

Regulating Pipelines: Alaska Issues & Experience



Spill Prevention & Response Division
Industry Preparedness Program

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Alaska Pipelines



- Mostly aboveground
- Tend to be larger, longer than lower 48
- Mostly in rural areas

Regulatory Background

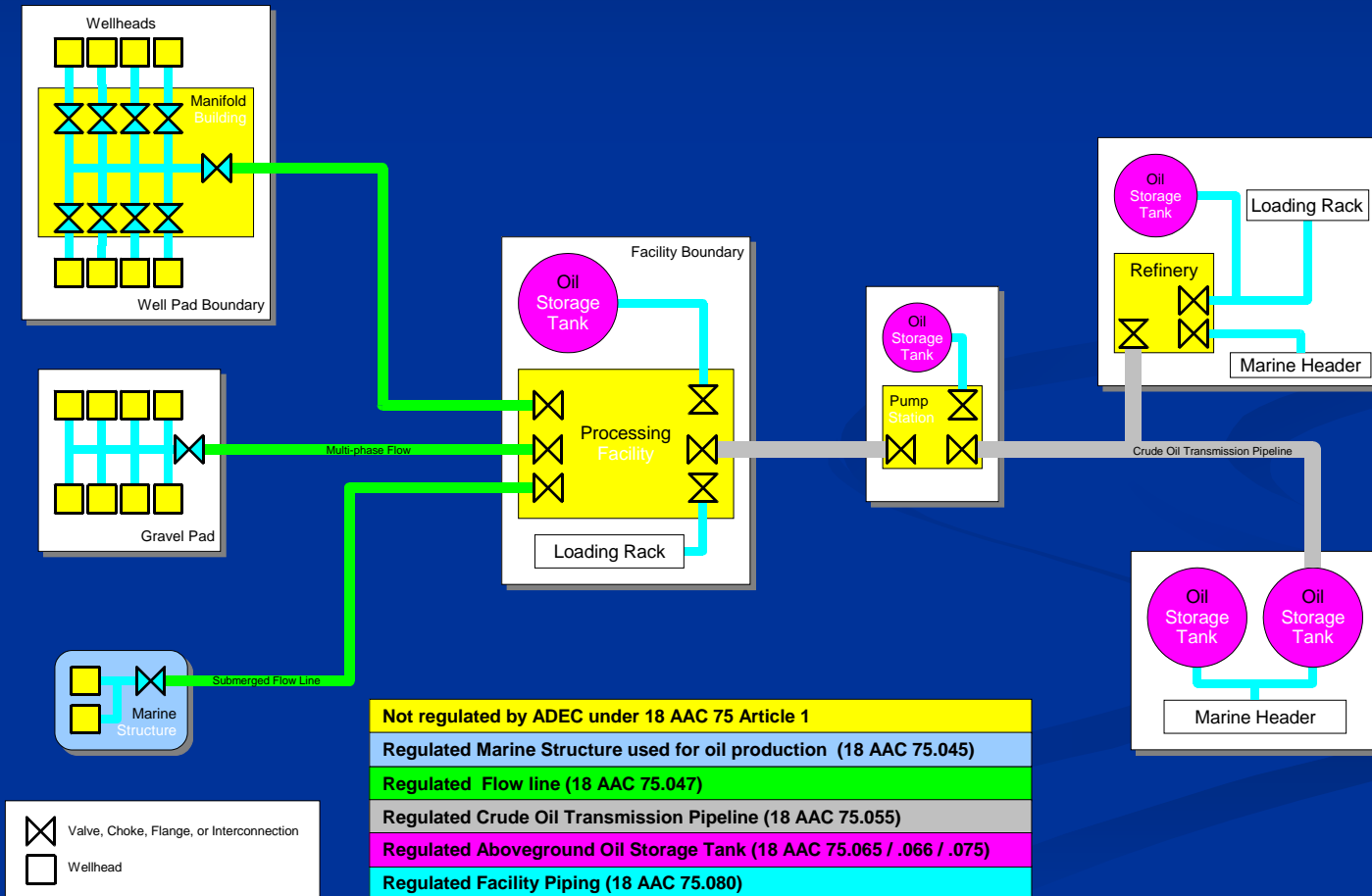
- Different emphasis between State and Federal regulation (public safety vs. environmental protection)
- Regulatory taxonomy
 - Regulated by contents, not location
 - Crude oil transmission lines
 - Flow lines
 - Facility piping
- Coordination between Federal/State oversight
 - JPO

Alaska Oil Pipeline Initiatives

- Charter for Development of the North Slope
 - “BP Charter” – anti-trust settlement
 - Corrosion Control Program
- Regulatory Initiatives
 - Regulatory Update of 18 AAC 75
- Arctic Pipeline Technology Team
 - MOA between ADEC, ADNRR, and AOGCC
 - Addresses issues of aging pipeline infrastructure on North Slope

Regulatory Scheme

Categories of Regulated Oil Piping at Production Facilities



Crude Oil Transmission Pipelines

- Single-phase liquid
- Leak detection
 - 1% daily throughput
 - Weekly aerial surveillance
- Discharge prevention



Crude Oil Transmission Lines



- Failure Modes
 - External Corrosion
 - Third Party
 - Mechanical Failure
- Legacy Lines
 - Internal Corrosion (low flow rate)

Low-Stress Crude Oil Transmission Pipelines



Production facility at Prudhoe Bay.

BP Exploration

Low-Stress Crude Oil Transmission Pipelines



- GC-2, OT-21 Transit Line Spill, March 2006
 - Low-stress pipeline / Crude oil transmission line
 - Internal corrosion
 - Legacy line

Flowlines



- New regulatory category
- Multi-phase flow
 - Unprocessed crude oil
 - Produced water
- Significant source of spills
 - Internal Corrosion
 - Mechanical Failure

Flowline Regulations

- Design & Construction Standards
 - ASME B31.4
- Operations & Maintenance / Corrosion Control
 - ASME B31.4, Chapter VII
 - NACE RP0169
- Leak Detection
 - Bundled lines
- Documentation



Just another beautiful day on the slope... -13°F, -35°F wind chill

