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## **18.0 MAINLINE PIPE**

### **18.1 INTRODUCTION**

This section contains guidelines for development of the Mainline Pipe Purchase Specifications. This specification, to be developed as part of the project procurement process, will include the necessary chemical and mechanical properties, dimensions, and fracture toughness requirements suitable for the service conditions and inspection procedures. The Mainline Pipe Purchase Specification will be included in the final design review package.

### **18.2 CODES AND CRITERIA**

#### **18.2.1 Codes**

- Code of Federal Regulations, Title 18 – Conservation of Power and Water Resources
- Code of Federal Regulations (CFR) 49, Part 192
- American Petroleum Institute (API) Specifications
  - 5L, Forty Second Edition, January 2000
  - 5L1, Recommended practice for Railroad Transportation of Line Pipe
  - 5LW, Recommended Practice for Transportation of Line Pipe on Barge and Marine Vessels
- American Society for Mechanical Engineers (ASME) Code for Pressure Piping B31.8, Gas Transmission and Distribution Piping Systems
- Federal Energy Regulatory Commission conditional certificate of public convenience and necessity, issued on December 16, 1977, as such is finalized
- Project report “Mainline Pipe Fracture Control Methodology”<sup>1</sup> (Original June 1, 1982 report updated to address current project configuration and materials. This report addresses brittle fracture, ductile fracture initiation, and fracture propagation).

#### **18.2.2 Criteria**

The purpose is to provide standards for pipe suitable for use in conveying natural gas.

##### **18.2.2.1 Information to be developed for pipe purchase:**

- Specification

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<sup>1</sup> This document is stamped, marked or otherwise identified as confidential and/or proprietary or otherwise protected. The ANNGTC continues to claim confidential treatment for this document, and it should be withheld from disclosure.

- Product Specification Level
- Grade and class
- Type of pipe
- Weldability
- Defect Acceptance Criteria
- Size or outside diameter
- Wall thickness
- Nominal length
- End finish
- Delivery date and shipping instructions

#### 18.2.2.2 Purchase Specification Standards

The main line pipe purchase specifications will include the following product specification and standards:

- Specification level PSL 2
- Grade 5L X80
- Process of manufacture
- Chemical properties
- Mechanical properties (including longitudinal stress-strain behavior)
- Dimensions, weights, lengths, defects and end finishes
- Inspection and testing
- Marking
- Coating and protection
- Documents
- Pipe loading and transport

#### 18.2.2.3 Manufacture compliance

- Certificate of compliance with test results is required from the manufacturer for project acceptance of the mainline pipe
- Material test reports are required from the manufacturer for project acceptance of the mainline pipe.