

**Alaska State Right-of-Way Lease Application
for the
Glennallen to Palmer Spur Line**

The following attachments have been provided as supporting documentation for this application:

- Glennallen to Palmer Spur Line Engineering Report (*Engineering Report*)
Attachment C - ANGDA Construction Timeline Scenarios
- Spur Gas Pipeline Glennallen to Palmer Environmental Report (*Environmental Report*)
- Glennallen to Palmer Spur Line Alignment/Lands Report (*Land Alignment Report*) **Attachment A – Legal Description**
- Public Outreach Report – Interviews of Local Opinion Leaders / Cook Inlet Spur Line (*Public Outreach Report*)
- Transport of North Slope Natural Gas to Tidewater – Key Design Considerations - Report

All are referenced accordingly within this document.

1. Date of Application:

April 4, 2005

2. Name and Address of Co-Applicants:

The Alaska Natural Gas Development Authority (ANGDA) is a public corporation of the State of Alaska. The Authority was established via Ballot Measure #3 of the 2002 election, and is operated by a Chief Executive Officer Mr. Harold Heinze who reports to a Board of Directors, all of whom have been appointed by the Governor. ANGDA was developed to represent Alaskans who believe that North Slope gas should be brought to market for the benefit of Alaskans.

ANGDA is submitting this document with the intent of securing a “conditional use” right-of-way lease for a pipeline route that connects Glennallen to the Cook Inlet natural gas distribution system. The contact person is Corrie Young – Administrative Officer at the same address and reachable at (907) 257-1393. Harold Heinze will sign the right-of-way lease application.

Harold Heinze, CEO

Alaska Natural Gas Development Authority

411 West 4th Ave

Anchorage, Alaska 99501

PART I – PROPOSED ROUTE

The proposed Glennallen to Palmer spur line begins in Glennallen on Ahtna, Inc. (AHTNA) lands and ends just west of Palmer. The proposed spur line, as envisioned, will connect North Slope natural gas to the greater Cook Inlet area.

The transmission line will consist of a 24-inch maximum diameter buried steel pipeline that is approximately 148-miles long. The majority of the route will follow existing and acquired rights-of-way. However, the first 15-miles of the route will traverse lands owned by AHTNA following a section line to the north of, and parallel to the Glenn Highway as it leaves Glennallen. The route will then follow the Alaska Department of Transportation and Public Facilities (ADOT&PF) right-of-way for the Glenn Highway for almost 50-miles. Upon leaving the ADOT&PF right-of-way the route will follow an RS-2477 route that ascends the Squaw and Caribou Creek drainages, crosses Chitna Pass, and descends the Boulder Creek drainage into the Chickaloon area. From Chickaloon to Palmer the route mostly follows an existing Matanuska Electric Association route that crosses both state and private lands.

3. Point of Origin:

The spur line route originates at the Trans-Alaska Pipeline System (TAPS) right-of-way, approximately 2-miles north of Glennallen. The proposed location is directly west of TAPS pipeline, at TAPS milepost 689.5.

The terminus facilities of the pipeline at both Glennallen and Palmer will comprise an industrial facility for compression and conditioning the gas for pipeline transportation. ANGDA is also studying the feasibility of transporting Natural Gas Liquids (NGLs) through the pipeline (see Michael Baker report referenced in Question 59).

The terminus facilities will be located on privately owned land in areas where other industrial facilities exist and are close to populated areas in Glennallen and Palmer.

The terminus facilities are not part of this application.

For further detail see the route alignment drawings in Appendix A of the *Engineering Report*.

4. Point of Termination:

The termination of the spur line is just south of the Glenn and Parks Highway interchange. The spur line will tie into the existing ENSTAR Natural Gas Company's (ENSTAR) 20-inch pipeline that is located on the west side of the Glenn Highway.

See also comments to Question 3.

For further detail see the route alignment drawings in Appendix A of the *Engineering Report*.

5. Total proposed length.

The proposed length of the pipeline is approximately 148-miles. The following table summarizes the ownership by mile and parcel along the length of the route.

Entity	Route Length Crossing [miles]	Alignment Percentage	Number of Parcels
State of Alaska	38.8	26.25	152
Department of Transportation	47.0	31.8	7
Public Land Order Easement	N/A	-	107
Mental Health Trust	12.4	8.39	18
University of Alaska	2.3	1.56	6
Borough	1.6	1.08	3
Native Corporation	28.7	19.42	28
Private	17.0	11.5	140
	147.8	100	354

Entity Parcels – PLO = PERMITS ... [PLO 170 = SOA 72 + DOT 7 + Private 28]

6. Total length proposed to cross State lands.

The total length that is proposed to cross state lands is approximately 86-miles. This total does not include approximately 2-miles of University of Alaska and 12-miles of Mental Health Trust lands.

7. Attach a map or plat showing the proposed alignment of the centerline of the pipeline right-of-way, and indicate the areas of upland ownership throughout the length of the proposed right-of-way.

The proposed alignment for the Glennallen to Palmer spur line is shown on the attached alignment sheets (see Appendix A in the *Engineering Report*). The property and upland ownership are also indicated on these sheets. ANGDA recognizes that as a result of the limited fieldwork that has been performed along the spur line route prior to the submittal of this application, the requirement of some minor route adjustments during the final route survey may be required. Significant route modifications are not anticipated.

8. Proposed crossings of streams and other bodies of water. (For each crossing indicate the width and depth of the stream or water body.)

Table 4.1 of the *Engineering Report* identifies the river and stream crossings along the proposed pipeline route. Stream widths and depths have not yet been identified. This

information will be collected during a later phase of the project and included in an update to this application.

9. Attach a map or plat showing the proposed alignment of the centerline of the pipeline right-of-way where it crosses the beds of streams or other bodies of water.

Refer to the alignment sheets (Appendix A of the *Engineering Report*).

10. Width of the proposed temporary right-of-way required for construction for each segment of the pipeline route on state lands.

A 300-foot wide temporary construction right-of-way is requested. This width will be reduced wherever possible based on refinements to the design as the project becomes defined.

11. Size and location of any sites, in addition to the proposed right-of-way, requested on a temporary basis during construction.

The size and location of any sites, in addition to the proposed right-of-way will be identified as the design matures.

12. Width of the proposed right-of-way required for operating the completed pipeline for each segment of the pipeline route on State lands.

The permanent right-of-way for State lands will be 50-ft (25-ft either side of pipeline centerline of the pipe). Additional portions of State land may be required at valve locations.

As mandated in 49 CFR 192.179, valves will not be located more than 20-miles apart in Class 1 locations (15-miles for Class 2 and 8-miles for Class 3). The expected valve locations are indicated on the alignment drawings (See Appendix A of the *Engineering Report*)

13. Size and location of any sites, in addition to the proposed pipeline right-of-way, requested for the operation of the completed pipeline.

No additional areas of permanent right-of-way are requested.

14. Legal description of State lands within the proposed pipeline right-of-way that are reserved or committed to any purpose. (For each tract of such States lands, state the purpose to which it is reserved or committed.)

Refer to: Land Alignment Report - Attachment A – Legal Description.

PART II – PROJECT DESCRIPTION

15. Substance(s) to be transported:

Natural Gas

16. Size, engineering and design characteristics and amount of each type of pipe to be used:

The spur line will be a buried pipeline that is 24-inch outside diameter, maximum. It is anticipated that the pipeline material will be API Specification 5L X80 steel. Most of the route is within areas defined by 49 CFR 192 as Location Class 1, though some of the route will be located in Class 2 and 3 Locations. Therefore, the pipe wall thickness will vary according to the design factor that is assigned to each Location Class. Based on a preliminary maximum allowable operating pressure of 2500-psi the pipe wall thickness is expected to vary between 0.562-inch and 1.031-inch. All valves and fittings will be rated for minimum ANSI Class 1500, or better.

17. Size, number and location of pumping, compressing, heating or refrigeration stations:

There may be a compressor/processing/power generation facility located at each end of the pipeline. It is anticipated that the compressor facilities will also include refrigeration to chill the compressor discharge gas. Sections 3.2 and 3.3 in the *Engineering Report* further discuss specifics regarding these two facilities and where they will be located.

18. Transportation capacity of the proposed pipeline:

The transportation capacity of the proposed pipeline will be 1,000 million standard cubic feet per day (MMSCFD)

19. Estimated life of the pipeline:

The life cycle cost of the pipeline is designed for minimum service of 30-years.

20. Planned temperature at which each substance will be transported and whether it will be heated or refrigerated to maintain the temperature.

Gas will be transported at ambient temperatures. Heating and/or chilling to avoid permafrost melt will not be required.

21. The pipeline will be (check as appropriate):

_____ Supported over the surface along its entire length

_____ On the surface along its entire length

_____ Partially buried along its entire length

 x Completely buried along its entire length

_____ None of the above (If this is checked, attach a map showing which portions of the pipeline are planned to be over the surface, on the surface, partially buried and wholly buried.)

There is the possibility that after additional studies of the fault crossing locations a special design area would be established, which might require up to 3 aboveground segments ranging approximately between 500- and 1000-feet. At this time it is anticipated that the pipeline will be buried through those sections.

22. Describe the methods to be employed for partially or completely burying any portion.

Generally, the pipeline will be buried by excavating a trench, lowering the welded pipeline into the trench, and backfilling, or burying, the pipe. In some locations the pipeline may be installed via a horizontal directional drill (HDD), or by boring. Section 7.1 of the spur line *Engineering Report* discusses the burial techniques in greater detail.

23. Describe any bridges, trestles, other structures or berms for the support of the proposed pipeline.

It is not anticipated that bridges, trestles or other structures will be used to support the proposed pipeline.

24. Describe the proposed method for all stream crossings and crossings of other bodies of water.

The pipeline will cross all streams and other bodies of water using either HDD, or open cut trench techniques. Most of the streams will be crossed via the latter technique, though many of these will be required to be installed during winter months when disturbance to the stream and the surrounding area can be minimized. Crossings of rivers and streams are discussed in detail in Section 7.3.3 of the spur line *Engineering Report*.

25. Describe the proposed methods for grades, cuts or fills.

Grades, cuts, or fills will be required in some cases to prepare the workpad prior to construction. Following construction the original grade will be restored and will be

revegetated. Section 7.2.2 of the spur line *Engineering Report* discusses the graded workpad in greater detail.

26. Discuss planned facilities for spill or leak prevention and containment.

Leak and spill prevention are significant factors that drive the design criteria for this project. The pipeline design and leak detection monitoring shall be in accordance with 49 CFR 192. As mandated by federal regulations the pipeline will also be designed to accommodate in line inspection (ILI). During construction proper containment will be required for the aboveground storage of all fuel or other hazardous products.

27. Proposed access roads, airstrips, heliports, float plane facilities, communication facilities, storage sites for equipment and materials, material sites, and material disposal sites, whether planned for construction, operation or maintenance support:

Specific engineering design and logistic elements will be developed as the project progresses. Existing and potential material handling, staging and storage sites are identified.

- A Project Labor Agreement will be in-place prior to construction
- Construction crews will be bussed using existing roads, existing access roads, revitalized or newly constructed access roads and the 300-ft wide construction work area to access the project. The revitalized or newly constructed access roads will be classified as temporary or permanent. We will not have any construction camps built for this project. “Local Hire” construction crews would be bussed to and from their home areas or assembly points.
- It is our intent that all pipe material will be shipped to and received at the Pt. Mackenzie Port facility and staged there for delivery by truck to the site.
- We will be sensitive to ADOT&PF roadbed and right-of-way concerns during construction activities that occur within the highway right-of-way throughout the year.

Whether a workpad, built for construction purposes, remains after construction is a determination the State will make.

Existing permitted, private, or commercial facilities along the alignment will support the project. Examples of existing facilities include:

- Gulkana Airport
- Gunsight Mountain Landing Strip
- Glenn Highway
- Palmer Airport
- Tazlina Strip

- Utility Easements

28. Size, number, approximate location and planned duration of field camps:

ANGDA will not construct field camps. A portable Maintenance Camp with offices, kitchen, housing, maintenance building and a medical trailer will be contractor provided. Existing facilities for housing, RV hook-ups, etc. will be contractor furnished along the route for the personnel.

29. Size, number and approximate location of housing for personnel operating or maintaining the pipeline:

ANGDA wants to go beyond satisfying Alaska hire regulations and will encourage the construction workforce to come from local communities where living at home and working a 5 ½ day work week is practiced.

It is anticipated that personnel will be housed at Glennallen, Palmer, and other locations along the route.

30. Size, number and approximate location of health care facilities:

There will be a portable first aid trailer specifically designated for this project and it will be located with the portable Maintenance Camp. Existing Hospitals and other medical facilities exist in both Glennallen and Palmer. Contractors will be required to provide onsite health care to respond to minor medical needs.

ANGDA intends to work with the local organizations and selected communities to provide vehicles, health care equipment and supplies, training and emergency response so that they can become capable of responding to medical emergencies that may occur during construction.

These supplemental facilities will not obviate the responsibility of the contractor for providing first aid at the jobsite.

31. Approximate number of persons to be employed during construction:

Estimates for the spur line construction work are that as many as 620 positions will be required for summer construction and approximately 565 during winter construction.

32. Approximate number of persons to be employed to operate and maintain the pipeline:

During the Operational phase it is anticipated that a work force of only 1-2 people will be required to service, check for leaks, and identify potential danger for 1 to 2 times per month throughout the year.

33. Planned commencement date for construction.

ANGDA intends to be ready to start pre-construction activities involving, i.e., centerline staking, developing gravel sites and staging areas for permanent pipeline materials during the summer/fall 2006.

Construction in the area that is designated for winter construction (Glennallen to west end of the Squaw Creek drainage) will begin in November 2006 and be completed by the end of that winter season. Immediately following the winter construction season, in early spring, the summer construction season will commence and be complete by the end of the summer of 2007.

These starting dates are dependent upon how external factors beyond the control of ANGDA come into play. These factors include the outcome of the Stranded Gas Act negotiations between the administration and two applicants, the urgency of the gas shortage in Cook Inlet, and the outcome of the FERC open season and applications to build a pipeline transporting North Slope natural gas to the Lower 48.

ANGDA's plan is to complete the Glennallen to Palmer Spur Line prior to field construction of either of the large line proposals. ANGDA will be prepared to build the pipeline connecting the nearest point of the Highway Line at Delta to the terminus of the Spur Line at Glennallen. The Alaska LNG proposal of the Alaska Gasline Port Authority would provide gas in Glennallen on its route from Prudhoe Bay to Valdez.

If the major projects are indefinitely deferred and if the Cook Inlet needs for new sources of natural gas become urgent, then ANGDA will be prepared to build a gas line from Glennallen all the way to Prudhoe Bay following the TAPS R-O-W.

See: Engineering Report – Attachment B - ANGDA Timeline Scenarios which provides additional information related to the planned construction schedule.

34. Estimated construction time:

The construction duration for the spur line is expected to be from 12- to 24-months. Construction of the terminus facilities will be timed so that their completion coincides with completion of the pipeline. Landscaping and restoration will be completed after construction and when the weather or restoration technique is most suitable for these activities.

For further discussion regarding the schedule, refer to the Section 9.1 of the *Engineering Report* and Attachment B – *ANGDA Timeline Scenarios*.

35. Planned commencement date for operations:

The ANGDA construction scheduling scenario is driven by the earliest and expected start date. Project management and scheduling is based on the concept of pre-building the Palmer to Glennallen spur line to: (1) connect to the proposed Alaska Gasline Port Authority (Port Authority) pipeline that will pass through Glennallen enroute to Valdez, (2) tie-in at Delta to the proposed pipeline to Chicago, or (3) build pipeline from Glennallen to either Prudhoe Bay or Pt. Thompson.

Operations will start upon delivery of gas into the Spur Line by one of the scenarios indicated above with the earliest start to operations in 2009.

- Refer to answers to Questions 55 through 59 for a description of the ANGDA ownership structure.
- Please refer to: Engineering Report - Attachment B - ANGDA Timeline Scenarios.

36. Estimated cost of materials:

Pipeline materials for this project are expected to cost approximately \$126 million. Section 9.3 and Appendix B of the *Engineering Report* provide detailed definition of the estimated material costs.

37. Estimated cost of construction and installation:

The estimated cost for construction and installation of the spur line is approximately \$361 million. This value is based on a budget “Level 0” cost estimate with a +/- 30% accuracy. Further definition is included in Section 9.2 and Appendix B of the *Engineering Report*. This estimate includes pipeline materials, a maintenance camp and medical trailer, but ANGDA does not anticipate a need for full blown man-camps for this project.

38. Estimated annual cost for operations and maintenance:

The estimated annual cost for operations and maintenance of the spur line is \$1.5 million per year.

PART III – AVAILABILITY OF INTERCONNECTIONS, TERMINAL FACILITIES AND STORAGE FACILITIES

39. Describe how the proposed pipeline will connect with planned field gathering systems, if any.

There are presently no planned gathering systems for the spur line. Gas flow for the spur line will come directly from another transmission line.

40. Discuss the technical and economic feasibility of providing connections with other field gathering systems at intermediate points along the proposed pipeline.

The idea of the provision of connections with other field gathering systems has been discussed. However, there are no immediate plans for future connections to gathering systems at intermediate points along the spur line route. Technically there are no significant challenges that would eliminate such an addition. The economic feasibility depends on the composition of the gas being added and the conditioning that would be required prior to injection into the spur line.

Some of the key factors that would be considered by ANGDA prior to potential connections would include (but are not limited to):

- Impact to pipeline operations
- Impact to service customers
- Compliance with applicable safety, environmental and pipeline regulations and laws
- Economic feasibility
- Compensation for changes to operational costs

41. Discuss the technical and economic feasibility of providing connections or interchanges with other pipelines at intermediate points along the proposed pipeline.

See response to Number 40.

42. Describe the location, area and capacity of proposed tank farms or other storage facilities.

There will be none constructed within the State Right-Of-Way. Neither the natural gas liquids (NGL) facilities located at the beginning of the spur line near Glennallen nor at the intersection of the Glenn and Parks highways near Palmer are near tidewater. Therefore bulk storage will be required to accommodate distribution of NGL products via tank truck, rail car, and/or pipeline. It is assumed that NGL storage at the facilities will consist of

surge capacity to accommodate the disposition of products via truck, rail or liquid pipeline(s). Tankage for fuel storage of fuel to power the gas driven generators is not anticipated. Storage for the purposes of surge capacity can be accomplished via the installation of numerous large cylindrical pressurized tanks. The pressure of the storage vessels will vary according the commodity being stored. Further clarification regarding the location of these future sites can be found in Sections 3.2.4 and 3.3.1 of the *Engineering Report*. Future studies will determine the size and layout of the bulk storage facilities.

43. Provide locations of and describe any terminal delivery facility of the proposed pipeline.

There are no terminal delivery facilities for this proposed pipeline.

44. Discuss the technical and economic feasibility of providing delivery facilities at intermediate points along the proposed pipeline.

There is no plan to provide delivery services at intermediate points. It is technically feasible to provide intermediate delivery of natural gas at various locations along the spur line by processing the gas to local distribution standards. It appears far too costly to construct and operate from an economic feasibility point-of-view based on capital costs and a very small volume of the market to be served.

PART IV - SAFEGUARDS FOR PERSONS, PROPERTY, THE PUBLIC AND THE ENVIRONMENT

The buried natural gas pipeline project is subject to strict state and federal laws that provide safeguards for persons, property, the public and the environment. Project specific permits and authorizations are required under state and federal laws for construction, operation, maintenance, and termination. Critical permits and authorizations required for this project are the State of Alaska AS 38.35 common carrier right-of-way lease; Clean Water Act (CWA) Section 404 permits from the U.S. Army Corps of Engineers; and CWA Section 401 permits from the Alaska Department of Environmental Conservation; Coastal Zone Management Act (CZMA)/Alaska Coastal Management Plan (ACMP) public review and final consistency determination in support of the Section 404 permits. Other permits and authorizations support the issuances of the right-of-way lease and grant. The permits and authorizations “package” requires compliance with project-specific conditions and stipulations that will be designed to comply with the safeguards contained in Part IV of the AS 38.35 right-of-way lease application. See Environmental Report for a listing of permits and authorizations required for this project.

ANGDA is concerned that the ROW creates the possibility of accessing private land from the state owned sections of the ROW raising a potential trespassing issue. ANGDA will initiate procedures that will minimize the prospects of trespassing.

45. Describe your plans to detect and abate any condition possibly arising from the construction, operation, maintenance and termination of all or part of the proposed pipeline that may cause or threaten to cause a hazard to the safety of workers on the pipeline project.

The Glennallen to Palmer Buried Gas Pipeline Safety Program (Safety Program) will be designed for the project to detect and abate any condition that may cause or threaten to cause a hazard to the safety of workers on the pipeline project during construction, operation, maintenance and termination activities. The Safety Program will be subject to review and approval by the Commissioner of Alaska Department of Natural Resources (ADNR). Implementation of the Safety Program will ensure project employees are provided with safe working conditions that may affect the safety of the public. The Program will comply with applicable Occupational Safety and Health Act (OSHA) and other federal, state, and local safety codes. Employee violation of the Safety Program will be cause for dismissal.

The Safety Program will be designed for:

- Constructing, operating, maintaining and terminating the buried pipeline project with minimum risk to health, life, and property. The Safety Program will address project specific problems that include location of construction activities and complexity of the activities.
- Establishing contractors and subcontractors requirements to maximize safe and consistent practices and uniform procedures for project administration, inspection, reporting and records functions.
- Training personnel in construction safety for the duration of the project.
- Ensuring state and federal regulations for safety, health, fire and environmental protection are uniformly and consistently observed by all contractors, i.e., 49 CFR 192.613-192.617 and AS38.35

All employees will be required to wear personal protection equipment (PPE) and clothing appropriate for work assignments and conditions. A Fire Protection Program will be included to address prevention, early detection, control, suppression, care for and/or evacuation of the injured; and re-establish routine operations.

Security plans and policies will be developed as a sub-set of the Safety Program. The security program will monitor safety compliance, violations, and incidents. Security personnel will be responsible for specific site areas. Close coordination between contractors, security, public law enforcement, and others deemed appropriate will facilitate prompt assistance is available at all times.

The Safety Program will include aspects of the Maintenance Program and will include training maintenance personnel in system operation and maintenance, natural gas characteristics, and required safety practices for working with natural gas. Training will include procedural requirements, maintenance manuals, specific instructions on system safety components, emergency plan, and employee emergency response.

Emergency Support Services facilities, communication, equipment and training will be provided at multiple locations during construction. During Operations, the facilities and equipment will remain at the locations for use and support of not only the pipeline but residents of the area. The localities will, after construction, provide funding for and take over support, equipment maintenance and training of personnel.

Decommissioning at the end of the economic life of the pipeline will be subject to approval by the appropriate state and federal agencies.

46. Describe your plans to detect and abate any condition possibly arising from the construction, operation, maintenance or termination of all or any part of the proposed pipeline that may cause or threaten to cause a hazard to the public health and safety.

A Public Information Program will be prepared to coordinate with communities and officials near the pipeline system for residents' awareness of the pipeline and potential hazards. A Law Enforcement component and Public Safety Plans will also be prepared for review and approval prior to construction requirements. These plans will encompass public health and safety. Public meetings and public notices will inform affected communities about proposed construction and operation and associated safety concerns.

Construction

Priority will be placed on prevention, detection and abatement of hazardous situations. A Quality Control Program will address safe construction practices to safeguard the public health and safety during pipeline construction and operations. The applicant, contractors and subcontractors are required to comply with all applicable federal, state and local laws and regulations for public health and safety, including 49 CFR Parts 191 and 192. The federal regulations require stringent standards for pipe materials, pipe design, components, corrosion protection, testing, operation and maintenance. Eliminating or limiting opportunities for interaction between the public and construction activities will be the basis for public safety. Closely monitoring and controlling communication during pipeline construction will detect situations that may endanger public health and safety.

Operations / Maintenance

Adherence to pipeline safety codes, industry standards, and implementation of best practicable technologies available are key safeguards for protecting public health and safety during operations and maintenance activities. A Leak Detection Program will include placing valves at strategic locations. A Response and Contingency Plan and Pipeline Inspection Program will be designed for the project.

Termination

Public safeguards for the public during pipeline termination are the same as discussed above for pipeline construction.

47. Describe your plans to detect and abate any condition possibly arising from the construction, operation, maintenance or termination of all or any part of the proposed pipeline that may cause or threaten to cause serious and irreparable harm or damages to public or private property.

Preventing serious and irreparable harm or damage to public and private property is the intent of the state and federal codes and permitting process. The right-of-way lease, conditions and stipulations closely regulate the project activities. The Project plan that includes design, construction, operation/maintenance, and termination will be required to comply with the conditions and stipulations that are based in law. Specific technical engineering and environmental protection criteria will be applied to protect the public and private property. Technical and Environmental Plans specific to the pipeline design and construction will minimize the harm or damage to the public or private property. Project-specific damage prevention plans identified in, i.e., 49 CFR 192.614, that will be required to safeguard the public and private property include:

- Pipeline Design Basis
- Brushing and Clearing the Corridor
- Excavation Activities
- Drainage, Erosion and Siltation Control
- Construction Rehabilitation
- Quality Control
- Construction Planning
- Operations Plan and Maintenance Plan

Inspection monitoring during procurement of pipeline materials and construction will ensure:

- Installation of specified pipeline materials.
- Pipeline materials testing prior to installation.
- Pipeline installation in accordance with design specifications.
- Construction methods compliance with applicable project quality standards for workmanship.
- Quality control testing of completed work products with applicable project quality standards.

Construction records will be compiled, reviewed and maintained to confirm system operation readiness.

The Operations and Maintenance Plan will address inspections, testing, and maintenance procedure and compliance with manufacturers' manuals and stringent pipeline safety codes. Surveillance and monitoring, corrosion controls, valve inspections, pipeline

operating and maintenance procedures, emergency plans, employee training, and inspection plans are controls to protect public and private property safety.

Where new access to property has been introduced by the project, the option of fencing (or other preferable barricade methods) will be offered to property owners.

48. Describe your plans to detect and abate any condition possibly arising from the construction, operation, maintenance or termination of all or any part of the proposed pipeline that may cause or threaten to cause serious and irreparable harm or damages to vegetation or timber.

Project-specific plans for design, construction, operation, maintenance, and termination will be developed and implemented to prevent serious and irreparable harm or damages to vegetation and timber. State and federal conditions and stipulations, based in regulation, will address protection of these resources.

Minimizing damage to vegetation will be included in the planning and design phases. The pipeline route, construction schedules and methods, and rehabilitation and maintenance will be considered in developing the plans. The planned pipeline corridor would minimize damage to vegetation and timber.

The route selected will generally be within existing corridors and in an area that has a history of heavy use for mining, recreation and associated RS 2477 trails in the Caribou Creek area. The use of existing corridors and trail systems will significantly reduce the negative impacts to vegetation and timber resources. The project will not introduce new access roads unless the State of Alaska determines it to be in the public's best interest. Vegetation, including wetlands vegetation, and timber resources along the selected pipeline route are shown in the *Environmental Report*. Damage to vegetation will be minimized through construction techniques that will include use of ice and snow pads, and mats to support equipment and for access to haul pipe and equipment. This proven method has been used to avoid damage to vegetation in Southcentral Alaska.

Rehabilitation of areas disturbed by construction will comply with the Rehabilitation Program. The Rehabilitation Program will integrate Drainage and Erosion Control, Visual Resource Protection, and Fish and Wildlife Protection to develop site-specific rehabilitation methods. The Re-vegetation Program will establish conditions to re-colonize the disturbed areas with adjacent native plants.

Native vegetation will re-colonize within disturbed areas. Maintaining some minimal clearing may be required for aerial inspection and maintenance in accordance with company policies, specifications and procedures, and federal pipeline safety regulations.

Operations and routine maintenance will not impact native vegetation or timber.

49. Describe your plans to detect and abate any condition possibly arising from the construction, operation, maintenance and termination of all or any part of the proposed pipeline that may cause or threaten to cause serious and irreparable harm or damages to fish or other wildlife or to their habitats.

The project will be designed, constructed, operated/maintained, and terminated consistent with the state and federal conditions and stipulations to prevent serious and irreparable harm or damages to fish and wildlife resources. The route reduces harm to fish and wildlife resources to the extent reasonably practicable by using existing corridors.

The two terminal station sites will avoid, to the extent reasonably practicable, harm to fish and wildlife resources. The compressor station in the Glennallen area will be on Ahtna, Inc. land. The terminus station that will provide for tie-in to the Enstar gas pipeline will be on borough owned lands. Winter construction techniques in sensitive areas will minimize disturbance.

Features that will minimize harm to fish and wildlife resources include:

- The pipeline will be buried and entirely within existing corridors except within the facilities site boundaries, and potentially at fault crossings where special burial design is not adequate to meet pipeline safety regulations. The buried design will not restrict human or wildlife access and movements across the right-of-way corridor.
- There will be very little human activity along the right-of-way associated with the pipeline operations. Permanent work pads and access roads are not necessary for spill response. Compressor stations will be small and unoccupied.
- Construction methods for pipeline crossings of rivers, streams and wetlands will avoid, to the extent reasonably practicable, harm to fish and fish habitat. Rivers and streams have been identified that may require additional investigation. Summer studies will determine the presence of anadromous fish.
- Frozen soil and dormant vegetation in the winter will provide natural habitat protection during winter construction. Winter construction will reduce impacts to fish and wildlife by avoiding fish and wildlife species when they are present and active. Impacts to most organisms will be avoided.

The Environmental Protection Programs will be developed specifically for fish and wildlife protection during planning, design, construction, and operations phases of the buried pipeline project. Habitat rehabilitation will be according to the criteria developed in the approved Rehabilitation Program. Specific programs for habitat protection include Air and Water Resources Quality Protection, Waste Management, Oil and Hazardous Materials Management, and Noise Control. Programs such as drainage and erosion control, visual resource protection, and water resource protection, will be incorporated and used to select site-specific rehabilitation methods. The Rehabilitation Program will include important wildlife browse. Mineral salt licks within the Caribou Creek area will be factored into the overall environmental protection strategies.

Training and education of construction managers, supervisors, and workers will include fish and wildlife resources protection. An Employee Briefings, Orientation and Education Program will be developed for this project.

An Environmental Management System developed for this project will include fish and wildlife and other environmental protections. International Organization for Standardization (ISO) 14001 standards will be included in the project controls to assure environmental protection and regulatory compliance.

A fish and wildlife protection monitoring and inspection program will continue throughout the project to detect and abate conditions that may lead to serious and irreparable harm or damage to fish and wildlife resources. An inspection program component will be included in the Quality Management Program.

50. Describe your plans for restoring areas of vegetation or timber damaged or harmed directly or indirectly by the construction, operation, maintenance or termination of all or any part of the proposed pipeline.

Areas disturbed by construction will be rehabilitated to restore the natural vegetation, wildlife habitat, and visual resources as the state determines. Disturbed areas will be cleaned and erosion and sedimentation control will be used in areas disturbed during the construction.

Native vegetation will re-colonize and will be used to control erosion and sedimentation. Reseeding and planting will be in accordance with written recommendations from the local soil conservation authority or the state. The Revegetation Program will focus on creating suitable conditions to re-colonize disturbed areas.

Restoration methods will be the same as described for vegetation harmed during construction, operation and maintenance and termination activities.

51. Describe your plans for abating erosion and restoring areas eroded as a direct or indirect result of the construction, operation, maintenance or termination of all or any part of the proposed pipeline.

Erosion and sedimentation will be controlled and eroded areas will be rehabilitated in compliance with state and federal regulations. The Project design will avoid erosion with approved environmental protection developed in compliance with the permitting conditions and stipulations. Erosion prevention and mitigation will be incorporated in the project planning and design phase. The Erosion Control Program will include the pipeline route and facility locations, construction techniques and schedules, and rehabilitation and maintenance methods.

The buried pipeline route will avoid eroding river channels, active floodplains, high-angle slopes, and active landslide area wherever possible. The route will be designed to reduce exposure to erosion forces and the potential to accelerate erosion.

Temporary and permanent erosion control will be used for the pipeline construction. The crossings at rivers, streams and wetlands will use erosion control to limit erosion-prone stream banks. The Office of Habitat, Management and Permitting (OHMP) will evaluate the rivers and streams on an individual basis.

The construction schedule will limit erosion potential. Frozen soil conditions protect against compaction, mixing, rutting, and drainage alteration that lead to post-construction erosion. Low water levels during winter reduce in-water work. Small, intermittent drainages flow is generally absent during the winter. Wetlands will be frozen during the winter and will be protected from equipment and pipe induced damage.

Rehabilitation of erosion-disturbed areas will be in accordance with the Rehabilitation Program. The program will be linked with the drainage and erosion control program and other protection programs including visual resource protection, fish and wildlife protection and air and water quality resource protection. The rehabilitation programs will specific criteria to colonize disturbed areas with adjacent native plants.

The permanent right-of-way maintenance will require brush clearing for aerial surveillance to comply with federal pipeline safety regulations as described.

52. Describe your plans for quality control and your procedures for inspection and testing the pipeline, both during and after construction.

For a description of the plans for quality control and the procedure for inspection and testing of the pipeline see Section 10.0 of the *Engineering Report*.

53. Describe your plans to ensure compliance by your contractors and subcontractors with the safeguards and stipulations of the right-of-way lease, if issued.

A Quality Management Program will be created that will provide controls over construction contractors and subcontractors through contractual agreements mandated for compliance with the permitting and authorizations conditions and stipulations. The Quality Management Program will ensure development and defining of:

- Designs, plans, procedures and schedules that incorporate stipulations.
- Designs, plans, procedures and schedules in specifications, drawings and requirements.
- Specifications, drawings and requirements that are attached to contracts.
- Documentation showing compliance of inspecting and monitoring.

The Environmental Management Contractor will develop an Environmental Briefing Program for supervisors, field personnel and federal field representatives.

PART V - SPECIAL SAFEGUARDS FOR NATIVES AND OTHERS SUBSISTING ON THE BIOTIC RESOURCES OF THE GENERAL AREA OF THE PROPOSED RIGHT-OF-WAY

54. Describe your plans and procedures to protect the interests of individuals living in the general area of the proposed right-of-way who rely on fish, wildlife and biotic resources of the area for subsistence purposes.

The project will protect fish, wildlife, and other subsistence resources, and avoid disruption of subsistence activities where possible. Subsistence resources and other environmental protections will be included in programs developed for this project, including Air and Water Resource Quality Protection, Waste Management, Oil and Hazardous Substance Management, Fish and Wildlife Protection and Noise Control.

The pipeline route and facility locations, construction schedules, and rehabilitation will be designed to prevent damage to and interference with subsistence resources and activities along the pipeline route. The selected buried pipeline route reduces damage to subsistence resources and intrusions into subsistence use areas by exclusively utilizing existing corridors. Compressor station sites were selected to avoid subsistence use areas and sensitive fish and wildlife habitats. Pipeline operation will not impact, or interfere, with subsistence activities.

The pipeline will be buried in compliance with pipeline safety regulations. The buried design will avoid potential obstruction to subsistence users. Wildlife will have unobstructed access over the pipeline corridor. No permanent work pads or access roads are necessary. Native vegetation will re-colonize. The compressor stations will not be permanently occupied.

The construction schedule will avoid damage to subsistence users and resources by avoiding the seasons when most subsistence activities are conducted, direct impacts to the subsistence resources will be avoided.

Rehabilitation of fish and wildlife habitats will be according to a Rehabilitation Program that will incorporate other programs including drainage and erosion control, visual resource protection and air and water resource protection. Native vegetation and timber will re-colonize. Some clearing will be necessary for aerial inspection and maintenance in accordance with federal pipeline safety regulations.

Access by subsistence users will be allowed for hunting, fishing and gathering. Training regarding subsistence users and resources of construction managers, supervisors, and workers will be provided through a Briefing, Orientation and Education Program.

PART VI – FINANCIAL INFORMATION

55. Describe the probable financing requirements for the proposed pipeline.

In 2004 ANGDA commissioned two reports to address financing requirements for the Spur Line. The investment bankers First Southwest Company headquartered in Dallas, Texas developed a financing plan for construction of Spur Line and Steve Pratt, a local utility consultant reported on ANGDA's role as a gas transportation utility and supplier of gas to utilities serving intrastate users.

The most likely scenario is for ANGDA to establish a public gas transmission utility to issue revenue bonds to finance construction of the Spur Line. This organization will continue to operate the pipeline after construction. The organization will not purchase, sell or deliver natural gas but will operate a facility enabling others organizations to transport gas through the pipeline. Users of the gas, be they homeowners, power generation companies or industrial users served by the Cook Inlet service area, will pay for the pipeline by means of a monthly charge evaluated and adopted by the Regulatory Commission of Alaska (RCA). The monthly charge will be collected and remitted to ANGDA and the bond trustee for payment of the operating expenses, the gas transmission utility, and debt service.

The First Southwest Company report indicates the financial structure, timing of bond issuance, and various scenarios of debt service.

The jurisdiction of RCA having regulatory authority over this pipeline will require ANGDA to obtain a Certificate of Public Convenience and Necessity to construct, own and operate the pipeline. The Certificate will require ANGDA to demonstrate that it is financially fit and technically capable of financing, constructing and operating the pipeline.

RCA will also be concerned about with issues associated with access to the pipeline and will require ANGDA to develop policies and procedures regarding initial and future access to pipeline transportation services

Refer to Section 11.0 of the *Engineering Report*.

56. Attach an annual financial statement and balance sheet for each applicant, prepared in accordance with generally accepted accounting principles for each of the applicant's three fiscal years immediately preceding the date of this application. A firm of reputable and independent Certified Public Accountants must certify the financial statement.

ANGDA will be required to submit to the RCA for application of a Certificate of Public Convenience comprehensive plans for engineering and construction, management and operations, and finances. The financing plan will demonstrate the existence of guarantees sufficient to fund construction costs and cash flow sufficient to cover start-up and operating expenses.

ANGDA will provide the Alaska Department of Natural Resources with all of the financial information in answer to Questions 55 and 56 after it has completed the documentation required by RCA mentioned above.

PART VII – OTHER INFORMATION

57. Name and address of the proposed general contractor(s) for constructing the pipeline:

ANGDA, or an organization created by ANGDA to act as a public gas transmission utility, will select a general contractor through competitive bidding in accordance with the State of Alaska procurement procedures.

58. Name and address of the proposed operator of the pipeline:

As discussed above, the proposed operator of the pipeline will be determined prior to ANGDA submitting the application for financing of the Spur Line.

It should be noted that ANGDA has received strong expressions of interest from Enstar (a gas utility company) and Enbridge (a pipeline operator) to be involved in the project as an investor and/or as a utility/operator.

59. Other information you believe may aid in the consideration of this application.

Reports cited in this application are referenced below and are included in the ANGDA website www.allalaskaing.com Also see Attachment B.

- “The all-Alaska LNG Project—a Report to the People” issued by ANGDA in September 2004.
- “Financial Plan for the Cook Inlet Spur Line” prepared by First Southwest Company dated September 1, 2204
- Report prepared by Steve Pratt Enterprises issued in third quarter 2004.
- “Transport of North Slope Natural gas to Tidewater” prepared by Michael Baker Corporation and issued in April 2005.
- “South-Central Alaska Natural gas Study” prepared by U.S. Department of Energy dated May 2004.