

Alaska Natural Gas Development Authority



Environmental Permitting Plan

Glennallen/Palmer Natural Gas Pipeline

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EXECUTIVE SUMMARY

The Alaska Natural Gas Development Authority (ANGDA) is working to bring Alaska North Slope gas to Southcentral Alaska as directed by House Bill 254. ANGDA issued a contract to Hoefer Consulting Group to prepare a multi-disciplinary (air, water, land) environmental permitting plan for a natural gas pipeline between Palmer and Glennallen. The proposed pipeline route is shown in **Appendix A**. The plan should ensure that ANGDA has all of the environmental permits in place to begin construction by November 1, 2006 and then operate the pipeline once it is constructed.

With this in mind, the objectives of this plan are to (1) establish the process for permitting the construction and operation of the proposed gas pipeline, (2) identify all of the environmental permits required, (3) prepare a schedule for obtaining these permits before the target date for commencement of construction, (4) develop tools for managing the permitting process, and (5) estimate the cost of environmental permitting.

The process for permitting projects in Alaska has been streamlined in recent years resulting in new agency procedures. Therefore, required permits and their acquisition processes were identified from previous project experience, but more importantly from extensive discussions with agency staff. The processes established for this project are described in **Section 3 and Appendix B**. The lists of permits and supporting studies required through these processes are itemized in **Appendices C through E**.

A variety of permits from multiple agencies are required for this project, and so an acquisition schedule has been developed to be ready for timely construction. Some construction and operation activities can trigger complex permitting processes involving studies, plans, public hearings, and multiple intra- and inter-agency approvals. Other agency approvals simply involve the submittal of a permit application and fee. Once the State Conditional Right-of-Way Lease is in hand (expected by end of 2005), the Alaska Coastal Management Program Consistency Determination becomes an important schedule driver. Thus, environmental permit applications required for the Consistency Determination are a priority. Other processes on the critical path for permitting are the State Pipeline Coordinator's Office Engineering/ Design Authorization and Notices to Proceed. The schedule for managing these processes is shown in **Appendix F**.

Several factors could affect the schedule. For instance, addressing public concerns late in the process could require additional time and resources. Accordingly, proactive public

involvement is recommended to address concerns before they affect schedule. Another schedule issue is that the project's final engineering design is not yet known. Some design options – such as purchasing power instead of self-generating – would likely require fewer permits and potentially less permitting time.

Given the uncertainties in the permitting process, one strategic option for moving the project forward is for the Project Sponsor to accept a segment-by-segment approval from SPCO. The advantage is that winter construction could proceed in the northern end of the route (e.g., avoiding seasonal nesting areas of the trumpeter swan) while permits are still being processed for the southern end.

With respect to managing the process, tools have been developed to track pre-permitting studies, plans, permit applications, and permit processing. See **Appendices H through L**. Additionally, **Appendices M and N** describe the recommended Document Control and Records Management Procedures. These appendices outline a reliable, integrated record system that provides readily retrievable information at the preconstruction, construction, operation, and termination phases. Cross-references and electronic sorts provide flexibility for a variety of applications, and paper and electronic copies would be available for audits and internal checks throughout the life of the pipeline.

Finally, for budget planning purposes, the permitting process herein has been estimated at a cost of \$2,700,000. This estimate includes environmental contractor time and agency fees, but not ANGDA staff time or engineering support. For details, see **Appendix G**.

By following this plan, ANGDA will ensure that it has acquired all of the environmental permits necessary for constructing and operating the Glennallen to Palmer spur pipeline. The tools will be in place to allow management to track permit acquisition and monitor compliance with permits once they are issued. Furthermore, Document Control and Record Management systems will be established to pass organized information on to the next generation of operators. This plan will be critical to the ultimate success of ANGDA in constructing its pipeline on time, on budget, and in full compliance with the law.

1 Introduction

The Alaska Natural Gas Development Authority (ANGDA) is working to bring Alaska North Slope gas to Southcentral Alaska as directed by House Bill 254. ANGDA requested a multi-purpose, multi-disciplinary (air, water, land) environmental permitting plan for a pre-construction, construction, and operation of natural gas pipeline running from Glennallen to Palmer, Alaska. This plan provides the following:

1. A list of anticipated environmental permits;
2. Permitting timelines, processes (flowcharts), and estimated costs;
3. Plans and studies required to support the permitting process;
4. A permit tracking system template;
5. Document control and recordkeeping procedures.

2 Project Description

The proposed project consists of construction and operation of an approximately 148-mile natural gas pipeline from Glennallen to Palmer, Alaska. The pipeline would be a common carrier line 24 inches in diameter and would operate as a transmission line within the meaning of 49 CFR 192 at a maximum allowable operating pressure of 2500 psi. The permanent right-of-way (ROW) would be 50 feet wide.

The line would originate approximately 2 miles north of Glennallen, just west of the Trans-Alaska Pipeline System (TAPS) near TAPS Milepost 689.5 and would terminate west of the Glenn/Parks Highway interchange where it would tie into an existing ENSTAR Natural Gas Company (ENSTAR) pipeline. The Glennallen-Palmer pipeline is a pre-build phase of an eventual natural gas pipeline from the Alaska North Slope to Alaska tidewater, and therefore it would not currently tie in to another system at the Glennallen end.

The route is generally north and parallel to the Glenn Highway. The pipeline crosses to the south side of the highway for one 6-mile section just east of the Lake Louise cutoff. The section of southcentral Alaska where the pipeline would be located is generally characterized by broad valleys, forests, and mountains interspersed with numerous lakes, rivers, streams and wetlands. The elevation ranges from less than 100 feet above sea level to over 4,000 feet. See **Appendix A** for a map of the proposed route.

Land along the route is currently owned by federal, state, and private landholders. However, the only section of current federal ownership is land selected for conveyance to a Native organization, which is assumed to occur prior to construction of that pipeline section. Therefore, no federal lands would be crossed by the pipeline, nor would facilities be placed within a federal ROW such as at the Glenn/Parks Highway interchange.

In addition to the pipeline, major facilities required for the proposed project include a compressor station at the Glennallen end and a metering station at the ENSTAR tie-in. Minor facilities include approximately seven remote controlled line valves and pig launcher and receiver stations. Supporting infrastructure includes communications links, access roads, and pipe lay down yards. Other facilities that could be built in conjunction with this pipeline are optional and therefore outside the scope of the permitting plan.

The pipeline would be buried in its entirety except for four situations:

- At the beginning and end of the project where the pipeline exits a compressor station or enters a metering skid
- In the vicinity of seismic fault zones
- Due to geotechnical constraints
- In instances where it is more efficient to hang the pipeline from a bridge at stream crossings

Where the pipeline does rise above ground, it will not be within an Alaska Department of Transportation and Public Facilities (DOT/PF) ROW.

ANGDA has requested a 300-foot wide ROW during pipeline construction. Various construction components may need permitting such as material and spoil sites, work pads, blasting and road construction, and equipment storage areas. It is likely two staging areas (10 to 25 acres) would be needed near Purinton Creek and Eureka. A temporary, portable camp and maintenance facility would support field operations during construction.

3 Permit Acquisition Process

3.1 The Process and Players

The permitting process involves a number of federal, state, and local agencies who will review various aspects of the project consistent with their own legal mandates. The Glennallen-Palmer pipeline is a pre-build phase of an eventual pipeline from the Alaska North Slope to Alaska tidewater. However, the scope of the review should be limited to the proposed project as described in Section 2.0 because project is guided by a new statute, AS 46.40.094, *Consistency Determination for Phased Uses and Activities*.

The chronological sequence of the permitting process is generally characterized by:

1. Developing preliminary project information for a project description
2. Initiating pre-application meetings with agencies and information meetings with key stakeholders
3. Filing permit applications
4. Negotiating permit terms
5. Implementing permit conditions

Project Description. Preliminary project information has already been developed for the ANGDA ROW application. This should be sufficient for the remainder of the permitting process as long as the project description is kept up-to-date.

Pre-Application Meetings/Communication with Agencies and Key Stakeholders. After the project description is ready, it is advisable to begin discussions with agencies and key stakeholders. Both agencies and stakeholders should be engaged early in the process to identify issues, permits, and pre-construction studies required to move the process forward. Identifying issues early is particularly important to keeping a project on schedule.

For a pipeline like the Glennallen-Palmer spur line that does not require a federal ROW lease, permitting in Alaska is coordinated through the Alaska Department of Natural Resources' State Pipeline Coordinator's Office (SPCO). Using the SPCO, many agencies have pooled their pipeline experts through a coordinated process wherein common information and policies are readily shared. SPCO would also coordinate the process for making the Alaska Coastal Management Program (ACMP) consistency determination for the section of pipeline that is within the coastal zone.

The SPCO is housed in Anchorage within the federal-state Joint Pipeline Office (JPO). State agencies within the JPO include the Department of Natural Resources, Department of Environmental Conservation, Department of Fish and Game, Department of Labor and Workforce Development, Department of Public Safety, Division of Fire Prevention, and the Department of Transportation and Public Facilities and appropriate federal agencies, such as the U.S. Army Corps of Engineers (COE) and the USDOT/Office of Pipeline Safety (OPS).

A pre-application meeting with SPCO and other state and federal agencies that have been identified as impacted is a good place to start the process.

Local government agencies also have codes, ordinances, and comprehensive plans that will apply to the pipeline. Matanuska-Susitna Borough (MSB) will be an engaged local agency. ANGDA is responsible for complying with the MSB coastal management program, and must obtain a consistency determination for the section of pipeline within the coastal zone.

Non governmental organizations (NGOs) include land owners, native corporations or tribes, utilities, and the general public. NGOs are often concerned about impacts to their property, their stakeholders, or the environment. Landowners along the proposed pipeline corridor include Tazlina Inc., AHTNA Inc., Chickaloon Moose Creek Native Association, Cook Inlet Region, Inc., Matanuska Electric Association (MEA), and various Limited Liability Corporations and private citizens.¹ Since NGOs can appeal both the coastal management consistency determinations and the individual permits, care should be taken to ensure that they are adequately informed and that proper procedures are followed. Some NGOs, such as the Chickaloon Village Traditional Council, have their own permitting or approval process. Also, utilities like Matanuska Electric Association and Copper Valley Electric Association have an approval process for easement crossings and may provide Letters of Non Objection.

Individual or coordinated meetings with other key stakeholders – state, local, and NGO – are recommended in order to identify issues and define processes for obtaining approvals and agreements.

¹ Two additional state agencies are also potentially landowners – the Alaska Railroad Corporation (ARRC) and the Mental Health Trust Authority. ANGDA would need to negotiate with these agencies individually to obtain authorization to utilize their lands.

Permit Applications and Negotiation. To begin filing permit applications, a coastal project questionnaire should be initially completed and submitted to SPCO along with several early permit applications such as ROW acquisition, land use permits, material sales contracts, special area permits, and surface waste disposal permits. Once these applications are processed, a “conceptual” project consistency determination is made by SPCO under ACMP. As the design engineering phase identifies specific project locations and timing, more detailed COE and state permit applications (examples: blasting, noise, stream crossing permits) are submitted and a “design/engineering” consistency determination must be made. Negotiation of permit terms presents a significant cost risk if burdensome terms are sought by agencies. There is a balance to achieve with respect to timely permit receipt versus costly permit stipulations. That is why it is important to engage agencies and stakeholders early in the process to work through the most difficult issues.

Flowcharts are provided in **Appendix B** for the processes and interactions for major permits. Tools to track permit applications and the various documents and records that are part of the permitting process are discussed in Sections 4 and 6 below.

Permit Implementation. It is important for agencies and the credibility of ANGDA with the public to monitor compliance with permit stipulations. Systems will need to be developed to implement permit terms and demonstrate compliance. Tools for tracking permit compliance are discussed in Section 5 below.

3.2 Permits

The list of permits required for the proposed project is lengthy, but none of them are uncommon. The pre-construction and construction permits needed before field activities are listed together in **Appendix C** as Construction Permits. The permit applications that may be linked to the Alaska Coastal Management Program consistency determinations are highlighted in yellow.

Once the natural gas pipeline enters the operational phase at commissioning, it will come under the jurisdiction of multiple federal, state, and local agencies. The regulatory requirements and associated permits would be determined by specific design and operational components. Identified operational permits are provided in **Appendix D**.

When the pipeline operations terminate, there would be specific requirements for closure and rehabilitation. Those details would be directed by the ADNR Commissioner in the lease stipulations and the commitments made in the rehabilitation plans.

3.3 Plans and Studies

Permit applications typically rely on plans and studies that document items such as existing environmental conditions, archeological surveys, wetlands delineation, biological assessments, wildlife interaction, and the like. Based on the project description and expected permits, anticipated environmental plans and studies are included with the permit list in **Appendix C**. Typical *Table of Contents* for these supporting plans and studies are provided in **Appendix E**. Studies requiring seasonal work or long lead time data collection are noted in the project schedule in **Appendix F**.

Once permits are issued, additional plans and studies may be required by the permits themselves. While it is difficult to forecast a complete list, the ones expected as permit requirements are listed with the permits in **Appendix C**.

3.4 Schedule / Timeline

ANGDA seeks to obtain project permits by October 2006 and commence construction by November 2006. This aggressive schedule requires active coordination and cooperation with the agencies. **Appendix F** contains a project timeline for the permits and associated plans and studies in order to be ready to commence construction by November 2006.

3.5 Cost Analysis

A cost estimate for the anticipated environmental permitting work from preliminary engineering to Notices to Proceed has been developed by HCG based on experience working on other large projects in Alaska. This estimate is restricted to contractor costs and agency fees for permitting the Glennallen to Palmer natural gas pipeline and associated major and minor facilities. Important costs that are not included are:

- ANGDA staff support
- Engineering support for permit applications (typically \$500,000 to \$1 million)
- Any other permitting that is outside this project plan

The total budget estimate is \$2,700,00. A cost spreadsheet is provided in **Appendix G**.

4 Tracking Permit Applications

Tracking permit applications for large, complex projects should be structured to provide overall status reports as well as the details of interest to the client. Examples of three tracking tool templates are provided. By using the Excel 'common data entry field' function, the three reports would be generated without redundant data entry.

The first, *Permit Applications – Overall Status* serves as a management support tool. By using icons to describe the status of multiple permits, the overall progress may be tracked without sorting through the individual details. This template is displayed in **Appendix H**.

The *Individual Permit Details* spreadsheet found in **Appendix I** tracks specific permit initiation, revision, completion dates, legal descriptions, surface owners, and other necessary data. Sorting and filtering specific data is simplified.

The *Permits – by Location* spreadsheet has several functions. It can be used by the engineering and environmental teams for quality assurance, ensuring all appropriate permits are in place. During construction, it can serve as an outline for the site-specific Environmental Briefings. See **Appendix J**.

The *Plans and Studies – Overall Status* spreadsheet is located in **Appendix K**.

5 Tracking Compliance

Once permits are received, stipulations and compliance requirements can be tracked for each construction and operational location. The compliance spreadsheet in **Appendix L** is a template for managing the reporting, notification, renewal, and field elements of each permit.

Requirements derived from environmental regulations can also be tracked using this approach. Additionally, a column can be added to estimate labor hour requirements for each task.

6 Document Control / Record Management

Keeping track of information for a complex, fast-track project like construction of the Glennallen-Palmer pipeline requires a comprehensive yet simple-to-use data management system. The system should account for documents and records generated during the pre-application, application, permit negotiation, and permit implementation stages that can be cross referenced with the design, engineering, operations, and maintenance phases.

Documents and records each require a distinct procedure. *Documents* are written pieces that direct work such as procedures and manuals. Typically, *documents* evolve as operations and regulations change. *Records* are historical reports that provide objective evidence of activities, inspections, observations, events or conditions that took place or existed at a specific time and place. *Records* differ from documents as they do not change or evolve. In some cases, it is considered fraudulent to alter records.

Principles of *Document Control* include:

- Current versions are available at their point of use,
- Obsolete documents retained for legal and/or institutional knowledge are marked as such to ensure they will not be mistaken for current versions, and
- Documents are periodically reviewed for applicability, suitability, and effectiveness.

Principles of *Record Management* include:

- Records must be traceable to the activity they represent,
- Readily available or retrievable,
- Protected against damage, loss, and theft, and
- Retained for the time period required by law and/or corporate policy.

Some documents eventually become records. An example is a written, regulatory-required program that must be reviewed annually. The written description of the currently, implemented program would be considered a document. The previous years' written programs and their reviews would be records.

Record retrieval is the hallmark of a records management system. The system must be based on constants, such as lease stipulations and pipeline mileposts. This is critical since government agencies have various jurisdictions and their permits are not

standardized (e.g. some permits are by activity, others by geographical location, piece of equipment, etc). By using the lease stipulations and pipeline mileposts as a standardized part of the record identifier, the system becomes completely integrated. When the engineering, design, environmental, operations, and maintenance records are automatically cross-referenced, complications from the agencies' variations, the passage of time, modified filing patterns, and corporate directives are prevented.

The Document Control Procedure and a Record Management Procedure can be found in **Appendices M and N**, respectively.