BLM Comments on the Draft EIS

May 2016

Section Number	Page	Original Language	Proposed Language or Comment	Disposition (CAs should leave blank)
Chapter 1				
Chapter 1: Purpose and Need Section 1.8.2	1-22	**Vegetation:** Vegetation would be cleared at the mine site, transportation infrastructure corridors, and in the pipeline ROW. Removal of vegetation could result in: soil erosion; loss of topsoil with its native vegetative seed bank; delayed reclamation; and spread of invasive plant species (invasive weeds). In addition, fugitive dust could affect adjacent vegetation and habitats, both tundra and riverine.	**Vegetation:** Vegetation would be cleared at the mine site, transportation infrastructure corridors, and in the pipeline ROW. Disturbance and removal of vegetation could result in: soil erosion; loss of topsoil with its native vegetative seed bank; delayed reclamation; introduction and spread of non-native invasive plant species (invasive weeds). In addition, fugitive dust could affect adjacent vegetation and habitats, both tundra and riverine.	
Chapter 2				

Chapter 2 – Alternatives Summary •Comments coded Mitigation 1 (2 comments):		○ We recommend adding use of remote sensing devices for monitoring the tailings dam to Chapter 5 – Mitigation; it appears to be industry practice.	'It appears to be industry practice" This makes it an assumed practice but no definite answer. A statement that specifically addresses this would be more appropriate. "Remote sensing devices for monitoring tailings dam will be used as an industry standard", Is a more definitive statement with less ambiguity.	
		<u>MITIGATION 1:</u> RFAI to ADEC to determine if recycling would be required. Corps direction needed.	The BLM feels that alternatives to burying equipment should be considered. For example: Adjacent or regional communities may be able to utilize excess equipment (during mine operations or after closure, reclamation); Equipment could be taken back to point of origin for recycling, or other locations for recycling/repurposing.	
Chapter 2: Alternatives	2-132	Other monitoring activities include cultural resources monitoring. A Non-Native Invasive Species Prevention Plan would be developed and implemented during construction, operations	Please describe what the Non-Native Invasive Species Prevention Plan (NISPP) would look like, what infrastructure/facilities would be incorporated and what kind of treatments and/or mitigations would be employed for each alternative.	

		and maintenance, and termination phases of the project and would include annual monitoring and treatment plans to mitigate impacts.	A baseline survey of all affected lands for this project is necessary prior to site occupancy to establish what is known about the current vegetation composition. The database in Alaska Center for Conservation Science is the only database, and does not have much baseline for the Donlin project area. Most of the Donlin proposed area(s) for the various Alternatives, has not been surveyed, thus much data is lacking for effective analysis. Non-native invasive species can be effectively addressed the same as hazardous materials through the Hazard Analysis Critical Control Point (HACCP) framework. This identifies what the hazards are, where, and at identified vector points how they can be mitigated. For example, as with hazardous fuels: 1) Prevention through training, safety awareness and safe handling procedures – equipment cleaning prior to moving to new worksites and best management practices; 2) Monitoring through routine inspections of disturbed ground, education and early detection rapid response; 3) Management through eradication of accidental/incipient infestations and reclaiming the contaminated site to condition prior to contamination.	

			Without this level of description for each alternative, including the No Action Alternative, it is difficult to assess environmental, social, and economic impacts relative to non-native invasive species.	
Chapter 2: Alternatives			We suggest, for each Alternative, a picture is worth a thousand words. Photos of "before and after" facilities development for the mine site/tailings/waste rock facilities/ports/fuel farms, etc., as an effective method of displaying what the various alternatives would look like. These visual displays would help reviewers better understand and be able to compare amongst the Alternatives what the direct impacts and potential effects would be from the ground-level perspective. While some displays in the DEIS do show the overhead footprint of the proposed development locations for the various alternatives, there are few to no on-the-ground perspectives of these developments for the readers to consider. Photo shop is a suggested tool to accomplish this ground view perspective for each alternative. This type of visual display worked very well with the Greens Creek Tailings Disposal FEIS 2003, for the proposed tailings facility and alternatives.	

			The magnitude of the Donlin project and the differences amongst the alternatives warrants such visual display of the direct impacts and effects.	
Chapter 2: Alternatives, Section 2.3.2.2.8-9			This section is appropriate for the inclusion of protocols for inspecting all modes of transportation for non-native invasive species, and the appropriate response action if something is found. This integral to the methodology with hazardous analysis critical control point schema used for hazmat/fuels, as it is also an appropriate method for addressing non-native invasive species. As such the process involves: Identification of the risk; prevention measures; containment; and reclamation. This would be part of the proposed invasive species management plan for each alternative.	
2.3.2.3.1			This section should address and incorporate the 2014 ROW Best Management Practices (Graziano/CES 2014) for non-native invasive species. These BMPs are recognized state-wide and are recommended, if not required, for all ROW operations such as this proposal. As such, any inspection points,	

			wash stations, outreach and education media, and other components of an invasive plant prevention plan for the ROW should be noted on maps and described in the text for all Alternatives as an Alternative Design Feature.	
2.3.2.3.4			Temporary work areas, construction camps, access roads and routes, material source sites, airstrips, water use and extraction sites and ancillary facilities outside of the ROW also need an invasive species prevention, monitoring and management plan described so we can evaluate potential environmental impacts and effects to the environment.	
2.3.2.3.7	2-132		The Non-Native Invasive Species Prevention Plan needs to be described here such that we can evaluate potential environmental impacts and effects. Depending on the detail of the NNISPP, varying levels of potential impacts and effects could result. A description of what, where, when, and how the NNISPP would be conducted for each Alternative – as a design feature - so readers can understand the differences amongst the various Alternatives and conduct analysis of potential environmental effects and impacts.	
2.3.2.3.7	2-141	Revegetation progress of reclaimed facilities would be monitored annually for the first 5	Monitoring revegetation progress should include early detection, rapid response for non-native invasive species, and described	

		years after closure or until observations indicate stabilized conditions. Should vegetative cover not meet criterion established by ADNR, Donlin Gold, and ADF&G, further action could include reseeding the area, additional application of soil amendments, and/or incorporation of additional growth media on a particular site or facility	so the reader can conduct environmental impact and effects analysis for each Alternative.	
Chapter 3				
3.10.3	3.10-38		Environmental Consequences relating to invasive species is not adequately addressed in this section due to not knowing what the NNISPP/ISMP looks like for each Alternative. Without knowing the Alternative design features regarding what will be done, where, when, and how invasive species will be monitored and managed, readers cannot effectively analyze environmental consequences, impacts and effects for each Alternative.	
3.10.3.2.1	3.10-48	Intensity would be medium to low in remote areas along the pipeline, and in transportation facilities areas where existing invasions are unknown or minimal.	We disagree with this statement because one cannot make a conclusion of “medium to low” based on “unknown” invasions.	

			Overall, the effects and impacts of non-native invasive species for the proposed action and all alternatives is not adequately addressed. The DEIS discussion of low-medium-high impacts is not adequate. Thorough discussion, analysis and disclosure of the direct and indirect effects and impacts of invasive species is lacking for potentially affected resources and human environments: impacts to fisheries habitat, fishing industry, subsistence fishing, berry picking, wildlife habitat, and other ecosystem services. For example: What would it mean to the commercial fishing industry and/or local subsistence users if barges inadvertently introduce zebra or quagga mussels to the freshwaters in the project area? Some non-native invasive species can rapidly and significantly alter the freshwater ecology and may have irreversible impacts, leading to environmental and economic disaster. (California Department of Fish and Game Frequently Asked Questions Quagga/Zebra Mussels). What would it mean to fisheries and people/economies/human environment if elodea or cord grasses were to be inadvertently introduced to water ecosystems in the project area via float planes? What would the potential direct and indirect impacts and effects on the	

			human environment? This is the kind of discussion/analysis/disclosure of potential impacts that is missing from the analysis. These considerations also should to be carried through into Chapter 4: Cumulative Effects.	
	3.10-44		This section talks about the elements of an Invasive Species Management Plan, but doesn't go into detail of what the design feature(s) would look like or involve for each alternative. Where would critical control points be? What control practices would take place? Who would conduct the control action? When, where, and who would conduct regular monitoring for invasives? What strategy would be used for controlling known existing invasive plant populations to minimize spread? What would the decision framework for treatment look like? What are the control measures that would be used? How would these design features differ amongst the differing alternatives? What is the infrastructure needed for detecting invasives and preventing the introduction and spread?	
Table 3.10-7 Impact Criteria	3.10-40		This table does not discuss the actual impacts of invasive species introduction and spread, while using measures of Low/Medium/High. The actual effects on	

for Effects on Vegetation			the human environment need to be fleshed out for full disclosure to the public as to how the invasive species could alter the ecosystem function and services it provides, economies and subsistence.	
	3.10-44	Invasive Species Management Plan Elements	While elements of an ISMP are discussed, there is no display of what, where, when, who, and at what frequency any actions will be implemented. What is the detail of the plan? What does the HACCP look like? Without this level of detail, adequate assessment of environmental impacts and effects cannot be accomplished, and full disclosure to the public is not achieved. ISMP design features inherently cannot be the same for all alternatives if the alternatives involve different modes of access, different development areas and associated logistical support impact areas. NEPA requires all alternatives to be rigorously explored and objectively evaluated, and environmental consequences discussed in context of direct and indirect impacts and effects to the human environment. As such, ISMP detail needs to be in the EIS, because if it is not, the level of BMPs, EDRR actions, and ISMP details is not connected to the Record of	

			Decision and therefore not enforceable. (CEQ 40 Questions 34d.)	
	3.10-49	Overall, invasive species introduction or spread would have a minor impact with application of EDRR, BMPs, design features, and a detailed ISMP in any action alternative.	We disagree that the conclusion of "Minor" is not scientifically defensible using this methodology of assessment. There is no display of who, what, where, when and how the EDRR, BMPs and ISMP design is, so the conclusion of "Minor" is not substantiated for any of the action alternatives. This is not scientifically defensible.	
3.10.3.2.2	3.10-52	Specific Effects	While the quantitative impacts are displayed in the tables, the qualitative impacts are not fully fleshed out regarding what direct, and indirect effects would be on the human environment. Using terms like Low/Medium/High do not fully explain what the impact means regarding effects on human environment/economies/ecosystem services.	
	3.10-43	Specific requirements would be identified in Donlin Gold's Stabilization, Rehabilitation and Reclamation Plan.	Without knowing what the Stabilization, Rehabilitation and Reclamation Plan looks like, we cannot conduct adequate analyses and make any conclusions on levels of impact or effects on the human environment. And, without the detail of this Plan, there is no connection to the EIS and Record of Decision, thus it is not enforceable.	

Chapter 3		Vegetation – Invasive Species	Overall, the environmental analysis regarding invasive species does not meet the intent and purpose of NEPA.	
3.21			AECOM responses to agency comments on the Camera Ready Draft EIS that BLM reviewed in October 2015 (BLM Summary of Key Points Compilation) have not been adequately addressed.	
Chapter 4				
4.3.2 Natural Gas Pipeline Water Removal and Use	34	Water withdrawal are controlled by requirements specified by ADNR	In addition as a minimum, Best Management Practices as identified in GMT1 Best Management Practice B2, should be applied. Withdrawal from streams or rivers shall not cause a change to flow to sensitive fish (i.e. , any fish except ninespine stickleback or Alaska blackfish) maintaining a hydrologic regimes to maintain adequate habitat for fish, invertebrates, and waterfowl. Impacts to EFH may occur if water is withdrawn in winter during low flow conditions leading to freezing of overwintering habitat by juvenile salmon. Monitoring of flow will be required to assess water level and water quality conditions before, during, and after water use from any fish-bearing water body.	
4.3.2 Spills and Leaks	35	Fuel would be dispensed to the contractor's fuel trucks on the ROW or at camp.	GMT A5 Best Management Practices should be applied to this EIS	
Chapter 5				

No comments submitted at this time				
Chapter 6				
No comments submitted at this time				
Chapter 7				
No comments submitted at this time				
Chapter 8				
No comments submitted at this time				
Chapter 9				
Chapter 9: References			Please add the following reference: BLM 2010 Instruction Memorandum No. 2010-001, BLM-Alaska Invasive Species Management 2010.	
Appendix				
Appendi Q Essential Fish Habitat	iii	Moderate impacts are associated with loss of Chinook and coho rearing habitat through direct loss of two creek channels and the effects of reduced flow in Crooked Creek. Rearing stages of these two species are present in low densities in streams that will be affected by Project activities. Coho spawning habitat will likely be reduced in Crooked Creek adjacent to the mine area due to the estimated stream flow reductions.	We Disagree with the classification of this impact.	
Appendi x Q	iii	Potential effects of the natural gas	We Disagree.	

Essential Fish Habitat		pipeline on EFH species are judged to be low because most construction will be conducted during winter when salmon are not present.		
Appendix Q Essential Fish Habitat	7	Local tug and barge operators would depart Bethel for Jungjuk Port once Bethel is clear of ice and flow levels provide at least 2 ft (60 cm) of gross under the keel clearance, when factoring stream flow and barge loads (Amec, 2014).	Vessel squat has not been addressed in the DEIS documents and should be addressed for impact analysis and consideration of the effects on the resource. Analysis needs to be addressed because it may address (change the impact to EFH. This would significantly increase impacts to fish and bottom of river (including Increase sediment, increased turbidity, and increased channel cutting leading to increased bank erosion. When a vessel is in motion, even in deep water, the water level in the vicinity of the ship is lowered, along with the ship itself (this is called vessel squat). This effect increases as the vessel's speed increases or as the water depth decreases. When a ship enters restricted water areas, there is a considerable change on the flow pattern about the hull. In shallow water the water passing beneath the hull must pass at a faster rate than in deep water, and as a	

			result there is a pressure drop beneath the vessel, increasing vessel squat Vessel passage affects the magnitude of bed load transport, and it also causes significant (but temporary) changes in the direction of sand ripple migration. Saltation transport has often been observed with the passage of large vessels. Please develop and provide a model to demonstrate how vessel squat and at the different draft depths, affects the depth and reach of the vessels on the river environment, and carry this through the impact and effect analysis. The following are a few good references for addressing vessel squat: 1) http://shipsbusiness.com/squat-factors.html 2) Wuebben, Brown, Zabilansky 1984 3) Liou and Herbich (1976, 1977)	
General Comment				
			The BLM feels this DEIS is overall inadequate to support a defensible decision.	