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24.0 GAS DELIVERY POINTS

24.1 INTRODUCTION

This section contains design criteria applicable to gas delivery points that will be installed to provide for gas service to locations along the pipeline route. Criteria are presented for design temperatures, design factors and metallurgical requirements.

Features of the design are described and a table of the most likely gas delivery locations is included. The specific location(s) of this design will be subject to individual commercial and technical evaluations.

24.2 CODES AND CRITERIA

24.2.1 Codes

- Code of Federal Regulations, Title 49 - Transportation, Part 192, Transportation .of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards.
- 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 from time to time.
- Code of Federal Regulations, Title 18 – Conservation of Power and Water Resources
- Federal Energy Regulatory Commission conditional certificate of public convenience and necessity, issued on December 16, 1977, as such is finalized

24.2.2 Criteria

- Maximum design operating gas pressure and minimum design operating gas temperature in accord with the project design basis.
- Minimum design temperature for above grade piping of -50°F.
- Design factor for gas delivery will be 0.6 for Class 1 locations.
- An adequate level of fracture toughness will be specified to provide fracture initiation resistance of the base materials and welds at the design temperatures. The final material selected will provide an adequate ductility at the design conditions to withstand fracture initiation based on accepted fracture mechanics analysis.
- Design flow rates will be developed in accordance with the individual evaluations for each location.
- Security locking devices will be provided at each gas delivery point.

24.3 DESIGN PROCEDURES

The gas delivery facilities installed during initial construction will consist of a branch connection and a manually operated ball valve sealed with a blind flange. Delivery facilities can also be installed after the commencement of operations with a “hot-tap” to the mainline pipe. The buried portion of the delivery connection will be coated with an approved coating. The final piping configuration will be analyzed to ensure that any potential pipe stresses resulting from pipe movement are within acceptable limits.

Each gas delivery facility will be contained within a security fence.

24.4 TABLES

LIST OF TABLES

<u>Table No.</u>	<u>Table</u>
24-1	Gas Delivery Locations

Table 24-1 Gas Delivery Locations

1. *Anaktuvuk Pass*
2. *Fairbanks*
3. *Delta Junction*
4. *Dot Lake*
5. *Tok*
6. *Northway*

- Notes:*
1. *These general locations and the specific alignment stationing are subject to commercial and technical evaluation and, when necessary, approval of the Federal Energy Regulatory Commission. The pipeline system in Alaska will transport natural gas but will not own any of the gas being transported. Therefore, arrangements will have to be made with the gas owner (either the State of Alaska or another gas shipper) by the entity that would transport or distribute the gas within Alaska.*
 2. *Additional delivery points may also be authorized and will be included in the design when resolved.*