

ASAP PROJECT
Joint Record of Decision

U.S. Army Corps of Engineers
Bureau of Land Management

March 4, 2019

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Joint Record of Decision and Permit Evaluation for the ASAP Project

LEAD FEDERAL AGENCY	U.S. Army Corps of Engineers
COOPERATING FEDERAL AGENCY	Bureau of Land Management
APPLICANT	Alaska Gasline Development Corporation
APPLICATION REFERENCE NUMBERS	POA-2009-00651 BLM Case file (2890) F-95641
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ACRONYMS AND ABBREVIATIONS

ADOT	Alaska Department of Transportation
ANCSA	Alaska Native Claims Settlement Act
ANILCA	Alaska National Interest Lands Conservation Act
Applicant	Alaska Gasline Development Corporation
ASAP	Alaska Stand Alone Gas Pipeline
BLM	Bureau of Land Management
CFR	Code of Federal Regulations
Corps	U.S. Army Corps of Engineers
CWA	Clean Water Act
DA	U.S. Department of the Army
DOI	U.S. Department of the Interior
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
FSEIS	Final Supplemental Environmental Impact Statement
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy and Management Act
FR	<i>Federal Register</i>
FSEIS	Final Supplemental Environmental Impact Statement
GCF	Gas Conditioning Facility
HDD	horizontal directional drilling
JROD	Joint Record of Decision
LEDPA	least environmentally damaging practicable alternative
MLA	Minerals Leasing Act
MLBV	mainline block valves
MP	milepost
MRB	Maintenance and Response Base
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act

NMFS	National Marine Fisheries Service
NPP	National Park & Preserve
NPS	National Park Service
PA	Programmatic Agreement
Permittee	Alaska Gasline Development Corporation
Project	ASAP Project
PSY	Pipe Storage Yard
RMP	Resources Management Plan
ROW	right-of-way/rights-of-way
SEIS	Supplemental Environmental Impact Statement
TAPS	Trans-Alaska Pipeline System
USACE	U.S. Army Corps of Engineers
USC	United States Code
USFWS	U. S. Fish and Wildlife Service
VSM	vertical support members
WOTUS	waters of the United States
WQC	Water Quality Certification

1.0 INTRODUCTION

This document constitutes the U.S. Department of the Army (DA), U.S. Army Corps of Engineers' (Corps) and the U.S. Department of the Interior (DOI), Bureau of Land Management's (BLM) Joint Record of Decision (JROD) under the National Environmental Policy Act (NEPA) for the Alaska Stand Alone Pipeline (ASAP) Project ("Project"), a natural gas distribution pipeline and associated facilities proposed by the Alaska Gasline Development Corporation ("Applicant"; "Permittee").

This JROD contains the Corps' determination of compliance with the Section 404(b)(1) Guidelines (40 CFR 230; "Guidelines"), the public interest review (33 CFR 320.4), and permit decision under the authority delegated to the District Engineer by 33 CFR 325.8, pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act 1899.

Further, this JROD is prepared in accordance with the BLM's authority under Section 28 of the Mineral Leasing Act (MLA), 30 United States Code (USC) 185, Section 302 and Section 304 of the Federal Land Policy and Management Act (FLPMA) (43 USC 1732 and 43 USC 1734), Sections 810 and 906 of the Alaska National Interest Lands Conservation Act (ANILCA), Section 106 of the National Historic Preservation Act (NHPA), and the National Trails Systems Act of 1968 (16 USC 1241-1251).

This document records the Corps' and the BLM's decision to select Alternative 1 for the Project, with, in the case of the Corps' decision, incorporation of the Denali National Park & Preserve (NPP) pipeline route variation (a component of Alternative 2) (herein referred to as the "Denali NPP Variation"), a 7-mile route through the Denali NPP detailed in the June 22, 2018, Final Supplemental Environmental Impact Statement (FSEIS) and subject to special conditions and mitigation. The Corps' regulatory authority is limited to components of the Project that would result in discharges of dredged and/or fill material into waters of the U.S. (WOTUS) under the CWA and all work within navigable WOTUS under the Rivers and Harbors Act of 1899, although the scope of analysis includes the entire Project footprint (see Section 4). The BLM's authorities are limited to the components of the Project that occur on BLM-managed public lands.

The FSEIS for the Project was prepared by the Corps and published on June 22, 2018. The findings in the FSEIS were based on an open, collaborative, and robust process among scientists, resource specialists, and regulatory staff of the Corps, the BLM, all other cooperating agencies, and the participating public. This process resulted in a FSEIS that — consistent with NEPA — provides an adequately detailed analysis of the environmental impacts of the Applicant's proposal and a reasonable range of alternatives, including the No Action Alternative, to inform and support the reviews and decisions of the Corps, the BLM, and the other cooperating agencies for the proposed Project.

This concludes the Corps' and the BLM's implementation of the NEPA for the action. Cooperating agencies that contributed to the NEPA EIS process include the

U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), National Park Service (NPS), BLM, U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration, and the Alaska Department of Natural Resources State Pipeline Coordinator's Section, which represented all State agencies including the Alaska Department of Natural Resources, Alaska Department of Fish and Game, Alaska Department of Environmental Conservation, Alaska Department of Transportation (ADOT), and Alaska Department of Health and Social Services.

2.0 DECISION SUMMARY AND BACKGROUND

2.1 CORPS' DECISION SUMMARY

The information presented in this JROD is the Corps' determination of the proposal's compliance with the Guidelines, and public interest evaluation. NEPA and the permit evaluation process have produced sufficient and accurate assessments of the resources, needs, concerns, and other issues that relate to this action and therefore are appropriate for the public interest review and analysis of alternatives as required by 33 CFR 320.4(b)(4) and 40 CFR 230.10. The comments and other supplemental information considered following the public involvement period have been independently reviewed and evaluated.

Based on these considerations, the Corps finds that Alternative 1 of the FSEIS, with the inclusion of the Denali NPP Variation, along with the incorporation of special conditions, is the least environmentally damaging practicable alternative (LEDPA) and would not be contrary to the public interest. A DA permit to authorize the discharge of dredged and fill material, as well as work within navigable WOTUS, as described herein, will be proffered to the Applicant. Special conditions contained in the permit would further reduce adverse effects of the Project and offset unavoidable adverse impacts to the aquatic ecosystem. Special conditions and the Corps' compliance monitoring will also ensure the Project is constructed in compliance with the guidelines and not contrary to the public interest. The Special Conditions include requirements for mitigation to minimize and offset unavoidable impacts to WOTUS, including wetlands.

2.2 BLM'S DECISION SUMMARY

After an independent review of the FSEIS, the BLM has determined that the FSEIS includes an adequate level of detail and a reasonable range of alternatives sufficient to inform the agency's decisions regarding the elements of the Project proposed to occur on or impact BLM-managed lands. In addition, the BLM finds that its comments, concerns, and suggestions have been adequately addressed in the FSEIS.

The BLM hereby adopts the FSEIS for the Project (available at <http://www.asapeis.com>) for its decision-making purposes. The FSEIS fulfills the needs and obligations set forth by NEPA and other relevant laws, regulations, and policies of the BLM as a cooperating agency.

This JROD approves the development of Project Alternative 1 Proposed Action on BLM-managed lands, as described in the FSEIS (June 2018). The FSEIS analyzed the Applicant's proposal to develop the gas pipeline, as well as ancillary facilities necessary to support the pipeline.

Approximately 229 miles and 6,337 acres of BLM-managed public land would be affected by the ASAP natural gas pipeline system development. See Appendix J for information regarding the BLM Right-of-Way (ROW) Grant, Associated Authorizations, and Requirements.

Actions covered by this decision include:

- Issuance of a 30-year ROW Grant for the construction, operations, maintenance, and termination of up to a 36-inch buried natural gas pipeline for the mainline, and up to a 12-inch buried natural gas pipeline for the Fairbanks lateral connector, on BLM-managed lands (FSEIS Section 2.2);
- Approval of temporary access roads, and ancillary facilities necessary for construction of the natural gas pipeline on BLM-managed lands (FSEIS Section 2.2);
- Approval of material sales (gravel/rock) and removal from BLM-managed lands necessary for pipeline access, construction, operations, and termination (FSEIS Section 2.2);
- Approval of timber sales (merchantable valued) and removal from BLM-managed lands necessary for pipeline access, construction, operations, and termination (FSEIS Section 4.8)
- Implementation of the approved and executed NHPA Section 106 Programmatic Agreement (Appendix D of this JROD); and
- Approval of temporary closures to the Alaska Native Claims Settlement Act (ANCSA) 17(b) public easements and access as necessary for public safety during pipeline construction (FSEIS Section 4.20).

The Applicant will be required to comply with all of BLM-selected mitigating measures selected from the ASAP FSEIS Appendix M, which are listed in Appendix J, Part 1 of this JROD. The mitigating measures the Applicant has agreed to undertake to avoid and minimize impacts to subsistence resources and uses are also described in Appendix J, Part 1. The BLM's additional supporting analysis and documents pertinent to this JROD are included as Appendix J, Parts 1-9.

This document also constitutes the JROD of the DOI regarding the Project proposed by the Applicant. The decision will allow development of BLM-managed lands as described in Alternative 1 of the June 2018 FSEIS for the Project. The FSEIS analyzed the Applicant's proposal to develop the gas pipeline, as well as ancillary facilities necessary to support the pipeline. The BLM decisions in this JROD are limited to BLM-managed public lands, and only address authorizations under the jurisdiction of the BLM. Access to other lands is subject to landowner approval, and other federal and state agencies will process applications for authorizations under their respective jurisdictions.

This JROD completes the required FSEIS process and NEPA requirements for the subsequent issuance of a BLM ROW Grant and other authorizations necessary for development of the natural gas pipeline on federal lands managed by the BLM.

2.3 ANILCA SECTION 810 SUMMARY

Appendix J, Part 6 to this JROD, BLM Supporting Analysis and Documentation, describes the mitigating measures that the Applicant will undertake to avoid, minimize, and mitigate impacts to subsistence resources and uses.

ANILCA § 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy, or disposition of the public lands which would significantly restrict subsistence uses shall be affected” until the federal agency gives the required notice and holds a hearing in accordance with ANILCA § 810(a)(1) and (2), and makes the three determinations required by the ANILCA § 810(a)(3)(A), (B), and (C). The three determinations that must be made are: 1) that such a significant restriction of subsistence use is necessary and consistent with sound management principles for the utilization of the public lands; 2) that the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other such disposition; and 3) that reasonable steps will be taken to minimize adverse impacts to subsistence uses and resources resulting from such action [16 USC § 3120(a)(3)(A), (B), and (C)].

The BLM found in its ANILCA § 810 Evaluation that Alternative 2 may significantly restrict subsistence uses for the communities of Nuiqsut, Kaktovik, Anaktuvuk Pass, Arctic Village, Venetie, Wiseman and Coldfoot due to the potential reduction in the availability of caribou if an above-ground pipeline were to be constructed between mileposts 0 and 62. Accordingly, the BLM undertook the notice and hearing procedures required by ANILCA § 810(a)(1) and (2) in conjunction with release of the Draft SEIS (U.S. Army Corps of Engineers [USACE], 2017) in order to solicit public comment from the potentially affected communities and subsistence users.

Because the final ANILCA § 810 Evaluation concludes that the BLM’s selected alternative, Alternative 1, will not significantly restrict subsistence uses, including in the cumulative case, the BLM is not required to make the three determinations required by ANILCA § 810(a)(3)(A), (B), and (C). Nonetheless, the BLM has determined that the selected alternative will involve the minimal amount of public lands necessary to accomplish the purpose and need, and that reasonable steps, delineated in the FSEIS, have and will be taken to minimize the adverse impacts upon subsistence uses and resources arising from this action. Further discussion of the ANILCA 810 analysis findings is included in Appendix J, Part 6 of this JROD, including the mitigating measures that the Applicant has agreed to undertake to avoid and minimize impacts to subsistence resources and uses.

2.4 BACKGROUND

Corps

In 2012, the Corps published a Final Environmental Impact Statement (FEIS) for an Alaska stand-alone pipeline originally proposed in 2009 (USACE, 2012b). The 2012 FEIS examined the potential impacts of construction and operation of a proposed natural gas pipeline from the North Slope of Alaska to the Cook Inlet area with a spur

line to Fairbanks. Due to the conceptual nature of the design at that time, specific information regarding the proposed construction of the Project was not available at a sufficient level to enable the Corps to complete a Record of Decision (ROD) and make a permit decision. The Applicant continued to modify the Project design and identify major Project components (material sites, access roads, camp sites).

The Corps received a revised DA permit application from the Applicant on July 23, 2014. The Applicant had selected the location for material sites, access roads, and other infrastructure, as well as proposed revisions to the Project based on several design improvements that would increase efficiency, make gas more accessible and affordable, and reduce environmental impacts.

Whenever there are changes, new information, or new circumstances for a Project for which a FEIS has been prepared, a determination must be made as to whether these result in significant impacts to the human environment that were not evaluated in the FEIS, and therefore, warrant the need for preparation of a Supplemental EIS (SEIS). Due to changes in the gas composition, length of the gas line, and other changes in Project design, it was determined that an SEIS was warranted. The Corps, as part of its permit evaluation process, developed a Draft and Final SEIS in compliance with NEPA. The Notice of Availability for the FSEIS was published in the *Federal Register* on June 22, 2018.

Design changes and refinements that occurred between publication of the 2012 FEIS (USACE, 2012b) and the 2014 DA Permit Application are summarized below and described in Table 2.2-1 of Chapter 2 of the FSEIS:

- Change to the use of lean natural gas (rather than enriched natural gas), which does not require additional facilities to make gas accessible;
- Change to the use of heavier pipe in certain areas where the tensile or compressive strain could exceed 0.5 percent;
- Reduced Mainline pipeline length (733 miles, a difference of 4 miles);
- Reduced Fairbanks lateral length (30 miles, a difference of 4 miles);
- Increased Mainline pipeline diameter (36 inch, an increase of 12 inches);
- Increase from a 9-barge sealift to a 23-barge sealift, which in turn requires the dredging of a navigation channel at West Dock, Dock Head (DH3), and nearshore disposal of the dredged material;
- Refining of the number and locations of materials sites, access roads, and other infrastructure and support facilities (i.e., worker camps and pipeline storage yards); and
- Refining of the route (i.e., alignment shifts for the North Slope, Minto Flats/Summer Ridge, Anderson/Clear, and Nancy Lake State Recreation Area, along Murphy Dome and Old Murphy Dome Roads for the Fairbanks Lateral, and refinements listed in FSEIS Appendix M, Part II).

BLM

The BLM received the original SF-299 ROW application from the State of Alaska, ADOT on November 27, 2009. On December 4, 2009, USACE, Alaska District, and seven Cooperating Agencies initiated the NEPA process for the proposed Project. In 2010 the Alaska State legislature established the Alaska Gasline Development Corporation (Applicant) and the Project was transferred from the ADOT to the Applicant.

A Draft EIS was issued on January 20, 2012 (USACE, 2012a) and the FEIS was issued on October 9, 2012 (USACE, 2012b). The 2012 FEIS examined the potential impacts of construction and operation of a proposed natural gas pipeline from the North Slope of Alaska to Fairbanks and the Cook Inlet area. The original 2012 FEIS can be accessed online from the e-NEPA website <http://www.arlis.org/thepipefiles/Record/1472882>.

The BLM received an amended ROW application from the Applicant on October 5, 2015 and on November 10, 2015 the BLM considered it adequate to initiate NEPA review.

3.0 AUTHORITIES

3.1 CORPS' AUTHORITY

This permit action is being taken under authority delegated to the District Engineer by 33 CFR 325.8, pursuant to:

- Section 404 of the CWA (33 USC §1344).
- Section 10 of the Rivers and Harbors Act of 1899 (33 USC §403).

3.2 BLM'S AUTHORITY

The BLM is responsible for land use authorizations on certain federally administered public lands. The authority for management of the land and resource development options presented in the FSEIS is pursuant to:

- National Environmental Policy Act (NEPA)
- Federal Land Policy and Management Act (FLPMA)
- Minerals Leasing Act (MLA)
- Title VIII of the Alaska National Interest Lands Conservation Act (ANILCA)
- Materials Act
- Independent Offices Appropriation Act of 1952 (31 USC 9701)
- National Trails System Act
- Alaska Native Claims Settlement Act (ANCSA)

See Appendix J, Part 7 for additional BLM Authorities, Policies, Regulations and Guidance discussion.

4.0 PROJECT DESCRIPTION

4.1 PROJECT DESCRIPTION AND IMPACTS

4.1.1 Overall Project Description

- Construction of approximately 733 miles of buried 36-inch diameter, intrastate, natural gas transmission mainline pipeline from a point near Prudhoe Bay in the North Slope Borough south to the Mat-Su Borough to connect into ENSTAR's distribution system at milepost (MP) 39 of the Beluga Natural Gas Pipeline southwest of Big Lake;
- Construction of a 12-inch diameter lateral pipeline approximately 30 miles from MP 440 east to Fairbanks;
- At West Dock in Prudhoe Bay, dredging and disposal of dredged material, installation of a temporary barge bridge, construction of new causeway approaches using open cell sheet pile, installation of mooring dolphins and construction of a staging pad;
- Construction of a North Slope Gas Conditioning Facility (GCF), mainline block valves (MLBVs), metering stations, and pig launchers and receivers; and
- Construction of support facilities including access roads, operations and maintenance buildings, construction camps, pipe storage yards, and material sites.

4.1.2 Detailed Description of the Project components

All work would be completed in accordance with sheet 1 of 241 through sheet 241 of 241 of the permit figures titled Alaska Stand Alone Pipeline Project Footprint Revision 6.1, and dated April 2018.

4.1.2.1 Mainline

The Applicant would construct an approximately 733 mile 36-inch diameter pipeline and a 30-mile, 12-inch diameter lateral pipeline belowground utilizing primarily open-cut trenching techniques. The Applicant would install the pipeline aboveground at required fault crossings and bridges and connect to aboveground infrastructure, including MLBVs and pigging facilities. They would utilize horizontal directional drilling at Yukon River, Tanana River, Honolulu Creek, Troublesome Creek, Chulitna River, Kashwitna River, and Willow Creek. The construction width footprint along belowground and aboveground portions of the proposed mainline would typically be 120 feet, allowing wider construction footprint up to 350 feet in certain areas requiring cut and fill.

4.1.2.2 Gas Conditioning Facility

The Applicant would construct an approximately 90.6-acre gravel pad for the Prudhoe Bay GCF and associated workspace. The Applicant would construct an additional

approximately 20.2-acre pad for the GCF construction and operational camp. Access roads would connect the existing road to these facilities and the facilities to each other. The Applicant would install approximately 4,200 feet of aboveground pipelines supported on a single set of vertical support members (VSM), approximately 25 feet apart, to transport gas from the existing CGF to the GCF and return waste products. An estimated 171 VSMS would be installed, resulting in a total surface area ground disturbance of approximately 839 square feet. Minimum vertical clearance of the VSMS shall be 7 feet to allow for wildlife passage.

4.1.2.3 Dredging for Access to West Dock

The Applicant would perform winter dredging with backhoes to a minimum depth of - 9 feet + 0.5 foot (mean lower-low water) for navigation route from offshore to West Dock DH 3 (including the area required for a turning basin leading to the docking site). Dredging would produce an estimated 247,000 cubic yards of material. The disposal location for dredge material from the West Dock navigation channel would be landward of the Territorial Sea boundary in the nearshore environment over bottomfast ice within Prudhoe Bay. Dredge material would be positioned in approximately 1- to 2-foot high piles distributed over a 100-acre area (approximately 1,000 feet by 4,356 feet for a rectangular plot).

The Applicant would conduct screeding operations as needed due to infilling of the channel by late summer also to level the seafloor, transferring the high spots to low spots using barges positioned in the offloading area and towed by shallow draft assist tugs. The Applicant would conduct screeding as needed at each barge berth at West Dock 3 and at the temporary barge bridge locations.

4.1.2.4 Ballasted Barge Bridge

The Applicant would utilize two unloaded, ballasted sealift barges as a temporary bridge to bypass the existing breach bridge, while allowing an opening for the passage of fish. The bridge would be set in place for an offload period of approximately 21 to 39 days. To protect the existing breach bridge, the Applicant would install four mooring dolphins (two per barge) between the barges and the bridge, and ballast the barges using local seawater until they are resting on the seabed. Placement of gravel below the barges and screeding may be used so the ballasted barges would be level with the top of the bridge abutments. The Applicant would construct gravel ramps where the barges adjoin to the abutments (north and south).

4.1.2.5 Dock and Causeway Upgrades

The Applicant would construct new approaches at the north and south sides of the existing causeway breach using open cell sheet pile. The new approaches would be east of the existing causeway and have integral abutments where they terminate at the causeway breach. All the new construction, including gravel fill at the new approaches, would occur prior to module sealift.

The Applicant would construct an approximately 5-foot temporary ramp at one of the barge berths, using rig mats and gravel, to accommodate 25-foot side-shell barges. Gravel for the ramp would be placed in lifts wrapped in geotextile fabric and folded over at the sides to minimize encroaching on the adjacent berth space. The 5-foot ramp would be removed after offloading the modules.

4.1.2.6 West Dock Staging Pad

The Applicant would construct an approximately 34.25-acre staging pad for the placement of 53 prefabricated modules used to construct the GCF. These modules would be offloaded at West Dock and moved along the causeway from the dock to the West Dock Staging Pad located at the end of the causeway.

4.1.2.7 Metering Stations

The Applicant would construct two metering stations: one would be located at the end of the Fairbanks Lateral (MP 30) and the other at the pipeline terminus (MP 733) at the ENSTAR Beluga Line (MP 36) tie-in. Each of the meter stations would be collocated within the footprint of other larger Project features.

4.1.2.8 Pig Launching Facilities

The Applicant would construct eight pig launcher and/or receiver facilities all of which would be collocated within other aboveground facilities. In two locations, launcher and receiver facilities would be collocated with one another (at Coldfoot and at MP 440 at the Fairbanks Lateral tie-in).

4.1.2.9 Mainline Block Valve Locations

The Applicant would install 40 MLBVs along the mainline pipeline. MLBVs would allow the Applicant to shut down or isolate portions of the pipeline, if necessary, and allow controlled venting during non-routine system blowdowns. The MLBVs would be installed in areas accessible to operating personnel and at intervals of no greater than approximately 20 miles, as specified in U.S. Department of Transportation safety standards for natural gas pipelines (49 CFR Part 192). Each MLBV assembly would consist of a below-ground valve, with valve operators and a bypass extending aboveground. Line break detection systems capable of closing the valve upon sensing a significant drop in pressure potentially indicative of a pipeline rupture would be installed at each MLBV site. Security fencing would surround the aboveground piping and valves at each mainline valve site. MLBV sites would typically be located on a 0.2-acre parcel largely within the limits of the construction or permanent pipeline footprint.

4.1.2.10 Maintenance and Response Bases

The Applicant would construct three maintenance and response bases:

- The GCF complex and the integrated GCF Maintenance and Response Base (MRB) would be located within the Prudhoe Bay Unit and would be a stand-alone

modular facility for gas processing, support (e.g., office, storage, shop, and equipment), and camp facilities.

- The Fairbanks MRB is planned to be an urban industrial facility located in Fairbanks near the Fairbanks offtake facilities.
- The Big Lake MRB is planned to be an urban industrial facility located within the Mat-Su Borough and conceptually collocated with the Big Lake offtake facilities at the termination point of the pipeline into the Beluga Pipeline.

4.1.2.11 Marshalling Yards

The Applicant would construct two marshalling yards for workspace and a pipe storage system for the safe, efficient, and secure storage and distribution of line pipe as it transitions from ocean and/or railway transit systems to pipe storage yards. Gravel pads would be constructed and operational several months prior to initial pipeline construction. Each yard would be approximately 21 acres and would have the capacity to store an estimated 40,000 tons of pipe. The yards would be located in Seward and Fairbanks and are sited within existing rail yards or adjacent to railways.

4.1.2.12 Project Access Roads

Construction of approximately 289 new access roads totaling an estimated 164 miles would be required. New gravel access roads would be approximately 30-foot wide at the driving surface, and would be located within a nominal 60-foot-wide ROW. Culverts would be installed as necessary to facilitate surface water flow under the access roads. In addition, the Project would require approximately 24 temporary ice roads totaling an estimated 23.2 miles.

4.1.2.13 Temporary Workspaces

Additional construction areas identified as temporary workspaces would be required for construction at road crossings, railroad crossings, crossings of existing pipelines and utilities, stringing truck turnaround areas, wetland crossings, points of inflection, and waterbody crossings. Temporary Workspaces would be located adjacent to the construction footprint and could be used for such things as spoil storage, staging, equipment movement, material stockpiles, and pullstring assembly associated with horizontal directional drill (HDD) installation. Where feasible, temporary Workspaces would be constructed outside of saturated/soft wetlands that would not support equipment. Temporary Workspaces range in size from approximately 0.34 acre to 1.47 acres. There would be a total of 72 temporary workspaces; however, 29 of temporary workspaces would exist fully inside of the construction impact areas and would be collocated with areas of impact. There would be approximately 43 temporary workspaces partially outside of the main pipeline construction ROW impact areas.

4.1.2.14 HDD Temporary Workspaces

HDD or horizontal bore temporary workspaces are necessary to accommodate pipeline HDD installation technique. HDD requires an entry and exit box, typically 200 feet by

300 feet, placed on either side of the feature to be crossed. Temporary workspaces associated with the HDD crossings of the rivers are likely to require a total land use of up to approximately 185 acres. Area would be needed for all the HDD crossings to string the pipe prior to pullback through the drilled bore. Some of these areas coincide with the typical construction easement; however, in some cases, false easements would be needed. The Applicant projects a need for approximately 72 temporary workspaces and 7 HDD false ROWs.

4.1.2.15 Material Borrow Sites

An estimated 87 material sites (sand and gravel pits) located along the proposed Project would be developed to provide approximately 24.5 million cubic yards of material for workpads, access roads, pipeline bedding and padding, and the construction of aboveground facilities and other Project features. Material sites would be located approximately every 5 to 15 miles along the route. Material sites would occupy approximately 5,145 acres (1,939 acres of wetlands and 3,206 acres of uplands).

4.1.2.16 Material Waste Sites

Material waste sites would be used for the placement of excess excavated materials or materials deemed unsuitable for backfill and would be evenly spread over the construction footprint or disposed of in accordance with applicable regulations and landowner requirements. Where needed, material borrow sites would have an area(s) for waste material storage.

4.1.2.17 Camps and Pipe Storage and Laydown Yards

The Applicant would establish up to approximately 26 pipe storage yards and laydown yards collocated with camps. Where possible, camps would be located in previously disturbed areas that were used for construction of the Trans-Alaska Pipeline System (TAPS), Alaska Railroad Corporation facilities, or for public events.

The Applicant would construct 13 stationary camps (1 GCF camp and 12 pipeline construction camps) that would each house between approximately 600 and 1,000 workers. These camp areas would typically be about 30 acres in size, but would range from 26 to 41 acres. Approximately 800 additional workers would be housed at the GCF camp at Prudhoe Bay. The stationary construction camps would primarily be located in previously cleared and disturbed areas that are accessible by existing roads and were used for construction of the TAPS, Alaska Railroad Corporation facilities, or for public events. The Applicant would develop a plan to evaluate each proposed site prior to use in order to determine existing conditions. The evaluation would review any prior permits issued for the sites and compare current conditions with those predicted to be present in the prior permit. This process would identify sites that have converted back to wetland conditions requiring additional Project permitting actions.

4.1.3 Project Location

The Project would be developed in the general vicinity of the Dalton Highway and Parks Highway Corridors. Major Project feature locations are as follows:

<u>Project Feature</u>	<u>Latitude</u>	<u>Longitude</u>
West Dock – Dock Head 3	70° 24.034' N	148° 31.47' W
Gas Conditioning Facility	70° 19.160' N	148° 33.295' W
Beginning of Mainline	70° 19.061' N	148° 33.013' W
End of Mainline	61° 25.589' N	150° 4.721' W
Start of Fairbanks Lateral	64° 56.723' N	148° 41.671' W
End of Fairbanks Lateral	64° 51.565' N	147° 52.490' W

4.1.4 Summary of Impacts to Waters of the U.S

The authorized work would result in discharges of dredged and fill material into approximately 7,939 acres of WOTUS, including wetlands, for construction of the Project:

- Discharges of dredged and fill material into freshwater wetlands are tabulated as 7,768.49 acres.
- Approximately 496 waterbodies, including 310 streams, would be crossed by the pipeline and 53 streams would be crossed by access roads.
- The Project would include discharges of dredged and fill material into 159.83 acres of marine and 10.83 acres of estuarine waters.

The permit would authorize pipeline crossings of the following navigable waters at approximately the following locations:

- Yukon River (HDD) 149°44'31.546" 65°52' 46.496"
- Chatanika River (Isolated Open Cut) 148°40'54.423" 64°58'42.885"
- Tanana River (HDD) 149°07'04.081" 64°34' 12.028"
- Nenana River (Isolated Open Cut) 149°18'03.880" 64°21' 03.517"
- Nenana River (Isolated Open Cut) 149°08'55.749" 64°31'37.345"
- Nenana River (Bridge) 148°55'59.517" 63°48'10.011"
- Nenana River (Bridge) 148°48'14.754" 63°27'23.187"
- East Fork Tolovana River (Isolated Open Cut) 148°37'59.017" 65°27'40.193"
- Susitna River (Bridge) 150°10'27.834" 62°10'31.579"
- Willow Creek (HDD) 150°07'22.310" 61°46'36.913"
- Little Susitna River (Isolated Open Cut) 150°08'27.992" 61°28'14.958"
- Nenana River (Bridge) 148° 53' 4.871" 63° 44' 15.177"
- Nenana River (Open Cut) 148° 47' 32.037" 63° 40' 22.825"

4.1.5 Summary of Impacts to BLM-Managed Lands

Of the 763-mile proposed pipeline corridor system, approximately 229 miles and 6,337 acres of BLM-managed public land would be affected. (See Appendix J, Part 9)

The BLM would offer a ROW Grant to the Applicant for the construction, operation, maintenance, and termination of the proposed 36-inch mainline and 12-inch Fairbanks lateral connector buried natural gas pipeline system and related ancillary facilities. The mainline pipeline ROW would involve a 120-foot wide temporary construction corridor and a 53-foot-wide permanent operational corridor. The Fairbanks lateral extension pipeline ROW would involve a 100-foot wide temporary construction corridor and a 30-foot wide permanent operational corridor.

During the estimated four year construction period, there would be temporary ancillary facilities affecting approximately 2,652 acres, including material sites, civilian camps, as well as temporary access roads and workspaces. These temporary ancillary facilities, which are necessary to support construction, would be decommissioned and the land reclaimed to a natural condition as described in Appendix J on completion of the construction phase. The pipeline would involve 100 stream/river crossings on BLM-managed land: 99 crossings would be open-cut trench, and 1 would be HDD (Yukon River).

The permanent operational pipeline system would involve a footprint total of 3,826 acres and 229 miles of impacted BLM-managed lands. During operations and maintenance, the pipeline would be accessed primarily via roads, with monitoring activities supported by aviation.

The ROW Grant term would be for 30 years. Prior to the 30-year grant termination date, the ROW Grant could be renewed.

4.2 PROJECT CHANGES SUBSEQUENT TO THE AUGUST 1, 2014, PUBLIC NOTICE

After the August 1, 2014, public notice for the route known as Version 6.0, the Applicant's Project team worked with members of its Alaska Liquefied Natural Gas project team to develop a common alignment (Version 6.1) for the portions of the two Project routes that overlap. This effort combined the available engineering and environmental knowledge to avoid physical hazards, minimize impacts to wetlands and other resources, and took into account SEIS scoping comments for the Project. Appendix V, Part 2, of the Draft SEIS describes route changes (including the specific MP location) and the rationale behind the Applicant's proposed change. After release of the draft, further changes were made to the Version 6.1 based on comments received from the public (FSEIS Table 4.9-1). Table 1 shows the reduction in roadway length and number from an earlier version of the Project considered (V6, December 2013) and the current version of the Project (V 6.1, February 2015).

Table 1 Reduction in Length and Number of Access Roads from v6.0 to v6.1

Category	Total Mileage			Number of Roads		
	V6.0	V6.1	Change	V6.0	V6.1	Change
New Roads	301.8	169.9	-131.9	397	293	-104
Temporary Ice Roads	22.6	23.2	+0.6	24	24	0

Since the applicant's initial mitigation statement in the July 23, 2014, revised permit application, the wetland compensatory mitigation plan has continued to evolve, and has undergone many revisions based on Corps feedback. The final version of the plan, dated September 13, 2018, is appended as Appendix G, Compensatory Mitigation Plan.

Additionally, the Applicant has incorporated several new design features, mitigation measures, and best management practices to minimize impacts of the proposed Project. These Applicant-proposed mitigation measures are contained in Appendix M of the FSEIS.

4.3 APPLICANT'S STATED PURPOSE AND NEED

The following is the Applicant's purpose and need statement as it appears in the DA permit application:

"The proposed ASAP Project would deliver North Slope natural gas to Fairbanks, Southcentral, and other communities in Alaska. The applicant's stated purpose of the proposed Project is to provide Alaskans with a stable, affordable, long-term supply of natural gas for heating and powering their homes and businesses. The purpose of AGDC, the Project sponsor and Applicant, is established in Alaska Statute 31.25.005, which states that the corporation shall, for the benefit of the state, to the fullest extent possible:

...Develop and have primary responsibility for developing natural gas pipelines...and other transportation mechanisms to deliver natural gas in-state for the maximum benefit of the people of the state;

When developing natural gas pipelines...and other transportation mechanisms to deliver natural gas in-state, provide economic benefits in the state and revenue to the state;

Assist the Department of Natural Resources and the Department of Revenue to maximize the value of the state's royalty natural gas, natural gas delivered to the state as payment of tax, and other natural gas received by the state;

Advance an in-state natural gas pipeline...in a safe, prudent, economical, and efficient manner, for the purpose of making natural gas...available to Fairbanks, the Southcentral region of the state, and other communities in the state at the lowest rates possible;

...Endeavor to develop natural gas pipelines ...to deliver natural gas...to public utility and industrial customers in areas of the state to which the natural gas...may be delivered at commercially reasonable rates; and

Endeavor to develop natural gas pipelines ...that offer commercially reasonable rates for shippers and access for shippers who produce natural gas..."

4.4 BASIC PROJECT PURPOSE AND WATER DEPENDENCY (40 CFR 230.10(A)(3))

The basic project purpose comprises the fundamental, essential, or irreducible purpose of the proposed project, and is used by the Corps to determine whether an applicant's project is water dependent. If the proposed activity does not require access or proximity to or siting within a special aquatic site (as defined in 40 CFR 230, Subpart E) to fulfill its basic purpose, then it is not water dependent and practicable alternatives not involving special aquatic sites are presumed to be available and less environmentally damaging unless clearly demonstrated otherwise (40 CFR 230.10(a)(3)). The Corps has defined the basic purpose for the proposed ASAP Project as the distribution of natural gas to markets, which is not a water dependent activity. The Corps has determined that practicable alternatives not involving special aquatic sites are not available.

4.5 OVERALL PROJECT PURPOSE (40 CFR 230.10(A)(2))

The overall Project purpose is used for evaluating practicable alternatives to the Applicant's preferred alternative under the Section 404(b)(1) guidelines and must be specific enough to define the applicant's needs, but not so restrictive as to preclude all discussion of alternatives. Defining the overall Project purpose is the responsibility of the Corps, considering the public interest; however, the applicant's needs must be considered in the context of the desired geographic area of the development, and the type of project being proposed. Consistent with this responsibility, the Corps has determined that the overall purpose of the proposed Project is driven by Alaska Statute 31.25.005(4), to provide an affordable, long-term, stable supply of up to 500 million standard cubic feet per day) of natural gas from existing reserves within North Slope gas fields to markets in the Fairbanks and Southcentral regions of Alaska and other communities within Alaska.

4.6 BLM PURPOSE AND NEED FOR ACTION

In accordance with Section 28 of the MLA, as amended, the BLM's purpose and need for the proposed Project is to respond to a ROW application submitted by the Applicant to cross federally managed lands. Consistent with the requirements of Section 28 of the MLA, and the direction in BLM Policy Manual 2884 – Applying for an MLA Grant or Temporary Use Permit, the BLM will decide whether or not to approve, approve with modification, or deny issuance of a ROW Grant to the Applicant for the proposed Project; and if so, under what terms and conditions. The proposed ROW action will be reviewed for consistency with approved BLM land use planning.

The BLM decision to be made is whether or not to authorize the requested 30-year ROW Grant and associated temporary use permits; and if authorized, what terms and conditions would apply to the authorizations. The BLM would decide whether or not to authorize material sales necessary to provide gravel resources necessary to support the construction of the pipeline via the Materials Act; and if authorized, what terms and conditions would apply to the material sales.

4.7 CONFORMANCE WITH BLM LAND USE PLANS

The BLM has determined the Project is in conformance with four BLM resource management plans. The Central Yukon Resource Management Plan (RMP) (BLM, 1986), the Utility Corridor RMP (BLM, 1989), the East Alaska RMP (BLM, 2007a), and the Ring of Fire RMP (BLM, 2008), provide the overall long-term management direction for BLM-managed lands encompassed by the Project. The Utility Corridor RMP was designed to provide for multiple uses of planning area resources while also providing resource protection for the approximately 6.1 million acres of BLM-managed surface lands (of which 5.8 million acres are BLM-managed mineral estate) within the Utility Corridor RMP planning area. An overriding priority of the utility corridor RMP is to specifically preserve the utility corridor for the transportation of energy minerals (BLM, 1989). Both the inner and outer corridors within the RMP planning area are designated as FLPMA section 503 ROW corridors under 43 CFR 2802.11.

5.0 SCOPE OF ANALYSIS

5.1 SCOPE OF ANALYSIS FOR CORPS' JURISDICTION

The scopes identified in this section to ensure compliance with NEPA, Section 7 of the Endangered Species Act (ESA) and Section 106 of the NHPA are based on the proposed Project and its alternatives.

5.1.1 Determined Scope for NEPA: 33 CFR 325, Appendix B, 7(b)

The scope of analysis relates to the Project components that the Corps analyzes to meet requirements of NEPA during the DA permit evaluation. These are based on the following four factors:

1. Whether or not the regulated activity comprises "merely a link" in a corridor type Project:
2. The regulated activities do not comprise "merely a link" in a corridor type project. Due to the abundance and configuration of WOTUS within the Project footprint, the regulated activities would occur throughout the length of the Project.
3. Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity that affect the location and configuration of the regulated activity:
4. There are no aspects of an upland facility that affect the location and configuration of the regulated activity. The Project configuration has been determined by the location of natural gas reserves, an area principally WOTUS, in relation to markets.

5.1.2 The Extent to which the Entire Project Would Be Within the Corps' Jurisdiction

A total of 21,493.04 acres (9,704.83 in wetlands; 11,788.20 in uplands) are in the Project footprint. Discharges of dredged and/or fill material would occur in 7,939 acres of WOTUS for the proposed pipeline, aboveground facilities, permanent access roads, material sites and marine dredge or fill.

5.1.3 The Extent of Cumulative Federal Control and Responsibility

The federal involvement for this Project is not limited to a DA permit issued by the Corps. In accordance with Section 28 of the MLA, the BLM has responsibility to grant ROW authorization on BLM-managed lands, which comprises approximately 228 miles for the proposed mainline corridor, and less than 1 mile for the Fairbanks lateral connector, and associated infrastructure and facilities. Additionally, a 7-mile portion of the pipeline would be routed through Denali NPP under Alternative 2. The extent of cumulative Federal control and responsibility is increased by the BLM and NPS administration of land management functions.

5.1.4 Discussion

Due to the extent of the Project directly within Corps' jurisdiction and the cumulative extent of Federal control and responsibility, the scope of analysis under NEPA for this action includes the impacts, alternatives, detriments and benefits resulting from the entire Project. The NEPA scope of analysis is defined generally as the entire 733-mile pipeline corridor encompassing the proposed Project ROW between Prudhoe Bay and the existing ENSTAR pipeline system at MP 39 southwest of Big Lake, Alaska. Also included is a 30-mile-long lateral pipeline that would connect to the natural gas distribution system in Fairbanks, referred to as the Fairbanks Lateral, as well as the areas around proposed infrastructure, including access roads, material sites, and facilities (i.e., GCF and camps). The scope includes Dock Head 3 (DH3) at West Dock, currently proposed for dredging and expansion to accommodate offloading of the GCF modules, and the nearshore area immediately east of West Dock where dredge material is proposed for disposal. Also included are Dock Head 2 at West Dock and the area proposed for disposal beyond the limits of the Territorial Seas. Around Denali NPP, the scope of analysis encompasses the proposed Alternative 1 corridor along the Parks Highway, east of the Denali NPP boundary, as well as the pipeline segment proposed under Alternative 2 between approximately MP 535 and MP 543, which runs through Denali NPP and is subject to NPS authority.

Based on this assessment, the entire Project is subject to Corps' NEPA evaluation and review, including the Project's direct, indirect/secondary, and cumulative impacts. The FSEIS evaluated the entire Project as required by NEPA (42 USC 4321-4347).

5.2 SCOPE OF ANALYSIS FOR THE BLM'S JURISDICTION

The BLM scope of analysis describes which portions of the overall Project the BLM will evaluate, pursuant to NEPA, as the area under the BLM management control and responsibility. Any BLM-managed land potentially impacted by the pipeline system corridor, staging areas, access roads, material sites, block valve facilities, pipeline storage yards, water extraction sites, work pads, or other related infrastructure are within the BLM scope of analysis.

Up to 229 miles and 6,337 acres of BLM-managed lands would be affected by this Project.

5.2.1 ANILCA 810 analysis

For any project requiring an authorization from the BLM, pursuant to ANILCA Section 810, the BLM is responsible for conducting the ANILCA Section 810 analysis for the Project. Based on ANILCA Section 810 and BLM Instruction Memorandum 2011-008, the BLM determined that the 810 Analysis needs to address the portion of the Project requiring a BLM authorization, that being the pipeline ROW, and all aspects of the Project that are dependent on that authorization and the associated pipeline, because those components of the Project would not go forward if not for the pipeline, and the pipeline would not go forward if not for those other components. This is consistent with NEPA requirements for evaluation of connected actions.

5.3 SCOPE OF ANALYSIS FOR MAGNUSON-STEVENSON FISHERY CONSERVATION AND MANAGEMENT ACT

Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on any action authorized, funded, or undertaken that may adversely affect Essential Fish Habitat (EFH).

The Project includes the gas pipeline, gas conditioning facility and connecting lines. These components define the Project Area, potentially affecting EFH.

EFH is assessed in Section 4.11 of the FSEIS. NMFS consultation conclusions are discussed in Appendix C of this JROD.

5.4 SCOPE OF ANALYSIS FOR NATIONAL HISTORIC PRESERVATION ACT

The permit area for an undertaking is defined in 33 CFR 325, Appendix C. The following three (3) tests must all be satisfied for an activity undertaken outside of WOTUS to be included within the "permit area":

- The activity outside of WOTUS would not occur but for the authorization of the work or structures within WOTUS.

- ☒ The activity outside WOTUS is integrally related to the proposed work or structures within WOTUS (or conversely, the proposed work or structures within WOTUS must be essential to the completeness of the overall Project or program).
- ☒ The activity outside the WOTUS is directly associated (first order impact) with the proposed work or structures within WOTUS.

Activities outside of WOTUS are included because all three tests identified in 33 CFR 325, Appendix C (g)(1) have been met.

The permit area considered for direct effects for ASAP includes the ROW corridor for pipeline construction and the proposed footprint for all other Project components (e.g. work camps, storage areas, gravel and material sources, and the GCF) plus a 90-foot buffer area. The area considered for indirect effects, including visual impacts, is contained within a 1-mile perimeter that surrounds the permit area. Maps depicting the permit area are contained in Appendix E.

5.5 SCOPE OF ANALYSIS FOR THE ESA

Under the ESA, “action area” refers to all areas to be affected directly or indirectly by the federal action and not merely the area that falls directly under the Corps’ regulatory jurisdiction. The ESA action area includes the footprint of the pipeline and ancillary features, and the footprint of the GCF including the footprint of all discharges of dredged or fill material in WOTUS.

In Prudhoe Bay, the action area is expanded to include areas that would be directly and indirectly affected by noise and construction activities. The action area for this part of the Project includes 185 square miles (479 square kilometers) surrounding the West Dock Causeway, the navigational channel, the temporary barge bridge, a barge marshalling area, and the dredge disposal site summarized in the ASAP West Dock Dredge and Disposal Plan (AGDC, 2015; AGDC, 2016a), as well as road improvements and gravel pads to be constructed in support of the transportation and construction of the GCF.

In addition, the action area includes a 1-mile buffer along the pipeline ROW south from the GCF near the Beaufort Sea (Figure 6). This includes areas within which listed species may be affected by disturbance resulting from construction activities and Project operations. This zone extends as far south as 50 miles from the Beaufort Sea Coast for both species of eiders, and as far south as 25 miles from the Beaufort Sea Coast for polar bear. A total of 627.3 acres of new impacts within the action area would be permanent.

The geographic areas evaluated for the ESA Section 7 consultation process focus on the aspects of the proposed action that may affect ESA species within the action area, the geographic areas evaluated focus on designated critical habitat or other portions of the action area where there is a likelihood of finding ESA-listed or ESA-candidate

species. This is limited to the portion of the action area that begins 50 miles south of the Beaufort Sea and extends north.

A 2012 Letter of Concurrence from the NMFS stated that fin whales, humpback whales, and Steller's sea lions may be present in or adjacent to the action area around the Port of Seward. The activities at the Port of Seward have not changed since the 2012 FEIS evaluation; however the Port of Seward has been removed from the action area as there are no activities proposed at that location which require federal authorization under the ESA at this location.

6.0 PUBLIC INVOLVEMENT

An essential step in the NEPA process is public involvement, which provides an opportunity for the public and agencies to express their views and help identify issues to be addressed in the FSEIS. Comments received were reviewed and considered by the Corps during the development of this JROD. See Appendix A for the public record and full summary of the public involvement activities and comment analysis.

6.1 PUBLIC NOTICE

Updated Application received: July 23, 2014

Application revised: April 2015, December 2015, January 2016, July 2016, June 2017, and April 2018

Public Notice dates: August 1, 2014; June 30, 2017

Public Notice periods: August 1, 2014 to September 2, 2014; June 30, 2017 to August 29, 2017

6.2 PUBLIC MEETINGS

The *Federal Register* published a Notice of Intent to prepare a SEIS (79 FR 44758) on August 1, 2014. The open scoping period was held from August 1 through October 14, 2014, to gather stakeholder input regarding the Project. Public scoping meetings were held in 16 Alaska communities between August 18 and October 8, 2014. A total of 78 submissions were received, in addition to verbal comments made during scoping meetings. In all, 26 issues were raised by stakeholders during the scoping process. These issues are included in Appendix A of this document.

On June 30, 2017, the *Federal Register* published the Notice of Availability (82 FR 29859 and 82 FR 39424) announcing the public comment period for the Draft SEIS, which ended on August 29, 2017. A comment period on the DA application ran concurrently. The public meeting process provided the opportunity to invite potentially affected and interested individuals, agencies, and groups to help:

- Share information and identify concerns about the proposed Action;
- Define a range of alternatives;
- Determine and define the scope of issues to examine;
- Identify other environmental and consultation requirements;
- Gather additional information regarding potential effects of the proposed Action; and,
- Inform and identify potentially interested parties.

Public meetings were held in several Alaska communities. The dates, locations and the official transcripts of the public meetings are included in Appendix A of this document.

6.3 OTHER PUBLIC INVOLVEMENT

The Corps published the ASAP FSEIS website <http://www.asapeis.com> to provide information, maps, and documents for the public about the Project and the NEPA process, to give meeting notices, and to post available Project documents and maps. The website also provided links to other useful online resources.

The Applicant's online ASAP Interactive Map Viewer provided the Project's geographic footprint and design components to help visualize impacts associated with construction and operation of the pipeline. The Interactive Map Viewer overlays the entire pipeline route and associated ancillary facilities on aerial photography or topographic maps. The Map Viewer can be accessed from the Applicants' website or from the Corps' ASAP FSEIS website <http://www.asapeis.com>.

6.4 EVALUATION AND CONSIDERATION OF COMMENTS RECEIVED

In response to the public notices issued by the Corps for the Project application, and in response to the Draft SEIS, numerous comments were received from local, state, and federal agencies; tribes; and the public. Public comments were received through August 29, 2017 and are summarized in a Public Comment Analysis Report (JROD Appendix A). A total of 81 submissions were received, in addition to 26 submissions from public hearings (including verbal testimony and comment forms). These submissions generated a total of 750 substantive comments: 75 from public hearing testimony and 675 from emails and letters. In all, 30 issues were raised by stakeholders during the comment period. Comments received on the Draft SEIS were fully considered and addressed in the FSEIS. Stakeholder issues are defined in Table 2 as well as the specific section of the FSEIS where those topics are discussed.

The Corps did not solicit comments following publication of the FSEIS. Comment letters from the EPA and the USFWS, each dated July 18, 2018, were received and considered during development of the JROD; however, specific responses will not be provided by the Corps.

Many of the comments contained in these letters were duplicative of comments previously received and addressed in the FSEIS Appendix Q. These letters, along with the Applicant's responses, are contained in Appendix A of this JROD.

Table 2 Issues Raised During the Public Comment Period and Where They are Discussed in the FSEIS

Code	Issue Text	Description	Sections in the FSEIS Where the Issue is Discussed
ACC	Access to Land/Property	Comments that discuss property/land access.	3.11, 3.12, 3.19, 4.0
ACK1	Acknowledged	Acknowledges the receipt of the communication that may be related to another topic other than the proposed Project.	--
AIR	Air Quality or Emissions/ Climate Change/ Green House Gases	Comments related to air quality, air emissions, climate change, or greenhouse gas emissions.	3.2, 3.18, 4.21, 4.22, 4.26, Appendix O
AKN	Alaska Native Issues	Comments on the analysis of the cultural and social impacts of the alternatives on Alaska Natives.	--
ALT	Alternatives	Comments that support or reject the preferred alternative or suggest new alternatives or alignments.	2.4, 2.6, 2.7, 4.6, 4.7, 4.8, 4.9
CUL	Archeological / Cultural Resources	Comments regarding the archeological / cultural resources impacts of the Project.	1.9, 3.15, 4.19, Appendix K
ECO	Economy	Comments regarding economic impacts of the Applicant's preferred alternative.	2.4, 2.6, 4.18
EDI	Editorial	Comments providing suggestions for improving the organization and readability of the document as well as accuracy of the content.	Executive Summary, 1.0, 2.0, 3.0, 4.0, Appendices
EFF	Effects of the Applicant's preferred alternative/ Analysis of Effects	Comments on the potential effects of the Applicant's preferred alternative, analysis of effects (including direct, indirect and cumulative), or the methods developed to analyze the alternatives.	Executive Summary, 3.3, 4.1, 4.26
ENG	Engineering / Project Design / Project Description	Comments discussing Project engineering, Project design (including gas composition), or proposed changes.	Executive Summary, 2.2, 2.6, 3.14, 4.6, 4.7, 4.9, 4.23, 4.25, Appendix M
FISH	Fish	Comments regarding fish and fish habitat.	3.3, 3.7, 4.11, Appendix M
GEO	Soils, Geology, Permafrost	Comments regarding soils, geology, and permafrost.	2.6, 4.6, 4.9, 4.25, 4.26
HAZ	Hazardous Material	Comments regarding potential risks related to hazardous materials or handling of hazardous materials associated with the Applicant's preferred alternative.	4.26

Code	Issue Text	Description	Sections in the FSEIS Where the Issue is Discussed
HIA	Health Impacts	Comments related to the health impact assessment in the NEPA process or concern about health impacts.	3.17, 4.21, 4.26
INA	Inadequate Information to Assess Effects/Unclear Information	Comments stating the information provided in the analysis of the alternatives or potential effects is inadequate, inaccurate, or confusing.	3.17, 4.0
LNG	LNG pipeline	Comments comparing ASAP to the LNG pipeline Project.	4.26
MIT	Mitigation / Monitoring	Comments related to mitigation and monitoring associated with the Applicant's preferred alternative.	4.5, 4.10, 4.11, 4.21, Appendix M
NEPA	National Environmental Policy Act	Comments regarding the NEPA and FSEIS process.	4.6
NOI	Noise	Comments regarding noise concerns.	4.21, 4.23
NOTE	Notification of Meeting	Comments regarding notification issues.	1.0
PER	Permits	Comments on permits and the permitting process.	Executive Summary, 1.10, 2.2, 3.3, 4.6, 4.7, 4.25
PUR	Project Purpose and Need	Comments regarding the Project purpose and need.	--
REC	Recreation	Comments regarding recreation concerns.	2.2, 3.12, 4.0, Appendix M
RFI	Request for Information	Comments requesting information including maps, presentations, or descriptions of locations.	--
SPILL	Spills (Oil Spills, Response or Planning)	Comments related to potential oil spills, spill response, or planning.	3.3
SUB	Subsistence	Comments on potential impacts to subsistence activities.	Executive Summary, 3.17, 4.20
VIS	Visual Resources	Comments regarding visual/scenic resources.	4.17, 4.26
WAS	Trash / Waste	Comments regarding effects of trash/waste during construction and operation.	3.11
WET	Wetlands / Water	Comments regarding wetlands, streams, rivers, or associated vegetation.	Executive Summary, 3.3, 3.20, 4.0, Appendix E, Appendix M, Project Website
WLD	Wildlife	Comments regarding potential effects on wildlife or wildlife-related issues with the proposed pipeline.	2.4, 3.6, 3.10, 4.10, Appendix V

1 These comments are not included in the total as substantive to the proposed action.

6.5 ADDITIONAL BLM PUBLIC INVOLVEMENT

The BLM considered public comment throughout the FSEIS process. The BLM participated in public scoping and Draft SEIS public meetings conducted by the Corps and the Applicant (See Chapter 1 of the FSEIS). The BLM also participated in agency scoping meetings that included Native Villages. It was through these public involvement opportunities that the BLM identified public issues of concern to incorporate into the FSEIS analysis and consequential outcome in the FSEIS.

Pursuant to ANILCA Section 810(a)(1) and (2), the BLM also conducted 12 hearings subsequent to many of the Draft SEIS public meetings to hear and gather comments regarding potential impacts to subsistence use resulting from the alternatives considered in the Draft EIS. These ANILCA 810 hearings were conducted in the following communities: Utqiagvik, Nuiqsut, Kaktovik, Minto, Nenana, Bettles, Anaktuvuk Pass, Wiseman, Healy, Cantwell, Trapper Creek, and Allakaket.

7.0 ALTERNATIVES (33 CFR PART 325 APPENDIX B (7), 40 CFR 230.5(C) AND 40 CFR 1502.14).

Considering alternatives helps to ensure that ultimate decisions concerning the proposed Project are well founded and consistent with other national policy goals and objectives. NEPA requires that an EIS include a discussion of a reasonable range of alternatives, including the no action alternative, and the effects of those alternatives. Reasonable is based on consideration of the Project purpose as well as technology, economics and common sense. Under the Guidelines, practicability of alternatives is taken into consideration and no alternative may be permitted if there is a less environmentally damaging practicable alternative. Practicable is defined as meaning the alternative is available, and capable of being done after taking into consideration cost, existing technology, and/or logistics in light of the overall Project purpose (40 CFR 230.3(q)).

As presented in Chapter 2 of the FSEIS, a rigorous and comprehensive process was used to identify and evaluate project alternatives. Thirty alternatives were considered and eliminated from detailed analysis in the FSEIS. Following the Corps' General Regulatory Policies (33 CFR 320), as well as other laws and statutes, key reasons for eliminating alternatives generally included the following: 1) does not meet the purpose and need of the proposed Project; 2) is not "reasonable" or "practicable"; or 3) does not include features that would reduce environmental impacts when compared to the proposed Project. A list of alternatives eliminated from detailed analysis is presented in FSEIS Table 2.6-1. Sections 2.6.2 through 2.6.7 of the FSEIS provide additional detail on the rationale for eliminating certain alternatives that required additional review.

7.1 ALTERNATIVES EVALUATED IN THE FEIS (2012)

As a supplemental evaluation, it is necessary to be aware of the analysis of alternatives presented in the 2012 FEIS. In 2012, the Corps considered 22 alternatives consisting of four categories; No Action Alternative, energy source alternatives, natural gas transport alternatives, and pipeline route alternatives. As a result of the 2012 screening process, the FEIS analyzed four alternatives in detail (including the 2012 Proposed Action). Based on the analysis described in Section 4.2 through 4.5 of the 2012 FEIS, only the Denali NPP route variation, the evaluation of the Yukon River bridge crossing mode, and No Action alternatives were carried forward for detailed environmental analysis in comparison to the 2012 version of the Applicant's preferred alternative.

7.2 ALTERNATIVES CONSIDERED AND CARRIED FORWARD FOR DETAILED ANALYSIS IN THE FSEIS (2018)

The Corps and Cooperating Agencies developed two alternatives (an action alternative and the no-action alternative) for evaluation in the SEIS for comparison to the Applicant's proposed alternative (Alternative 1). Alternative 2, summarized below and carried forward for analysis through the FSEIS, varies from Alternative 1 as it consists of five options and variations involving engineering design, siting, and operational features. Alternatives 2 and 3 address the concerns raised in scoping, represent a reasonable

range of potentially practicable alternatives in consideration of the Overall Project Purpose (Section 4.4), and fulfill the NEPA requirements for analyzing the No Action Alternative.

The three alternatives are summarized as follows:

- Alternative 1: Use of Dock Head 3 (DH3) at West Dock, nearshore disposal of dredge material, buried pipeline (except at fault crossings, elevated bridge stream crossings, pigging facilities, and block valve locations), and HDD at the Yukon River;
- Alternative 2: Denali NPP route variation, use of Dock Head 2 (DH2) at West Dock, ocean disposal of dredge material, pipeline elevated on VSMs from MP 0 to 62, and aerial crossing at Yukon River; and,
- Alternative 3: No Action Alternative.

7.3 COMPARISON OF FSEIS ALTERNATIVES

In this analysis summary, the five Alternative 2 design options and variations are contrasted to the corresponding Project components of Alternative 1. Alternative 3 is also evaluated.

7.3.1 Denali NPP Variation (Alternative 2)

This variation is a reasonable and practicable alternative that is environmentally preferable over Alternative 1.

The Alternative 1 route in the vicinity of Denali NPP would traverse east of the Nenana River and would avoid Denali NPP lands. It would cross steep slopes, and have an increased need for access roads and material sites (gravel pits). This route would create a new corridor through areas of sloped forested landscape, creating visual impacts when viewed from Denali NPP. The acreage of affected wetlands and the number of stream crossings would be greater than Alternative 2.

The Denali NPP route variation would cross through a corridor (MP 535 to MP 543) that already contains infrastructure; the Parks Highway, Alaska Railroad, and fiber optic cable systems. It would avoid the steep and challenging terrain east of the highway and would minimize visual impacts to Denali NPP. This variation would result in a reduced acreage of total land use by eliminating 2 material sites and reducing the need for construction access roads. Additionally, there would be potential to allow facilities and equipment in Denali NPP to use clean-burning natural gas rather than traditional fuels.

Approximately 89 percent of the Denali NPP route variation is either upland or currently developed land. The remaining 11 percent of the Denali NPP route variation is wetland consisting of: 21.2 acres of scrub/shrub, 0.5 acre of emergent, 0.13 acre of riverine, and less than 0.001 acre is other palustrine (ponds). There are no forested wetlands within this area of the Project. In comparison with the applicant's proposed route, the Denali

NPP route variation would result in avoiding placement of fill material into approximately 87 acres of wetland within its 7-mile length.

The Denali NPP Variation would result in two additional crossings of the Nenana River: a buried crossing north and east of the McKinley Village, and an aboveground crossing using an existing pedestrian/bike bridge. Yet, as compared to Alternative 1, there would be six fewer pipeline stream crossings, and eight fewer road stream crossings.

The Denali NPP lands that would be crossed are not designated wilderness areas.

This alignment would be subject to the provisions of Title XI of the ANILCA and the 2013 Denali National Park Improvement Act (Public Law 113-33). On August 15, 2018, and September 14, 2018, the Applicant submitted public filings to the Federal Energy Regulatory Commission (FERC) docket for the Alaska Liquefied Natural Gas project (FERC Docket No. CP-17-178-000), respectively as accession number 20180815-5078(33055749), pages 186-207 and pages 327-411 and accession number 20180914-5030(33118854), pages 17-382. The cited portions of these filings include information relevant to the Denali NPP route segment, a common alignment of both projects, including field survey summaries for wetlands, visual resources, and cultural resources and are incorporated by reference. This information supports analysis and conclusions contained in the FSEIS. The filings can be accessed at the FERC website <https://elibrary.ferc.gov/>.

7.3.1.1 Aboveground Pipeline Mode (MP 0 to MP 62) (Alternative 2)

This design variation is not practicable. Additionally, it raises concerns over environmental consequences.

An aboveground pipeline would require installation of approximately 6,014 VSM guide/slide supports with 372 associated anchors to support the pipeline above the tundra and additional infrastructure. If a dual VSM structure were required (two VSMs at every location) this number could increase to approximately 12,028 VSMs. The aboveground line would require use of drilling equipment, slurry, and hardware fittings to mount and balance the pipe to the appropriate position. An aboveground pipeline would generally follow the belowground route, but would be longer, adding approximately 200 feet of distance every 1,500 feet due to the use of 'Z-loops' in the design to compensate for thermal expansion and contraction. As a result, the pipeline would be approximately 8.2 miles longer due to 'snaking' of the pipe over the same 62 mile-long distance of the proposed belowground mode. The use of VSMs would require additional shipping/trucking and storage of VSM pipe, anchors, and other supplies and equipment (hardware fittings, slurry, and machinery) to the Arctic Coastal Plain. The aboveground alternative would also carry a much higher cost for dismantlement, removal, and remediation following completion of the Project. As conveyed in Part 1 of Appendix A of the FSEIS, these additions would result in substantially higher costs for materials, labor/ workforce and time/complexity to complete installation.

Increased and more complicated logistical efforts include additional material handling challenges, more barge, rail, and highway truck traffic, additional schedule, more challenging welding and balancing procedures, and increased structural challenges and risks related to wind or frost heaving, potentially leading to VSM movement. North of the Brooks Range, winter season yields a period of up to 120 days from early January to late April for pipeline construction. As an aboveground design would require installation of VSMS at approximately 6,000 locations, it is possible that an aboveground design could require two winter seasons: the first for installation of VSMS and the second for the installation of the pipe. This would impact cost, schedule, and simultaneous operations with other mainline spreads, camp space, and logistics. For a belowground design, only one winter construction season would be required.

Security and safety of an aboveground pipeline are major concerns for reliability of operations. An aboveground pipeline is less secure than a belowground pipeline, and it is more vulnerable to accidental and intentional damage (i.e., sabotage). An aboveground line could explode or leak if it is hit by accidental or intentional bullet strikes. The pipe and VSMS are vulnerable to strikes from aircraft and ground-based vehicles. An aboveground pipe is also more vulnerable to terrorism attacks. In addition, the increased trucking and handling and extended construction season associated with aboveground design would increase the probability for truck accidents and other safety incidents.

The Applicant expressed concerns regarding the available technology that can guarantee operational integrity of an aboveground pipeline should a temporary loss of pressure occur during cold Alaska winters. Phase change from gas to liquid and subsequent liquid dropout would always exist as a potential hazard to operational reliability during cold winters. Extended shutdown due to liquid drop out in an aboveground pipeline could interrupt service for a prolonged period. The belowground design is based on existing technology and ensures operational integrity during cold winters because a phase change from gas to liquid is not possible, even with loss of pressure, due to warmer subterranean temperatures.

In addition to the impracticability of an aboveground pipeline design due to cost, logistics, and existing technology, there are concerns over environmental impacts associated with the aboveground pipeline that could make it more environmentally damaging than a belowground mode. While the aboveground option would result in a relatively slight reduction to direct wetland impacts (about 46 fewer acres when compared to the belowground design), the overall long-term impacts to wetlands and other natural resources are expected to be greater for the aboveground option. Doubling the acreage (from 15.41 to 36.07 acres) of the Prudhoe Bay Pipe Storage Yard (PSY) and the Franklin Bluffs PSY would be necessary to handle the store the VSMS, additional pipeline, and other supplies. These additional PSYs and the VSMS would be gravel fill pads and result in a permanent loss of wetlands. In contrast, the wetlands impacted for the belowground pipeline are likely to re-establish as wetlands.

The aboveground pipeline and VSMS would create three-dimensional habitat fragmentation that could permanently disturb the viewshed and wildlife, especially

caribou. The BLM in its ANILCA 810 analysis evaluated potential effects on subsistence activities. The BLM expressed concerns over impacts of an aboveground pipeline on movements of caribou, an important subsistence species. The elevated pipeline could potentially alter their movements and reduce availability of caribou to subsistence users.

The aboveground design would also require ice pad that is approximately 10 percent wider than for the proposed belowground pipe installation. This would result in approximately 10 percent more water from North Slope lakes per season. If a second season is required to install the aboveground pipeline, the water usage impacts to North Slope lakes would be greater. A second construction season would also increase impacts to air emissions and noise.

7.3.1.2 Ocean Disposal of Dredge Material (Alternative 2)

This design variation is practicable, but would result in additional impacts to the aquatic environment.

Under Alternative 1, dredged materials would be placed on top of the bottomfast ice in the nearshore areas and would, therefore, enter the water column intermittently as nearshore ice melts in the summer. The dredged material would then be intermittently released into the nearshore waters and sink to the benthic environment in the summer as the bottomfast ice melts. The impact of removal or burial of benthic organisms is expected to be minor, as the impacted areas are shallow and generally known to contain few biologically significant communities due to the presence of bottomfast ice for much of the year. In addition, during the ice-free open water season, nearshore sediments are repeatedly disturbed and mobilized by wave action from the coastal winds prevalent in the proposed Project Area. This wave action results in the continuous transport and redistribution of nearshore sediments along the coastline during the ice-free season. Therefore, fish species in this area are likely to be adapted to these processes, which disturb and redeposit sediments and benthic organisms regularly. For this reason, impacts to fish due to changes in prey distribution would likely be minor because of the short duration (i.e., one summer).

Under this variation in Alternative 2, dredge material would be disposed of in the ocean, beyond the Territorial Sea. Currently, no specific offshore disposal sites have been designated by the EPA near the proposed Project Area; therefore, the exact location would need to be determined based on criteria listed in 40 CFR 220-229. It is surmised that water column depth would be greater, and the substrate and aquatic organisms would not be habituated to disturbance by bottomfast ice and wave action. Ocean disposal would substantially increase sediment loading and an increased geographic area of impacts. The affect would likely temporarily alter water quality for less than 1 year at an isolated location.

7.3.1.3 Aerial Crossing at Yukon River (Alternative 2)

This design variation is determined to be practicable. Initially, the crossing of the Yukon River by construction of a new aerial suspension bridge across the Yukon River was the

Applicant's preferred option in the 2012 FEIS. The Applicant changed their preferred crossing mode to HDD prior to scoping the SEIS.

In comparison of the Yukon crossing options, there would be minor differences between the environmental impacts of the HDD option and the aerial option. The aerial crossing option would be more logistically challenging to construct. While costs of this option have not been provided to the Corps, it is generally accepted that a HDD crossing is the standard for such crossings and would be substantially less expensive than a bridge structure. Lastly, the aerial option would adversely affect aesthetics, may cause bird-strike mortalities, and would heighten security concerns.

7.3.2 FSEIS Alternative 3 (No Action Alternative)

This alternative does not meet the Overall Project Purpose.

Section 1502.14 of NEPA requires federal agencies to explore all reasonable alternatives, including the alternative of No Action. The No Action alternative provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives.

The No Action Alternative would result in denial of the DA permit application. In this case, that would mean that utility-grade natural gas would not be transported via pipeline from the North Slope to Fairbanks, rural villages, and southcentral Alaska because no pipeline would be constructed. Additionally, no operations and maintenance requirements would exist. Liquefied natural gas, or other energy resources, would need to be made available from alternative sources.

7.4 CORPS' DETERMINATION OF THE LEAST ENVIRONMENTALLY DAMAGING PRACTICABLE ALTERNATIVE

The selected LEDPA must achieve the Overall Project Purpose, be practicable and feasible, and be the least environmentally damaging alternative. The Corps determined that Denali NPP pipeline route variation meets the Overall Project Purpose, is practicable, and would result in less impact on the aquatic environment. The LEDPA adopts all practicable means to avoid or minimize environmental harm from the alternative, with the inclusion of the appropriate and practicable special conditions to minimize pollution or adverse effects to the affected ecosystem. The FSEIS indicated that routing this 7-mile portion of the pipeline through the Denali NPP could reduce direct impacts by approximately 86.8 acres of wetlands, reduce visual impacts, as well as reduce the number of material sites and stream crossings required. Therefore, the Corps has concluded that the modified Alternative 1 to include routing a portion of the pipeline through Denali NPP, between MP 535 to MP 543, is the LEDPA.

The Denali NPP Variation was not specifically requested in the DA permit application, thus the Applicant's Preferred Alternative is not the LEDPA. During a meeting on August 24, 2018, the Corps informed the Applicant that preliminary analyses indicated that Alternative 1 may not in its entirety represent the LEDPA. In an August 31, 2018

letter, the Applicant indicated it does not object to issuance of a DA permit for the Project that would include the Denali NPP Variation.

7.5 BLM'S RATIONALE FOR ADOPTING ALTERNATIVE 1

Among the alternatives evaluated in the FSEIS, Alternative 1 will result in fewer overall environmental impacts on BLM-managed land than Alternative 2, and therefore, is considered by the BLM to be the environmentally preferred alternative and is the BLM's selected alternative in this JROD. In particular, under Alternative 2 the use of an elevated pipeline on VSMS from mileposts 0 to 62 may cause a substantial reduction in the availability of caribou and thus may significantly restrict subsistence uses for the communities of Nuiqsut, Kaktovik, Anaktuvuk Pass, Arctic Village, Venetie, Wiseman and Coldfoot, and the aerial crossing of the Yukon River would result in greater adverse impacts to the visual landscape, may cause bird strike mortalities, and would heighten security concerns.

The decision in this JROD emphasizes balanced and environmentally responsible development, and includes protections for physical, cultural, and biological resources. In accordance with ANILCA Section 810, the decision also addresses local residents' concerns regarding protection of their subsistence way of life and the subsistence resources on which they depend through inclusion of new mitigation measures developed specifically for the Project (FSEIS Appendix M).

The Project would also lead to increased revenues to the State of Alaska, resulting from State and local taxes, and private land use agreements with private landowners, including Ahtna, Cook Inlet Region, Inc., and Doyon, will result in increased revenues for these native corporations. Local residents and communities will benefit indirectly from revenues associated with the development on federally managed lands that would accrue to the State of Alaska. Construction of the Project facilities would occur over approximately 3.5 years and employ up to 6,000 workers. Once operational, the Applicant estimates that the Project will employ approximately 240 full time employees.

7.5.1 Denali NPP Variation

The Denali NPP Variation (a component of Alternative 2) deviates from the Alternative 1 route starting on State of Alaska administered lands, traversing through the NPP lands and back onto State of Alaska lands. The Corps' LEDPA Alternative 1, with the Denali NPP Variation (an element of Alternative 2), involves no change in the location, distance, acreage or potential impacts to BLM-managed lands, and is of no consequence to BLM-managed lands in that region. Furthermore, National Park lands are excluded from MLA ROW authority. Since the Denali NPP Variation has no consequence to BLM-managed lands, the Corps' LEDPA is compatible with the BLM's environmentally preferred alternative.

7.5.2 RMP Compliance

Public Land Order 5150 classified a large corridor of BLM-managed land for the purpose of accommodating utilities such as the Dalton Highway and the TAPS, as well

as future pipelines. The 1989 Utility Corridor RMP provides management direction, guidance, and requirements for this area. The Project as described in Alternative 1 is located within this designated utility corridor and is consistent with the intended purpose of the designated utility corridor. The Project along with the other multiple utility installations in the Utility Corridor are compatible with each other and the Project will not unreasonably interfere with other utility ROWs. The existing Dalton Highway will provide efficient access and minimize the footprint necessary to construct, operate and maintain the Project. The Project will involve the use of existing material sources (sand, gravel, rock) as well as new material sites within the established utility corridor for construction and operational needs.

7.5.3 Joint Use of Right-of-Way Corridors under Section 28(p) of the MLA

Section 28(p) of the MLA, 30 USC 185(p), requires the BLM to consider the co-location of rights-of-way to the extent practicable in order to minimize adverse environmental impacts. The co-location of the Project adjacent to the TAPS for their common purpose of transporting petroleum products from their Alaska North Slope origin to distribution sites described in Alternative 1 minimizes adverse environmental impacts to the maximum extent practical, thus meeting the provisions of Section 28(p). Furthermore, the Project will not preclude the co-location of other potential future utility ROWs in the classified utility corridor.

The Project Alternative 1 is also co-located with the Electric Intertie ROW corridor to the extent feasible in that region. Alternative 1 is the most practical route for the Project intended purpose, and will not unreasonably interfere with the other existing utility ROWs.

7.5.4 Minimizing Environmental Impacts to BLM Managed Lands

The proposed pipeline area facilities include a natural gas pipeline, metering stations, pig launcher/receiver sites, check valves, and associated construction-related support facilities such as construction camps, construction access roads, material sites, pipeline storage yards, access roads, HDD workspaces, water extraction sites, work pads, and the pipeline construction ROW.

Design considerations for the proposed pipeline route include selection of the shortest pipeline length possible to minimize project footprint, while avoiding the following to the extent practicable: geotechnical hazards, hydrological hazards, known environmental and cultural sites, the Iditarod National Historic Trail, and potential land use conflict areas. The pipeline route and ROW design also consider seasonal construction schedules, constructability, and avoidance and minimization of impacts on BLM-managed land.

All pipeline stream crossings were analyzed for flow, width, and characterization to determine the most practicable crossing modes to avoid major diversions in rivers. HDD methods are proposed to install the pipeline underneath the Yukon River. Excavated cuttings from HDD sites will not be placed in waterbodies or in drainages. Without the

HDD crossing at the Yukon River, the crossing would likely be aerial and require a larger disturbance footprint for gravel pads necessary for work areas, both of which would create additional potential impacts. Criteria for HDD stream crossing locations include 100-year flood recurrence interval, depth of cover, setbacks for pipe exposure, bank mitigation/restoration to prevent erosion, bank protection, fish habitat and recreation value, and adverse impacts to BLM-managed land.

The Utility Corridor RMP (BLM, 1989) has identified the designated corridor lands to accommodate such utilities as the proposed Project. Language in Appendix N of the Utility Corridor RMP requires that projects “Maintain 300-foot zones of undisturbed vegetation on either side of the Jim River and Prospect Creek downstream from the eastern edge of the inner Corridor” with regards to preserving the hydrological functions of these river/stream systems. Since the Utility Corridor RMP established these lands specifically to accommodate utilities, it is reasonable to anticipate there will be a need for river/stream crossings. The proposed methodology using perpendicular isolated open-cut trenching would involve a smaller impact footprint than parallel trenching near the water bodies, or the additional acres that would otherwise be needed for HDD crossing. Deployment of isolated open-cut trenching methodology at the 99 river/stream crossings as proposed on BLM-managed lands would meet the intent of management direction in the BLM Utility Corridor RMP. Best management practices and close coordination with the Alaska Department of Fish and Game will be required through ROW Grant stipulations to ensure proper procedures are taken to preserve the hydrological functions of all stream and river crossings on BLM-managed lands.

7.5.5 Native Corporation Selected Lands and Public Easements

Sections of Ahtna-selected lands in the Cantwell area that were in the original SF-299 ROW Grant application received from the Applicant are no longer involved in the proposed action and thus are not included in this decision. The Applicant has relinquished this section of Ahtna-selected acreage/miles from their SF-299 ROW Grant application to the BLM. This action by the Applicant will allow the BLM to move forward with the conveyance of these lands to Ahtna.

There are currently 11 ANCSA 17(b) public access easements that intersect the proposed Project on Native Corporation lands. The rights to public access provided by these easements conflict with the imperative of excluding public access during construction to protect the safety of the general public from the potential hazards of developing a natural gas pipeline. The BLM retains the ANCSA 17(b) easements across all Native Corporation lands potentially affected by the Project. The Applicant will be required to develop a comprehensive public easement access plan that addresses how they will manage and mitigate all aspects of public access, including but not limited to ANCSA 17(b) easements, during all phases of pipeline activities including construction, operations, maintenance, and termination of the Project, prior to receiving a Notice to Proceed, per ROW stipulations.

A Federal ROW across public lands does not prohibit members of the public from accessing and enjoying those public lands. The non-exclusive nature of the ROW

means that the public have access to the lands except where it is appropriate to restrict access to either protect public safety or maintain operational integrity of the pipeline system. The BLM has determined that public access will be allowed in the ROW, except for areas approved for restricted access necessary for protecting public safety or maintaining operational integrity of the pipeline system.

After construction, requests for temporary closure or restriction of public access on BLM-managed lands must be submitted to the BLM for approval at least 90 days in advance to provide for adequate assessment of impacts to other authorized activities and land uses, and to allow for adequate public notice of any closures or restrictions. Restricted areas would be identified in detailed construction plans provided to the BLM Authorized Officer for review and approval according to the ROW Grant stipulations.

7.5.6 Revegetation and Reclamation

The ASAP FSEIS Appendix E – *Revegetation Plan and Wetlands Analysis and Redesign* (Appendix E) includes a detailed description of the Applicant’s proposed methodology for installing the pipeline and addressing revegetation needs within the ROW corridor. The BLM requires additional revegetation, restoration and reclamation measures beyond that proposed in Appendix E of the 2018 FSEIS.

Appendix E of the FSEIS indicates that the organic surface layer would only be separated and saved in “designated agricultural lands.” While there are no “designated agricultural lands” of BLM jurisdiction in the proposed ROW corridor, the BLM requires that during any ground-disturbing activity the topsoil shall be separated and saved for site reclamation. The BLM considers stockpiling the organic surface layer (otherwise described by the BLM as “topsoil”) a best management practice when undertaking any earth-moving activity for subsequent reclamation and revegetation. Stockpiling and redistribution of the surface layer is required for all Project-related site excavation. The BLM has determined that segregation and storage of the surface layer is required. The BLM will address any exceptions to the segregation of the surface layer on a site specific basis.

BLM requirements for revegetation and reclamation are explained in Appendix J, Part 5 of this JROD.

The Applicant will be required to submit detailed construction, operations, maintenance and termination plans for each phase of pipeline activity to the BLM Authorized Officer for review and approval prior to any Notice to Proceed, per ROW Grant stipulations.

7.5.7 Subsistence Analysis

Appendix J, Part 6 to this JROD, BLM ANILCA Section 810 Analysis Summary, describes in detail the mitigating measures the Applicant will undertake to avoid, minimize, and mitigate impacts to subsistence resources and uses.

ANILCA § 810(a) provides that no “withdrawal, reservation, lease, permit, or other use, occupancy, or disposition of the public lands which would significantly restrict

subsistence uses shall be affected” until the federal agency gives the required notice and holds a hearing in accordance with ANILCA § 810(a)(1) and (2), and makes the three determinations required by the ANILCA § 810(a)(3)(A), (B), and (C). The three determinations that must be made are: 1) that such a significant restriction of subsistence use is necessary, and consistent with sound management principles for the utilization of the public lands; 2) that the proposed activity will involve the minimal amount of public lands necessary to accomplish the purposes of such use, occupancy, or other such disposition; and, 3) that reasonable steps will be taken to minimize adverse impacts on subsistence uses and resources resulting from such action [16 USC § 3120(a)(3)(A), (B), and (C)].

The ANILCA § 810 Evaluation concluded that Alternative 2, the Denali NPP Alignment Alternative, may result in a significant reduction in subsistence uses for the communities of Nuiqsut, Kaktovik, Anaktuvuk Pass, Arctic Village, Venetie, Wiseman, and Coldfoot due to potential reduction in the availability of caribou if an aboveground pipeline is constructed between MPs 0 and 62.

Because the final ANILCA § 810 Evaluation concludes that the BLM’s selected alternative, Alternative 1, will not significantly restrict subsistence uses, including in the cumulative case, the BLM is not required to make the three determinations required by ANILCA § 810(a)(3)(A), (B), and (C). After consideration of all alternatives, and consistent with the Corps’ LEDPA, the BLM selected Alternative 1. Nonetheless, BLM has determined that the selected alternative will involve the minimal amount of public lands necessary to accomplish the purpose and need, and that reasonable steps, delineated in the FSEIS, have and will be taken to minimize the adverse impacts upon subsistence uses and resources arising from this action. Further discussion of the ANILCA 810 analysis findings is included in Appendix J, Part 6 of this JROD, including the mitigating measures the Applicant has agreed to undertake to avoid and minimize impacts to subsistence resources and uses.

The BLM authorizes ROWs to fulfill its responsibilities under the authority of Section 28 of the MLA, as amended. The Applicant filed a ROW application with the BLM for the proposed Project across BLM-managed public lands. The BLM is responsible for providing a ROW across BLM-managed public lands for the proposed natural gas pipeline, while providing protections for specific habitat, resources and uses. Therefore, the BLM finds that issuance of a ROW for this action would be necessary and consistent with sound principles for the utilization of public lands. Given these steps, the BLM has determined that the proposed action includes all reasonable steps to minimize adverse impacts on subsistence uses and resources.

8.0 RELATED LAWS AND POLICIES

8.1 SECTION 401 OF THE CWA (33 USC 1341)

Pursuant to Section 401 of the CWA, a Section 404 CWA permit is not valid until a Section 401 Water Quality Certification (WQC) has been issued or the requirement for the certification has been waived. For the purposes of the Project, the State of Alaska administers Section 401 WQC with exception of the lands that would be crossed for the Denali NPP Route, over which the EPA has Section 401 authority. Conditions of the state and EPA Section 401 WQC would become conditions to the final DA permit.

The Alaska Department of Environmental Conservation completed their review of the proposed Project pursuant to Section 401 of the CWA, and was issued WQC on August 28, 2018 for the discharge of the dredged and fill material for the Applicant, ASAP POA-2009-651, Multiple Waterbodies.

As of the date of this JROD, the EPA has not issued a WQC for the portion of the Project that would cross the Denali NPP. A Section 404 CWA authorization for construction of the pipeline through the Denali NPP would be provisional upon the issuance of WQC by the EPA.

8.2 SECTION 307(C) OF THE COASTAL ZONE MANAGEMENT ACT OF 1972 (16 USC 1456(C))

By operation of Alaska State law, the federally approved Alaska Coastal Management Program expired on July 1, 2011, resulting in a withdrawal from participation in the Coastal Zone Management Act's National Coastal Management Program. The Coastal Zone Management Act federal consistency provision, section 307, no longer applies in Alaska. The *FR* Notice was published July 7, 2011, in Volume 76 N. 130, page 39857.

8.3 SECTION 302 OF THE MARINE PROTECTION, RESEARCH AND SANCTUARIES ACT OF 1972 (16 USC 1432)

This Act is not applicable because the Project area does not contain marine sanctuaries.

8.4 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (42 USC 4321 – 4347)

The Corps and the BLM have independently reviewed and evaluated the information presented in the ASAP FSEIS and other supplemental information provided following the July 22, 2018 release of the FSEIS. These agencies find that the EIS process has produced sufficient and accurate assessments of the resources, needs, concerns, and other issues that relate to this action and that therefore is appropriate for the public interest review and alternative analysis required by 33 CFR 320.4 (b) 4 and 40 CFR 230.10.

Signature of this JROD by the authorizing officials completes the Corps' and the BLM's NEPA requirements and responsibilities for applications received to date. Additional

site-specific NEPA analyses BLM may be required to evaluate water withdrawals from specific water bodies and mineral material sites for pipeline construction if and when applications for such uses are submitted.

8.5 THE FISH AND WILDLIFE ACT OF 1956 (16 USC 742A, ET SEQ.)

The Migratory Marine Game-Fish Act (16 USC 760c-760g), the Fish and Wildlife Coordination Act (16 USC 661-666c) and other acts express the will of Congress to protect the quality of the aquatic environment as it affects the conservation, improvement, and enjoyment of fish and wildlife resources. Under the Fish and Wildlife Coordination Act, any federal agency that proposes to control or modify any body of water must first consult with the USFWS or the NMFS, as appropriate, and with the head of the appropriate state agency exercising administration over the wildlife resources of the affected state. Coordination with the USFWS, the NMFS, and the State of Alaska Department of Fish and Game, and completion of the process and analyses contained within the FSEIS and JROD is required. Signature by the authorizing official completes the Corps' Fish and Wildlife Coordination Act responsibilities.

8.6 NATIONAL HISTORIC PRESERVATION ACT OF 1966 (16 USC 470 ET SEQ.)

As the Lead Federal Agency, the Corps has completed coordination and consultation pursuant to Section 106 of the National Historic Preservation Act. The proposed Project could adversely effect on sites listed, or eligible for listing, in the National Register of Historic Places or of other national, state, or local significance. In-depth discussions continued with the Applicant, State Historic Preservation Office, and other consulting parties, including interested Indian tribes, to resolve outstanding issues regarding site eligibility, preparation of a Programmatic Agreement (PA) to ensure preservation or other appropriate treatment of historic properties within the Cultural Resources Study Area (Area of Potential Effect), and development of attachments to the PA including the Cultural Resources Management Plan (see Appendix E of this JROD) and an Unanticipated Discovery Plan should any previously unidentified historic properties be discovered during construction. These agreements have been executed and consultation under and compliance with Section 106 of the NHPA have been concluded.

The PA is Appendix D of this JROD. All requirements, conditions, and measures included in the PA, dated November 30, 2018, among the Corps; the State Historic Preservation Office; the BLM; the Knik Tribal Council; the Chickaloon Village Traditional Council; the Kenaitze Indian Tribe; Doyon Limited, and Ahtna, Inc.; Arctic Slope Regional Corporation; and Cook Inlet Regional, Inc.; and the Applicant regarding the Project would be made part of the this DA Permit.

8.7 ENDANGERED SPECIES ACT OF 1973 (16 USC 1531 ET SEQ.)

Pursuant to Section 7 of the ESA, the Corps consulted with both NMFS and USFWS on ESA-listed species that may be found within the Project area. A NMFS Letter of Concurrence and a USFWS Biological Opinion are included as Appendices B (USFWS) and C (NMFS) of this JROD.

On July 10, 2012, the USFWS published a Biological Opinion regarding effects on spectacled eiders (*Somateria fischeri*), Alaska-breeding Steller's eiders (*Polysticta stelleri*), polar bears (*Ursus maritimus*), designated polar bear critical habitat, and the candidate species Pacific walrus (*Odobenus rosmarus*). The 2012 Biological Opinion determined that the proposed Project was "not likely to jeopardize the continued existence of spectacled eiders or polar bears, and is not likely to destroy or adversely modify polar bear critical habitat" (AGDC, 2012, Appendix I-2). In a March 8, 2018 amendment to the 2012 Biological Opinion, the USFWS further concluded that the determinations regarding polar bears and their critical habitat, remain unchanged. The USFWS March 2018 amendment to the BO also stated that "On December 5, 2017, the Service determined the Pacific walrus was not warranted for ESA-listing. Consequently, potential impacts on Pacific walrus from the proposed revisions do not require consultation or conferencing under Section 7. With respect to eiders, the USFWS concluded that the proposed Project is "not likely to jeopardize the continued existence of spectacled eiders or the Alaska breeding Steller's eiders."

On September 5, 2018, NMFS transmitted a Letter of Concurrence to the Corps regarding the proposed Project (Appendix C). The Letter of Concurrence concluded that the NMFS, "concur[s] with your determination regarding the species in the immediate Project area and agrees that the vessel activity in the marine transit route may affect, but is not likely to adversely affect, the listed species and critical habitat in the remainder of the action area."

8.8 THE DEEPWATER PORT ACT OF 1974 (33 USC 1501 ET SEQ.)

This Act is not applicable because the Project does not involve the ownership, construction, operation, or decommissioning of deepwater port structures located beyond the U.S. territorial sea for the import and export of oil and natural gas.

8.9 SECTION 28 OF THE MINERAL LEASING ACT (30 USC 185)

Under Section 28 of the MLA (30 USC 185) and under 43 CFR 2881.11, the BLM has the authority to issue ROW Grants for oil or natural gas pipelines or related facilities to cross BLM-managed public lands or under the jurisdiction of two or more federal agencies, except lands within the National Park System, land held in trust for Indians, or land within the Outer Continental Shelf. The Applicant would need to obtain a ROW Grant and temporary use permits from the BLM for crossing BLM-managed lands or managed by the Department of Defense. The Applicant has submitted an application with the BLM for a ROW across federal lands. In addition, Section 28(p) of the MLA, 30 USC 185(p), requires the BLM to consider the co-location of rights-of-way to the extent practicable in order to minimize adverse environmental impacts.

8.10 DENALI NATIONAL PARK IMPROVEMENT ACT (PUBLIC LAW 113-33)

The Denali National Park Improvement Act (Public Law 113-33) was passed on September 18, 2013, and contains a provision for construction of a high-pressure natural gas transmission pipeline (including appurtenances) in non-wilderness areas

within the boundary of Denali National Park within, along, or near the approximately 7-mile segment of the George Parks Highway that runs through the Park. This provision includes any distribution and transmission pipelines and appurtenances that the Secretary determines to be necessary to provide natural gas supply to the Park.

Routing the Project on the 7-mile segment through Denali NPP was analyzed as an alternative in the FSEIS in compliance with the NEPA. In accordance with the Denali National Park Improvement Act, the Corps has worked with the Applicant and NPS to identify a potential pipeline route through the eastern edge of Denali NPP that would have the least adverse environmental effects. This alignment would be subject to Title XI of the ANILCA. To date, the applicant has not submitted a ROW application for a route through Denali NPP. Such an application would require the NPS to expeditiously identify a route that complies with Denali National Park Improvement Act.

8.11 ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT (ANILCA) TITLE XI

If the applicant submits an SF-299 application for a route through Denali NPP, the Project and associated federal applications would be subject to the Title XI provisions of ANILCA. Title XI addresses the proposed construction of transportation and utility systems in and across Conservation System Units. Section 1104 of Title XI outlines the specific steps for granting approval to develop such projects as airports, roads, ferry terminals, pipelines and transmission or communication lines in Conservation System Units. The NPS and the Corps worked together to delineate the most environmentally preferable alternative pipeline route through Denali NPP, which was analyzed in the FSEIS. Upon submission of such an application, the Corps would work with the NPS and the Applicant to complete processing of the SF-299 application pursuant to the Title XI ANILCA requirements. To date, the applicant has not submitted an SF-299 application for a route through Denali NPP.

8.12 OTHER AUTHORIZATIONS

For other State and local authorizations that apply to the proposed Project, refer to Table 1.11-1 of the FSEIS.

9.0 FINAL AGENCY ACTION

9.1 CORPS' DECISION

I find that the issuance of the DA permit, as described by regulations published in 33 CFR Parts 320 through 332, with the proposed work described in this document, is based on a thorough analysis and evaluation of all issues set forth in this JROD. There are no less-environmentally damaging practicable alternatives available to the Applicant to construct the Project than Alternative 1, with inclusion the Denali NPP Variation and appropriate and practicable special conditions to minimize adverse effects to the affected ecosystem. The issuance of this permit is consistent with National Policy, statutes, and administrative directives; and on balance, issuance of a Corps' permit to construct the Project is not contrary to the public interest. As explained above, all practicable means to avoid and/or minimize environmental harm from the selected alternative have been adopted and would be required by terms and conditions of the DA permit.

Approving Official:



David S. Hobbie
Regional Regulatory Chief
Alaska District

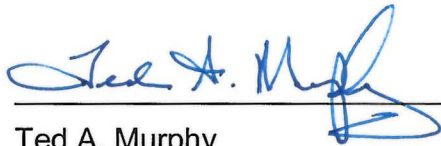
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Date

9.2 BLM'S DECISION

9.2.1 Alaska State Director's Recommendation

I recommend approval of this JROD to select Alternative 1 and authorize both a 36-inch mainline and a 12-inch Fairbanks lateral connector underground natural gas pipeline ROW Grant and associated temporary use permits subject to terms, conditions, stipulations, and environmental protection measures developed by the DOI, and identified in this JROD, including attachments, and the plan of development by the Applicant.



Ted A. Murphy
Acting State Director
Bureau of Land Management, Alaska


3-4-2019

Date

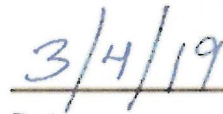
9.2.2 Assistant Secretary Approval

I hereby approve this JROD to select Alternative 1 and authorize both a 36-inch mainline and a 12-inch Fairbanks lateral connector underground natural gas pipeline ROW Grant and associated temporary use permits subject to terms, conditions, stipulations, and environmental protection measures developed by the DOI, and identified in this JROD, including attachments, and the plan of development by the Applicant.

My approval of this decision constitutes the final decision of the DOI and, in accordance with the regulations at 43 CFR 4.410(a)(3), is not subject to appeal under Departmental regulations at 43 CFR Part 4.



Joseph R. Balash
Assistant Secretary
Land and Minerals Management, DOI



Date