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March 13, 2019

VIA ELECTRONIC SUBMISSION

Ms. Nicole Hayes
Bureau of Land Management, Alaska State Office
Attention – Coastal Plain EIS
222 West 7th Avenue #13
Anchorage, AK 99513-7599

Re: Comments of the Alaska Oil and Gas Association and American Petroleum Institute on the Bureau of Land Management’s Draft Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program

Dear Ms. Hayes:

This letter provides the comments of the Alaska Oil and Gas Association (“AOGA”) and the American Petroleum Institute (“API”) (together, the “Associations”) in response to the U.S. Bureau of Land Management’s (“BLM”) *Notice of Availability of the Draft Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program*, 83 Fed. Reg. 67,337 (Dec. 28, 2018). The Associations previously submitted respective scoping comments in response to BLM’s related notice of intent.¹ We appreciate BLM’s consideration of the comments set forth below.

I. THE ASSOCIATIONS

AOGA is a professional trade association whose mission is to foster the long-term viability of the oil and gas industry for the benefit of all Alaskans. AOGA’s membership includes 12 companies representing the industry in Alaska that have state and federal interests, both onshore

¹ Letter from Kara Moriarty (AOGA) to Nicole Hayes (BLM) Re: Notice of Intent to Prepare an Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program, Alaska (June 19, 2018); letter from Richard Ranger (API) to Nicole Hayes Re: Comments on Notice of Intent to Prepare an Environmental Impact Statement For the Coastal Plain Oil and Gas Leasing Program, Alaska (June 19, 2018).

and offshore. AOGA's members have a well-established history of prudent and environmentally responsible oil and gas exploration, development, and production in Alaska.

API is a national trade association representing over 625 member companies involved in all aspects of the oil and natural gas industry. API's members include producers, refiners, suppliers, pipeline operators, and marine transporters, as well as service and supply companies that support all segments of the industry. API and its members are dedicated to meeting environmental requirements, while economically developing and supplying energy resources for consumers.²

II. OVERVIEW

The oil and gas industry provides the energy that has made the United States the world's leading producer and refiner today. Through 21st-century innovation and technological advancement, the U.S. oil and gas industry has helped the nation capitalize on its domestic energy abundance with cleaner operations, facilities, and products. Our industry is committed to improving its environmental performance while producing the energy required by a modern economy. Oil and gas are unsurpassed in the attributes that power a modern society, including portability and reliability. This is why energy forecasters project an energy future in which oil and gas continue to be essential for both the United States and the world.

The U.S. Energy Information Administration ("EIA") predicts that, by 2050, petroleum and other liquids (followed closely by natural gas) will remain—by multiple magnitudes—the energy sources most relied upon in the United States to continue to power our economy and to meet the challenges that our dynamic nation will face in the future.³ Indeed, U.S. consumption of oil has increased every year since 2012 and now approximates consumption levels before the Great Recession.⁴ Similarly, world consumption of all primary energy sources, including oil, has grown steadily since 1992.⁵

Congressional approval to open the Coastal Plain for oil and gas development has been a high priority of the State of Alaska, North Slope Borough, Arctic Slope Regional Corporation ("ASRC"), Kaktovik Inupiat Corporation ("KIC"), and the oil and gas industry since 1987 when the Department of the Interior ("DOI") first recommended that action be taken. BLM's Coastal Plain leasing program is in the public interest and fulfills a promise made to the Inupiat People

² By submitting this letter, the Associations do not intend to limit the ability of their individual member companies to submit separate comments or present their own views on the issues discussed in this letter.

³ U.S. EIA, *Annual Energy Outlook 2019*, at 27 (Jan. 24, 2019), www.eia.gov/aeo.

⁴ *BP Statistical Review of World Energy*, at 17 (June 2018), <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/energy-economics/statistical-review/bp-stats-review-2018-full-report.pdf>.

⁵ *Id.* at 10.

on the North Slope of Alaska. Leasing and development of the Coastal Plain will help the United States meet the energy challenges of the future. The EIA projects that the United States will “be a net exporter of liquid fuels on a volume basis from 2029 to 2045, with net exports peaking near 650,000 b/d in 2037.”⁶ To maintain this benefit to the American economy, including the competitive advantage it provides for American manufacturers and the budget relief it provides for American families, access to areas of great energy resource potential like the Coastal Plain will remain vitally important. Otherwise, U.S. net imports are forecasted to increase in 2045, “reaching almost 750,000 b/d in 2050 in the AEO2018 Reference case.”⁷ Significant investment in U.S. production is needed now, prior to that transition point, to both maintain and grow production as production volumes from developed fields, however large, are always in decline. Oil production from the Coastal Plain will significantly help to maintain the energy advantage America now enjoys and will reduce U.S. expenditures on crude oil and petroleum products imports.⁸ In the EIA’s low and high production cases for the Coastal Plain, “cumulative expenditures on imported crude oil and liquid fuels from 2031 through 2050 are about \$200 billion (4%) *lower* and \$595 billion (12%) *lower*, respectively, than in the AEO2018 Reference case.”⁹

BLM’s Draft Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program (“DEIS”) is an important first step toward developing the Coastal Plain to ensure that these projections are realized. In general, the DEIS is well-organized and provides a thorough analysis of reasonably foreseeable impacts of a Coastal Plain leasing program. The Associations appreciate that the DEIS is responsive to the congressional mandate to implement a Coastal Plain leasing program and that it properly analyzes the anticipated future effects of development and production consistent with the National Environmental Policy Act (“NEPA”). The DEIS provides a wide-ranging analysis of the potential environmental impacts that could result from various leasing alternatives. In addition, the DEIS describes each component of the affected environment followed immediately by an analysis of the potential impacts to that environmental component, making BLM’s analysis accessible and easy to follow. The Associations nevertheless believe that improvements and clarifications to the DEIS are necessary to properly frame alternatives and to ensure that analyzed mitigation measures are practicable and effective.

⁶ Dana Van Wagener, U.S. EIA, *Analysis of Projected Crude Oil Production in the Arctic National Wildlife Refuge* (May 23, 2018), <https://www.eia.gov/outlooks/aeo/anwr.php>.

⁷ *Id.*

⁸ *Id.*

⁹ *Id.* (emphases added).

Section IV below provides the Associations' detailed comments on the DEIS. These comments are summarized as follows:

- The DEIS's Purpose and Need statement properly characterizes the congressional mandate to establish and administer a competitive oil and gas leasing program for the development, production, and transportation of oil and gas in and from the Coastal Plain. However, the Purpose and Need statement indicates that the Final Environmental Impact Statement ("FEIS") is being prepared to support the requirement to "hold multiple lease sales." BLM should modify the Purpose and Need statement to make clear that such lease sales must allow for the eventual development, production, and transportation of oil and gas in and from the Coastal Plain in order to meet the Purpose and Need. In other words, the clear congressional mandate is not merely to hold a lease sale, but rather to manage the federal lands in the Coastal Plain for oil and gas development.
- BLM interprets a statutory 2,000-acre limit on surface occupancy to apply to production and support facilities on rights-of-way ("ROWs") and easements in addition to leased lands. BLM bases this interpretation on Congress's inclusion of ROWs and easements in the program's authorizing statute. However, the statutory language and legislative history are clear that Congress directed BLM to authorize development of up to 2,000 surface acres of federal lands *separate from and in addition to* any federal lands subject to ROWs or easements. The FEIS must be modified accordingly to provide for the development of up to 2,000 surface acres of federal land, not including ROWs or easements.
- BLM lacks authority to impose broad surface occupancy restrictions. Congress has already spoken to surface development by limiting production and support facilities to 2,000 acres. Congress granted BLM no authority to impose additional surface restrictions. Consistent with this intent, Congress directed BLM to administer the Coastal Plain program in a manner similar to its administration of the National Petroleum Reserve-Alaska ("NPR-A"). BLM's inclusion of no surface occupancy ("NSO") stipulations for all of the development alternatives considered in the DEIS conflicts with this mandate. BLM should issue an FEIS that does not include broad NSO restrictions, consistent with Congress's instruction.
- BLM proposes to reevaluate the adequacy of the FEIS for the second and any subsequent lease sales. The Associations support this approach, which is consistent with NEPA's implementing regulations and BLM's own NEPA handbook. However, a reference to fulfilling NEPA requirements "at least through December 2027" is irrelevant and should not be included in the FEIS.
- Alternatives C, D1, and D2 are not consistent with the DEIS's Purpose and Need and should not be included as reasonable alternatives in the FEIS as currently drafted. Each of these alternatives would so drastically restrict future development options by limiting access to large areas of the Coastal Plain that they would effectively prevent the

establishment of a reasonable, competitive oil and gas program there. Developable areas would be so small, isolated, and removed that they would not support integrated development with sharing of infrastructure such as roads, barge landings, or seawater treatment plants. Broad, unjustified NSO restrictions and setbacks would further limit potential development and prevent investments in surveys and infrastructure necessary to develop the Coastal Plain as contemplated by Congress. Because Alternatives C, D1, and D2 do not meet the Purpose and Need, they are not reasonable and should not be analyzed in the FEIS as proposed. These alternatives should be modified to remove broad NSO restrictions and setbacks.

- If BLM retains Alternatives C, D1, and D2 notwithstanding these comments, BLM's "reasonably foreseeable development scenario" developed for the purpose of evaluating the potential environmental impacts of hypothetical development activities must be revised to reflect industry's view that development is unlikely to occur under these alternatives. With regard to Alternative B, the DEIS's "reasonably foreseeable development scenario" provides an appropriate framework to consider the potential impacts of the leasing program under NEPA. However, the hypothetical scenario can be improved through incorporation of the Associations' comments regarding the likely development timeframe and other infrastructure considerations.
- The Associations have a number of comments regarding BLM's proposed stipulations and required operating procedures ("ROPs"). Some conditions are not practicable or require factual correction, whereas other conditions lack evidence showing that they are necessary or would be effective. BLM should address each of the Associations' comments, which are provided in Attachment A, to ensure that the Coastal Plain program lease conditions are necessary, feasible, and effective. In addition, BLM should clarify that the U.S. Fish and Wildlife Service's ("FWS") land management authority on the Coastal Plain is subject to and must be exercised consistently with the direction and purpose set forth by Congress for BLM to "provide for an oil and gas program on the Coastal Plain."
- The DEIS's discussion of climate and meteorology is well-organized, clear, and defensible. The Associations agree with the DEIS's acknowledgement of the potential greenhouse gas ("GHG")-related benefits that are likely to be realized through Coastal Plain development from availability of natural gas to Kaktovik. However, the Associations have specific comments on inaccuracies and recommendations for modifying the language to better reflect differences between the Coastal Plain and other oil and gas development areas, particularly as it relates to emission intensity and fugitive emissions from leaks.
- The DEIS's analysis of potential impacts to caribou is well-written but contains some outdated and incomplete data, the result of which is an exaggeration of potential adverse effects of oil and gas development on caribou and the likelihood of those effects. In

particular, the DEIS overstates the impact of road crossing delays and aircraft noise and should be revised to recognize that a herd's reaction to infrastructure may lessen with habituation. In addition, the DEIS's presentation of potential impacts to calving fails to acknowledge data indicating that a significant amount of calving can be expected to continue near oil and gas infrastructure, and that the Porcupine Caribou Herd does not annually use this area to calve. The FEIS should incorporate the additional data and information provided in these comments regarding caribou calving and the low likelihood of potential adverse effects to caribou.

- The DEIS must be revised to include a more complete depiction of polar bear denning and potential impacts to polar bears, and of the industry's standard practices to avoid disturbing or harassing polar bears. Specifically, the DEIS's annual maternal den estimate, which is based on a personal communication and extrapolates from a series of other unknown estimates, is not consistent with the number of maternal dens documented in the program area over the last 40 years. The FEIS should include a maternal denning estimate that is based on the best available scientific information and should clearly and transparently identify the sources of that information. Furthermore, the DEIS overstates the potential impacts from oil and gas activities to maternal denning and the potential for such activities to result in disturbance, harassment, injury, or death. The FEIS should reflect the oil and gas industry's history of implementing procedures, training, mitigation measures, and best practices for human-polar bear interactions that minimize the potential for polar bear disturbance or harassment.

In addition to these comments, the Associations include a list of additional technical corrections and comments in Attachment B. The Associations encourage BLM to make the clarifications and corrections described in greater detail in Section IV, below, and in Attachments A and B, to ensure the faithful implementation of a Coastal Plain leasing program. We sincerely appreciate BLM's consideration of these comments, which are constructively intended to improve and provide necessary clarity in the FEIS.

III. BACKGROUND: ARCTIC ALASKA OIL AND GAS DEVELOPMENT

Alaska's oil and gas industry has a history of safe, effective, and environmentally responsible development of Arctic Alaska spanning five decades. The record of development on Alaska's North Slope and associated offshore areas provides strong support for BLM's proposed leasing program for the Coastal Plain, also known as the "1002 Area." In addition, due to its proximity to existing infrastructure, the Coastal Plain provides a key opportunity to develop "advantaged oil"—that is, oil that can be produced with significant reliance on existing infrastructure, thus reducing the overall cost and footprint of development.

Development of the North Slope began in the early 1960s just after Alaska Statehood. In 1964, the State held its first North Slope lease sale. The massive Prudhoe Bay field was discovered in 1968. To resolve outstanding Alaska Native claims to land title throughout Alaska and facilitate

development of the Prudhoe Bay oilfield and construction of the Trans-Alaska Pipeline system (“TAPS”), Congress in 1971 enacted the Alaska Native Claims Settlement Act (“ANCSA”). ANCSA established 12 Alaska land-based regional corporations and over 200 village corporations which were granted 44 million acres of land, including subsurface rights, and which received nearly a billion dollars as compensation for the land lost. Each of the regional and village corporations in each area could “select” certain lands. The lands granted were expected to enable the newly created for-profit corporations to produce returns for their shareholders, in part by resource development. One of the eight North Slope villages that owed land selection rights was the village of Kaktovik, which sits within the geographic boundary of the Arctic National Wildlife Refuge (“ANWR”) adjacent to the Coastal Plain. The village of Kaktovik, through its village corporation, KIC, selected approximately 92,000 surface acres on land adjacent to its village and has since been allowed to select an additional 5,000 acres.

In 1980, 16 National Wildlife Refuges were created in Alaska, including the 19.3-million-acre ANWR. Although within ANWR boundaries, the selected KIC lands remain as private inholdings.¹⁰ Oil and gas development on the KIC lands was also prohibited until enactment of the Tax Cuts and Jobs Act lifted the prohibition.¹¹

In its 40-plus years of production, the North Slope has produced, and TAPS has delivered, over 17 billion barrels of oil. It is without dispute that this production has provided unparalleled economic and social benefits to the State of Alaska, Alaska Native organizations, municipalities, and all of Alaska’s citizens. This action brought tens of thousands of people out of poverty and into our modern world as we now know it. To this day, the oil and gas industry remains the backbone of Alaska’s economy. Over 103,000 Alaska jobs are attributable to oil and gas investment and activity, which represents 32% of all Alaska jobs and 35% of all Alaska wages. The oil and gas industry has contributed over \$150 billion (not adjusted for inflation) to the State of Alaska through royalties and taxes, and provides the largest cash contribution to the Alaska Permanent Fund.

These benefits have been produced through an established record of safe and environmentally responsible development that is respectful of all of Alaska’s natural resources. This outstanding record stems in significant part from an industry commitment to employing best management practices (“BMPs”) and providing extensive training programs for North Slope workers, such as the mandatory safety training course provided through the industry-organized North Slope Training Cooperative.¹² The associated Alaska Safety Handbook provides standardized safety procedures, including BMPs, for Alaska oil and gas operations. Additionally, the North Slope

¹⁰ See Cong. Research Serv., *Arctic National Wildlife Refuge: An Overview*, at 7-8 (Jan. 8, 2018) (summarizing history of land selections).

¹¹ See *infra* Section IV.A.

¹² See North Slope Training Cooperative, <http://nstc.apicc.org/>.

Environmental Field Handbook provides best environmental practices and standardized measures for compliance with environmental regulations. This standardization ensures that employees and contractors implement a consistent set of safe and responsible practices and procedures.

The development of the North Slope also has an impressive record of environmental stewardship and innovation. For example, oil and gas operators and FWS jointly developed procedures, training, and best practices for managing human-polar bear interactions that set the global gold standard for human-bear interactions and have been repeatedly recognized as a success.¹³ This program establishes detailed plans and procedures that, *inter alia*, reduce and manage oilfield attractants to polar bears, outline a chain-of-command for responding to any polar bear, and provide polar bear awareness and response training for employees.¹⁴ The oil and gas industry has invested millions of dollars into this program and related polar bear research, monitoring, and infrastructure modifications.¹⁵ Responsible industry practices have also ensured that polar bear denning in the vicinity of oil and gas operations has been carefully monitored and protected to allow for the successful emergence of the sow and cub(s). Indeed, even in FWS's rule listing the polar bear as a "threatened species," FWS expressly recognized that the oil and gas industry has a "beneficial record of protecting polar bears" and that Alaska oil and gas activities have "minimal" impacts that have *no* contribution to the bear's listed status.¹⁶

Similarly, oil and gas operators regularly employ caribou mitigation measures, such as avoidance of off-road travel during and after peak caribou calving, to minimize potential impacts during the calving season, specifications for pipelines and roads to allow for unaltered caribou movement,

¹³ See 73 Fed. Reg. 28,306, 28,314 (May 15, 2008) (special rule) (program has "proven to be beneficial to the conservation of marine mammals such as the polar bear"); 73 Fed. Reg. 28,212, 28,266 (May 15, 2008) (listing) (program has "proven to be highly successful in providing for polar bear conservation in Alaska").

¹⁴ See 73 Fed. Reg. at 28,311 ("The intent of the interaction plan and training activities is to allow for the early detection and appropriate response to polar bears that may be encountered during operations, which eliminates the potential for injury or lethal take of bears in defense of human life. By requiring such steps be taken, we ensure any impacts to polar bears will be minimized and will remain negligible.").

¹⁵ For example, the industry conducts annual den detection surveys in December, prior to the start of winter off-road activities. Den surveys are typically done from an aerial fixed wing or rotor platform and use infrared technology/cameras to identify putative dens. Putative dens are then confirmed on the ground and/or avoided with a buffer zone to mitigate against potential impacts to denning bears.

¹⁶ 73 Fed. Reg. at 28,241, 28,266, 28,284; see *id.* at 28,266 ("Oil and gas exploration, development, and production activities do not threaten the [polar bear] species throughout all or a significant portion of its range").

and seasonal speed restrictions on vehicles. These measures are largely effective in mitigating oil and gas activity impacts to caribou.¹⁷

Additionally, innovations in drilling technology have reduced the geographical footprint of oil development while, in certain circumstances, increasing the amount of resources that can be reached. Multilateral wells or sidetracked wells minimize surface facilities and well footprints. As a result of these technological advances, drill pad size has shrunk from 65 acres in 1970 to as little as 12 acres today. These advances demonstrate that oil and gas can be produced efficiently in Arctic Alaska with a minimal geographic footprint and, consequently, with minimal environmental impact. This impact will only continue to lessen as the industry continues to innovate.

Finally, oil produced from the Coastal Plain will have practical benefits. Along with oil from the NPR-A, Coastal Plain oil will add volume to TAPS just as state resources diminish, helping to maintain flow and temperature levels. As referenced above, Coastal Plain oil is “advantaged oil” because of its close proximity to existing infrastructure. This reduces the overall cost and footprint of new development, minimizing the impacts of oil production and transportation on the surrounding environment.

In sum, the development of Arctic Alaska’s oil and gas resources has produced enormous economic, social, and scientific benefits while simultaneously minimizing environmental impacts and protecting Alaska’s natural resources.¹⁸ This record of experience and knowledge, along with continued industry innovations, provides a sound basis for the safe and responsible exploration and development of the Coastal Plain, proven by a half-century of responsible development on the North Slope.

¹⁷ See, e.g., Alaska Dep’t of Fish & Game, Central Arctic Caribou Herd News, at 2 (Winter 2016-17), http://www.cookinletarchers.com/central_arctic_caribou_herd_news_winter_2016_2017.pdf (“The impact of oil infrastructure on [the Central Arctic caribou herd] has also been considered, but is not thought to be contributing to the decline since the herd grew substantially during peak oil development.”); Brian E. Lawhead et al., BLM, *A Literature Review and Synthesis on the Effect of Pipeline Height on Caribou Crossing Success* (Apr. 2006); Lynn E. Noel et al., *Caribou Distribution Near an Oilfield Road on Alaska’s North Slope, 1978-2001*, 32 *Wildlife Soc’y Bull.* 757 (2004), <https://www.uaf.edu/files/snre/Publications/Cronin/14%20Noel%20et%20al%202004%20WSB%20MPU%20caribou.pdf>; Matthew A. Cronin et al., *Mitigation of the Effects of Oil Field Development and Transportation Corridors on Caribou* (July 1994), http://www.arlis.org/docs/vol2/point_thomson/1011/1011A_~1.pdf.

¹⁸ See, e.g., 73 Fed. Reg. at 28,289 (“[T]he actual history of oil and gas activities in the Beaufort and Chukchi Seas demonstrate that operations have been done safely and with a negligible effect on wildlife and the environment.”).

IV. DETAILED COMMENTS

A. The FEIS must be consistent with the Tax Cuts and Jobs Act.

In 1960, the Arctic National Wildlife Range was established by Public Land Order 2214.¹⁹ In 1980, the Alaska National Interest Lands Conservation Act (“ANILCA”) expanded the Range and renamed it the Arctic National Wildlife Refuge.²⁰ As to the 1002 Area, ANILCA expressly directed the Secretary of the Interior to carry out an oil and gas exploration program, assess and report on the results of that program, and conduct baseline studies evaluating the impacts of potential oil and gas activities on fish, wildlife, habitat, and subsistence.²¹ Congress also contemplated the development and production of oil and gas from the 1002 Area by specifically directing the Secretary to report on, *inter alia*, (i) the estimated volume of oil and gas reserves in the area; (ii) the potential adverse effects of carrying out exploration, development, and production of oil and gas in the area; and (iii) how produced oil and gas could be transported.²² ANILCA, as enacted, prohibited the leasing and development of oil and gas in the 1002 Area “until authorized by an Act of Congress.”²³

In keeping with ANILCA’s directive, DOI commissioned more than 1,300 miles of seismic exploration lines in the 1002 Area by a petroleum-industry consortium from 1983 to 1985.²⁴ In 1987, based on the seismic analysis and other data, DOI published a report and Environmental Impact Statement (“EIS”) recommending that Congress take action to open the 1002 Area to oil and gas leasing and to develop an oil and gas leasing program. Based upon seismic and data analysis methods available at that time, the 1987 Report described 4.8 to 29.4 billion barrels of in-place oil in seven plays. Of that amount, an estimated 3.2 billion barrels (mean) were determined to be conditional recoverable oil resources (based on the technology then available). The 1987 Report described the 1002 Area as “the Nation’s best single opportunity to increase significantly domestic oil production” and the “most outstanding petroleum exploration target in

¹⁹ Public Land Order 2214, Establishing the Arctic National Wildlife Range (Dec. 6, 1960).

²⁰ ANILCA, Pub. L. No. 96-487, 94 Stat. 2371 (1980). ANILCA is codified in various titles of the U.S. Code related to the subject matter or department addressed. The ANILCA sections pertinent to oil and gas leasing in the 1002 Area are sections 303 and 1002, *et seq.*, codified at 16 U.S.C. § 668dd (Note) and 16 U.S.C. § 3142, *et seq.* respectively.

²¹ ANILCA § 1002(c).

²² *Id.* § 1002(h).

²³ *Id.* § 1003.

²⁴ U.S. Dep’t of Interior, Arctic National Wildlife Refuge Alaska, Coastal Plain Resource Assessment: Report and Recommendation to the Congress of the United States and Final Legislative Environmental Impact Statement, at 3 (Apr. 21, 1987) (“1987 Report”).

the onshore United States.”²⁵ In 1995, Congress responded to DOI’s recommendation by passing a bill directing BLM to “establish and implement a competitive oil and gas leasing program” for the 1002 Area.²⁶ Despite the Executive Branch’s earlier recommendation to Congress to pass such legislation, President Clinton overrode Congress’s (and DOI’s) intent and vetoed the bill.

In 1998, the U.S. Geological Survey (“USGS”) updated the 1987 Report’s analysis and assessed the 1002 Area’s petroleum resources by reprocessing and reinterpreting the 1983-85 data.²⁷ USGS’s 1998 Assessment estimated at least 11.6 billion barrels of in-place oil, which more than doubled the 4.8 billion barrels estimated in the 1987 Report. The 1998 Assessment further estimated 7.7 billion barrels (mean) of technically recoverable oil in 10 potential plays.²⁸ This new analysis provided valuable insight and reaffirmed the significant potential for oil and gas development in the 1002 Area.²⁹ Although numerous bills were introduced over almost 20 years following USGS’s report, political gridlock prevented Congress from authorizing oil and gas leasing in the 1002 Area, as originally recommended by DOI in response to ANILCA’s mandate.

In 2017, Congress broke the decades-long political gridlock. Specifically, Congress passed Public Law No. 115-97—the Tax Cuts and Jobs Act (“Tax Act”)—which includes a stand-alone title that expressly directs the Secretary of the Interior to “establish and administer a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain.”³⁰ Congress placed specific parameters on the establishment and administration of the leasing program, namely:

- The Secretary shall offer at least two area-wide lease sales within 10 years;
- Each lease sale shall offer no fewer than 400,000 acres area wide;
- The lease sales shall offer the areas of highest potential for the discovery of hydrocarbons;

²⁵ *Id.* at vii.

²⁶ H.R. 2491, 104th Cong. § 5333 (1995). The Arctic Coastal Plain Leasing and Revenue Act of 1995 is found at H.R. 2491 §§ 5331-5344.

²⁷ USGS, Arctic National Wildlife Refuge, 1002 Area, Petroleum Assessment, 1998, Including Economic Analysis, Fact Sheet 0028-01: Online Report, <https://pubs.usgs.gov/fs/fs-0028-01/fs-0028-01.htm> (last modified Nov. 29, 2016) (“1998 Assessment”).

²⁸ Although the 1987 Report and 1998 Assessment both reported technically recoverable petroleum resources, the methodologies were too dissimilar to allow these amounts to be compared.

²⁹ New analysis by the U.S. EIA predicts an additional 3.4 billion barrels in crude oil production between 2031 and 2050. U.S. EIA, *Analysis of Projected Crude Oil Production in the Arctic National Wildlife Refuge*, at 5 (May 2018).

³⁰ Pub. L. No. 115-97, § 20001(b)(2)(A), 131 Stat. 2054 (2017).

- The initial lease sale shall be offered not later than December 21, 2021;
- A second lease sale shall be offered not later than December 21, 2024;
- The Secretary shall issue any ROWs or easements across the Coastal Plain for the exploration, development, production, or transportation necessary to carry out the program; and
- The Secretary shall authorize up to 2,000 surface acres of federal land to be covered by production and support facilities during the term of the leases.³¹

Notably, the Tax Act also directs the Secretary to manage the program in a manner similar to the administration of the NPR-A.³²

As described in the subsections below, BLM must make certain revisions to the DEIS for consistency with the Tax Act. Specifically, BLM must: (1) ensure that the FEIS includes a complete Purpose and Need statement consistent with congressional intent; (2) correct its application of the 2,000-acre surface area occupancy restriction; and (3) remove broad surface occupancy restrictions and setbacks at this leasing stage and allow area-wide access in the exploration phase, allowing appropriate surface mitigation measures to be determined later, once development plans are proposed.

1. The Purpose and Need statement must support the eventual development, production, and transportation of oil and gas.

The DEIS's Purpose and Need statement properly characterizes the Tax Act as requiring the Secretary of the Interior, acting through BLM, to "establish and administer a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain."³³ The Purpose and Need statement goes on to explain that the FEIS will inform BLM's implementation of subsection (c)(1) of the statute—*i.e.*, "the requirement to hold multiple lease sales."³⁴ However, the FEIS must also inform and support the broader congressional mandate to not only hold lease sales, but to "establish" a program for the "development, production, and transportation" of oil and gas on the Coastal Plain.³⁵

³¹ *Id.* § 20001(c).

³² *Id.* § 20001(b)(3).

³³ DEIS at 1-1.

³⁴ *Id.* at 1-2.

³⁵ Pub. L. No. 115-97, § 20001(b)(2)(A).

The Purpose and Need statement should be clear that leases or lease stipulations that would not allow for exploration and the eventual development, production, and transportation of oil and gas in and from the Coastal Plain will not meet the Tax Act’s requirements. The Associations request that the FEIS include a revised Purpose and Need statement reflecting not only BLM’s obligation to hold multiple lease sales, but also that such lease sales must be conducted in a manner that will allow for the development, production, and transportation of oil and gas in and from the Coastal Plain, as directed by Congress.

2. Congress intended the 2,000 surface acre limit to apply only to leased areas.

As noted above, the Tax Act requires BLM to authorize “up to 2,000 surface acres of Federal land on the Coastal Plain to be covered by production and support facilities”³⁶ In describing how it will apply this limitation, BLM interprets the 2,000 surface acre limit to include production and support facilities on both leased lands and ROWs and easements located on non-leased lands.³⁷ BLM provides little explanation for this interpretation, stating only that the Tax Act provides for the issuance of ROWs and easements, pursuant to which production and support facilities may be constructed.³⁸ These are, however, distinct and separate statutory provisions addressing independent mandatory requirements for execution of the oil and gas program.

First, with respect to ROWs and easements, the language of the Tax Act clearly directs that “[t]he Secretary *shall issue any rights-of-way or easements across the Coastal Plain for the exploration, development, production, or transportation necessary to carry out this section.*”³⁹ The legislation at subsection (c)(3) separately addresses surface occupancy for the separate purposes of “production and support facilities”—which are not within ROWs or easements.

This plain statutory language is confirmed by the Joint Explanatory Statement of the Committee of Conference,⁴⁰ which makes clear that Congress did *not* intend for facilities on ROWs or easements to count toward the 2,000-acre limitation:

³⁶ *Id.* § 20001(c)(3).

³⁷ DEIS at 1-6.

³⁸ *Id.*

³⁹ Pub. L. No. 115-97, § 20001(c)(2) (emphases added).

⁴⁰ A joint explanatory statement is the most reliable piece of legislative history in ascertaining congressional intent. See Richard J. McKinney & Ellen A. Sweet, *Federal Legislative History Research: A Practitioner’s Guide to Compiling the Documents and Sifting for Legislative Intent*, <https://www.llsdc.org/federal-legislative-history-guide> (last revised July 2015) (“in a legislative history of a U.S. public law, the greatest weight is usually accorded to the joint explanatory statement in a bill’s conference report”).

The legislation directs the Secretary to issue any necessary rights-of-way or easements across the Coastal Plain for the exploration, development, production, or transportation associated with the oil and gas program. *Additionally*, the section authorizes the development of up to 2,000 surface acres of federal land on the Coastal Plain.^[41]

This statement plainly shows that, through the Tax Act, Congress directed BLM to allow development of up to 2,000 surface acres of federal lands *in addition to*—not inclusive of—any federal lands subject to ROWs or easements.⁴² The FEIS must be modified accordingly, and the Coastal Plain oil and gas lease program should provide for the development of up to 2,000 surface acres of federal land, *not* including ROWs or easements.

3. The DEIS’s NSO provisions and setbacks conflict with Congress’s mandate under the Tax Act.

The broad, categorical NSO restrictions and extensive setbacks proposed by BLM are inconsistent with the Tax Act and the intent of Congress. Congress set the applicable limit on surface facility development at 2,000 acres,⁴³ a minimal footprint in the 1.5635-million-acre Coastal Plain area and the 19.3-million-acre Arctic Refuge. This reflects Congress’s considered determination of the permissible footprint for the oil and gas program it mandated and the appropriate balance for protection of other resources. While surface protection and mitigation measures can be appropriately considered as the NEPA and permitting processes move forward to review specific development proposals, the NSO stipulations proposed at this initial stage comprise *a priori* prohibitions on surface use which Congress did not authorize. Sweeping limitations on development never considered by Congress upset the balance it intended and compromise the oil and gas program it established. In short, Congress has already spoken to surface development by limiting production and support facilities to 2,000 acres. Congress did not authorize BLM to further limit surface occupancy.

Relevant provisions of the Tax Act demonstrate that Congress intended to establish an oil and gas program throughout the Coastal Plain, not one with additional limits on surface development. Thus, Congress directed that the prohibition in ANILCA section 1003 on development and

⁴¹ H.R. Rep. No. 115-466, at 675 (2017) (emphasis added).

⁴² The legislative history does not speak to other aspects of BLM’s interpretation of the 2,000-acre limit, which BLM properly interprets to include only those portions of oil and gas facilities that actually touch the land’s surface, and to exclude ice roads and reclaimed acreage formerly containing production and support facilities.

⁴³ Pub. L. No. 115-97, § 20001(c)(3) (“Surface development. In administering this section, the Secretary shall authorize up to 2,000 surface acres of Federal land on the Coastal Plain to be covered by production and support facilities”).

production of oil and gas “shall not apply to the Coastal Plain.”⁴⁴ Instead, Congress made it a purpose of ANWR under section 303(b)(2) of ANILCA “to provide for an oil and gas program on the Coastal Plain.”⁴⁵ In the same section, Congress affirmatively mandated establishment of an oil and gas program “in and from the Coastal Plain.”⁴⁶ To carry out these provisions, Congress directed that the Secretary “shall issue any rights-of-way or easements *across the Coastal Plain* ... necessary to carry out this section.”⁴⁷ Congress required “area-wide” leasing sales and directed that the sales “shall offer... those areas that have the highest potential for the discovery of hydrocarbon.”⁴⁸ These provisions affirmatively direct the establishment of an “area-wide” oil and gas program “across the Coastal Plain,” including the as-yet-unknown “areas of the highest potential” for hydrocarbons.⁴⁹

The DEIS’s proposed NSO restrictions and extensive setbacks are inconsistent with the Tax Act’s requirement that BLM establish an “area-wide” program that includes those areas that have the highest potential for the discovery of hydrocarbons. The limited and dated subsurface data currently available does not allow for identification of the areas with the highest potential for hydrocarbon development. To carry out the intent of Congress, BLM must adopt a leasing approach that first allows for early area-wide access before considering area closures or limits on surface occupancy. The FEIS must recognize the importance of a thorough seismic acquisition and exploratory drilling period by lease holders in order to identify the areas with highest potential for hydrocarbon development, consistent with congressional intent.

Moreover, as discussed below, the consequences of the approach set forth in the DEIS, if adopted, could as a practical matter defeat the Purpose and Need of the leasing program. To carry out Congress’s intent, BLM must adopt an approach that allows for up-to-date geological and geophysical data acquisition and initial exploratory drilling. BLM should impose

⁴⁴ *Id.* § 20001(b) (“Oil and Gas Program.-- (1) In general.--Section 1003 of the Alaska National Interest Lands Conservation Act (16 U.S.C. 3143) shall not apply to the Coastal Plain.” (citing ANILCA prohibition on oil and gas leasing in ANWR “until authorized by an Act of Congress”)).

⁴⁵ *Id.* § 20001(b)(2)(B) (amending section 303(2)(B) of ANILCA to “provide for an oil and gas program on the Coastal Plain”).

⁴⁶ *Id.* § 20001(b)(2)(A) (“The Secretary shall establish and administer a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain.”).

⁴⁷ *Id.* § 20001(c)(2) (emphasis added).

⁴⁸ *Id.* § 20001(c)(1)(A) (“[T]he Secretary shall conduct not fewer than 2 lease sales area-wide under the oil and gas program under this section The Secretary shall offer for lease under the oil and gas program under this section-- (I) not fewer than 400,000 acres area-wide in each lease sale; and (II) those areas that have the highest potential for the discovery of hydrocarbons.”).

⁴⁹ *Id.*

development-related mitigation measures based on site-specific information, and only after the areas with the highest potential for hydrocarbon development have been identified.

This plain intent of the Tax Act is further confirmed by the requirement that BLM manage the Coastal Plain program “in a manner similar to the administration of lease sales” for the NPR-A under the Naval Petroleum Reserves Production Act of 1976 (“NPRPA”), “including [its] regulations.”⁵⁰ BLM’s inclusion of NSO stipulations for all of the development alternatives at this stage in the leasing process conflicts with this mandate. Neither the NPRPA nor its implementing regulations established an NSO regime across large swaths of the NPR-A, as does the DEIS. Rather, the NPRPA provides specific protection of surface areas where needed.⁵¹ Further, BLM’s NPR-A regulations contemplate that special stipulations may be set forth in the notice of sale, but “[a]dditional stipulations needed to protect surface resources and special areas may be imposed *at the time the surface use plan and permit to drill are approved.*”⁵² Consistent with these regulations, the NPR-A leasing EIS did not include broad NSO restrictions on lands offered for leasing.⁵³

⁵⁰ *Id.* § 20001(b)(3).

⁵¹ The NPRPA rescinded previous withdrawals for the Reserve under 42 U.S.C. § 6502 “for the purposes of the oil and gas leasing program authorized under this section” and instead provided for protection of surface areas where needed. *See* 42 U.S.C. § 6506(a)(e); *see, e.g., id.* § 6504(a) (exploration in certain areas “shall be conducted in a manner which will assure the maximum protection of such surface values to the extent consistent with the requirements of this Act for the exploration of the reserve”); *id.* § 6506(b) (authorizing Secretary to impose such conditions, restrictions, and prohibitions as deemed necessary or appropriate to mitigate reasonably foreseeable and significantly adverse effects on the surface resources of the NPR-A).

⁵² 43 C.F.R. § 3131.3 (emphasis added); *see also id.* § 3162.3-1(c) (Lessee must “submit to the authorized officer for approval an Application for Permit to Drill for each well. No drilling operations, nor surface disturbance preliminary thereto, may be commenced prior to the authorized officer’s approval of the permit.”).

⁵³ The NPR-A EIS included “Special Areas” related to specific resources on lease program lands, but was explicit that a Special Area designation “does not itself impose specific protections, but instead highlights areas and resources for which the BLM will extend ‘maximum protection’ consistent with exploration of the Reserve.” BLM, National Petroleum Reserve-Alaska Final Integrated Activity Plan/Environmental Impact Statement, at 17 (Nov. 2012), https://eplanning.blm.gov/epl-front-office/projects/nepa/5251/41003/43153/Vol1_NPR-A_Final_IAP_FEIS.pdf. Similarly, areas designated as having “exceptionally important surface resources,” such as the Teshekpuk Lake Caribou Habitat Area and the Teshekpuk Lake Goose Molting Area, were “not in themselves administrative or legislative designations,” and carried no formal special status, but instead were “simply areas that the BLM has identified through the planning process where resource concerns are provided special protections.” *Id.*; *see also N. Alaska Envtl. Ctr. v. Kempthorne*, 457 F.3d 969, 976 (9th Cir. 2006) (describing NPR-A leases as “more like the ‘non NSO leases’” which “authorize the lessees to undertake development subject to government regulation of surface disturbing activities”).

As BLM's NPR-A regulations recognize, it is premature to make broad assumptions about the appropriateness of surface occupancy across large swaths of land at this time. Surface use restrictions cannot be reasonably or appropriately defined at this early stage. Moreover, many of the proposed NSO restrictions and setbacks go far beyond mitigation measures effectively employed for decades across the North Slope to protect sensitive areas, water bodies, wetlands, polar bears, caribou, and other natural resources. BLM should make determinations on the appropriateness of surface occupancy restrictions as compared to other successfully deployed mitigation measures based on site-specific analyses of reservoir targets, the best available technology, and site-specific wildlife studies, as is done in the NPR-A. The Associations request that BLM revise the FEIS to remove these overly broad NSO restrictions and setbacks to ensure that the contemplated lease sales are administered in a manner consistent with the Tax Act.

B. BLM's proposal to evaluate the adequacy of the FEIS in future phases is consistent with NEPA's implementing regulations and BLM's NEPA handbook.

The Associations agree with BLM's approach to satisfying NEPA for each phase of the proposed leasing program. Specifically, the DEIS explains that the first lease sale will be conducted pursuant to the FEIS. Before conducting the second and any subsequent lease sales, BLM "will evaluate the adequacy of the [FEIS] in light of new information and circumstances to determine whether it requires supplementation or revision in order to comply with NEPA."⁵⁴ This approach is consistent with NEPA's implementing regulations and BLM's own NEPA handbook.⁵⁵ In light of this, the DEIS's reference to fulfilling NEPA requirements "at least through December 2027" is irrelevant and should not be included in the FEIS.⁵⁶

C. Alternatives C, D1, and D2 do not meet the DEIS's Purpose and Need.

The DEIS sets forth four development alternatives, all of which would impose significant limitations and conditions on future development and BLM decision-making. The DEIS asserts that all four of these alternatives would meet the Purpose and Need—*i.e.*, to "establish and administer a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain."⁵⁷ In fact, however, Alternatives C,

⁵⁴ DEIS at 1-5.

⁵⁵ 43 C.F.R. § 46.120(c) (providing for use of existing environmental analysis for subsequent action upon determination that it adequately assesses the environmental effects of the proposed action and reasonable alternatives); *see* U.S. Dep't of Interior, BLM, *National Environmental Policy Act Handbook*, H-1790-1, § 5.1 (Jan. 30, 2008) (instructing officials to review existing environmental documents and answer several questions geared at determining whether a prior document adequately analyzes a proposed action).

⁵⁶ *See* DEIS at 1-5.

⁵⁷ *Id.* at 2-1.

D1, and D2 would drastically restrict future development options and constrain BLM's future decision-making authority, effectively precluding establishment of a reasonable, competitive oil and gas program in the Coastal Plain. Alternative C would allow surface occupancy on just 40% of the area offered for leasing. Alternatives D1 and D2 would *remove 33%* of the Coastal Plain from the leasing program entirely and then allow surface occupancy on only *32% of the remaining lands*. By comparison, while BLM removed large areas from the NPR-A leasing area for mitigation purposes, the preferred alternative still made 11.8 million contiguous acres available to surface occupancy leasing—over 18 times the number of surface acres that would be available to leasing under Alternative C and 36 times the number of surface acres that would be available under Alternative D.⁵⁸ Moreover, the interplay of the linear North-South trending river, stream, and delta setbacks with the areal nature of lagoon setbacks and broad NSO restrictions effectively fragments the remaining accessible surface areas, compounding the impracticability of surface occupancy restrictions.

Despite the technological advances described in Section III above, there are still important limitations on directional drilling that would prevent the development of significant portions of the subsurface lands under these broad restrictions. Even with advances in extended reach drilling, such techniques would not bridge the vast distances contemplated in the DEIS as a result of the proposed NSO restrictions. A deep, high pressure reservoir may only allow a horizontal reach of up to two miles, whereas a shallower depth reservoir with a normal pressure profile may support up to seven miles, depending on rock properties encountered.⁵⁹ Accordingly, under Alternatives C, D1, and D2, developable areas would be so small, isolated, and removed that they would not support integrated development and would limit potential sharing of infrastructure such as roads, barge landings, or seawater treatment plants. These critical limitations would not allow the investments in surveys and infrastructure required to develop the Coastal Plain as contemplated by Congress.⁶⁰ By isolating large areas and the hydrocarbon resources they may contain, the NSO stipulations and setbacks imposed under Alternatives C, D1, and D2 would effectively prevent optimal development of the 1002 Area as contemplated by Congress, and, therefore, would not meet the Purpose and Need or the requirements of the Tax

⁵⁸ See U.S. Dep't of Interior, National Petroleum Reserve-Alaska Final Integrated Activity Plan/Environmental Impact Statement, at 22 (Nov. 2012), https://eplanning.blm.gov/epl-front-office/projects/nepa/5251/41003/43153/Vol1_NPR-A_Final_IAP_FEIS.pdf.

⁵⁹ What is technically feasible and safe will depend on many variables, including well pressure, reservoir depth, sub-surface geology, and overall complexity of the wells, which can be determined only through exploration drilling and testing.

⁶⁰ Alternative B also contains some surface occupancy restrictions which, as discussed above, are inconsistent with congressional intent. However, it allows BLM to consider, evaluate, impose, or exempt from imposition most site-specific conditions based on details available at future phases of the leasing process.

Act. Alternatives that do not meet a proposal's Purpose and Need are not reasonable, and should not be analyzed in the FEIS.⁶¹

Furthermore, in presenting the alternatives, the DEIS fails to justify *why* NSO restrictions—particularly the extensive restrictions proposed in Alternatives C, D1, and D2—are necessary to achieve the identified mitigation objectives. This is of particular concern because the restrictions on surface use for various resources greatly exceed the mitigation measures successfully applied for decades across the North Slope, including in the NPR-A. For example, the DEIS does not provide justification for extraordinary setbacks, sometimes of several miles, for rivers, streams, and coastal areas; greatly expanded restrictions with respect to caribou and polar bears; and “wilderness value” setbacks on the borders of the Coastal Plain. When introducing the alternatives, the DEIS simply refers to the fact that NSO stipulations are part of each alternative without offering a justification for the stipulations themselves or explaining why BLM is proposing to manage the Coastal Plain in a manner that departs so significantly from its approach in the NPR-A.⁶²

Similarly, Table 2-2 describes the minimization objectives associated with each lease stipulation but does not describe or analyze *how* NSO stipulations would achieve the stated objectives. In fact, in some places, the DEIS appears to suggest that a mitigation objective could be similarly achieved through *either* an NSO *or* a non-NSO stipulation, suggesting that the choice between these alternatives would be arbitrary.⁶³ Without the benefit of BLM's analysis of whether and to what extent NSO restrictions are warranted to meet the stated mitigation objectives, the oil and gas industry cannot meaningfully comment on whether the specific NSO requirements are reasonably related to a legitimate governmental purpose or whether the stated mitigation objectives could be achieved with less burdensome mitigation measures.

The Associations request that BLM remove broad, unjustified NSO restrictions from all of the alternatives analyzed in the FEIS. These restrictions, particularly as applied to Alternatives C, D1, and D2, would effectively prevent development of the Coastal Plain as directed by Congress,

⁶¹ 40 C.F.R. § 1502.14(a) (requiring consideration in an EIS of “reasonable alternatives”); *Wyoming v. U.S. Dep't of Agric.*, 661 F.3d 1209, 1244 (10th Cir. 2011) (alternatives that do not accomplish the purpose or objective “are not ‘reasonable’”); *see also W. Watersheds Project v. Abbey*, 719 F.3d 1035, 1046 (9th Cir. 2013); *N. Alaska Envtl. Ctr.*, 457 F.3d at 978 (“alternatives which are ‘infeasible, ineffective, or inconsistent with the basic policy objectives for the management of the area’” need not be discussed (quoting *Headwaters, Inc. v. BLM*, 914 F.2d 1174, 1180 (9th Cir. 1990))).

⁶² DEIS at 2-2.

⁶³ *See, e.g., id.* at 2-5 (describing the same water quality objective for Alternatives B, C, D1, and D2 but, without explanation, imposing Standard Operating Procedure 9 for Alternatives B and C, while imposing broad NSO restrictions for D1 and D2).

and are therefore inconsistent with the stated Purpose and Need. As discussed in Section III.A.3 *supra*, mitigation or avoidance measures to protect surface resources should be developed by BLM in consideration of site-specific development proposals at the time the surface use plan and application for permit to drill for such proposals are considered. Accordingly, BLM must modify the alternatives, consistent with the Tax Act, to remove broad NSO stipulations, setbacks and other broad, surface-related restrictions not related to site-specific information.

D. The “reasonably foreseeable development scenario” must recognize development limitations under certain alternatives, but currently provides a reasonable basis for assessment of Alternative B.

As noted in Section III.C *supra*, the proposed NSO stipulations in Alternatives C, D1, and D2 would effectively prevent development of the Coastal Plain area. The “reasonably foreseeable development scenario” presented in Appendix B of the DEIS fails to consider that the best prospects for commercially attractive development may be off-limits for development under these alternatives. In addition, it fails to consider how the number of pads, wells per pad, and size of surface facilities would be impacted by surface area restrictions, in turn impacting production rates and recovery. For the reasons explained above, the Associations believe that Alternatives C, D1, and D2 are not reasonable and should not be included in the FEIS; however, if the FEIS includes these or similar alternatives, the hypothetical development scenario must be revised to acknowledge that development is unlikely to occur under those alternatives.

With regard to Alternative B, the DEIS’s hypothetical scenario does a fair job of estimating the potential for oil and gas exploration, development, production, and abandonment. The Associations therefore believe it provides an appropriate framework to consider the potential impacts of the leasing program under Alternative B for NEPA purposes.⁶⁴ The Associations do have minor comments and corrections, as follows below, that BLM should incorporate to improve its hypothetical scenario for Alternative B.

First, the hypothetical development scenario should consider more realistic development timeframes. In the NPR-A, nearly 20 years transpired from initial lease to first production. BLM should consider this experience for its 1002 Area timing assumptions.

Second, the hypothetical scenario should assume a mix of large and small facilities that are likely to share infrastructure, such as roads and support facilities. It should also assume that a seawater treatment facility may be needed in more than one location (*e.g.*, west and east). Technological advances will also result in fewer satellite pads and other surface infrastructure than anticipated in the hypothetical scenario. BLM should consult with industry to ensure the hypothetical scenario accurately reflects current practice and expectations.

⁶⁴ See, *e.g.*, *N. Alaska Envtl. Ctr.*, 457 F.3d 969 (upholding BLM’s analysis of hypothetical exploration and development in EIS for the NPR-A oil and gas lease program).

In addition to addressing these comments, the Associations recommend that BLM include a summary of the hypothetical scenario early in the FEIS itself. As currently written, the DEIS makes it difficult for readers to evaluate the effects analyses and other sections of the DEIS while having to frequently refer to the hypothetical scenario that is separately presented in Appendix B. Including a summary of the hypothetical scenario at the beginning of the FEIS will provide readers with helpful context.

E. The DEIS presents certain conditions that are unreasonably restrictive, inappropriate, or not supported by the best available science.

As discussed in Section III *supra*, Alaska's oil and gas industry has a history of safe, effective, and environmentally responsible development of Arctic Alaska spanning five decades. The Associations' members have significant experience implementing stipulations similar to those proposed in the DEIS. The comments set forth below and in Attachment A regarding BLM's proposed stipulations and ROPs are provided on the basis of this experience and expertise. Some conditions are not practicable or require factual correction, whereas other conditions lack evidence showing that they are necessary or would be effective. The Associations urge BLM to address these comments fully in the FEIS to ensure that each alternative includes necessary, feasible, and effective lease conditions.

In addition to the comments provided in Attachment A, the Associations request that the FEIS include a transparent description of the relationship between BLM's oil and gas program authority and FWS's land management authority. Specifically, BLM has the duty to fully administer the oil and gas program mandated by Congress, including the authority to directly manage lands in the Coastal Plain as necessary to do so. Although FWS is the manager of ANWR, its management of the Coastal Plain is subject to the provisions of the Tax Act and the revised purpose of ANWR "to provide for an oil and gas program on the Coastal Plain."⁶⁵ This new direction and purpose from Congress controls management of the Coastal Plain, and FWS's authority must be exercised accordingly.⁶⁶

⁶⁵ Pub. L. No. 115-97, § 20001(b)(2)(B) (amending purpose of ANWR in ANILCA section 303(2)(B)).

⁶⁶ It is important to note that FWS's 2015 Comprehensive Conservation Plan for ANWR, which refused to consider oil and gas development, has been superseded with respect to management of the Coastal Plain by the Tax Act and the revised purpose of the Coastal Plain under ANILCA. The Wildlife Refuge Administration Act of 1966 requires a wildlife refuge to be managed in a manner which "first protects the purposes of the refuge"—now, "to provide for an oil and gas program on the Coastal Plain." *See* 16 U.S.C. § 668dd(A)(3)(D); ANILCA § 303(b)(2). The purposes of a refuge are defined by reference to the law(s) which created it. *See* 16 U.S.C. § 668ee(10). Management of the Coastal Plain of ANWR must now conform to the actions of Congress as set forth in the Tax Act and its revision of ANILCA section 303(b)(2) for the Coastal Plain.

F. The DEIS provides a robust analysis of potential environmental consequences, but requires some corrections.

As the DEIS acknowledges, BLM's leasing decisions will not authorize ground-disturbing activity. Future exploration and development activities will require additional BLM approval, which, in turn, will require review necessary under NEPA and other environmental and cultural resource statutes. Nevertheless, the DEIS properly considers and analyzes potential environmental impacts that could result in the future from various leasing and mitigation alternatives. In addition, the DEIS's presentation of each component of the affected environment followed immediately by an analysis of the potential impacts to that environmental component makes BLM's analysis accessible and easy to follow.

In the comments below, the Associations provide comments to assist BLM in improving and, in some places, making important corrections to its analysis of potential effects. Specifically, subsection 1 provides comments on the DEIS's discussion of climate and GHG issues. Subsection 2 provides comments on the DEIS's analysis of potential impacts to caribou, including the need to incorporate additional data and correct information to ensure the FEIS does not exaggerate potential adverse effects to caribou from a Coastal Plain oil and gas program. Finally, subsection 3 identifies incorrect and incomplete information regarding polar bear denning and the potential for human-bear interactions. The Associations respectfully request that these comments be incorporated in the FEIS's overview of the affected environment and potential environmental consequences.

1. The DEIS presents a strong analysis of potential GHG issues, but there are opportunities for improvement.

In general, we find the DEIS's discussion of climate and meteorology to be well-organized, clear, and defensible.⁶⁷ Specifically, we agree with the DEIS's acknowledgement of the potential GHG-related benefits that are likely to be realized through Coastal Plain development from availability of natural gas to Kaktovik.⁶⁸ The potential conversion to gas by the Kaktovik community has the potential to result in lower nitrogen oxides, particulate matter, and GHG emissions in the region. Additionally, we respectfully submit the following opportunities for improving this section.

First, we disagree with the DEIS's suggestion that "building structures and installing combustion sources that can heat localized areas near development" have "potential impacts" on "climate" at the "micro-scale."⁶⁹ Given the low-density surface occupation of oilfield development and the

⁶⁷ See DEIS at 3-2 to 3-9.

⁶⁸ See *id.* App. B.

⁶⁹ *Id.* at 3-5.

relatively small amount of fuel combusted, such effects are likely not measurable and, in any case, would be inconsequential to climate in the program area. We recommend that BLM strike this language as it is unsubstantiated and, at best, misleading.

Second, the DEIS uses the estimated GHG emissions from the Greater Mooses Tooth 2 Development Project (“GMT2”) as a proxy for calculating the potential direct GHG emissions for development of the Coastal Plain.⁷⁰ This approach requires assumptions regarding the potential development of the Coastal Plain that are unlikely to be realized. Specifically, the DEIS assumes that the GHG emission intensity (*i.e.*, lbs. of GHG pollutant emitted per barrel of oil produced) from Coastal Plain development will be identical to the GHG emission intensity from the GMT2 project. However, like most other U.S. industries, the oil and gas industry continues to improve and reduce its direct GHG emissions through improvements in oil production energy efficiency and direct technological changes. Given that the timing of any potential Coastal Plain development would be at least 10 years beyond the potential GMT2 development, the direct GHG emission intensity of Coastal Plain development will almost certainly be improved compared to the estimated emission intensities for GMT2. We recommend that the FEIS be updated accordingly.

Third, the FEIS should acknowledge that specific oil development practices on Alaska’s North Slope result in lower potential fugitive emissions compared to national estimates.⁷¹ Generally, North Slope development projects must provide environmental enclosures for equipment, which aids in leak prevention. For example, emissions from pigging operations in North Slope projects are typically captured and collected. As another example, Alaska state requirements prohibit what is defined as “unnecessary and wasteful” venting and flaring of gas. These practices should be accounted for in the FEIS.

2. Outdated and incomplete information that exaggerates potential impacts to caribou must be updated in the FEIS.

The DEIS provides a robust analysis of potential impacts to the Porcupine Caribou Herd (“PCH”) and Central Arctic Herd caribou. However, in some cases the DEIS relies on outdated and incomplete data and does not consider research undertaken by or on behalf of industry regarding potential effects of oil and gas activities on caribou. As a result, the DEIS exaggerates the adverse effects on caribou and the likelihood of those effects.

First, the DEIS states that roads and pipelines associated with a Coastal Plain oil and gas leasing program could delay and deflect caribou movement during spring and fall.⁷² The DEIS cites

⁷⁰ *Id.* at 3-6.

⁷¹ *See id.* at 3-8.

⁷² *Id.* at 3-115.

research showing that 30% of collared female caribou took an average of 33.3 days to cross Red Dog Mine road in northwestern Alaska.⁷³ The DEIS explains that crossing delays for these “slow crossers” averaged 11 times longer than the crossing delay for “normal crossers,” which averaged just 3.1 days.⁷⁴ However, the DEIS fails to note that this “slow crosser” phenomenon occurred in a single year (2011).⁷⁵ Notably, the study’s authors postulated that the “slow crossers,” which were Western Arctic Herd caribou, may simply be less accustomed to industrial development than the Teshekpuk Herd, which was not represented in the “slow crosser” group.⁷⁶

The FEIS should include references and analysis recognizing that a herd’s reaction to a road may lessen with habituation. For example, in its August 2018 supplemental EIS for GMT2 (“GMT2 SEIS”), BLM recognized that multiple studies suggest that caribou habituate to infrastructure and roads:

Wolfe et al. (2000) reported that, once caribou were initially exposed to infrastructure, crossing transportation corridors occurred more often than expected. *Habituated cow-calf groups crossed roads as frequently as bulls, and roads did not have an observable effect on animal distribution or individual energetic cost.* Boertje et al. (2012) and Nicholson et al. (2016) found that large ranges, historic movement patterns, and large-scale migratory behavior persist even when highways and roads bisected those ranges.^[77]

The FEIS should similarly conclude that caribou habituation to development on the Coastal Plain may take time, but is likely to occur, based on the experience of existing fields on the Alaska North Slope.

Second, the DEIS overstates the potential impact of aircraft noise and fails to recognize that caribou become habituated to such noise. The DEIS relies in part on Maier et al. (1998), which

⁷³ *Id.*

⁷⁴ *Id.* (citing Ryan R. Wilson et al., *Effects of Roads on Individual Caribou Movements During Migration*, 195 *Biological Conservation* 2 (Mar. 2016)).

⁷⁵ *See* Wilson et al., *supra* note 74, at 7.

⁷⁶ *See id.* (“Caribou in the [Teshekpuk Herd] might have had greater experience with industrial development on the eastern portion of their range than caribou in the [Western Arctic Herd] and thus were less sensitive to the road” (citation omitted)).

⁷⁷ U.S. Dep’t of Interior, *Alpine Satellite Development Plan for the Proposed Greater Mooses Tooth 2 Development Project*, Final Supplemental Environmental Impact Statement, at 352 (Aug. 2018) (emphasis added), https://eplanning.blm.gov/epl-front-office/projects/nepa/65817/155289/190057/GMT2_Final_SEIS_Volume_1- Chapters_1-6.pdf (“GMT2 SEIS”).

involved military aircraft and not the type of small or commercial aircraft flown on the North Slope or that would be used on the Coastal Plain.⁷⁸ Moreover, the DEIS fails to recognize caribou habituation to aircraft noise, which was appropriately considered in the GMT2 SEIS:

Prolonged exposure to low-level aircraft could increase daily energy expenditure and decrease individual fitness or reproductive capacity over time if not properly mitigated. Alternatively, *caribou can become habituated to aircraft*; particularly when aircraft consistently maintain altitudes greater than 500 feet above ground level and do not engage in hazing or harassing behavior. *Habituated animals do not associate aircraft with danger and, as a result, exert minimal additional energy when overflown.*^[79]

The FEIS should reach a similar conclusion and, at a minimum, must include the sources that BLM has relied on in evaluating other oil and gas activities, including those relied on in the GMT2 SEIS.

Third, the DEIS estimates that program-related construction and development activities are expected to displace calving caribou within 2.49 miles of development for a total displacement of 633,000 acres under the hypothetical scenario.⁸⁰ It further posits that, if “large-scale” displacement from calving grounds occurs, calving distribution would likely shift east or southeast, resulting in an 8% decline in calf survival.⁸¹ However, the DEIS fails to acknowledge that not all calving is displaced in the cited studies, and therefore, that calving would still be expected to occur within the “displacement” area described by BLM. For example, one study found that 44.4% of calving occurred within 2.49 miles of the subject road, and a replicate study found higher densities of calves within 1 kilometer of the roads than farther away.⁸² The DEIS also fails to recognize that PCH caribou do not calve in the 1002 Area every year,⁸³ and that its calving grounds have varied substantially in the last decade.⁸⁴ The FEIS should be revised accordingly, and should reflect that lower calving density may or may not decrease near roads

⁷⁸ DEIS at 3-115.

⁷⁹ GMT2 SEIS at 351 (emphases added; citations omitted).

⁸⁰ DEIS at 3-112; *see also id.* App. E at E-8.

⁸¹ *Id.* at 3-114 to 3-115 & E-8.

⁸² *See* Written Testimony of Matthew A. Cronin for the U.S. Senate Energy and Natural Resources Committee (Nov. 2, 2017).

⁸³ *See* Alaska Dep’t of Fish & Game, Porcupine Caribou News, at 4 (Summer 2017), http://www.adfg.alaska.gov/static/home/library/pdfs/wildlife/porcupine_caribou_news/porcupine_caribou_news_summer_2017.pdf.

⁸⁴ *Id.* at 4-5.

and facilities, and that calving rates and locations may ultimately be influenced by a range of factors including habitat, snow melt timing, and habituation to vehicles, roads, and buildings.⁸⁵

3. Information regarding polar bear maternal denning and human-bear interactions must be updated in the FEIS.

The DEIS presents a robust description of polar bear distribution and potential impacts, but requires corrections and updating to ensure the FEIS presents an accurate depiction of potential polar bear denning and denning impacts, and properly characterizes the potential for and minimal effects from human-bear interactions.

First, the DEIS estimates annual maternal denning in the program area to be approximately 19 dens, citing a phone conversation with a FWS biologist.⁸⁶ This referenced estimate cannot be found in published data, nor does it appear to be related to any specific denning study or combination of studies. Instead, the DEIS says this estimate is based on various other estimates including “[1] the estimated population of the [Southern Beaufort Sea] stock, [2] the proportion of adult females in the population, [3] the breeding probability of adult females, [4] the proportion of dens on land, and [5] the proportion of historical dens in the program area”⁸⁷ The DEIS does not indicate what each of these numbers is, and does not cite to supporting data, modeling, or other sources, making it impossible for the Associations to determine whether these estimates are accurate or whether there are errors in these numbers that are compounded through the application of these *five* separate estimates to reach an approximate annual denning number for the program area. Given the number of maternal dens that have been documented in the program area over approximately 40 years,⁸⁸ the DEIS’s annual denning estimate should be subject to some skepticism. The FEIS should include a maternal denning estimate that is based on the best available scientific information and should clearly and transparently identify the sources of that information.

Second, the DEIS overstates the potential impact to maternal denning in several places. For example, the DEIS states that there are “[a] few records” of female polar bears denning successfully near oilfield infrastructure since the beginning of development along the central Beaufort Sea coast.⁸⁹ The DEIS later concludes that construction of ice and gravel roads, pads,

⁸⁵ See Cronin Testimony, *supra* note 82.

⁸⁶ DEIS at 3-128 & n.27.

⁸⁷ *Id.* at 3-128.

⁸⁸ *Id.*

⁸⁹ *Id.*

and pipelines may cause temporary loss of suitable denning habitat.⁹⁰ However, industry monitoring reports required under Marine Mammal Protection Act letters of authorization indicate that between five and 10 instances of the successful emergence of a sow and cub(s) have been recorded on or around oilfield infrastructure in just the past 10 years.⁹¹ On one gravel pad that is no longer in use, there is typically one den recorded per year.⁹² The FEIS should incorporate data showing that maternal denning occurs near oilfield infrastructure and activity in greater numbers than is reflected in the DEIS and that implementation of established avoidance and mitigation measures means that construction of program infrastructure is not likely to significantly impact maternal denning.

Third, the DEIS incorrectly states that polar bears could be susceptible to vehicle strikes.⁹³ In fact, there is no known instance of an oil and gas industry vehicle striking a polar bear in the over 40 years of development on the North Slope. The FEIS should not include this statement and should reflect that there is no basis in the record to support that there is a risk of vehicle strikes.

Finally, the DEIS incorrectly describes industry practice when polar bears move through areas near industrial facilities, stating that bears “would likely be disturbed by activities on, or be hazed away from, drill-site pads.”⁹⁴ This is not industry practice and does not reflect standard industry training. Rather, under typical conditions, bears are allowed to cross roads, pads, and other infrastructure without disturbance. A bear will generally be deterred back to the tundra or ice only if it endangers workers or attempts to “bed down” on a road or pad. As an example of the relative infrequency of deterrence events, one operator reported just three deterrence events in 2018 out of a total of 203 polar bear sighting reports at its Prudhoe Bay unit.⁹⁵

⁹⁰ *Id.* at 3-134. The DEIS repeats this conclusion in several places. *See id.* at 3-136 (describing response of denning females to various disturbances); *id.* at 3-138 (“the presence of operating facilities would probably discourage female bears from denning”).

⁹¹ *See, e.g.*, Letter of Authorization reports for BPXA (*e.g.*, Badami Ice Road 2008-09, Sag River/Heald Point 2009, L5 drillsite 2018, and Put 23 Minesite 2014-15), ENI (*e.g.*, Spy Island - Nikaitchuq 2011), and Hilcorp (*e.g.*, Endicott Road 2017); *see also* U.S. Fish & Wildlife Serv., *Mama polar bear and cub make it through denning season thanks to collaborative work*, June 2017, <https://fws.maps.arcgis.com/apps/MapJournal/index.html?appid=6b07fba073c348d4adf21c371bec0805> (describing successful emergence of mother and cub next to oil and gas facility).

⁹² *See, e.g.*, Susan Carghill Bishop and Bill Streever. 2016. Long-Term Ecological Monitoring in BP’s North Slope Oil Fields Through 2014. BP Explorations (Alaska) Inc. Anchorage, AK.

⁹³ DEIS at 3-140.

⁹⁴ *Id.* at 3-135.

⁹⁵ Letter from Christina Pohl (BP) to Patrick Lemons (FWS) Re: 2018 Slope-Wide Polar Bear and Walrus Monitoring Report for BPXA Areas of Operation (Jan. 15, 2019).

As discussed in detail in Section III *supra*, the North Slope oil and gas industry implements procedures, training, and best practices for managing human-polar bear interactions that were developed jointly with FWS and set the gold standard for human-bear interactions world-wide. FWS has recognized that the oil and gas industry has a “beneficial record of protecting polar bears” and that Alaska oil and gas activities have “minimal” impacts on polar bears.⁹⁶ The DEIS does not adequately recognize that these efforts are successful at reducing the likelihood of disturbance and hazing, making the DEIS’s statement that such effects are “likely” incorrect.⁹⁷ Moreover, the DEIS includes information on human-polar bear interactions under the title “Injury and Mortality,”⁹⁸ even though the vast majority of hazing events, which are themselves rare, do not result in injury or mortality.⁹⁹ The Associations request that BLM correct the inaccurate statements regarding hazing, remove the human-bear interaction discussion from the “Injury and Mortality” subsection, and recognize the oil and gas industry’s successful multi-decade implementation of best practices for human-polar bear interactions that minimize the potential for disturbance or harassment.

V. CONCLUSION

BLM’s DEIS is an important first step toward fulfilling Congress’s directive of establishing and administering a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain. The Associations appreciate BLM’s effort in preparing the DEIS to ensure it is responsive to Congress’s directive and to fully analyze anticipated effects of future development consistent with the requirements of NEPA. As described above, the Associations have serious concerns about the DEIS’s consideration of broad NSO stipulations that would effectively prevent development under several alternatives. Additionally, the FEIS must be revised in accordance with the comments above and in Appendix A to properly frame alternatives and ensure that mitigation measures are practicable and effective, and to ensure that BLM’s actions are consistent with the Tax Act.

⁹⁶ See *supra* note 16 and accompanying text.

⁹⁷ DEIS at 3-135.

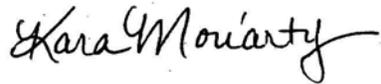
⁹⁸ See *id.* at 3-140.

⁹⁹ *Id.* (acknowledging that lethal take of polar bears associated with oil and gas activities is rare).

Ms. Nicole Hayes
March 13, 2019
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If you would like to discuss any aspect of these comments or have questions for our industry in preparing the FEIS, please do not hesitate to contact us.

Sincerely,

A handwritten signature in cursive script that reads "Kara Moriarty".

Kara Moriarty
AOGA President

A handwritten signature in cursive script that reads "Richard Ranger".

Richard Ranger
API Senior Policy Advisor

Attachment A
Proposed Stipulations and Required Operating Procedures

Page No.	Stipulation/ROP	Associations' Comment
2-4 to 2-15	Lease Stips. 1-5, 7, 9	As discussed in Section IV.A.3 and C of the Associations' comments, the proposed NSO stipulations and broad setbacks are inconsistent with the plain language of the Tax Act and congressional intent and, particularly with regard to Alternatives C, D1 and D2, will effectively prevent the development of the lease area, contrary to congressional intent. These restrictions should be removed from the FEIS, and BLM should make site-specific decisions regarding appropriate surface restrictions later, when development is proposed.
2-4 to 2-5	Lease Stip. 1	This stipulation should provide an explanation for why the proposed setback distances correlate to protection of terrain, habitat or floodplain features, and the stipulation should define boundaries based upon the presence of such features. Finally, the FEIS should recognize that a pipeline cannot span a river or stream under the setbacks provided in this stipulation. The FEIS should describe scenarios in which such crossings would be allowed, rather than relying on future undefined and uncertain exception processes for all pipeline crossings.
2-5 to 2-6	Lease Stips. 1 & 2	The DEIS appears to describe a different stipulation framework for river deltas than for rivers and streams. The Associations suggest moving river delta stipulations to stipulation 2.
2-8	Lease Stip. 4; Alternative D(b)	This component of the stipulation requires coordination of construction and infrastructure use with "all other prospective Arctic Refuge users or user groups," but does not clarify how this coordination would be achieved given the likely difficulty of identifying and coordinating with "all" potential user groups. This stipulation should be revised to clarify that coordination will be accomplished through public notice and consultation.
2-15	Lease Stip. 10; Alternative D	In order to "[p]rotect wilderness values," this stipulation would prohibit surface occupancy within 3 miles of the southern and eastern boundaries of the Coastal Plain near the Mollie Beattie Wilderness Area. This presumptive setback is inconsistent with the Tax Act and the newly revised purpose of ANWR under ANILCA "to provide for an oil and gas program on the Coastal Plain." Visual or other impacts in such areas should be considered on a case-by-case basis in review of specific proposals for development, not subject to preemptive prohibition.
2-18	ROP 6(a)	Existing monitoring technologies that conform to both Alaska Department of Environmental Conservation and U.S.

		<p>Environmental Protection Agency minimum air monitoring standards are nearly impossible to implement and be successful without existing infrastructure. The Associations request that the language of this ROP be modified to limit site-specific air monitoring at locations without existing infrastructure to extraordinary circumstances in which existing baseline concentrations are known to be materially different from regional measurements. This modification is appropriate because over 30 years of baseline data collection shows uniform baseline background conditions at or below measurement thresholds across the Coastal Plain, except in cases of localized wind-blown fugitive dust and wild land fires. Examples of long-term monitoring data supporting this statement include data from BPXA’s A-Pad and Central Compressor Pad monitoring stations and the Nuiqsut Monitoring Station. Compiled data is available in several locations, including: (1) U.S. Army Corps of Engineers, Nanushuk Project Final Environmental Impact Statement, at 3-93 (Nov. 2018), http://www.nanushukeis.com/documents.html; (2) BLM, Alpine Satellite Development Plan, GMT1 Development Project - Final Supplemental Environmental Impact Statement, at 68-70 (Oct. 2014), https://eplanning.blm.gov/epl-front-office/projects/nepa/37035/46869/50779/GMT1_Draft_SEIS_Vol_1_Chapters_1-7.pdf; and (3) BLM, National Petroleum Reserve-Alaska Final Integrated Activity Plan/Environmental Impact Statement, at 144 (Nov. 2012), https://eplanning.blm.gov/epl-front-office/projects/nepa/5251/41003/43153/Vol1_NPR-A_Final_IAP_FEIS.pdf.</p> <p>Additionally, this proposed requirement could pose a significant data accuracy problem and operational challenge if an operator is directed to collect the data where there is no grid-supplied electrical power. This language should also be modified to ensure that such data, if necessary, should be collected in a location at which grid power is accessible and available.</p>
2-18	ROP 6(b)	<p>A facility meeting the qualifications that may necessitate monitoring over the life of the project (<i>i.e.</i>, very large facilities in proximity to a federally mandated Class I area, population center, or location in or near a nonattainment or maintenance area) is not contemplated in the DEIS. Therefore this ROP is unnecessary and should be removed. If such a project is proposed, then the need for this monitoring should be assessed and required as part of BLM’s project-specific approval process.</p>

2-18	ROP 6(c)	To remove ambiguity, this ROP should be revised to clarify the scope of indirect emissions sources or to allow indirect sources to be addressed qualitatively, consistent with the most current practice on the North Slope. For example, hauling materials to the North Slope on the Dalton Highway is generally considered an indirect source, but is never quantified. As written, this ROP could be interpreted to require calculation of these emissions and many others as part of an initial application. This is more information than is needed for BLM to determine the appropriate scope of the air quality analysis under NEPA.
2-18	ROP 6(f)	To reinforce that decisions on mitigation should not be solely based on model-predicted impacts that are often inconsistent with existing measurements, and to ensure that decisions to implement mitigation are based on specific strategies that cause quantifiable improvements to predicted elevated impacts, this ROP should be modified to include the following italicized language: “If, <i>after factoring in existing measurements, modeling conservatism, and model applicability</i> , the air quality analysis shows potential future exceedances of the National Ambient Air Quality Standards (NAAQS) or Alaska Ambient Air Quality Standards (AAAQS) or impacts above specific levels of concern for AQRVs, the BLM would require air quality mitigation measures and strategies <i>shown to effectively mitigate causes of the predicted impact</i> within its authority and in consultation with”
2-19	ROP 7	This ROP would require a proponent of a permanent oil and gas development to design and implement a monitoring study of contaminants in locally used subsistence foods. We recommend removing this proposed requirement for at least three reasons. <i>First</i> , potential contaminants from oil and gas operations are already prevented from entering subsistence foods due to the applicability of numerous monitoring and release prevention requirements. This ROP may be interpreted to imply some level of tolerance for pollution to enter subsistence foods, which is misleading and would likely cause groundless concern over subsistence food. Monitoring should instead be focused as needed on potential sources of contamination and related environmental areas such as nearby water bodies. <i>Second</i> , placing responsibility on a lessee or operator to conduct subsistence food sampling can be intrusive to subsistence users and tends to create tension between the users and the operators. <i>Third</i> , a sampling program designed and implemented by an operator may be viewed with skepticism by the subsistence community. Accordingly, should any sampling of subsistence foods prove to be necessary, it is an effort better suited to the

		federal land manager, the trustee agency for the species at issue, or the local government.
2-19	ROP 8	This ROP would prevent the withdrawal of unfrozen water from springs, rivers, and streams during winter. If implemented, this ROP would have significant adverse impacts on oil and gas operations, particularly given that rivers and streams comprise most of the water resource available in the lease areas. Moreover, the ROP is unnecessary and inconsistent with proven existing regulation of water withdrawals on the North Slope. BLM should consider modifying this ROP to be similar to stipulations protecting anadromous fish, including the use of fish screens and limitations on the amount of liquid water under ice that could be removed.
2-19 to 2-20	ROP 9	Paragraph d of proposed ROP 9 is confusing and has been contentious in its application in the NPR-A. There, BLM often applies this provision in an overly restrictive manner that regularly results in the need to request a deviation in order to secure the amount of ice needed for ice road and pad construction. These requests are granted because ice aggregate is removed from areas of lakes frozen down to the lake bed and therefore does not reduce fish, aquatic invertebrate, or waterfowl habitat. For this reason, we recommend that BLM delete paragraph d from this proposed ROP and add a clause to paragraphs a and b that allows up to 20% total lake volume to be used when both ice and water are being withdrawn. This would be protective of hydrology and habitat, and consistent with state regulations.
2-20	ROP 10	The Associations have significant concerns about ROP 10, both in terms of how it is presented and its specific mitigation proposals. <i>First</i> , ROP 10 appears to primarily apply to marine or on-ice seismic operations. Much of the anticipated seismic work on the Coastal Plain is expected to be terrestrial, so the presentation of ROP 10 is unnecessarily confusing. The Associations request that the FEIS clearly indicate that ROP 10 applies to marine or on-ice operations only. <i>Second</i> , the FEIS should treat polar bears and ice seals separately in terms of the “requirement/standard” articulated in the ROP. These species have different life cycles, agencies of oversight, dates of biological significance, and types of mitigation. It is inappropriate to apply the same requirements and standards to both. Moreover, while ringed seals are mentioned, there is no mention of other ice seals or whales. It is

		<p>critical that the FEIS clarify to which species this ROP is intended to apply, and that the requirements/standards and mitigation be specific to and appropriate for each species. For example, it is valid and appropriate to assume that a polar bear maternal den survey would be conducted between October 30 and April 30 in consultation with FWS for winter overland moves and seismic work. However, this date range is only valid for polar bears. For ice seals, new activities over a previously undisturbed area in ice seal habitat should occur between March 1 and April 15 in consultation with NMFS. Seal mitigation measures should be set forth separately, as they do not build lairs or pup until March.</p> <p><i>Third</i>, ROP 10 for Alternative D proposes a sound source verification, which is complicated in shallow waters, may result in a poor match of the isopleth, and is not always of value or practicable in certain seasons or habitats. Similarly, requirements for airborne and vehicle sound are overly prescriptive at this early stage, and should instead be developed with project-specific information in hand. In addition, proposed 12-foot-wide ice paths may be too narrow and are typically evaluated at 20 feet wide. Rather than include these overly prescriptive measures at this stage, the FEIS should instead state that operators “will work closely with regulators to ensure that mitigation measures are developed that are consistent with the Marine Mammal Protection Act and agency marine mammal guidelines, and take into account practicability, site-specific information, and project activity details.”</p>
2-22 to 2-23	ROP 11(e)	<p>This component of the ROP requires an undefined offset to avoid portions of previous ice road routes. This is not warranted because, as recognized in the GMT2 SEIS, “[a] study by Yokel et al. (2007) suggests that seasonal ice roads and pads constructed within the same footprint each year do not have additive effects over years.” GMT2 SEIS at 336. Moreover, constructing an ice road in the same location as subsequent years is considered best practice and may be necessary to avoid difficult terrain, archaeological sites or sensitive environmental resources.</p>
2-30	ROP 32	<p>This ROP should be modified to remove the requirement for eider nest searches. The DEIS recognizes at page 3-86 that Steller’s eiders are “considered to occur only as a rare visitor in the program area and [are] not expected to nest that far east on the ACP.” On the same page, the DEIS notes that Spectacled eiders are “uncommon breeders in the program area, and nests have been documented only on the Canning River delta.”</p>

		Ground-based nest searches are not likely to result in the identification of nests in areas of activity due to the unlikely appearance of these two species, and therefore, the ROP would increase costs and risks of delay without commensurate benefits to the species.
2-31	ROP 34	This ROP would require minimum flight altitudes over certain areas and should be clarified to accommodate the need to fly lower for some required activities (<i>e.g.</i> , archaeological clearance, spill response equipment staging and demobilization). In addition, rather than providing for “possible suspension of all flights” for “disturbance determined to be unacceptable,” this ROP should be modified to provide for “adjustments, including redirection, modified scheduling, or temporary suspension of specific flights ...” Finally, the ROP’s provision that takeoffs and landings to support oil and gas operations would be limited “to the maximum extent possible” should be revised to limit takeoffs and landings “to the extent practicable and consistent with prudent operation of facilities.”
2-35	ROP 41(a)	This ROP should be revised to clarify that vehicles already approved by the Alaska Division of Mining, Land and Water for summer off-road travel would be considered authorized and would not require additional process or approvals.
2-36	ROP 45	Based on molecular genetic research published in 2010 and 2012, the Alaska tiny shrew has been merged by mammal taxonomists with the Eurasian least shrew and is now classified as the Holarctic least shrew (<i>Sorex minutissimus</i>), which occurs from Scandinavia, across Russia, and into Alaska and Yukon, and which is classified by the International Union for the Conservation of Nature as “least concern.” Because of this changed taxonomic status and the fact that the species is not listed in the State of Alaska’s current Wildlife Action Plan, this species does not meet the eligibility criteria for Sensitive species established by BLM Manual 6840. It is our understanding that the Alaska tiny shrew may no longer be included in the Alaska List of Sensitive Species currently being revised by BLM. Therefore, we recommend that the reference to the Alaska tiny shrew be removed from this ROP.

Attachment B
Additional Technical Corrections and Comments

Page No.	Associations' Comment
3-114	The DEIS references Boulanger et al. (2012), a study regarding migratory caribou displacement near two open-pit diamond mines in Canada. This study is not comparable to roads and other facilities related to the Coastal Plain program because (1) open-pit diamond mine noise and disturbance is not similar to oil and gas exploration and development, and (2) the two diamond mines had footprints of 10 and 30 square kilometers, respectively, which is orders of magnitude larger than roads and other facilities associated with oil and gas development. References to this study should be removed from the FEIS.
3-114, 3-117	The DEIS makes the explicit assumption that maternal female caribou with young calves will avoid active infrastructure “[t]hroughout future drilling and operations,” by “up to 2.49 miles.” It also refers to Lawhead et al. (2004), which noted displacement of cows and calves from the Meltwater road in Kuparuk. The DEIS fails to note that the same study states that, within two weeks after estimated peak calving, maternal females with calves no longer avoided roads. Lawhead et al., Caribou Mitigation Monitoring for the Meltwater Project, 2003, Third Annual Report, at 2 (Mar. 2004). The FEIS should include these statements and clarify that maternal female caribou with young calves are not likely to avoid roads or facilities after a period of habituation.
3-122	The link provided for the FWS stock assessment report (“SAR”) is not working. Recommend providing updated link to the most recent SAR.
3-129, 3-134, 3-137	The DEIS refers to the technology for searching large areas for maternal dens as “forward-looking radiometry” or “FLIR.” The FEIS should use the term “infrared sensors” rather than FLIR, which is technically inaccurate and does not reflect improved technology currently used by North Slope operators.
3-128	It is not clear what the DEIS means by “near” oilfield infrastructure. This should be defined in the FEIS.
3-172	The DEIS states that up to 50% of subsistence caribou harvesters may avoid development activities or infrastructure at some point over the period of development. The FEIS should be revised to provide additional information and context. In fact, from 2013 to 2016, between 51% (2016) and 61% (2013) of Nuiqsut Caribou Subsistence Monitoring Project respondents reported avoidance of any subsistence use area during the study years. Of these respondents, only 33% (2016) to 46% (2015) reported doing so for reasons associated with development. <i>See</i> Stephen R. Braund & Associates, Nuiqsut Caribou Subsistence Monitoring Project: Results of Year 8 Hunter Interviews and Household Harvest Surveys (Aug. 9, 2017) (annual reports available at https://northslopescience.org/nuiqsut/). The most recent study year (2016) showed a decrease in the percentage of respondents avoiding any area and a decrease in the percentage of respondents avoiding for development reasons.