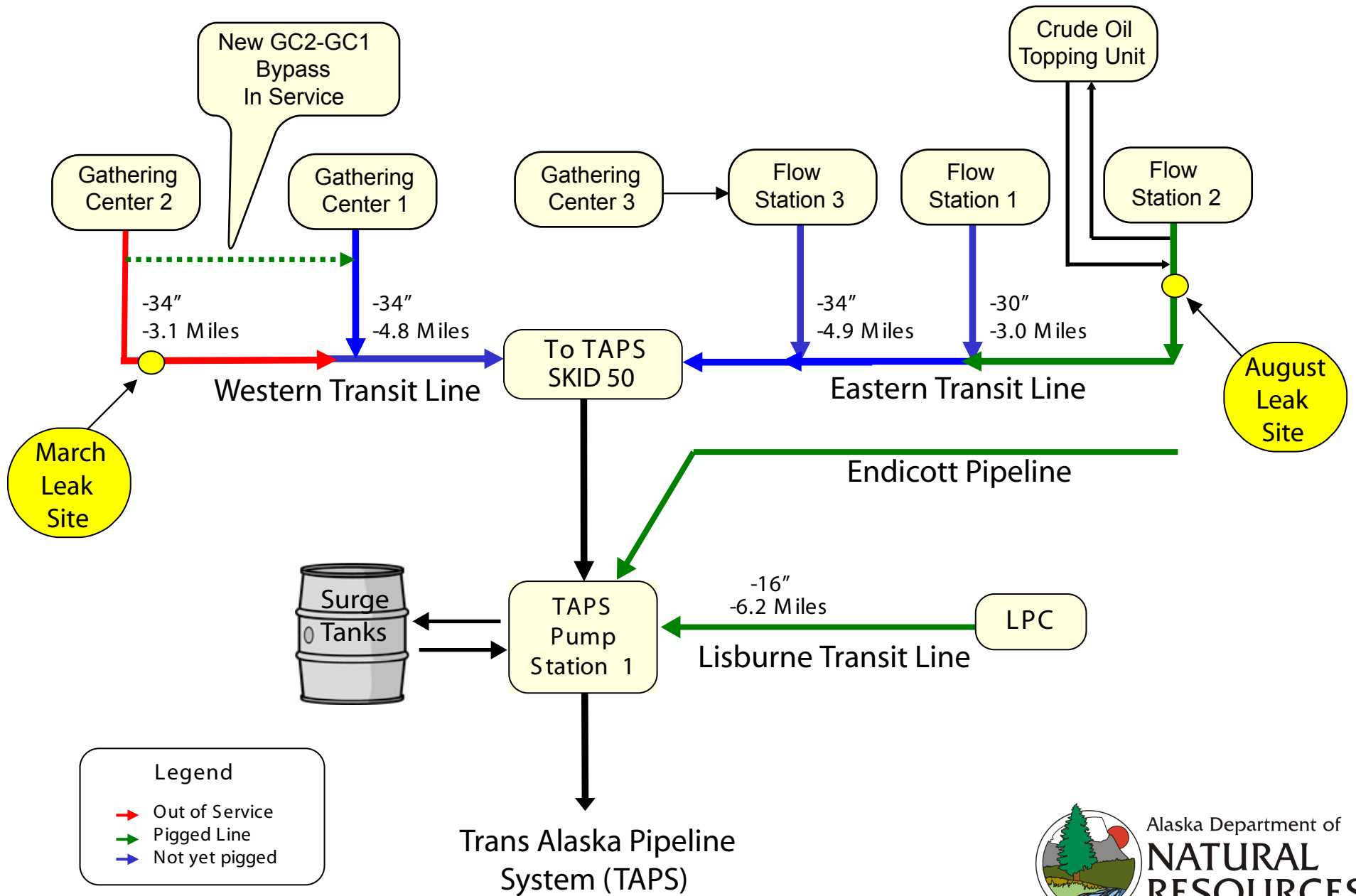


Prudhoe Bay Oil Transit Lines



Ensuring System Integrity

Presented to
The Senate and House Resources Committees
August 18, 2006

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Commissioner



Alaska Department of
Natural Resources

Next Steps

- Prudhoe/WOA Continued Operation
- Prudhoe/EOA Restart Operations
- Reduced Flow Impacts to TAPS
- Impacts to other PBU Operations, Other Fields and In-State Refineries
- Transit Pipeline Replacement Plan
- *Implementation of System Integrity Oversight*

Prudhoe/WOA Continued Operations (SPCO)

- Plan for WOA Drain-Down: GC2 to GC1 Line Segment
 - Estimated volume of 17,000 bbls.
 - Planned start date: August 17
 - Draining from top of pipe to vac trucks
 - Possible complication with Dept. of Justice investigation
- Timeline for moving WOA pig launcher from GC2 to GC1
 - Pig launcher is being refurbished in Anchorage
 - Estimated installation date: October 31
 - Will allow in-line inspection from GC-1 to Skid 50
- Pigging Schedule: GC1 to PS1 Line Segment
 - Sediment Management Plan: Bypass of Pump Station 1
 - Cleaning pig runs begin early November
 - Smart Pig run: late November
 - The most significant defects identified from smart pig run by end of 2006
 - Complete data analysis in 3-4 months
 - Response/Plan Revision based on smart pig data

Prudhoe/EOA Re-Start Operations (SPCO)

- Determine the current integrity of the EOA Transit Line
 - Analyzing data from in-line inspection pig run prior to shutdown
 - BP is currently using automated external inspection techniques to scan for areas of interest
 - Areas of interest measured by ultrasonic direct measurement tools
 - Progress hampered by tape coating on the exterior of the pipe
 - BP evaluating new tools and techniques to read through the tape
 - BP is allocating most resources to WOA due to USDOT Corrective Action Order, therefore slowing progress on the EOA
- Plan for bypassing Pump Station #1 intake: sediment management
 - New piping will be installed downstream of Skid to Tank 110 at Pump Station 1.
- Pipeline integrity testing plan: Ultrasonic Testing (UT) and Smart Pig
 - Continuing ultrasonic direct measuring and automated scans of the pipe
 - Continuing to evaluate techniques to speed up process re: tape issue
 - Pigging will be evaluated with respect to interim operations and long-term solution
- BP analysis of interim options to restore production
 - Evaluating bypass options from flow stations 1, 2 and 3 into the Endicott pipeline
 - Most probable scenario is: Flow Station 2 bypass into Endicott pipeline on an interim basis. Flow Stations 1 and 3 pipelines placed back into service on an interim basis. Flow Station 2 to 1 segment replaced as soon as possible. Flow Station 1 and 3 to Skid 50 segments to be replaced later.

Prudhoe/EOA Re-Start Operations (SPCO) Continued

- Mitigation measures for both WOA and EOA operations
 - Increased corrosion inhibitor injection at GC-2 and possibly other locations
 - Investigating biocide injection to mitigate bacterial activity
 - Repeated ultrasonic direct measuring of areas of interest
 - Increased surveillance with infrared detectors with visual sweeps every four hours
 - Increased oil spill response capabilities on-site
 - Investigating additional surveillance techniques such as hydrocarbon sniffing and Light Detection and Ranging (LIDAR).
- Ongoing integrity testing for re-start operations
 - When resources become available from the WOA, BP will shift inspection crews to EOA to prove integrity of the flow station to Skid 50 segment of EOA
- Forecast of effects, specifically production impacts, of the various options for interim operations
 - If flow station 3 is restored, production will increase by 85,000 bbls
 - If flow station 1 is restored, production will increase by 75,000 bbls
 - If flow station 2 bypass is installed, production will increase by 40,000 bbls
 - If OT-31 (WOA) is replaced, production will increase by 7,000 bbls

Reduced Flow Impacts to TAPS (SPCO)

- Initial assessment completed
- Joint pipeline Office and Alyeska are addressing low throughput issues
 - Impact to air quality permits
 - Vibration impacts at Atigun, Isabel and Thompson passes
 - Leak detection sensitivity
 - Crude oil temperature
 - Natural gas supply for Pump Stations 1, 3 and 4
 - Impacts to Strategic Reconfiguration project
 - Impact to pigging program
 - Cold weather operations
 - Impact to ballast water treatment process
 - Implications of batched throughput operations

Impacts to other PBU Operations, Fields and In-State Refineries (DO&G)

- Daily communication with all field operators and Alaska refinery operators has been established.
- Monitoring throughput
- North Slope fuel gas
 - PBU facilities: Power Plant, Camps
 - TAPS
 - Deadhorse gas utility company
- PBU crude oil topping unit
 - Captive to EOA transit line
- NGL to Kuparuk River Unit for Enhanced Oil Recovery
- Gas to North Star Unit: Enhanced Oil Recovery and fuel gas

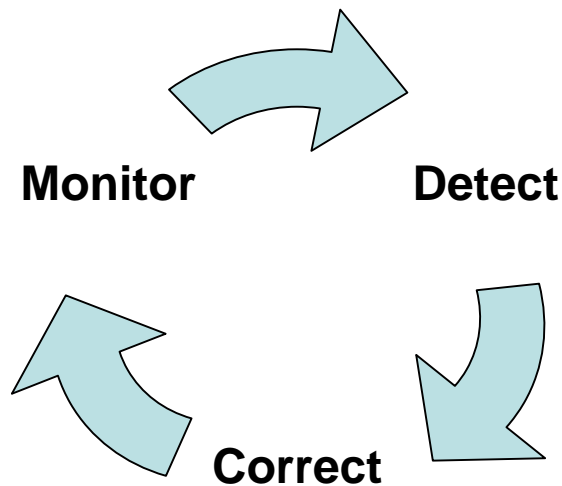
Transit Pipeline Replacement Plan (DO&G/SPCO)

- BP intends to eventually replace all of the WOA and EOA transit pipelines and has placed purchase orders for the pipe needed to do so. The current transit pipelines will be replaced with much smaller diameter pipe better adapted to current operations. Details to be determined include:
 - Schedule
 - Materials
 - Logistics
 - Production Impacts
 - Design criteria for replacement pipe
 - Will DOT conduct a design review? DNR to cooperate, or conduct separately
 - Schedule for submitting a Plan of Operations application
 - Construction Plan
 - Start-Up Plan for new line
 - Operations/Corrosion Monitoring and Prevention Plans
 - DR&R of transit lines

System Integrity Oversight

- Review: DNR Authorities
- Future Oversight: System Integrity & Compliance
- Ongoing Oversight – DNR, Division of Oil & Gas
- Other State of Alaska Regulatory Oversight
- Organizational Structure
- Implementation
- Performance Standards

***The Division of Oil and Gas
has been directed to expand its mission
to include
system integrity oversight.***



System Integrity Oversight

- DNR Authorities
 - As Land Owner, DNR authority originates in the Alaska Land Act (AS 38.05)
 - AS 38.05.020 – “The commissioner may exercise the powers and do the acts necessary to carry out the provisions and objectives of this chapter.”
 - AS 38.05.180(a)(1)(A) – “The people of Alaska have an interest in the development of the state’s oil and gas resources to maximize the economic and physical recovery of the resources.”
 - AS 38.05.180(a)(2)(A)(ii) – “It is in the best interests of the state...to allow the maximum flexibility in the methods of issuing leases to minimize the adverse impact of exploration, development, production, and transportation activity.”
 - AS 38.05.850 – Authority over off-lease gathering lines.
 - Standard Oil and Gas Lease -- “Lessee shall exercise reasonable diligence in drilling, producing, and operating wells...shall carry on all operations hereunder in a good and workmanlike manner in accordance with approved methods and practices, having due regard for the prevention of waste of oil and gas....and the preservation and conservation of the property for the future productive operations....shall allow Lessor to inspect all operations at any time; shall carryout at Lessee’s expense all reasonable orders and requirements of Lessor relative to the prevention of waste and the preservation of said land...”
 - Enforcement of Unit Agreements, Plans of Development, Plans of Operation
 - Regulation of Pipelines, under the Right of Way Leasing Act (AS 38.35)

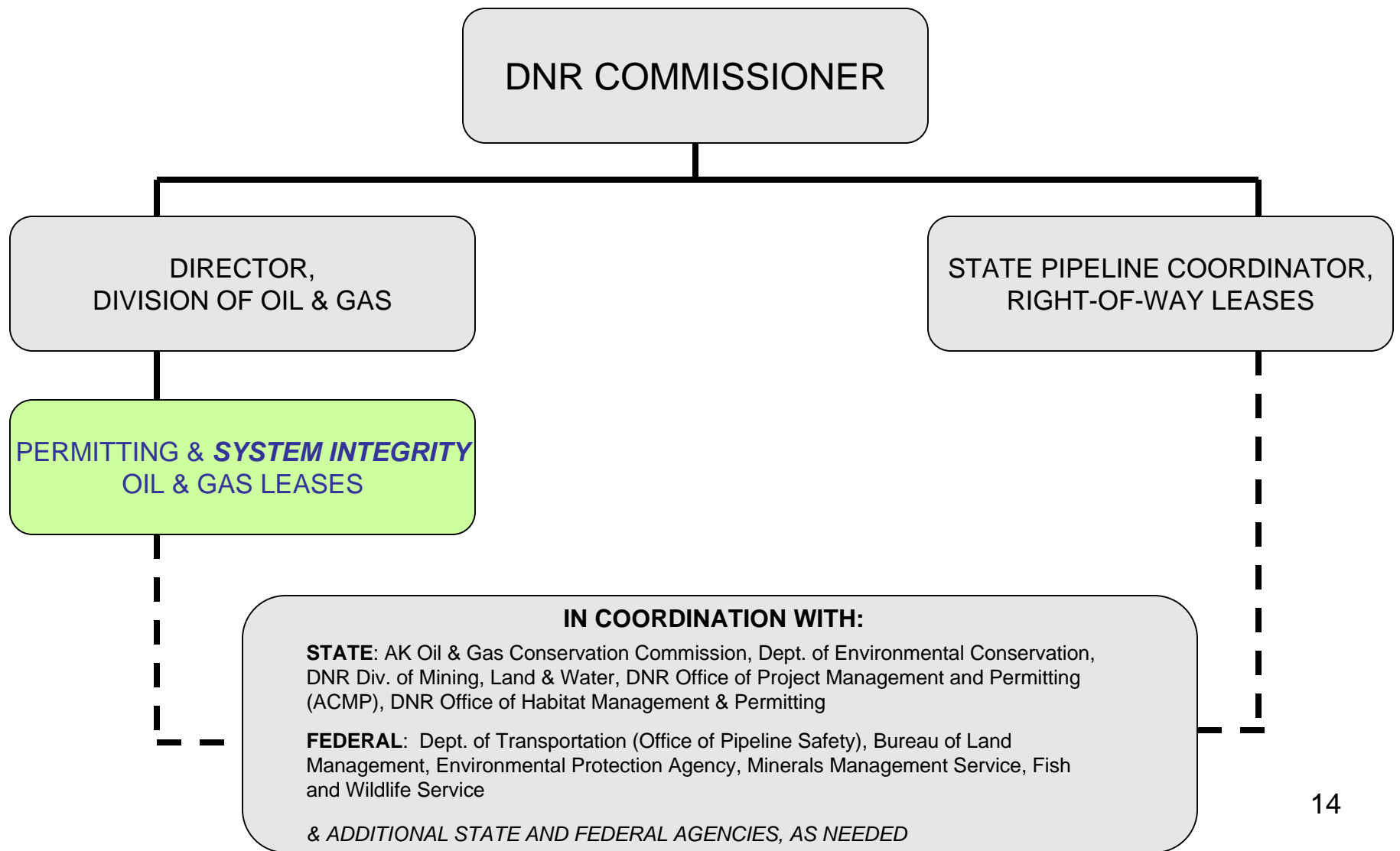
System Integrity Oversight

- Current DO&G Permitting & Compliance
 - Identify and coordinate mitigation measures in Best Interest Findings
 - Facilities & Operations
 - Fish, Wildlife, Habitat
 - Subsistence, Commercial and Sport Harvest Activities
 - Fuel and Hazardous Substances
 - Public Access
 - Prehistoric, Historic, and Archeological Sites
 - Local Hire, Communication and Training
 - Mitigation Measures become terms of the Lease
 - Plans of Operation Approvals
 - Describe all related project facilities and activities
 - Determine compliance with Lease Mitigation Measures
 - Identify Lease Area Surface Owners
 - Broad Public Notice
 - Addresses new permit stipulations (from ACMP review, performance standards)
 - Inspect facilities for compliance with all terms
 - Coordinate corrective actions, perform follow-up inspections

System Integrity Oversight

- Other State Regulatory Activity
 - DNR/Division of Mining, Land & Water (DMLW)
 - Land Use (Tundra Travel)
 - Water Use
 - Material Sale Contracts
 - Easements
 - DNR/Office of Habitat Management & Permitting (OHMP)
 - Fish Habitat, Fish Passage Permits
 - DNR/Office of Project Management & Permitting (OPMP)
 - Alaska Coastal Management Program Reviews
 - DNR/State Pipeline Coordinator's Office (SPCO)
 - AS 38.35 Pipelines
 - Department of Public Safety: Fire Marshal's Office
 - Department of Labor & Workforce Development: Electrical Inspector, Safety Liaison
 - ADEC
 - Oil Spill Prevention/Response
 - Storm Water Discharge
 - Wastewater Disposal
 - Solid Waste Disposal
 - Air Quality
 - AOGCC
 - Drilling Permits – Production and Underground Injection
 - Reservoir Management
 - Well Spacing and Correlative Rights
 - Prevention of Waste

Organizational Structure: System Integrity Component

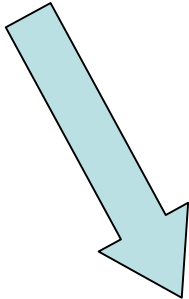


System Integrity Oversight

State System Integrity Program



- Risk-based Monitoring
- Quality Assurance Audits
- Oversight of Risk Assessment
- Oversight of Risk Management



Producer Quality Assurance/Quality Control



Drill sites

Gathering lines

Gathering Centers / Flow stations

Transit lines

Rotary equipment

Power generation/distribution

Fuel

Roads/pads

Environmental protection

Spill prevention/response

Leak detection

System Integrity Oversight

- Implementation of System Integrity Oversight Component
 - Use ROW Lease Compliance Monitoring template of the SPCO
 - Establish programmatic elements for compliance monitoring
 - Lessees identify how their programs meet requirements
 - Review Lessee Programs; Perform risk analysis
 - Risk analysis identifies priorities for attention
 - Annual compliance monitoring report documents compliance with lease conditions and monitors select issues as determined by the Director, Division of Oil & Gas.
 - Implementation Requirements
 - Staff: 3-4, supplemented by current JPO staff and contractual support
 - Schedule: First annual System Integrity Oversight Report submitted to the Legislature on August 6, 2007.
 - Priorities: 1) Prudhoe Bay Unit; 2) Remaining North Slope fields; 3) Statewide