

SA2 – Alaska Department of Natural Resources and Others (cont'd)

CC-355

Comment	SA2-378	SA2-378	Construction of the Kenai Municipal Water System upgrades would likely not occur concurrently with construction of the Project, so no cumulative impacts from these actions would be anticipated. See the updates to section 4.19.4.15 of the final EIS. Operational emissions from the Kenai Municipal Water System upgrades are unknown.
While discussions are preliminary, the emissions resulting from increased operations of the Kenai Municipal Water System should be included in the analysis. Expansion of this plant's water treatment capacity will likely increase air emissions. In addition, the construction of a six mile water pipeline to support the Liquefaction Facility should be included in construction emissions.	SA2-379	SA2-379	LNG carrier emissions are quantified in table 4.15.5-20 of the final EIS as part of the operating air emissions associated with the Liquefaction Facilities.
Section 4.15 addresses greenhouse gas emissions only and never mentions criteria air pollutants related to LNG carrier movements within the project proximity or at port. Please add a discussion of criteria air pollutants if Section 4.15 is going to be cited.	SA2-380	SA2-380	Appendix W of the final EIS has been updated to address this comment.
The Division of Oil & Gas has submitted numerous comments concerning Appendix W-1 and inaccuracies that were found with the data for oil and gas projects. (Comments are located near the bottom of the Comment Matrix.) Please correct and update this table and review for potential changes to the cumulative impacts analysis.	SA2-381	SA2-381	Details regarding the modeling results for trenching can be found in AGDC's Alaska LNG Sediment Modeling Study: Mainline Stream Crossing. See the footnote in section 4.3.2.4 in the final EIS for instructions on accessing this document.
What is the error of the modelling results for trenching? The max downstream impact and duration depends on the discharge of affected streams, substrate and slope, as well as the dynamics of trenching. Listing a specific impact distance of 290 ft and 1 hour duration based on modelling results greatly simplifies a potential impact.	SA2-382	SA2-382	Nonjurisdictional facilities are discussed in section 4.19.2 of the final EIS. Impacts from nonjurisdictional facilities are included in our assessment of cumulative impacts.
Please clarify whether the cumulative impacts include associated projects.	SA2-383	SA2-383	See the updates to section 4.6.3.1 and the response to comment SA2-6.
Contrary to FERC's assessment, the ADF&G believes there will be no significant impact to the Central Arctic Caribou Herd. The CAH is not calving within the limits of the project area. Calving by the CAH is to the south of the PTTL and either east or west of the Mainline Pipeline. The area of the GTP is not used for calving, and generally not used for insect relief or as winter range. Very few CAH caribou winter on the North Slope in the vicinity of the PTTL; therefore few adverse effects will occur to this herd from winter construction of the PTTL. While the project may be in the center of the herd's range, they do not use the area much. There are good mitigation measures in place within the oilfields when caribou are present around oilfield infrastructure. A 7 foot pipeline height is now the standard for caribou passage. For additional mitigation measures see: Cronin, M.A., W.B. Ballard, J. Truett, and R. Pollard, eds. 1994. Mitigation of the effects of oil field development and transportation corridors on caribou. Final Report to the Alaska Caribou Steering Committee. LGL Alaska Research Associates, Inc. Anchorage, Alaska.			
Contrary to FERC's assessment, the ADF&G believes there will be no significant impact to the Central Arctic Caribou Herd. The CAH is not calving within the limits of the project area. Calving by the CAH is to the south of the PTTL and either east or west of the Mainline Pipeline. The area of the GTP is not used for calving, and generally not used for insect relief or as winter range. Very few CAH caribou winter on the North Slope in the vicinity of the PTTL; therefore few adverse effects will occur to this herd from winter construction of the PTTL. While the project may be in the center of the herd's range, they do not use the area much. There are good mitigation measures in place within the oilfields when caribou are present around oilfield infrastructure. A 7 foot pipeline height is now the standard for caribou passage. For additional mitigation measures see: Cronin, M.A., W.B. Ballard, J. Truett, and R. Pollard, eds. 1994. Mitigation of the effects of oil field development and transportation corridors on caribou. Final Report to the Alaska Caribou Steering Committee. LGL Alaska Research Associates, Inc. Anchorage, Alaska.			

SA2 – Alaska Department of Natural Resources and Others (cont'd)

CC-356

Comment	SA2-383		
<p>Contrary to FERC's assessment, the ADF&G believes there will be no significant impact to the Central Arctic Caribou Herd. The CAH is not calving within the limits of the project area. Calving by the CAH is to the south of the PTTL and either east or west of the Mainline Pipeline. The area of the GTP is not used for calving, and generally not used for insect relief or as winter range. Very few CAH caribou winter on the North Slope in the vicinity of the PTTL; therefore few adverse effects will occur to this herd from winter construction of the PTTL. While the project may be in the center of the herd's range, they do not use the area much. There are good mitigation measures in place within the oilfields when caribou are present around oilfield infrastructure. A 7 foot pipeline height is now the standard for caribou passage. For additional mitigation measures see: Cronin, M.A., W.B. Ballard, J. Truett, and R. Pollard, eds. 1994. Mitigation of the effects of oil field development and transportation corridors on caribou. Final Report to the Alaska Caribou Steering Committee. LGL Alaska Research Associates, Inc. Anchorage, Alaska.</p>			
<p>The phrase "nationally designated protected areas" may be misleading. Class I areas are nationally designated protected areas by the Clean Air Act (CAA). Special protections for Class II areas only exist due to a 2011 memorandum of understanding signed by the Department of Interior, Environmental Protection Agency, and the Department of Agriculture, U.S. Forest Service regarding air quality analyses and mitigation for federal oil and gas decisions through the National Environmental Policy Act Process. The Federal Land Managers' Air Quality Related Values Work Group (FLAG) guidance document requires that the above agencies consult with federal land managers for NEPA projects that involve lands designated "Sensitive Class II areas" by the federal land management agency. This "Sensitive Class II" designation does not provide any special protections, it only requires that federal agencies involved in the NEPA process consult with the federal land managers if there could be air quality impacts on lands managed by the federal land managers. As noted earlier, please remove this phrase from the text and address replace with "Sensitive Class II areas" as that is the phrase that is used in the 2011 memorandum of understanding.</p>	SA2-384	SA2-384	See the responses to comments SA2-7, SA2-10, and SA2-11.
<p>Contrary to FERC's assessment, the ADF&G believes there will be no significant impact to the Central Arctic Caribou Herd. The CAH is not calving within the limits of the project area. Calving by the CAH is to the south of the PTTL and either east or west of the Mainline Pipeline. The area of the GTP is not used for calving, and generally not used for insect relief or as winter range. Very few CAH caribou winter on the North Slope in the vicinity of the PTTL; therefore few adverse effects will occur to this herd from winter construction of the PTTL. While the project may be in the center of the herd's range, they do not use the area much. There are good mitigation measures in place within the oilfields when caribou are present around oilfield infrastructure. A 7 foot pipeline height is now the standard for caribou passage. For additional mitigation measures see: Cronin, M.A., W.B. Ballard, J. Truett, and R. Pollard, eds. 1994. Mitigation of the effects of oil field development and transportation corridors on caribou. Final Report to the Alaska Caribou Steering Committee. LGL Alaska Research Associates, Inc. Anchorage, Alaska.</p>	SA2-385	SA2-385	See the updates to section 4.6.3.1 of the final EIS and the response to comment SA2-6
<p>State of Alaska mining law also requires for reasonable access to existing and future mining claims through State of Alaska lands. And like the federal government, the state cannot deny a claim holder the ability to recover locatable minerals from the claim. Any limitations on the method of mining must be in statute or regulations of the agencies that authorizes mining activity. Access across State of Alaska lands may only be denied if it is for the safety of the general public such as during the construction of the pipeline.</p>	SA2-386	SA2-386	Section 5.1.1 of the final EIS has been updated to address this comment.

SA2 – Alaska Department of Natural Resources and Others (cont'd)

CC-357

Comment				
See comment directly above regarding "nationally designated protected areas". As noted earlier, please remove this phrase from the text and replace with "Sensitive Class II areas" as that is the phrase that is used in the 2011 memorandum of understanding.		SA2-387	SA2-387	See the response to comment SA2-7.
Have alternatives been considered for in-river material sites?		SA2-388	SA2-388	See the response to comment CM1-1.
How were the 150 ft (private) and 500 ft (public) well distances from construction workplaces determined? Potential impacts from contamination or water withdrawals from aquifers could extend well beyond 500 ft.		SA2-389	SA2-389	Our regulations for environmental reports for Natural Gas Act applications require applicants to identify the location of known public and private groundwater supply wells or springs within 150 feet of proposed construction areas (18 CFR 380.12(d)(9)).
Here it is stated that a Project Water Well Monitoring Plan would be implemented 150 ft from project footprint for both public and private water wells and springs. Inconsistent with text on page 5-5.		SA2-390	SA2-390	See the updates to section 5.1.3.1 of the final EIS. AGDC has committed to monitoring of public wells and private and springs within 150 feet of the Project footprint.
The project must consider groundwater impacts greater than 500 ft from the project footprint, especially when impacts are down gradient from the project site.		SA2-391	SA2-391	Comment noted.
Agree with FERC with designing bridges for a 10-year flood event		SA2-392	SA2-392	Section 5.1.3.1 has been updated to include AGDC's commitment to implement this recommendation.
Agree with FERC, site specific plans should be developed to minimize impacts from potential inadvertent releases of drilling fluid.		SA2-393	SA2-393	AGDC filed updated DMT Plans on December 13, 2019 (Accession No. 20191213-5043).

SA2 – Alaska Department of Natural Resources and Others (cont'd)

CC-358

Comment			
Agree with FERC, water use plans on a site specific basis should be developed including volumes, sources, and discharge locations.		SA2-394	SA2-394 Section 5.1.3.4 has been updated to include AGDC’s commitment to implement this recommendation.
This would be conducted in accordance with ADF&G permits.		SA2-395	SA2-395 Section 5.1.3.4 of the final EIS has been updated to address this comment.
Add: Workers would be prohibited from feeding wildlife to avoid adverse reactions to wildlife and to avoid adverse human/carnivore interactions.		SA2-396	SA2-396 Section 5.1.6.1 of the final EIS has been updated to address this comment.
Contrary to FERC’s assessment, the ADF&G believes there will be no significant impact to the Central Arctic Caribou Herd. The CAH is not calving within the limits of the project area. Calving by the CAH is to the south of the PTTL and either east or west of the Mainline Pipeline. The area of the GTP is not used for calving, and generally not used for insect relief or as winter range. Very few CAH caribou winter on the North Slope in the vicinity of the PTTL; therefore few adverse effects will occur to this herd from winter construction of the PTTL. While the project may be in the center of the herd’s range, they do not use the area much. There are good mitigation measures in place within the oilfields when caribou are present around oilfield infrastructure. A 7 foot pipeline height is now the standard for caribou passage. For additional mitigation measures see: Cronin, M.A., W.B. Ballard, J. Truett, and R. Pollard, eds. 1994. Mitigation of the effects of oil field development and transportation corridors on caribou. Final Report to the Alaska Caribou Steering Committee. LGL Alaska Research Associates, Inc. Anchorage, Alaska.		SA2-397	SA2-397 See the response to comment SA2-6.
Agree with FERC, site specific fish and habitat surveys should be completed at all waterbody impact sites. Without site specific information regarding fish community, life stage use, and habitat variables it is unreasonable to expect adequate impact minimization measures can be applied.		SA2-398	SA2-398 Section 5.1.7.1 of the final EIS has been updated to include AGDC’s commitment to implement this recommendation.
Agree with FERC.		SA2-399	SA2-399 Section 5.1.7.1 of the final EIS has been updated to include AGDC’s commitment to implement this recommendation.

SA2 – Alaska Department of Natural Resources and Others (cont’d)

CC-359

Comment	SA2-400	SA2-400	See the response to comment SA2-231.
AGDC will also have to adhere to design criteria approved by ADF&G for culverts in all fish bearing waterbodies.			
Agree with FERC.	SA2-401	SA2-401	Section 5.1.7.1 of the final EIS has been updated to include AGDC’s commitment to implement this recommendation.
The proposed project will cross the INHT in two locations - permanently altering the setting, which our office believes would entail an adverse effect to the nationally significant, congressionally designated trail under Section 106 of the National Historic Preservation Act. Analysis of the project's impact to this resource focused on users' access and temporary impacts caused by construction and does not address the permanent alteration to the landscape that the pipeline crossings would require. These alterations would damage visitor and user experience, viewsheds, and otherwise alter the setting.	SA2-402	SA2-402	Comment noted. See the responses to comments FA2-63 and SA2-297.
Please reference prior comments referring to "Class II nationally designated protected areas.	SA2-403	SA2-403	See the response to comment SA2-7.
Please reference prior comments referring to "Class II nationally designated protected areas. Class II sensitive areas will continue to be a tension between the project, the federal land managers and the department; ADEC will need to address visibility issues through the federally required regional haze plan for the Class I areas and would need mitigation on any impacts for those areas. Those mitigation measures should be included in the EIS in order to comply with federal regulations.	SA2-404	SA2-404	See the responses to comments SA2-7, SA2-10, and SA2-11.
There are several concerns raised by increasing the fines to 20% or greater including the availability of material, an increase in dust, stability of the work surface when wet (i.e. mud), and the potential re-use of the gravel pads and roads the land owner may wish to undertake. Suggest building in a mechanism which would make allowances for lack of material, sensitive environmental areas, construction equipment weight and traction needs, and potential re-use activities.	SA2-405	SA2-405	Our recommendation for the surface course is based on standard gravel road building procedures.
Concur with FERC that fish surveys should be conducted at all waterbodies where fish survey data are not available. Additionally, fish surveys should include effort sufficient to document not just the suite of fish species present but also life stage and habitat types to better inform appropriate mitigation measures. Resident fish streams should also be documented with species and life stage information, not just AWC streams.	SA2-406	SA2-406	See response to comments SA2-196 and SA2-398.

SA2 – Alaska Department of Natural Resources and Others (cont’d)

CC-360

Comment				
Regardless of the NMFS criteria, AGDC will be required to implement culvert design criteria approved by ADF&G under AS 16.05.871 or AS 16.05.841 for all fish-bearing waterbodies. These design criteria will be similar to those described in the NMFS, 2011a document and will include criteria such as culvert size, gradient, embeddedness, and inlet and outlet stabilization measures.		SA2-407	SA2-407	See the responses to comments SA2-229 and SA2-231.
Regarding 54b, d: Change to: The ADF&G fish habitat permits issued for water withdrawal will specify the maximum screen mesh size and maximum water withdrawal velocity across the intake screen based on fish species presence, both resident and anadromous species.		SA2-408	SA2-408	See the responses to comments SA2-229 and SA2-233.
The ADF&G Division of Subsistence is a State agency.		SA2-409	SA2-409	Appendix A of the final EIS has been updated to address this comment.
The distribution list needs to be updated to ensure the current and correct individuals receive project documents. There are several individuals that either no longer work for the federal agencies or currently have different roles.		SA2-410	SA2-410	An updated distribution list is provided in appendix A of the final EIS.
The distribution list needs to be updated to ensure the current and correct individuals receive project documents. There are several individuals that either no longer work for the state agencies or currently have different roles.				
It would be considerably easier to determine the location of project facilities if the map backgrounds were high quality aerial photographs or satellite images instead of USGS maps. The USGS maps as background for the facilities have substantial background symbols (e.g., wetland symbology) and faded shading (e.g., rivers, contour lines) that detract from one's ability to quickly discern the locations of facilities.		SA2-411	SA2-411	Comment noted.
Staging pad will eliminate a long-term DNR tundra monitoring station managed and operated by DMLW/NRO.		SA2-412	SA2-412	Section 4.9.2.2 of the final EIS has been updated to address this comment.
Current routing of the "New Module Haul Road" will construct over the Term Well A exploration site. The site has undergone remediation and rehabilitation and is not yet closed in terms of meeting rehabilitation goals. Though the reserve pit was excavated, residual contamination may remain on site. BPXA is conducting the rehabilitation.		SA2-413	SA2-413	See section 4.9.6 and table R-1 of appendix R of the final EIS.
There are a purported 12 material sites in Denali State Park. If these or their accesses extend outside of the ROW lease corridor they will have to abide by the statutes, regulations, and management plans governing Denali State Park.		SA2-414	SA2-414	Comment noted. AGDC would address the extension of material sites or access roads beyond the right-of-way lease corridor, if this occurs, as part of the state permitting process.
The State Pipeline Coordinator's Section agrees with these changes.		SA2-415	SA2-415	Comment noted.
Change to: Use native stream bed material for the upper 1 foot of trench backfill in all waterbodies that are subject to ADF&G Title 16 permit requirements.		SA2-416	SA2-416	See response to comment SA2-230.
This condition as written would preclude any instream work during winter. In many locations, particularly north of the Brooks Range, the streams freeze to the bottom during winter. In other locations, some isolated sections of streams may freeze to the bottom, or water quality conditions may preclude successful overwintering. With these conditions, winter construction would be the best option to minimize impacts to fish and water quality. We recommend this measure be deleted or changed to simply state: Instream work in both anadromous and resident fish streams shall be approved and permitted by the ADF&G under AS 16.05.841 and AS 16.05.871.		SA2-417	SA2-417	See response to comment SA2-228

SA2 – Alaska Department of Natural Resources and Others (cont'd)

Comment	SA2-418	SA2-418	The special area permit is included as a required Project authorization in Table 1.6-1 of the final EIS.
Vegetation maintenance within Sunitna Flats State Games Refuge and Minto Flats State Game Refuge requires a special area permit. The removal of spruce beetle killed trees should follow the recommendations of the Division of Forestry to prevent the distribution of additional spruce beetles.	SA2-419	SA2-419	Table I-2 of appendix I of the final EIS has been updated to address this comment.
The unnamed stream at MP 90.3 is a non-anadromous tributary to Dan Creek. It does not have an AWC code. Dan Creek below the confluence of its tributary is anadromous and has the AWC code.	SA2-420	SA2-420	See the response to comment SA-192.
Species listed under the AWC Species column for the Yukon River include pink and sockeye salmon that are not found at the crossing location. Re-examine this and other waterbody tables in this appendix to ensure the correct data are presented. If using the online AWC, selecting a point on a stream will likely indicate "Species at the Mouth" rather than the species at that point. One must open additional layers in the program to determine species presence and activity or examine the printed AWC map for the desired location.	SA2-421	SA2-421	Due to adoption of the Denali Alternative, Lynx Creek is no longer crossed by the Project. See the update to table 1-2 in appendix I of the final EIS.
Lynx Creek is not an identified anadromous fish stream. When examined in August 2013, it was dry with a very steep gradient that likely only had flow from snow melt. (Alaska Department of Fish and Game. 2013. Supplemental Fish Stream Sampling along the Alaska Stand Alone Pipeline Mainline and Fairbanks Lateral Alignments, 2013. Prepared for AGDC by ADF&G, Division of Habitat.	SA2-422	SA2-422	The specific dry-ditch, open-cut crossing method to be implemented at this crossing (e.g., flume, dam-and-pump, or channel diversion) would be based on field conditions at the time of construction.
Dry-ditch open cut crossing is proposed in the winter. Field surveys should be conducted and ensure flows recede enough in winter to allow enough room to divert the channel and install the pipeline by the dry-ditch method.	SA2-423	SA2-423	Table I-2 of appendix I of the final EIS has been updated to address this comment.
Examine all entries within this table to ensure data are correct. This table indicates no fish presence data are available for Creeks D, E, F, J, or M. Fish presence data are available for these creeks in the following reference: Winters, J.F. and W.A. Morris. 2004. Fisheries investigations in streams crossed by the proposed Point Thomson Gas Cycling Project. Technical Report No. 04-03. Alaska Department of Natural Resources, Office of Habitat Management and Permitting. 21 pp. http://www.adfg.alaska.gov/static/home/library/pdfs/habitat/04_03.pdf	SA2-424	SA2-424	Comment noted. AGDC would obtain the water volume and depth data when permit applications are submitted to the appropriate agencies for Project water sources.
Water volumes and depth data for most of the lakes listed as water sources for the P TTL are available. These data were collected by ExxonMobil and submitted to state agencies for the permitting of water withdrawal for the Point Thomson Project.	SA2-425	SA2-425	EFH consultation for the Project is complete (see the updates to table 1.6-1 and section 4.7.4 of the final EIS).
Use the most current ADF&G Anadromous Waters Catalog (2019) for all discussions and references to anadromous fish within this appendix and throughout the document. The AWC is updated yearly with new stream additions or changes to species presence or activity. Outdated information may not fully reflect the current status of a given stream.			

CC-361

SA2 – Alaska Department of Natural Resources and Others (cont'd)

CC-362

Comment			
This figure depicts pink salmon occurring in the Yukon River up to Fort Yukon. Pink salmon are documented in the AWC only upstream to approximately the community of Ruby. Only chum, chinook, and coho salmon occur at the Yukon River crossing of the Mainline Pipeline. Re-examine this and other fish distribution figures to ensure the correct data are presented. If using the online AWC, selecting a point on a stream will likely indicate "Species at the Mouth" rather than the species at that point. One must open additional layers in the program to determine species presence and activity or examine the printed AWC map for the desired location.	SA2-426	SA2-426	EFH consultation for the Project is complete (see the updates to table 1.6-1 and section 4.7.4 of the final EIS).
Sockeye salmon in the Yukon River are listed in the AWC only to a point approximately 5 miles upstream of the community of Tanana. Only chum, chinook, and coho salmon occur at the Yukon River crossing of the Mainline Pipeline. Re-examine this and other fish distribution figures to ensure the correct data are presented. No sockeye salmon occur in Birch Creek.	SA2-427	SA2-427	EFH consultation for the Project is complete (see the updates to table 1.6-1 and section 4.7.4 of the final EIS).
Alternatively, the Sagavanirktok and Shaviovik river crossings may occur in areas of naturally grounded ice, thus no impacts would occur.	SA2-428	SA2-428	Comment noted.
Examine the column Essential Fish Habitat Species to ensure all listed salmon species are indeed present at the pipeline crossings. Pink and sockeye salmon are not present at the Mainline Pipeline crossing of the Yukon River.	SA2-429	SA2-429	EFH consultation for the Project is complete (see the updates to table 1.6-1 and section 4.7.4 of the final EIS). The Yukon River would be crossed using
Examine the column Essential Fish Habitat Species to ensure all listed salmon species are indeed present at the pipeline crossings. Coho salmon are not present at the Mainline Pipeline crossing of the South Fork Koyukuk River.	SA2-430	SA2-430	DMT; therefore, there would be no in-stream impacts. EFH consultation for the Project is complete (see the updates to table 1.6-1 and section 4.7.4 of the final EIS).
Many entries within this table are incorrect, particularly from the PTTL south to the Yukon River. The only waterbody with planned water withdrawals and EFH species along the PTTL is the Sagavanirktok River. The remainder of these PTTL waterbodies do not have AWC numbers or salmon. Along the Mainline, there is no AWC listing of spawning in the Sagavanirktok River contrary to what is listed in this table. There are no pink or sockeye salmon present at the Mainline Pipeline crossing of the Yukon River. The entire table should be reexamined to ensure accuracy of the presented data.	SA2-431	SA2-431	EFH consultation for the Project is complete (see the updates to table 1.6-1 and section 4.7.4 of the final EIS).
The effects presented in this paragraph, while possible, will likely not occur as ADF&G permitting requirements under AS 16.05.871 and AS 16.05.841 will greatly reduce or eliminate the discussed effects.	SA2-432	SA2-432	Comment noted.
Change to: The ADF&G fish habitat permits issued for water withdrawal will specify the maximum screen mesh size and maximum water withdrawal velocity across the intake screen based on fish species presence, both resident and anadromous species.	SA2-433	SA2-433	See responses to comments SA2-229 and SA2-233.
Change to: The ADF&G fish habitat permits issued for water withdrawal will specify the maximum screen mesh size and maximum water withdrawal velocity across the intake screen based on fish species presence, both resident and anadromous species.	SA2-434	SA2-434	See responses to comments SA2-229 and SA2-233.
Hay bales constructed of non-native materials or materials contaminated with invasive species are discouraged for use within ADF&G Special Areas (and other disturbed sites in general) to reduce the risk of invasive species spread.	SA2-435	SA2-435	Comment noted.

SA2 – Alaska Department of Natural Resources and Others (cont'd)

Comment			
Use the most current ADF&G Anadromous Waters Catalog (2019) for all discussions and references to anadromous fish within this appendix and throughout the document. The AWC is updated yearly with new stream additions or changes to species presence or activity. Outdated information may not fully reflect the current status of a given stream.	SA2-436	SA2-436	EFH consultation for the Project is complete (see the updates to table 1.6-1 and section 4.7.4 of the final EIS).
Verify that all species listed in this table actually exist seasonally or year-round in the specified project areas. For example, Arctic cisco and Inconnu (sheefish) do not occur in Cook Inlet yet are listed as potentially impacted from activities within Cook Inlet.	SA2-437	SA2-437	Table N-1 of appendix N of the final EIS has been updated to address this comment.
Correct to "Polar bear ^{5,6*} "; the polar bear is protected by the Marine Mammal Protection Act (g=Protected under the Marine Mammal Protection Act)	SA2-438	SA2-438 SA2-439	Appendix P of the final EIS has been updated to address this comment. Appendix U was edited for clarity to indicate that under the no-action alternative the lands needed for subsistence purposes would not be subject to use or occupancy.
Please clarify this first sentence. As written, it seems to indicate that the no action alternative would prohibit the use of public lands for subsistence purposes.	SA2-439		
This statement should be re-evaluated considering the ADF&G's opinion that the impacts to the Central Arctic Caribou Herd would not be significant.	SA2-440	SA2-440	The BLM guidance on the ANILCA 810 process is given in Instruction Memorandum (IM) AK-2011-008. ¹ This IM requires the BLM to evaluate the potential impacts to subsistence resources and uses from a proposed action. The policy further states that the evaluation must apply to each alternative analyzed in the EIS, including the cumulative analysis.
This statement should be re-evaluated considering the ADF&G's opinion that the impacts to the Central Arctic Caribou Herd would not be significant.	SA2-441		There have been positive ANILCA 810 evaluation findings for past and recently proposed projects. Despite the negative finding for the proposed action, when considered in combination with past, present, and reasonably foreseeable future actions the cumulative case presents a positive finding. A positive finding in the cumulative case triggers the Notice, Hearing, and Determination requirements of ANILCA Section 810(a).
The type of effect in the accidents and injuries row, "increase (positive effect) of behavior-based and other safety culture programs implemented in the project" should be addressed in the following columns, similarly to the other type of effects.	SA2-442		
Spelling error. Revise ATB to ATV.	SA2-443		
This bullet is repeated twice in this column. Remove duplicate bullet.	SA2-444		
The positive aspect of potential change to infectious disease should be addressed in the following columns, similarly to the other type of effects.	SA2-445	SA2-441 SA2-442	See the response to comment SA2-440.
It would be useful to add some examples of where this has happened in other similar projects.	SA2-446	SA2-443	AGDC revised table 38 of the HIA (appendix V of the final EIS) to address this comment. Section 4.17.3 of the final EIS has been updated based on the revision to the HIA.
Suggested revision: "This impact may be mitigated by implementing traffic control plans and by keeping communities aware of the Project schedule."	SA2-447		AGDC revised table 38 of the HIA (appendix V of the final EIS) to address this comment. Section 4.17.3 of the final EIS has been updated based on the revision to the HIA.
Edit to reflect accurate years of duration (i.e., either 2-4 years or 6-8 years).	SA2-448	SA2-444	AGDC revised table 38 of the HIA (appendix V of the final EIS) to address this comment. Section 4.17.3 of the final EIS has been updated based on the revision to the HIA.
It is unclear how a rating of high was developed for this potential impact. Add the summary of impact criteria ratings and likelihood, as was done for rating other potential impacts. Using our subject matter expertise, we would come to a rating of medium positive rather than high.	SA2-449	SA2-445	AGDC revised table 38 of the HIA (appendix V of the final EIS) to address this comment. Section 4.17.3 of the final EIS has been updated based on the revision to the HIA.
		SA2-446	Comment noted.
		SA2-447	AGDC revised section 4.1.1 of the HIA (appendix V of the final EIS) to address this comment.
		SA2-448	AGDC revised section 4.1.1 of the HIA (appendix V of the final EIS) to address this comment.
		SA2-449	AGDC revised section 4.1.1 of the HIA (appendix V of the final EIS) to address this comment.

SA2 – Alaska Department of Natural Resources and Others (cont'd)

CC-364

Comment			
If you add up the criteria impact ratings and likelihood described in the bulleted list, the impact is actually rated as low (and is described as low in Table 42). However, we would agree with the narrative that the potential impact should be rated as medium. Accidents and injuries related to construction have occurred in similar projects and are about as likely as not to occur during the construction phase in this project (especially considering highway corridor traffic and potential decrease in safety for subsistence activities). Additionally, the potential magnitude of the impact should be rated at least high (2) due to the potential serious consequences of an accident/injury and to be consistent with how magnitude was rated for other potential impacts.	SA2-450	SA2-450	AGDC revised section 4.1.1 of the HIA (appendix V of the final EIS) to address this comment.
Suggested revision: "Safety in the workplace and the introduction of a safety culture beyond the workplace may offset the risks of accidents and injuries of individuals and households".	SA2-451	SA2-451	AGDC revised sections 4.2.1 and 4.2.2 and table 40 of the HIA (appendix V of the final EIS) to address this comment. Tables 4.17.3-1 and 4.17.3-2 of the final EIS have been updated based on the revisions to the HIA.
If you add up the criteria impact ratings and likelihood described in the bulleted list, the impact is actually rated as low (and is described as low in Table 42). Please correct this inconsistency. Additionally, the potential magnitude of the impact should be rated at least high (2) due to the potential serious consequences of an accident/injury and to be consistent with how magnitude was rated for other potential impacts.	SA2-452	SA2-452	AGDC revised section 4.1.1 of the HIA (appendix V of the final EIS) to address this comment.
Suggested revision: "Introduction of a safety culture beyond the workplace that may offset the risks of accidents and injuries of individuals and households".	SA2-453	SA2-453	AGDC revised sections 4.2.1 and 4.2.2 and table 40 of the HIA (appendix V of the final EIS) to address this comment. Tables 4.17.3-1 and 4.17.3-2 of the final EIS have been updated based on the revisions to the HIA.
This could be misleading as ADEC does not regulate the mobile sources that make up the bulk of construction equipment. Those emissions fall under the regulatory authority of the Environmental Protection Agency (EPA), which sets emission standards for industrial equipment.	SA2-454	SA2-454	AGDC revised section 4.2.1 of the HIA (appendix V of the final EIS) to address this comment.
Several PACs have expressed concern about flaring from existing and proposed oil/gas projects. Please address this concern in the narrative for this sub-section.	SA2-455	SA2-455	AGDC revised section 4.3.1 of the HIA (appendix V of the final EIS) to address this comment.
If you add up the criteria impact ratings and likelihood described in the bulleted list, the impact is actually rated as medium (and is described as low in Table 42), which is more appropriate for this potential impact. Please correct this inconsistency in this sub-section and other locations where this rating is referenced.	SA2-456	SA2-456	AGDC revised section 4.3.2 of the HIA (appendix V of the final EIS) to address this comment.
If you add up the criteria impact ratings and likelihood described in the bulleted list, the impact is actually rated as high, which is more appropriate for this impact. Please correct this inconsistency in this sub-section and other locations where this rating is referenced.	SA2-457	SA2-457	The ratings were calculated correctly in the HIA (appendix V of the final EIS).
This paragraph is more appropriate for the mitigation measures section of table 43 and in page V-160. Suggest moving information, as potential mitigation measures are potential and should not be used to consider health impacts.	SA2-458	SA2-458	AGDC revised sections 4.4.1 and table 43 of the HIA (appendix V of the final EIS) to address this comment. Table 4.17.3-1 of the final EIS has been updated based on the revisions to the HIA.
Adding up the criteria impact ratings and likelihood brings the total to 6, which corresponds to an impact rate of medium, which is more appropriate for this potential impact. Correct math error and revise sections where this rating is referenced.	SA2-459	SA2-459	AGDC revised section 4.1.1 and table 39 of the HIA (appendix V of the final EIS) to address this comment. Table 4.17.3-1 of the final EIS has been updated based on the revisions to the HIA.
Suggest revising the potential magnitude of the impact to at least high (2) due to the potential serious consequences of an accident/injury and to be consistent with how magnitude was rated for other potential impacts. This would bring total rating for this potential impact to medium.	SA2-460	SA2-460	AGDC revised section 4.2.1 and table 40 of the HIA (appendix V of the final EIS) to address this comment. Table 4.17.3-1 of the final EIS has been updated based on the revisions to the HIA.
Suggest revising the potential magnitude of the impact to at least high (2) due to the potential serious consequences of an accident/injury and to be consistent with how magnitude was rated for other potential impacts.	SA2-461	SA2-461	AGDC revised section 4.2.2 and table 40 of the HIA (appendix V of the final EIS) to address this comment. Table 4.17.3-2 of the final EIS has been updated based on the revisions to the HIA.
If you add up the criteria impact ratings and likelihood, the impact is actually rated as medium, which is more appropriate for this potential impact. Please correct this inconsistency in this sub-section and other locations where this rating is referenced.	SA2-462	SA2-461	AGDC revised section 4.2.2 and table 40 of the HIA (appendix V of the final EIS) to address this comment. Table 4.17.3-2 of the final EIS has been updated based on the revisions to the HIA.
		SA2-462	See response to comment 460.

SA2 – Alaska Department of Natural Resources and Others (cont’d)

CC-365

Comment			
<p>"Revise sentence and reference to update and accurately reflect status: Construction of planned expansion facilities, previously planned to commence in 2019, has been deferred based on a 2018 agreement with the ADNRR to stay a deadline in a 2012 agreement with Exxon (Petroleum News, 2018d) until a Final Investment Decision (90 days) or Suspension Notice (30 months) on the Alaska LNG Project (ADNR 2018x). Alaska Department of Natural Resources (ADNR). 2018x. Point Thomson Unit Letter Agreement, September 10, 2018. Available online at http://dog.dnr.alaska.gov/Library/Document/AAA9C8712AA644F2BBD0B5E69EBCD486/9-10-2018_Point_Thomson_Unit_Letter_Agreement. Accessed July 2019."</p>	SA2-463	SA2-463	Appendix W of the final EIS has been updated to address this comment.
<p>Rename to identify projects instead of company to: Franklin Bluffs oil and gas exploration</p>	SA2-464	SA2-464	Appendix W of the final EIS has been updated to address this comment.
<p>Remove reference to Alaska Journal of Commerce (AJC, 2018d); this reference is about ConocoPhillip's Willow Project in NPR-A.</p>	SA2-465	SA2-465	Appendix W of the final EIS has been updated to address this comment.
<p>Rename to identify project instead of company to: Guitar Unit oil and gas exploration</p>	SA2-466	SA2-466	Appendix W of the final EIS has been updated to address this comment.
<p>Use full company name: Alliance Exploration</p>	SA2-467	SA2-467	Appendix W of the final EIS has been updated to address this comment.
<p>"Add unit area: 7,573 acres under lease (ADNR, 2019z) Alaska Department of Natural Resources (ADNR). 2019z. Unitized Leases - Acreage Detail. Available online at http://dog.dnr.alaska.gov/Documents/Leasing/PeriodicReports/Lease_UnitizedLeasesAcreageDetail.pdf. Accessed August 2019."</p>	SA2-468	SA2-468	Appendix W of the final EIS has been updated to address this comment.
<p>"Update with current project proponent, add correct reference COE 2018b is the Donlin Gold EIS: Armstrong EnergyOil Search Alaska, LLC proposed plans to construct develop its oil and gas leasehold. The Nanushuk Project, which consists of three drill pads, one of which will include a central processing facility, an operations center, 25 miles of new access roads, 14 miles of in-field pipelines, and a 25-mile-long oil export pipeline. The project also includes temporary discharges to 5.8 acres of jurisdictional waters of the U.S. for screening activities at the existing Oliktok Dock (COE, 2018xb). U.S. Army Corps of Engineers (COE). 2018x. Nanushuk Project, Final Environmental Impact Statement. Available online at http://www.nanushukeis.com/documents/FEIS/FEIS%20EX%20Summary_2018-10-25.pdf. Accessed August 2019."</p>	SA2-469	SA2-469	Appendix W of the final EIS has been updated to address this comment.
<p>Update to reflect current project: 267 acres</p>	SA2-470	SA2-470	Appendix W of the final EIS has been updated to address this comment.
<p>"Update project status: Draft Environmental Impact Statement (EIS) released by the U.S. Army Corps of Engineers (COE) in September 2017. Final EIS issued in November, 2018. COE permit issued May, 2019 with the project expected to come online in 2023 (COE, 2019x)1. U.S. Army Corps of Engineers (COE). 2019x. Nanushuk Project Permit, POA-2015-00025. Available online at http://www.nanushukeis.com/documents/20190521_IN_USACE_POA-2015-00025%20Executed.pdf. Accessed August 2019."</p>	SA2-471	SA2-471	Appendix W of the final EIS has been updated to address this comment.

SA2 – Alaska Department of Natural Resources and Others (cont’d)

CC-366

Comment			
As presented this 'project' confuses oil and gas exploration projects in the Canadian Beaufort Sea with oil and gas lease sales in the Alaskan Chukchi and Beaufort Seas. Recommend splitting into 2 projects - Canadian Beaufort Sea oil and gas exploration and development, and Alaskan Beaufort Sea and Chukchi Sea area oil and gas leasing. Changes and updates are presented in individual comments.	SA2-472	SA2-472	Appendix W of the final EIS has been updated to address this comment.
Add new Project - Canadian Beaufort Sea oil and gas exploration and development	SA2-473	SA2-473	Appendix W of the final EIS has been updated to address this comment.
"Revise for accuracy and correct reference citation (missing from references): Projections of oil and gas exploration and development 2013-2028 with target area focus on the northern Yukon Territory, Banks Island, Victoria Island, and Beaufort Sea: 1-2 seismic surveys, 1 or 2 shallow shelf wells, 3 to 4 deep shelf wells, production by 2025 (Lin Callow and LTLC and SalmoConsulting, 2013). LTLC Consulting (LTLC), and Salmo Consulting Inc. (Salmo). 2013. Updated oil and gas exploration and development activity forecast Canadian Beaufort Sea 2013 – 2028. Prepared for Aboriginal Affairs and Northern Development Canada. March 2013. Available online at https://www.beaufortrea.ca/wp-content/uploads/2012/03/NCR-5358624-v4-BREA_-_FINAL_UPDATE_-_EXPLORATION_AND_ACTIVITY_FORECAST-_MAY_2013.pdf . Accessed July 2019."	SA2-474	SA2-474	Appendix W of the final EIS has been updated to address this comment.
Mackenzie Delta/Canadian Beaufort Sea region	SA2-475	SA2-475	Appendix W of the final EIS has been updated to address this comment.
Mackenzie Valley Gas Pipeline deemed uneconomic and Norman Wells oil pipeline shut down. Exploration and development expected to focus on oil in Canadian Beaufort (LTLC and Salmo, 2013).	SA2-476	SA2-476	Appendix W of the final EIS has been updated to address this comment.
Use of the same marine transportation corridors as Project construction	SA2-477	SA2-477	Appendix W of the final EIS has been updated to address this comment.
No	SA2-478	SA2-478	Appendix W of the final EIS has been updated to address this comment.
A, AR, LS, M, S	SA2-479	SA2-479	Appendix W of the final EIS has been updated to address this comment.
Revise: Alaskan Beaufort Sea and Chukchi Sea area oil and gas leasing	SA2-480	SA2-480	Appendix W of the final EIS has been updated to address this comment.
"Revised to update: In 2008, 29.3 million acres were offered for lease and 2.7 million were leased in the Chukchi Sea. In 2007, 8.7 million acres were offered in the Beaufort Sea and 0.5 million acres were leased (BOEM, 2017c). BOEM Department of the Interior proposed in January 2018 to expand oil and gas leasing in both the Beaufort and Chukchi Sea areas, and is preparing an EIS for a 2019 lease sale completed the 2019-2024 Lease Sale Schedule that includes 3 sales each in the Beaufort and Chukchi seas during 2019-2024 (BOEM, 2019x). Bureau of Ocean Energy Management (BOEM). 2019x. 2019–2024 Draft Proposed Program Lease Sale Schedule. Available online at https://www.boem.gov/NP-DPP-Lease-Sale-Schedule-2019-2024/ . Accessed July 2019."	SA2-481	SA2-481	Appendix W of the final EIS has been updated to address this comment.
"Rearrange to match title: Beaufort Sea – Specific projects in the Beaufort Sea are identified in this table. Chukchi Sea – unknown; no specific projects proposed. Department of the Interior BOEM's planned 2019 lease sale could open up to 65 million acres of federal Arctic waters to oil and gas drilling."	SA2-482	SA2-482	Appendix W of the final EIS has been updated to address this comment.

SA2 – Alaska Department of Natural Resources and Others (cont'd)

Comment			
<p>"Update, fix reference: Beaufort Sea: Ongoing projects Chukchi Sea: No known exploration plans in the Chukchi Sea. Department of the Interior BOEM is planning an oil and gas lease auction sale in 2019 (S&PB Global Platts, 2018), based on the 2019-2024 schedule that has not been approved. Under the current 2017-2022 Lease Sale Schedule, no sales will occur in the Beaufort and Chukchi seas (BOEM, 2019y). S&PB Global Platts, 2018. US Interior moves toward Arctic offshore oil and gas sale in 2019. Available online at https://www.spglobal.com/platts/en/market-insights/latest-news/oil/111518-us-interior-moves-toward-arctic-offshore-oil-and-gas-sale-in-2019. Accessed December 2018. Bureau of Ocean Energy Management (BOEM). 2019y. 2017–2022 Lease Sale Schedule. Available online at https://www.boem.gov/2017-2022-Lease-Sale-Schedule/. Accessed July 2019."</p>	SA2-483	SA2-483	Appendix W of the final EIS has been updated to address this comment.
<p>Rename and move company to project description: Mustang oil development project</p>	SA2-484	SA2-484	Appendix W of the final EIS has been updated to address this comment.
<p>Revise to: Brooks Range Petroleum (BRP) has conducted exploratory drilling for onshore oil on Alaska's North Slope. Ultimate development would potentially include an oil processing facility and drilling up to 31 production and injection wells (AJC, 2018c).</p>	SA2-485	SA2-485	Appendix W of the final EIS has been updated to address this comment.
<p>BLM Coastal Plain Oil and Gas Leasing</p>	SA2-486	SA2-486	Appendix W of the final EIS has been updated to address this comment.
<p>In December 2017, Congress passed the Tax Act (Public Law 115-97) that opened the 1.5 million acre Coastal Plain (also known as the ANILCA 1002 area) of the Arctic National Wildlife Refuge for oil and gas exploration and development.</p>	SA2-487	SA2-487	Appendix W of the final EIS has been updated to address this comment.
<p>"Up to 2,000 acres of disturbance from oil and gas facilities (BLM 2018x), no specific projects proposed. Bureau of Land Management (BLM). 2018x. Coastal Plain Oil and Gas Leasing Program; Draft Environmental Impact Statement. Available online at https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/coastal-plain-eis. Accessed May 2018. Bureau of Land Management (BLM). 2019x. Coastal Plain Oil and Gas Leasing Program EIS. Available online at https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/coastal-plain-eis. Accessed August 2019."</p>	SA2-488	SA2-488	Appendix W of the final EIS has been updated to address this comment.
<p>"The Draft EIS was issued on December 28, 2018 (BLM 2018x), and the Final EIS is to be issued in late 2019 (BLM 2019x). Bureau of Land Management (BLM). 2018x. Coastal Plain Oil and Gas Leasing Program; Draft Environmental Impact Statement. Available online at https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/coastal-plain-eis. Accessed May 2018. Bureau of Land Management (BLM). 2019x. Coastal Plain Oil and Gas Leasing Program EIS. Available online at https://www.blm.gov/programs/planning-and-nepa/plans-in-development/alaska/coastal-plain-eis. Accessed August 2019."</p>	SA2-489	SA2-489	Appendix W of the final EIS has been updated to address this comment.
<p>Facilities would be more than 60 miles east of the Alaska LNG Project's GTP and Mainline Pipeline. The Alaska LNG Project's P TTL extends to just west of the Coastal Plain boundary. Would use the same marine transportation corridors as Project construction</p>	SA2-490	SA2-490	Appendix W of the final EIS has been updated to address this comment.
<p>Yes</p>	SA2-491	SA2-491	Appendix W of the final EIS has been updated to address this comment.
<p>A, AR, C, GS, GW, LS, LU, M, N, R, RT, S, SW, V, VG, WL, VT, W</p>	SA2-492	SA2-492	Appendix W of the final EIS has been updated to address this comment.
<p>Rename: Caelus Energy LLC, Nuna Development oil discovery</p>	SA2-493	SA2-493	Appendix W of the final EIS has been updated to address this comment.

CC-367

SA2 – Alaska Department of Natural Resources and Others (cont'd)

Comment	SA2-494	SA2-494	Appendix W of the final EIS has been updated to address this comment.
<p>"Update ownership and description: The Nuna discovery Development is just east of the Colville River and about 5 miles southwest of the Oooguruk Field (ConocoPhillips, 2019x)an onshore pad designed to develop the southern part of the Torok reservoir that cannot be reached from Oooguruk Drill Site (ODS). Nuna, like ODS, would pay to use Kuparuk facilities to process its oil (ADNR, 2014c). ConocoPhillips. 2019x. ConocoPhillips Signs Agreement with Caelus Natural Resources to Acquire Nuna Discovery Acreage. News Release, June 17, 2019. Available online at https://static.conocophillips.com/files/resources/nr-copa-announces-purchase-of-nuna-final.pdf. Accessed August 2019."</p>			
<p>Update: 22 acres (gravel pad) and 4-mile-long gravel road21,000 acres under lease</p>	SA2-495	SA2-495	Appendix W of the final EIS has been updated to address this comment.
<p>"Update: The project was permitted in 2015. However, development has slowed due to low oil prices and oil tax credit uncertainty (Caelus Energy LLC, 2017).ConocoPhillips will appraise Nuna and then reach an investment decision (AJC, 2019x; ConocoPhillips, 2019x). ConocoPhillips. 2019x. ConocoPhillips Signs Agreement with Caelus Natural Resources to Acquire Nuna Discovery Acreage. News Release, June 17, 2019. Available online at https://static.conocophillips.com/files/resources/nr-copa-announces-purchase-of-nuna-final.pdf. Accessed August 2019."</p>	SA2-496	SA2-496	Appendix W of the final EIS has been updated to address this comment.
<p>Rename: Caelus Energy LLC, Oooguruk Unit oil and gas development</p>	SA2-497	SA2-497	Appendix W of the final EIS has been updated to address this comment.
<p>"Update: The existing Oooguruk Project includes a 6-acre gravel island about 5 miles offshore in 4.5 feet of water in Harrison Bay and a subsea flowline bundle connecting to an onshore tie-in pad (Caelus Energy LLC, 2017). As noted in ADNR DOG August update, New wells drilling activities are currently postponed, and but future, activities are planned with the pursuit of six new wells (ADNR, 2017c).Eni U.S. Operating Co. Inc. (Eni) has recently become the field operator (ADNR, 2019y). Alaska Department of Natural Resources (ADNR). 2019y. Voluntary Unit Contraction, Oooguruk Unit – Approved. Available online at http://dog.dnr.alaska.gov/Library/Document/DCC74A25A56642A8B947A4B1385C33D0/2019-06-20_Successor_Unit_Operator_-_Eni_US_Operating_Co_-_Approved. Accessed August 2019."</p>	SA2-498	SA2-498	Appendix W of the final EIS has been updated to address this comment.
<p>" Update with unit area: No specific additional acreage identified35,271 acres under lease (ADNR, 2019z). Alaska Department of Natural Resources (ADNR). 2019z. Unitized Leases - Acreage Detail. Available online at http://dog.dnr.alaska.gov/Documents/Leasing/PeriodicReports/Lease_UnitizedLeasesAcreageDetail.pdf. Accessed August 2019."</p>	SA2-499	SA2-499	Appendix W of the final EIS has been updated to address this comment.
<p>No data for new wells, revise: Drilling activities at Oooguruk Unit postponed through 2018 (Petroleum News, 2018f); planning future workover campaign and pursuit of six new wells.</p>	SA2-500	SA2-500	Comment noted.
<p>Split Cook Inlet oil and gas development from Cook Inlet OCS lease sales: Cook Inlet areaBasin oil and gas development</p>	SA2-501	SA2-501	Appendix W of the final EIS has been updated to address this comment.
<p>"Revise to: Cook Inlet is a mature, petroleum producing basin that has seen extensive exploration and development over the past 40 years (AOGA, 2015a). There are numerous onshore and offshore oil and gas fields on state and federal leases in the Cook Inlet basin. Planned offshore activities between 2019 and 2024 include two seismic surveys, approximately 22 exploratory wells, platform and pipeline maintenance/repair, three geohazard surveys, a well abandonment, and marine construction associated with land-based exploration and development on Native owned lands on the Iniskin Peninsula (84 FR 37442; 84FR 37716). "</p>	SA2-502	SA2-502	Appendix W of the final EIS has been updated to address this comment.

SA2 – Alaska Department of Natural Resources and Others (cont’d)

Comment			
Revise to: Specific Cook Inlet projects are identified in this table.	SA2-503	SA2-503	Appendix W of the final EIS has been updated to address this comment.
Revise to: In 2019 the National Marine Fisheries Service and the U.S. Fish and Wildlife Service issued regulations for the incidental take of marine mammals during oil and gas activities (84 FR 37442; 84 FR 37716). These regulations identify planned operational and exploratory oil and gas activities in state and federal waters in middle and lower Cook Inlet between 2019 and 2024.	SA2-504	SA2-504	Appendix W of the final EIS has been updated to address this comment.
Split Cook Inlet oil and gas development from Cook Inlet OCS lease sales: Cook Inlet OCS leasing and oil and gas exploration	SA2-505	SA2-505	Appendix W of the final EIS has been updated to address this comment.
Revise to: Hilcorp Alaska has acquired numerous federal offshore leases in lower and middle Cook Inlet for oil and gas exploration and potential development (BOEM, 2017a). Planned activities include 3D seismic and geohazard surveys, and 2 to 4 exploratory wells pending seismic survey results.	SA2-506	SA2-506	Appendix W of the final EIS has been updated to address this comment.
"Revised to: 76,615 acres under lease (ADNR, 2019z) Alaska Department of Natural Resources (ADNR). 2019z. Unitized Leases - Acreage Detail. Available online at http://dog.dnr.alaska.gov/Documents/Leasing/PeriodicReports/Lease_UnitizedLeasesAcreageDetail.pdf . Accessed August 2019."	SA2-507	SA2-507	Appendix W of the final EIS has been updated to address this comment.
Revise to: Seismic and geohazard surveys scheduled for 2019 or 2020, with exploratory wells in 2020 to 2022 (84 FR 37442; 84 FR 37716).	SA2-508	SA2-508	Appendix W of the final EIS has been updated to address this comment.
Revise to: Activities in lower Cook Inlet may be supported by oil and gas service companies located near the Liquefaction Facility at Nikiski.	SA2-509	SA2-509	Appendix W of the final EIS has been updated to address this comment.
Revise to: No	SA2-510	SA2-510	Appendix W of the final EIS has been updated to address this comment.
Revise to: M, N, S, VT	SA2-511	SA2-511	Appendix W of the final EIS has been updated to address this comment.
Rename to describe project: Nikaitchuq, Nikaitchuq NorthEni – Spy Island oil and gas exploration and development	SA2-512	SA2-512	Appendix W of the final EIS has been updated to address this comment.
Revise to: Eni US proposes drilling up to four exploration wells, consisting of two extended reach mainbores and two sidetracks from Spy Island Drillsite to Outer Continental Shelf, to evaluate the oil and gas resource potential of three of the company's Outer Continental Shelf (OCS) leases in the U.S. Beaufort Sea. Spy Island Drillsite is located about 3 miles offshore in 6 to 8 feet of water off Oliktok Point (BOEM, 2017b).	SA2-513	SA2-513	Appendix W of the final EIS has been updated to address this comment.

CC-369

SA2 – Alaska Department of Natural Resources and Others (cont'd)

Comment			
"Revise to include unit areas: Unit areas: 21,229 acres Nikaichuq, 58,230 acres Nikaichuq North (OCS) (ADNR, 2019z). Wells would be drilled from the existing artificial island – Spy Island Drillsite . The usinge of extended reach drilling to access OCS lease targetsallows for use of existing facilities. Alaska Department of Natural Resources (ADNR). 2019z. Unitized Leases - Acreage Detail. Available online at http://dog.dnr.alaska.gov/Documents/Leasing/PeriodicReports/Lease_UnitizedLeasesAcreageDetail.pdf . Accessed August 2019."	SA2-514	SA2-514	Appendix W of the final EIS has been updated to address this comment.
Revise to: BOEM approved the Initial Exploration Plan in 2017, and approved a revision to the Plan in April 2018 (BOEM, 2018). Development drilling at Nikaichuq Unit in state waters may resume late 2018 to 2019 (Petroleum News, 2018h).	SA2-515	SA2-515	Appendix W of the final EIS has been updated to address this comment.
Rename to describe project: Kitchen Lights Unit – oil and gas developmentFurie Operating Alaska	SA2-516	SA2-516	Appendix W of the final EIS has been updated to address this comment.
Revise for accuracy: Furie Operating Alaska plans nNew offshore gas wells and workovers of existing offshore wells in Cook Inlet. The company is working on a revised Kitchen Lights development plan (Petroleum News, 2018b).s 2017 development plan called for completing the KLU-A1 well and drilling another to be completed later.	SA2-517	SA2-517	Appendix W of the final EIS has been updated to address this comment.
Revise for accuracy: 83,394 acres under lease (ADNR, 2019z). Uncertain. Work will uses the existing platform and a jack-up rigs; one or more new rigs could be erected in Cook Inlet.	SA2-518	SA2-518	Appendix W of the final EIS has been updated to address this comment.
Rename to describe project: Hilcorp, Beluga River Unit gas field	SA2-519	SA2-519	Appendix W of the final EIS has been updated to address this comment.
"Update description: In early 2016, Hilcorp Alaska, LLC, became operator of the Beluga River Unit, one of the numerous units operated by Hilcorp in the Cook Inlet area (Petroleum News, 2017d). The Beluga River Gas Field provides natural gas for customers in southcentral Alaska, producing 11,754 million standard cubic feet of gas in 2018 (Hilcorp, 2019)."	SA2-520	SA2-520	Appendix W of the final EIS has been updated to address this comment.
"Revise for accuracy: 6,098 acres in unit area (ADNR, 2019z).None identified Alaska Department of Natural Resources (ADNR). 2019z. Unitized Leases - Acreage Detail. Available online at http://dog.dnr.alaska.gov/Documents/Leasing/PeriodicReports/Lease_UnitizedLeasesAcreageDetail.pdf . Accessed August 2019."	SA2-521	SA2-521	Appendix W of the final EIS has been updated to address this comment.
"Update: Continued operationproduction; well workovers, facility maintenance, no new wells identified (Hilcorp, 2019). Hilcorp Alaska, LLC (Hilcorp). 2019. 57th Plan of Development and Operations for the Beluga River Unit – No. 14-08-001-8195. February 28, 2019. Available online at http://dog.dnr.alaska.gov/Library/Document/486812D50F3C45EA900071D9D300FD4/2019-02-28_57th_Plan_of_Development . Accessed August 2019."	SA2-522	SA2-522	Appendix W of the final EIS has been updated to address this comment.
Rename to describe project: HilcorpMilne Point Unit –, Moose Pad oil development	SA2-523	SA2-523	Appendix W of the final EIS has been updated to address this comment.

SA2 – Alaska Department of Natural Resources and Others (cont'd)

CC-371

Comment	SA2-524	SA2-524	Appendix W of the final EIS has been updated to address this comment.
<p>Revise to update project, Mat-Su Valley Frontiersman, 2017 not listed in references: Hilcorp is building built a new drilling pad , the Moose Pad, on the west side of the Milne Point Unit (MPU). The new Moose Ppad will provides Hilcorp access to about 7 square miles of undeveloped oil reserves within the MPU. Initial dDevelopment plans for Moose Pad will include developing up to 44 new wells, . To support new oil production wells on Moose Pad, an oil production pipeline, a small tie-in pad, and new pad infrastructure (Petroleum News, 2018i). will be installed (Mat-Su Valley Frontiersman, 2017). In August 2017, modification to flowline route was requested.</p>			
<p>"Revise to add unit area: 50,936 acres leased in the MPU (ADNR 2019z). 17.2 acres (new well pad) 14 acres (est.) access road, aboveground oil pipeline (2.8 miles) 1 acre flowline realignment"</p>	SA2-525	SA2-525	Appendix W of the final EIS has been updated to address this comment.
<p>"Update status: Expected to commission new pad by JanuaryProduction at Moose Pad came online in early April 2019, 2019 (Petroleum News, 2018i)Mat-Su Frontiersman, 2019). Mat-Su Frontiersman. 2019. Hilcorp starts production at Moose Pad oil project. April 24, 2019. Available online at https://www.frontiersman.com/news/hilcorp-starts-production-at-moose-pad-oilproject/article_83881cf8-66ec-11e9-b884-63ab7e3f623d.html. Accessed August 2019. "</p>	SA2-526	SA2-526	Appendix W of the final EIS has been updated to address this comment.
<p>Rename to describe project: Hilcorp, Liberty Unit OCS oil development Development Project</p>	SA2-527	SA2-527	Appendix W of the final EIS has been updated to address this comment.
<p>Revise to locate project: Hilcorp is cConstructingon of an artificial island in the Beaufort Sea OCS to support drilling and production facilities, with 5.6 miles of buried offshore oil pipeline and 1.5 miles of onshore aboveground oil pipeline. ...</p>	SA2-528	SA2-528	Appendix W of the final EIS has been updated to address this comment.
<p>Update status: Final EIS issued by BOEM in September 2018. (Petroleum News, 2018i). Construction to begin in late 2019, would occur over a 3-year period following permitting, with production as early as 2022 (Petroleum News, 2018j).</p>	SA2-529	SA2-529	Appendix W of the final EIS has been updated to address this comment.
<p>Revise to describe projects/location: National Petroleum Reserve-Alaska oil developments: GMT-1, GMT-2, and Willow</p>	SA2-530	SA2-530	Appendix W of the final EIS has been updated to address this comment.
<p>Revise to describe project: ConocoPhillips, Kuparuk River Unit oil production and development</p>	SA2-531	SA2-531	Appendix W of the final EIS has been updated to address this comment.
<p>Revise to: ConocoPhillips is wWorking to improve production at existing drill sitespads in the Kuparuk River Unit and slowly expand facilities designed to target undeveloped areas in the unit.</p>	SA2-532	SA2-532	Appendix W of the final EIS has been updated to address this comment.
<p>Add unit area: Unknown249,961 acres leased in the unit (ADNR, 2019z)</p>	SA2-533	SA2-533	Appendix W of the final EIS has been updated to address this comment.

SA2 – Alaska Department of Natural Resources and Others (cont'd)

Comment	SA2-534	SA2-534	Appendix W of the final EIS has been updated to address this comment.
Rename to describe project: Great BearNorth Slope Shale Oil Development			
e Clarify project description: A single project is proposed to develop a source reservoir resource. Great Bear at Petroleum plans exploration and evaluation wells along the Dalton Highway on . Their success in the last two Central North Slope leases sales has secured leases that straddle about 20 miles of the highway, about 30 miles south of Prudhoe Bay (ADNR, 2015c).	SA2-535	SA2-535	Comment noted.
Revise: 1,000 square miles of seismic surveysUnknown. 500,000-acre lease purchased in 2010. Six leases terminated in 2017.	SA2-536	SA2-536	Appendix W of the final EIS has been updated to address this comment.
Revise: Over 1,000 square miles of Sseismic surveys have been completed south and southwest of Deadhorse and south of Nuiqsut. To date only oOne exploration well has been drilled (Petroleum News, 2017b).	SA2-537	SA2-537	Appendix W of the final EIS has been updated to address this comment.
Revise name: Andeavor Kenai Refinery	SA2-538	SA2-538	Comment noted.
"Update description: The Andeavor Kenai Refinery can process up to 6872,000 barrels per day (bpd). The refinery produces gasoline and gasoline blendstocks, jet fuel, diesel fuel, heating oil, heavy fuel oils, propane, and asphalt. Crude oil is delivered by double-hulled tankers through Cook Inlet and by pipeline from the Kenai Peninsula and Cook Inlet. A 68-mile-long, 42,000 bpd common-carrier products pipeline transports jet fuel, gasoline, and diesel fuel to the Port of Alaska (POA) and the Anchorage International Airport. Wholesale delivery occurs through terminals in Kenai, Anchorage, and Tesoro's Nikiski dock (Andeavor, 2018; Marathon, 2019). Marathon (Marathon Petroleum Corporation). 2019. Kenai Refinery Fact Sheet. Available online at https://www.marathonpetroleum.com/content/documents/fact_sheets/Kenai_Refinery_Fact_Sheet.pdf . Accessed August 2019."	SA2-539	SA2-539	Appendix W of the final EIS has been updated to address this comment.
Update area: 650 acresUnknown	SA2-540	SA2-540	Appendix W of the final EIS has been updated to address this comment.
Rename to describe project: Yukon Flats Basin area oil and gas developmentexploration	SA2-541	SA2-541	Appendix W of the final EIS has been updated to address this comment.
Revise for clarity: The Yukon Flats basin is an underexplored oil/gas bearing sub-basin part ofin interior Alaska. Surface hydrocarbons in soils, along with oil and gas in lakebed sediment cores, indicate the presence of an active thermogenic hydrocarbon system. Oil export is readily available via the Trans Alaska Pipeline System (where capacity is available), and potential gas export availability with the development of the Project (Doyon Limited Oil and Gas Exploration [Doyon], 2015).	SA2-542	SA2-542	Appendix W of the final EIS has been updated to address this comment.

CC-372

SA2 – Alaska Department of Natural Resources and Others (cont’d)

CC-373

Comment	SA2-543	SA2-543	Appendix W of the final EIS has been updated to address this comment.
Clarify area affected: Doyon Limited controls 1.4 million acres in the Yukon Flats area surrounded by the Yukon Flats National Wildlife Refuge, and in 2010 acquired 96 miles of 2D seismic data.	SA2-544	SA2-544	Appendix W of the final EIS has been updated to address this comment.
Update status remove reference to ANWR: Seismic exploratory activities evaluation ongoing, no wells have been drilled. In December 2017, Congress opened up an additional 1.5 million acres for drilling in the Arctic National Wildlife Refuge.	SA2-545	SA2-545	The ADNR should work directly with AGDC regarding any proposed changes to the Unanticipated Contamination Discovery Plan.
"Please update the contact list to include the following: State Pipeline Coordinator is part of the Division of Oil & Gas, not of DMLW. State Park Lands and Alaska Mental Health Land Trust Office are their own offices within ADNR. The contact for State Parks land is DNR-Parks Director's Office at 907-269-8700. Alaska Railroad Corporation is not part of ADNR. Notification to the appropriate DNR Office, preferably by e-mail: Anchorage email dnr.scro.spill@alaska.gov, phone (907) 269-8503; Fairbanks email dnr.nro.spill@alaska.gov, phone (907) 451-2739; "	SA2-546	SA2-546	Comment noted.
Waterways, especially rivers, are common pathways for the spread of invasive species, and extra care should be taken where the project crosses rivers to prevent the spread downstream.	SA2-547	SA2-547	See the response to comment SA2-156.
"What data was used to generate this table? A Creeping thistle infestation was found around Dalton Highway MP 308, which was treated in 2018 and is scheduled to be treated again in 2019. Other species to potentially include: Perennial sowthistle Sonchus arvensis, Common tansy Tanacetum vulgare, Creeping thistle Cirsium arvense, Hempnettle Galeopsis spp, Quackgrass Elymus repens and Chickweed Stellaria media."	SA2-548	SA2-548	See the response to comment SA2-73.
Recommend that AKLNG has the borrow sites certified weed-free gravel through the Alaska Division of Agriculture Weed Free Gravel Certification Program.	SA2-549	SA2-549	See the response to comment SA2-158. Our understanding is that the demand for straw erosion control products on this Project would exceed the available supply of weed-free hay or straw from farmers certified through the Alaska Division of Agriculture Weed Free Forage program.
Recommend that AKLNG acquires its hay and straw bales and/or wattles from within Alaska and from farmers certified through the Alaska Division of Agriculture Weed Free Forage program.	SA2-550	SA2-550	AGDC's proposed seed mixes consist of native grass cultivars developed from seed collected in Alaska. AGDC plans to use commercial suppliers to obtain the quantities of seed needed for the Project.
In addition to using weed-free seed mixes, we recommend using local seeds sources to the greatest extent possible.	SA2-551	SA2-551	AGDC would not be harvesting tundra sod.
Does this also include sod? Will the project save tundra sod removed for trenching to place back on top for after when the trench is backfilled?	SA2-552	SA2-552	For the Alaska LNG Project, AGDC adopted the ASAP Revegetation Plan, which, along with the associated seed mixes, was prepared by the ADNR Plant Materials Center. In addition, AGDC committed to consulting with the ADNR Plant Materials Center for any future changes in seed mixes (see section 4.2 of the Project Revegetation Plan). Instructions for accessing the Project Revegetation Plan were provided in section 2.2-1 of the draft EIS and likewise are provided in table 2.2-1 of the final EIS.
Recommend that AKLNG consult with the Alaska Division of Agriculture Plant Material Center regarding appropriate seed sources for revegetation on state land.			

SA2 – Alaska Department of Natural Resources and Others (cont'd)

Comment
Gravel is a key resource on the North Slope for construction. Whatever gravel can be reused instead of abandoned in place should be stockpiled for future projects to extend gravel resources in mine sites.

SA2-553

SA2-553

Comment noted.

CC-374

SA3 – Senator Click Bishop

20191003-5020 FERC PDF (Unofficial) 10/3/2019 12:42:45 AM

ALASKA STATE LEGISLATURE

Session:
Alaska State Capitol, Room 121
Juneau, Alaska 99801
Phone (907) 465-2327



Interim:
1292 Sadler Way
Fairbanks, Alaska 99701
Phone: (907) 456-8161

Senator Click Bishop

October 2, 2019

Kimberly D. Rose, Secretary
Federal Energy Regulatory Commission
888 First Street Northeast, Room 1A
Washington, D.C. 20426

Re: Docket Number CP17-178-000 – Draft Environmental Impact Statement for the Alaska Gasline Development Corporation's Alaska Liquefied Natural Gas Project

Dear Ms. Rose:

I wholeheartedly support the recommendation that the Alaska Liquefied Natural Gas Project proposed by the Alaska Gasline Development Corporation be selected as the preferred alternative for a liquefied natural gas plant and marine terminal in Nikiski, Alaska. SA3-1

This project will be a boon to my hometown of Fairbanks and communities I have the honor to represent in the Alaska Legislature – Nenana, the Denali Borough, and villages in the upper Yukon River basin – that need a clean source of affordable energy like natural gas.

A natural gas project benefits all Alaska by planting a strong pillar in our resource-driven economy that provides good jobs and a reliable state and local tax base to support schools, roads, public safety, and other services Alaskans need.

Hawaii and the contiguous 48 states, too, stand to gain from this project by the jobs it creates, having an in-country source of energy that helps make our nation more self-sufficient, and improving our country's balance of trade.

Thank you for your consideration and for your public service,

Click Bishop

Senator for District C
Fairbanks, Nenana, Denali Borough, and the Upper Yukon Region

E-Mail: Senator.Click.Bishop@akleg.gov
Website: www.alaskasenate.org/bishop/

SA3-1

Comment noted.

CC-375

SA3 – Senator Click Bishop (cont’d)

20191003-5020 FERC PDF (Unofficial) 10/3/2019 12:42:45 AM
Document Content(s)

Click Bishop on AKLNG Docket Number CP17 178-000.PDF.....1-1

CC-376

SA4 – Representative Gary Knopp

20191004-5120 FERC PDF (Unofficial) 10/4/2019 1:31:42 PM

Representative Gary Knopp

District 30

SESSION:
State Capitol, Room 424
Juneau, AK 99801 - 1183
Phone: 907-465-2693



INTERIM:
145 Main Street Loop, Room 221
Kenai, Alaska 99611
907-283-2690

October 4, 2019

Kimberly D. Rose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426
Project Docket Number CP17-178-000

Dear Ms. Rose,

As Representative of the Alaska State House District neighboring the preferred Nikiski Liquefied Natural Gas Project site, I am writing to voice my support for the project as proposed by the Alaska Gasline Development Corporation. The economic opportunities and potential benefits of a project of this magnitude will reach far beyond the Kenai Peninsula and the State of Alaska.

The proposed gas liquefaction facility will be located in a proven area that has served as a petroleum support and processing site for over five decades. The Draft Environmental Impact Statement finds the long term affect to this community and surrounding wildlife would be insignificant and furthermore the construction phase impact on recreational areas would be temporary and minor.

The wide array of employment opportunities with 980 projected jobs and annual wages estimated at \$385 million will help stabilize the Kenai economy that has seen job opportunities decline in recent years. The additional employment opportunities are wide spread with particular growth expected in the oil and gas, mining support services, construction, transportation, professional, scientific and technical services. This project will also create important opportunities for existing Alaskan businesses with an estimated \$7.1 billion of materials and services purchased in State. Upon completion, this project will bring affordable, reliable natural gas to our smaller communities. Where the benefit of suppling natural gas does not only reduce the monthly bills of residential, commercial and industrial users; it also provides all Alaskans with improved air quality.

With all considered, I respectfully ask that you support the AGDC preferred, Alaska LNG Project Alternative B and site the liquefaction facility at Nikiski.

Thank you for your consideration,

A handwritten signature in black ink that reads "Gary Knopp".

Representative Gary Knopp
District 30

Rep.Gary.Knopp@akleg.gov

SA4-1

SA4-1

Comment noted.

CC-377

SA4 – Representative Gary Knopp (cont'd)

20191004-5120 FERC PDF (Unofficial) 10/4/2019 1:31:42 PM

Document Content(s)

AK LNG Support .docx.PDF.....1-1

CC-378

SA5 – Senator John Coghill

20190930-5157 FERC PDF (Unofficial) 9/30/2019 3:13:34 PM

Chad Hutchison, Fairbanks, AK.
This is Chad Hutchison on behalf of Alaska State Senator John Coghill.

SA5-1

After reviewing the material found here:
<https://www.ferc.gov/industries/gas/enviro/eis/2019/06-28-19-DEIS.asp>;
this office supports Alternative B.

SA5-1

Comment noted.

CC-379

SA5 – Senator John Coghill (cont'd)

20190930-5157 FERC PDF (Unofficial) 9/30/2019 3:13:34 PM

Document Content(s)

92347.TXT.....1-1

CC-380