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10.0 PIPELINE CONTINGENCY

10.1 INTRODUCTION

Pipeline contingency refers to uncontrollable events that could have a significant adverse impact on the operation or integrity of the pipeline and its appurtenances, or that could be hazardous to persons or property. Current federal pipeline safety regulations (49 CFR Part 192) do not define a "contingency" event, but instead require procedures to address "abnormal operations" within the Operations and Maintenance Plan for the Project and procedures to minimize hazards resulting from gas pipeline emergencies (see TIS34).

10.2 CRITERIA

10.2.1 General Project Criteria

- The Project will be designed, constructed, operated, and maintained in conformance with applicable safety regulations.
- In development of contingency procedures, the following Project documentation will be referenced:
    - Project Design Criteria Manual, and related drawings and specifications
    - Operations and Maintenance Plan and related O&M procedures
    - Project management and staffing plans
    - Project construction and safety plans
    - Project communication plan
    - Project quality assurance/quality compliance plans

10.2.2 Statutes, Regulations and Other Applicable Authorities

- Code of Federal Regulations, Title 49
    - Section 192.605 concerns the Operations and Maintenance Plan. It requires operators of pipeline facilities to prepare and follow a manual of written procedures to provide safety during maintenance and operations and when operating design limits have been exceeded (i.e., during abnormal operations). The Plan must include, among other things, instructions enabling Project personnel to recognize conditions that may be safety-related conditions that are subject to the reporting requirements of 49 CFR § 191.23, as well as surveillance, emergency response, and accident investigation procedures, as required by 49 CFR §§ 192.613(a), 192.615, and 192.617.
    - Section 192.613 requires procedures for continuing surveillance of facilities to monitor and address changes in class location, failures, leakage history, corrosion,

substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions. This section also requires that, if a segment of the pipeline is determined to be in unsatisfactory condition but there is no immediate hazard, a program be initiated to recondition or phase out the affected section, or, if the segment cannot be reconditioned or phased out, a reduction be made in the maximum allowable operating pressure, in accordance with 49 CFR § 192.619.

  - Section 192.614 concerns damage prevention programs, requiring a written program to prevent damage to the pipeline from excavation activities.
  - Section 192.615 concerns emergency plans, requiring written procedures to minimize hazards resulting from gas pipeline emergencies. These procedures are to provide for, at a minimum:

- Means to receive, identify, and classify notice of emergency events;
- Means to communicate with necessary emergency services;
- Prompt, effective response to various types of emergencies, including gas leaks, fires, explosions, and natural disasters;
- Provisions of emergency equipment, tools, materials, and personnel;
- Actions directed toward protecting people first, and property second;
- Emergency shutdown and pressure reduction procedures, to minimize hazards to life or property;
- Making safe any actual or potential hazards to life or property;
- Notification of appropriate emergency and other public officials of gas pipeline emergencies and coordination of planned and actual emergency responses;
- Safe restoration of outages;
- Investigation of failures; and
- Personnel training.
  - Section 192.616 requires that a continuing educational program be established to enable customers, the public, appropriate government organizations, and persons engaged in excavation-related activities to recognize a gas pipeline emergency for the purpose of reporting it to the operator or appropriate public officials.
  - Section 192.617 requires that procedures be established to analyze accidents and failures, in order to determine the cause(s) of the failure and to minimize the chance of recurrence.
- Federal Right-of-Way Grant for the Alaska Natural Gas Transportation System Alaska Segment, Serial No. F-24538 (December 1, 1980), as such may be updated and/or amended.
  - Stipulation 2.14.1 requires submittal of a Pipeline Contingency Plan to the OFI. The Plan must conform to the requirements of 49 CFR § 192.605 and 49 CFR §

192.615 and outline the steps to be taken in the event of a failure, leak or explosion in the pipeline. The Plan must be approved by the OFI prior to startup.

  - Stipulation 2.14.2 requires that the plan and methods of implementation thereof be updated, as appropriate, and that such updates be submitted annually to the OFI.

- Federal Energy Regulatory Commission conditional certificate of public convenience and necessity, issued on December 16, 1977, as such is finalized.
- State of Alaska Regulations
  - Alaska Department of Transportation and Public Facilities
  - Alaska Department of Environmental Conservation.

10.3 METHODOLOGIES

The Project will develop "contingency" procedures for abnormal operations and emergency response that will be included in the Operations and Maintenance Plan. The organization and general content of the Abnormal Operations section of the Operations and Maintenance Plan, including emergency plans, are summarized in the following sections.

The Project recognizes that the regulations that set forth the current requirements for abnormal operations and emergency response procedures are subject to revision. The Project will update its plans and procedures when necessary to conform to such revised regulations, consistent with Stipulation 2.14.2 of the Federal Right-of-Way Grant for the Project.

10.3.1 Abnormal Operations

The purpose of the abnormal operations section is to define an abnormal operation and provide detailed instructions on how to respond to the abnormal condition. The goal of the section is to provide for safe operation when operating design limits have been exceeded.

10.3.1.1 Types of Abnormal Operations (49 CFR § 192.605(c)(1))

The following events are considered abnormal operations. If any of these events occurs, immediate response and reporting are required:

- Unintended closure of valves or shutdowns;
- Increase or decrease in pressure or flow rate outside of normal operating limits;
- Loss of communications;
- Operation of any safety device; and
- Any other foreseeable malfunction of a component, deviation from normal operation, or personnel error, which may result in a hazard to persons or property.

The Operations and Maintenance Plan will address these events in sufficient detail to provide operators the guidance necessary to be able to identify the occurrence of any abnormal operation (i.e., to be able to determine when operating design limits have been exceeded).

10.3.1.2 Required Checks (49 CFR § 192.605(c)(2))

Variation from normal operation after abnormal operation has ended will be checked to determine system integrity and to verify that continued operation is safe. This section will need to include detailed instructions for system checks for each abnormal operation defined above.

10.3.1.3 Notification (49 CFR § 192.605(c)(3))

Detailed instructions regarding procedures for notifying appropriate operating personnel when notice of an abnormal operation is received will be provided in this section. An abnormal operation reporting form should also be prepared.

10.3.1.4 Periodic Review (49 CFR § 192.605(c)(4))

The schedule for reviewing operator response, in order to determine the effectiveness of response procedures, will be addressed in this section. Procedures for corrective action for responses deemed inadequate will also be detailed.

10.3.1.5 Safety-Related Condition Reports (49 CFR § 192.605(d))

This section will provide specific instructions regarding how to recognize conditions that potentially may be safety-related and subject to reporting requirements. Operator and maintenance personnel training requirements will be detailed, and reporting requirements detailed in 49 CFR § 191.23 will be addressed.

10.3.1.6 Surveillance, Emergency Response, and Accident Investigation (49 CFR § 192.605 (e))

Continuing Surveillance (49 CFR § 192.613(a)). Plans for continuing surveillance of the facility will be detailed in this section. The section needs to detail procedures to address changes in class location, failures, leakage history, corrosion, substantial changes in cathodic protection requirements, and other unusual operating and maintenance conditions.

Investigation of Failures (49 CFR § 192.617). Procedures to analyze accidents and failures will be included in this section.

Emergency Plans (49 CFR § 192.615) This section will contain detailed plans to minimize the hazard resulting from a gas pipeline emergency. This plan will identify an incident commander and detail specific responsibilities of operators, responders, and others. An incident command system (ICS) will be used to respond to emergencies. ICS defines key personnel and their specific responsibilities in an emergency. Plans for communications with responders, who is responsible to implement specific actions, response headquarters, and other information will be established in the plan, consistent with the ICS. Minimum required procedures are:

- Event Processing (49 CFR § 192.615(a)(1)). Procedures to receive, identify, and classify notices of events, which require immediate response are contained herein.
- Communications (49 CFR § 192.615(a)(2)). Procedures to establish and maintain communications with emergency and regulatory personnel are contained herein. Radio frequencies, telephone lines, the location(s) of the incident command center, and who is responsible to manage communications will be detailed.
- Types of emergencies (49 CFR § 192.615(a)(3)). Incidents classifying as emergencies will be described in this section. Regulation lists four required incident types. Additional incidents will be added, as appropriate, specific to the pipeline.
- Resources (49 CFR § 192.615(a)(4)). The quantities, locations, and availability of personnel, equipment, tools, and materials needed to respond to an emergency are detailed in this section.
- Protection of People (49 CFR § 192.615(a)(5)). Plans to ensure people are protected during an emergency are detailed in this section. Specific actions planned will be detailed. Actions to protect property will also be detailed in the section; however, protection of property is a lower priority than protection of people.
- Emergency Shutdown (49 CFR § 192.615(a)(6))
- Procedures for emergency shutdown of the pipeline or reduction in pressure to minimize hazards to life or property will be contained in this section.
- Making Safe (49 CFR § 192.615(a)(7)). Procedures to return the pipeline to safe conditions are contained in this section. Testing and certification requirements for different emergency scenarios will also be detailed.
- Coordination and Notification (49 CFR § 192.615(a)(8)). Specific requirements for coordination with emergency responders as part of the emergency plan and notification requirements during an actual emergency will be contained in this section. Emergency notification requirements may differ from abnormal operations notification requirements.
- Service Restoration (49 CFR § 192.615(a)(9)). Procedures to resume operation of the pipeline safely following an emergency related shutdown will be addressed in this section. Different procedures will be developed, as needed, to address the different types of emergency situations that may result in a shutdown.
- Investigate the Cause of the Emergency (49 CFR § 192.615(a)(10)). Procedures to investigate, classify and report the cause(s) of an emergency will be detailed in this section.
- Training Requirements (49 CFR § 192.615(b)).
    - Reference Availability (49 CFR § 192.615(b)(1)). Specific supervisory and other positions who must have access to this plan are listed in this section.
    - Operator Training (49 CFR § 192.615(b)(2)). Minimum emergency training requirements for operating personnel are contained in this section. In addition, the

elements of a periodic testing program to verify the training is effective are provided.

- Employee Review (49 CFR § 192.615(b)(3)). After an emergency, the actions of each employee involved will be reviewed to determine if the proscribed procedures were followed effectively. This section will describe how the review will be accomplished.

- Liaison (49 CFR § 192.615(c)). Each operator must establish and maintain liaison with fire, policy, emergency, and other public officials. This section describes the minimum required elements established by liaison.
  - Responsibility and Resources (49 CFR § 192.615(c)(1)). The available resources and specific responsibilities for each potential responder will be detailed in this section. Available responders will vary depending upon pipeline segment.
  - Operators Capabilities (49 CFR § 192.615(c)(2)). Officials from fire, police, local government and other responders need to be informed regarding the operators capabilities during an emergency. This section will detail specific operator capabilities for each pipeline segment and detail how this information will be provided to local responders.
  - Types of emergencies (49 CFR § 192.615(c)(3)). Local responders will be provided a description of the types of emergencies where their assistance may be needed. The different scenarios where other resources might be needed will be listed in this section.
  - Planning Required (49 CFR § 192.615(c)(4)). Detailed plans for coordinating, sharing resources, and planning with responders and local communities will be contained in this section. The specific goal of the planning is to identify how hazards to life or property can be minimized.

10.3.1.7 Damage Prevention (49 CFR § 192.614)

This section will describe procedures to prevent damage to the pipeline from excavation activities, including excavation, blasting, boring, tunneling, backfilling, removal of aboveground structures, and other earthmoving operations. Among other things, it will: identify persons who normally engage in excavation activities in the vicinity of the pipeline; describe procedures for notifying the public and those who normally engage in excavation activities in the vicinity of the pipeline of the damage prevention program; identify procedures for receiving and recording notification of planned excavation activities; provide procedures for the temporary marking of the buried pipeline in the area of planned excavation and for notifying persons who give notice of their plans to excavate of the temporary markings; and describe procedures for inspection of the pipeline where there is reason to believe that the pipeline could be damaged by excavation activities.

10.3.1.8 Public Education (49 CFR § 192.616)

This section will detail a continuing educational program to enable customers, the public, appropriate government organizations, and persons engaged in excavation-related activities to

recognize a gas pipeline emergency for the purpose of reporting it to the operator or appropriate public officials.