2010
First Phase Consolidated Implementation Plan

Alaska Pipeline Project

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Scheduling and Compliance

Alaska Natural Gas
Transportation Projects
Office of the Federal Coordinator

ALASKA NATURAL GAS
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OFFICE OF THE FEDERAL COORDINATOR

MEMO

To: Larry Persily, Federal Coordinator
Office of the Federal Coordinator, Alaska Natural Gas Transportation Projects

From: William P. Doyle
Director of Permits, Scheduling & Compliance
Office of the Federal Coordinator

Date: May 26, 2010

Re: ***First Phase Consolidated Implementation Plan — Alaska Pipeline Project***

The First Phase Consolidated Implementation Plan regarding federal agency activities, roles and responsibilities for the Alaska Pipeline Project (APP) undertaken by TransCanada and ExxonMobil is complete.

The federal regulatory review process will help expedite the project for delivery of North Slope natural gas through the North American natural gas pipeline system to markets across the continental United States. I began developing the implementation plan in December 2009, and its completion comes after four rounds of comments from 20 agencies and White House Executive Office of the President and Office of Management and Budget approval. The federal agencies were prompt in their responses, accessible and very helpful throughout the entire process.

This plan, which establishes the federal agency framework for meeting statutory obligations, may now be made public.

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INTRODUCTION

In accordance with a 2006 interagency memorandum of understanding (MOU), the Office of the Federal Coordinator (OFC) is responsible for drafting project implementation plans for the environmental analysis, permitting and construction of an Alaska natural gas pipeline.

In June 2006, most of the federal agencies with responsibilities for an Alaska natural gas transportation project entered into the MOU. The participating agencies agreed to use their best efforts to achieve early coordination and compliance with deadlines and procedures established by the environmental impact statement lead agency and in accordance with relevant laws and regulations. The Federal Energy Regulatory Commission (FERC) is the lead agency.

Pursuant to the Alaska Natural Gas Pipeline Act (ANGPA), the OFC is responsible for coordinating the expeditious discharge of all activities by federal agencies with respect to an Alaska natural gas transportation project. Further, the OFC must ensure that all federal agencies comply with ANGPA.

On June 9, 2009, the OFC completed and published the First Phase Consolidated Implementation Plan for the Denali – The Alaska Gas Pipeline LLC, a joint venture between BP and ConocoPhillips.

This document shall serve as the First Phase Consolidated Implementation Plan for the Alaska Pipeline Project (APP). The APP consists of two primary project sponsors—TransCanada Alaska (TC Alaska) and ExxonMobil (EOM).

OVERVIEW: FEDERAL AND STATE LAWS

Alaska Natural Gas Pipeline Act (ANGPA)

The Alaska Natural Gas Pipeline Act (ANGPA or Act)[1] was enacted on October 13, 2004. ANGPA clarifies procedures for processing applications to federal agencies for an Alaska natural gas pipeline; authorizes federal loan guarantees of up to $18 billion (indexed for inflation) for a project; and establishes the Office of Federal Coordinator that is responsible for the expediting the necessary federal agency permits, authorizations and environmental reviews.

ANGPA provides that FERC is the lead agency[2] for purposes of compliance with the National Environmental Policy Act of 1969 (NEPA) and the preparation of a single, consolidated

[1] Alaska Natural Gas Pipeline Act of 2004, 15 USC 720.

[2] See, Council on Environmental Quality Regulations (CEQ Reg.) 1508.16, "Lead agency" means the agency or agencies preparing or having taken primary responsibility for preparing the environmental impact statement; see also, CEQ Reg. 1508.5 "Cooperating agency" means any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a

environmental impact statement (EIS) for all federal agencies. The Act directs FERC to issue a final EIS no more than 18 months after the filing of a complete application. Further, FERC is directed to issue a final determination to grant or deny the application within 60 days after issuance of the final EIS. FERC adopted regulations governing the conduct of open seasons for an Alaska natural gas transportation project, including procedures to allocate capacity. The regulations were affirmed in all respects by a July 27, 2007, ruling from the U.S. Court of Appeals for the District of Columbia Circuit.

ANGPA removed potential legal obstacles concerning applications for a new Alaska pipeline project and established procedures to work with Canada, the State of Alaska, and other interested parties to expedite construction of a pipeline to deliver natural gas to the Lower 48 states.

Alaska Gasline Inducement Act (AGIA)

The Alaska Legislature awarded a license under the Alaska Gasline Inducement Act[3] (enacted in May 2007) to TC Alaska LLC. On December 5, 2008, the AGIA license was formally signed by the governor and issued to TC Alaska LLC (Licensee). AGIA entitles TC Alaska LLC to receive State of Alaska matching funds of up to $500 million for project development, but does not give the company any priority for federal licensing purposes. Nor does AGIA grant TC Alaska LLC an exclusive right to construct and operate an Alaska gas pipeline.

ALASKA PIPELINE PROJECT (APP) DESCRIPTION[4]

Background

The North Slope of Alaska holds approximately 35 trillion cubic feet (tcf) of proven natural gas reserves and an estimated 100 tcf to 200 tcf of potential discoveries. Connecting these vast reserves to market holds the promise of tremendous benefits for Alaska and its residents, as well as to the energy, environmental and economic security of the United States.

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reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. The selection and responsibilities of a cooperating agency are described in CEQ Reg. 1501.6. A State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may by agreement with the lead agency become a cooperating agency.

[3] Alaska Gasline Inducement Act, AS 43.90 et. seq. AGIA is a state law that allows the licensee to draw down on matching funds for project development in exchange for "must haves" required by the State of Alaska including but not limited to: conducting an open season every two years for possible pipeline expansion; 4.5 bcf/d initial design capacity with the ability to expand to 5.9 bcf/d; rolled-in tariffs to accommodate pipeline expansions in Alaska; a minimum of five natural gas delivery points in Alaska; and executing a project labor agreement prior to construction; see: http://www.gov.state.ak.us/agia/agia/pdf/agia_docs/HB0177F.pdf.

[4] The text associated with the *APP Project Description*, *Gas Treatment Plant*, *Point Thomson Transmission Pipeline*, *Natural Gas Transmission Pipeline*, *Open Season and FERC Application Filing*, and *Other APP Activities* were prepared with the assistance of the APP representatives and/or otherwise developed from documents filed by APP with the Federal Energy Regulatory Commission.

The APP is being advanced on behalf of TC Alaska LLC by TransCanada Alaska Development Inc. (TransCanada Alaska Development) and ExxonMobil Alaska Midstream Gas Investments Inc. (EMAMGI), along with a respective affiliate of each company in Canada (collectively, the "APP Parties")[5]. On May 1, 2009, TransCanada and ExxonMobil agreed to form a joint project (APP or "the Project") and undertake joint work (starting May 5, 2009) under the terms of an interim project agreement (IPA), a U.S. project funding agreement (US PFA) and associated agreements. The IPA and associated agreements were executed on June 10, 2009. These agreements define how the APP parties will progress the project and the APP parties' interaction with the licensee. The work products developed by the joint project are used by the AGIA licensee to meet the AGIA license obligations.

TransCanada has extensive North American pipeline construction experience, particularly in cold weather environments, and operates pipeline networks across Canada and the U.S. TransCanada also holds construction certificates and substantial property rights for a pipeline through Canada under the Northern Pipeline Act (NPA) and a pipeline right-of-way in the Yukon Territory. ExxonMobil is the largest holder of proven Alaska North Slope natural gas resources.

The scope of the APP includes the following components:

- A gas treatment plant (GTP) near Prudhoe Bay, Alaska, to condition North Slope natural gas for pipeline transmission;
- A 32-inch-diameter gas transmission pipeline connecting the Point Thomson field east of Prudhoe Bay to the GTP; and,
- A 48-inch-diameter gas transmission pipeline that will extend, subject to shipper confirmation during the open season process[6], from the GTP to either:
  - The Alaska/Canada border for onward delivery to Alberta (the "Alberta option"); or,
  - Valdez, Alaska (the "Valdez option").

FERC Compliance

FERC accepted a request by TC Alaska LLC to initiate its pre-filing process on May 1, 2009, and established a project docket number (PF09-11) on its electronic library (e-library)[7] for public access of subsequent filings. FERC staff continues to coordinate with APP staff as it proceeds with the APP 2010 open season. This docket also contains monthly updates from APP.

[5] The APP is an unincorporated entity. The relationship between TransCanada and Exxon Mobil is contractual. For additional information see http://www.thealaskapipelineproject.com/.

[6] Open season is a means of publicly advertising available capacity on a pipeline and soliciting bids from gas producers and shippers for pipeline capacity.

[7] FERC e-library website is: http://elibrary.ferc.gov/idmws/search/fercgensearch.asp and enter PF09-11 in the Docket Number field.

Gas Treatment Plant

The GTP will be comprised of four trains under the Alberta option, with an initial design to treat up to 5.3 bcf per day of raw gas and the ability to deliver at the GTP outlet 4.5 bcf per day of pipeline quality natural gas at 2,500 pounds per square inch gauge (psig). The GTP will be comprised of three trains under the Valdez option, with an initial design to treat up to 3.5 bcf per day of raw gas and the ability to deliver at the GTP outlet 3.0 bcf per day of pipeline quality natural gas at 2,500 pounds per square inch gauge (psig). In April 2009, TC Alaska awarded a contract to URS Corporation (URS Washington Division) to develop a preliminary feasibility and engineering study for the GTP.

Point Thomson Transmission Pipeline

The APP includes a 58-mile (93-kilometer) X65 steel transmission pipeline that will extend from the Point Thomson field to the GTP. This pipeline will provide a nominal 1.1 bcf per day of raw gas to the GTP for processing and transport through the natural gas transmission pipeline.

Natural Gas Transmission Pipeline

Under the Alberta option, shippers would have the ability to deliver natural gas to the British Columbia/Alberta border, for onward delivery into North American markets. Under the Valdez option, shippers would have the ability to deliver to a liquefaction facility to be developed by third parties, for onward delivery to LNG markets. APP proposes that the Alberta option will have a throughput of 4.5 bcf per day and the Valdez option will have a throughput of 3.0 bcf per day. Both options include opportunities for local off-takes in Alaska, and the Alberta option also provides opportunities for local off-takes in the Yukon Territory and/or British Columbia.

The transmission pipeline for the Alberta option would be a 48-inch-diameter X80 steel pipe extending approximately 1,700 miles (2,736 kilometers) with 734 miles (1,181 km) in Alaska and 966 miles (1,555 km) in Canada. This proposed corridor parallels the route of the existing Trans-Alaska Pipeline System (TAPS) from Prudhoe Bay to Delta Junction, Alaska. From Delta Junction, the APP would continue to follow the Alaska Highway southeast to the Yukon border, through northern and northeast British Columbia where it would link with the Alberta hub on TransCanada's pipeline grid in northwestern Alberta. The base design capacity will be 4.5 bcf per day with six compressor stations in Alaska and 11 in Canada. The capacity could be expanded to 5.9 bcf per day with additional compression for a total of 33 compressor stations.

Given the pipeline will operate in areas of continuous and discontinuous permafrost, gas chillers will be installed at the GTP and at several of the compressor stations. APP anticipates that there will be sufficient downstream pipeline spare capacity our of the Alberta hub to support the anticipated full Alaska natural gas volumes by the time APP becomes operational.

Under the Valdez option, the 48-inch X80 steel transmission pipeline will extend approximately 803 miles (1,292 km) from the GTP in Prudhoe Bay to Valdez, and parallel the TAPS. This option will have two compressor stations with chillers in Alaska to support the base design of 3.0

Bcf per day to serve a potential LNG facility to be owned, designed, constructed and operated by others.

APP secured WorleyParsons to develop a conceptual routing design and construction execution planning for the Alberta option and Valdez option in support of 2010 open season deliverables.

Open Season and FERC Application Filing

The Alberta and Valdez options are alternative proposals that entail ongoing discussions with potential shippers. Depending on customer interest as evidenced in an open season[8], APP will proceed with either the Alberta option or the Valdez option, but not both, at the conclusion of the open season. In compliance with the provisions of AGIA, TC Alaska must meet the scheduling approved by the State of Alaska. Accordingly, APP must conclude its initial Open Season by July 2010, and file an application for a certificate of public convenience and necessity (CPCN) with FERC for authorization to construct and operate the pipeline by October 2012. APP has awarded contracts to environmental and regulatory consulting firms in the U.S. and Canada to support planning and permitting-related efforts, including execution of a comprehensive environmental baseline study program starting in 2010. On January 29, 2010, TC Alaska filed a request for commission Approval of its plan for conducting an open season with FERC. The plan indicates that first gas is estimated to flow in 2020. On March 31, 2010, FERC issued an order approving TC Alaska's open season plan.

Other Recent APP Activities

APP has completed the following activities[9] to facilitate conceptual design, cost estimating and planning efforts:

- Anchorage office: Established a project office in Anchorage.

- Pipeline right-of-way: Study of a preliminary routing corridor established for the APP through Alaska is continuing, including a review and analysis of Light Detection and Ranging (LiDAR) datasets collected in August 2009. Final processed LiDAR data became available in April 2010. Geotechnical samples from 111 bore holes were collected to characterize permafrost conditions, soil settlement and uplift, and validate terrain mapping. APP will continue to develop pipeline routing in subsequent phases by collecting field data, continuing engagement with regulatory agencies and developing forums for stakeholder input.

- Pipeline engineering: APP continues to progress preliminary pipeline system engineering. Work in progress includes: continuation of hydraulic and geothermal modeling; pipeline

[8] Information regarding FERC's Open Season process for Alaska Natural Gas Transportation Projects can be viewed on FERC's website, http://www.ferc.gov/industries/gas/indus-act/angtp.asp.

[9] Additional information regarding progress and updates to the APP project can be found at http://gasline.alaska.gov.

design; geotechnical hazards analysis; facilities design; cost estimating; construction/logistics planning activities; and, a number of technology development initiatives. Technology development activities include progression of the pipeline reliability model, further integrating strain capacity and strain demand elements, and frost heave testing. Meetings have been held with potential materials suppliers and testing of certain pipe materials is in progress. Plans are being developed for future field work and engineering.

- Gas treatment plant: APP continues to progress preliminary facilities engineering and execution planning. Plans are being developed for future field work and engineering.

APP 2010- 2011 Field Study Program[10]

Field studies will occur during 2010-2011 and a detailed field program schedule will be developed as part of the final field program execution planning. *According to APP, planning will include discussions with agency representatives to confer on issues such as the survey width, discipline specific survey protocols and data quality objectives, and schedule milestones* (emphasis added).

APP intends to gather environmental data for preparing and contributing to FERC environmental resource reports. Furthermore, APP intends to collect information necessary for federal permitting applications and other submissions that shall be developed concurrently with the FERC filing. In addition, APP intends to provide information related to system alternatives and construction options. Finally, the field study program is intended to gather environmental data to assist FERC in complying with the National Environmental Policy Act.

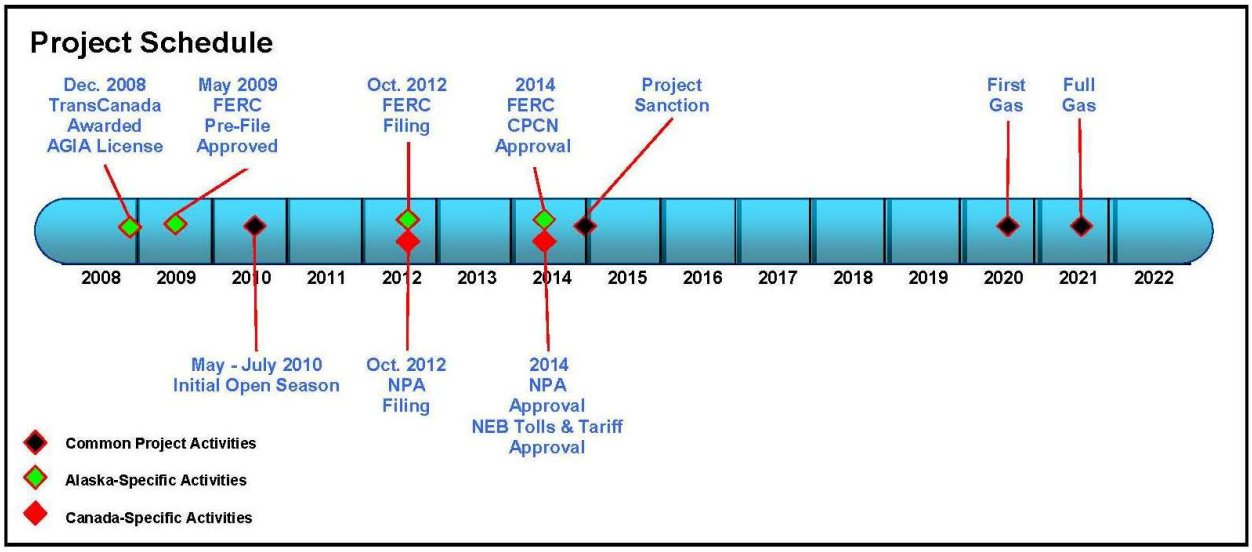
General Routing/Alignment

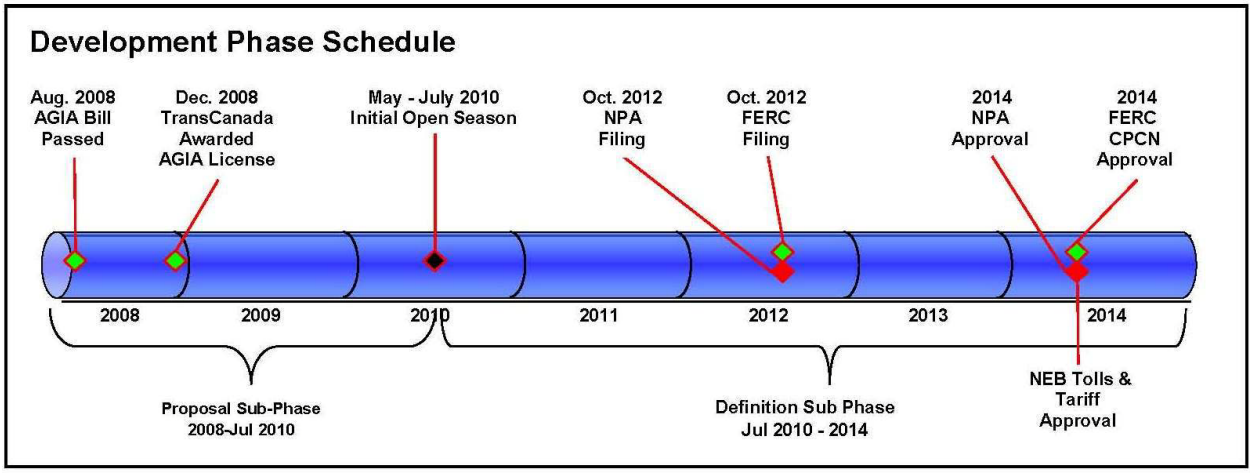
Appendix 2 is a general mapping diagram of the expected gasline route through Alaska and Canada.

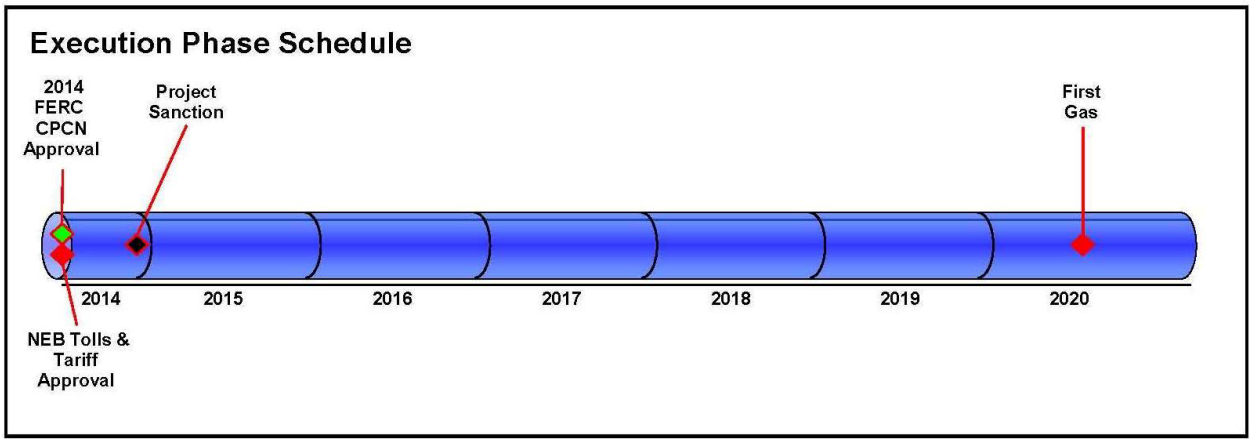
[10] The below section title "APP Anticipated Field Study Plan 2010-2011" summarizes APP's expected field study plan for collecting environmental resource data.

APP Timeline

Below are graphics indicating the most current timelines for the project schedule, development phase schedule and execution phase schedule, consistent with the APP open season plan.







ATTENTION ITEMS

This section highlights several "attention items" discussed with agencies during the formation of this implementation plan.

Government-to-Government Consultations

On April 12, 2010, FERC forwarded to all cooperating agencies a staff working document: Alaska Native Consultation Plan for Alaska Pipeline Projects. The Draft was first circulated by FERC in March 2009 for comment. In addition, on April 5, 2010, APP filed its Stakeholder Engagement Plan (SEP). The SEP is intended to engage a wide array of stakeholders interested in, and potentially affected by, the APP. Alaska Native tribes, corporations and communities are recognized as a particular focus area for this plan. According to APP, some of the greatest challenges in stakeholder engagement occur across the cultural diversity of Alaska Natives, government regulators and the project proponents. APP therefore recognizes as a practical matter, special attention is needed to train staff and promote effective outreach with Alaska Native stakeholders.

Statement of Purpose and Need and Scope of Project Alternatives

On March 17, 2010, FERC provided all cooperating agencies with a Purpose and Need and Scope of Alternatives Statement in accordance with Section IVI (6) of the *Memorandum of Understanding Related to an Alaska Natural Gas Transportation Project*. This statement revises FERC initial purpose and need/scope of alternatives statement circulated in July 2008, and incorporates comments provided by cooperating federal agencies. FERC will develop a list of specific alternatives after the project sponsor(s) provide project descriptions and maps.

Native Land Conveyances

Close to 30 Native allotments have been identified in the vicinity of where a pipeline alignment may traverse. The State and DOI Bureau of Land Management continue to work on this issue.

Geological Studies

Sections of Alaska between Delta Junction and the Canadian border have been recently studied by the Alaska Division of Geological & Geophysical Surveys (DGGS). Prior to mid-2009, there were little or no studies ever conducted with respect to earthquake hazard probabilities. The USGS and DGGS should meet, discuss and share data findings.

Climate Change

In February 2010, the CEQ released draft guidance with respect to greenhouse gas emissions and climate change. The draft guidance suggests ways in which federal agencies can improve their consideration of the effects of greenhouse gas (GHG) emissions and climate change in their evaluation of

proposals for federal actions under the National Environmental Policy Act. CEQ proposes to advise federal agencies to consider, in scoping their NEPA analyses, whether analysis of the direct and indirect GHG emissions from their proposed actions may provide meaningful information to decision makers and the public. There is a 90-day comment period for the draft guidance memorandum, with public comments due no later than May 24, 2010. Further, CEQ has identified specific questions for public review and comment. CEQ seeks comments toward developing further guidance on the treatment of GHG emissions for federal land and resource management actions. CEQ also seeks comments on the identification of any GHG emissions threshold amount for determination that the potential GHG emissions are "significant" under NEPA and whether a separate threshold should be set for determining whether GHG emissions have significant cumulative effects.

Human Health Effects

Evaluation of human health effects as part of a NEPA analysis is an emerging issue for consideration in large oil, gas and mining projects. Agencies will need to continue discussions on the extent to which human health effects will be addressed in the NEPA analysis for the Alaska gas pipeline project.

Contaminated Sites

A contaminated site is an area that has been affected by spills of petroleum products or other hazardous substances, by the migration of such substances from a separate source to the site, or by the improper disposal of petroleum or hazardous substances. Every contaminated site should be identified early to ensure they are properly addressed in the EIS.

Historic Properties

Given the large number of historic properties that may be affected, early coordination is essential. The Advisory Council on Historic Preservation reviews and provides comments on actions by federal agencies that may affect properties that are listed in or eligible for listing in the National Register of Historic Places (National Register). The National Register includes buildings, archaeological sites, districts and objects of national, state and local significance. Resources that are eligible for the National Register are afforded the same level of protection as those formally listed. The review is carried out pursuant to Section 106 of the National Historic Preservation Act. The Section 106 process involves coordination with the State Historical Preservation Office and the Tribal Historic Preservation Office, appropriate native entities and other consulting parties. There are no Tribal Historic Preservation Officers for Alaska.

APP ANTICIPATED FIELD STUDY PLAN 2010-2011

Logistics and Field Operations

The route for the pipeline from Point Thomson to the U.S./Canada border would extend nearly 800 miles; the route to Valdez for an LNG option would extend nearly 860 miles. The field program would be staged and orchestrated based on broad work spreads, which would be dependent upon terrain, ecoregion, potential field office and field camp locations, travel, communications, medical facilities, fuel, supplies and ground and air transportation facilities. Final selection and scheduling of the work spreads will be based on land access.

All field activities will be coordinated with the Alaska Pipeline Project Stakeholder Engagement Team. Alaska Natives, residents, landowners, and other stakeholders along the routes will be contacted and advised of the field activities. No field activities will occur on private property unless permission for access and specific field surveys has been granted.

Field offices will be established to serve as the communication, coordination and logistical link between the field and project offices as appropriate. These field offices will provide logistical and other support to field crews and the facilities will be used for staging personnel, and managing and storing equipment and supplies. Field offices may be established in Deadhorse, Fairbanks, Tok and Valdez as necessary for field activities in the broader areas. In these communities, lodging, air and ground transportation, communications, medical and other services and infrastructure are available. Field camps will be necessary due to the limited availability of services along the length of the project routes. Where available, local accommodations will be used; camping will be necessary in some areas.

Field operations will be supported by a combination of motor vehicles, all-terrain vehicles, snow machines, and commercial or charter aviation (helicopters and fixed-wing aircraft). Commercial aviation is limited to the major communities of Anchorage, Fairbanks, Deadhorse and Valdez. Helicopters would be used to expedite certain field studies and where access is constrained by terrain, vegetation, water bodies, land ownership, or lack of roads or trails.

Infrastructure for telecommunications is limited in much of rural Alaska. Local land-line telephone service is available in many communities, but cellular telephone service is limited in some areas of Fairbanks, Deadhorse and Valdez, some areas along the Richardson Highway and the Alaska Highway near Tok. Cell service is generally absent between Fairbanks and Deadhorse, and between Delta Junction and Valdez. Satellite phones and VHF radios will be necessary in these areas.

Field Studies Schedule

Field studies will occur during the 2010-2011 timeframe and a detailed field program schedule will be developed as part of the final field program execution planning. *According to APP, planning will include discussions with agency representatives to confer on issues such as the*

survey width, discipline specific survey protocols and data quality objectives, and schedule milestones (emphasis added).

Field Study Plan Summary

APP's initial field study plan is based on the results of the environmental information needs analysis. The plan identifies the field activities and studies aimed at acquiring outstanding information necessary for preparing the FERC resource reports.

Program Objectives

A. To gather environmental data for preparing and contributing to the following eight FERC resource reports:

- FERC Environmental Resource Report 2: Water Use and Quality
- FERC Environmental Resource Report 3: Fish, Wildlife, and Vegetation
- FERC Environmental Resource Report 4: Cultural Resources
- FERC Environmental Resource Report 5: Socioeconomics
- FERC Environmental Resource Report 6: Geological Resources
- FERC Environmental Resource Report 7: Soils
- FERC Environmental Resource Report 8: Land Use, Recreation, and Aesthetics
- FERC Environmental Resource Report 9: Air and Noise Quality

B. To collect information necessary for federal permitting applications and other submissions that shall be developed concurrently with the FERC filing.

C. To provide information related to system alternatives and construction options.

D. To gather environmental data to assist FERC in complying with the National Environmental Policy Act.

Water Use and Quality

Aerial photos, topographic maps, National Wetlands Inventory (NWI), LiDAR imagery, GIS, and other available data will initially be used to identify and preliminarily characterize surface water resources, and to map and delineate wetlands and other habitat types and land cover. The preliminary list of surface waters will be examined relative to the study area, and the data will be reviewed and verified.

The field program for surface waters and wetlands will focus on the following needs within the study area:

- Identifying and characterizing all perennial streams and other waters of the U.S as defined in 33 CFR 328 and 40 CFR 230.41, and all special aquatic sites (e.g., wetlands, riffle-pool complexes, mudflats, etc.) as defined in 40 CFR 230.40-230.45;

- Verifying or delineating and mapping the boundaries of these waters, i.e., the ordinary high-water mark, high-water line, and mean high water as applicable;
- Characterizing aquatic habitat at locations where the study corridor crosses streams by documenting features such as channel gradient, sinuosity, bank full width, depositional features, substrate, bank structure and stability, woody debris, vegetative cover, riparian condition, floodplain characteristics, temperature, velocity, dissolved oxygen and ice condition;
- Verifying or identifying sensitive habitats (e.g., spawning and overwintering) and other areas of special significance or importance to fisheries;
- Verifying or identifying springs and areas of upwelling;
- Verifying or delineating wetland/upland boundaries and/or conducting wetland determinations in accordance with the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and Alaska Regional Supplement (USACE 2007) at representative, unique and important wetlands within all ecoregions along the study area;
- As necessary, recording hydrologic and other data to facilitate significant nexus determinations for wetlands and other potential waters of the U.S.; and,
- Identifying all potable water intakes within three miles downstream of the proposed crossing and potential contaminated waters or sediments.

Additional surface water data will be gathered to identify areas where surface water and/or ice may be withdrawn for activities such as hydrostatic testing, and constructing ice roads and construction pads. Data collection will include lake bathymetry (to determine volume), stream discharge, and water quality (e.g., pH, specific conductance, dissolved oxygen, calcium carbonate, etc.). The study area for this field data collection may extend greater than five miles from the pipeline routes and areas of other project features, but will be limited to those areas where ice and surface water are identified as potentially necessary.

The field program for groundwater use and quality will be limited to verifying and identifying groundwater supply wells and springs in the study area, which will extend greater than 150 feet from potential locations of any project footprint, including the construction right-of-way, access roads, staging areas and ancillary features such as compressor stations and material sources. Field surveys will focus in areas where water supply wells and springs are known or suspected to be present, e.g., Glennallen, Northway, Dot Lake, Tok, Delta Junction, Fairbanks, Valdez and rural residential areas.

Fish, Wildlife, and Vegetation

Fish

Fish surveys will be conducted in consultation with ADF&G for selected streams to verify or document fish presence and record species, habitat use and other data. Surveys will also be conducted in certain streams, habitats or specific locations to verify or document any overwintering use. The study area will include the project routes and potential locations for the GTP, compressor stations, staging areas, materials sources and other ancillary project features. It will also include those lakes and streams identified as

potential sources of water and/or ice. Fish surveys will be conducted using standard accepted protocols for electro-fishing, seining and trapping, as applicable to site conditions and other factors.

Vegetation and Wildlife

Aerial photos, topographic maps, NWI, LiDAR imagery, GIS and other available data will be initially used to identify, map and delineate land cover and vegetative communities (habitats). This effort will include known and potentially suitable habitats for listed and proposed endangered and threatened species and for other species of concern (e.g., sensitive, unique), as well as proposed and designated critical habitats for listed endangered and threatened species. The study area may extend beyond a pipeline route and potential sites for the GTP, compressor stations, and other ancillary features of the project. It may be broader in some areas based on the potential for disturbance and other effects to certain wildlife species.

The field program will entail habitat sampling to verify, identify and describe the vegetation, community and habitat attributes in important and representative habitats within all ecoregions in the study area. Using standard vegetation and habitat sampling protocols, quantitative data will be collected for biological parameters (e.g., vegetation composition and structure, species abundance and diversity, canopy closure, stem density, substrate type, slope, aspect, etc.) that will facilitate characterization of the major land covers and habitats using a classification system such as Viereck et al. (1992). Sensitive and other important habitats (e.g., denning, nesting, calving, migration, etc.) and special habitat features (e.g., rock outcrops, cliffs, springs, avalanche chutes) will be verified, characterized and mapped.

Known and potentially suitable habitat for listed and proposed threatened and endangered species will be characterized relative to the species' important and critical habitat components. Site- and species-specific field surveys or inventories may be conducted for spectacled eider, Steller's eider, yellow-billed loon, raptors, marine mammals, Dall sheep and other wildlife species. The need and scheduling of any surveys or inventories would be based on habitat use, species behavior, protocols, temporal validity of results, early agency consultation and other considerations.

Cultural Resources

In consultation with the ADNR Office of History and Archaeology (i.e., the State Historic Preservation Office [SHPO]), FERC and BLM, the Area of Potential Effect will be delineated. Alaska Native groups will be consulted on all field research plans.

Field activities will include an initial site survey in the Area of Potential Effect to verify and document the location of previously identified sites and to identify any new sites. This may include shovel test, probe survey or deep coring, as appropriate.

All work will be undertaken in accordance with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation for identification and documentation (48 FR 44720-44726), and by qualified professionals as described in 36 CFR 61.

Socioeconomics

Field data collection is not anticipated to be necessary to compile the outstanding information pertaining to employment, housing, government services, transportation, business, subsistence, fiscal condition, health, traditional knowledge and other socioeconomic considerations. However, investigative methods such as inquiries and interviews may be necessary to determine historic and current socioeconomic conditions.

Soils

It will be necessary to request unpublished soils information from the Natural Resources Conservation Service (NRCS), BLM, DNR and others. It will also be necessary to examine the available data for the study area considering engineering and construction information. There will be limited terrestrial field data collection needs specific to soils. Field activities are expected to be limited to examining surface soils to describe horizon thickness, color, texture, particle size and distribution, structure and other physical parameters.

Sediment samples will be collected from offshore areas that may be subject to dredging or to disposal of dredged materials.

Reconnaissance level field surveys in the study area will examine and document present and historic potential for soil, sediment or groundwater contamination (e.g., use of hazardous substances or petroleum products).

Geological Resources

Field surveys to identify potential paleontological resources in the study area will be completed in conjunction with the archaeological field surveys. A field program specific to the remaining data requirements for Resource Report 6 is not anticipated. However, geotechnical and geophysical surveys for engineering needs are anticipated.

Land Use, Recreation and Aesthetics

Land use will be verified or characterized as part of the land cover and habitat survey effort. Interviews and meetings with the BLM, North Slope Borough, Fairbanks North Star Borough and others are expected to be necessary to identify planned residential or commercial/business development; to ascertain or verify the management and use of public lands under their jurisdiction; to identify and delineate subsistence uses and subsistence use areas; to document or verify aesthetic resource values; or to obtain unpublished records and other data. A field data collection effort specific to meeting the requirements for Resource Report 8 is not anticipated.

Air Quality

Air monitoring stations will be installed and operated to collect baseline meteorological and ambient air quality data. The location and number of monitoring stations will be determined in consultation with the Alaska Department of Environmental Conservation, Division of Air Quality, and will be based on potential sites for the GTP and compressor stations.

Noise

Noise sensitive areas (NSAs) will be identified in proximity to the GTP, compressor stations, pipeline route and ancillary project features. Ambient sound levels at these NSAs will initially be estimated based on current land uses, and may subsequently be measured at locations where there is a potential for noise from project construction or operation to affect NSAs, or to affect endangered, threatened or other sensitive wildlife.

FEDERAL AGENCY ROLES[11]

The Office of the Federal Coordinator (OFC)

The Office of Federal Coordinator for Alaska Natural Gas Transportation Projects (OFC) has a congressional mandate to ensure that federal agencies act in a manner that leads to expedited pipeline permitting, construction and operation of a pipeline to move Alaska gas to U.S. markets. To carry out its statutory obligations, the OFC is developing a plan that will, in part, identify potential issues in the planning and development of an Alaska gasline project and develop strategies to overcome potential regulatory bottlenecks. It is expected that at least 20 federal agencies will participate in the planning and approval process for an Alaska gas pipeline project.

The OFC is an independent agency in the executive branch, pursuant to the ANGPA with authorities derived from both ANGPA and the Alaska Natural Gas Transportation Act (ANGTA) of 1976 (P.L. 94-586). The OFC is responsible for coordinating all federal activities for an Alaska gas pipeline project, including joint surveillance and monitoring with the State of Alaska during construction and for one year following the completion of the project. In addition, the OFC is responsible for ensuring that federal agencies do not include any term or condition to or add to, amend, or abrogate any certificate, right-of-way, permit, lease or other authorization that the OFC determines would prevent or impair in any significant respect the expeditious construction and operation, or expansion, of the Alaska gas pipeline project. In December 2007, Congress passed the Energy Independence and Security Act (Act) of 2007 (P.L. 110-140). The Act included technical amendments to the ANGPA that granted the OFC the authority to enter into reimbursable service agreements, among other changes.

The OFC is also to provide a liaison function to ensure adequate communication with Congress, the State of Alaska, and federal U.S. and Canadian agencies.

The OFC in 2009 established a technical review team that will share engineering information and expertise relevant to agency permitting of design and construction of a natural gas project. Key responsibilities will be to identify project technical issues to include but not limited to: pipeline, proximity, security, leak prevention, best available control technology, permafrost, gas treatment plant, and emissions. Also, the technical review team will identify issues that require expedited coordination due to environmental standards, constructability impacts, or internal agency higher level approvals.

[11] Appendix 1 is a table that comprises hypertext on-line links to agency specific manuals and guidance materials.

The OFC is developing a permitting/authorization matrix titled, "Eliminating and Controlling Uncertainty in the Regulatory Process." It includes the application process for each federal permit and authorization required, and itemization of the data sets applicants would be required to submit to secure the permits and authorizations from the federal agencies.

The Federal Energy Regulatory Commission (FERC)

FERC is responsible for granting a certificate of public convenience and necessity for construction and operation of an Alaska gas pipeline project pursuant to Section 7 of the Natural Gas Act (NGA). In addition to confirming FERC's authority over a pipeline to bring natural gas from the Alaska North Slope to the Lower 48 states, ANGPA designates FERC as the lead agency for the purposes of complying with NEPA and stipulates that FERC will prepare a single EIS consolidating the required environmental reviews of all federal agencies that have a permitting role in an Alaska natural gas transportation project. ANGPA also requires FERC to issue a draft EIS not later than one year after FERC determines that company's application is complete. The final EIS must be issued no later than 180 days after issuance of the draft EIS.

The Energy Policy Act of 2005 (EPACT 2005) expanded FERC's role by making it the lead agency for coordinating all applicable federal authorizations on all interstate natural gas pipelines. To reduce redundancy and sequential processing, FERC is responsible for conducting several activities including:

- Establishing a schedule for agencies to review requests for all federal authorizations required for a project. This ensures the expeditious completion of all such proceedings and complies with applicable schedules established by federal law. Other federal and state agencies considering an aspect of an application for federal authorization are to comply with the deadlines established by FERC; and

- Maintaining, with the cooperation of federal and state administrative agencies and officials, a complete consolidated record of all decisions made by FERC and other federal and state agencies responsible for any federal authorization and the relevant documents or studies.

In order to expedite the EIS process (and to ensure compliance with legislated timeframe), FERC utilizes its pre-filing process to begin the NEPA review before an actual certificate application has been submitted by a project sponsor. The purpose of the pre-filing process is to encourage the early involvement of interested stakeholders, facilitate interagency cooperation, and identify and resolve issues before an application is filed with FERC. The pre-filing process is a means for meeting NEPA requirements and optimizing scheduling. It is designed to facilitate the development of a FERC application that is complete and that identifies all stakeholders and issues. The FERC pre-filing process is initiated by a letter from FERC's Director of Office of Energy Projects approving a request from a project sponsor.

During the pre-filing review period, it is expected that substantial progress can be made toward completing the federal permitting process.

The agency activities include:

- Familiarizing staff with the project area,
- Attending the project sponsor's stakeholder outreach meetings,
- Initiating Alaska Native tribal government consultation,
- Reviewing the route and alternatives,
- Meeting with other federal and state agencies and stakeholders,
- Conducting scoping meetings,
- Identifying data gaps,
- Evaluating the draft application for completeness, and
- Advising the project proponent on information needs and project modifications that may facilitate an expeditious federal permitting review.

The project sponsor's pre-filing activities include:

- Project design and engineering,
- Route surveys,
- Analysis of infrastructure needs,
- Conducting stakeholder outreach meetings and open houses,
- Preparing permit applications for all required federal authorizations,
- Tracking and responding to stakeholder comments on the proposal, and
- Facilitating the required consultations under the Endangered Species Act (ESA), the National Historic Preservation Act, and the Magnuson-Stevens Fishery Conservation and Management Act.

The 2006 MOU between cooperating agencies on the Alaska pipeline project establishes a project management framework for cooperation among participating federal agencies related to the approval of an Alaska natural gas transportation project. In particular, FERC is clearly identified as the lead agency and the other agencies agree to cooperate with FERC in order to streamline the regulatory reviews. The participating agencies agree to implement their related agency reviews and permitting processes on a concurrent rather than sequential basis to enable completion of the EIS within the time limits required by ANGPA.

The participating agencies agree to participate in the pre-filing process and to meet the schedules set by FERC. The schedule established by FERC will be as expeditious as possible, while remaining consistent with any statutory permit review periods. To foster interagency cooperation, FERC would seek input from the relevant participating agencies in developing the schedule, setting the range of alternatives, and determining the application is complete before beginning the EIS.

FERC granted TC Alaska's request to enter into the pre-filing process on May 1, 2009. FERC established a public docket (PF09-11) to track activities for the Alaska Pipeline Project.

U.S. Army Corps of Engineers

The U.S Army Corps of Engineers (Corps) has the regulatory authority to issue or deny permits under three separate laws. First, the Corps may issue or deny a Section 404 permit under the federal Water Pollution Control Act of 1972, as amended (Clean Water Act) (33 United States Code 1344) for the discharge of dredged or fill material into waters of the U.S., including wetlands. The Corps issues or denies a Section 404 permit in accordance with guidelines developed by the Environmental Protection Agency (EPA) in conjunction with the Secretary of the Army; these guidelines are known as the 404(b) (1) guidelines. Second, the Corps may issue or deny a Section 10 permit under the Rivers and Harbors Act of 1899 (33 United States Code 403) for structures or work in, or affecting, navigable waters of the U.S. Other permit authorities in the Rivers and Harbors Act are Section 9 for dams and dikes, Section 13 for refuse disposal and Section 14 for temporary occupation of work built by the United States. Last, the Corps may issue or deny a Section 103 ocean dumping permit under Section 103 of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 United States Code 1413) for transport of dredged material for ocean disposal.

The Corps understands FERC's role as the lead agency, including the responsibility for government-to-government consultation with Alaska Native entities. It needs to be understood that pursuant to the Department of Defense American Indian and Alaska Native Policy, the Corps will actively participate in this consultation with Alaska Natives concerning Department of Defense activities, including issuance of Corps permits that may have the potential to affect protected tribal rights and resources on or off Indian land, and interests in Indian land.

U.S. Coast Guard Bridge Program, U.S. Department of Homeland Security

The U.S. Coast Guard's Bridge Program is responsible for approval of the locations and plans for bridges and causeways constructed across navigable waters of the United States; approval of the locations and plans for international bridges; issuing regulations associated with drawbridge operations; and the engineering and construction of the alteration of bridges found to be unreasonable obstructions to navigation under the Truman-Hobbs Act.

In Alaska, navigability is a concern for vessels that may range from canoes to small motorboats (used as guide boats or hunting and fishing) to tugs and barges (that might carry fuel or building materials). The specific Bridge Program responsibilities include conducting navigability determinations for each waterway to be crossed, participating in the NEPA review process as a cooperating agency, reviewing bridge permit applications, and issuing or denying bridge permits.

The laws authorizing the Coast Guard to approve the locations and plans of bridges and causeways across navigable waters of the United States include: Section 9 of the Rivers and Harbors Appropriations Act of March 3, 1899, as amended, 33 U.S.C. 401; The Act of March 23, 1906, as amended, 33 U.S.C. 491; The General Bridge Act of 1946, as amended, 33 U.S.C. 525; Section 124a of the Surface Transportation Assistance Act of 1978, as amended, 23 U.S.C. 144(h); Sections 107 and 108 of the Coast Guard Authorization Act of 1982, 33 U.S.C. 530; and various special acts of Congress authorizing individual bridge crossings. In addition, a bridge that crosses a waterway that includes an international border requires a Coast Guard bridge

permit per the International Bridge Act of 1972, 33 U.S.C. 535, whether or not the waterway is navigable.

The pipeline and its related infrastructure will cross hundreds of streams and rivers. For each potential bridge site, navigability determinations will be required to determine whether a bridge permit is required and establish the minimum navigational clearances. The waterways the pipeline will cross between Delta Junction and the Canada border are currently being reviewed for the purpose of Coast Guard jurisdiction. The waterways being studied to date are along the preliminary route of the pipeline furnished by TransCanada since the route has not been finalized. It is anticipated that the Coast Guard's field work associated with each navigational determination for each waterway along the preliminary route will be completed by September 30, 2010.

The 17th Coast Guard District Bridge Office, in Juneau is responsible for all bridge actions in Alaska. After Coast Guard field work completion, the Coast Guard District 17 legal office will complete the navigability determination for each waterway, or applicable part thereof. Under current resourcing, it is anticipated the navigability determinations will be completed after calendar year 2010. Each bridge that crosses a navigable waterway would require a bridge permit or bridge permit exemption issued by the Coast Guard. Even with extensive use of buried crossings under smaller waterways, it is anticipated that there will be several waterways that will ultimately require permits.

As specified by ANGPA § 104, the Coast Guard will act as a cooperating agency to FERC during development of the FERC EIS and adopt FERC's final EIS. Information needed to apply for Coast Guard bridge permits can be found in the Bridge Permit Application Guide at http://www.uscg.mil/hq/cg5/cg5411/BPAG_2008.pdf.

U.S. Coast Guard Role in Waterfront LNG Facilities, U.S. Department of Homeland Security

The Coast Guard exercises regulatory authority over LNG facilities and the associated LNG vessel traffic that affect the safety and security of port areas and navigable waterways, under Executive Order 10173; the Magnusson Act (50 USC 191); the Ports and Waterways Safety Act of 1972, as amended (33 USC 1221); and the Maritime Transportation Security Act of 2002 (46 USC 701). The Coast Guard is also responsible for matters related to navigational safety, vessel engineering and construction safety standards, and matters pertaining to the safety of facilities or equipment located in or adjacent to navigable waters. The Coast Guard has no statutory authority with respect to the creation of LNG facilities or structures.

As an expert on matters related to maritime safety and security, the Coast Guard will act as a cooperating agency to FERC during development of the FERC EIS. The Coast Guard will make recommendations to FERC on the suitability of the waterway, assess the safety and security of the LNG facility as a marine facility, and assess the safety and security of LNG carrier operations while at berth and during transit to and from the LNG facility while in U.S. territorial waters.

Once an applicant submits a letter of intent to the Coast Guard in accordance with 33 CFR 127.007, the Coast Guard will review information on the proposed project and issue a letter of recommendation in accordance with 33 CFR 127.009 to the agencies having jurisdiction as to the suitability of the waterway for LNG marine traffic. The Coast Guard's letter of recommendation will be based on a review of information submitted in accordance with 33 CFR 127.007(d) (1) through (6), 33 CFR 127.009(a) through (d) and other information related to maritime safety and security. Detailed guidance on this process is contained in Navigation and Vessel Inspection Circular (NVIC) 05-08, which is available online at http://www.uscg.mil/hq/cg5/NVIC/pdf/2008/NVIC_5-08.pdf.

Advisory Council on Historic Preservation

The Advisory Council on Historic Preservation (ACHP) reviews and provides comments on actions by federal agencies that may affect properties that are listed in or eligible for listing in the National Register of Historic Places (National Register). This review is carried out pursuant to Section 106 of the National Historic Preservation Act (NHPA), which requires federal agencies to take into account the effects of their undertakings, or undertakings they regulate or assist, on historic properties and affords the ACHP a reasonable opportunity to comment on such undertakings. The implementing rules for the Section 106 process are outlined in regulations promulgated by the ACHP, Protection of Historic Properties (36 CFR Part 800).

The ACHP interprets the Section 106 regulations as follows: provides guidance and advice to federal agencies and other consulting parties in the process; assists in resolution of disputes arising in the Section 106 process and participates formally in Section 106 consultations, when it determines it is warranted. The ACHP also engages in consultation with agencies to develop program alternatives to streamline and expedite reviews that tailor the Section 106 process to agency programs.

The Section 106 process is a four-step process that involves the following basic actions by the responsible federal agency/agencies prior to the initiation of project activities. If more than one federal agency is involved in an undertaking, some or all of the agencies can designate a lead federal agency that shall act on their behalf, fulfilling their collective responsibilities under Section 106. In the first step of the Section 106 process the federal agency official establishes the undertaking and initiates consultation with all federal agencies, the appropriate State Historic Preservation Officer(s) (SHPOs) and Tribal Historic Preservation Officer(s) (THPOs), Native American tribes, and other consulting parties. The second step involves determination of the area of potential effects and the identification and evaluation of historic properties in consultation with the SHPO, THPO, and other consulting parties, including Indian tribes. The third step involves the assessment of effects that the project will have on historic properties that are identified. Finally, in the fourth step of the Section 106 process, the federal agency official and consulting parties negotiate an outcome that avoids, minimizes or mitigates adverse effects on historic properties. If the federal agency, SHPO, THPO(s) and ACHP, if participating, reach a consensus about resolution of adverse effects, this is embodied in a memorandum of agreement (MOA) or programmatic agreement (PA) that illustrates that the federal agency has fulfilled its responsibilities under Section 106 and its implementing regulations. This legal document is incorporated in the record of decision required under NEPA.

The heart of the Section 106 process is consultation which is defined in the regulations as the process of seeking, discussing and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 process. There is no time limit established for consultation, rather parties meet and exchange information until the agency believes a consensus regarding the outcome has been reached. The following parties have consultative roles in the Section 106 process: the SHPO/THPO, federally recognized Indian tribes including Alaska Native villages and regional and village corporations, representatives of local governments, the project proponent / applicant, and other individuals and organizations with a demonstrated legal or economic interest in the undertaking or affected properties or a concern with the undertaking's effects on historic properties.

Preliminary discussions with the SHPO and THPOs will be focused on the identification and evaluation of historic properties and assessment of effects coordinated with the preparation of the DEIS required under NEPA. The ACHP will be involved in historic preservation reviews for in-state support pipelines and infrastructure support projects given the complexity of this undertaking and the widespread public interest. Based on the magnitude and volume of reviews required for the Alaska natural gas projects, the Section 106 reviews will begin during the pre-filing phase of FERC's application process. A PA outlining the process for a long-term undertaking will likely be negotiated during the pre-filing phase, as well.

The ACHP's executive director has identified the Alaska gas pipeline project as a priority.

Pipeline Hazardous Materials and Safety Administration, U.S. Department of Transportation

The Pipeline Hazardous Materials and Safety Administration (PHMSA) is responsible for establishing safety standards for the nation's pipeline transportation system in accordance with 49 USC 60101, et seq. PHMSA establishes and enforces minimum safety standards for the design, construction, operation, and maintenance of pipeline facilities in accordance with the pipeline safety regulations, 49 CFR 190-1999.

PHMSA has the role of reviewing *special permit* applications and determining the technical conditions of any special permits that are granted for pipelines. For example, if the applicant wants to use X100 steel (a thinner, stronger steel, which, because it uses less material, can produce economic savings), or if it wants to deviate from standard hydrostatic strength testing requirements, it may need a special permit. PHMSA expects that there will be special permits. PHMSA indicates that it is ready, willing and able to work closely with the APP and the state when processing special permits.

On March 3, 2010, PHMSA sent a detailed information request[12] to Exxon Mobil Development Company and TransCanada PipeLines Limited regarding the nature of their proposed APP

[12] The information request includes two enclosures. Enclosure "A" is titled the "Information Request for the Proposed Alaska Pipeline Project (APP Project). Enclosure "B" is titled "Guidance for Special Permit Applicants on Providing Environmental Information." Enclosure A has nine subsections which includes (1) Introduction to Special Permits, (2) General Requirements, (3) Design Requirements, (4) Material and Fabrication Requirements,

project and their plans for submission of special permit applications for the project pursuant to 49 U.S.C 60118 (c) and 49 C.F.R. § 190.341.

Processing any special permit would take no fewer than 12 months and may extend past the 12-month period based upon the technical requirements of the special permit request(s). PHMSA indicates that the project sponsors should apply for special permits at least 12 months prior to the date needed. Once an application is received, PHMSA publishes a notice in the *Federal Register* stating its intent to review the application, sets up a publicly viewable docket, reviews the application, addresses any comments, and ultimately posts its decision in the *Federal Register*. If a project sponsor submits more than one application, PHMSA could process the applications together or separately.

As part of its duty with respect to issuing special permits, PHMSA will review and comment on draft resource reports and participate with FERC as necessary to develop specific data requests to ensure the information provided is sufficient to meet the agencies' regulatory and program oversight responsibilities and authorities.

Specifically, PHMSA notes that an Alaska natural gas mainline may require special permits, including but not limited to: pipe strength (X100); pipe ductility (crossing earthquake zones); strain-based design (ASME limit and reliability designs); post-construction testing (hydrostatic testing); quality control (hydrostatic testing); valve spacing (distance between valves); cathodic protection (composite piping); and depth of cover (permafrost issues). It is important for the APP to actively engage PHMSA on their special permit requirements during this FERC pre-filing stage.

PHMSA recommends it would be prudent to have completed technical studies available and/or conducted with respect to construction of pipelines in and around permafrost; seismic evaluation for the proposed right-of-way; landslide and slippage; and river and stream flood plain evaluations. The effects of climate change must be included in these studies.

Bureau of Indian Affairs, U.S. Department of Interior

The Bureau of Indian Affairs (BIA) Alaska Region is responsible for administering federal Indian policy with respect to Alaska Native tribal governments and self-determination tribal organizations, and for discharging the Secretary of Interior's Indian fiduciary trust responsibilities. The BIA will be responsible for granting rights-of-way (ROW), with the consent of Indian owners, across Indian lands subject to federal restrictions; to protect and preserve Indian trust assets from loss, damage, unlawful alienation, waste and depletion; and to advance quality communities for tribes and Alaska Natives.

Geographically, the Alaska natural gas pipeline will stretch from the North Slope region into the Interior of Alaska. This geographic region covers over 265,561 acres of restricted lands or

(5) Construction Requirements, (6) Corrosion Control Requirements, (7) Testing Requirements, (8) Operation and Maintenance (O&M) Requirements, and (9) Integrity Management Requirements. Enclosure B includes guidance for applicants to provide environmental information and includes (1) Purpose and Need, (2) Site Description and Affected Environment, (3) Mitigation Measures, and (4) Analysis and Investigation of Alternatives.

Native allotments. According to the BIA, this acreage figure covers the restricted lands under the proposed pipeline routes. As the exact alignment of the pipeline is uncertain at this time, the acreage figure represents a high-end estimate of the allotted lands and will be adjusted once the pipeline route has been definitively identified. There is approximately 1.5 million acres of restricted land statewide. These allotments are managed on behalf of the individual Alaska Native landowners by the BIA. However, the lands may also be managed pursuant to self-governance agreements by tribal service providers in accordance with the Indian Self-Determination and Education Assistance Act of 1975, Public Law 93-638.

The BIA states that three Alaska offices will be involved in the process, the Fairbanks agency office; the Division of Environmental & Cultural Resources Management (DECRM); and the Branch of Natural Resources.

The responsibilities associated with BIA Fairbanks agency office include the review and processing of realty transactions prepared by tribal realty service providers; contacting and working with the individual land owner(s) regarding ownership and land boundaries and use permits; and ensuring that federal Indian policy is followed.

The responsibilities associated with the DECRM office include compliance with the National Environmental Policy Act; field plan review; route alignment review; and reviewing resource report data.

The responsibilities associated with the Branch of Natural Resources include collecting and analyzing the natural resources data for the Native allotments along the proposed pipeline corridor. The data and analysis will be used to become more familiar with the project and identify the villages, Native allotments and resources that may be affected. This information will be provided to the tribes and tribal beneficiaries so they can fully participate in the scoping, comment and review of the pre-filing process. Natural resource specialists will be tasked with data collection and analysis as well as attending the stakeholder meetings; Native consultations; and meetings with other federal and state agencies.

TransCanada Alaska would need to get permission from the individual landowner(s) to gain access to restricted property. An organization such as the Tanana Chiefs Conference could assist the company in gaining access and collecting field studies pursuant to its compact with the BIA. The BIA itself would be responsible for completing the federal functions.

Bureau of Land Management, U.S. Department of Interior

The Bureau of Land Management (BLM) has principal responsibility, under Section 28 of the Mineral Leasing Act (MLA) of 1920, as amended, for issuing ROW grants and related permits authorizing natural gas pipelines to cross federal lands, except lands in the National Park System, lands held in trust for an Indian or Indian tribe, and lands on the Outer Continental Shelf. The BLM is also bound by the pertinent regulations in 43 CFR 2880.

It is desirable for all agencies with responsibility for tribal consultation to consolidate such efforts in order to reduce impacts to tribes and rural villages in Alaska. FERC, as the lead

agency on the EIS, will take the lead in government-to-government tribal consultation. BLM will participate in meetings and teleconferences with tribes in coordination with FERC. BLM is coordinating with FERC and U.S. Army Corps to minimize disruption to tribal communities as these two projects go forward.

BLM is the record title holder and surveyor of federal land title for the United States government. The land title transfer program includes fulfilling land entitlement under the Statehood Act, the Alaska Native Claims Settlement Act and the Native Allotment Act. Therefore, the BLM must coordinate and communicate to project applicants and other federal and state entities when land title passes into private ownership during the application process. BLM has prioritized conveyance of land title along natural gas pipeline routes.

BLM requires a cost-recovery agreement before moving forward on ROW actions. At this time BLM is processing ROW applications for proposed interstate and intrastate natural gas pipelines. The schedule for the NEPA work is driven by the applicant and FERC. The BLM will process temporary-use permits submitted by the TC Alaska to conduct studies and other work prior to granting a right-of-way. As TC Alaska submits the resource reports to FERC, the BLM will review the reports to ensure adequacy and to meet deadlines in the FERC process.

BLM identifies climate change and health impact analyses as issues that will likely impact the scope of the EIS. There is growing desire among the public to see consideration of these impacts.

U.S. Fish and Wildlife Service, U.S. Department of Interior

The Fish and Wildlife Service (Service) provides technical information, comments and recommendations on proposed federal projects and private development as a result of its obligations under the Clean Water Act, Endangered Species Act, Fish and Wildlife Coordination Act, Migratory Bird Treaty Act, Marine Mammal Protection Act and NEPA. Project activities that may affect National Wildlife Refuges are reviewed consistent with the Refuge System Improvement and Administration Acts, and special use permits are issued for activities on Service land.

It is important that the Service participate in the FERC pre-filing process. The objective of Service participation is to provide guidance on how best to conserve and enhance fish and wildlife resources, on and off refuges, while accomplishing the goals of the project. The Service can help to facilitate the early resolution of important concerns on wetlands, endangered species, migratory birds, Refuges, and anadromous fish.

During the pre-filing phase the Service will provide technical advice on the collection of field data, and studies needed to assess the potential for impacts to trust resources. The Service will provide technical input on the type and amount of data required for impact assessment (including, but not limited to listed species, wetlands and other high-value habitats, raptors, and fish passage). The Service will also advise the applicant on an ongoing basis of critical information gaps in the FERC application and make recommendations on how to fill those gaps (if any).

The Service's Fairbanks field office will coordinate with regional and Washington office personnel as well as other agency staff. The Fairbanks office will be the lead for Section 7 endangered species consultation.

US Geological Survey, U.S. Department of Interior

The mission of the U.S. Geological Survey (USGS) is to "…serve the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life."

The USGS has a broad hazard science mission that in Alaska, for example, includes monitoring and hazard probability assessments through the Alaska Volcano Observatory; developing new earthquake probability models; providing hydrologic data for flood forecasting; and modeling river scour probabilities related to critical infrastructures such as roads, bridges, and the proposed pipeline. The USGS has itemized several scientific studies and tasks that should be undertaken with respect to the proposed natural gas pipeline project(s).

Based on the APP timeline, USGS proposes that *broad-level hazard probability assessments* commence as soon as possible. Assessments should be performed on the following:

> *Flood and Scour Hydrologic Hazard Issues*: Hydrologic hazards along the proposed route(s) relate to the magnitude and frequency of natural flows; the hydraulics and scour and fill from those flows; and the instability of the stream channels. Previous studies identified potential channel crossings were conducted over 20 years ago. Channel-forming flows have changed since then in response to the climate. For instance, the Sagavanirktok River has experienced floods in excess of two times the design flood used in the Trans-Alaska Pipeline System (TAPS) assessments. Moreover, the extent of lateral channel migration has increased in areas with melting permafrost.
>
> *Earthquake Hazard Probabilities*: Earthquake hazards have been assessed from the North Slope to Delta Junction. Some of the studies were conducted more than 25 years ago. Sections of the region between Delta Junction and the Canadian border have been recently studied by the Alaska Division of Geological & Geophysical Surveys (DGGS). The USGS and DGGS should get together as soon as possible to merge their data sets and determine what is needed to complete the assessment.
>
> *Volcano Hazards*: The pipeline corridor may be exposed to volcanic ash fall and volcanic mudflows (lahar). Mount Wrangell and Mount Churchill are two volcanoes whose potential hazard levels should be analyzed.
>
> *Landslides, Slope Stability and Mass Movement Processes*: Mountain hazards, including snow avalanches, rock-fall, landslides, debris flows and torrential flooding are of significant importance. The proposed route crosses major mountain ranges and a number

of upland areas characterized by steep alpine terrain where mountain hazards are inherent and occur regularly. Processes that could be potentially damaging to the gas pipeline and associated infrastructure include rapid movement of water, snow, ice, debris and rock on hill slopes or in stream valleys along the route. Successful management of mountain hazards require a careful analysis of the hazard and the risks posed based on an understanding of past events, and event frequency and magnitude.

Permafrost and Glacier Hazards: Glaciers and permafrost are present along major portions of the proposed pipeline route. Changes in glaciers and permafrost are shifting hazard zones beyond historically documented areas, and in many areas, permafrost temperatures have risen and are close to 0° C. The recently accelerated retreat of glaciers in nearly all mountain ranges of Alaska has led to the development of numerous glacier lakes. Areas underlain by ice-rich permafrost have poor drainage conditions. Assessments of permafrost conditions and glacier hazards will need to be updated.

Water Quality Issues Associated with Infrastructure Improvements and Maintenance: Road construction often introduces fine-grained sediment. Fine-grained sediment has been shown to have adverse effects on fish populations. When roads are paved, the sealant has been shown to produce high levels of polycyclic aromatic hydrocarbons that are susceptible to runoff and have adverse effects on fish. Documentation of current streambed sediment particle-size distribution can be used as a baseline against which future change is measured. Water quality should be indexed before any construction commences.

National Park Service, U.S. Department of Interior

The National Park Service (NPS), in accordance with Organic Act of 1916, manages units of the national park system. Gates of the Arctic National Park and Preserve is located adjacent to the proposed natural gas pipeline. In establishing Gates of the Arctic National Park and Preserve, Congress placed emphasis on maintaining "the wild and undeveloped character of the area."

The NPS administers the National Historic Landmark s (NHL) Program on behalf of the Secretary of the Interior. The NPS serves as an interested party throughout the National Historic Preservation Act Section 106 process as well as providing technical assistance to the land managers to ensure the integrity of the NHL. The proposed natural gas pipeline route passes close to the boundaries of the Gallagher Flint Station NHL. The NPS will advise FERC on the Section 106 consultation process.

Federal Highway Administration, U.S. Department of Transportation

The Federal Highway Administration (FHWA) is responsible for carrying out two distinct programs: the Federal-Aid Highway Program and the Federal Lands Highway Program. The Federal-Aid Highway Program provides federal financial and technical assistance to the states for the planning, construction and improvement of the National Highway System, urban and rural roads and bridges. FHWA approval is required for certain types of highway projects and uses of the ROWs of federal-aid highways. Under the Federal Lands Highway Program, FHWA

provides highway design and construction services for various federal land-management agencies, such as the Forest Service, National Park Service and other federal and Tribal lands. The FHWA operates under the general authorities provided under Title 23 United States Code as codified in 23 Code of Federal Regulations.

The Alaska natural gas pipeline project will rely heavily on the state's infrastructure and, consequently, will impact many of the programs administered by FHWA. In Alaska, major chokepoints are located on the Dalton Highway at Atigun Pass and the Yukon River Bridge; within the municipalities of Fairbanks, North Pole, Delta Junction; the Richardson Highway at the Alaska Range and Thompson Pass; Haines and Haines Highway; and the Parks Highway from Anchorage to Wasilla. Some projects are under way at this time to address the most pressing needs.

U.S. Environmental Protection Agency

The Environmental Protection Agency (EPA) is responsible for administering a wide range of environmental laws. EPA responsibilities relevant to the pipeline permitting process include, but are not limited to: reviewing and commenting on an EIS under NEPA and Section 309 of the Clean Air Act (CAA); oversight authority of state issued CAA Title V operating permits; co-administering the Section 404 Clean Water Act (CWA) regulatory program; review Corps permits for ocean dumping of dredged material; designating and managing ocean disposal sites for dredged material under Section 102 of the Marine Protection, Research and Sanctuaries Act (MPRSA); and oversight authority of oil-spill prevention and response requirements under CWA and the Oil Pollution Act. The EPA currently maintains National Pollutant Discharge Elimination System (NPDES) permitting authority for oil and gas activities in Alaska; however, authority for oil and gas sector permitting is expected to be transferred to the Alaska Department of Environmental Conservation in 2011. Also, EPA is the process of reissuing the North Slope general permit for facilities related to oil and gas extraction to include coverage for potential natural gas pipeline corridors in Alaska.

In addition, EPA's special expertise in the assessment of human health and ecological impacts, consultation and coordination with tribal governments; and evaluation of greenhouse gas emissions and climate change impacts, among other areas, may prove useful in expediting pipeline permitting, construction and operation. EPA will be a cooperating agency with FERC for the TC Alaska pipeline project.

The EPA has established an Alaska gas pipeline review team with senior technical involvement and senior management review. EPA understands the significance of these gas transportation projects and has appropriately prioritized their review. Employees from several parts of EPA are contributing to the Alaska pipeline review activities. EPA headquarters' Office of General Counsel, Office of Federal Activities, Office of Water, Office of Air and Radiation, and Office of Solid Waste and Emergency Response are fully participating. In addition, EPA's Pacific Northwest Regional Office (Region 10) in Seattle and the Alaska Operations Office in Anchorage will continue to facilitate EPA's expert involvement in the review.

EPA will review and comment on the draft resource reports and participate with FERC to develop specific data requests to ensure they are sufficient to meet agencies' regulatory or program oversight responsibilities and authorities. Notwithstanding that upcoming review process, EPA expects to focus its data requests on several issues, including but not limited to: air quality; water quality; wetlands; greenhouse gas emissions; climate change; hazardous materials; alternatives analyses; tribal communities; and human health impacts.

National Oceanic and Atmospheric Administration, U.S. Department of Commerce

NOAA's strategic goals are to protect, restore and manage the use of coastal and ocean resources through an ecosystem approach to management, to understand climate variability and change, and to enhance society's ability to plan and respond are supported by the programmatic activities of NOAA's National Marine Fisheries Service (NMFS) and the National Ocean Service (NOS). The independent statutory authorities of NMFS and NOS collectively provide agency-wide services to provide critical support for NOAA's mission.

NMFS is responsible for the stewardship of the nation's living marine resources and their habitats within the United States Exclusive Economic Zone. NMFS's legal mandates and authorities are derived from the Magnuson-Stevens Fishery Conservation and Management Act, 16 USC 1801 (Magnuson –Stevens Act); Endangered Species Act of 1973 as amended, 16 USC 1531 (ESA); Marine Mammal Protection Act of 1972 as amended, 16 USC 1361 (MMPA); Fish and Wildlife Coordination Act, 16 USC 661 (FWCA); National Environmental Policy Act 43 USC 4321; and the Federal Power Act 16 USC 791 (FPA). NMFS will participate in the environmental review process for the permitting and construction of an Alaska natural gas pipeline.

Section 305 (b) of the Magnuson-Stevens Act requires federal agencies to consult with NMFS on all actions that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity. EFH has been designated in waters used by anadromous salmon and various life stages of marine fish under NMFS jurisdiction. Six fishery management plans exist for fisheries in Alaska. They cover groundfish in the Gulf of Alaska, groundfish in the Bering Sea and Aleutian Islands, crab in the Bering Sea and Aleutian Islands, salmon, scallops and federally managed species in the Arctic.

Under the MMPA, NMFS has management responsibility for all marine mammals in Alaska except sea otter, walrus and polar bear, and for several species listed as threatened or endangered under the ESA. Section 7(a)(2) of the ESA directs federal interagency cooperation "to insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species" or result in the destruction or adverse modification of critical habitat.

The MMPA prohibits, with few exceptions, injury, harm or harassment of marine mammals. Under the 1994 amendments to the MMPA, harassment is defined as "any act of pursuit, torment, or annoyance which has the potential to injure or disturb a marine mammal causing

disruption of behavioral patterns including migration, breathing, nursing, breeding, feeding or sheltering." Any unintentional and incidental take of marine mammals by U.S. citizens may be authorized under Section 101 (a) (5) of the MMPA.

The NOS administers the Coastal Zone Management Act, 16 USC 1451 (CZMA). The State of Alaska has a coastal management program that is within the Alaska Department of Natural Resources (DNR). The DNR program includes state coastal management enforceable policies that are approved by the NOS Office of Ocean and Coastal Management. The program was last updated in 2005 and approved by NOAA. For the pipeline components and related activities, including any proposed LNG facility occurring within Alaska's coastal zone that require federal authorizations, the applicant will need to provide DNR with a CZMA consistency certification and necessary data and information pursuant to 16 USC § 1456(c)(3)(A) and 15 C.F.R. part 930, subpart D.

U.S. Department of Energy

The Department of Energy (DOE) is responsible for developing and coordinating national energy policy. With respect to the APP, DOE's responsibilities arise under Section 116 of Public Law 108-324, the Alaska Natural Gas Pipeline Act (ANGPA), 15 USC 720n; the National Environmental Policy Act, 42 U.S.C. 4321-4347; and Section 3 of the Natural Gas Act (NGA), 15 USC 717b.

Section 116 of ANGPA authorizes the Secretary of Energy to enter into federal loan guarantee agreements to facilitate construction of an Alaska gas pipeline or liquefied natural gas (LNG) project that would be used to transport Alaska North Slope natural gas to the continental United States. Consistent with ANGPA, DOE will be a cooperating agency in the NEPA review process regardless whether DOE receives a loan application at the time the NEPA review process commences.

For the purpose of the TC Alaska pipeline project through the period when the FERC deems the application complete, DOE has a limited role. There are two different application processes that are relevant – the FERC application for the project and the DOE application for the loan guarantee.

DOE's loan guarantee under ANGPA would not be available if the gas was being delivered elsewhere than to the Lower 48 states. Also, in the case of natural gas exports, DOE would have to authorize the export.

U.S. Department of Labor

The U.S. Department of Labor (DOL) Employment and Training Administration is responsible for administering federal employment and job training programs, including programs authorized under the Workforce Investment Act (WIA). DOL was authorized by Public Law 108-324 to establish a grant program to train Alaska workers.

Pursuant to ANGPA, Section 113, the Secretary of Labor shall make grants to the Alaska Workforce Investment Board for purposes such as the recruitment and training of adult and dislocated workers including Alaska Natives in the skills required to construct and operate an Alaska gas pipeline system. The DOL may grant funding up to $20 million. Although authorized, the funds have yet to be appropriated by Congress. In order to be appropriated, the governor of the State of Alaska has to first certify to the Secretary of Labor that there is a reasonable expectation that the construction will commence by a date that is two years after the date of certification.

U.S. Department of Agriculture, Forest Service

The Forest Service (FS) is responsible for managing National Forest System lands. Most natural gas pipelines crossing national forest system lands are permitted by a BLM ROW grant issued under Section 28 of the Mineral Leasing Act of 1920, as amended.

Although the currently envisioned route for the pipeline is close to the Chugach and Tongass National Forests, it does not intersect the boundaries of either. However, the applicant may need to ship equipment and materials from Alaska ports to various staging areas for pipeline construction. To the extent that these areas are proposed at Haines, Skagway or Valdez, roads across national forest system lands could require upgrading. Such upgrades could require realignment, structural reinforcement or other improvements. Additional ROW widths may also need to be granted, land-use plans may need to be amended, and appropriate NEPA documentation may be necessary. The FS intends to remain current with Alaska gas pipeline project activities and progress to ensure that it meets its responsibilities for timely project authorization.

As of January 2010, the FS had not identified any issues pertinent to the Alaska gas pipeline project.

Transportation Security Administration

The role of the Pipeline Security Division within the Transportation Security Administration (TSA) is to enhance the security preparedness of the nation's most critical hazardous liquid and natural gas pipeline systems. The Division conducts analyses to maintain pipeline industry domain awareness, develops security programs, identifies industry best practices and lessons learned, and seeks to maintain effective communications with pipeline industry and government stakeholders.

After review of all relevant material to date in regard to the APP proposal, TSA's Pipeline Security Division has determined it has no active role in the current implementation phase of the project (FERC pre-filing).

When appropriate, the TSA Pipeline Security Division will ensure all necessary agency attention is provided in order to prevent any delay to the project and will coordinate with the Office of the Federal Coordinator to discuss any security matters or concerns in relation to the pipeline.

U.S. State Department

The Department of State has the lead role in issuing presidential permits for cross-border facilities, including oil and liquids pipelines. This authority was updated in April 2004 by Executive Order 13337 to conform to the National Energy Policy. However, FERC continues to be the NEPA lead and issuing authority for the Presidential permits for cross-border facilities involving natural gas pipelines. State is one of the departments that will approve FERC permits for cross-border natural gas pipelines. In addition, State will address, in coordination with other relevant agencies, the foreign policy aspects of any agreements with the Government of Canada concerning Alaska natural gas transportation projects, including the manner in which the OFC (including the exercise of such authority by the Secretary of Energy) will engage with Canada on that subject. The United States has certain existing international agreements with Canada that need to be considered in connection with an Alaska natural gas transportation project.

U.S. Air Force

The proposed natural gas pipeline route crosses through Eielson Air Force Base outside Fairbanks, running across the northeastern portion of the base property. A developer would need to acquire permits and easements for construction operations within the base property, the routing of the natural gas pipeline within the Air Force base perimeter, and access to the pipeline after it is put into service. The Air Force is familiar with the permits and easements required and the pipeline construction and operational issues for a pipeline from its experiences with the trans-Alaska oil pipeline that also crosses Eielson property.

CONFLICT AND DISPUTE RESOLUTION

The OFC shall make itself available to discuss and settle any disputes that may arise and facilitate dispute resolution using the procedures agreed to and memorialized in the June 2006 MOU. The OFC understands that FERC is the lead federal agency. In addition, the Council on Environmental Quality (CEQ) acts as a referee when agencies have disagreements. The CEQ could also be called in to help facilitate the resolution of problems that might arise during the NEPA or environmental permitting process. Such facilitation would be coordinated with the OFC, unless it is a dispute between the OFC and another agency.

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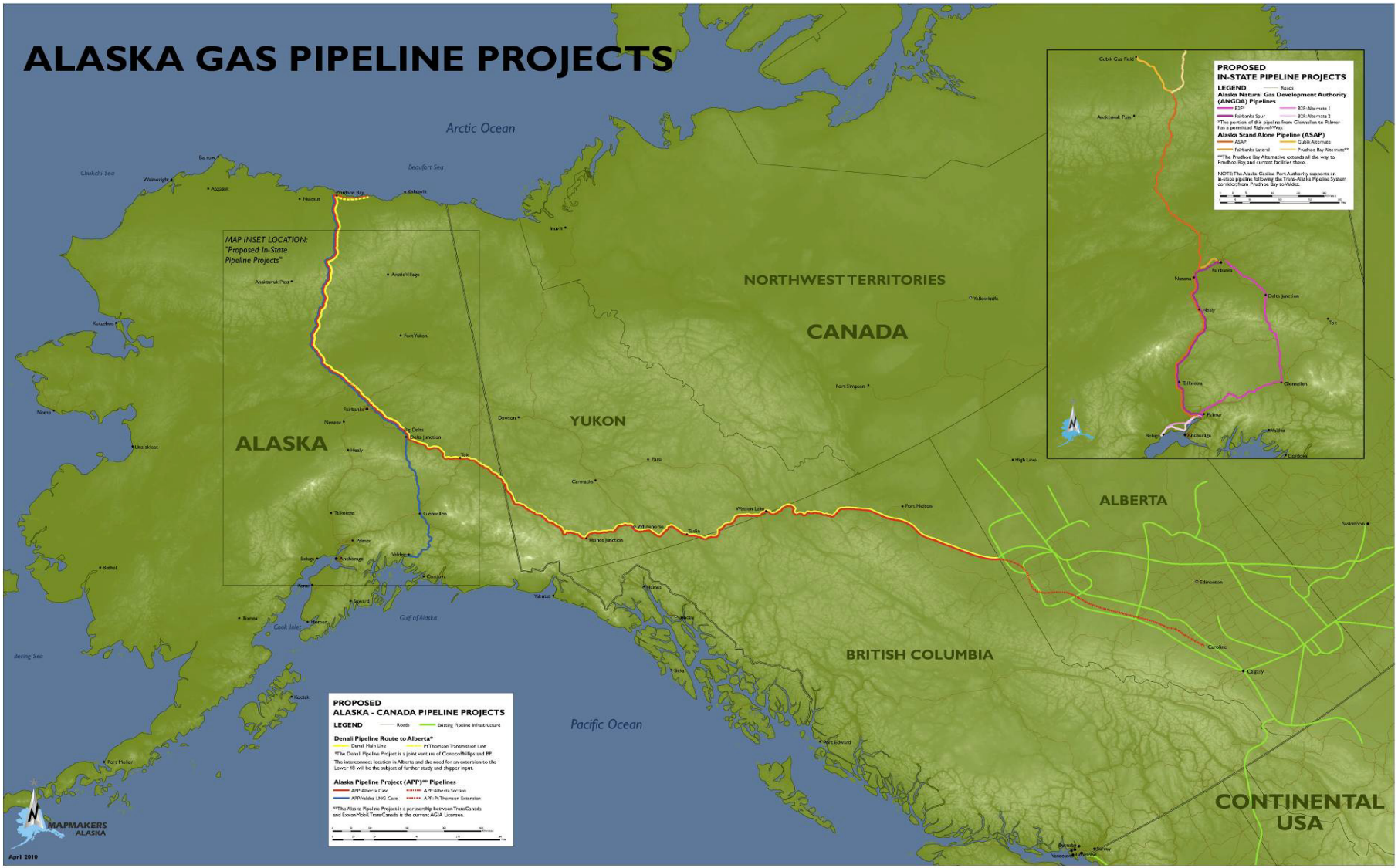
APPENDIX 1

Table of Select On-line Guidance and Manuals

1. Federal Energy Regulatory Commission
    a. FERC's General Pre-filing Environmental Review Process
    b. Resource Reports for Natural Gas Pipeline Applications
    c. Citizen's Guides (An Interstate Natural Gas Facility on My Land?)
2. National Environmental Policy Act (NEPA), 1969
    a. NEPA Statute
    b. CEQ Regulations Implementing NEPA
3. Wetlands
    a. EPA Summary of Clean Water Act
    b. Protection of Wetlands, Executive Order No. 11990
    c. U.S. Army Corps – EPA Joint Compensatory Mitigation Guidance
    d. U.S. Army Corps – EPA Rapanos v. United States & Carabell v. United States, Joint Guidance, December 2, 2008
    e. EPA Clean Water Act Definition "Waters of the United States"
    f. U.S. Army Corps of Engineers, Wetlands Delineation Manual, 1987
    g. U.S. Army Corps of Engineers, Regional Supplement, Alaska Region, 2007
4. Historic Properties
    a. National Historic Preservation Act
    b. Section 106 Regulations
    c. Section 106 Regulations Users Guide
    d. Section 106 Archaeology Guidance
    e. ACHP Case Digest
5. Endangered Species
    a. U.S. Fish and Wildlife Service & National Marine Fisheries Endangered Species Consultation Handbook
6. Essential Fish Habitat
    a. National Marine Fisheries Service, EFH Consultation Guidance
7. Coastal Zones
    a. Coastal Zone Management Act, CZMA Statute
    b. Federal Consistency Regulations
    c. NOAA CZMA, Federal Consistency Overview
8. Clean Air
    a. EPA, CAA Overview
    b. Non Attainment Areas, EPA's Green Book
9. Coast Guard Bridge Administration
    a. Bridge Administration Program Permit Application Handbook

APPENDIX 2

Map of Proposed Pipeline Routes