TAPS Highlights

December 8, 2016

Alyeska Pipeline Service Company
TAPS background

• Incorporated August 14, 1970 to design, build, operate and maintain the pipeline, pump stations and the Valdez Marine Terminal.
• Alyeska personnel and contractors continually monitor and operate TAPS so oil flows safely, efficiently and in an environmentally sound manner.
• Currently owned by four oil pipeline companies. In transition to three.
TAPS highlights

- 800-mile warm-oil pipeline in cold climate.
- Arctic pipeline operated successfully for nearly 40 years.
- 5% of U.S. domestic oil supply.
- 17th billion barrel of crude oil received into TAPS on July 19, 2014.
- 21,000+ tankers loaded.
- Nearly 17% of west coast refinery input.
- Supplies Alaska refineries.
TAPS today

- Four active pump stations with forward flow: 1, 3, 4 & 9
- Pump Station 5: relief station
- Pump Station 7: contingency recycle heat
- Yukon Response Base, Delta Response Base, and Glennallen Response Base
- Valdez Marine Terminal (VMT)
- Ship Escort/Response Vessel System (SERVS)
- Urban offices in Fairbanks, Anchorage, Valdez
Ship Escort Vessel Response System (SERVS)

- Largest oil spill response organization in the world
- Prevention is key; SERVS is ready to respond 24/7
- Established July 1989
- All laden tankers are escorted by two SERVS vessels for 70 miles
- SERVS vessels also assist tankers in emergencies
- SERVS vessels provide initial oil spill response
- 400 private (fishing) vessel owners on contract to train and respond (Cordova, Whittier, Valdez, Homer, Seward, Kodiak)
- Contract transition under way
Valdez Marine Terminal

- 1000 acres of land
- Originally 18 crude holding tanks; 9.18 million bbls capacity, now 14 tanks – 7.14 million bbls
- Originally 4 berths, now 2 berths in operation
- Ballast water treatment facility
- Self-sustained power generation
- Oil measured, held and loaded on tankers
- Award winning fire team
Operations Centers

Operations Control Center
  • Remote operations of TAPS & Valdez Marine Terminal

Security Operations Center
  • Monitoring security systems
Managing throughput decline

Managing challenges:

• Lower throughput
  • 2016 YTD: 513,127 BPD
• Cold weather operations
• Water and wax issues

Implementing solutions:

• Slip stream heat installed and used successfully at Remote Gate Valve 65
• Installed methanol injection ports for cold weather contingency
• Installed Canty testing devices to better characterize wax
• Continued recirculation, as needed, at Pump Stations 3, 4, 7 and 9 to add heat
Wax Management
Wax Management
Contingency Methanol Injection

- Install physical connections on TAPS to allow contingency methanol injection during winter 2015-2016
- Connections at PS6, PS7, and PS8 for injection during flowing conditions
- 11 low-point locations on aboveground mainline pipe for injection during shutdown scenario. Selected locations are at highest risk for water settlement and accumulation.

Sites by pipeline milepost
- PS 6, PLMP 355
- RGV 65, PLMP 397.4
- PS 7, PLMP 414
- PS 8, PLMP 489.1

Closer look at injection site
- Existing 1-inch valve attached to mainline pipe at Pump Station 7.
- This is the actual location where contingency methanol would be injected if needed at PS 7.
Environmental Stewardship

Alyeska’s people have an unwavering commitment to protecting Alaska’s environment.
Improving Long-Term Capability
Valdez Marine Services

- Edison Chouest Offshore
  - Approved contract in August, 10-year term, beginning July 2018
  - Industry leader in safety and environment
  - More modern equipment, flexible capabilities
- Transition
  - Commitment to protecting the environment, culture and resources of Prince William Sound during and beyond the contract transition.
  - 2 year transition underway
  - Active stakeholder engagement
- New vessels
  - 5 new escort tugs
  - 4 new general purpose escort tugs
  - 3 new response barges
  - Ross Chouest utility tug (new to PWS)
TAPS People, TAPS Pride

Who we are:

• Alyeska has approximately 800 employees, plus hundreds of contractors
• 94.6 percent of Alyeska employees live in Alaska
• 20 percent are Alaska Native; 30 percent are women; 33 percent are minorities
• 70 percent of our contract partner companies are headquartered in Alaska
• Strong partnerships with Alaska Native people, corporations and programs (such as ANSEP)

TAPS people are:

• Committed to safety and protecting the environment
• True-grit Alaska professionals who are smart, tough and proven problem-solvers, leveraging teamwork and ingenuity
• Engaged in communities, financially and personally
• Recipients of Governor’s Safety Award, Worlds Most Ethical Companies Award

Our people understand that not just what they do, but how well they do it, matters enormously.
TAPS Future

- Increased Alaskan oil throughput - the key to TAPS long-term sustainability
- Alaska has abundant energy resources
- More safe development of resources depends on federal and state willingness to make them available
- Federal and state regulatory process need to be simplified and better coordinated
- Strong partnerships essential

The “easy day” was yesterday.
Abundant Resources

Offshore Arctic
- 27 bbo
- 132 tcf gas
- Est. 54,000 jobs (nationwide)

Cook Inlet
- 599 mbo
- 19 tcf gas

NPR-A
- 896 mbo
- 53 tcf gas

ANWR
- 10 bbo
- 3.5 tcf gas

Onshore North Slope
- Conventional: 5 bbo, 35 tcf gas;
- Heavy/Viscous: 24-33 bbo;
- Unconventional: 2 bbo, 12 tcf gas

mbo = million barrels of oil  bbo = billion barrels of oil  tcf = trillion cubic feet