation. The negotiated agreement will be included in the Project's road use permit. (115)

Comment: Access - Separate ROWs for Blackbird Mine and Cobalt townsite. (115)

Response: The agencies understand that the Project is pursuing an access agreement through the Blackbird mine site and will provide documentation of that agreement when it becomes available.

Access through rights-of-way for use by corporate entities is required to conduct commercial activities through private property. Access via the Morgan-Panther Creek route was evaluated and deemed not acceptable (See Transportation Technical Report). Using the Morgan-Panther route would require changing the Plan of Operations submitted by Formation and further analysis of the Morgan-Panther route. (115)

Comment: Access - Arbitrary and capricious requirements for project access route roads. (115)

Response: Traffic related to the ICP will constitute up to 100% higher ADT on the Williams Creek route. ICP will be the major user, and as such, the agencies have determined Formation should finance a major portion of maintaining the access route. (115)

Comment: Access - stream sediment reduction. (115)

Response: Additional resurfacing of the access route proposed by the agencies will reduce wear on the road surface and provide a safe route for mixed commercial and recreational users, as well as further mitigate sediment delivery to streams. (115)

Comment: Access - Blackbird Creek Road/turnouts. (115)

Response: Text in the DEIS is in error and has been revised in the FEIS (note that it is correctly identified on Figure 4-1). The agencies want five turnouts constructed between M.P. 38.7 and 39.0 because this section of road is too narrow for safe passing of vehicles. Increased traffic on this section of road will be entirely due to operation of the ICP and the agencies deem it reasonable for Formation to fund necessary improvements for the safety of both ICP workers and workers associated with the BMSG. (115)

Comment: Errors and omissions in the impact discussions - Failure to discuss traffic cumulative effects in historic terms. (115)

Response: The EIS analyzes impacts due to operation of the ICP using baseline data as provided in the "Idaho Cobalt Project Transportation Baseline Report and Transportation Plan." (115)

Comment Code	Letter No.	Comment Subject
ROAD-900-1	23, 81, 115	Proposed Access Route and Improvements – Upgrade

Comment: Support phased road resurfacing. (23)

Response: Road resurfacing proposed by the Project coupled with additional resurfacing proposed by the Forest Service will, over the life of the Project result in resurfacing of the entire access route. (23)

Comment: The additional miles of upgrading for the access road would be helpful but does put extra costs on the company for roads used by a variety of forest users. Within the mine site, a tram system would be great if operation can pay for the cost. A tram would reduce truck traffic between the mill and portal on a dangerously steep slope. (81)

Response: Traffic related to the ICP will constitute up to 100% higher ADT on the Williams Creek route. The ICP will be the major user, and as such, the agencies have determined the ICP should finance a major portion of maintaining the access route. The Project intends to construct and employ a tram if it will reduce operational costs. Site road engineering (i.e. slopes) accounts for the type of vehicles using the road. (81)

Comment: Access - stream sediment reduction; additional mitigation not necessary. (115)

Response: Additional resurfacing of the access route proposed by the agencies will reduce wear on the road surface and provide a safe route for mixed commercial and recreational users, as well as further mitigate sediment delivery to streams. The sediment reduction to streams along the access route would only occur after road improvements are completed and a small sediment increase is expected in the first years of the project. (115)

Comment: Access - Blackbird Creek Road/turnouts. (115)

Response: The agencies have identified the need for five turnouts to be constructed between M.P. 38.7 and 39.0 (this section was correctly shown on Figure 4-1, but incorrectly referenced as M.P. 36.6 to 38.7 in the DEIS text) because this section of road is too narrow for safe passing of vehicles. Increased traffic on this section of road will be entirely due to operation of the ICP and the agencies deem it reasonable for Formation to fund necessary improvements for the safety of both ICP workers and workers associated with the BMSG. (115)

Comment Code	Letter No.	Comment Subject
ROAD-900-2	93	Proposed Access Route and Improvements – Busing

Comment: We support the Forest's Road Use Permit proposal that at least 80% of employees be bused or van-pooled to the work site. (93)

Response: The Forest Service has identified busing as a way to reduce the traffic load on the forest road system to increase safety and reduce environmental impacts. (93)

Comment Code	Letter No.	Comment Subject
ROAD-900-3	107	Proposed Access Route and Improvements – Maintenance

Comment: We would recommend that the mining operation take over maintenance of the road from Highway 93 to the mine itself, thus allowing the County greater ability to maintain the other roads of the county, which would doubtlessly carry a greater vehicle load as a result of the population influx. (107)

Response: A Road Use Agreement between the Salmon-Challis National Forest and Formation Capital will specify maintenance responsibilities and may include payments for deferred road maintenance (such as surface, culvert or bridge replacement), and periodic maintenance (grading, cleaning culverts) for roads within the Forest based on ICP's projected road use. (107)

Comment Code	Letter No.	Comment Subject
ROAD-900-4	108, 110	Proposed Access Route and Improvements – Impacts

Comment: Nez Perce Tribe is concerned about the use of roads and facilities in riparian areas; re: compliance with INFISH standards. (108)

Response: Distance to streams from Project Access route alternatives was considered in the Project Access route selection (see "Idaho Cobalt Transportation Technical Report"). Of currently developed roads, the Williams Route has the least amount of stream within 300 feet of the road. The only Project Site roads in riparian areas are Tertiary roads, proposed for seasonal use or intermittent use. (108)

Comment: Tribe requests FS to the maximum extent possible, locate new roads, and relocate old roads to ridgetops; reduce open road density. (108)

Response: There are minimal (<1 mile) new Site roads in riparian zones. All of these are Tertiary roads, proposed for seasonal or intermittent use. Relocating existing Project Access or Site roads to ridge tops is infeasible. Road densities in the vicinity of the Project will be reduced through decommissioning of existing non-essential roads (See section "Project Site Roads" in chapter 4). A total of 40,000 feet of un-needed roads are proposed for reclamation. (108)

Comment: Large amount of new road construction will destabilize the slopes and lead to mass slope failures. (110)

Response: New road construction associated with the ICP is quantified in Table 4-13. These new roads would be required to be constructed to meet Forest Service standards. There would be a net decrease in total road miles due to reclamation of existing roads. Roads have been designed to be geotechnically stable (see Idaho Cobalt Project Transportation Baseline Report and Transportation Plan). Project access routes and site roads have been selected to provide minimal access to the Project and to Project facilities. Road density will decrease due to reclamation of approximately 4.5 miles of site roads under Alternative II or 7.6 miles under Alternatives III, IV, and V.

There are numerous examples of successfully recontoured and revegetated roads in similarly steep terrain on the Salmon-Challis National Forest. (110)

Comment Code	Letter No.	Comment Subject
ROAD-900-5	110	Proposed Access Route and Improvements – Roads Analysis

Comment: The FS should require a much greater concurrent reclamation package; FS should use a completed Roads Analysis for informed decisions. (110)

Response: The company's proposed reclamation plan contains a commitment to concurrent reclamation. In evaluating their plan the agencies identified one primary area that could speed the rate of reclamation where the TWSF would not receive final cap and revegetation to allow placement of water treatment wastes. The preferred alternative would require reclamation of the final portion of the TWSF at closure and off-site disposal of any water treatment wastes. Turkey Tracks Enterprises completed a roads analysis for the Idaho Cobalt Project (2005a). The Transportation technical report prepared by the Agencies (Hydrometrics and Smith, 2006) considered six possible Project Access routes. Analysis included proximity to streams as related to sedimentation and potential accidents related to hauling materials considered hazardous to aquatics. Analysis also considered anticipated increased and current traffic loads, road standards, road maintenance, public safety, underlying land ownership, issues with roadless areas and wild and scenic river designations and total length of the Project Access Route alternatives. (110)

Comment Code	Letter No.	Comment Subject
ROAD-900-6	110	Proposed Access Route and Improvements – Safety Standards

Comment: Non-negotiable road closure safety standards needed. (110)

Response: The Forest Service administers all Project Access and site roads on National Forest System Lands. On National Forest System Lands the Project will be subject to Forest Service road use restrictions, including closures due to storms and other hazardous travel conditions. (110)

Comment Code	Letter No.	Comment Subject
ROAD-900-7	23, 121	Proposed Access Route and Improvements – Switchback Modifications

Comment: Oppose Williams Creek road switchback modification. (23)

Comment: Mitigation measures beyond those that mitigate for direct impacts from the mine project should be removed. An example being the reconstruction of the Williams Creek road between mile posts 7.1 and 8.1; this work is expensive, does not enhance safety in any proportionate way to cost, drastically alters the view-shed, and might even be called a “pork project” as the USFS already has a new road designed and has been looking to fund its construction for years. One small portion of this entire road-segment, a particular switch-back, has been labeled as a “safety concern.” This particular switch-back turn could use an additional length of culvert and some fill to reduce the risk of large semi trucks from becoming stuck here as they occasionally did in the past while freighting hundreds of loads to the Beartrack Mine. The as-is switchback should be labeled as more of an obstruction, as little property damage and no injury ever occurred from stuck semi-trucks at this location: they simply needed to be pulled out. (121)

Response: The Forest Service considers the switchback section of the Williams Creek Road to be hazardous, especially for larger vehicle traffic. Past accidents, particularly involving large trucks, provide evidence of the hazard risk in this section. Reducing hazardous sections of road, especially sections within 300 feet of a stream, will further mitigate potential for hazardous spills reaching a stream during transport of mine related reagents, chemicals, and operating supplies. The preliminary design has been completed as part of the ICP analysis and funding for construction will be done in conjunction with the ICP project. (23, 121)

Comment Code	Letter No.	Comment Subject
ROAD-901	113, 115	Access Route through Blackbird Mine Site

Comment: Objections: ICP access to Noranda's property and use and reclamation of roads used to access BMSG facilities. (113)

Response: The Forest Service has no authority to require BMSG to grant FCC easements of any kind. The EIS assumes that if the ICP is going to go forward that they will have obtained agreements with BMSG. The FEIS and ROD attempt to clarify this issue by indicating that obtaining these access agreements is required prior to approval of ICP's Plan of Operations. (113)

Comment: Access - Separate ROWs for Blackbird Mine and Cobalt townsite. (115)

Response: The agencies understand that the ICP is pursuing access through the Blackbird mine site and will provide documentation of that agreement when it becomes available.

No right of way currently exists for the existing road through the Cobalt Townsite. If ICP obtains a ROW they shall convey the ROW to the FS. (115)

Comment Code	Letter No.	Comment Subject
ROAD-901-1	115, 155	Access Route through Blackbird Mine Site – Impacts to BMSG

Comment: Errors and omissions in the development of agency alternatives - include description of additional road closure and reclamation re: effects on Blackbird Mine cleanup and other activities in drainage. (115)

Response: Specific road segments to be reclaimed at the inception of project construction are shown on Figure 6-3 in the "Idaho Cobalt Project Transportation Technical Report." The inventory of roads to be reclaimed was developed in consultation with the BMSG and the FS to facilitate ongoing and future BMSG cleanup activities and site administration. (115)

Comment: No analysis of BMSG impeded access to Blackbird Mine site and ability to comply with Consent Decree in the event of obstruction to traffic due to increased traffic, accidents or road obstruction on access roads. (155)

Response: The possibility of an accident temporarily impeding access on the narrow mountain roads is a realistic scenario. The increased traffic, particularly large truck traffic, associated with the ICP will increase the likelihood of accidents. However, the likelihood that a vehicle accident would have a significant or long term effect on access to the BMSG or would materially affect the BMSG's ability to comply with requirements of their Consent Decree and UAO are remote. Additionally, the majority of the access roads that would be utilized by the ICP are public facilities and not maintained for the sole convenience of the BMSG. (155)

Comment: Use of the Blackbird Creek road by the ICP would increase access and reduce security at the Blackbird Mine. (155)

Response: The gate at the entrance to the Blackbird mine site has been observed to often be left unlocked, potentially leaving the site unsecured. Frequent traffic by other authorized users will be just as likely to provide a higher level of security as it would to reduce security. If the BMSG requires additional security measures due to implementation of the Project, those measures can be part of the road use permit agreed upon by the Project, BMSG, and FS. (155)

Comment: ICP would adversely impact Transportation Routes and Power Lines used for the Blackbird Mine site remedial actions. (155)

Response: The Forest Service cannot require that agreements be reached for access and power supply; however, these are the assumptions provided in FCC's Plan of Operations and analyzed in the EIS and would be included in any approved Plan of Operations. Alternative access and powerline routes were evaluated but dismissed. (155)

Comment: The proposed use and/or closures of site roads are not acceptable to the BMSG. (155)

Response: The inventory of roads to be closed was determined in consultation with the agencies and a representative of the BMSG. The segment of road in question below the Ram Portal is considered by the agencies to be an over-steep shortcut that is unnecessary for access to BMSG facilities. The agencies consider the road to be left in place to be adequate in providing access to the same destination(s) as the road segment to be reclaimed. The realignment of the road to the Bucktail drainage is shown on Figure 2-11. (155)

Comment: Many collection and conveyance structures, such as diversion and collection ditches, collection sumps and drops structures, and pipelines are located adjacent to or within the roadways. Along portions of Blackbird Creek and Meadow Creek, the primary access roadway is constructed directly over a low-permeability cover and collection systems for contaminated groundwater. Excursions of vehicles or equipment off the roadway, either intentional or accidental, can impact the integrity of the cover. (155)

Response: The BMSG and EPA would have to agree to use of or any design changes to access roads through BMSG property. The EIS assumes that ICP use and maintenance of the access route could be designed and conducted in a manner that does not pose an unacceptable risk of damage to the existing infrastructure. If that were not the case, it is assumed that BMSG and EPA would not allow access. (155)

Comment Code	Letter No.	Comment Subject
ROAD-902-1	5, 14, 16, 41, 49, 50, 53, 114, 117, 118, 119, 120, 143, 160, 161	Morgan Creek Road/Alternative Access Routes – Support Morgan Creek Route

Comment: Alternative II is more reasonable with regards to surfacing the road from Salmon toward the mine. Please also give proper consideration to allowing worker traffic to the mine from Challis as well as Salmon. Doing so will reduce traffic on the road from Salmon as well as traffic on Highway 93, making for safer travel all the way around. (5)

Comment: Believes the Morgan Creek Road should be considered an approved route to the project year-round. It could boost local economy in the Challis area if workers and supplies had access by this route. (14)

Comment: I'm in support of the Cobalt Project. How will the environmental community "rock-throwers" delay or hinder the process? (16)

Comment: Any transportation access upgrades through Morgan Creek? (16)

Comment: Morgan Creek Road on the Custer County side should be included . . . Safe and accessible way for job opportunities. (41)

Comment: I would like the Morgan Creek road to be open so the community of Challis is able to utilize it the same as Salmon can utilize Williams Creek. (49)

Comment: I totally support this project. We have an empty school building we need Morgan Creek open. I would appreciate if you would look at that heavily like you just discussed because we need access. (50)

Comment: We believe that both the Morgan Creek access and the Williams Creek access would be beneficial to all parties concerned. Having two accesses provides safety to the mine and its employees in the event of an emergency response or evacuation from the mine site. Opening two accesses would reduce the biological and environmental impact on the area by diverting road traffic in two directions as opposed to over-utilizing one sole corridor. (53)

Comment: I also support the idea of having the Morgan Creek Summit plowed in the winter so that miners coming from Challis can have a shorter commute to work during the winter. (114, 117, 118, 119, 120)

Comment: Additionally, please consider allowing a transportation corridor to the mine from Challis. This would alleviate traffic through Salmon and allow residents of Challis the ability to hold a steady job from Formation Capital's mine as well. The Morgan Creek road thus should be improved by the Forest Service and cost should not be charged against costs allocated to the mining project. (143)

Comment: Support mine, wants Morgan Ck road access for Challis workers. (160)

Comment: Wants Morgan Ck road open for Challis workers. (161)

Response: The EIS analyzes the use of the Morgan Creek road and concludes that using the Williams route has fewer impacts than using the Morgan route. The Morgan route would experience significant increases in traffic, especially in the winter, leading to potential increases in sediment delivery to streams. There are more streams proximate (within 300 feet) of the Morgan route than the Williams route. The Morgan route would require extensive upgrades to accommodate vehicles delivering materials to the mine site. It is anticipated that most mine workers will be coming from the Salmon area and the Morgan route would be a much longer commute for them. The Morgan route would have to be maintained year-around increasing maintenance costs.

Potential mine workers residing in the Challis area would be able to use the Morgan Creek access route while it is accessible. The Project, and Alternatives considered in the EIS, require extensive upgrades to the Williams Creek access route to enhance safety, mitigate sediment delivery to streams, and provide emergency response protocols for potential hazardous material releases. Using the Morgan Creek access route year-round would require similar upgrades to comply with Forest Service requirements, especially for transportation of reagents, chemicals, and other operating supplies. These upgrades would be the Project's responsibility. (5, 14, 16, 41, 49, 50, 53, 114, 117, 118, 119, 120, 143, 160, 161)

Comment Code	Letter No.	Comment Subject
ROAD-902-2	42, 93	Morgan Creek Road/Alternative Access Routes – Impacts

Comment: DEIS should specify how increased traffic on Morgan Creek will be documented and how the effects of increased traffic will be mitigated. (42)

Comment: Permitting alternative routes (e.g. Morgan Creek Summit) will unnecessarily spread the direct/indirect impacts of increased vehicle traffic over the landscape and decrease the potential of many other aquatic and terrestrial habitats. (93)

Response: Traffic on the Morgan Creek route may consist of light vehicles occupied by mine workers from the Challis area. These workers will be encouraged to ride employee buses from Salmon, which will be the only way into the Project during the winter. Traffic and mitigation of traffic on the Morgan

Creek route are not proposed to be part of the Project road use permit. All reagents and operating supplies will be transported via the Williams Creek access route. Use of the Morgan-Panther Creek route was evaluated and deemed not acceptable as a primary access route (See Transportation Technical Report). Using the Morgan-Panther for other than individual employee seasonal access would require changing the Plan of Operations submitted by Formation and further analysis of the Morgan-Panther route. (42, 93)

Comment Code	Letter No.	Comment Subject
ROAD-902-3	65	Morgan Creek Road/Alternative Access Routes – Oppose MC Route

Comment: I don't believe Morgan Creek Road would be a good alternative for employee travel in the winter as Morgan Creek Summit on the north slope will take a major amount of upgrade to make it safe in slick conditions. (65)

Response: The Morgan Creek road was considered as a Project Access route and rejected, in part, because of the need for major upgrades and winter access. (65)

Comment Code	Letter No.	Comment Subject
ROAD-902-4	155	Morgan Creek Road/Alternative Access Routes – Inadequate Analysis

Comment: No adequate analysis of alternative access routes provided in DEIS. (155)

Response: Access routes via Big Deer Creek, Little Deer Creek, the Salmon River, Morgan Creek and Moccasin-Napias Creeks were considered in more detail in the Transportation Technical report prepared for the EIS. The Moccasin-Napias route was dismissed because this route would require extensive upgrades to handle proposed traffic loads (currently an objective ML2 road), the route is proximate (<300 ft) to streams along much of its length, grades are too steep for loaded truck traffic, and the route is not maintained in the winter. The Salmon River route was dismissed as an alternative because portions of this route experience a large amount of recreational traffic and would require extensive upgrades for safety and stream proximity issues. The Salmon River route has the most miles of stream proximate to roads when compared to the other alternatives, and therefore the greatest risk associated with spills, and Project traffic along this route is not considered compatible with the Wild and Scenic River classification for the Salmon River. The Little Deer Creek alternative was dismissed as an alternative because it would require building a major new bridge across Panther Creek adversely affecting the creek's eligibility as a Wild and Scenic river and would require approximately 8 miles of new road in an area managed under a Roadless classification. Big Deer Creek was dismissed as an alternative because developing this route would require two new major bridges, one over Panther Creek and one over Big Deer Creek. The bridge over Panther Creek would affect the creek's eligibility as a Wild and Scenic river. The Big Deer route would require upgrading 5.5 miles of primitive access, four miles of which would be within riparian habitat conservation area, and 3 miles would be within a roadless area. There are also Native American Cultural resources along the Big Deer route. Analysis of the Morgan Creek route, when compared to the Williams Route, found that the Morgan Creek route had more proximate stream miles, 41 miles versus 26 miles, thereby increasing the risk from spills. Additionally, the Morgan Creek route would also require more additional maintenance since it currently is not kept open in the winter. The Williams Creek route was selected as the better alternative when considering stream proximity and additional maintenance issues. The Williams Creek route is also shorter (about 6 miles) than the Morgan Creek route (assuming the preponderance of traffic is expected to emanate from Salmon). (155)

Comment Code	Letter No.	Comment Subject
ROAD-903	115	Road Reclamation

Comment: Access - agency identified additional site road's reclamation during construction phase. (115)

Response: The agencies deem it appropriate that all unnecessary roads in the Project area be reclaimed as part of the ICP. Additional road reclamation will further mitigate impacts from the Project. Additional roads identified by the agencies for reclamation were selected in consultation with a representative of the BMSG and will not interfere with BMSG's continued CERCLA activities. (115)

Comment Code	Letter No.	Comment Subject
ROAD-903-1	115	Road Reclamation – Switchbacks

Comment: Access - new section of road to replace switchbacks on Williams Creek road not adequately analyzed. (115)

Response: The section of Williams Creek road proposed to be relocated is intended to improve public safety and reduce the risk of mine related traffic from having an accident. (115)

Comment Code	Letter No.	Comment Subject
ROAD-903-2	67, 93, 110	Road Reclamation – Reclaim Old Roads

Comment: Concerned about the large volume of exploration roads in the project area and the cumulative effects of these former exploration activities and the new exploration proposal. The Forest Service should examine the environmental effects of the overall road density and road density within Riparian Habitat Conservation Areas, including Total Soil Resource Commitment and Detrimental Disturbance. The Forest Service should evaluate the condition of Forest Service roads in the area and need for maintenance, reconstruction, realignment, or reclamation as part of this project. (67)

Response: There will be a net decrease of exploration roads (site roads) when the Project is constructed. Any additional roads constructed for exploration during the mine life will be reclaimed when they are deemed no longer useful. Reduction in bonding for exploration roads is contingent on successful reclamation. The condition of Forest Service roads to be used for Project access has been assessed and mitigation for impacts to these roads are included in the agency alternatives. (67)

Comment: We recommend that all newly constructed roads be decommissioned and obliterated at the end of the mining project. The exception would be those absolutely necessary to maintain water treatment efforts and for administrative purposes. FCC proposes reclamation of 23,000 feet of road. Agencies identified and additional 17,000 feet of roads for reclamation . . We support reclamation of the additional 17,000 feet of roads. (93)

Response: As you have noted, the Company's proposal calls for the reclamation of approximately 23,000 feet of substandard and non-essential roads during the construction phase of the Project. Under the preferred alternative the Company will reclaim, during the construction phase, the additional 17,000 feet of site roads that has been identified by the Agencies. In addition, all new roads that are constructed under all alternatives will be reclaimed at closure, except those identified

as roads to be used for administrative purposes. Your support for the reclamation as detailed for the alternatives has been noted. (93)

Comment: Suggest mitigation of roads to protect variety of resources. (110)

Response: Vehicle collisions with wildlife always occur along highways or roads. The Plan of Operations will require that most workers be van pooled to the project area to reduce the total amount of vehicle traffic on access roads. From the Blackbird Mine gate to the project site vehicles will be required to travel at slow speeds. (110)

Comment Code	Letter No.	Comment Subject
ROAD-904-1	110	Exploration Roads – Include Analysis

Comment: Additional exploration, drilling, access road construction, or development needs to be disclosed and analyzed as part of the revised DEIS. (110)

Response: Formation has proposed approximately, 20,000 feet of exploration access over the course of the mine life within the claim block. Site specific analysis of these plans will be conducted upon submission of the plans and will entail, low impact, full bench and full reclamation of all activities upon completion. The estimated disturbance and potential impact of future exploration activities is addressed in the cumulative effects analysis. (110)

POWERLINE AND PIPELINES

Comment Code	Letter No.	Comment Subject
PP-1000	113, 155	Power Transmission Line and Pipelines

Comment: Objections: ICP access to Noranda’s property and use of the power line for existing mine treatment plant and Noranda property. (113)

Comment: The BMSG does not agree to any new uses that could interfere with consistent and reliable supply of power to the remedy. (155)

Response: The DEIS did not intend to imply that the ICP would use any of BMSG’s power supply facilities without BMSG’s consent or that modifications to the power supply system would not be required. The intent of the analysis was to identify an appropriate route for bringing power to the ICP site. It will be up to the ICP and Idaho Power to determine the line and substation requirements necessary to supply the ICP. It will also be up to BMSG to agree or deny ICP use of any of the power supply system that BMSG owns. The intent of the statement indicating a need for an agreement between ICP and BMSG was to indicate that use of these lines would be subject to BMSG’s agreement. Sections of the FEIS describing the power supply system have been modified to clarify this.

An agreement between the Project and the BMSG will be required to upgrade the existing power line to accommodate the Project’s power requirements. (113, 155)

Comment: ICP would adversely impact Transportation Routes and Power Lines used for the Blackbird Mine site remedial actions. (155)

Response: The Forest Service can not require that agreements be reached for access and power supply; however, these are the assumptions provided in FCC's Plan of Operations and analyzed in the EIS. Alternative access routes were evaluated but dismissed. Agency analysis has determined that with appropriate upgrades there would be no significant impacts to BMSG associated with the use of the proposed access route and power line; however, it will be up to the ICP to obtain approval to utilize any private property. Specific concerns on road access in the vicinity of the 7000 dam have been addressed by rerouting the road access to the Bucktail drainage. The design and improvement of the power line and substation to adequately service both BMSG and the ICP is up to those two private parties and Idaho Power Company. (155)

RECREATION

Comment Code	Letter No.	Comment Subject
REC-1100	110	Recreation - Mitigation

Comment: Appreciate that workers will not be allowed to carry firearms, and request that this condition be extended to fishing equipment and OHVs as well; FS should review and design a series of trails to accommodate increased use and include in NEPA analysis; adverse effect on hunting and fishing opportunities. (110)

Response: Workers will be transported by vans to and from the work site by FCC for the sole purpose of work employment. Possession and use of fishing equipment and OHVs by mine workers being transported to and from the mine site by FCC is not relevant to the FCC's mine worker transportation situation.

Based on the recreational use increase experienced involving existing FS trails associated with the previous construction and operation/closure of the nearby Beartrack Mine in the same general area and transportation route, and involving a similar number of mine employees, there is no reasonable expectation that the FS will need to design a series of trails to accommodate increased use of the area by FCC mine employees and their families. (110)

WILDERNESS AND ROADLESS AREAS

Comment Code	Letter No.	Comment Subject
WLD-1200	115	Frank Church River of No Return Wilderness Area

Comment: Errors and Omissions in describing the existing environment - show cobalt mining Special Management Zone on Figure 3-17. (115)

Response: Information regarding the Congressional Reservation of a portion of the Frank Church River of No Return Wilderness Area for cobalt mining has been added to the FEIS text. (115)

Comment Code	Letter No.	Comment Subject
WLD-1201	54	Roadless Areas

Comment: Designate each of the following areas as wilderness: Panther Creek (41000 acres) and South Panther Creek (7800 acres). (54)

Response: Thank you, but your comment is outside the scope of this EIS. Wilderness areas can only be designated by a Congressional Act. (54)

Comment Code	Letter No.	Comment Subject
WLD-1201-1	110	Roadless Areas – No Impacts to Roadless

Comment: The proposed pipeline maintenance road and the Deer Creek pipeline are in violation of Roadless Use, 66 Fed. Reg. 3244. (110)

Response: Roadless Rule 66 Fed. Reg. 3244 doesn't preclude building new roads in designated roadless areas. Additionally, activities under the 1872 Mining Law constitute a preexisting right under law that would allow roads to be constructed within inventoried roadless areas. See sections on "Land Use-Summary," and "Land Use" in Chapter 4. Roads and pipelines associated with the Project are required to "access the claims." Claims include mineral rights and access to those minerals. In this case access to the minerals requires, or may require, a pipeline and road(s) in order to comply with other regulations. (110)

Comment: Road construction in RHCAs; no agency finding of no alternative to avoid. (110)

Response: Contrary to the commenter's assertion, constructing a maintenance road for the water treatment discharge pipeline would not be a violation of the roadless rule. FS roadless regulation at 36 CFR 294.12(b)(3) says a road may be constructed in inventoried roadless areas when the road is needed pursuant to reserved or outstanding rights, or as provided for by statute or treaty. The General Mining Law of 1872 (17 Stat. 91, as amended) provides United States citizens a possessory right to prospect, explore and develop locatable minerals on public domain lands. This possessory right includes reasonable access to conduct locatable mineral activities. The Forest Service considers the construction of the maintenance road for the discharge pipeline as being reasonably necessary for the development of FCC's locatable mineral prospect and therefore exempt from the road prohibitions of the roadless rule. The commenter is also incorrectly infers that the DEIS rejected alternate pipeline routes solely on the basis that they involved road construction in roadless areas. Minimizing road construction within inventoried roadless areas was only one of a number of factors considered by the FS in evaluating the best route for the discharge pipeline. (110)

SCENIC RESOURCES

Comment Code	Letter No.	Comment Subject
SCR-1300-1	110	Scenic Resources - Light

Comment: Concerns about visual effects for visitors and recreationists; night sky view adverse effects. (110)

Response: Lights from the ICP would be visible from limited areas within the Wilderness, including along Trail #29 and from Indian Peak and Gant Ridge along the eastern wilderness boundary. These

areas get relatively little use, but wilderness users that observe the ICP lights may find that it detracts from their feeling of isolation and overall wilderness experience. (110)

CULTURAL/TRIBAL

Comment Code	Letter No.	Comment Subject
CUL-1400	112	Cultural/Historic Resources – Impacts to Tribes

Comment: In Chapter 4 it is unclear what the potential impacts to Tribes would be. (112)

Response: Potential impacts to the Tribes are not expected to be significant. Although the Idaho-Cobalt analysis area is within the ancestral homeland of the Shoshone – Bannock and the Nez Perce, prehistoric Native American use of the proposed area does not appear to have been substantial. Inspection of the area of potential effect for the mine operation indicated the presence of one prehistoric site eligible for the National Register of Historic Places. The water discharge pipeline route was re-engineered in order to avoid the site. Thus, project effects are not anticipated. Access to this area is currently restricted because of on-going clean-up activities at the Black Bird Mine. Given safety considerations, access to the FCC mine area of operations will continue to be restricted. However, access by tribal members to Forest Service land immediately adjacent to the mine will still be available. During Government-to-Government consultation, the Tribes did not identify specific resources within the area of operation that they would like access. If the Tribes identify such resources at a later date, access accommodation will be made while maintaining a safe working environment. (112)

Comment Code	Letter No.	Comment Subject
CUL-1401	108	Native American Rights – Consider Native American Rights

Comment: The Tribe is formally opposed to this project, and hopes that the FS will take into consideration the agency's trust responsibility to protect Nez Perce treaty reserved resources when making a decision whether to approve this project. (108)

Response: Protection of treaty reserved resources is mandated by federal law (NHPA, ARPA, Executive Order 13084, etc.). These laws require federal agencies to consult with potentially affected tribes. The Salmon-Challis National Forest conducted Government-to-Government consultation with the Nez Perce Tribe on June 19, 2007. In addition, staff level coordination meetings between the Forest and the Tribe occurred during EIS development. As a result, environmental conditions and requirements as outlined in the EIS will be imposed on the project proponent. In addition, the large bond imposed on the project proponent should ensure full attention to environmental issues including those related to tribal trust responsibilities. (108)

Comment Code	Letter No.	Comment Subject
CUL-1402	108, 112	Tribal Consultation

Comment: The Tribe requests formal consultation between the SCNF and the Nez Perce Tribal Executive Committee on this project regarding Tribe's concerns about additional mining in the Salmon River basin, and FS duty to seek highest levels of protection for the Tribe's Treaty Resources. (108)

Response: The Forest Service met with the Nez Perce Tribal Council on June 19, 2007 to discuss the ICP and the status of the EIS. The Agencies have carefully considered and appreciate the Tribe's participation in the analysis process and detailed comments on the DEIS. (108)

Comment: The EIS discusses consultation with the Shoshone/Bannock and Nez Perce Tribes and describes the consultation that has occurred. We recommend discussing the current status and schedule for ongoing consultation. (112)

Response: Recent Government-to-Government consultation with the Shoshone-Bannock Tribes occurred on September 19, 2007 when representatives of the Salmon-Challis National Forest and the Shoshone-Bannock Tribes met in Fort Hall, Idaho. During this meeting several issues were discussed including a desire on the part of the Tribes to have a tribal staff member present to monitor construction of the water discharge pipeline adjacent to the known archaeological site. The Forest indicated that tribal staff participation would be welcome. The Tribes also indicated that an ethnographic study was needed and that the study should be conducted by someone approved by the Tribes. The Forest will work with the Tribes to develop an ethnographic overview as part of future Forest planning. This overview will include the Idaho-Cobalt study area as well as an analysis of the larger regional landscape. The Forest requested that the Tribes provide a letter detailing their issues and concerns regarding the Idaho Cobalt project. Staff level telephone conversations subsequent to the Government-to-Government consultation meeting indicates that a letter from the Tribes is being drafted. The Forest will respond to the written concerns and Government-to-Government consultation will continue throughout the remainder of the EIS process as appropriate. (112)

AIR/CLIMATE

Comment Code	Letter No.	Comment Subject
AIR-1500	110	Air Quality – Inadequate Analysis

Comment: Revised DEIS must analyze the amount of diesel fuel exhaust, sediment, and fugitive dust delivered to surface water and airsheds; FS needs to quantify when suppression activities will be employed for particulates/volume and define the work area. (110)

Response: The amounts of diesel fuel exhaust and fugitive dust were analyzed in the Air Quality Technical Report (REF) used for the development of the Air Quality section of the DEIS. The impacts of operating a mill were analyzed and described in the Air Quality section of the DEIS. The neighboring area and transportation corridor was also analyzed and described in the Air Quality section of the DEIS. Quantification of suppression activities for particulates will be a part of the Air Quality Operating Permit that will be issued by IDEQ for the project. Air quality standards and requirements will be met within an IDEQ issued Air Quality Operating Permit for the project, including assessment and compliance with PSD increments and rules. (110)

HEALTH AND SAFETY

Comment Code	Letter No.	Comment Subject
HS-1600	108	Public Health – Fish Consumption

Comment: The Nez Perce Tribe, and other fishing tribes, are in a uniquely threatened position because of the prevalence of heavy metals and other toxin in salmon, steelhead, lamprey and sturgeon (that are consumed in large quantities). (108)

Comment: The Tribe is not comfortable that potential impact from heavy metals has been adequately addressed in the EIS, nor adequately mitigated in the POO; potential to significantly reduce successful recruitment of fish species, potential to contaminate fish that currently reside in this area. (108)

Response: The Forest Service and EPA recognize the Tribe's position and interest with regards to fish consumption. The analysis of the ICP discharge (see Water Resources section of Chapter 4) predicts a decrease in copper and cobalt chemical mass loads to the downstream fisheries during and following mining as a result of water treatment. Long-term improvements in water quality associated with the Blackbird cleanup should have a beneficial effect on fish and fish consumption.

The potential for leaching of heavy metals and ARD was one of the major concerns addressed by the EIS team. For example, in the first paragraph of Appendix B to the Water Report states: "The geochemistry of mined rock material is one of the critical characteristics of the mine that has the potential to influence the environmental impacts associated with the ICP." There is extensive analysis of the potential for elevated levels of heavy metals to exist in mine drainage or for ARD to occur. An extensive geochemical testing program (Chapter 3 & 4, Appendix B, Water Report) was designed and implemented for the DEIS. Testing concluded, for example (Page 9, Appendix B, Water Report), that "Overall, samples were very low in sulfide sulfur (Figure 9) with 50% of the samples having no detectable sulfur (< 0.01 weight %) and 75% of the samples with less than 0.1%. Sulfur concentrations were log-normally distributed. The highest sulfur levels in the Ram and Sunshine, which had similar sulfur distributions, were less than 2%. Only about 5 % of the samples had more than 1% sulfur, with many of these samples representing ore zones. The ANP of ICP samples (Figure 9) was also very low with 70% of the samples having ANP values less than 3 kg/t. This level of ANP would be neutralized when about 0.1% pyritic S oxidizes. About 1% of the samples came from zones that had carbonate mineralization and yielded ANP levels in the range of 10 to 100 kg/t." Additionally, on page 18, Appendix B, the EIS team stated, "Extensive geochemical testing conducted by FCC consultants (Telesto 2004) indicated those samples with more than about 0.15% pyritic sulfur and a negative NNP are potentially acid generating (PAG). In this evaluation, a threshold pyritic sulfur level of 0.2% and a negative NNP appeared to correspond to potentially acid generating waste rock. Overall, about 17% of 239 rock samples collected from the Ram and Sunshine deposits (Figure 15) were PAG while the remaining samples were either weakly acid neutralizing (80%) or uncertain (3%). All PAG samples were very low in ANP meaning they have little ability to neutralize acidity, and could become acidic quickly if there are sufficient sulfides to create acidic conditions. Kinetic testing, however, showed that chalcopyrite and cobaltite tends to oxidize slowly under oxidizing conditions. Tailings samples were non acid-generating according to the Sobek static test results."

Despite the relatively low risk of ARD, several mitigation measures were employed to insure that release of ARD and metals were minimized. Among these measures were capture of outflow from the underground mines, perpetual water treatment (as needed base on monitoring results), commingling of tailings and waste rock, and addition of alkaline amendments to underground slash. (108 for both above)

Comment Code	Letter No.	Comment Subject
HS-1601	110	Forest Fires – Safety

Comment: It is reasonable to expect that the reforested TWSF will burn at some point; concern for a burn during working life of mine or closure period; critical safety and water protection mechanisms could be compromised. (110)

Comment: All aspects of the project should be designed to withstand a stand-replacing fire event; bond should include periodic reducing fire fuels. (110)

Response: Fire is an inevitable component of the forest ecosystem in this part of Idaho. Stand replacing fire events can be expected to reoccur at frequencies every several hundred years or less. The 2000 Clear Creek fire was such an event in much of the area surrounding the ICP. ICP facilities, including buildings, TWSF and mine support sites at the mine portals will have buffer zones and access roads kept clear of trees. However, it is possible that fire could damage ICP facilities or more likely infrastructure such as the power line. The Forest Service does not have authority to require design to withstand a particular fire event or to bond for such an event. However, the ICP would have a backup generator and the bond would cover maintenance and replacement of the generator in the event of damage so that water capture and water treatment could continue despite line power disruption. (110 for both above)

Comment Code	Letter No.	Comment Subject
HS-1602	115	Materials/Chemicals/Concentrate Transport and Storage

Comment: Water Treatment Chemicals. (115)

Response: The FEIS has been reworded to more accurately describe the difference in effects between Alternatives II and IV in regards to water treatment chemicals. The chemical usage in Alternative IV would be no greater than that required for Alternative II. The risk evaluation provides the agencies with sufficient pertinent information to evaluate impacts, and is sufficient to comply with NEPA requirements. (115)

Comment: Access – arbitrary requirements - new section of Williams Creek Road. (115)

Response: A primary reason for modifying the switchback section and moving the road further from Williams Creek is to reduce the risk of accidents and the risk that a resulting spill could reach the creek. (115)

Comment Code	Letter No.	Comment Subject
HS-1602-1	108, 110	Materials/Chemicals/Concentrate Transport and Storage – Spills

Comment: Tribe is significantly concerned about transportation-related impacts; including accidental spills. (108)

Response: The ICP proposes to resurface 10.9 miles of the Access route to mitigate sediment delivery to streams. The agencies propose under Alternatives III, IV and V to resurface the entire length of the Access route. The agencies also propose annual application of dust abatement treatments (see “Road Improvements” subsection under “Mitigation” in Chapter 2. Also see sections in Chapter 2: “Transportation of Personnel and Supplies,” “Spill Control,” “Other Mitigation”(bullet Enhanced emergency management capabilities..., and bullet Additional access road improvements), and “Spill Control” heading under “Emergency Management, Spill Control and Fire.” (108)

Comment: A hazardous materials spill prevention plan needs to be in place. (110)

Response: Hazardous materials spill prevention and response plans are include in the Plan of Operations. See sections in chapter 2 titled “Transportation of Personnel and Supplies,” “Spill Control,” “Spill Control” section under “Emergency Management, Spill Control and Fire,” and section on Fisheries Resources in Chapter 4. The spill prevention and response plans will be incorporated into the final project permits. (110)

Comment Code	Letter No.	Comment Subject
HS-1602-2	110	Materials/Chemicals/Concentrate Transport and Storage – Relocate Roads

Comment: Relocate roads out of riparian zones to reduce risk for transportation spill reaching surface water. (110)

Response: Distance to streams from Project Access route alternatives was considered in the Project Access route selection. See “Idaho Cobalt Transportation Technical Report”. Of currently developed roads, the Williams Route has the least amount of stream within 300 feet of the road. Relocating most sections of road within Riparian Habitat Conservation Areas would require constructing an entire new access route which is infeasible. A section of the Williams Creek road at MP 7.1 to 8.1 is proposed to be relocated to eliminate a switchback and move the road further from the creek. (110)

Comment Code	Letter No.	Comment Subject
HS-1602-3	110	Materials/Chemicals/Concentrate Transport and Storage – Fuel Storage

Comment: Concern for stockpiling large amounts of diesel fuel at the summit; recommend INFISH style 300' buffers. (110)

Response: To reduce the potential for adverse impacts from fuel leaks, all fuel storage at the mine site will be stored in lined and bermed containment areas. The fuel storage will meet INFISH requirements and be greater than 300 feet from surface water. All containment areas will have the capacity for 1½ times the volume of stored fuel. (110)

Comment Code	Letter No.	Comment Subject
HS-1602-4	110	Materials/Chemicals/Concentrate Transport and Storage – Ore Transport

Comment: The DEIS does not state how enriched ore will be secured to ensure spill-proof delivery for processing off FS lands. (110)

Response: Concentrate will be secured in steel roll off containers and transported off site on single frame trucks, which will be subject to plans regarding transportation of materials and supplies. See sections in Chapter 2 “Transportation of Personnel and Supplies,” “Spill Control,” “Other Mitigation” (bullet Enhanced emergency management capabilities), and “Spill Control” section under “Emergency Management, Spill Control and Fire.” (110)

Comment Code	Letter No.	Comment Subject
HS-1603	115	Public/Mine Traffic Conflicts

Comment: Access – new section of Williams Creek Road. (115)

Response: The section of Williams Creek road proposed to be relocated is intended to improve public safety and reduce the risk of mine related traffic from having an accident. (115)

Comment Code	Letter No.	Comment Subject
HS-1604-1	90, 110	Spill Prevention and Response Plan – Need Plan

Comment: Finally, are there contingency plans for accidents related to fuel and chemical spills? What if there is a massive fuel spill on the way to the mine site? How will that be handled and how much pollution will that cause to the watershed and Williams Creek and then the Salmon River? (90)

Response: Formation Capital Corporation (FCC) has prepared a spill control plan that addresses management of hazardous materials during shipping and storage. Their plan includes notification of the ICP facility prior to transport of fuels or chemicals, use of closed trucks, travel only during daylight hours, use of pilot vehicles, and continuous radio contact with pilot vehicle and facility during transport (Chapter 2, Alternative II). The plan would be revised to address any changes in the plan of operations, reviewed and approved by the agencies prior to initiation of construction activities. Alternatives III, IV and V require road improvements in addition to those proposed by FCC to improve traffic safety, to reduce sediment production and reduce risks of spill of transported materials. (90)

Comment: A hazardous materials spill prevention plan needs to be in place. (110)

Response: Hazardous materials spill prevention and response plans are include in the Plan of Operations. See sections in Chapter 2 titled “Transportation of Personnel and Supplies,” “Spill Control,” “Spill Control” section under “Emergency Management, Spill Control and Fire,” and section on Fisheries Resources in Chapter 4. The spill prevention and response plans will be incorporated into the final Plan of Operations. (110)

Comment Code	Letter No.	Comment Subject
HS-1604-2	110	Spill Prevention and Response Plan – Plan Components

Comment: Revised DEIS needs to analyze threats to fisheries from spills along transportation route; FS should regulate all transportation contractors; FS should provide restrictions re: chemicals stored next to each other or transported together; transport route should examined for particularly hazardous areas. (110)

Response: The DEIS (Fisheries Section in Chapter 4) addresses potential impacts on fisheries resulting from spills along the transportation route. Table 4-12 summarizes evaluation of hazardous effects from a spill based on types and amounts of hazardous materials to be transported and anticipated frequencies of a spill effecting fish and fishery habitat. The ICP will be accessed by FS roads and all FS regulations pertaining to transport of hazardous material, load limits, etc will be applicable to ICP related traffic. Proposed upgrades to the Williams Creek access route will mitigate transportation related hazards. Specific regulations regarding transportation of personnel and supplies are included in the ICP Plan of Operations and will be incorporated into the final permits

along with additional regulations deemed appropriate by the agencies. (See sections in Chapter 2: "Transportation of Personnel and Supplies," "Spill Control," "Other Mitigation"(bullet Enhanced emergency management capabilities..., and bullet Additional access road improvements), and "Spill Control" heading under "Emergency Management, Spill Control and Fire." (110)

SOCIOECONOMICS

Comment Code	Letter No.	Comment Subject
ECON-1700-1	1, 3, 4, 8, 9, 12, 13, 16, 19, 20, 21, 22, 25, 28, 29, 30, 31, 32, 33, 34, 36, 38, 39, 40, 41, 44, 46, 49, 51, 53, 57, 58, 59, 60, 62, 63, 66, 68, 69, 70, 76, 79, 80, 83, 84, 85, 86, 87, 88, 89, 94, 95, 105, 114, 116, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 162, 164, 168, 173	Employment and Local Economy – Job & Benefit to Area

Comment: The Idaho Cobalt Project is a great Asset not only to the USA but Lemhi County's Economic Development. We can only hope that the process will proceed forward in a timely manner. (1)

Comment: The Idaho Cobalt Project is a good fit and a good economic project for Idaho. This project will provide good jobs for the Salmon, Idaho and Kellogg, Idaho areas. (3)

Comment: More jobs for the Valley. (4)

Comment: Idaho needs the jobs and tax revenues. (8)

Comment: Mine will have a very small foot print and the science has been done to ensure very little if any negative affect will occur in an area that already has been mined. The financial and civil effects that it will have on the Salmon/Challis area are not only greatly needed and important to this area but come with little if any downside. (9)

Comment: High pay mining job with benefits good for families and counties. Need more jobs in Shoshone County. (12)

Comment: Need Idaho jobs - Work in mining industry and would be interested in work at Salmon Cobalt Mine. (13)

Comment: Worked on Blackbird remediation in the 1980's. Projected 160 jobs at \$15-25\$/hr. Annual payroll - \$11 million/year. Local contractors, local supplies. (16)

Comment: The project would be of great value to the economic circumstances of Lemhi and Custer Counties, by providing good-paying jobs and opportunities. (19)

Comment: Jobs & benefits to Lemhi Co and Idaho; ICP would supply domestic cobalt, a strategic metal. (20)

Comment: Custer and Lemhi Counties will benefit for many years from the employment opportunities at the project as well as the secondary employment demands created by commerce of the project in these counties. (21)

Comment: Jobs & benefits to Lemhi Co and Idaho; ICP would supply domestic cobalt, a strategic metal. (22)

Comment: Community will benefit from the \$477,000 local tax dollars and \$1.8 million in state taxes. Support FCC's TWSF plan, don't limit tailings facility size. (25)

Comment: Support the Idaho Cobalt Project, mine will provide jobs and economic benefits to Lemhi County and the State of Idaho while supplying the United States with cobalt, a strategic metal. (28 - 32)

Comment: Jobs and good wages contribute to local economy FCC economically viable company in Lemhi County. Good paying jobs. (33)

Comment: It puts jobs out there for a mining town. It is important for many uses, such as being a component in batteries for hybrid cars. (34)

Comment: I think this will be great for Idaho because it will add much needed employment opportunities for Idaho State residents. (36)

Comment: It should do quite a bit to perk up the economy of the Salmon-Challis area without any undue environmental risks. (38)

Comment: This project is needed in this area and would definitely add to the economies of both Custer and Lemhi Counties. The jobs at the mine would be a nice boost to our local economies as well as the trickle down effect of many more jobs added to the local businesses. (39)

Comment: It will also help the local economy with jobs, and help the local tax base. (40)

Comment: They need to start producing cobalt . . . To provide jobs that will benefit our local economy in many ways. (41)

Comment: Will provide many high-paying jobs which in turn will increase spending in the local economy. (44)

Comment: The ICP will employ more than 150 people . . . Which will generate about 8 million dollars in taxes each year. (46)

Comment: I am completely for this, I think it will help our economy. (49)

Comment: I believe this would be a really good project for both Lemhi and Custer County. I know it will do a lot for this community here. (51)

Comment: The proposed project would provide a tremendous economic boost to the City of Challis, to Custer County as well as the City of Salmon and Lemhi County. . . this project would dynamically increase the population in our region as well as decrease the unemployment rate. (53)

Comment: The ICP will employ more than 150 people . . . Which will generate about 8 million dollars in taxes each year. (57, 59, 60, 63)

Comment: I believe this project should go forward for the good of the people of this town, county, state, and country. (58)

Comment: Formation Capital's plan is a good one that will benefit our state greatly. (62)

Comment: With today's advanced methods and the past mishandled mining endeavors as teaching aids we feel this mine will be a plus for the towns of Salmon and Challis, the counties of Lemhi and Custer, and to the North American continent. (66)

Comment: The ICP will employ more than 150 people . . . And over \$470,000 local tax dollars each year. . . the taxes paid by Formation Capital would allow for increased enrollment in our schools and improvements for our roads. (68, 69, 70)

Comment: The Idaho Cobalt Project is a well-designed project that would bring much-needed domestic supply of cobalt to our nation while giving the state of Idaho and its local communities an economic boost by providing steady jobs and tax dollars to the area. (76)

Comment: The ICP will employ more than 150 people . . . And significant tax dollars to the state and local economies for the duration of the mine's productivity. (79)

Comment: The ICP will bring 150 good-paying jobs to Salmon and Challis. . . And will generate about \$8 million in taxes each year. (80)

Comment: The ICP will employ more than 150 people . . . And over \$470,000 local tax dollars each year. . . the taxes paid by Formation Capital would allow for increased enrollment in our schools and improvements for our roads. (83)

Comment: The planned cobalt mine would bring more than 150 much needed long-term high-paying jobs to this area. Not only would the mine help struggling families in this, bring new families back to our area, and increase enrollments in our schools, but the taxes paid by Formation Capital would bring more money to our schools and hospital, improve our roads, and benefit the struggling businesses in our community. (84)

Comment: FCC's mine will provide many great economic benefits to our nation, the state, and especially the local economies. The mine would provide nearly 160 good-paying jobs for the duration of the mine's productivity and add millions of tax dollars to the economy. (85)

Comment: The economic benefits the Idaho Cobalt Project will bring to the State of Idaho and the little impact it will have on our environment presents a winning decision for all parties that are involved. (86)

Comment: I would like to express my total support for the mine. I believe they will leave it better than it is now, and it would add another base for income to the valley, even if only for 10 years, it is worth while. (87)

Comment: The Cobalt Projects would be very good for people and the economy of Challis. (88)

Comment: I am sure that you are already made aware that cobalt is an essential metal in today's society and will strengthen local economies in the Salmon-Challis area. Employment opportunity in Idaho's small, rural communities is important to the tax base of local government, local schools, and the economic health of the state. (89)

Comment: The proposed mine will provide jobs and economic benefits to Lemhi County and the State of Idaho, while supplying the United States with a constant supply of cobalt, a strategic metal of great and growing importance to the United States. (94, 105)

Comment: The City welcomes the employment opportunities and renewed resource industry for the local economy. (95)

Comment: Bring a much-needed economic boost to our community by providing steady jobs and tax dollars to the area. (114)

Comment: The proposed mine will provide jobs and economic benefits to Lemhi County. (116)

Comment: This project will bring a lot of very good things to Lemhi County, including stable, steady jobs and tax dollars from Formation Capital. Challis and Salmon could certainly use both of these things! Our unemployment rates will go down and our community will benefit from the \$477,000 local tax dollars and \$1.8 million in state taxes that Formation will pay. (122, 123, 124, 125, 126, 127, 128)

Comment: Importantly for this area, the Idaho Cobalt Project will employ more than 150 people with good, family-wage jobs, bringing a yearly payroll of about 9.5 million dollars, and will generate about 8 million dollars in taxes each year. (129, 130, 131, 132, 134)

Comment: Some of the economic assets would include tax dollars from Formation Capital and many much-needed steady jobs. Local unemployment rates will go down and communities will benefit from the local tax dollars and state taxes that will fortify and improve vital community services. (133)

Comment: The increased jobs and the increase in the local tax base will help our schools and infrastructure. (135)

Comment: The proposed mine would bring over 150 long-term jobs to the region and more than \$475,000 local tax dollars annually during the 15-20 years it is projected to operate. Lemhi County has been struggling economically and many people in the region would appreciate the opportunity to hold a long-term, steady job. Not only would the mine help struggling families by providing constant jobs and a decent income, but the taxes paid by Formation Capital would also allow for improved roads, schools and other essential community services. (136)

Comment: As the owner of a small business, River Mountain Roasts, as well as being a one-woman temporary service as a means of making my wages, I can see that having more money in the Valley will benefit many small businesses. (139)

Comment: I have observed that when there is an operating mine near our community, businesses had additional cash flow. Also, you didn't see many empty houses with 'For Sale' signs, hence improved tax revenues, leading to healthier funds available for local schools and services. As substitute teacher, I can see where any additional funds for our schools and our kids will be highly beneficial as well. (139)

Comment: This natural reserve is not only a national resource, but also a local resource that will be an industry that will produce jobs, local tax base and stability to the economics of this county and the state of Idaho. (140)

Comment: The planned cobalt mine would bring more than 150 long-term jobs to the area and over \$470,000 local tax dollars each year during the projected operations period of 15-20 years. Lemhi County has been struggling economically and many people in our region would appreciate the opportunity to hold a long-term, steady job. Not only would the mine-help struggling families by providing constant jobs and a decent-income; but the taxes paid by

Formation Capital would also allow for increased enrollment in our schools and improvements for our roads. (141, 142)

Comment: The proposed mine will provide jobs and economic benefits to Lemhi County. (143, 144)

Comment: The Idaho Cobalt Project will bring 150 jobs with excellent pay to Lemhi and Custer Counties, as well as substantial tax revenues and increased commerce locally. Montana, too will benefit, as residents of those counties do much of their shopping and other business in Butte and Missoula, not to mention Dillon, Hamilton etc. (145)

Comment: The planned cobalt mine will provide several good paying jobs that could last well into the future as more exploration proves out more reserves. The mine will provide more than 150 long-term jobs to the area and over \$470,000 local tax dollars each year during the projected operations period of 15-20 years. Many local businesses will also benefit from not only the extra cash flow in the community, but also from supporting the needs of the mine. Additionally, Formation Capital is working with the local community to ensure that the "boom and bust" nature of mining does not negatively impact the community. (146)

Comment: I appreciate having the chance to comment on the Idaho Cobalt Project and to let you know I support this environmentally sound mining project. I've seen what the mines do in this valley and I fully support the cobalt project because of economic benefits that it brings to this valley. I haven't seen any negative effects from these projects so I would be fully in favor of this project. (147)

Comment: The proposed cobalt mine would bring more than 150 long-term jobs to the region for the duration of the mine's production. In addition, it would provide over \$475,000 local tax dollars annually during the 15-20 years it is scheduled to operate. Lemhi County could use the economic boost and many people in the region would appreciate the opportunity to hold a steady job. Not only would the mine help families by providing constant jobs and a decent income, but the taxes paid by Formation Capital would also allow for improved roads and other essential community services. (148)

Comment: The economies of Lemhi and Custer Counties are relatively dependent on seasonal and government jobs. The tax base is not overly strong. Having 150 good-paying jobs in the area for 10 or more years would be a substantial boon with an 'n' but not a boom that would lead to a bust. There are many local people who are more than capable of working at the mine, and there are several people from the area who are currently working at mines in Montana, Nevada and the like who would return to live near their families. This would bolster the local economy and social structure without creating a strain on local services, housing stocks and the like. This modest increase in local employment, plus the attendant boost in local commerce would be a substantial benefit with minimal downside. (149)

Comment: The Idaho Cobalt Project is a well-planned project that will have benefits for the region, state, and nation. (150)

Comment: The mine will also provide over 150 steady jobs and bring in considerable tax dollars to the state and local economies during the mine's production years. (150)

Comment: I feel we need an economic boost in this county. So many of our young people are having to leave to find good-paying jobs, and so many of the jobs here are low-paying. Many people here would like to see their college grads be able to return home. The mine will provide 150 good paying jobs with good benefits, and will also bolster the local tax base. This will also benefit our schools and community infrastructure. (151)

Comment: The sooner these permits are issued the better it will be for the local economy which is in need of more job stability and income producing employment. There is potential for around 150 jobs which would be of great benefit to all concerned. (152)

Comment: Support mine; it will be good for region. (162)

Comment: Mayor of Salmon. Support the mine. (164)

Comment: Economic benefits from mine. (168)

Comment: Supports mine, jobs for local kids. (173)

Response: Your comments regarding the economic benefits of this project are appreciated and have been considered in the preparation of the FEIS. (all comments above)

Comment Code	Letter No.	Comment Subject
ECON-1700-2	5, 6, 7, 11, 14, 16, 43, 45, 48, 52, 55, 95, 104, 106, 160, 163, 167, 171, 174, 175	Employment and Local Economy – Support Project

Comment: It sounds like it would be very good for the people who live here for jobs. (5)

Comment: The extensive studies done show mining can be done in environmentally sound way. . . No logical reason for the project not to move forward. Every aspect been reviewed, every question answered. . . Should move forward to benefit community, state, county. (6)

Comment: Support mine, jobs. (7, 11, 43, 45, 163)

Comment: Favors the project moving forward and believes that through the appropriate approval process, a viable project will come forth. (14)

Comment: Up from the phosphate belt. In support of Project, we are going through our own EIS and we know it's not easy. I'm all for it. Mother Nature probably put more pollutants than anything. I'm an original Cobalt Brat. 2nd through 8th grade. It will bring economy here. ICP is one of the best designed projects I've seen in my years of experience. I'm anxious to see the project go. I have never seen a project more environmentally friendly than this one. How long before they can actually mine? We need the jobs so our kids don't move away. Formation has worked very hard for a long time to do a good job. I'm in Support. Does Formation Capital have any thoughts on job training for the young people of Lemhi County? Worked on Blackbird remediation in the 1980's Projected 160 jobs \$15-25/hr Annual payroll - \$11 Million/yr Local Contractors/Local Supplies. (16)

Comment: I think it's a really good project. (48)

Comment: I am very heavily in favor of this project. I invested in some of the stock because I knew it would be good for me in the long run and good for the people around here too. (52)

Comment: You have my full support. It will be welcomed in many ways. I wish all a good, safe and environmentally sound year for your new endeavor! (55)

Comment: The City welcomes the employment opportunities and renewed resource industry for the local economy. While appreciating the employment benefits and property tax contribution to Lemhi County, the proposed project is predicted to have a fiscal impact to

services provided by the City of Salmon . . .mitigate operational and capital impacts. We also recognize that there will be additional impacts to other community services including the Salmon School District, Lemhi County, and Lemhi County Economic Development Association. (95)

Comment: I am writing to express my support for the proposed Idaho Cobalt Project and for the issuance of a favorable Record of Decision. It appears that the project has been well-planned and will be conducted in a manner that is protective of human health and the environment. (104)

Comment: I believe this project is a good project for the people, it is well-planned and I believe the Formation Capital Company will do a good job if taking care of the land for us. (106)

Comment: Support mine, wants Morgan Ck road access for Challis workers. (160)

Comment: Supports project, make sure that spread of weeds is addressed. (167)

Comment: Supports project. (171, 174, 175)

Response: Thank you for your comments; the agencies have considered local support and economic impacts in analysis of the ICP. Chapter 1 of the EIS explains management direction and laws and regulations that guide the SCNF analysis of Formation Capital Corporation's (FCC) Plan of Operations. Formation Capital Corporation's proposed action and alternatives are reviewed to determine if changes or additions to the Plan of Operations are required to meet the requirements of the regulations for environmental protection set forth in 36 CFR 228.8. (5, 6, 7, 11, 14, 16, 43, 45, 48, 52, 55, 95, 104, 106, 160, 163, 167, 171, 174, 175)

Comment Code	Letter No.	Comment Subject
ECON-1701	16, 96, 97, 98, 99, 100, 101, 102, 138, 153, 169, 172	Community Services – Training

Comment: The planned cobalt mine would bring more than 150 long-term jobs to the area and over \$470,000 local tax dollars each year during the projected operations period of 15-20 years. . . .the taxes paid by Formation Capital would also allow for increased enrollment in our schools and improvements to our roads. (96, 97, 98, 99, 100, 101, 102)

Response: Your comments pertaining to the potential benefits to the Salmon/Challis area workforce have been acknowledged in the review process and will be considered in the final analysis. Chapter 4, Social and Economic Resources, of the DEIS has described the benefits and drawbacks of the proposed mining development. A technical report presenting a more detailed description of the socioeconomic environment also was prepared and is on file at the Salmon-Challis National Forest office in Salmon, Idaho (Northwest Resource Consultants, 2005). (96, 97, 98, 99, 100, 101, 102)

Comment: Mines provide a variety of training opportunities for their employees, ranging from safety to equipment training and industrial training. These are transferable skills that benefit the community as well as the individual. (138)

Comment: The Idaho Cobalt Project, when permitted, will afford many people like me with the opportunity to return home to Salmon, where we have family. The project will also have good-paying jobs in an area that could benefit from a boost to the economy. In addition to people

like me who are currently working elsewhere in the mining industry, I know of many people in Lemhi and Custer Counties who could, through the extensive training mines provide, will be able to work at the Idaho Cobalt Project. Thus, there will be a modest influx of people due to the mine, and many of those will actually be people returning to the area, to their home and families. (153)

Comment: Mining company employees tend to be active members of their communities, coaching Little League Baseball teams, being involved in local clubs and civic projects. Also, miners are well known for volunteering as EMT's, Search and Rescue. Due to the outstanding training that mines provide, they are well equipped to handle a variety of emergencies and fulfill other needs. (153)

Response: The Forest Service recognizes the benefits that the mine will offer to the local workforce in Salmon and Challis Idaho. Evaluation of the benefits have been weighed along with other impacts as discussed in Chapter 4, specifically 4-83 and 4-103. Your additional comments pertaining to benefits to the workforce as well as civic returns have been noted in the review process. (138 and both 153 above)

Comment: Does FCC have any thoughts on job training for the young people of Lemhi County? (16)

Comment: Are there any job training opportunities from the mine? (169)

Comment: Supports project, has educational opportunity been considered? (172)

Response: The mine would provide some job training opportunities, but has made no specific commitments. FCC has not included any plans regarding training of mine personnel in their Plan of Operations submitted to the Forest Service. The idea of ICP providing an educational opportunity, as a working laboratory, has not been considered in the EIS process. (16, 169, 172)

Comment Code	Letter No.	Comment Subject
ECON-1701-2	53, 75, 164	Community Services – Schools

Comment: Both Salmon and Challis would greatly benefit from the opening of two accesses, it would allow for the impact of this project on our community infrastructures to compliment one another (i.e., Salmon schools are experiencing over crowding, while Challis Schools are experiencing low enrollment). (53)

Response: Your comments pertaining to the potential benefits of opening both the Morgan Creek and William Creek accesses have been acknowledged in the review process and will be considered in the final analysis. (53)

Comment: If the Cobalt project develops and the school bond passes, we would expect some relief on our building bond corresponding to the actual impact on school population. Alternately, in the short term, if a bond does not pass before mining-related population increases, we would expect a provision of portable or modular classrooms and concomitant maintenance and operations costs. (75)

Response: FCC intends to hire qualified workers from the local Salmon/Challis area workforce; therefore, negative impacts, as a result of a large influx of people moving into the area, were not

anticipated to be significant. Mitigation of socioeconomic resources, such as entering into a Good Neighbor Agreement, is not a NEPA requirement. (75)

Comment: Would like to have Economic Development Program involved. Schools in Salmon currently at capacity. (164)

Response: Thank you for your comment on the involvement of the Economic Development Program. At the time that socioeconomic data were collected, Salmon Public Schools were not at capacity; however, it was noted that enrollment was expected to increase due to upcoming large class sizes (DEIS, page 3-70). Your comment will be considered in the final analysis. (164)

Comment Code	Letter No.	Comment Subject
ECON-1701-3	95	Community Services – Regional Impacts

Comment: Impacts from increased population on City of Salmon services are projected to be on the order of \$2 million. (95)

Response: Thank you for your comments on the positive impacts of the proposed project as well as your in-depth analysis of potential fiscal impacts, both direct and indirect. The analysis you provided was based on the influx of 60 construction workers and 130 operation employees and their families into the Salmon area and the previous experience of the City of Salmon with the Beartrack Mine. FCC intends to hire qualified workers from the local Salmon/Challis area workforce; therefore, negative impacts, as a result of a large influx of people moving into the area, were not anticipated to be significant. Mitigation of socioeconomic resources, such as entering into a Good Neighbor Agreement, is not a NEPA requirement. (95)

Comment Code	Letter No.	Comment Subject
ECON-1701-4	107	Community Services – Law Enforcement

Comment: We feel that an agreement could be reached by which the mining operation would help fund the extra needed law enforcement personnel. (107)

Response: The EIS team will take your comment into consideration during the final review and selection of alternatives. Any agreement between the company and state or local law enforcement is outside of the Forest Service’s authority. (107)

Comment Code	Letter No.	Comment Subject
ECON-1701-5	23	Community Services – Request Contribution to Impacted Services

Comment: There will be impacts to Lemhi County services and suggest participation in LCEDA. (23)

Response: Thank you for your comments and willingness to be included in the Idaho Cobalt Interagency Team. Your comments have been acknowledged in the review process and will be considered in the final analysis. Chapter 4, Social and Economic Resources, of the DEIS has described the benefits and disadvantages of the proposed mining development. A technical report

presenting a more detailed description of the socioeconomic environment also was prepared and is on file at the Salmon-Challis National Forest office in Salmon, Idaho (Northwest Resource Consultants, 2005). (23)

Comment Code	Letter No.	Comment Subject
ECON-1702	113	Cost/Benefit

Comment: Social and Economic costs and benefits is unbalanced, inadequate and biased on economic benefits of mining. (113)

Response: Evaluation of potential positive and negative effects on socioeconomic resources in the study area have been described in a technical report (Northwest Resource Consultants, 2005), Chapter 3 of the DEIS, pages 3-68 - 3-73, and summarized in Chapter 4, specifically pages 4-83 and 4-103. Your comments have been acknowledged in the review process and will be considered in the final analysis. (113)

Comment Code	Letter No.	Comment Subject
ECON-1702-1	65	Cost/Benefit – Project Economics

Comment: I can't see any investor out there who has a dime in this project not wanting to back it without a profit: the question is: Can it? (65)

Response: Thank you for acknowledging the positive impacts of the proposed mine and your concern about investors making a profit on their investments. Prior to entering the EIS process, FCC conducted extensive research on potential profit and loss of the mine. Your comments will be considered in the final analysis. (65)

Comment Code	Letter No.	Comment Subject
ECON-1702-2	90	Cost/Benefit – Post Mine Bust

Comment: Secondly, is that the real economic benefit will not really happen in Challis but more in Salmon. With the main road leading to the mine site via Williams Creek and the fact that Morgan Creek road is closed at least six months of the year, Challis will not benefit from this mine. The mine is not going to buy fuel in Challis and truck it up over Morgan Creek with the road in the shape it is at this time. The schools in Challis will not fill up, but the already over-populated school in Salmon will feel the stress. When the mine closes, the families will move away from the area, what will happen then to the economy of Salmon? (90)

Response: The DEIS recognizes the benefits that the mine will offer to the local workforce in Salmon and Challis Idaho. Evaluation of the benefits have been weighed against drawbacks in the socioeconomic resources technical report (Northwest Resource Consultants, 2005), Chapter 3 of the DEIS, p. 3-68 - 3-73, and summarized in Chapter 4 specifically 4-83 and 4-103. Chapter 3 points to the diversification of the Salmon economy over the past five to ten years, and the continued efforts to reduce dependence on one primary industry, as a buffer to help reduce the after-mining bust. (90)

Comment Code	Letter No.	Comment Subject
ECON-1702-3	113	Cost/Benefit – Not Balanced

Comment: Social and Economic costs and benefits is unbalanced, inadequate and biased on economic benefits of mining. (113)

Response: Evaluation of potential positive and negative effects on socioeconomic resources in the study area have been described in a technical report (Northwest Resource Consultants, 2005), Chapter 3 of the DEIS, pages 3-68 - 3-73, and summarized in Chapter 4, specifically pages 4-83 and 4-103. Your comments have been acknowledged in the review process and will be considered in the final analysis. (113)

RECLAMATION BOND

Comment Code	Letter No.	Comment Subject
RCL-1800	110	Reclamation Bond Calculation

Comment: Bonding amounts should include regular maintenance work every few decades as needed to repair degraded liners and water treatment facilities. (110)

Response: The financial assurance calculated for the ICP includes long-term capital contribution as well as operations and maintenance funding for water treatment facilities. Funding for post-closure inspection and maintenance of caps and liners is also included, but assumes that this will only be required for five years. No long-term capital replacement costs are assumed for the waste storage facility. (110)

Comment Code	Letter No.	Comment Subject
RCL-1800-1	65, 109, 115	Reclamation Bond Calculation – Excessive

Comment: I also believe the 13 million dollar reclamation bond is extreme for an underground project and should be cut in half. (65)

Response: Prior to approval of a plan, the SCNF will ensure that ICP provides financial assurance, or a reclamation bond, to ensure that the lands involved with the mining operation are reclaimed in accordance with the approved plan of operation and reclamation requirements (CFR 228.8 and 228.13). The bond will be calculated using the USDA Forest Service Training Guide for Reclamation Bond Estimation and Administration For Mineral Plans of Operation authorized and administered under 36 CFR 228A (2004). (65)

Comment: Contrary to the discussion of bond calculations in the DEIS, the Forest Service’s “Training Guide for Reclamation Bond Estimation and Administration for Mineral Plans of Operation Authorized and Administered under 36 CFR 228A” (USDA – Forest Service, April 2004), makes it very clear that bond calculations are not to be based on worst case scenarios. Regarding water treatment, the Guide specifically states “[t]he need for water treatment should be based on impacts that are predicted to occur not a worst case assumption.” Guide, Summary of Comments, p. 2. (109)

Comment: Bonding does not include worst-case contingencies - bond calculations based on worst case scenario. (115)

Response: The inclusion of long-term water treatment costs as part of the financial assurance calculation is not based on a "worst case" scenario. Analysis of the geochemical and hydrological characteristics of the ICP using the DSM model and other tools indicates that there is some uncertainty (see page 4-8 through 4-11 DEIS) in predicting both chemical and hydrogeological conditions. Without collection and long-term water treatment the DSM model predicts that Alternative II would cause a slight and possibly measurable increase in copper concentration in Big Deer Creek following closure even under the 50% or expected case. In the 90th percentile case the DSM predicts a likely exceedance of water quality standards. The 90th percentile case is not a "worst case" or contingency condition, but a situation that is expected to occur one out of ten times and is therefore considered by the agencies in the context of risk to the environment as reasonably likely to occur. It is therefore entirely appropriate to require a bond or other financial assurance for long-term water treatment until such time that it can be demonstrated that long-term water treatment will not be needed. (109, 115)

Comment Code	Letter No.	Comment Subject
RCL-1800-2	27, 90, 93, 103, 104, 108, 110, 113	Reclamation Bond Calculation – Need Large Bond

Comment: Financial assurance is inadequate. (113)

Response: As the commenter should be aware, releases that have caused and continue to cause impairment to South Fork Big Deer and Big Deer Creeks are being addressed under separate CERCLA authority. The USFS will ensure that financial assurance be in place to cover costs of long-term water treatment should ICP's mining activities have the potential to further impact the impaired stream reaches. As described in IDEQ's draft 401 certification letter (December 1, 2006), additional metal load to the already impaired streams is not allowed under Idaho water quality regulations. The draft MPDES permit includes a stipulation that FCC demonstrate compliance with this requirement prior to discharge. (113)

Comment: Water treatment operation and maintenance costs are severely underestimated, capital costs for construction of a water treatment plant are not included. (113)

Response: The estimated annual operating costs are based on the actual 2006 annual labor cost and power requirements of a mine water treatment facility having very similar operating requirements as the water treatment process proposed by the DEIS, vendor pricing for water treatment chemicals, actual electric rates provided by the local power company, and actual sludge disposal rates quoted by the Lemhi County Landfill. The water treatment system used as the labor cost basis is leased by a mine in northern Nevada, and operated on a contract basis by a private water treatment company. The annual operating costs are therefore current, and based on an actual case example. The flow rates and water treatment equipment hydraulic capacity are based on the water treatment flow capacity requirements used in the DEIS. The bond estimate includes a component to cover equipment replacement, which will be adequate for the type of equipment used in the treatment process.

The water treatment plant will be built by, and costs incurred by, FCC in order to start mining and milling activities. Therefore the capital cost of the water treatment plant is not included in the reclamation bond calculation. (113)

Comment: Have arsenic and iron components of ore been accounted for? Must assume that ARD will be produced. Need to bond for operational and long term water treatment. (27)

Response: Geochemistry and acid-generation characteristics of ore were determined through geochemical testing as described in the Geochemistry section of Chapter 3 of the EIS and the Water Resources Technical Report. Geochemical testing characterized the arsenic and iron contents of ore. All alternatives address the potential for ARD through a variety of control and mitigation measures including operational and long-term water capture and treatment. Bonding for all aspects of mine reclamation and closure would be required. (27)

Comment: Thirdly is the cost of clean-up will not scratch the surface for the amount of damage the mine will do to the environment. Formation Capital proposes \$13 million to cover the cost of returning this land to its natural habitat. . . . the Forest Service wants \$43 million for reclamation costs. Do you honestly believe that even 1 billion dollars will clean up the mess that they will be making up in our beautiful forests? (90)

Comment: We strongly encourage the Forest to require adequate bonding to ensure that, in a worst case scenario, there are adequate financial resources to treat and deal with any unexpected post-closure mine impacts. (93)

Comment: If, in spite of good common sense, the project is permitted, there should be a very large bond amount required. (103)

Comment: I am pleased to know that the Forest Service will require ICP to post a financial assurance to support post-closure activities and ensure the site is returned to a stable and acceptable condition. (104)

Comment: The proposed \$13 million reclamation bond is inadequate; the FS should require that the operation post the \$43 million reclamation bond that was originally estimated. (108)

Response: The Forest Service will ensure that adequate financial assurance is in place. Methodology for calculating a financial assurance amount is outlined by guidance manual for reclamation bond estimation for mineral Plans of Operation authorized and administered under 36 CFR 228A as referenced in the DEIS (USDA Forest Service, 2004). (90, 93, 103, 104, 108)

Comment: Tribe is particularly concerned about reclamation costs given the almost certain need to treat wastewater and contaminated groundwater for the long-term; inaccurate predictions of water quality impacts is the rule, not the exception with hardrock mining. (108)

Response: The financial assurance amount calculated by the Forest Service and included in the Forest Services ROD conforms to Forest Service guidance (USDA Forest Service, 2004) and includes costs to remove structures, regrade and recontour the surface, replace soil and revegetate the reclaimed land. The financial assurance also includes necessary administrative and overhead costs to complete the reclamation if the company were unable or unwilling to do so and costs for long-term water treatment, if such treatment is needed to meet water quality requirements. Long-term water treatment costs are the largest component of the calculated financial assurance. Although it is not certain that long-term water treatment will be required following closure of the ICP, there is a reasonable likelihood that it will, which is why the Forest Service is including costs for long-term water treatment in the financial assurance. Monitoring data gathered during mining and the years following closure may provide sufficient data to better predict the need and scope of post-closure water treatment. As additional information becomes available the financial assurance amount may be modified during the annual project review. (108)

Comment: Final reclamation bond should be adjusted to reflect additional mitigation measures. (110)

Comment: The revised DEIS should confirm that financial assurances will be set aside as part of the reclamation bond. (110)

Comment: The bond must be substantive enough to cover potential impacts to water quality and impacts to the sensitive nature of this site and listed species inhabiting the area. (110)

Response: The financial assurance calculation includes the additional design components and mitigation measures included in the preferred alternative in the FEIS. A final financial assurance (bond) amount will be calculated for the project as approved in the ROD. (110 for all three above)

Comment Code	Letter No.	Comment Subject
RCL-1800-3	73, 110, 149	Reclamation Bond Calculation – Balance Bond Amount

Comment: It would indeed be a shame if the interests of the old way of mining were able to delay jobs coming to Idaho residents, jobs working at a clean modern mine. It is important that the bond is large enough, but it is equally important that you don't over-react to the interests of BMSG and environmental groups and set the bond at a level which makes the project too expensive. (73)

Comment: The agencies should be commended for not misleading the public by publishing premature bond calculations in the Draft EIS. There are two fundamental reasons why bond calculations should not be included: 1) it's not in compliance with federal regulation or policy, and 2) doing so pre-supposes an outcome, gutting the very purpose of the EIS process. The bond for the Idaho Cobalt Project must be adequate and sufficient, and should not cover for the old Blackbird Mine. That calculation can only be made after you have made your decisions have been made on the Alternative or mix of alternatives. (149)

Response: The EIS team appreciates your comments regarding bond calculation. As discussed in the Draft EIS under the heading of Financial Assurance on page 4-109, there is a certain level of uncertainty in terms of costs of reclamation for all Alternatives. Once the evaluation of alternatives to the proposed action are complete and the Plan of Operations reflects the decision of the agencies, a bond will be calculated using the Forest Service guidance manual for reclamation bond estimation for mineral Plans of Operation authorized and administered under 36 CFR 228A as referenced in the DEIS (USDA Forest Service, 2004). (73, 149)

Comment: List of items bonding should take into account. (110)

Response: The financial assurance calculation included in the ROD includes components addressing capture and treatment of water, containment and reclamation of mine wastes, road reclamation and sediment control. The agencies do not have authority to require ICP to fund fish recolonization efforts in historically impacted streams. (110)

Comment Code	Letter No.	Comment Subject
RCL-1800-4	108	Reclamation Bond Calculation – Roads

Comment: Obliteration and recontouring of all roads used for the project should be built into the reclamation bond. (108)

Response: As described under the Transportation Mitigation heading in the Monitoring and Mitigation Measures Included in Agency Alternatives section (page 2-67, DEIS), all roads on National Forest lands not required for access to post-closure facilities or required for access to the Blackbird Mine Site Group facilities will be regraded and revegetated. This would result in approximately 40,000 feet of existing roads being reclaimed as part of the ICP operations, resulting in a net reduction of sediment yield to areas streams. Prior to approval of the Plan of Operations, the SCNF would require a reclamation bond to ensure that all reclamation is completed in accordance with the approved Plan of Operation (CFR 228.8 and 228.13). (108)

Comment Code	Letter No.	Comment Subject
RCL-1800-5	110	Reclamation Bond Calculation – Fire

Comment: All aspects of the project should be designed to withstand a stand-replacing fire event; bond should include periodic reducing fire fuels. (110)

Response: Fire is an inevitable component of the forest ecosystem in this part of Idaho. Stand replacing fire events can be expected to reoccur at frequencies every several hundred years or less. The 2000 Clear Creek fire was such an event in much of the area surrounding the ICP. ICP facilities, including buildings, TWSF and mine support sites at the mine portals will have buffer zones and access roads kept clear of trees. However, it is possible that fire could damage ICP facilities or more likely infrastructure such as the power line. The Forest Service does not have authority to require design to withstand a particular fire event or to bond for such an event. However, the ICP would have a backup generator and the bond would cover maintenance and replacement of the generator in the event of damage so that water capture and water treatment could continue despite power line disruption. (110)

Comment Code	Letter No.	Comment Subject
RCL-1800-6	112	Reclamation Bond Calculation – Include Bond Details in FEIS

Comment: Financial assurance. (112)

Comment: The DEIS makes no clear association of each mitigation measure that would require financial assurance, what the cost or range of costs each measure may require, and the assumptions and basis for the estimates. (112)

Comment: We also request that the FEIS include the estimate of the financial assurance amount and the financial assurance vehicle, particularly the portion that would guarantee implementation of anticipated long-term water management and treatment tasks. (112)

Response: A detailed description of the components included in the financial assurance calculations is included in the ROD.

Forest Service regulations (36 CFR 228.13, FSM 2817.24 and the Forest Service Handbook FSH 6509.11K establish the financial instruments that can be accepted as financial assurance for projects on Forest Service lands. Cash, surety bonds and a variety of other financial instruments are considered acceptable. Not until the company provides an approved financial assurance will work on the ICP be allowed to begin. (112 for all above)

Comment Code	Letter No.	Comment Subject
RCL-1801	115	Reclamation Methods

Comment: Other - TWSF closure cap, soil balance showing quantities needed and source is needed. (115)

Response: Soil material for the TWSF closure cap is expected to be available from within the TWSF footprint as proposed for the FCC cap design. ICP will be required to submit a revised design of the TWSF in the Plan of Operations that identifies the source of cap material. (115)

Comment Code	Letter No.	Comment Subject
RCL-1801-1	84, 94, 105, 108, 110	Reclamation Methods – Adequate Reclamation a Primary Concern

Comment: The treated water will be cleaner than natural water around it and reclamation is a main concern. (84, 94, 105)

Response: The Forest Service recognized the importance of reclamation of disturbance to public lands under its jurisdiction and a comprehensive reclamation plan is included within the company's Plan of Operations and is described in the Alternative II Reclamation section of Chapter 2 (pages 2-32 through 2-36, FEIS). Water treatment would be required to achieve specific effluent limits set by the NPDES permit, but would not necessarily treat water to be cleaner than natural or background conditions (see Water Treatment section in Chapter 2 pages 2-26 – 2-29, FEIS). The agencies agree that successful reclamation is a primary objective and the reclamation objectives and methods are described in Chapter II of the FEIS and agency additions to the reclamation plan described in the preferred alternative (FEIS pages 2-51 to 2-74). (84, 94, 105)

Comment: The Tribe wonders whether the site will ever actually be truly reclaimed, if not, violation of FS requirements. (108)

Response: The Forest Service and the mining industry both have considerable experience with the physical regrading, soil replacement and revegetation aspects of reclamation similar to that proposed for the ICP. This experience indicates that reestablishment of a viable and sustainable vegetation community at a site such as the ICP can successfully be accomplished using methods and materials as proposed. Loss of productivity during operations and in the early years following reclamation is expected. However, in the long-term (tens of years) it is expected that the disturbed areas will support sustainable natural vegetation communities. (108)

Comment: Reclamation should include restoring soils, the original vegetation types and >15" course woody debris for nutrient cycling and wildlife. (110)

Response: Reclamation under the preferred alternative would utilize native species and ultimately result in forest types that are similar to natural conditions (recall that the current condition following

the 2000 fire is early stage serial lodgepole pine regeneration). As discussed in the soil section of Chapter 4, there will be unavoidable impacts to soils as a result of salvage, storage and redistribution. Although soil productivity will be temporarily lost and will be reduced following reclamation, the overall productivity of the generally young and shallow soil that would be affected by the ICP will only be slightly diminished. Addition of coarse woody debris to the reclamation surface could add diversity and contribute to long-term nutrient cycling. Selective salvage and use of woody debris in the reclamation process has been added to the reclamation plan. (110)

Comment Code	Letter No.	Comment Subject
RCL-1801-2	27, 108	Reclamation Methods – Fish

Comment: Have arsenic and iron components of ore been accounted for? Must assume that ARD will be produced. Need to bond for operational and long-term water treatment. (27)

Response: Geochemistry and acid-generation characteristics of ore was determined through geochemical testing as described in the Geochemistry section of Chapter 3 of the DEIS. Geochemical testing characterized the arsenic and iron contents of ore. All alternatives address the potential for ARD through a variety of control and mitigation measures including operational and long-term water capture and treatment. All aspects of mine reclamation and closure would be accounted for in calculation of a financial assurance amount. (27)

Comment: The project needs to take fish restoration into account in the design of reclamation activities, as well as operational changes and mitigation actions. (108)

Response: No impacts to fish are predicted although a risk to fish as a result of a potential spill of hazardous materials is acknowledged and evaluated in more detail in the Biological Analysis (BA) submitted to USFWS and NMFS in October 2007. (108)

Comment Code	Letter No.	Comment Subject
RCL-1801-3	146	Reclamation Methods – Use Native Species

Comment: From my past experience the native species can take a little longer to get fully established. The nonnative species grow faster and help to stabilize the soil quicker. Are there native species that are quicker growing that can perform as well as the nonnative species? Could a small tree and shrub nursery be established in the near vicinity to grow native trees and shrubs? There is a better survival rate if trees are grown at the same elevation and in the same environment. Native trees that are coming back from the fires could be thinned and transplanted onto the reclaimed areas. Additionally these transplants have some of the natural vegetation around the root ball when they are transplanted which helps to spread the native grasses and shrubs. (146)

Response: There are several advantages to using native species including that they are generally part of a balanced ecosystem. Non-native species may not have natural checks and may be able to out-compete natural vegetation. Although non-natives can quickly establish, which is a benefit to erosion control, they may not provide suitable habitat or forage for native wildlife. Forest Service policy directs use of native vegetation to the extent possible. As the commenter notes, there are a number of advantages to using native species that are adapted to site specific conditions, and use of local seed or transplant stock is a way to maximize the potential for successful revegetation. (146)

Comment Code	Letter No.	Comment Subject
RCL-1802	110	Concurrent Reclamation – Emphasize Concurrent Reclamation

Comment: The FS should require a much greater concurrent reclamation package; FS should use a completed Roads Analysis for informed decisions. (110)

Response: The company's proposed reclamation plan contains a commitment to concurrent reclamation. In evaluating their plan the agencies identified one primary area that could speed the rate of reclamation where the TWSF would not receive final cap and revegetation to allow placement of water treatment wastes. The preferred alternative would require reclamation of the final portion of the TWSF at closure and off-site disposal of any water treatment wastes. (110)

TAILING WASTE ROCK STORAGE FACILITY

Comment Code	Letter No.	Comment Subject
TWSF-1900	112, 115	TWSF Capacity

Comment: The modifications to the FCC proposal in Alternatives III thru V should therefore indicate method used to achieve design compaction. (112)

Response: The EIS team determined that the required compaction can be accomplished using the methods described in the DEIS. As stated in the DEIS, snow would be removed from the active disposal areas prior to placing waste rock or tailings in the TWSF. The snow would be stockpiled in a designated area within the facility. This will allow for proper compaction to occur. (112)

Comment: Page 2-20 and Page 2-21: There is an inconsistency in terms of compaction level for tailings disposed of in the TWSF. (112)

Response: The agencies were not able to identify an inconsistency. Both paragraphs state 90 percent compaction. (112)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, no slurry transport proposed. (115)

Response: Editorial Correction. (115)

Comment: Other - FS acknowledgement of geologic probability that ore reserves will be expanded and additional waste disposal capacity needed. (115)

Response: Although the likelihood of finding additional cobalt/copper mineralization in the area of ICP's claims is high, the economics of mining those reserves are difficult to predict. The selection of a smaller TWSF facility in Agency Alternatives IV and V is intended to provide the required range of alternatives considered in the NEPA analysis. The alternatives are presented in such a fashion that selection of another option for the TWSF size would be possible in the Record of Decision. (115)

Comment Code	Letter No.	Comment Subject
TWSF-1900-1	3, 5, 8, 23, 24, 25, 26, 34, 46, 57, 62, 63, 76, 77, 79, 80, 81, 84, 85, 106, 109, 114, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 129, 130, 131, 132, 133, 134, 135, 137, 139, 145, 149, 150	TWSF Capacity – Permit Larger TWSF

Comment: The mine would be most productive with a larger tailings and waste facility. (3)

Comment: Alternative II is more forward-thinking because it calls for an adequate facility for storing waste rock and tailings, and is more than adequate in projecting the amount of cement needed to neutralize tailings. (5)

Comment: Formation's plan does present some advantages. It doesn't make sense to limit the tailings and overburden area to ten years of capacity. It is better to "over-permit" now rather than waiting until later. (8)

Comment: Support FCC tailings design. (23)

Comment: Concerned that limiting the volume of the proposed tailings facility limits production and reduces operator flexibility. Unreasonable conditions imposed upon the proponent will likely have a negative value on the feasibility of developing this, one of a few cobalt deposits within the United States. (24)

Comment: Community will benefit from the \$477,000 local tax dollars and \$1.8 million in state taxes. Support FCC's TWSF plan, don't limit tailings facility size. (25)

Comment: Concerned that limiting the volume of the proposed tailings facility limits production and reduces operator flexibility. (26)

Comment: The environment and the economy is better off with the larger waste rock storage facility as proposed by the company. (34)

Comment: Formation Capital's . . . Proposal to have a larger waste rock storage facility is the better option, both economically and for the environment. (46, 57, 63)

Comment: Approve the whole TWSF footprint. The Forest Service's proposed TWSF footprint is a good phase I for the TWSF, but it would be shortsighted not to plan for growth. (62)

Comment: Formation Capital's plan calls for the best water treatment processes and waste storage facilities that will hold more than ten years of tailings and waste. I urge you to permit the larger facility. Failing to do so will limit the mine's productivity and disrupt jobs down the road. (76)

Comment: Limiting the productivity of the mine by not building a large enough waste facility is a waste of time and tax dollars. Allow the mine to produce at full capacity for the longest period of time by building a storage facility that does not require an interruption of jobs and mine productivity. (77)

Comment: Formation Capital's plan calls for the best water treatment processes and waste storage facilities. (79)

Comment: Alternative II provides for a larger waste rock and tailings facility that will not limit the mine's productivity. Alternative II also provides for the separation of waste rock before it

is stored. I believe this will prove to be the better option in case we decide we need to treat the waste rock and tailings separately in the future. (80)

Comment: Reducing the size capacity of the tailings/waste rock storage facility (TWSF) as recommended in Alternative IV seems unwise -- a false economy. The capacity requested in Alternative II is only 35% greater than the known reserves/production estimate. Given the geology, there is excellent potential for finding that 35%. Having a second permit for such a small increase involves extra costs and delays for the mine -- costs which would be better spend on reclamation. (81)

Comment: I believe the proposal for a larger waste rock storage facility is a good option. It would allow room in case there is more material than expected. This would allow for a longer mine life, would not stop production, and would not interrupt jobs in order to re-permit the facility. (84)

Comment: Alternative II also offers a more comprehensive tailings and waste facility that allows mining production to continue uninterrupted beyond ten years. The Forest Service's alternative needlessly constrains production. (85)

Comment: Formation Capital's plan for waste storage is better than the Forest Service's plan which limits the life of the project. (106)

Comment: Formation Capital's mining plan offers a comprehensive tailings and waste facility that will allow for mining production to continue uninterrupted beyond ten years. The Forest Service's alternative constrains cobalt production by limiting the waste facility's capacity to ten years. The Forest Service should approve and permit the larger waste facility. Limiting the size of the TWSF may seem like an environmental protection now, but even with this larger facility, the environmental impact will still be minimal- the total footprint of the mine will be less than 150 acres. Having the larger facility from the start will benefit the environment and the local economies. (109)

Comment: Limiting the productivity of the mine by not building a large enough waste facility is a waste of time and tax dollars. Allow the mine to produce at full capacity for the longest period of time by building a storage facility that does not require an interruption of jobs and mine productivity. (114)

Comment: The Idaho Cobalt project is a well-planned project that would bring a much-needed economic boost to the community by providing steady jobs and tax dollars to the area. Failing to permit the larger facility will limit the mine's productivity and disrupt jobs down the road. (117, 118, 119, 120)

Comment: Formation Capital has planned for the best water treatment processes and waste storage facilities that will accommodate tailings and waste beyond ten years of production. (117, 118, 119, 120)

Comment: Rejecting the extra capacity of the tailings impoundment is poor planning. If the USFS is concerned that the footprint will not be necessary, allow for expansion at a later date when the extra capacity is needed. (121)

Comment: It makes more sense to plan a waste storage facility that will hold 35% more waste than what would be produced by from current production estimates, which Formation has done. The Forest Service's alternative only provides for waste beyond ten years of productivity, which means that if the mine is productive beyond ten years, under the Forest Service's plan, we would be forced to stop production and interrupt jobs in order to re-permit the facility. We should not limit our economy with something as impractical as not building a large enough storage facility. It is important to consider this possibility and for this reason, I

support Formation Capital's plan of operations over the Forest Service's alternatives. (122, 123, 124, 125, 126, 127)

Comment: The mining company's proposal to have a larger waste rock storage facility is the better option, both economically and for the environment. The company wants to permit some excess capacity for this storage facility, which would allow room in case there is more material than expected during the 10-year life of this permit, and would also allow for a longer mine life if additional ore is found. Since it is likely more ore will be located, it makes sense to permit the larger storage area. That would be better not only for the company, but also for the community and regional economy. It also is a sound proposal for the environment. (129, 130, 131, 132)

Comment: The Idaho Cobalt Project would be most productive with a larger tailings and waste facility permitted from the beginning of the plan. This larger facility would leave room for the possibility of increased ore reserves and avoid unnecessary interruptions in employment. Mining is criticized for being a boom-and-bust industry -permitting the larger waste facility will help reduce that being likelihood. (133)

Comment: Some of the economic assets would include tax dollars from Formation Capital and many much-needed steady jobs. Local unemployment rates will go down and communities will benefit from the local tax dollars and state taxes that will fortify and improve vital community services. (134)

Comment: Under Alternative II the mine would be afforded a larger tailings and waste facility. That leaves room for an increase in future ore reserves, which makes more long-term sense for permitting. (135)

Comment: The Idaho Cobalt Project would be most productive with a larger tailings and waste facility permitted from the beginning of the plan. This larger facility would leave room for the possibility of increased ore reserves and avoid unnecessary interruptions in employment. Mining is criticized for being a boom-and-bust industry - permitting the larger waste facility will help reduce the chance of that occurring. (137)

Comment: Formation Capital's Alternative II is a far superior plan to the other alternative of the draft EIS, particularly the added size of the tailings and waste rock storage facility being able to allow additional future reserves. Limiting the mine to 10 years doesn't make any sense, particularly if there is ore available to operate longer. (139)

Comment: Various aspects of the Draft contain language that is unnecessarily confining, such as the agency recommendation to have a smaller tailings and waste rock storage facility (TWSF in the EIS) than is proposed by the company. Such restrictions will bring no additional environmental protection and could actually limit the mine's operating life, which in turn has negative social and economic effects. As you move forward with the Final EIS, please consider the ramifications of such confinements. We stress we are not talking about loosening environmental protections or regulations, but rather placing undue restrictions that don't bring a corresponding benefit. (145)

Comment: Formation's proposed Facility is the better option. Environmentally, it makes more sense to permit the larger facility, so as not to come up short in 10 or 12 years. From an economics standpoint, it also is preferable for nearly the same reason. And from a pure logic standpoint, it only makes sense to not potentially constrain the entire operation down the road with an artificial limitation that doesn't benefit the environment or the economy. (149)

Comment: The Forest Service's alternative will limit the production of the mine by restricting the capacity of the waste facility to ten years. Even with a larger facility, the total footprint of the mine will be less than 150 acres. Having the larger facility from the start will benefit the

environment, as well as the local economies by allowing the mine's production to continue uninterrupted. (150)

Comment: Formation Capital has planned for the best water treatment processes and waste storage facilities that will accommodate tailings and waste beyond ten years of production. (150)

Response: Proposed modifications to the company's proposal, as described in Chapter 2 Alternatives III, IV and V, have been developed in response to issues and potential impacts identified during the scoping and Idaho Joint Review Process (JRP) used by the EIS team to develop Issues, Concerns, and Opportunities (ICOs) for the ICP and during the impact analysis. A summary of advantages and disadvantages considered in regards to the TWSF facility is provided on page 2-70 to 2-71 of the DEIS. Your comment in support of maintaining a 35 percent buffer above current production estimates has been noted in the review process. (3, 5, 8, 23, 24, 25, 26, 34, 46, 57, 62, 63, 76, 77, 79, 80, 81, 84, 85, 106, 109, 114, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 129, 130, 131, 132, 133, 134, 135, 137, 139, 145, 149, 150)

Comment Code	Letter No.	Comment Subject
TWSF-1901	115	TWSF Design

Comment: Errors and omissions in the description of Alternative II. Chapter 2, TWSF reclamation (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, Figure 2-1 wetland mitigation cells. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, TWSF reclamation. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the development of agency alternatives - unsubstantiated commingle tailings and waste in TWSF as mitigation measure. (115)

Response: Many times there is a subtle distinction between a component of an alternative and a mitigation action. In this case, the distinction is unimportant because the merits of tailings and waste rock commingling were considered by the DEIS analysis, and on balance commingling was thought to be a superior approach. To clarify this conclusion, however, by "commingling" does not necessarily envision a homogeneous mixture of tailings and waste rock. Encapsulation of waste rock by layers of tailings that will further reduce the oxygen diffusion into waste rock zones is the anticipated plan. Commingling is an added measure that supplements the environmental protection afforded by the geomembrane liner and cover system. The protective tailings shell will provide the only means of reducing oxygen flux during the operating life of the mine. The requirement for encapsulation of waste rock by tailings does not rule out use of a separate waste rock placement cell. (115)

Comment: Errors and omissions in the impact discussions - failure to analyze phased construction of TWSF. (115)

Response: FCC's proposed phased construction of the TWSF begins with a toe berm and would destroy the existing isolated wetlands in the first year of construction. Alternative IV was designed to avoid the wetlands impacts entirely (if the identified ore reserves were all that were ever mined) or to postpone the impacts to the wetlands until additional ore reserves were identified indicating a need for the larger disturbance area. (115)

Comment: Other - TWSF closure cap, soil balance showing quantities needed and source is needed. (115)

Response: Although the likelihood of finding additional cobalt/copper mineralization in the area of ICP's claims is high, the economics of mining those reserves are difficult to predict. The selection of a smaller TWSF facility in Agency Alternatives IV and V is intended to provide the required range of alternatives considered in the NEPA analysis. The alternatives are presented in such a fashion that selection of another option for the TWSF size would be possible in the Record of Decision. (115)

Comment Code	Letter No.	Comment Subject
TWSF-1901-1	3, 26, 81, 85, 109, 121, 146, 149, 150	TWSF Design - Commingling

Comment: Commingling of tailings and waste is a flawed concept. Dissimilar materials should be located in the TWSF so they can be managed separately in the long run. (3)

Comment: Commingling of material in TWSF will provide an increased level of operating complexity that is not justified based on available data. (26)

Comment: In regard to commingling versus separating the tails from the waste rock . . . I know that fine material does generally reduce permeability and it may inhibit oxygen from entering as well. If the tails are indeed non acid-generating, this may work. (81)

Comment: Lastly, tailings and waste should not be commingled. Alternative II, which provides for different waste materials to be managed separately, is the better choice. (85)

Comment: In addition, Formation's plan calls for amending tailing cement to neutralize all sulfides. Lastly, tailings and waste should not be commingled. Formation's plan provides for different waste materials to be managed separately and for that reason is the best choice. Allowing for proper management of tailings and waste will allow the option of treating the waste separately in the future, in the unlikely event that is deemed necessary. (109)

Comment: Unsupported assertions - TWSF, unsupported assertions re: co-disposal. (115)

Comment: Mill tailings should not be commingled with waste-rock unless the benefit from such an action is clearly demonstrated. It is assumed that attenuation would be the goal of the commingling strategy; if so, the attenuating capacity of the mill tailings should be relatively easy to determine. If there isn't significantly more attenuating capacity in the mill-tailings than acid-forming potential of the waste-rock, the commingling strategy should be abandoned. Otherwise the potential for leaching even more constituents from the mill-tailings might be the result. Oxygen-limiting schemes briefly described in the DEIS often only slow the progress of sulfide oxidation. Changes in barometric pressure and convection have in other locations caused oxygen diffusion despite substantial engineering efforts to prevent it. In short,

keeping the two piles separate at least provides the ability to manage each pile's unique effluent in an appropriate manner, if there turns out to be an effluent over the long-term. Adjustment of the bonding calculation could also be made if there is a definitely measurable difference in risk between the two options. (121)

Comment: The tailing and the waste should remain segregated in the TWSF. From an environmental standpoint it would be easier to monitor and know exactly where the material of greatest concern is located with out spreading it out through out other material of lesser concern. Dilution of the waste material does not remedy the concerns of ARD. The tails are predicted to have low levels of sulfide or metals bearing materials and should not be contaminated with materials of a possible higher sulfide or metals content. The impermeable layer that covers the TWSF will control the water and air permeating through the material. Does the FS have data or testing that proves their claim that the tailings and waste commingled is a better plan? The tailings and the waste will likely both be porous materials so commingling the two will just spread the waste out and reduce the ability to control the situation. (146)

Comment: There has to be sufficient room to be able to maintain two separate bodies of material (tailings and waste) in the same storage facility. The design as presented in Alternative IV doesn't allow for separation of materials. (146)

Comment: I'm also puzzled by the Draft EIS's proposed method and ratio of commingling tailings and waste. It seems Formation's proposal is the sounder, more environmentally friendly approach, and I recommend you re-consider it. (149)

Comment: Formation's waste storage plan calls for waste rock to be segregated, in case the rock and tailings need to be treated separately in the future, which I believe is a better alternative. (150)

Response: Commingling of tailings and waste rock disposed of in the TWSF as proposed in Alternatives III, IV and V is intended to reduce the oxidation rate of the higher permeability waste rock component and reduce long-term risk to the environment of metals release as described in more detail on page 2-56 of the DEIS. The FEIS includes the requirement that the ICP provide a plan for commingling of tailings and waste rock with the intent to reduce oxidation and metals leaching from waste rock. Public support for the selection of Formation Capital's proposal that maintains the separation of waste materials will be taken into consideration during the final evaluation of alternatives. (3, 26, 81, 85, 109, 121, 146, 149, 150)

Comment Code	Letter No.	Comment Subject
TWSF-1901-2	110	TWSF Design - Footprint

Comment: Reduce TWSF footprint by completely backfilling underground mine workings. (110)

Response: If the mine were completely backfilled, the access ramps would be filled during the closure phase. Material used for backfilling the ramps would be taken from the top of the TWSF in order to maintain the structural integrity of the pile. Backfilling the entire mine will not utilize the entire amount of material in the TWSF. Therefore, the footprint of the remaining material would not be reduced, rather the pile would be lower in height. (110)

Comment Code	Letter No.	Comment Subject
TWSF-1901-3	26, 146	TWSF Design – Cap

Comment: Oppose additional cap material on TWSF due to cost/benefit. (26)

Comment: The 4 feet soil cover will significantly increase costs to cover the TWSF. Where will this amount of subsoil come from without creating more disturbances? Is there scientific justification for 4 feet vs 3 feet? (146)

Response: Alternatives III through V require the ICP to submit a revised design of the TWSF cap for Forest Service approval. The TWSF closure cap would be modified to include a minimum of 4 feet of soil cover material composed of three feet of subsoil and one foot of topsoil. Four foot of soil cover (versus three feet in Alternative II) will provide a thicker cover capable of supporting the growth and long term sustainability of native forest tree species that will eventually revegetate the site without damage to the impermeable liner system. (26 and 146)

MINE

Comment Code	Letter No.	Comment Subject
MINE-2000-1	112, 115	Underground Mine Backfilling

Comment: Page 2-11 (backfilling 4th paragraph): The modifications to the FCC proposal in Alternatives III thru V should indicate that backfilling in 10 feet lifts is not appropriate and that the backfilling procedures should be modified to provide lifts of no greater than 2 feet. (112)

Response: Backfill lifts: mine backfill is a cemented paste, not soil. The paste gains strength as the cement hardens, not through compaction. A 10-foot lift is appropriate for this type of backfill. (112)

Comment: Errors and omissions in the description of Alternative II. Summary section (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, paste backfill cement addition (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, dewatering at Ram. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Chapter 2, dry backfill. (115)

Response: Editorial Correction. (115)

Comment Code	Letter No.	Comment Subject
MINE-2000-2	62, 81, 115, 146	Underground Mine Backfilling – Slash Amendment

Comment: Mixing tailings and waste is not a recommended method of storage. The proposed slash amendment is an unnecessary expense. The large tonnage of cement that will be in the stopes will have more than enough excess neutralizing capacity to counter any potentially acid generating material in the slash. (62)

Comment: Underground paste backfill and extra lime addition to slash (waste rock) is helpful. (81)

Comment: Tailings will be made into a paste with cement (page 2-11). Cement is limestone. Is there a need to add more limestone? (146)

Response: Metals leaching and acid drainage is a potential concern for the TWSF and post-closure mine discharge. A brief summary of the Geochemistry contributing to these concerns is found on page 4-13 of the DEIS. The agency alternatives propose to address this concern through the amendment of waste rock (slash) left underground in the Ram and Sunshine mines with lime or cement to provide alkalinity to reduce potential for metals leaching. (62, 81, 146)

Comment: Miscellaneous - Underground tailing placement - adding limestone is not necessary. (115)

Comment: Errors and omissions in the development of agency alternatives - unsupported alkalinity amendment to slash waste rock. (115)

Response: The EIS team is aware of a number of mining projects in which the average NNP of a waste rock facility was positive, yet the seepage from the pile was acidic. Early work with selective placement of alkaline waste rock as a mitigation measure was not always successful if the alkaline rock was placed as distinct alternating layers among acid generating waste rock. One problem with alkaline addition is that if acidic interstitial solutions form they can migrate into the alkaline rock unit and precipitate iron and aluminum oxyhydroxide precipitates on the carbonate minerals, which can reduce their reactivity. As a practical matter, acidic solutions may migrate through mixed acidic and alkaline rock even when the overall average NNP is positive. As a consequence of concerns about the lack of success with some efforts to neutralize ARD potential, the EIS team is requiring site-specific demonstration that the proposed style of mixing will successfully control pH. (115 for both above)

Comment Code	Letter No.	Comment Subject
MINE-2000-3	108, 110	Underground Mine Backfilling – Complete or Maximize Backfill

Comment: Waste rock and mine tailings should be used to completely backfill the mine shafts; waste rock should be mixed with concrete so that potential groundwater contamination (acid mine drainage) is minimized. (108)

Response: In the agency alternatives II, IV and V (see Chapter 2 DEIS), the risk of ARD from waste rock is reduced through: 1) ongoing geochemical characterization program; 2) amendment of waste rock with alkaline materials (e.g. lime, limestone, cement) as needed to ensure long-term acid control; and 3) encapsulation of waste rock within low permeability tailings in the TWSF. (108)

Comment: Encourage additional backfilling of mine workings. (110)

Response: ICP has proposed backfilling mine stopes as part of the mining process. Their plan would leave open access ramps and drifts (tunnels) from the ramps to access ore zones at the end of mining. The volume of openings left unfilled is estimated to be approximately 30 percent and 95 percent of the total mine volume for the Ram and Sunshine Mines, respectively. Complete backfilling would occur following the end of mining and would require removing tailings from the TWSF and reconstituting them as a paste to pump underground. The backfilling of the ramps and drifts would not significantly affect the post-closure chemical load contributed to groundwater because the majority of metals load is anticipated to come from the slash. Alternatives Considered But Dismissed, located in the final EIS, Chapter 2, provides a description of the additional backfill and a discussion of its feasibility and rationale for its dismissal. NEPA requires the analysis of a reasonable range of alternatives which address identified issues. Although additional backfilling may address some of the issues, the Agencies found that it was not reasonable or practical and did not provide significant environmental benefits. Additionally, it would not eliminate the need for a surface tailings storage site that would be slightly smaller in acreage and height of that proposed. Please refer to Chapter 2 for more details. (110)

Comment Code	Letter No.	Comment Subject
MINE-2001	115	Surface Disturbance

Comment: Errors and omissions in the description of Alternative II. The Proposed Action (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the description of Alternative II. Incorrect acreage of disturbance. (115)

Response: Editorial Correction. (115)

Comment: Errors and omissions in the development of agency alternatives - provide infiltration gallery conceptual design information. (115)

Response: The infiltration gallery alternative has been dismissed in the FEIS and Alternative IV has been revised to include a discharge pipeline and in-stream diffuser. Rationale for dismissal of the infiltration gallery option is provided in Chapter 2 of the FEIS. (115)

Comment: Errors and omissions in the impact discussions - Alt. III disturbance area doesn't match Table 2-3. (115)

Response: Acreages for Alternative II in the DEIS had not been updated per the June 2006 Plan of Operations. Text for Alternative III has been updated in the FEIS. Acreages in Wetland and Vegetation Resources sections are, in some cases, a subset of the acreages in Table 2-3 and will not always exactly concur with acreages in Table 2-3. (115)

Comment: Errors and omissions in the impact discussions - Alt. II would result in more wetlands than Alt. III. (115)

Response: The agency alternatives include the objective of trying to minimize impacts to all wetlands including isolated non-jurisdictional wetlands that provide important habitat for a number of forest species. The isolated wetlands were identified following the 2000 fire and had characteristic wetlands vegetation assemblages at that time. They have also persisted for seven years following the fire including several drought years indicating that these are not likely to be temporary artifacts of the post-fire conditions. Proposed artificial wetlands may not provide equivalent services as the original and have not been demonstrated to be permanent since they would receive water from the TWSF that would be greatly diminished post-closure. The current constructed wetlands design would need to be revised taking into account final TWSF size and cap design. Further the quality of the water supplied by the TWSF seepage collection system may have chemical characteristics that limit wetlands functions. (115)

Comment: Miscellaneous - Adherence to regraded slope standards in Bucktail drainage. (115)

Response: Editorial. (115)

Comment Code	Letter No.	Comment Subject
MINE-2002	110	Agency Project Administration – Agency Capability to Manage

Comment: Deeply concerned about the ability of the State and Federal land management and regulatory agencies to properly supervise and monitor FCC exploration, development, operations, closure, and post -closure activities. (110)

Response: A Forest Service administrator is assigned to FCC's exploration plans and monitors construction activities prior to activity, documents, final reclamation, well plugging etc., and has performed this role since permitted activities commenced on the site. Page 2-55 of the DEIS requires the formation of an Interagency Task Force to provide oversight of this project. This concept has been in practice for mine operations on the Salmon-Challis for over a decade and has been comprised of representatives from the Forest Service, Idaho Department of Water Resources, Idaho Division of Environmental Quality, Idaho Depart of Lands, Environmental Protection Agency, Fish and Wildlife Service, Idaho Fish and Game, National Marine Fisheries Service, and the Army Corp of Engineers. Review of Operations, Reclamation Bond, Monitoring results, planned activities for the coming year etc. are quarterly reviewed by this group. Inspections throughout the year are conducted by the Forest Service. (110)

Comment: Operations should be suspended under certain weather or environmental conditions; the FS needs to define and set standard for qualified operators; FCC needs to submit a full emergency system guideline for all potential problems at the facility. (110)

Response: As outlined in the Emergency Management, Spill Control and Fire subsection of the Operational and Design Components, Monitoring and Mitigation section of Chapter 2, the Operating Permit will be conditioned with requirements to have a Spill Prevention Control and Countermeasure Plan, a Spill Response Plan, additional fire response items and specific emergency management planning and implementation components. These items are intended to address a range of emergency conditions that would put the operations, personnel or the environment at risk. The Forest Service does not have authority to set standards for "operators" at the mine. (110)

Comment Code	Letter No.	Comment Subject
MINE-2003	110	Project Infrastructure

Comment: The revised DEIS should describe anticipated infrastructure needs. (110)

Response: A revised DEIS has not been prepared. Infrastructure associated with the proposed ICP is described in detail in Chapter 2 under Alternative II and modified as appropriate under the other alternatives. (110)

Comment Code	Letter No.	Comment Subject
MINE-2004	110, 112	Geomembrane Liners

Comment: FS should disclose track record and failure rate of geomembrane liners and describe consequences; trigger levels for detection system, etc. (110)

Comment: Pond needs to be double lined w/leak detection and removal system; concern for geostability of pond. (110)

Response: The Forest Service has determined that geomembrane liners are an acceptable form of liner for the TWSF installation. The TWSF will have either a 60-mil PVC liner overlying a compacted clay liner, or a 40-mil PVC liner overlying a geosynthetic clay liner. The water management pond liner consists of a primary 80-mil HDPE liner over a secondary 40-mil HDPE liner with a HDPE geo-net leak collection system in between the two liners. Water collected in the geo-net membrane reports to a sump where it can be monitored and removed. The Forest Service is confident in the liner design of both the TWSF and the water management pond, and the construction quality control and inspection plan that will ensure the liners are properly constructed.

Monitoring of the leak detection system as proposed by FCC includes determining the presence of water in the sump using an electronic moisture probe. If water is present, the sump will be pumped and the volume of water will be measured to determine the leakage rate. If the leakage rate is determined to be greater than a generally accepted de minimus liner system rate, agencies will be notified within 10 working days and FCC will submit a specific response plan, with a schedule for implementation within 15 days. (110 for both above)

Comment: Page 2-24 and Figure 2-9: The modifications to the FCC proposal in Alternatives III thru V should indicate that the HPDE pond liners would be covered with a soil or gravel layer to protect the liners from ice puncturing. A soil or gravel cover provides an additional benefit of reducing the risk of liner uplift during high wind events if the ponds are not full of water. (112)

Response: Ice damage is most likely to occur in the pond corners. This is based on experience at nearby mine sites. The most practical method of protecting against ice damage is to provide a sacrificial sheet of liner material in the pond corners. If damaged, this sheet can be replaced during the life of mine. As part of Alternatives II-V, ICP will be required to submit a design for Forest Service approval to protect pond liners from potential ice damage. (112)

Comment Code	Letter No.	Comment Subject
MINE-2005	110	Noise

Comment: The FS needs to describe the volume and regularity of noise from blasting and other mining activities and analyze how visitors to and wildlife using FCRONR Wilderness will be affected. (110)

Response: Table 4-11 in the FEIS describes the anticipated volume (decibels) of various mining construction, operation, and reclamation activities associated with the Proposed Action based upon the distance of the receptor from the noise source. The Noise section of Chapter 4 also discusses the anticipated Proposed Action noise impact on visitors, wildlife and recreationists within the general project area and along the proposed transportation route. The boundary of the Frank Church River of No Return Wilderness area nearest to the proposed Idaho Cobalt Mine project area is approximately 4 miles to the west. Mine-associated initial surface and near-surface blasting noise would be the most likely to be audible in this area of the FCRONR Wilderness Area. Although blasting noise associated with surface and near-surface development of the mine portals would be potentially audible for several miles, it would be short-term for surface blasting (approximately two weeks), and be significantly reduced as the mine development-related blasting continued to proceed further underground. Portions of trail # 029 are located within the area that would be impacted by blasting noise. This FS trail is lightly used by recreationists as an access route to the FCRONR Wilderness. Use of this trail is primarily associated with hunter access during the local big game hunting season. Other mine related noise is expected to be attenuated to near background levels within the Wilderness Area. Wildlife in the wilderness area are not expected to be affected by noise associated with the operations. (110)

Comment Code	Letter No.	Comment Subject
MINE-2006	110, 113	Closure and Long-Term Maintenance - Management

Comment: The FS should consider the reliability of these systems (reclaimed facilities) over the long-term (500+ years) and require testing and maintenance as needed. (110)

Response: The agencies appreciate your concern for the long-term management of mine wastes upon closure. Critical facilities such as the TWSF have been evaluated for long-term geotechnical stability. The financial assurance is also intended to provide long-term financing for post closure water treatment (over 100-years). The EIS has not specifically evaluated 500+ year design standards, but the agencies feel that the facility designs identified in the preferred alternative are adequate for long-term function. (110)

Comment: DEIS does not evaluate the environmental impacts of an interim mine shutdown for economic reasons. (113)

Response: The FEIS has been modified (see 2-33) to describe the Interim Shutdown Plan included in the Plan of Operations. The Interim Shutdown Plan addresses continued operations, maintenance, monitoring and reporting necessary to minimize risk of adverse environmental impacts during a shutdown period. (113)

BLACKBIRD MINE SITE

Comment Code	Letter No.	Comment Subject
BMS-2100	115	Adjacent CERCLA Concerns

Comment: Blackbird Related Issues - Need for explanation of cleanup schedule, etc. for Blackbird Mine. (115)

Response: The Chapter 3 discussion of Blackbird Mine site activities is adequate to describe the area affected by the alternatives under consideration in the EIS. A detailed discussion of the cleanup standards for the Blackbird Mine site can be found in EPA's 2003 Record of Decision for the Blackbird Mine site. The schedule for cleanup activities can be found in the Unilateral Administrative Order for Remedial Design and Remedial Action, effective date August 10, 2003, as amended. The cleanup schedule is subject to change as it is updated at least annually.

The United States is not considered a "responsible party" in the Blackbird Mine site cleanup efforts. To the contrary, the United States District Court for the District of Idaho found in 1994 that the United States was not liable under CERCLA as an owner, operator, or arranger with respect to the Blackbird Mine. Order Granting United States' Motion to Dismiss and Denying the M.A. Hanna Company's Motion for Partial Summary Judgment, State of Idaho v. The M.A. Hanna Company et al., and consolidated case, CV 83-4179(R) (December 12, 1994). The mining companies filed an appeal of that order with the Ninth Circuit Court of Appeals and the United States entered into a 1997 Settlement Agreement with the companies to avoid incurring further fees and expenses that would come from such litigation. Under the Agreement, the United States agreed to pay a small percentage of the BMSG's costs associated with complying with the 1995 Consent Decree. That Agreement was entered into with absolutely no United States admission of liability or fault regarding the Blackbird mine site contamination. Changes were made in the FEIS as a result of the comment. (115)

Comment Code	Letter No.	Comment Subject
BMS-2100-1	110, 113, 115, 155	Adjacent CERCLA Concerns – Don't Impact CERCLA Cleanup

Comment: ICP would add to the pollution load of Blackbird CERCLA site. (110)

Response: The various design components, monitoring, and mitigation measures incorporated into the agency alternatives are intended to reduce the environmental impacts of the proposed mining operations. Point source discharges and non-point sources cannot cause or contribute to exceedances of water quality standards. The proposed Idaho Cobalt Project is not authorized to release hazardous substances, and it is not authorized to interfere with achieving and maintaining the performance standards for the Superfund cleanup at the Blackbird Mine Site. If the ICP releases or poses a potential threat of a release of a hazardous substance to the Blackbird Mine Superfund Site, the owner and operator of the new mine could become a potentially responsible party jointly and severally liable for response costs for the Superfund Site. If there are loadings from the new mines that are not captured and treated by Formation Capital Corporation, there would be potential for releases to the Superfund Site. Formation Capital should consider entering into an agreement with EPA and the other potentially responsible parties for the Superfund Site to address how the parties will work together in the event of a release from the ICP. (110)

Comment: Concern about potential hydrologic connection between ICP and Blackbird groundwater. What are implications of groundwater capture by BMSG and increased treatment loads. Notes potential need for an agreement with BMSG to handle increased loads from ICP. (110)

Response: As noted in the DEIS, and described in Section 4.3.2.1 of the Water Resources Technical Report, an analysis was performed specifically to address the potential for dewatering of the Ram and Sunshine mines to induce inflow from the Blackbird Mine workings. Results of the analysis do not suggest that such a scenario would occur. Nonetheless, additional monitoring wells are proposed between both ICP mines (Ram and Sunshine) and the Blackbird mine workings to monitor for the potential encroachment of Blackbird mine water into either of the ICP mines. In addition, monitoring of the distribution and quality of groundwater inflow to the ICP mines underground workings during dewatering would be used to evaluate the potential influx of Blackbird mine water.

If operational phase monitoring did indicate that Blackbird mine water was being drawn into the Ram or Sunshine Mines, possible remedies include grouting of structures/fracture zones acting as conduits between the mines, placement of capture/pumpback wells between the mines, treatment of the Blackbird mine water in ICP's process circuit, or cessation of mining and allowing the ICP mines to reflood. (110)

Comment: BMSG unlikely to meet water quality standards in Bucktail Creek; capture of ICP load by BMSG collection system not required by CERCLA. (113)

Response: It is the FS understanding that BMSG is not currently required to achieve compliance with water quality standards in Bucktail Creek as a Use Attainability Assessment (IDEQ, 2002) was conducted and approved by IDEQ and EPA (see footnote 3, Tables 4-8 and 4-9, DEIS). The DEIS makes no assumptions that Bucktail Creek will achieve compliance with water quality standards.

It is the FS and EPA understanding that BMSG is conducting additional remediation actions that are expected to further reduce copper loadings in Bucktail Creek so that water quality standards may be met, as required by the Unilateral Administrative Order, in South Fork Big Deer Creek, Big Deer Creek and Panther Creek. As summarized in the DEIS (page 4-9) and described in the Water Resources Technical Report (pages 4-2 through 4-4), the DSM assumed a future water quality condition based on the completion of the Blackbird Cleanup. These conditions include reductions in Blackbird loads to Bucktail Creek, the BT-5 pipeline, and compliance with water quality standards per the UAO. However, in no case did the DSM or the water quality effects evaluation assume any capture and treatment of ICP chemical mass loads by BMSG. Any loads predicted to be released from the ICP were assumed to report to Big Deer Creek and Panther Creek. Thus, the DEIS does not assume capture and treatment of ICP loads by BMSG in order to meet water quality standards. (113)

Comment: If ICP is approved, BMSG should be relieved of its consent Decree obligations. (113)

Response: The Forest Service and Environmental Protection Agency RODs for the ICP EIS will not unilaterally impose an additional burden on the BMSG to collect and treat the discharge of metals from the ICP. The preferred alternative contains enhancements to the ICP water monitoring program to detect, identify, and allocate the effects of mining so that FCC's cleanup responsibility can be established. FCC will be required to treat mine discharge from the Ram mine and Sunshine mine. For FCC mine water predicted to be captured and treated by BMSG, FCC must either: 1) take action, such as continual dewatering, to prevent FCC mine waters from commingling with water being treated by BMSG; or 2) obtain needed agreements (with BMSG) and permits (from regulatory agencies) to allow FCC's mine water to be treated at BMSG's existing Blackbird water treatment plant. Approval of the ICP alone; however, does not provide a basis for relieving the responsible parties for the Blackbird Mine CERCLA site of its CERCLA liability or its contractual commitments. (113)

Comment: If ICP is approved, BMSG should be relieved of its obligations to meet water quality standards in the Bucktail drainage, and the Agencies should be responsible for the consequences. (113)

Response: The commenter refers to meeting water quality standards in the Bucktail Creek drainage. However, Bucktail Creek itself does not currently have water quality standards because the State of Idaho determined through a Use Attainability Analysis that achieving water quality standards in Bucktail Creek is not technically feasible. The following response therefore assumes that the use of the term "Bucktail drainage" includes other downstream impaired waterbodies that may be considered a part of the drainage because, Bucktail Creek flows into or otherwise contributes to them. The BMSG's historic mining operations resulted in significant releases of hazardous substances to the Bucktail drainage. Such releases significantly degraded and impaired surface waters in the Bucktail drainage, the Blackbird/Meadow Creek drainage, and the Panther Creek drainage. The ROD for the Blackbird Mine CERCLA Site requires that the ongoing releases to groundwater and surface water be reduced to levels that will result in the cleanup levels established in the CERCLA ROD being met. The operation and maintenance of the remedy will also continue in perpetuity. There is no basis for relieving the BMSG from its obligations to meet water quality standards in surface waters in the drainage, other than Bucktail Creek. The Forest Service Record of Decision for the ICP requires that all future designs, analyses, and mitigation measures assure that no point or non-point pollutant loadings will cause or contribute to water quality standards violations. EPA expects all dischargers to comply with their NPDES permit. The proposed ICP is not authorized to release hazardous substances that will interfere with achieving and maintaining the performance standards for the Blackbird Mine Site cleanup. If the proposed ICP releases or is a potential threat of a release of a hazardous substance to surface waters within the Blackbird Mine Superfund Site that requires response action or that results in the incurrence of response costs, the owner and operator of the ICP could incur liability under applicable environmental laws, including but not limited to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). (113)

Comment: Blackbird Related Issues - Description of "Upper Bucktail Creek Alluvium." (115)

Response: The Upper Bucktail alluvium area refers to that portion of Bucktail Creek where groundwater seepage from the Sunshine Mine would recharge Bucktail Creek. This could occur over a considerable length of Upper Bucktail Creek, but predominantly upstream of BMSG's Phase II capture system. Table 4-7 footer has been revised in the FEIS to more clearly state this.

This is an area where water quality could be affected by both ICP and BMSG facilities. The purpose of this analysis is to show what effect the Sunshine Mine could have on the quality of water that ultimately could be captured by the BMSG Phase 2 capture system. As stated in the last paragraph on page 4-24 DEIS, post-flooding mass loads from the Sunshine Mine are predicted to increase copper loads in the Bucktail headwaters alluvium by about 0.15 lb/day, or by 10% to 50%. Thus, this is the incremental impact associated with the Sunshine Mine as illustrated by the color coding for the Alt. II closure (year 5) copper concentration in Upper Bucktail Alluvium. A more detailed description of the impacts to Upper Bucktail alluvium groundwater quality from the Sunshine Mine is presented in Table 4-7 of the Water Resources Technical Report and the 2008 Technical Report addendum. (115)

Comment: Blackbird Related Issues - Point of evaluation for Bucktail alluvium is not appropriate. (115)

Response: The purpose of the Upper Bucktail alluvium groundwater quality evaluation was to determine what impact the ICP operations could have on alluvial groundwater that may ultimately be captured by BMSG. Therefore, the evaluation focuses on the area upgradient of the BMSG Phase II capture system where outflow from the Sunshine Mine may report, which is upgradient of the influence of the Ram Mine. This is the appropriate area of interest for the evaluation objective since any water bypassing the Ram Mine capture system would primarily or entirely enter Bucktail Creek

downstream of the BMSG capture facilities. The reader is referred to relevant sections of the DEIS and the Water Resources Technical Report for details of the evaluation. (115)

Comment: Blackbird Related Issues - US Gov. is responsible party for Blackbird Mine cleanup. (115)

Response: *The United States is not considered a “responsible party” in the Blackbird Mine site cleanup efforts. To the contrary, the United States District Court for the District of Idaho found in 1994 that the United States was not liable under CERCLA as an owner, operator, or arranger with respect to the Blackbird Mine. Order Granting United States’ Motion to Dismiss and Denying the M.A. Hanna Company’s Motion for Partial Summary Judgment, State of Idaho v. The M.A. Hanna Company et al., and consolidated case, CV 83-4179(R) (December 12, 1994). The mining companies filed an appeal of that order with the Ninth Circuit Court of Appeals and the United States entered into a 1997 Settlement Agreement with the companies to avoid incurring further fees and expenses that would come from such litigation. Under the Agreement, the United States agreed to pay a small percentage of the BMSG’s costs associated with complying with the 1995 Consent Decree. That Agreement was entered into with absolutely no United States admission of liability or fault regarding the Blackbird mine site contamination. (115)*

Comment: Blackbird Related Issues - Cleanup uncertainty/ICP impact assessment unfair. (115)

Response: *The Water Resources Technical Report for the ICP (page 4-4) recognizes there is uncertainty associated with cleanup activities and states that predictions of stream concentrations would be understated if the Blackbird cleanup does not meet expectations. The comment underscores the reason enhanced monitoring of the ICP activities will be included as mitigation in the approved plan of operations. The DEIS presents an analysis of effects and doesn’t make judgments about the ICP or the ongoing BMSG cleanup. (115)*

Comment: The release of ICP Waters to the Blackbird Mine collection and treatment systems is not acceptable. (155)

Response: *The comment is correct in assuming that the estimated 5 percent or less of post-operational Ram Mine outflow potentially discharging to the BMSG Phase II capture system is based on a flow net analysis of the groundwater flow field between the Ram Mine and Bucktail Creek, and the percentage of the flow field area upgradient of the Phase II capture system. However, the DEIS analysis probably overestimates the potential for groundwater contaminants from the Ram Mine to mix with the BMSG Phase II capture system because the analysis assumes a uniform flow field exiting the mine. In reality, the majority of outflow from the Ram Mine will exit from the north half of the workings, due to the geometry of the workings and permeability of backfill material, with very little or no flow expected from the south portion of the workings which geographically overlap, and have the potential to mix with, the BMSG capture facilities. A more detailed description of outflow from the Ram and Sunshine Mines and potential for mixing with the BMSG capture facilities is included in the 2008 addendum to the Water Resources Technical Report.*

The comment further states that the assumption that groundwater flow generally follows the topographic gradient is only valid if the groundwater system behaves as an isotropic porous media aquifer. This is only partially correct. In reality, the bedrock system need only have a sufficient fracture density and interconnectivity to act as an equivalent porous media aquifer for flow to generally follow topography. As stated in responses to multiple comments (see Comment Response WTR 301-1 and WTR 310), additional safeguards have been incorporated as a result of the EIS analysis to ensure that contaminant migration through groundwater can be adequately controlled should contaminant pathways deviate significantly from those predicted by the equivalent porous

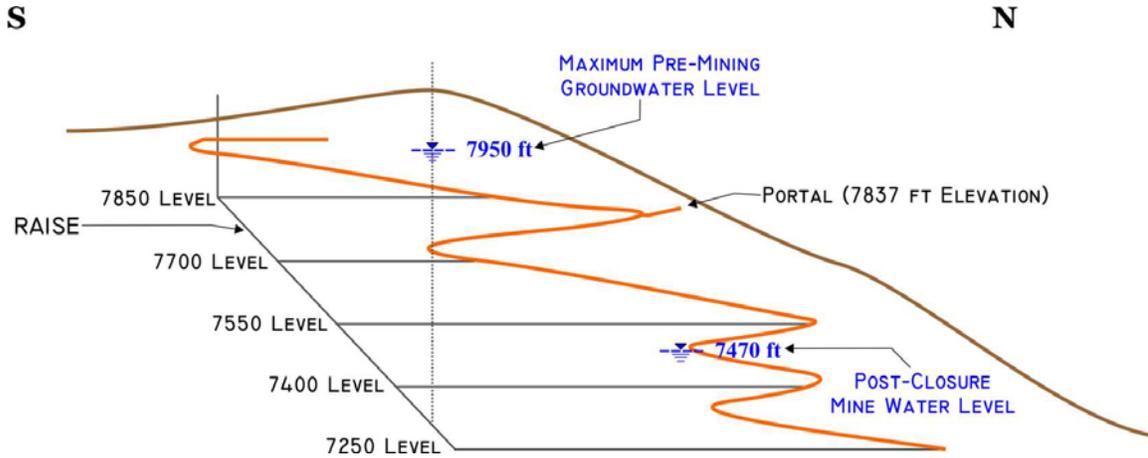
media model. These safeguards include detailed characterization of bedrock groundwater flow through mine inflow and groundwater drawdown monitoring during the mine operational period, and the multiple approaches to groundwater containment incorporated into the plan, including bedrock groundwater pumpback wells downgradient of each mine, and/or backup groundwater capture system in Lower Bucktail drainage, or maintaining the mines in a dewatered condition if necessary. Based on these monitoring requirements and contingencies, the EIS team believes that the quantity of Ram Mine-derived groundwater contaminants potentially reporting to the BMSG, if any, can be adequately quantified and controlled. (155)

Comment: The actual amount of groundwater that would be released from the Sunshine mine and the effectiveness of the proposed well capture system for ICP are not known. (155)

Response: See response to Comment WTR-301 and WTR-310. Also, note that it would be very feasible to prevent the outflow of groundwater from the Sunshine Mine after closure by keeping the mine in a partially or fully dewatered condition. Allowing the mine water level to recover to an elevation that would submerge the slash left in the mine (about 37% of the mine void), but prevent outflow through the groundwater system (by keeping the water level below the surrounding groundwater elevation), would allow the slash to rinse and the mine water quality to ultimately approach pre-ICP mine concentrations. Based on the small inflow rate predicted for the Sunshine Mine (<10 gpm), the mine water level could be controlled through pumping of the mine water to the ICP water treatment plant. Therefore, the migration of groundwater contaminants from the Sunshine Mine can be adequately controlled, if necessary. The potential need for long-term dewatering and treatment of the Sunshine Mine water after mine closure (either partial or complete dewatering), is recognized and is included as a contingency in the Alternative IV and V groundwater containment plans. Also, note that for Alternatives IV and V, the closure period copper concentrations downgradient of the Sunshine Mine are less than three times the pre-ICP mining concentrations (see Table 4-7 in DEIS). Thus, even with a 75% capture efficiency with the bedrock groundwater capture wells, the copper load reporting to Upper Bucktail drainage would be less than the current load from the Sunshine Mine area. Therefore, development of the Sunshine Mine under Alternative IV or V could actually decrease the copper load reporting to the BMSG capture system from the Sunshine Mine area (with reflooding and 75% capture) as compared to current conditions. (155)

Comment: There is no evaluation in the DEIS on the potential for groundwater to migrate into the Meadow Creek drainage. (155)

Response: The potential for southward groundwater flow from the Sunshine Mine was evaluated by the EIS team and found to not be significant. This is based on the fact that only a small portion of the upper access decline tunnel would be located south of the topographic divide, and the post-mining reflooded portion of the Sunshine workings would all be located north of the topographic divide. As shown in the figure below, the Sunshine workings are predicted to refill with groundwater to an approximate elevation of 7470 feet amsl after mine closure. Based on this prediction, all of the flooded workings would be located north of the topographic divide, thus minimizing the potential for southward migration of mine water into Meadow Creek drainage. (155)



Comment: Obstruction to BMSG, either permanent or temporary, would interfere with BMSG's ability to comply with the Consent Decree and UAO. (155)

Response: Comment noted. There are no permanent road closures planned that will preclude access to BMSG facilities. Any temporary closures due to Project related traffic would be remedied as soon as possible to prevent unscheduled interruptions to Project activities.

Access within BMSG's private property is entirely under BMSG's control. Use of access roads on public lands is managed by the Forest Service. Access to BMSG facilities will be maintained as necessary and the Forest Service will coordinate with BMSG and the EPA to ensure that adequate access exists to avoid interference with BMSG's CERCLA activities. (155)

Comment Code	Letter No.	Comment Subject
BMS-2100-2	108, 109, 112, 115, 149	Adjacent CERCLA Concerns – Consider BMSG Impacts

Comment: There is little discussion of full impacts from the nearby Blackbird Mine; details of this and other projects in the area need to be addressed. (108)

Response: The past, present and future impacts of the Blackbird mine are carefully considered in the analysis of the ICP. The baseline conditions reflect both historic impacts and recent cleanup activities. Ongoing cleanup and future impacts from the Blackbird site are considered in the DSM analysis and described in the cumulative impacts section of Chapter 4. (108)

Comment: The Tribe is particularly concerned that FCC will blame any contamination found at the site on the Blackbird Mine, and will attempt to avoid cleanup requirements on this account. (108)

Response: A key component of the selected alternative is to modify the water monitoring provisions of FCC's proposed plan of operation to enhance the ability to detect, document, and quantify effects of mining on groundwater and surface water quantity and quality. An extensive amount of baseline data has been and continues to be gathered in the project area, and monitoring would be required after commencement of mining activities that would assist the regulatory agencies in determining any actions to be required of the appropriate regulated entity(ies) to address any water quality concerns. It should also be noted that FCC would be required under an approved plan of operations to operate

pumpback wells and a water treatment system as long as needed to achieve long-term water quality goals. (108)

Comment: Throughout the length of the DEIS, there are several discussions regarding the Blackbird Mine Site, located in Lemhi County, Idaho. While it is true that the Blackbird Mine is geographically very close to the proposed ICP site and that the mine site is currently undergoing significant cleanup, what has happened at Blackbird should have no effect on whether the ICP gets permitted or not. Each mining project should be judged the merits of its own plan and should not be held accountable by mistakes that others have made. (109)

Response: The agencies have considered information from the Blackbird mine in the analysis of ICP mine geochemistry and water quality. Blackbird data have provided important insight into potential effects of the ICP. Not only have there been significant impacts to baseline conditions from Blackbird activities, but the ongoing cleanup and projected improvements in water quality have been factored in to the analysis of the ICP. The agencies are required to evaluate both baseline conditions and cumulative effects as part of the NEPA analysis. Although the decision on whether to allow the ICP to proceed is generally independent of the historic impacts of the Blackbird Mine, there is one significant area where that is not the case. Federal and State water quality regulations require that the impaired water quality in area streams resulting from historical mining be considered in determining the amount of pollutants that the ICP will be allowed to discharge. That is, the impacts of the historic activities imposes limitations on the proposed ICP operations. That being understood, the ICP has been evaluated on it's own merits and without assuming that past practices at Blackbird would necessarily be repeated by the ICP. (109)

Comment: Page 4-7, Item No. 6: Quantify “very small” in terms of range flows or chemical mass. Also, compare across alternatives and the amount of chemical mass loads that would be intercepted from BMSG sources. (112)

Response: The predicted copper concentration and chemical mass changes at Ram Spring are described in the Technical Memorandum - Water Resources Technical Report Addendum (Hydrometrics, 2008). (112)

Comment: Blackbird Related Issues - BMSG participation in JRP meetings. (115)

Response: No change has been made in the FEIS. (115)

Comment: Blackbird Related Issues - Permit condition requiring ICP/BMSG cooperative WQ monitoring. (115)

Response: Language in this section has been clarified. The Agencies, not FCC, would be responsible for coordination of monitoring through their review and approval of monitoring plans and water resource monitoring data. (115)

Comment: Blackbird Related Issues - Continued WQ impact to Big Deer Creek is caused by Blackbird Mine pollution. (115)

Response: Text in the referenced paragraph (page 4-30, 2nd paragraph, DEIS) and throughout Chapter 4 has been modified to more clearly identify the causes of existing and predicted future water quality conditions. (115)

Comment: Blackbird Related Issues - ICP/Blackbird Mine cleanup coordination. (115)

Response: The comment refers to the first paragraph of the Blackbird Mine Site Summary section in Chapter 4. The issues and areas where coordination of activities would be required to minimize impacts are described in the remaining paragraphs of the section and primarily consist of water resource monitoring and operation of Blackbird cleanup facilities (e.g. dams, groundwater pumping systems, and pipelines) in Bucktail Creek drainage that must remain operational for the cleanup to continue.

The Agencies, not FCC, would be responsible for coordination of monitoring through their review and approval of monitoring plans and water resource monitoring data. Coordination and review of ICP activities by the Agencies would be needed to ensure that ICP activities do not interfere with BMSG facilities. Language in this section has been revised for clarification. (115)

Comment: BMSG diminution of flows in Big Deer Creek drainage. (115)

Response: The section titled Surface Water (page 4-87, DEIS) clearly states that “Blackbird cleanup actions are also expected to result in long-term decreases in streamflow in Bucktail Creek and South fork of Big Deer Creek due to continued pumping and transport of groundwater and surface water...”. Determining what if any water rights are required for ICP’s operations is not the responsibility of nor has it been determined the EIS analysis. The ICP will have to obtain the necessary water rights to be in compliance with the Plan of Operations approved by the Forest Service. (115)

Comment: To allow the operators and successors of the old Blackbird Mine have undue influence over your agency (both the USFS and EPA) decisions would be incorrect and would not be in the best interests of the nation, Idaho or Lemhi County. Moreover, to punish Formation Capital for the mistakes made at the Blackbird Mine (by making Formation bond for that operation’s water quality problems, for example) would be improper. (149)

Response: The issues that you have raised are addressed in Chapters 3 and 4 under headings referring to the Blackbird Mine Site and Financial Assurance. It is an objective of both the Forest Service and Environmental Protection Agency associated with the ICP to ensure no adverse impacts will jeopardize the ongoing CERCLA cleanup activities at the Blackbird mine site (page 4-86, DEIS). Careful coordination of ICP and the Blackbird cleanup activities will be required to ensure that no adverse impacts occur (page 4-86, DEIS). (149)

Comment Code	Letter No.	Comment Subject
BMS-2100-3	113	Adjacent CERCLA Concerns – Plan will Jeopardize BMSG Cleanup

Comment: ICP jeopardize ongoing cleanup activities at Blackbird Mine. (113)

Comment: ICP jeopardize ongoing cleanup activities at Blackbird Mine - DEIS fails to provide necessary analysis and assurances re: impacts to Blackbird Mine cleanup. (113)

Response: The ICP has been subject to careful and conservative analyses. The design, monitoring, and mitigation measures will continue to be subject to careful and conservative design, analyses, and monitoring. The Forest Service’s Record of Decision provides that the ICP cannot release hazardous substances to the environment and it cannot interfere with the Blackbird Mine Superfund Site cleanup. Additionally, IDEQ has required that no net copper and cobalt loadings will be added to impaired streams. No point or non-point discharges from the mines are allowed to cause or

contribute to water quality standards violations. Because the ICP effluent discharge will meet state water quality standards at end of pipe and the State has developed a CWA 401 certification that requires no additional loads of copper and cobalt be added to the watershed, there will be no violation of the state antidegradation policy. (113 for both above)

Comment: ICP adverse impact on BMSG's Consent Decree and UAO. (113)

Response: The Forest Service's Record of Decision provides that the ICP is not authorized to release hazardous substances to the environment and it cannot interfere with the Blackbird Mine CERCLA Site cleanup. Additionally, all future plans and designs must assure that no pollutant loadings will be added to the watershed. Additionally, Section 107 of CERCLA, 42 U.S.C. §9607, provides that the owner or operator of a facility from which there is a release, or a threatened release of a hazardous substance which causes the incurrence of response costs shall be liable for all costs of removal or remedial action incurred by the United States or any other person. At this time, there is no evidence that Formation Capital's activities have resulted in releases or a potential threat of a release of hazardous substances. If the proposed mining project releases or poses a potential threat of a release of a hazardous substance into the environment requiring response action, then the owner and operator of the mine could become a potentially responsible party and subject to administrative enforcement activities or litigation by the government and/or private entities that incur response costs that should be the responsibility of the owner or operator of the ICP. (113)

Comment: ICP approval would frustrate water quality restoration objective of Consent Decree. (113)

Response: Analysis of the ICP impacts to groundwater and surface water indicate that there will be no net addition of metals to the Bucktail drainage during operations or following mine closure while water capture and treatment continue. During ICP operations they will capture and treat water that would have otherwise found its way into the BMSG collection system. Thus during operations, the ICP impact will be to reduce metals loading to Bucktail Creek and to BMSGs capture/treatment system. It is likely that once mine dewatering has ceased that a small amount of groundwater from the Sunshine mine would evade capture from the bedrock capture well system and could commingle with water that is captured by BMSG. It is also possible once Ram mine dewatering has ceased that a small amount of groundwater affected by the Ram mine would be captured by the BMSG collection pumps. During the period that the ICP bedrock capture systems operate, the metals load that could potentially reach BMSG's collection system would be lower than the existing baseline condition through the Ram and Sunshine ore zones.

During ICP mine operations (mine dewatering) the metals loads predicted to reach Bucktail Creek are lower than existing conditions. Similarly, during the period that the bedrock and or Bucktail alluvial capture systems operate, the metal load reaching Bucktail Creek would remain below the existing baseline condition. Monitoring and incremental approval of each of the critical steps that could lead to changes in groundwater conditions are intended to avoid increase in metals loads that could adversely affect BMSG's cleanup. This analysis indicates that the ICP would not have an adverse effect on BMSG's ability to meet requirements of the consent decree. (113)

Comment Code	Letter No.	Comment Subject
BMS-2100-4	112, 113, 115, 155	Adjacent CERCLA Concerns – Water Treatment

Comment: Pages 2-50 and 2-51: The listing of Other Mitigation should include an agreement between FCC and the BMSG for upgrading of the BMSG's water treatment plant and an agreement between FCC and the BMSG for long term operation, maintenance, and monitoring associated with operation of the BMSG's water treatment plan. (112)

Response: Any agreement between ICP and BMSG would be the responsibility of those parties. The FEIS indicates that any ICP activities or design changes that could effect the BMSG CERCLA remedy would have to be approved by USFS and EPA remedial project managers, this would include any agreement between the ICP and BMSG for use of the existing water treatment infrastructure as contemplated in Alternative V. (112)

Comment: Uneven ICP/BMSG playing field for water quality requirements. (113)

Response: The ICP is subject to the Clean Water Act and the Blackbird Mine Site Group is subject to a consent decree under CERCLA, CWA and State authorities and a Unilateral Administrative Order under CERCLA. The 2003 CERCLA Record of Decision for the Blackbird Mine Site and the supporting administrative record is the basis for the selected remedy, which is protective of human health and the environment. The 2003 CERCLA Record of Decision also describes the applicable or relevant and appropriate requirements for the selected remedy. ICP is not currently subject to CERCLA actions at the Blackbird site and EPA intends to ensure that the ICP, like all discharges, complies with NPDES discharge requirements. If there are releases or the potential threat of a release from the ICP mines, the owner and operator could be ordered to abate any imminent and substantial endangerment resulting from such releases or potential threats in accordance with Section 106 of CERCLA, 42 U.S.C. § 9606, and/or may be potentially liable for response costs at the Blackbird Mine Superfund Site under Section 107 of CERCLA, 42 U.S.C. § 9607.

The Plan of Operations will contain requirements including submittal of detailed plans, implementation of mitigation measures, and monitoring and reporting intended to ensure compliance with water quality regulations. The Forest Service has the authority to enforce compliance with the Plan of Operations. Additionally, the Forest Service will ensure that a bond or other financial assurance is in place that is intended to finance long-term water capture and treatment if proposed design and mitigation measures are not effective in controlling release of metals to surface and groundwater.

The Idaho DEQ has authority over groundwater quality and can enforce violations of Idaho Water Quality Law. (113)

Comment: Errors and omissions in the impact discussions - Blackbird Mine assimilative capacity vs. ICP. (115)

Comment: Blackbird Related Issues - BMSG assimilative capacity and environmental statutes. (115)

Response: The effects of the ICP on area streams and the Blackbird cleanup were identified as issues during scoping (see page 1-8 and 1-9 FEIS). The water resource evaluation makes no judgment regarding assignment of assimilative capacity, rather the effects of the ICP are evaluated relative to status of the BMSG cleanup (i.e., existing water quality conditions and water quality conditions after completion of the cleanup). In addition, the Blackbird cleanup goal for cobalt is assumed as a measure of potential toxicity in area streams as there is no numeric aquatic life criterion for cobalt. (115 for both above)

Comment: Blackbird Related Issues - ICP reduction in total copper load in Big Deer Creek prior to construction of BT-5 remedy. (115)

Response: Text has been modified to clarify Blackbird impacts and ICP effects on copper load. (115)

Comment: The BMSG has not agreed to the collection and treatment of waters released from the ICP system and the FS cannot reasonably approve an alternative that is dependent on such an agreement. (155)

Response: The ICP plan as proposed is expected to result in a decrease in metals load reaching the BMSG collection system in Bucktail Creek during all phases of operation and closure. Therefore, it is not clear that there are any adverse affects on BMSG and that there is any reason that the Forest Service cannot approve a Plan of Operations. (155)

Comment Code	Letter No.	Comment Subject
BMS-2100-5	112	Adjacent CERCLA Concerns – Sediment

Comment: Page 3-10: The discussion of the Blackbird Mine Site and Ongoing CERCLA Response sections would benefit from a clear articulation from the Record of Decision of each media found to have been presenting an ecological or human health risk. Impacts to sediment quality in surface water are not discussed nor are the sediment cleanup goals. (112)

Response: Media addressed by the CERCLA response are summarized on pages 3-8, 3-10 of the FEIS. Text has been expanded for clarification. (112)

Comment: Page 3-29: It would be useful to have the sediment contaminant levels found as part of the RI/FS referenced in this discussion and also discuss the risk-based sediment cleanup goals. (112)

Response: Sediment metal concentrations found in the RI/FS and cleanup goals are described in the Water Resources Technical Report (Tables 3-19 and 3-20), which is part of the administrative record. Additional discussion of sediment cleanup goals has been added to page 3-10 of the FEIS. (112)

Comment Code	Letter No.	Comment Subject
BMS-2100-6	112, 113, 115	Adjacent CERCLA Concerns – Inadequate Description

Comment: Page 3-79: The diversion facility to route Bucktail Creek flows around South Fork Big Deer Creek is described in the text as a diversion ditch. EPA's ROD for the Blackbird Mine site indicates that this diversion facility would incorporate a buried pipeline rather than a diversion ditch. The text should be corrected accordingly. (112)

Response: No description of the BT-5 diversion could be found on page 3-79 of the DEIS. On page 3-81 of the DEIS, (page. 3-85, FEIS), the BT-5 diversion is described as "utilizing a buried pipeline." (112)

Comment: BMSG cannot lawfully be required to clean up contamination caused by the ICP. (113)

Response: Actual mitigation designs are included in the descriptions of the alternatives in Chapter 2 of the DEIS to the extent needed to evaluate and compare the effects of alternatives. The FS would stipulate in the ROD that all mitigations would be initiated or constructed at the earliest appropriate stage of mine construction.

Text has been modified to further describe the amount of chemical mass loads from ICP that might be intercepted and treated by BMSG and the potential effects of this capture and treatment on water quality in Blackbird Creek.

While it is true that the Agencies require submittal of detailed plans as a condition of approval of the Plan of Operations, this is not an unusual situation. In many cases, such as in the case of the alkaline amendment addition, the studies required to complete the detailed Plan must be deferred because they must employ actual mining equipment to be meaningful. The Agencies believe that sufficient detail has been provided to enable conclusions to be drawn about the potential success of the mitigation measures (as indeed must be the case as the commenter has clearly formed an opinion about the potential success of mitigation). Lack of a detailed mitigation plan does not mean that a detailed plan will not be developed in the future. When such plans are developed, they will be reviewed and are subject to approval by appropriate regulatory authorities. Additionally, contingency and monitoring plans are in place to detect failure of mitigation and provide an alternative means of environmental protection. Nothing in the FEIS is intended to imply that BMSG would be required to clean up contamination contributed by the ICP.

If the proposed ICP releases or causes a potential threat of a release of a hazardous substance that requires response action or that results in the incurrence of response costs, the owner and operator of the ICP could incur liability under applicable environmental laws, including but not limited to joint and several liability under CERCLA. The Forest Service and EPA Records of Decision will provide that the ICP is not authorized to release or cause the potential threat of a release of hazardous substances to the environment. (113)

Comment: Objections: ICP access to Noranda's property and use of the power line for existing mine treatment plant and Noranda property. (113)

Response: The DEIS did not intend to imply that the ICP would use any of BMSG's power supply facilities without BMSG's consent or that modifications to the power supply system would not be required. The intent of the analysis was to identify an appropriate route for bringing power to the ICP site. It will be up to the ICP and Idaho Power to determine the line and substation requirements necessary to supply the ICP. It will also be up to BMSG to agree or deny ICP use of any of the power supply system that BMSG owns. The intent of the statement indicating a need for an agreement between ICP and BMSG was to indicate that use of these lines would be subject to BMSG's agreement.

An agreement between the ICP and the BMSG would be required to upgrade the existing private power line to accommodate the Project's power requirements. (113)

Comment: Blackbird Related Issues - Need for explanation of cleanup schedule, etc. for Blackbird Mine. (115)

Response: The Chapter 3 discussion of Blackbird Mine site activities is adequate to describe the area affected by the alternatives under consideration in the EIS. A detailed discussion of the cleanup standards for the Blackbird Mine site can be found in EPA's 2003 Record of Decision for the Blackbird Mine site. The schedule for cleanup activities can be found in the Unilateral Administrative

Order for Remedial Design and Remedial Action, effective date August 10, 2003, as amended. The cleanup schedule is subject to change as it is updated at least annually.

The United States is not considered a “responsible party” in the Blackbird Mine site cleanup efforts. To the contrary, the United States District Court for the District of Idaho found in 1994 that the United States was not liable under CERCLA as an owner, operator, or arranger with respect to the Blackbird Mine. Order Granting United States’ Motion to Dismiss and Denying the M.A. Hanna Company’s Motion for Partial Summary Judgment, State of Idaho v. The M.A. Hanna Company et al., and consolidated case, CV 83-4179(R) (December 12, 1994). The mining companies filed an appeal of that order with the Ninth Circuit Court of Appeals and the United States entered into a 1997 Settlement Agreement with the companies to avoid incurring further fees and expenses that would come from such litigation. Under the Agreement, the United States agreed to pay a small percentage of the BMSG’s costs associated with complying with the 1995 Consent Decree. That Agreement was entered into with absolutely no United States admission of liability or fault regarding the Blackbird mine site contamination. Changes were made in the FEIS as a result of the comment. (115)

Comment Code	Letter No.	Comment Subject
BMS-2100-7	93, 115	Adjacent CERCLA Concerns – Cleanup Efforts Will Not Be Impacted

Comment: If the ICP is approved, it should not compromise BMSG cleanup efforts and water quality standards should continue to improve in both Big Deer and Panther Creek watersheds. (93)

Comment: Blackbird Related Issues - Need explanation of agency goal for no WQ impact at BMSG compliance points. (115)

Response: The comment that you have provided has undergone careful review as it is an agency objective associated with the ICP to ensure no adverse impacts to the ongoing CERCLA cleanup activities at the Blackbird mine site. Careful coordination of ICP activities and the Blackbird cleanup will be required to ensure that no adverse impacts occur. The summary beginning on page 4-86 of the DEIS provides an explanation of the potential identified for the ICP to impact BMSG activities and specific monitoring and mitigation measures identified to minimize the potential for any adverse impact.

The referenced water quality goal has been established by the Forest Service and EPA and is based on the Forest Service’s interpretation of the requirements at 36 CFR 228.8(b) for protection of water quality and minimization of adverse environmental consequences. The regulation at 36 CFR 228.4(c)(3) requires the ICP plan of operations to describe the measures to be taken to meet the requirements for environmental protection found at §228.8. Explaining the water quality authorities applicable to BMSG’s activities at the Blackbird Mine site is beyond the scope of the ICP EIS. The stated goal is to ensure that the ICP is in compliance with applicable federal and State requirements and does not interfere with the Blackbird Mine CERCLA site cleanup. Accordingly, there is no shift of the Blackbird cleanup burden from BMSG to FCC. Edits were made to the Blackbird Mine Site section in Chapter 2 of the FEIS to reflect this. (93, 115)

MISCELLANEOUS

Comment Code	Letter No.	Comment Subject
MISC-2200-1	71, 113, 170	Miscellaneous – Protect Environment

Comment: I've been a stockholder for several years and I respect the quality of Formation's management. Accordingly I expect them to take the right steps to protect the environment. (71)

Response: Under regulations of the Secretary of Agriculture, Formation Capital Corporation, U.S. (FCC) must conduct mining operations in accordance with the regulations at 36 CFR 228A, and with a plan of operations that has been approved by the Forest Service. The EIS process facilitates analyses and disclosure of environmental impacts on local and regional resources in compliance with the National Environmental Policy Act. Chapter 1 explains management direction and laws and regulations that guide the Salmon-Challis National Forest analysis of FCC's Plan of Operations. (71)

Comment: Approval of the ICP without a specific, demonstrated and binding plan to avoid water quality and other environmental impacts would violate FS, EPA and IDEQ requirements and thus would be unlawful. (113)

Response: The various design components, monitoring and mitigation measures incorporated in the agency alternatives are intended to reduce environmental impacts and the risk of such impacts by the proposed mining operation. All design features, plans and mitigation measures included in whatever alternative is selected in the Record of Decision will be required to be incorporated into the ICP Plan of Operations. All of the components of the Plan of Operations are enforceable and must be implemented. The key design components included in the preferred alternative intended to protect water quality and to avoid adverse impacts to BMSG's activities are intended to provide multiple layers of protection. While both the backfill amendment and the groundwater capture and treatment systems may each alone be effective in achieving target water quality goals, the combination of systems is intended to assure that if one system does not function as predicted that there is a backup. Additionally, the application of the DSM modeling tool specifically looks at a range of effectiveness of key operating systems. (113)

Comment: Cobalt recycle alternative to mining not evaluated. (113)

Comment: Environmentally sound project, should be no impacts to fish or wildlife. (170)

Response: The EIS process facilitates analyses and disclosure of environmental impacts on local and regional resources, including both the natural and human environment. The proposed action and alternatives are reviewed using this federal structure in compliance with the National Environmental Policy Act. Forest Service decisions for acceptance of the proposed action or alternatives are in consideration of Forest Service, Council on Environmental Quality, and other relevant federal and state laws and regulations. Chapter 1 explains management direction and laws and regulations that guide the SCNF analysis of FCC's Plan of Operations. (113, 170)

Comment Code	Letter No.	Comment Subject
MISC-2200-2	2, 19, 20, 22, 28, 29, 30, 31, 32, 33, 56, 73, 77, 78, 79, 82, 83, 84, 85, 89, 94, 96, 97, 98, 99, 100, 101, 102, 109, 116, 117, 118, 119, 120, 128, 136, 138, 140, 141, 142, 143, 144, 145, 146, 148, 149, 150	Miscellaneous – Cobalt Need and Use

Comment: Cobalt strategic metal that is useful in advanced technology. Supports. (2)

Comment: Cobalt is a strategic metal, and essential to many defense applications. The need to protect and forest our own sources of such a mineral is very important for our national security. (19)

Comment: Jobs & benefits to Lemhi Co and Idaho; ICP would supply domestic cobalt, a strategic metal. (20, 22)

Comment: Support the Idaho Cobalt Project, mine will provide jobs and economic benefits to Lemhi County and the State of Idaho while supplying the United States with cobalt, a strategic metal. (28, 29, 30, 31, 32)

Comment: Cobalt used for defense applications, animal feeds, cancer treatment, batteries, fuel cell vehicles, etc. Is a strategic mineral. (33)

Comment: Cobalt is an enabling catalyst used in . . . Batteries being developed for hybrid electric vehicles. . . [which] hold the promise to significantly reduce our Nation's consumption of gasoline, reduce our dependence on foreign oil, and reduce greenhouse gases. (56)

Comment: Cobalt is needed for several environmentally applications (such as batteries for hybrid cars, making cleaner fuels, even for building wind turbines) the overall benefit of this project is to enhance out environment. (73)

Comment: At full production, the Idaho Cobalt Mine would supply approximately 15% of the demand within the United States, decreasing our reliance on international supply. (77)

Comment: This memo is intended to support the Formation Capital effort to develop the mine in an environmentally acceptable manner and in so doing to not only help resolve the nation's need for the critical metals that will be produced, but will in addition contribute substantially to the economy of the region. (78)

Comment: Cobalt is a vital element in our day-to-day lives, with applications ranging from industrial and health care fields, to national defense and high-tech industries. In addition, it is being used in increasing amount for environmentally friendly technologies, including batteries for hybrid vehicles, and as a catalyst for gas-to-liquid conversion. (79)

Comment: I support the project as long as all the environmental guidelines are followed. The deposit is a valuable resource that should be mined, as long as it can be done safely without polluting any of the nearby creeks or the air. (82)

Comment: It will provide a domestic source of much-needed metal to the market while leaving a very miniscule impact on our environment. (83)

Comment: There is a growing demand for cobalt as it is a very versatile metal that has many applications in our day-to-day lives. I understand there is not primary domestic source of

cobalt and the United States is almost completely dependent on external sources for its supply. (84)

Comment: The demand for cobalt is growing daily, with many various uses in the high tech industry, health care, defense, and environmental and conservation applications. Cobalt from FCC's mine would provide about 15% of the domestic demand for the metal, reducing our reliance on foreign markets. (85)

Comment: No less important, cobalt is considered a strategic commodity by the US government. Domestic production will decrease our dependence on foreign sources and provide a critical material for America's national defense. (89)

Comment: Supplying the United States with a constant supply of cobalt, a strategy metal of great and growing importance to the United States. (94)

Comment: It will provide a domestic source of much-needed metal to the market while leaving a very miniscule impact on our environment. Formation Capital's plan uses such modern, environmentally sound technology and mining methods that will allow them to extract cobalt from the ground without polluting our lands and water. (96, 97, 98, 99, 100, 101, 102)

Comment: Moreover, the United State currently has not one primary cobalt mine, yet the country imports large amounts of this strategic metal for domestic use. Domestic consumption will only increase over time, particularly because cobalt is used in many environmentally friendly applications, such as hybrid car batteries. (109)

Comment: Cobalt is a very versatile metal that has many applications in our day-to-day life. For example, cobalt is used in the production of hybrid electric and fuel cell vehicles, rechargeable batteries, solar energy panels and health care. Despite the growing demand for the metal, there is no primary domestic source of cobalt and the U.S. is almost completely dependant on external sources for its supply. (116)

Comment: Mining the metal here in Idaho would provide our nation with a domestic supply of cobalt. (117, 118, 119, 120)

Comment: In addition to the economic benefits that this mine is sure to bring, it will provide a domestic source of a much-needed metal to the market while leaving a very miniscule impact on our environment. (128)

Comment: It will provide a domestic source of a strategic metal to the United States while leaving a minimal impact on our environment. (136)

Comment: Formation Capital's plan will help supply this country with a domestic source of cobalt while at the same time protecting this area's environment. (138)

Comment: The strategic mineral that the Formation Capital cobalt project will provide is an asset that this county, the United States of America, needs to use from its own reserves. (140)

Comment: It will provide a domestic source of a much-needed metal to the market while leaving a very miniscule impact on our environment. (141, 142)

Comment: Cobalt is a very versatile metal that has many applications in our day-to-day life. For example, cobalt is used in the production of hybrid electric and fuel cell vehicles, rechargeable batteries, solar energy panels and health care. Despite the growing demand for the metal, there is no primary domestic source of cobalt and the U.S. is almost completely dependant on external sources for its supply. (143, 144)

Comment: While the United States is a major consumer of cobalt for a variety of industrial and environmental applications, there is not a single primary cobalt mine in this country. (145)

Comment: It also provides a strategic mineral for the United States that is currently either only imported or derived from secondary sources or as a by product. With the unstable nature of governments around the world it is not wise to rely on outside suppliers for a mineral that is so necessary to our daily lives. (146)

Comment: This mine will provide a domestic source of a key strategic metal to the United States while leaving very little environmental impact. (148)

Comment: All indications are that cobalt consumption is going to increase, particularly because it is being used more and more in 'green' applications, such as hybrid car batteries. Thus, cobalt must be mined somewhere. It seems the United States has an obligation to itself and the world to have a notable amount of that necessary production take place in this country, and in an environmentally sound and socio-economically responsible manner as proposed by the Idaho Cobalt Project. (149)

Comment: Cobalt is a fundamental element in our world today, with applications in industry, national defense, health care, and high-tech industries. Perhaps most interesting is cobalt's several environmentally-friendly uses, such as in batteries for hybrid vehicles, which save fuel and reduce our country's reliance on foreign oil. Other environmentally sound examples of need for cobalt include removing sulfur from oil and in the construction of solar panels. Cobalt also serves as a catalyst for gas-to-liquid conversion, which is easier to transport, creates no contaminants or particulates and burns cleaner than Liquefied Natural Gas. We already rely on cobalt daily and the demand for it will only continue to grow. (150)

Response: The DEIS recognizes the rare opportunity for development of a cobalt resource in the U.S. provided by the Idaho Cobalt Belt mineralization (page 3-2, DEIS). Additionally, the DEIS discusses the importance and versatility of Cobalt to the U.S. and Global economies under the heading Cobalt Production and Uses (page 3-5, DEIS). (2, 19, 20, 22, 28, 29, 30, 31, 32, 33, 56, 73, 77, 78, 79, 82, 83, 84, 85, 89, 94, 96, 97, 98, 99, 100, 101, 102, 109, 116, 117, 118, 119, 120, 128, 136, 138, 140, 141, 142, 143, 144, 145, 146, 148, 149, 150)

Comment Code	Letter No.	Comment Subject
MISC-2200-3	42	Miscellaneous – Lighting

Comment: The effects of the lighting of the ICP should be more fully analyzed and mitigation proposed if the lighting is visible from wilderness or private property. (42)

Response: The FS recognizes the value of minimizing the effects of day and night (sky-glow) visual quality-related impacts associated with the construction and operation of the proposed ICP project. The potential for adverse sky-glow impacts to the nearby Frank Church River of No Return Wilderness Area, and private property parcels has been evaluated and although individual wilderness users may be impacted the overall impact will be minimal and has been determined to be not significant. (42)

Comment Code	Letter No.	Comment Subject
MISC-2200-4	54	Miscellaneous – Wilderness

Comment: Suggests a recovery and restoration plan for all streams in the vicinity of the project area and supports fully preserving habitat of sensitive and T&E species. (54)

Response: Recovery and restoration of streams in the vicinity of the ICP that have been impacted by historical mining activities is occurring under CERCLA authority. This EIS (Chapter 4) and the Biological Assessment and Biological Opinion prepared for the ICP address habitat of T&E species. (54)

Comment: To fully preserve the habitats of all species, including the following: goshawk, three-toed woodpecker, bald eagle, fisher, wolverine, long-toed salamander, boreal owl, chinook salmon, spotted frog, steelhead, Canada lynx, bull trout, gray wolf, west slope cutthroat trout, Ute ladie's tresses. (54)

Response: Chapter 1 of the DEIS explains management direction and laws and regulations that guide the SCNF analysis of FCC's Plan of Operations. FCC is entitled to conduct operations that are reasonably incident to exploration and development of mineral deposits on its unpatented mining claims pursuant to the United States Mining laws. Under applicable regulations, the Forest Service must determine whether to approve the Plan of Operations submitted by FCC as it is proposed, or to require changes or additions deemed necessary to meet the requirements of the regulations for environmental protection. (page 1-3 and page 1-4, DEIS) The EIS process facilitates analyses and disclosure of environmental impacts on local and regional resources, including both the natural and human environment.

Although approval of the Plan of Operations or an alternative will aim to minimize or eliminate adverse environmental impacts from mineral development activities on National Forest System lands, some impacts will take place. Mitigation, restoration and reclamation activities are described in detail in Chapter 2 for each alternative under consideration. A primary assumption made as part of the agencies' analyses is that the majority of reclamation is anticipated to be completed within two to three years following mine closure (p. 4-2, DEIS). (54)

Comment Code	Letter No.	Comment Subject
MISC-2200-5	63, 107	Miscellaneous – Support Natural Resource Development

Comment: It is in the interest of all citizens and government agencies to support the development of domestic natural resources. (63)

Response: The Forest Service is responsible for administering National Forest lands in accordance with multiple use principles that include development of natural resources. The proposed ICP requires Federal action by the Forest Service as defined by the 1872 Mining Law, as amended, and the regulation at 36 CFR 228 Subpart A. (63)

Comment: We believe that the wise and judicious use of natural resources in Lemhi County is essential to our local economy. We firmly believe that the development of mineral and timber industry is of solid, long-term benefit to the County and its citizens. (107)

Response: The DEIS recognizes the rare opportunity for development of Cobalt in the U.S. provided by the Idaho Cobalt Belt mineralization (page 3-2). Additionally, the DEIS discusses the importance and versatility of Cobalt to the U.S. and Global economies under the heading Cobalt Production and Uses (page 3-5, DEIS).

In addition, the DEIS recognizes the benefits that the mine will offer to the local workforce in Salmon and Challis Idaho. Evaluation of the benefits have been weighed against drawbacks in Chapter 4, specifically 4-83 and 4-103. Your comments have been noted in the review process. (107)

Comment Code	Letter No.	Comment Subject
MISC-2200-6	65	Miscellaneous – Mancamp

Comment: I would suggest a man camp set up on private property in the Cobalt area for these employees [Challis], with alternating schedules 10-12 hours/shift. This will cut down on traffic problems, cut down driving fatigue, reducing accidents and lead to higher production at the mine. (65)

Response: The agencies considered a work camp to reduce traffic, but found there was no site that could meet Idaho Health Department requirements or that could provide adequate water or sewer facilities. The option of providing a work camp was dropped from consideration due to these and other regulatory issues (See page 2-72 in the DEIS). (65)

Comment Code	Letter No.	Comment Subject
MISC-2200-7	90, 103	Miscellaneous – Oppose Mine

Comment: One issue is the amount of damage to the landscape which will be done and probably has already been done for the amount of time for which the Mining Corporation permit is allowed at this time. I feel that for the 10 years that the mine would be up and running, there is too much destruction of the landscape for that very short period of time to justify this project. I fail to see that any mine in Idaho will ever return to natural habitat. Mining is . . .extraction process that forever leaves a footprint on the land. (90)

Comment: Given the utter devastation which resulted from previous mining activity in the Panther Creek drainage, I urge the Forest Service to deny this project. Panther Creek has yet to begin to recover from its toxic history and now we want to add to this? (103)

Response: The Forest Service is required to evaluate potential impacts of a project against applicable laws and regulations. The proposed reclamation plan and mitigation measures are intended to protect the environment and return the land to a similar condition to that before mining. However, as the commenters state and the EIS documents there are historic impacts from mining at the Blackbird site and there will be both long- and short-term impacts from the ICP. (90, 103)

Comment Code	Letter No.	Comment Subject
MISC-2200-8	121	Miscellaneous – Firearm Policy

Comment: Attempting to regulate firearms possession in a private vehicle on public property (roads) is beyond the purview of the NEPA process. Imposing this rule onto Formation Capital Co. as a term of employment appears to be an end-run around the laws that the USFS can impose or enforce itself. At the very least, the proposed denial of this constitutional right presents no study or evidence demonstrating any substantial benefit; only hyperbolic speculation. This proposal should be rejected outright. (121)

Response: The purpose of a Plan of Operations is to allow mining to occur and there has been no demonstration that employees require firearms on site to accomplish that goal. Concerns about additional hunting pressure from employees traveling to the mine and safety issues are not mere speculation, but are valid concerns. There is no question as to the legality of the company imposing restrictions on firearms in the workplace. Most workers will travel to the mine site in company sponsored buses or vans and all employee vehicles would park within the mine site, which is controlled by the Plan of Operations and Mine Safety and Health Administration regulations. (121)