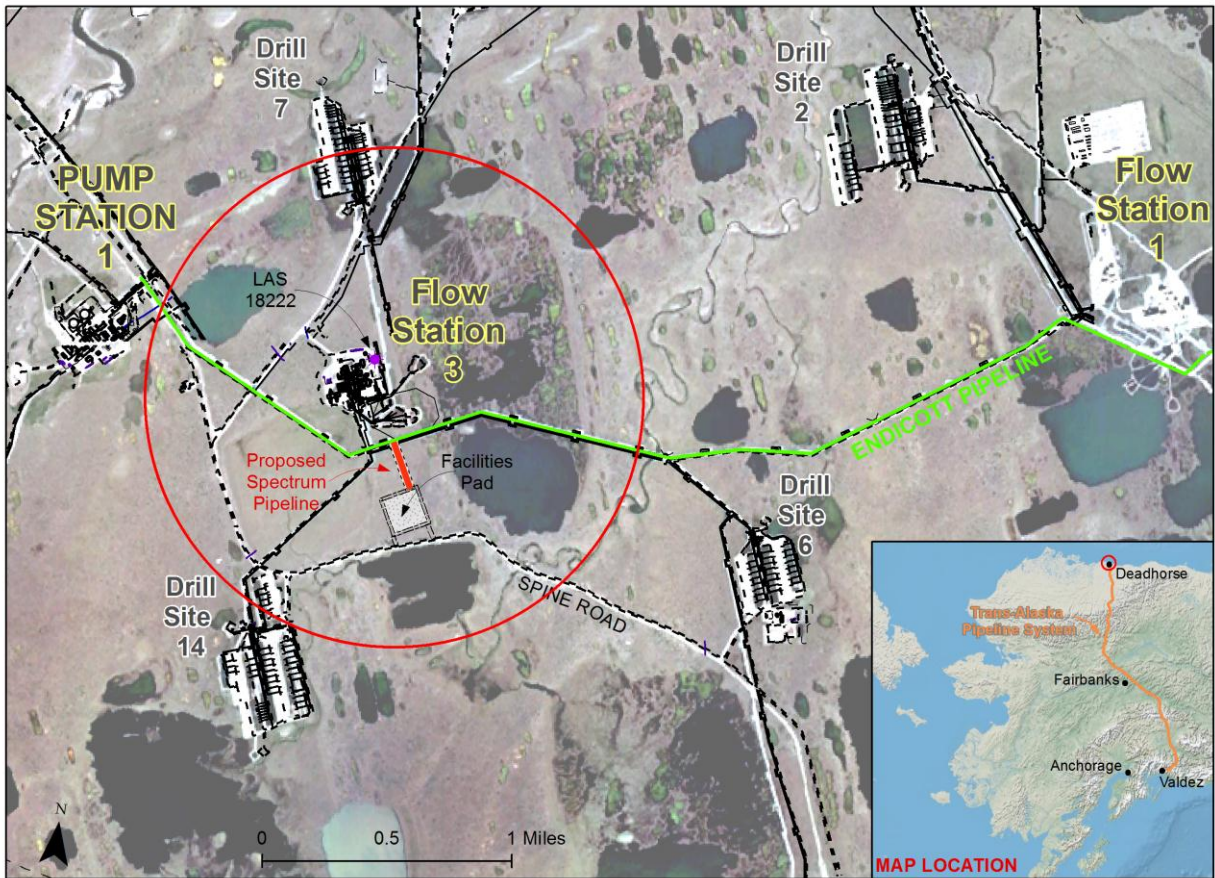


Spectrum Alaska, LLC, Natural Gas Pipeline and LNG Facility
Right-of-Way Lease, ADL 419409

Commissioner's Analysis and Proposed Decision



Alaska Department of Natural Resources
State Pipeline Coordinator's Office
411 West 4th Avenue, Suite 2
Anchorage, AK 99501

August 2, 2013

Purpose of Analysis and Proposed Decision

The Right-of-Way Leasing Act (Alaska Statute 38.35) sets forth the procedures governing an application for an oil or gas pipeline right-of-way across State lands. Under this Act, the Commissioner of the Department of Natural Resources is granted all powers necessary to lease State land for pipeline right-of-way purposes. In leasing land for pipeline right-of-way purposes, the Commissioner must make a written finding that the applicant is fit, willing, and able to perform the transportation or other acts proposed in a manner that will be required by the present or future public interest. Additionally, prior to granting a right-of-way lease, the Commissioner is required to prepare an analysis of the application.

The following document is the Commissioner's Analysis and Proposed Decision on the AS 38.35 Right-of-Way Lease Application, which was submitted by Spectrum Alaska, LLC, on October 9, 2012. The application includes the Spectrum pipeline and associated liquefied natural gas (LNG) facility, both located on State lands within the Prudhoe Bay Unit. The public comment period for this Commissioner's Analysis and Proposed Decision is August 2, 2013, through 5:00 p.m. on September 3, 2013. Written comments may be faxed to (907) 269-6880, emailed to spco.records@alaska.gov, or submitted by U.S. Mail or in person to:

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I. Introduction

Nature of the Request

On October 3, 2012, Spectrum Alaska, LLC (Spectrum), a wholly owned subsidiary of Spectrum LNG, LLC, submitted to the Alaska Department of Natural Resources (DNR), State Pipeline Coordinator's Office (SPCO) an application for a non-exclusive Alaska Statute (AS) 38.35 Right-of-Way Lease for the purpose of constructing and operating an approximately 1,100-foot natural gas pipeline and related liquefied natural gas (LNG) facility in Prudhoe Bay. The proposed project is entirely located within the restricted Prudhoe Bay Unit operating area. The purpose of the pipeline is to transport natural gas from the Prudhoe Bay Unit Central Gas Facility to the LNG facility for processing. The LNG produced by the facility will be transported by truck to either the North Slope or utilities along the highway system. The proposed pipeline will be located entirely on land owned by the State of Alaska.

The DNR Commissioner (Commissioner) is mandated, in accordance with AS 38.35.100, to determine whether Spectrum is fit, willing, and able to perform the transportation or other acts proposed in a manner required by the present or future public interest. Per AS 38.35.080, the Commissioner must analyze the proposed action and proposed lease on State lands, including a review of the applicant's technical and financial capabilities related to construction and operation of a gas pipeline and related facilities, as proposed in the project description and application.

The Commissioner has all powers necessary and proper to implement AS 38.35 and to grant leases of State lands for these purposes. With the exception of signing the Right-of-Way Lease, the SPCO administers these authorities on behalf of the Commissioner.

Applicant

Spectrum Alaska, LLC, was created for the purposes of constructing and operating the proposed Spectrum Alaska LNG plant and associated Spectrum pipeline. Section VII of this Analysis describes the corporate structure and background in detail.

Project Description

Spectrum proposes to construct and operate a pipeline that would transport natural gas within the Prudhoe Bay Unit (PBU). The proposed pipeline would be elevated a minimum of seven feet above the tundra surface on vertical and horizontal support members (VSMs and HSMs). The proposed pipeline begins at a proposed metering station located near Flow Station 3 (FS3) and terminates at the point of connection with the applicant's proposed natural gas liquefaction facility located on the accompanying pad.

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The facility will provide for processing, storage, and transport of LNG by truck, as well as dispensing fuel for local truck fueling. It will be staffed with full-time operations and support personnel for routine operations and maintenance activities. Employee housing will be provided as part of the project, and the facilities will be accessible via the existing local road system.

The project includes: the pipeline; a metering facility that can deliver gas needed to produce up to 400,000 gallons per day of LNG; treatment equipment for a plant; a single LNG storage tank and truck loading bay; a single LNG "train" that can liquefy up to 100,000 gallons per day; a maintenance shop; and an office and man camp building. Space will be prepared for more tanks, truck loading bays, and three more LNG trains on the pad.

The Spectrum project will provide LNG for use in any market that chooses to convert to LNG service. Virtually anything that uses diesel can be converted to use LNG. Further, LNG can be easily converted to compressed natural gas (CNG) which can be used as motor fuel for smaller vehicles.

Estimated construction time for the project is approximately one year. The initial project application proposed starting construction in July of 2013, with a planned commencement date for operations in August 2014. These dates have changed and the agreed-upon effective date of the proposed Draft Lease will be August 15, 2014, or earlier if agreed upon by the parties. Construction will not commence prior to the effective date in the final lease. The metering skid, to be used where the pipeline terminates at the facility, is completely enclosed and has already been delivered to Prudhoe Bay.



Figure 1: Pipeline Location Map

Right-of-Way Location

The applicant requests a temporary 100-foot-wide right-of-way for pipeline construction, an 800-foot by 800-foot gravel pad for LNG facilities, and two 40-foot-wide driveways connecting the pad to Spine Road. The construction right-of-way, including the pipeline and facilities pad, will comprise approximately 18 acres of State-owned lands. The permanent operational right-of-way of the pipeline will be reduced to 35 feet in width, with the pad and driveway dimensions remaining consistent from the construction stage. The operations right-of-way will comprise approximately 16 acres. An as-built survey will be required to determine the actual location and acreage of the operations right-of-way. Exhibit B of the attached Draft Lease (Attachment A) contains the legal descriptions for the Spectrum pipeline and LNG facility construction and operations right-of-way.

The proposed Spectrum project is located in Section 3 of Township 10 North, Range 14 East of the Umiat Meridian (UM).

General Natural Gas Pipeline Design

The proposed Spectrum pipeline would be an 8-inch diameter pipe approximately 1,100 feet in length. The proposed pipeline would be made of high-yield carbon steel (API 5L-X65). The pipeline is designed to conform to Federal Regulation 49 CFR 192. Spectrum intends to contract with CONAM Construction Company for both the design and construction of the pipeline. The pipe will be supported above ground by VSMs for the majority of the route. The only exception to the above-ground installation is a "cased" crossing where the pipeline will cross beneath a gravel road associated with existing pipelines.

The Spectrum pipeline will originate at a connection on the fuel gas header that brings gas from the Prudhoe Bay Central Gas Facility to FS3. The pipeline will have conventional expansion loops to allow for thermal expansion and contraction, and each end will have flanges to accommodate pigging equipment. It will terminate at the gravel pad where the natural gas liquids production plant, storage facilities, and loading facilities are located. All these facilities are part of the pipeline lease. The plant will process the field fuel gas into LNG and then load the LNG into trucks for delivery to markets accessible by truck.

The LNG facility has a control room that will control the pipeline and receive reports from its instrumentation.

II. Administrative Actions

State Pipeline Coordinator's Office

The SPCO was created by Administrative Order (AO) 121 in 1990 (superseded by AO 134 in 1993 and supplemented by AO 187 in 2001). The purpose of the SPCO was to have a DNR office that was dedicated to the work of issuing right-of-way leases under AS 38.35, the Right-of-Way Leasing Act, and coordinate the State's efforts related to other federal right-of-way grant processes.

The SPCO is the lead State agency of the Joint Pipeline Office (JPO). This office, originally created for a major gas pipeline project, coordinates State and Federal activities associated with the Trans-Alaska Pipeline System (TAPS) right-of-way and other common carrier pipelines where state and federal agencies share oversight responsibilities. Multiple State and Federal agencies participate in the JPO:

State Agencies

Department of Commerce, Community and Economic Development

Department of Environmental Conservation

Department of Fish & Game

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Department of Health & Social Services
Department of Labor & Workforce Development
Department of Law
Department of Natural Resources
Department of Public Safety
Department of Revenue
Department of Transportation & Public Facilities
Division of Homeland Security & Emergency Management
Regulatory Commission of Alaska
Alaska Oil & Gas Conservation Commission

Federal Agencies

Department of Defense: Army Corps of Engineers
Department of Homeland Security: Coast Guard; Transportation Security Administration
Department of the Interior: Bureau of Land Management/Office of Pipeline Monitoring
Department of Transportation: Pipeline & Hazardous Materials Safety Administration
Environmental Protection Agency

AS 38.35 Right-of-Way Lease Development and Purpose

AS 38.35 right-of-way leases are complex technical and legal documents that grant a revocable interest in State land for the purposes of constructing and operating a common carrier hydrocarbon pipeline. As part of the effort in preparing this document, the SPCO has worked closely with multiple agencies, often from different levels of government, to ensure that the lease fully represents both the protection and development of State resources.

AS 38.35 and Alaska Administrative Code (AAC) 11 AAC 80 govern SPCO right-of-way leases for common carrier pipelines. These statutes and regulations outline the process for issuing rights-of-way along with the rigorous standards that applicants must meet.

11 AAC 80.005 contains the 59 questions required in applications for right-of-way leases. Upon receipt and confirmation by the SPCO that the application is complete, the SPCO issues a 60-day public notice of the application, per AS 38.35.070. At that time, the SPCO begins work on the Commissioner's Analysis and Proposed Decision, which includes the "fit, willing, and able determination," required pursuant to AS 38.35.100. Included in this analysis is a detailed description of the applicant, project area, resources, potential impact by the proposed project, and ways in which the SPCO has mitigated potential impacts (typically accomplished through terms of the individual right-of-way leases).

AS 38.35.120 contains covenants for all SPCO right-of-way leases. Other lease and stipulation terms are based upon the SPCO's historical review of leases, along with detailed engineering and environmental analyses of the area and project.

If there are no major changes to the analysis or lease, then the Commissioner can issue a final determination and offer the lease to the project proponent.

An AS 38.35 right-of-way lease is a stand-alone DNR land authorization for all pipeline activities (including construction, operations, and maintenance) that take place within the leased lands. Many activities that would otherwise require a permit from DNR – such as ice roads or the development of staging areas for construction – are authorized through the AS 38.35 lease and lease process. When such activities are anticipated, the applicant approaches the SPCO, which then coordinates with all of the necessary DNR divisions prior to issuing an approval.

Additionally, an AS 38.35 pipeline right-of-way lease includes specific protocols and processes for approval or acceptance of the required design basis, construction plan, operations plans, and mitigation measures, prior to certain activities taking place. The SPCO works closely with other agencies to ensure the SPCO's authorization meets current policies, regulations, and industry standards. The AS 38.35 right-of-way lease does not absolve the lessee from obtaining and keeping current non-DNR permits (including Federal and local authorizations) required for pipeline construction, operation, maintenance, and termination activities.

Public Notice of Application (AS 38.35.070)

Coordinate state agencies, as defined by AS 38.35.230, were furnished copies of the Spectrum Alaska, LLC Right-of-Way Lease Application. The application was posted on the SPCO website and hard copies were made available to the public. The Notice of Application was published on the State of Alaska and the Department of Natural Resources public notice websites. Public notices of the receipt of the application were sent to local post offices and libraries. Interested parties, including other State, Federal and local government agencies, towns, and Alaska Native Claims Settlement Act (ANCSA) Regional and Village Corporations within the project vicinity, were notified of the availability of the amended application for review. Public notices were published in the Fairbanks Daily News-Miner (October 11, 2012) and the Arctic Sounder (October 11, 2012).

Administrative Record

The Spectrum Alaska, LLC Right-of-Way Lease Application (ADL 419409) documents, including maps, figures, and other information contained within the case file, constitute the administrative record used in this Commissioner's Analysis and Proposed Decision.

Notice of Commissioner's Analysis and Proposed Decision

Concurrent with issuing the Commissioner's Analysis and Proposed Decision, SPCO will provide public notice of the availability of this Analysis, including the Draft Right-of-Way Lease and exhibits, and of the opportunity to provide written comments on these documents. The Commissioner will consider written comments received within the comment period, August 2, 2013, to 5:00 p.m. on September 3, 2013.

III. Land Status of Proposed Leasehold

Title

The DNR Division of Mining, Land and Water, Realty Services Section, completed a title report, RPT 4082, for the lands encompassed by the proposed Spectrum right-of-way lease. The title report confirmed the State of Alaska holds fee title to the land and mineral estates.

The State of Alaska received title to these lands via Patent 50-74-0092 from the United States of America. Additionally, the State of Alaska holds title to all submerged lands acquired via the Submerged Lands Act Amendment of 1988, the Common Law Doctrine of Riparian Rights.

The State land crossed by this proposed project right-of-way is not scheduled or classified for any disposal.

Classification

The lands encompassed by this application were classified as Resource Management (RMG) under Classification (CL) 618. The lands are subject to ADL 50666, North Slope Area Special Use Lands, and are located within the designated area for the Dalton Highway corridor.

On March 28, 1969, DNR issued CL 618, thereby classifying the State lands encompassed by this application as Resource Management Land. A land classification establishes the apparent best use of an area with the presumption that all other uses are compatible unless specifically prohibited. According to 11 AAC 55.200, land classified as RMG is either land that might have a number of important resources, but for which a specific resource allocation decision is not possible at this time, or land that contains one or more resource values, none of which is of sufficiently high value to merit designation as a primary use. CL 618 does not prohibit the proposed use of State lands in the subject area and the proposed use is compatible under this classification.

As of March 5, 1970, all lands encompassed by this project are subject to ADL 50666 under 11 AAC 96.014. ADL 50666 designates all lands in the Umiat Meridian (UM) as "special use lands." This designation stipulates that, in addition to permitting requirements under 11 AAC 96.010, permits are required for geophysical activity, other exploration activity, construction activity, and transportation activity, except along established roads. This requirement does not prohibit the development of lands within the Umiat Meridian or the development of permitted easements and rights-of-way.

The proposed pipeline project is located within the designated area for the Dalton Highway corridor (AS 19.40). Pursuant to AS 19.40.200(a), the State may not employ AS 38 to dispose of land within five miles of the highway right-of-way; however, AS 19.40.200(b)(4) states the prohibition on the disposal of State land under (a) of this section does not apply to of lands

necessary for exploration, development, production, or transportation of oil or gas. Accordingly, this designation does not prohibit the proposed right-of-way.

Nothing in the management actions designating the units described above precludes the State from issuing an AS 38.35 Right-of-Way for the development, construction, and continued operation of a pipeline across State land in the project area.

Mineral Estate

The lands within Section 3, Township 10 North, Range 14 East, UM are closed to mineral entry by Mineral Closing Order (MCO) 67A.

Mining would be incompatible with significant surface uses on State lands. MCO 67A minimizes conflicts of interest between mining interests and uses such as oil and gas development. This designation does not affect the proposed right-of-way.

Third Party Interests

The Spectrum project does not conflict with any known third party interests previously granted by the State of Alaska. Third party interests on lands within or adjacent to the proposed right-of-way are portrayed in Attachment D and include an oil and gas lease, an oil and gas pipeline, an oil spill containment contingency site, a non-exclusive utility easement, and Prudhoe Bay Unit facilities .

The Spectrum pipeline is proposed to originate at a connection on the fuel gas header that transports gas from the Prudhoe Bay Central Gas Facility to FS3. Greater Prudhoe Bay facilities in this area include FS3, an electric power line, gravel roads, gathering lines, and the Endicott oil pipeline. Prudhoe Bay activities are permitted under various leases and permits from the Federal government, the North Slope Borough, and the State of Alaska.

All identified third party interests will be notified of this Commissioner's Analysis and Proposed Decision.

Access

The proposed pipeline project is located in a developed area of Prudhoe Bay where there is a network of existing gravel roads. At FS3, a restricted-use gravel road along several field lines will provide access to the point of origin. Access to the LNG facility will be developed from Spine Road within the restricted portion of Pump Station 1.

Spectrum will conduct surveillance and maintenance activities along the pipeline route by foot, low ground-pressure vehicles, and other approved means of off-road travel.

Spectrum proposes to construct a temporary ice road during construction of the pipeline to provide access along the entire route of the pipeline. A permanent pad for the LNG facility and

permanent driveways will be constructed for the project. Authorizations must be obtained from the SPCO before the construction of any ice road or pad may begin. The Northern Region Office of the DNR Division of Mining, Land, and Water determines the timing of tundra travel closures and openings.

Easements

The proposed Spectrum pipeline is located entirely on State land. The facility driveways will be connected to the platted road right-of-way for Spine Road. The pipeline will cross one restricted-use pipeline access road authorized under the BP Exploration (Alaska), Inc. (BPXA) Prudhoe Bay Unit lease operations. Within the Prudhoe Bay Unit, roads are maintained by BPXA Roads and Pads; Spectrum will need to secure an agreement with BPXA to utilize any restricted-use roads for the proposed project. GCI Fiber Communications Company, Inc. (GCI) has a non-exclusive private easement for fiber optic innerduct along Spine Road between Deadhorse and Pump Station 1. Spectrum and GCI will need to communicate to locate the fiber where Spectrum's driveways connect to Spine Road and coordinate to protect the existing fiber optic line. A 200-foot-wide private easement for an overhead electric line, surveyed as ASLS 76-170, crosses the proposed pipeline and is authorized under a DNR Division of Oil and Gas lease operation permit to BPXA.

IV. Natural Resources in the Project Area

AS 38.35.100 requires the Commissioner's Analysis and Proposed Decision to consider specific aspects of the environment and resources within the proposed right-of-way area. Section IV of this document is an introduction to the existing fish, wildlife, and biotic resources of the area, as well as their habitat. Within Section VIII, the analysis section, these resources are discussed in relation to the proposed Spectrum project.

Fish

There are neither streams nor fish-bearing lakes crossed by the proposed pipeline project, thus no recreational fish harvest occurs in the project area. An anadromous lake and stream are located south of the proposed project location. Fish identified in the lake are rearing stage Dolly Varden and species in the stream include broad whitefish, Dolly Varden, and whitefish (ADF&G 2012). Spine Road is located between the project area and the anadromous lake and stream.

Wildlife

The proposed project area is within the Prudhoe Bay Closed Area, an area closed to the taking of big game. Thus, no harvest of large mammals occurs in the proposed project area.

The project area is within the summer range used by the Central Arctic Herd (CAH). Caribou use the North Slope coastal plain for calving from mid-May to mid-June and for insect relief from late June to early August. Caribou are most likely to occur in the project area during the insect season as they move between preferred feeding areas to the south and insect relief areas along the coast and in the Sagavanirktok River floodplain. In areas of human activity, caribou seek the shade of buildings, elevated pipelines, and parked vehicles. The CAH can move long distances along the coast for insect relief (Arthur and Del Vecchio 2009).

Grizzly (brown) bears are known to occur during summer in the Prudhoe Bay area, although their preferred habitat (along major river corridors) lies outside the project area. An estimated 269 brown bears are distributed in Unit 26B, the Alaska Department of Fish & Game (ADF&G) game unit that includes Prudhoe Bay. The bears are distributed throughout Unit 26B, with densities highest in the mountains of the Brooks Range and lowest on the coastal plain. Grizzly bears may occur along the coast wherever marine mammal carcasses wash ashore (Lenart 2009). Grizzly bears hibernate from September/October through April/May and should not be in the project area during construction.

Muskoxen occur infrequently in the Prudhoe Bay/Deadhorse area. During 2007-2010, the population of muskoxen in Unit 26B was estimated to be fewer than 200. Muskoxen were found primarily near Beechy Point, Deadhorse, and along the Sagavanirktok and Ivishak Rivers in Unit 26B during 2006-2010 (Lenart 2011). The low frequency of use is likely due to the absence of preferred riparian habitat. Muskoxen are more likely to occur in the major river drainages east and west of the project area and are not expected to occur in the actual project area.

Arctic and Red foxes can be encountered in the project area year-round. . In late March and early April, foxes begin to den and have kits. Arctic foxes are attracted to areas of human activity and artificial food sources, particularly if waste management is poor or if humans actively feed them.

Polar bears are listed as threatened under the Endangered Species Act of 1973 (as amended) and are managed by the U.S. Fish and Wildlife Service (USFWS). Polar bears can occur in the project area at any time of the year, but most likely from August through April.

In December 2010, USFWS designated critical habitat for polar bear terrestrial denning habitat within eight kilometers (five miles) of the Beaufort Sea coast. The Spectrum project is located within the 5-mile buffer for polar bear terrestrial denning habitat (USFWS 2011). Consultation with the USFWS by the applicant will be required to determine if a polar bear interaction plan or a Letter of Authorization for incidental take (harassment) is required for the project.

Birds

Waterfowl, loons, shorebirds, raptors, ptarmigan, and passerines are likely to occur in or adjacent to the project area. The Federally-listed threatened spectacled eider and Steller's eider and one

candidate species, the yellow-billed loon, may occur in the project area (USFWS 2012; Willms 1992).

The USFWS, under the Migratory Bird Treaty Act of 1918 (16 USC 703-712), has regulatory authority for migratory birds and will review the project pursuant to this authority. In addition, the USFWS will review the project with respect to the Bald Eagle Protection Act and the Endangered Species Act of 1973 (as amended).

Cover Types and Vegetation

The Arctic Coastal Plain is characterized as an ecoregion that is poorly drained, treeless, and underlain by permafrost. Due to the poor soil drainage, wet graminoid herbaceous communities are the primary vegetation cover. The poor drainage also results in the creation of thaw lakes, which are abundant throughout the region (Gallant et al 1995). To date, no known Federally-listed threatened or endangered plants have been identified on the Alaska Coastal Plain. All of the land encompassed by the Spectrum project is either tundra or wetlands.

V. North Slope Borough

Introduction

The Spectrum project area is located entirely within the North Slope Borough (NSB). The NSB, formed in 1972 as a result of the passage of the Alaska Native Claims Settlement Act (ANCSA) and the discovery of oil, is the regional municipal government for northern Alaska.

Encompassing the entire north coast of Alaska and bordered to the south by the Brooks Range, the NSB is the largest borough in Alaska. Although the NSB makes up more than 15 percent of the state, with an area of 88,817 square miles, fewer than 7,500 residents, mostly Inupiat Eskimos, live in the area (DCCED 2012). The NSB government is largely funded by oil and property tax revenues, which enables it to provide communities with public services, infrastructure, and employment.

The proposed pipeline right-of-way is located within the community of Prudhoe Bay (Deadhorse). Prudhoe Bay is an industrial settlement located adjacent to the Beaufort Sea at the northern end of the Dalton Highway. Prudhoe Bay can be accessed by the Prudhoe Bay Airport or the Dalton Highway, which is subject to closure in winter months. Established to support oil and gas development, Prudhoe Bay is not a traditional community. For safety and security reasons, access to the oilfields is restricted to oilfield workers and visitors with special permits. Prudhoe Bay has a population of 2,174 (Bureau of the Census 2010); however, as many as several thousand transient workers are there at any given time, working in oil and gas development-related jobs (DCCED 2012).

The nearest other communities to the proposed project are Barrow (200 miles west), Nuiqsut (60 miles west), and Kaktovik (112 miles east). Prudhoe Bay is the only NSB community with road access; all other communities are classified as rural and are accessible only by ice road, plane, or boat.

Subsistence

Caribou are a significant subsistence resource for communities on the arctic coastal plain. Harvests in the region, not specifically the project area, occur predominantly in the summer and early fall (June–October), though caribou are harvested throughout the year (Braem et al 2011). The closest community that could potentially use the project area for subsistence purposes is Nuiqsut, approximately 60 miles to the west of the project area. Although Nuiqsut residents formerly used the area in and around Prudhoe Bay, current use excludes this area (SRB&A 2011). As noted in the community profile prepared for the North Slope Borough, “the locations of Nuiqsut residents’ subsistence harvest activities have shifted as petroleum development has grown around the community. Hunters are not using areas to the east of the village in the same manner and extent as in prior years” (URS 2005). Harvest of any game is prohibited within the project area.

Recreation and Tourism

Limited recreational activities exist near the project area, but several recreation facilities are provided for workers on the North Slope. Tourists can fly or drive to Prudhoe Bay, but can only access the Prudhoe Bay Unit and adjacent unitized operating areas through approved tour operators. Public access is allowed on State lands that are not unitized operating areas.

The proposed project is located entirely within the restricted Prudhoe Bay Unit operating area; tourism use in or near the proposed pipeline right-of-way is not allowed. Within Prudhoe Bay, guided hunting and recreational tours are a possible component of the economy. Tours are operating along the Dalton Highway to Prudhoe Bay. Borough residents expressed a desire to the North Slope Borough for increased local employment opportunities (URS 2005).

Sport Fishing and Hunting

The proposed pipeline falls within State Game Management Unit (GMU) 26B, under which the area in and around Prudhoe Bay is closed to the taking of big game, with the remainder of the area open. State restrictions must be verified prior to hunting; the animal and the time of year could establish whether a permit is required, if only bow and arrow hunting is allowed, and if the area is open to both residents and nonresidents.

Cultural Resources

The Alaska State Historic Preservation Office (SHPO) reviewed the project area for conflicts with cultural resources under AS 41.35, the Alaska Historic Preservation Act. Based on SHPO

records, there are no known historic properties or cultural resources in the vicinity of the proposed pipeline, but unknown sites may exist.

AS 41.35.070 requires the department to locate, identify, and preserve information regarding historic, prehistoric, and archeological sites, locations, and remains. The Alaska Historic Preservation Act prohibits the appropriation, excavation, removal, injury, or destruction of any State-owned historic, prehistoric (paleontological), or archaeological site without a permit from the Commissioner.

VI. Technical Capability of the Applicant

Reviewed Documents

This section is based primarily on the Spectrum Alaska, LLC project, November 2012, Design Basis for Feed Gas Pipeline and LNG Facilities.

Per Stipulation 3.3 of the Draft Lease, modifications to the contents of the Design Basis after acceptance must be submitted to and accepted by the State Pipeline Coordinator.

Background

Spectrum Alaska, LLC, is planning to construct a pipeline and LNG facility. The pipeline will transport natural gas from the Prudhoe Bay Central Gas Facility to the LNG facility. The LNG facility will process gas, liquefy it, store LNG onsite, and load LNG on trucks. The plant area also contains an office, sleeping quarters, and in the future might include a small liquefied petroleum gas (LPG) process, storage, and truck loading plant. The plant is designed to allow for expansion by means of adding additional parallel process trains, more truck loading facilities, and increased storage.

The inlet to the new pipeline will attach to an existing valve on the 24-inch field-fuel gas unit (FFGU) header that provides fuel gas to the Greater Prudhoe Bay Unit. The terminus of the pipeline is located at the planned LNG facility on a new gravel pad that is to be constructed. The pipeline will not have an access road and the gravel pad will have two driveways.

The approximate separation distances from the Spectrum LNG facility to other major installations are:

- | | |
|---|------------|
| • Flow Station 3 (at the inlet manifold module) | 2,200 feet |
| • Drill Site 14 | 3,100 feet |
| • Pump Station 1 | 6,300 feet |

The risks associated with the location of the facility will be mitigated by following the National Fire Protection Association (NFPA) 59A standard.

Codes, Regulations and Standards

The Design Basis and construction drawings establish minimum engineering requirements for a safe and environmentally sound installation on the AS 38.35 lease. They reference codes, regulations, and standards under which the pipeline will be designed and operated. The most important requirements are listed below. For a full list, refer to the Design Basis.

1. ANSI/ASME B31.3, Standard for Process Piping (for the plant).
2. ANSI/ASME B31.8, Standard for Gas Piping Systems (for the pipeline).
3. Code of Federal Regulations Title 49, "Transportation," Parts 191, 192, 193, 195.
4. AISC, Manual of Steel Construction, 13th Edition.
5. American Welding Society (AWS) D1.1/D1.1M:2006, Structural Welding Code -Steel.
6. API 5L, Specification for Line Pipe, 2004
7. API 1104, Welding Pipelines and Related Facilities, 2005
8. ASCE 7-05 Minimum Design Loads for Buildings and Other Structures 2005
9. International Building Code, as adopted by the State of Alaska
10. National Electrical Code (NEC), as adopted by the State of Alaska
11. NFPA 59A, Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG).
12. Seismic Design Guidelines and Data Submittal Requirements for LNG Facilities, 2007 (Draft).

The feed gas pipeline and LNG facilities will be regulated by local, state, and federal authorities. The project will incorporate shut-off valves, emergency access to critical valves, and communications. The pipeline and major parts of the facility will be jurisdictional to the Code of Federal Regulations (CFR), Title 49, Parts 192 (which regulates gas pipelines and parts of gas plants), 193, and 195 (which regulates liquid hydrocarbon pipelines and parts of plants). These codes are the principal authorities for the regulation of pipelines in the United States. They are implemented by the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA).

The applicant's facilities must conform to the International Building Code sections adopted by the State of Alaska. This code is primarily the jurisdiction of the Department of Public Safety. The Alaska Department of Labor and Workforce Development enforces safe workplace practices and the National Electrical Code (NEC or NFPA 70) and the inspection and certification of certain mechanical items, such as pressure relief valves, air receivers, and certain tanks.

The applicant is voluntarily following several other codes and standards not required by authorities. These include NFPA 59A, Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG) and Seismic Design Guidelines and Data Submittal Requirements for LNG Facilities (Draft).

Transported Product

The product transported by the Spectrum pipeline will consist primarily of natural gas (methane). The downstream LNG facility will process natural gas, liquefy it, and refrigerate it to cryogenic temperatures. The upstream pipeline to the facility will transport only gases to the processing facility, not liquids.

A design flow rate on the pipeline is not defined in the Design Basis because it is not meaningful for this pipeline. This is because it (1) covers a short distance, (2) can never achieve rates sufficient to reach erosional velocities and (3) is demand-fed. The flow area will be established by the diameter needed for span support between VSMS and not by velocity or pressure limits. The physical properties of the components in the feed gas mixture are estimated to be within the following ranges:

Components	Design Gas
Methane, C1	80.36 mole %
Carbon dioxide, CO2	11.93
Ethane, C2	5.17
Propane, C3	1.62
Nitrogen, N2	0.62
Butane, C4	0.21
Pentane, C5	0.03
Hexanes +	0.06
Hydrogen sulfide, H2S	28-39 PPM
Water, H2O	3 PPM

The Prudhoe fuel gas is of lower quality than natural gas typically provided for commercial, industrial, and residential use, where methane content is more than 99%. In addition, the heating value is lower than typical utility gas, with a net heat content measured at 862 BTU/scf, and ideal heat content of 955 BTU/scf. Over the lifetime of the lease, component fractions may change within limited ranges. This fuel gas has been used within the Greater Prudhoe area and in Deadhorse for more than 35 years, and its corrosion rates and characteristics are well-established. The incoming fuel gas is not processed to standards for typical utility distribution service, but it is dehydrated to a dew point of approximately -40 to -50°F. This should prevent water accumulation in the pipeline. Water can combine with other chemicals to form a mixture that can increase corrosion rates.

The Spectrum LNG facility will process the fuel gas to higher standards for commercial use. The processing may change during the time period of the lease. For end use, the gas could have the carbon dioxide removed. This is a large percent (12 - 13%) of the gas and provides no heat value. In addition, approximately 5 - 6% of the fuel gas consists of heavier hydrocarbons and ethane (C2) components. These have industrial uses, such as LPG, natural gas liquids, and energy for the facility. In the future, heavier hydrocarbons in the fuel gas mixture may be removed and either used to power the plant or for a separate product. Hydrogen sulfide (H2S)

rates have been rising in the Prudhoe Bay area for years. This is typical of aging oilfields. In higher concentrations, this compound can accelerate corrosion in piping, in burners, and in equipment. In the future, Spectrum may decide to remove a portion of H₂S.

LNG Facility

The LNG facility will be mostly modular in construction, consisting of facilities, major equipment, and storage tanks mounted on structures or located in buildings that are fabricated elsewhere and transported and installed onsite. The facility is designed to be easily expandable if demand for LNG increases. The LNG facilities will be located on the gravel pad and will consist of the following:

- Inlet from the feed gas pipeline (FGPL).
- Processing equipment to create LNG
- LNG storage and containment
- Truck loading dock(s)
- Office/camp (for personnel and truck drivers)
- Maintenance shop
- Control room and communications
- Truck parking
- Driveways
- Generator(s) and electrical distribution
- Motor control center(s) (MCC)

Many parts of the plant and loading facilities will be constructed to specialized standards to handle LNG. To convert methane in its gaseous form into a liquid, product temperatures must be lowered to the cryogenic region, below -260°F (-162°C). This requires special metallurgies, equipment, materials, and thick insulation.

The original facility will have one process train, but up to three more trains may be added. The facility will have one storage tank, but the layout allows storage to be expanded to up to five tanks. The electrical generator and MCC can also be expanded under the design. One truck loading dock may be expanded to two or three docks. Some support facilities will be available at startup and others may be constructed in the future. The control room, office/camp, and general shop will be part of the original construction.

The exact capacity of the plant is not fully established because the equipment is not yet specified or purchased. The Design Basis states that maximum storage onsite is 400,000 gallons of LNG. The original construction may only have one storage vessel with a volume of 80,000 gallons, and storage will be added as needed.

Geotechnical

The Spectrum project will be built on lands that are underlain by "cold" permafrost. The pipeline route is arctic tundra, with an organic layer underlain by silts. The area is treeless. Sedges and grasses are the predominant vegetation. The area is considered a wetland, and seasonal ponds or shallow lakes can appear at breakup or with heavy rains.

The permafrost depth (the active layer thickness) under the undisturbed tundra surface in the area of Deadhorse and Prudhoe Bay is typically less than three feet. Although no detailed geotechnical borings have been done along the route, the area encompassed by the lease is expected to be similar to other locations in the developed oilfield areas of Prudhoe Bay and Deadhorse.

Each VSM will be embedded a minimum depth below the ground surface to mitigate the risk of heave or settlement; this depth will be established using the criteria in the Design Basis. During construction, bore holes will be monitored and the depth will be extended in holes that encounter massive ice. This construction methodology is typical of North Slope pipelines. The soils and other geotechnical conditions in the Prudhoe Bay area are well understood because of the large numbers of projects completed in the area over the past 40 years.

Hydrology and Waterway Crossings

The terrain and vegetation route is typical of this area on the North Slope. The topography is flat, and the pipeline crosses no major land feature, significant waterway, or rough terrain during its short route; however, the pipeline crosses an area that may have standing water during summers.

The route will have one road crossing, located in a casing. A casing is a second pipe that surrounds and protects the pipeline. The design of the crossing follows past North Slope practices, which have been proved over the past four decades. The pipeline is electrically isolated from the casing to avoid the possibility of galvanic corrosion. The casing will be thermally insulated from the subgrade, embedded in non-frost susceptible fill, and oversized to allow for subsidence of the casing. The crossing will be designed and constructed per American Petroleum Institute (API) Recommended Practice 1102, Steel Pipelines Crossing Railroads and Highways.

Pipe Physical Characteristics

The pipeline will be constructed of low-temperature, high-yield steel pipe, and will be externally coated. The pipeline will be insulated along its entire length. The pipeline will be composed of primarily API-5LX, -50°F Arctic-rated pipe, with some A333 Grade 6, -50°F rated pipe. The primary metallurgy used within the plant will be A333 Grade 6, -20°F rated pipe. Piping,

components, and storage of LNG will be constructed of specialized cryogenic metallurgy designed to handle liquids of extremely low temperatures.

Design Life

The design life of the pipeline is 30 years, which coincides with the length of the proposed lease. At the end of the lease, the pipeline would need to be evaluated for useful life, should the applicant want to renew the lease.

A 30-year design life does not indicate that the pipeline and associated structures will be failure-prone and requiring replacement after 30 years of operations. Engineering design life is established from a combination of technical, regulatory, economic, and commercial considerations. There are various definitions of design life; however, for the purposes of this lease it can be defined as the period over which the systems, components, and structure are required to perform their primary functions with acceptable safety, regulatory, and environmental performance, and with an acceptable probability that they will not experience major failures, require extensive replacements, or need an excessive number of major repairs.

VII. Financial Capability of the Applicant

The applicant, Spectrum Alaska, LLC, is a newly formed company established for the purpose of constructing and operating the proposed Spectrum pipeline and LNG facilities on the North Slope. Spectrum Alaska is wholly owned by Spectrum LNG, LLC. Spectrum LNG also owns Desert Gas, LP, which operates an LNG plant on the Arizona/California border very similar to the one proposed by Spectrum Alaska. Spectrum LNG is a subsidiary of the parent company Spectrum Energy Services, LLC. All are privately-held companies.

Spectrum's management and partners in Spectrum LNG, Mr. Latchem, President, Mr. Helmricks, and Mr. Ploen, have all had successful relationships with the State in regard to other land leases and rights-of-way. Mr. Latchem led the development of two of Alaska's natural gas distribution companies, Fairbanks Natural Gas (FNG) and Norgasco. He remains the largest shareholder of Norgasco. Mr. Helmricks, as a previous partner in Colville, Inc., built and certified a refuse utility in Deadhorse and two successful fuel distribution companies. Before selling his interest in Colville, he oversaw the delivery of much of the 20 million gallons a year of diesel sold by Colville. After selling his interest, Mr. Helmicks was part of the team managing construction the Desert Gas Plant in Arizona. Subsequently he purchased an interest in Spectrum LNG and took on the role of Vice President of Engineering and Operations. Mr. Ploen began his career in oil spill response and cleanup on the North Slope and offshore in the Beaufort Sea. Mr. Ploen has successfully built his consulting and response firm, Qualitech Environmental, into an international response organization.

Spectrum Alaska Natural Gas Pipeline and LNG Facility
Commissioner’s Analysis and Proposed Decision

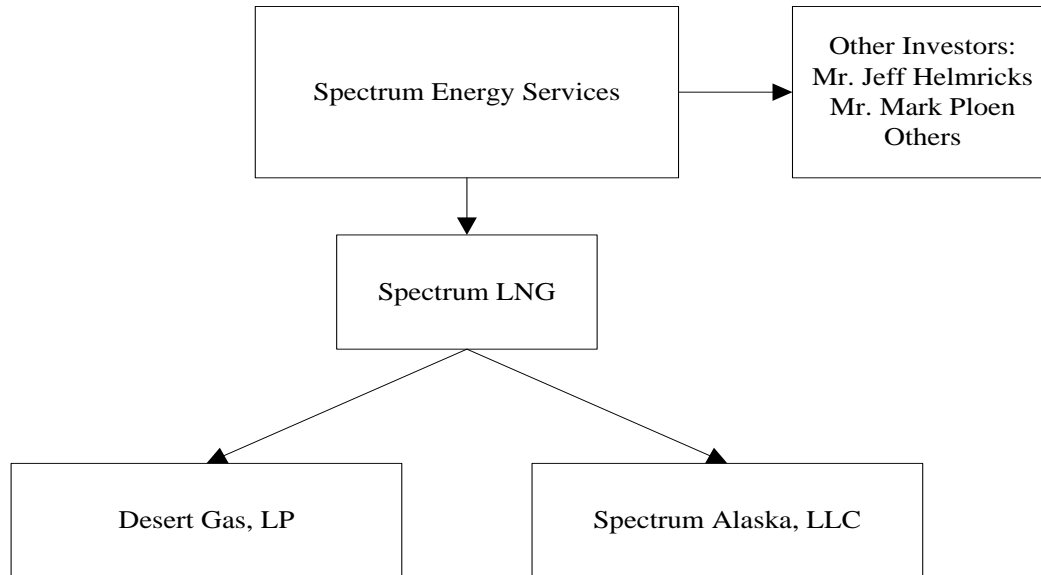


Figure 2: Relationship of Applicant to Parent Company

In support of this Commissioner’s Analysis and Proposed Decision, and to satisfy regulation, Spectrum shared with the DNR Commissioner’s Office three years of confidential financial statements. The 2010 and 2011 financial statements were for the parent company Spectrum Energy Services. The 2012 financial statement was for Spectrum LNG and represented consolidated assets audited by Hartog, Kallenberger, Swarthout, LLC Certified Public Accountants, a reputable independent firm, in accordance with generally accepted accounting and auditing principles. All of the Spectrum financial information is confidential under AS 38.05.035(a)(8)(D). A letter from F&M Bank and Trust Company attesting to Spectrum’s ability to finance and complete this project was also received by the SPCO.

The Regulatory Commission of Alaska (RCA) has completed a thorough review of the Spectrum Alaska project, which included a financial fitness test of the applicant. The RCA has issued Spectrum Alaska a Certificate of Public Convenience and Necessity to operate a common carrier pipeline for this project.

The financial capability of the applicant will be supplemented by not less than \$5 million in liability insurance, with the State of Alaska listed as an additional insured, and an escrow account, described in Exhibit C of the Right-of-Way Lease, which can be used in the event the lessee does not perform in compliance with the lease or for dismantlement, removal and restoration (DR&R). Collectively, the insurance and escrow account are referred to throughout the remainder of this Proposed Decision as the “Financial Assurance Package.”

The total cost to construct the Spectrum project is estimated by the applicant to be \$30 million. The estimated cost to operate the pipeline on an annual basis is \$3 million.

VIII. Analysis of Application and Proposed Right-of-Way

Pursuant to the State of Alaska's Right-of-Way Leasing Act, the Commissioner must evaluate the Applicant's technical and financial capabilities to perform the transportation or other acts proposed, in a manner consistent with the present or future public interest.

Fit, Willing and Able Criteria

In accordance with AS 38.35.100, there are specific criteria that must be evaluated in the analysis of an application filed under AS 38.35.50. If the Commissioner makes a favorable determination, then a lease may be offered to the applicant. In making the determination, the Commissioner must consider these following criteria:

1. Will the proposed use of the right-of-way unreasonably conflict with existing uses of the land involving a superior public interest?
2. Does the applicant have the technical and financial capability to protect state and private property interests?
3. Does the applicant have the technical and financial capability to take action to the extent reasonably practical to:
 - 3A. prevent any significant adverse environmental impact, including but not limited to, erosion of the surface of the land and damage to fish, wildlife and their habitat?
 - 3B. undertake any necessary restoration or re-vegetation?
 - 3C. protect the interests of individuals living in the general area of the right-of-way who rely on fish, wildlife, and biotic resources of the area for subsistence purposes?
4. Does the applicant have the financial capability to pay reasonably foreseeable damages for which they may become liable or claims arising from the construction, operation, maintenance, or termination of the pipeline?
5. Does the applicant agree that in the construction and operation of a pipeline within the right-of-way it will comply with, and require contractors and their subcontractors to comply with, applicable and valid laws and regulations regarding the hiring of residents of the state currently in effect or that take effect subsequently?

Analysis

Criterion 1. Will the proposed use of the right-of-way unreasonably conflict with existing uses of the land involving a superior public interest?

Existing uses and biotic resources in the area were discussed in detail in Sections IV and V above. DNR has analyzed the project and potential impacts and determined that the proposed Spectrum project will not unreasonably conflict with these uses. Some short term impacts may be associated with the project; however, the Draft Right-of-Way Lease, Stipulations, and Applicant's Design Basis (Attachments A and B) contain mitigation measures to protect the public interest. Such mitigation measures include:

- The proposed project is located entirely within the existing and restricted Prudhoe Bay Unit operating area; tourism use in or near the proposed pipeline right-of-way is not allowed.
- The proposed Spectrum pipeline will be elevated to a minimum height of seven feet, other than at the road crossing, to ensure passage of large mammals; accordingly, any impact, other than potential temporary access issues during construction and maintenance, should be minimal.
- While no known historic properties or cultural resources exist in the vicinity of the proposed pipeline, Stipulation 1.13 requires Spectrum to affirmatively protect cultural resources, should such resources be encountered, while undertaking any pipeline activities. Spectrum must agree to require its employees, agents, contractors, subcontractors and their employees to comply with the Alaska Historic Preservation Act. Should any sites be discovered during the course of construction, maintenance, operations, or termination of the pipeline activities, Spectrum will cease the activity will cease and immediately notify SHPO.
- The project area is closed to mineral entry, location and mining activity within the leasehold boundaries.
- AS 38.35.120(a)(12) requires that a right-of-way lease may not unduly interfere with occupancy and use of the land within the lease by the state, its grantees, permittees, or other lessees of any part of the right-of-way not actually occupied or required by the pipeline, for necessary operations.
- Most construction and major maintenance activities will occur in the winter, when most wildlife is reported to not be in the immediate project area.
- Stipulation 2.1 allows the State Pipeline Coordinator to require mitigation measures for additional protections of fish, wildlife and their habitat, should such measures be necessary anytime during the life of the lease.
- During construction and installation of the road crossing and driveways, Spectrum must implement traffic control measures and signage to direct traffic. As required by Stipulation 1.10, any access restrictions along authorized rights-of-way require prior written approvals by the State Pipeline Coordinator.
- Spectrum has obtained a letter of non-objection from BP, the operator of the Prudhoe Bay Unit, for the construction and operation of the pipeline and LNG facilities. The letter of non-objection requires that Spectrum must also comply with the Prudhoe Bay

Unit Road Use Agreement, and must reach a separate agreement with the PBU owners to connect to any PBU Facilities.

Summary

The pipeline right-of-way as proposed, and the activities that will occur within the right-of-way over the life of the pipeline, should have minimal impact on existing and continued uses of the area.

Operation of the pipeline is not expected to result in any long term effects to fish or wildlife or change habitat use. Wildlife could be disturbed during pipeline construction and maintenance activities, but these impacts should be short-term, will occur in winter when most wildlife is not in the project area, and should not be significant. Development of the pad will occur throughout the year, but it will be constructed next to an already-busy developed road and is unlikely to significantly impact wildlife because wildlife is already accustomed to activity in the area.

The Draft Lease and Stipulations, in addition to other State, Federal and local requirements, contain substantial mitigation measures to protect existing uses of the land and to mitigate possible conflicts with existing and future uses. In addition, prior to authorizing permission to construct, the State will review and accept a range of specific plans detailing how the Applicant will implement measures to protect cultural resources, fish and wildlife, and biotic resources. The Commissioner is satisfied that the proposed Spectrum project will not result in an unreasonable conflict with existing uses of the land involving a superior public interest.

Criterion 2. Does the applicant have the technical and financial capability to protect state and private property interests?

The SPCO engineering staff reviewed the applicant's basis of design and provided a technical analysis, contained above in Section VI of this Analysis. This engineering analysis determined the Spectrum pipeline has been designed to meet current safety standards to withstand the conditions to which it will be subjected, so long as it is maintained adequately. The project design incorporates measures to ensure pipe integrity and the plans for buried road crossings incorporate measures to maintain safe conditions for vehicle traffic.

The proposed construction techniques are designed specifically to minimize impacts to public and private lands and the environment. Work in sensitive habitat will be conducted to minimize or avoid damage to the underlying vegetation and inclusive wildlife. The design and construction measures are designed to prevent, mitigate, or repair any damages to vegetation in the project area.

Stipulation 1.2 requires Spectrum, prior to initiating any pipeline activities, to submit a pipeline activities plan for review and acceptance by the State Pipeline Coordinator. The pipeline

activities plan will include all construction and operation schedules, spatial data depicting the boundaries of the construction zone and alignment of the pipeline; groundwater control, erosion and sediment control; runoff or other potential impacts to vegetation; proposed stockpiles or disposal areas; hazardous substances control, cleanup and disposal; safety and hazard preventions; cultural resource preservation; sanitation and waste disposal; public awareness and traffic management; fire prevention and response; emergency preparedness; liquefied natural gas facilities operations; on-site residences; plans and schedules for facility expansions after initial construction; and site rehabilitation plans.

Stipulation 1.3 requires a quality management program to be approved prior to commencement of pipeline activities and adhered to during all phases of construction and operations. The quality management program will be comprehensive and designed to ensure safety and integrity during construction and operation and to document the lessee's compliance with the lease and stipulations.

The applicant has provided a financial assurance package that includes a review of the companies' consolidated assets, liability insurance, and an escrow account to cover any performance issues or DR&R (see Section VII).

Summary

The measures and precautions pertaining to safeguarding the health and safety of the public will also protect property located adjacent to the project. The SPCO has scrutinized the proposed design of the Spectrum project and determined it to be acceptable. Additional protective measures are required in the lease through the above-discussed programs and plans. The Commissioner is satisfied that Spectrum has the technical and financial capability to protect state and private property interests.

Criterion 3. Does the applicant have the technical and financial capability to take action to the extent reasonably practical to:

3A. prevent any significant adverse environmental impact, including but not limited to, erosion of the surface of the land and damage to fish, wildlife and their habitat?

Stipulation 1.3 requires Spectrum to have an approved quality management program in place during all pipeline activities. Prior to construction, Stipulation 1.2 also requires Spectrum to submit a pipeline activities plan (detailed above), which will be used by the SPCO to develop a comprehensive construction oversight strategy. Stipulation 3.9 requires that all pipeline activities minimize surface modifications and maintain the integrity of the surrounding environment. Per Stipulations 1.6 and 3.2, prior to natural gas being transported through the pipeline, Spectrum must develop and submit surveillance and maintenance programs.

Other specific protections for surface erosion and damage to fish, wildlife and their habitat include:

- Construction and maintenance of the pipeline will generally be conducted in the winter from ice roads. This will minimize adverse effects to fish and wildlife habitat, and to birds and terrestrial mammals, which are typically not present in the project area in winter.
- Construction of the facilities pad will involve filling approximately 15 acres of land adjacent to a developed road. The pad will be designed in compliance with U.S. Army Corps of Engineers regulations and North Slope practices.
- Winter water withdrawal limits and screened water intake requirements will be placed on ADF&G fish habitat permits issued to the project proponent to ensure protection of fish resources in any fish-bearing water body from which water is withdrawn.
- The elevated pipeline (a minimum of seven feet above the tundra surface) will facilitate passage of caribou and other wildlife.
- Proper storage and disposal of food and materials.

Summary

Construction and operation of the pipeline is not expected to result in any long term effects to fish, birds, or wildlife or change habitat use, especially considering the size and location of the project in an industrialized area. Wildlife could be disturbed during pipeline construction and maintenance activities, but these impacts should be short-term; construction of the pipeline will occur in winter when most wildlife will not be in the project area and impacts should not be significant. Additionally, the pad and pipeline will be constructed adjacent to an already-busy developed road and the additional development of a small project is unlikely to significantly impact wildlife accustomed to industrial activity. The Commissioner, having considered the technical analysis of the Design Basis and the Applicant's financial information and provisions in the Draft Lease, concludes that the Applicant has the technical capability to prevent significant environmental impact, including prevention of erosion and damage to fish and wildlife and their habitat.

3B. undertake any necessary restoration or re-vegetation?

Impacts that may require restoration or re-vegetation will be related to the construction and maintenance of the pipeline and the facilities pad. An area as wide as 100 feet will be needed for construction activities; the operational right-of-way will be 35 feet. The pipeline would be constructed in the winter from an ice road adjacent to the pipeline right-of-way. The impacts to vegetation by the Spectrum project are anticipated to be minimal. The facilities pad and associated driveways will involve up to 100,000 cubic yards of gravel that will remain through the life of the project.

As discussed above, Stipulation 1.2 requires a pipeline activities plan, which will include site rehabilitation plans. The SPCO will require detailed abandonment procedures addressing restoration and revegetation (among other things) prior to termination of pipeline operations.

Having considered the plans and mitigations discussed above, the Commissioner is satisfied that Spectrum Alaska, LLC, has the technical and financial capabilities to restore and revegetate areas, as necessary.

3C. protect the interests of individuals living in the general area of the right-of-way who rely on fish, wildlife and biotic resources of the area for subsistence purposes?

Construction, operation, and maintenance of the pipeline should not produce any short or long-term impacts to subsistence users. As discussed in Section V of this analysis, subsistence use in the immediate project area does not occur.

Impacts from pipeline construction and termination activities would be short-term. Spectrum proposes to use standard pipeline construction designs for an above-ground gas pipeline. The SPCO reviewed the proposed design and construction techniques, other pipeline integrity issues, and current and future fish, wildlife and biotic resources. The right-of-way lease contains mitigation measures to limit adverse impacts associated with the project; accordingly, the Commissioner is satisfied that the project will not impact subsistence resources in the area.

Criterion 4. Does the Applicant have the financial capability to pay reasonably foreseeable damages for which they may become liable on claims arising from the construction, operation, maintenance or termination of the pipeline?

AS 38.35.100 requires the applicant to have financial capability to protect state and private property interests and to take action to the extent possible to prevent any significant adverse environmental impact; restore or re-vegetate disturbed areas; protect the interests of individuals in the general area who rely on fish, wildlife, and biotic resources for subsistence purposes; and pay reasonably foreseeable damages for which the applicant may become liable on claims arising from the construction, operation, maintenance, and termination of the pipeline.

Pursuant to AS 38.35.120(a)(14), if the Commissioner determines that the net assets of a pipeline right-of-way lessee are insufficient to protect the public from damage for which the lessee may be liable arising out the construction or operation of the pipeline, the Commissioner may require that the lessee obtain and furnish liability and property damage insurance from a company licensed to do business in the state or furnish other security or undertaking upon the terms and conditions the Commissioner considers necessary. After considering the financial capability of Spectrum and evaluating risk associated with the proposed pipeline operations, the Commissioner has determined that Spectrum must obtain a liability and property damage insurance policy. Per Section 11 of the Draft Lease, Spectrum must procure no less than \$5 million in liability insurance, with the State being named as an additional insured.

Spectrum will also be required to provide additional security payments by establishing an escrow account to cover the costs of performance any time the State has the right to perform under the lease, including DR&R. Exhibit C of the Draft Lease establishes a funding schedule to meet the obligation of the estimated DR&R cost (less salvage value). An initial deposit approved by the Commissioner will be required in escrow prior to authorization to start construction of the pipeline. Annual payments will be added to the escrow account once the pipeline has been in service and will continue through the end of the funding period of ten years. Per Exhibit C of the Draft Lease, a review of the escrow account funding can be revisited by either party every five years.

Summary

DNR's Acting Commissioner Joe Balash has reviewed the assets and confidential financial records of the applicant and, with the assurance package in place, determined them to be acceptable. The Commissioner therefore finds that the applicant will have the financial resources sufficient for the construction, operation, maintenance, and termination of the Spectrum project consistent with the terms of the lease and all applicable laws and regulations. The lease provides a continuing right of the Commissioner to review the lessee's financial resources throughout the Lease term.

Criterion 5. Does the applicant agree that in the construction and operation of a pipeline within the right-of-way that they will comply with, and require contractors and their subcontractors to comply with, applicable and valid laws and regulations regarding the hiring of residents of the state currently in effect or that take effect subsequently?

As outlined in Section 10 of the Draft Lease, Spectrum must require its Contractors to abide by the terms of the lease. In regard to hiring of residents of the state, Section 32 of the Draft Lease states, "The Lessee shall, during Pipeline Activities, comply with, and require its Contractors to comply with applicable and valid laws and regulations regarding the hiring of residents of the State then in effect or that take effect subsequently."

In accepting and signing the Lease, Spectrum agrees to be bound by the conditions in the Lease and its attachments.

Summary

DNR requires, via a condition of the in Right-of-Way Lease, that Spectrum will require its contractors and subcontractors to comply with laws and regulations. The Commissioner is satisfied that Spectrum agrees to comply with, and require Contractors to comply with, all applicable and valid laws and regulations regarding the hiring of residents of the state in effect or that take effect subsequently.

CONCLUSION

Proposed Determination

Based on the foregoing analysis, the proposed Spectrum project should not result in significant degradation of the environment, resources, or lands. Potential impacts from the construction, maintenance, and operation of the Spectrum project will be mitigated through the accepted design, which considered safety, the environment and pipeline integrity, and through the covenants, conditions and stipulations of the right-of-way lease.


Under AS 38.35, a Right-of-Way Lease granted on State land shall contain specific terms and conditions that will apply to the construction, operation, surveillance, and maintenance of the right-of-way, the pipeline, and activities specifically associated with the right-of-way and pipeline. For a complete list of the proposed stipulations that will be contained within the lease, please see the Draft Right-of-Way Lease (Attachment A).

Proposal of Action

The Commissioner of the Department of Natural Resources is charged under AS 38.35.100 with the duty to make the determination whether the applicant is fit, willing, and able to perform the transportation or other acts proposed in a manner that will be required by the present or future public interest.

After a careful review of the record developed for this project, I have determined that the applicant is fit, willing, and able to construct and operate this proposed pipeline. The Draft Spectrum LNG Project Right-of-Way Lease includes the required covenants per AS 38.35 and other measures necessary to protect the interests of the residents of the State of Alaska.

If I do not significantly alter this Analysis following the period of public comment and if the applicant meets all of the conditions precedent, then this Commissioner's Analysis and Proposed Decision shall constitute the Commissioner's Final Decision and I will offer the applicant the Right-of-Way Lease.



Joseph R. Balash, (Acting) Commissioner
Alaska Department of Natural Resources



Date