



Bureau of Land Management

COMPREHENSIVE MONITORING PROGRAM REPORT

TAPS ENVIRONMENTAL OVERSIGHT RESULTS

APRIL 2007



Bureau of Land Management (BLM)

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Our Message to Stakeholders

TAPS and BLM

The Trans-Alaska Pipeline System (TAPS) transports nearly 19 percent of the nation's domestically produced crude oil through the unique and fragile environment of Alaska. TAPS is critical to the nation's economy and security. Revenues and investment income from crude oil transported by TAPS account for 80 percent of the State of Alaska's general fund. Since start up in 1977, TAPS has safely transported more than 13 billion barrels of crude oil from Prudhoe Bay to Valdez.

BLM's Comprehensive Monitoring Program

BLM's vision is: To work proactively with the oil and gas industry in Alaska to achieve safe operation, environmental protection, and continued transportation of oil and gas in compliance with legal requirements. The BLM Comprehensive Monitoring Program (CMP) is intended to influence continuous improvement in Alyeska Pipeline Service Company's management of TAPS construction, operations and maintenance activities. The BLM CMP process is focused on problem prevention rather than reaction, emergency response, and damage control.

CMP reports periodically communicate to BLM stakeholders summaries of past monitoring efforts. The reports revisit critical TAPS audit deficiencies; incorporate concerns raised by TAPS employees and outside interest groups; address high risk activities; verify compliance with laws, regulations, permit conditions, and Grant/Lease stipulations; verify compliance with important internal Alyeska controls such as the quality, safety and environmental programs; and evaluate causal factors and trends related to recent TAPS incidents. Reports have previously covered one of twelve CMP functional topics:

- . Alaska Native Employment & Training
- . Configuration Management
- . Employee Concerns Program
- . Equal Employment Opportunity
- . Quality
- . Maintenance
- . Safety
- . Project Design
- . Project Performance
- . *Environmental Protection*
- . Risk Management
- . Operations

About This Report

The BLM is pleased to present selected portions of *TAPS Environmental Protection for 2007* to our stakeholders. While the operation of TAPS will never be risk-free, BLM oversight helps minimize environmental risks, maximize compliance with worker safety and pipeline integrity standards, and improve maintenance performance.


for **Jerry Brossia**
Authorized Officer

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ACRONYMS

ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
APSC	Alyeska Pipeline Service Company
BLM	U.S. Department of Interior Bureau of Land Management
CAA	Clean Air Act
CFU	colony forming units
CMP	Compliance Monitoring Program
CWA	Clean Water Act
DMR	Discharge Monitoring Report
FCE	Full Compliance Evaluation
Grant	Federal Agreement and Grant of Right-of-Way
IME	Integrity Management Engineering
IFC	Issued for Construction
BLM	Joint Pipeline Office
Lease	State of Alaska's Right-of-Way Lease
mcl	maximum contaminant level
mL	milliliters
MP-166	Monitoring Program Procedures
MSGP	Mult-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
NTP	Notice to Proceed
PLMP	Pipeline Milepost
PS	Pump Station
RGV	remote gate valve
SPC	State Pipeline Coordinator
STP	sewage treatment plant
SWDS	Solid Waste Disposal Site
TAPS	Trans-Alaska Pipeline System

USEPA	United States Environmental Protection Agency
VMT	Valdez Marine Terminal
WWTF	waste water treatment facility

EXECUTIVE SUMMARY

The U. S. Department of Interior Bureau of Land Management (BLM) concludes, to a large degree, that Alyeska Pipeline Service Company (APSC) is in compliance with the Environmental Stipulations in the Federal Agreement and Grant of Right-of-Way (Grant) and the State of Alaska's Right-of-Way Lease (Lease) for the Trans-Alaska Pipeline System (TAPS) during the period from October 2003 to October 2006. BLM also believes APSC to be in compliance with most environmental laws and regulations. Some noncompliance issues identified by BLM and the Alaska Department of Environmental Conservation (ADEC) were unresolved or have not formally closed during the period covered by this report. Information reviewed showed minor problems with collection and management of accurate environmental compliance records. The dewatering records management issue was resolved; however, ADEC continues to cite APSC for air quality permit violations for procedural requirements (paperwork violations). BLM recommends APSC develop monitoring procedures similar to their Monitoring Program Procedures (MP-166) protocol to address environmental compliance issues or conduct environmental owner assessments on a regular frequency to evaluate compliance with Grant and Lease Environmental Stipulations.

In the future, the BLM will continue its environmental surveillance and assessment program to evaluate the degree of APSC's compliance to the Grant and Lease Environmental Stipulations. This effort will be conducted in cooperation with the stakeholder regulatory agencies. The focus will continue on oversight of APSC's TAPS environmental protection program. Additional effort may focus during conduct of environmental briefings where BLM, at its discretion, may expand upon specific areas of concern to insure compliance with the Environmental Stipulations. Field verification during project execution of 2007 recommendations presented in APSC's 2006 Annual Report for the Rivers and Floodplain Program shall be inspected at BLM discretion.

1.0 INTRODUCTION AND PURPOSE

The U. S. Department of Interior Bureau of Land Management (BLM) and the Alaska Department of Natural Resources (ADNR) are responsible for the monitoring of Alyeska Pipeline Service Company's (APSC) compliance with the Federal Agreement and Grant of Right-of-Way (Grant) and the State of Alaska's Right-of-Way Lease (Lease) for the Trans-Alaska Pipeline System (TAPS). This Compliance Monitoring Program (CMP) report summarizes the results of BLM, ADNR and APSC documents that are used to determine the degree of APSC's compliance with the Grant and Lease Environmental Stipulations during the period from October 2003 to October 2006. CMP reports for the oil spill contingency plan and material sites are provided under separate cover.

2.0 GRANT/LEASE REGULATORY REQUIREMENTS

The Grant and Lease Environmental Stipulations and subject area of corresponding BLM and ADNR authored compliance documents dated from October 2003 to October 2006 are summarized in Table 2-1. This summary does not include APSC documents.

Table 2-1 Summary of Grant and Lease Environmental Stipulations and Corresponding BLM Compliance Documents

Stipulation	General Description	Subject Area of BLM Documents
Stipulation 2.2.1	Environmental Briefing	Environmental Briefing
Stipulation 2.2.1.1	Pollution Control - General	Excavation Dewatering Domestic Wastewater Air Quality Thermal Erosion Storm Water
Stipulation 2.2.2.1 Stipulation 2.2.2.2	Pollution Control - Water and Land Pollution	River and Floodplain Construction Contaminated Sites Aerial Surveillance Excavation Dewatering
Stipulation 2.2.3.1	Pollution Control - Thermal Pollution	Thermal Erosion
Stipulation 2.2.4.1 Stipulation 2.2.4.2	Pollution Control - Air Pollution and	Air Quality

Stipulation	General Description	Subject Area of BLM Documents
	Ice Fog	
Stipulation 2.2.5.1	Pollution Control – Pesticides, Herbicides and other Chemicals	No BLM Documents in this subject area
Stipulation 2.2.6.1 Stipulation 2.2.6.2	Pollution Control – Sanitation and Waste Disposal	Waste Management; Solid Waste Disposal
Stipulation 2.3.1.1	Buffer Strips – Public Interest Areas	River and Floodplain Construction
Stipulation 2.3.2.1 Stipulation 2.3.2.2	Buffer Strips – Vegetative Screen	River and Floodplain Construction Vegetative screen and aesthetic requirements
Stipulation 2.3.3.1	Buffer Strips – Streams	River and Floodplain Construction
Stipulation 2.4.1.1 Stipulation 2.4.1.2 Stipulation 2.4.1.3	Erosion Control – General	River and Floodplain Construction Erosion Control Aerial Surveillance
Stipulation 2.4.2.1 Stipulation 2.4.2.2	Erosion Control – Stabilization	River and Floodplain Construction Erosion Control
Stipulation 2.4.3.1 Stipulation 2.4.3.2	Erosion Control – Crossing of Streams, Rivers or Flood Plains	Erosion Control
Stipulation 2.4.4.1	Erosion Control – Seeding and Planting	River and Floodplain Construction
Stipulation 2.4.5.1	Erosion Control – Excavated Material	River and Floodplain Construction
Stipulation 2.5.1.1	Fish and Wildlife Protection – Passage of Fish	Passage of Fish
Stipulation 2.5.1.2 Stipulation 2.5.1.3 Stipulation 2.5.1.4	Fish and Wildlife Protection – Passage of Fish	River and Floodplain Construction
Stipulation 2.5.2.1 Stipulation 2.5.2.2	Fish and Wildlife Protection – Fish	River and Floodplain Construction

Stipulation	General Description	Subject Area of BLM Documents
Stipulation 2.5.2.3 Stipulation 2.5.2.4	Spawning Beds	
Stipulation 2.5.3.1	Fish and Wildlife Protection –Zones of Restricted Activities	River and Floodplain Construction
Stipulation 2.5.4.1	Fish and Wildlife Protection – Big Game Movements	River and Floodplain Construction
Stipulation 2.6.1.1 Stipulation 2.6.1.2 Stipulation 2.6.1.3	Material Sites – Purchase of Materials	River and Floodplain Construction Material Sites (presented under separate cover)
Stipulation 2.6.2.1	Material Sites – Layout of Material Sites	Material Sites (presented under separate cover)
Stipulation 2.7.1.1	Clearing – Boundaries	River and Floodplain Construction
Stipulation 2.7.2.1 Stipulation 2.7.2.2 Stipulation 2.7.2.3 Stipulation 2.7.2.4 Stipulation 2.7.2.5 Stipulation 2.7.2.6 Stipulation 2.7.2.7 Stipulation 2.7.2.8	Clearing – Timber	River and Floodplain Construction
Stipulation 2.8.1	Disturbance of Natural Water	River and Floodplain Construction
Stipulation 2.9.1	Off Right-of-Way Traffic	River and Floodplain Construction
Stipulation 2.10.1	Aesthetics	River and Floodplain Construction Vegetative Screen and Aesthetic Requirements
Stipulation 2.11.1 Stipulation 2.11.2	Use of Explosives	River and Floodplain Construction
Stipulation 2.12.1 Stipulation 2.12.2 Stipulation 2.12.3	Restoration	River and Floodplain Construction Erosion Control

Stipulation	General Description	Subject Area of BLM Documents
Stipulation 2.12.4 Stipulation 2.12.5		
Stipulation 2.13.1 Stipulation 2.13.2	Reporting of Oil Discharges	River and Floodplain Construction Contaminated Sites
Stipulation 2.14.1 Stipulation 2.14.2 Stipulation 2.14.3 Stipulation 2.14.4	Contingency Plans	Contaminated Sites Oil spill contingency plan documents covered under separate cover

3.0 BACKGROUND/HISTORY

Previous CMP reports released in 1998 and 2002 evaluated existing surveillance, assessment and audit data to determine the status of APSC's TAPS Environmental Protection Program. The 2002 CMP concluded that there were no outstanding issues to be resolved regarding compliance to the environmental stipulations to the Grant and Lease. The 1998 CMP made the following conclusions about APSC environmental performance:

- APSC is in compliance with environmental stipulations of the grant and lease based on 1997 performance;
- APSC is in compliance with most environmental laws and regulations. Several noncompliance issues identified by agencies were unresolved during the period covered by the 1998 CMP report;
- Corrective and preventive actions resulting from past audit findings related to the TAPS Environmental Protection Program Are in place and effective;
- The effectiveness of APSC's environmental policy, which communicates the corporate commitment to environmental protection to all APSC employees and contractors, could be increased by clearly stating it in a high level document signed by APSC's top management;
- APSC has implemented an effective program of environmental audits and environmental surveillances. However, opportunities for improvement exist;
- APSC conducted major maintenance projects in a manner that minimized risk to the environment;

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- In addition, the BLM has documented concerns related to the potential for increased risk to the environment posed by APSC's recent reorganization. BLM cannot yet determine if potential risks are occurring because APSC is still in transition to the new organization. BLM plans to assess if consequences or events associated with potential risks actually occur after APSC's new organization is in place in mid-1998;
 - The 1998 CMP indicated BLM will continue to oversee APSC's TAPS environmental protection program, including compliance with environmental stipulations of the grant and lease.

4.0 METHODOLOGY/SCOPE

This CMP report summarizes APSC's degree of compliance with the Grant and Lease Environmental Stipulations based on BLM, ADNR, AND APSC documents covering numerous subjects during the period from October 2003 to October 2006. The majority of the documents used in this report include BLM and ADNR surveillance, assessment and engineering reports. These compliance documents are project specific and stipulation specific. Project specific documents usually cover all applicable Grant and Lease Requirements. Surveillance reports focus on compliance with a specific Section or Exhibit of the Grant and Lease. In either case the BLM and ADNR reports present the objective evidence that determines the degree of compliance to the Grant and Lease. Surveillance reports are categorized as being either satisfactory, minor unsatisfactory or significant unsatisfactory for each Grant and Lease requirement listed. Assessment reports trend the surveillance report findings and access them to overall compliance to the Grant and Lease. The BLM and ADNR documents used in determination of APSC's compliance to Environmental Stipulations of the Grant and Lease comprise a representative sample of APSC programs used to comply with major environmental regulatory requirements of the Grant and Lease that includes the Clean Water Act (CWA) and Clean Air Act (CAA). In many instances, APSC environmental compliance deliverables to stakeholder regulatory agencies, including the U.S. Environmental Protection Agency (USEPA) and the Alaska Department of Environmental Conservation (ADEC), are the subject of BLM surveillance and assessment.

This CMP also included a review of various APSC authored compliance reports that did not reveal any specific APSC authored self assessment records related to compliance to the Grant and Lease Environmental Stipulations. However, APSC surveillances related to erosion control and safe fish passage were included the 2004, 2005 and 2005 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports summarized in Section 5.5.3.

This CMP reviewed APSC's Integrity Management Engineering (IME) Monitoring Program Procedures (MP-166). These procedures were established specifically for the development and maintenance of monitoring procedures for use in the IME monitoring program. Each MP-166 procedure developed considers compliance to the applicable elements of the Grant and Lease Environmental Stipulations. For example, the TAPS Rivers and Flood plains monitoring procedure cover elements of Stipulations 3.6 and 2.4.3.1 covered in the subject areas of Table 2-1.

This CMP reviewed APSC's 2004 *Report of Compliance to The Federal and State Agreement and Grant*

of Right-of-Way Lease dated May 2, 2005, The primary function of this report is to describe APSC's compliance monitoring and reporting on a company wide basis for the year 2004. This report also evaluates monitoring and reporting activity to indicate where the company is most susceptible to compliance issues.

This CMP also reviewed APSC's 2006 Compliance Summary (APSC Government Letter No 11618).

Section 5 presents the results and discussion of BLM, ADNR and APSC documentation related to the subject areas of Table 2-1.

5.0 RESULTS AND DISCUSSION

5.1 Environmental Briefing

5.1.1 Surveillance Results and Discussion

Surveillances were prepared on Environmental Briefings mainly covering large scale construction and maintenance projects including Strategic Reconfiguration; maintenance; construction performed during pipeline shutdown; and construction in rivers and floodplains. The interpretation for Stipulation 2.1, Environmental Briefing, in the Gant states that "Permittees shall accommodate environmental briefings provided by Federal employees designated by the Authorized Officer." Satisfactory findings were reported from nine (9) surveillance reports. In each of these surveillances, the environmental briefings were conducted by APSC personnel. During the briefings, the BLM was welcomed to speak on environmental concerns or requirements. This requirement is essentially an authority for BLM to conduct environmental briefings at its discretion.

5.2 Excavation Dewatering

5.2.1 Surveillance Results and Discussion

Approximately twenty-three (23) water quality surveillances were prepared to document observation of excavation dewatering projects associated with mainline integrity investigations. Significant unsatisfactory findings were found in one 2004 surveillance report (FBU-04-S-051) regarding the permitted effluent limitations for turbidity; records contents and reporting requirements specified in the Linewide National Pollutant Discharge Elimination System (NPDES) Permit and the associated State Pipeline Coordinator's (SPCO)/ ADEC Short Term Water Quality Variance dated November 8, 1993.

APSC corrected the records finding by modifying their "Excavation Dewatering Record" (Alyeska Form 3356) to include the exact time a sample is collected. APSC verbally contacted the USEPA, the agency of regulatory authority, and no corrective action was required on the reporting requirements in this instance (APSC Government Letter No. 1003).

The BLM observation of the exceedance of the permitted turbidity effluent limitations was based on the APSC Excavation Dewatering Record, inspected by BLM in the field, as part of Surveillance FBU-04-S-051. In response, APSC claimed that this Excavation Dewatering Record was not for NPDES compliance because the location where the samples were collected did not meet the permitted mixing zone requirements. In this instance APSC claimed that compliance with effluent limits is demonstrated through monitoring, but monitoring that does not meet a monitoring requirement is not an effluent exceedance and due to the environmental conditions; that is, the frozen condition of the Dietrich River at Pipeline Milepost (PLMP) 182.76, the monitoring to determine compliance with the effluent limit did not occur (APSC Government Letter No. 1003).

The ADEC Division of Water is reviewing APSC's ongoing application of the Short Term Water Quality Variance letter dated November 8, 1993 for all the excavation dewatering projects performed under the current APSC NPDES Linewide Permit.

Follow-up surveillances conducted at integrity investigations where dewatering was anticipated have shown APSC to be using the modified Excavation Dewatering Record, (Alyeska Form 3356) as presented in surveillance report FBU-04-S-289.

5.3 Storm Water

5.3.1 Surveillance Results and Discussion

Approximately fifteen (15) surveillances with satisfactory findings were prepared to document that monitoring and reporting activities were conducted in accordance with the NPDES Storm Water Multi-Sector General Permit for Industrial Activities (MSGP-2000) at applicable APSC material sites. In some cases BLM reviewed APSC's MSGP-2000 Discharge Monitoring Reports (DMRs) submitted to the USEPA. The DMRs reviewed indicated compliance with the monitoring and reporting requirements of the MSGP-2000.

5.4 Domestic Wastewater

5.4.1 Assessment Results and Discussion

BLM conducted an assessment at TAPS Pump Stations (PS) -3, -5 and -6 by evaluating compliance with effluent limitations and monitoring requirements for domestic wastewater specified in the APSC Linewide NPDES Permit. During the 2006 summer surveillance activity, BLM personnel collected wastewater effluent samples at PS-3, -5 and -6 for analytical analyses at a commercial laboratory. Sample results from the PS-5 sewage treatment plant (STP) effluent sample port were in reported in excess of the daily maximum effluent limitation for fecal coliform. The ADEC subsequently inspected the PS-5 wastewater treatment system on July 27, 2006. The ADEC sampling and analyses supported the observations of the BLM sampling and analyses. The ADEC requested corrective actions to be completed by December 15, 2006, to bring the wastewater treatment facilities into compliance with State of Alaska Regulations including:

- Chemicals such as chlorine should be stored in a separate locked storage room to decrease the possibility of accidental worker exposure and spillage
- A flow meter should be installed on the effluent discharge line or the influent line to allow more accurate accounting of the amount of wastewater that is being treated and discharged. A more accurate accounting will make it easier will make it easier to determine chemical feed rates.
- The point of compliance for the effluent samples is the end of the pipe or the outfall line. Effluent samples should be collected from this compliance point at all times except in the case of access at certain times of the year that presents a serious physical safety hazard. If hazardous conditions prevent sampling at this point during certain times of the year, the department will accept an alternative sampling point inside the plant as long as it is truly representative of the quality of the effluent being discharged.

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- Relocation of the blower motors or a method of sound dampening is necessary to address the high noise levels in the waste water treatment facility (WWTF). It is difficult for the operators and others to work in this plant under these conditions. The Alaska Department of Labor and OSHA should be consulted if changes are not made in the very near future to reduce the level of noise from the blower motors.
 - The effluent sample analyses results that exceeded the permit limits are total suspended solids=105 mg/l and fecal coliform bacteria = 1,800 colony forming units (CFU)/100 milliliters (mL). The daily maximum for total suspended solids is 60 mg/L and for fecal coliform bacteria it is 400 CFU/100 mL. The samples were collected from the end of the pipe or outfall line. Alyeska agreed to conduct additional monitoring from this location to determine what may have caused this exceedance of the permit limits and will provide a written explanation to ADEC.

BLM also prepared surveillance reports to document review of APSC's DMRs for domestic wastewater effluent from PS-3, -5 and -6 for the year of 2005 through April 2006. APSC submits DMRs monthly to the USEPA and the ADEC.

The results of this assessment indicate APSC to be satisfactory with the requirements of Grant and Lease Stipulation 2.2.1.1., Pollution Control-General, for the STP effluent quality at PS-3, -5 and -6 contingent upon completion of corrective action requested by ADEC at PS-5. ADEC requested the work to be completed by December 31, 2006 and a subsequent APSC letter sent to ADEC (Government Letter No 10596) asked for a six-month extension to complete the corrective action. By letter dated March 27, 2007, APSC indicated it would be mid-April before the flow meter installation is complete; the other corrective actions are in progress.

5.5 Erosion Control

Under the Grant and Lease for the TAPS, APSC is required to: avoid or minimize disturbance to vegetation; design and construct control facilities to avoid erosion and channel changes; leave disturbed areas in a stable condition (by replanting as soon as practicable); and prevent or minimize erosion at stream and river crossings.

To meet these requirements, APSC provides engineered structures for erosion control for water bodies that transect or affect the integrity of the TAPS system. These structures include bridges; low water crossings; culverts; and structures to control surface sheet flows and subsurface flows.

5.5.1 Aerial Surveillance

5.5.1.1 Surveillance Results and Discussion

Aerial surveillance is used to observe pipeline anomalies and obtain objective evidence in support of the compliance monitoring effort conducted by BLM. There were approximately seventy four (74) aerial surveillances from a fixed wing aircraft conducted along the Right-of Way and TAPS facilities from Prudhoe Bay to Valdez. Of these, five (5) minor unsatisfactory findings identified deficiencies needing correction during APSC routine maintenance, which included:

- Pad erosion at approximately PLMP 494 (two surveillance reports FBU-05-S-175 and 176)
- Pad erosion at culvert crossing at approximately PLMP 635 (two surveillance reports FBU-05-S-185 and 186)
- Pad erosion at approximately PLMP 228, 229 and 281.8 (FBU-05-S-212)

BLM will continue to monitor erosion on the right-of-way and these minor unsatisfactory findings for possible trends that may later rise into findings that would require corrective action. Minor unsatisfactory findings are not formally transmitted to APSC and do not, by themselves, require corrective action.

BLM will continue to monitor erosion on the right-of-way because it's a naturally occurring process. BLM will continue to monitor APSC's erosion control projects ranging in importance to minor rutting on roadway to emergency measures necessary to ensure pipeline integrity.

5.5.2 River and Floodplain Construction

5.5.2.1 Engineering Reports Discussion

ADNR and BLM prepared several engineering reports that focused on compliance with the Grant/Lease and the BLM approved design bases and criteria for the TAPS based on Notice to Proceed (NTP) applications and supporting Issued for Construction Packages (IFC) received from APSC. As part of the compliance evaluation, applicable environmental stipulations are outlined based on the contents of the NTP and IFC packages. In some cases APSC was required and did submit additional information in support of the NTP's and IFC's. Engineering and Technical reports were prepared for:

- TAPS PLMP 67.8 Sag River Revetment IFC package in support of APSC's NTPA received March

5, 2004 (ANC-04-E-016);

- TAPS PLMP 242 M.F. Koyukuk River Revetment IFC package PWR #X094B Partial Release B, Revision 0 (ANC-04-E-005 and ANC-04-E-006);
- TAPS PLMP 271.5 Jim River Sub-Channel #2 Revetment (ANC-04-S-024);
- Compliance review performed for the proposed Tanana River South Bank Riprap Addition with the Grant/Lease and the approved design bases and criteria for the TAPS (ANC-05-E-021);
- Compliance Review for PLMP 686 Tazlina River Revetment Improvements PWR #X095G Partial Release G, IFC, Rev. 0 May 17, 2005 (ANC-05-E-025);
- Compliance review for the TAPS PLMP 196 Dietrich River Revetment IFC package PWR #X095D Partial Release D, Revision 0 dated July 13, 2005 with the TAPS Grant and Lease (ANC-05-E-040); and
- Compliance Review for PWR #X096M, PLMP 686.8 Tazlina River South Bank Revetment.

5.5.3 General Erosion Control and Safe Passage of Fish

5.5.3.1 Surveillance Results and Discussion

ADNR and BLM conducted approximately sixty three (63) surveillances where culverts or low water crossings were installed to properly manage watershed runoff and erosion where it transects or affects the right-of-way. In many cases these water crossings are also required to provide a means for safe fish passage. These surveillances included stipulations 2.4.3.1 - Crossing of Streams, Rivers or Flood Plains; 2.5.1.1 - Passage of Fish; and 2.12.2 – Restoration. From the sixty three (63) surveillances, BLM and ADNR identified unsatisfactory findings in twelve (12) of the surveillance reports at water crossings along the right-of-way. The surveillance reports with significant unsatisfactory findings have been resolved by APSC corrective action as summarized in the 2004, 2005 and 2005 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports issued by APSC. In some cases ADNR or BLM follow-up is required as presented in the Table 5-1 status summary of the unsatisfactory surveillances.

Table 5-1 Status of Corrective Action Resulting From Unsatisfactory Erosion Control Surveillances

Location	Surveillance	Status
Shorty Creek Culvert, PLMP 400.5	ANC-04-S-020	Culvert replaced. Closed by follow-up BLM surveillance report FBU-04-S-341Rev1 and by APSC in the 2004 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports.
Rosie Creek culverts in Spur Dike 10 , PLMP 243.26	ANC-04-S-023	Removed corrugated metal pipes reported in 2004 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports.
Richardson Slough, PLMP 219.6	ANC-040-S-027	Repaired rip rap lined channel reported in 2004 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports.
Minor work pad erosion, PLMP 12.5	ANC-04-S-034	No corrective action required; continue to monitor.
Minor work pad erosion, PLMP 229	FBU-04-S-217	No corrective action required; continue to monitor.
Minor work pad erosion, PLMP 755.1	FBU-04-S-328	No corrective action required; continue to monitor.
Minor work pad erosion PLMP 764	FBU-04-S-357	No corrective action required; continue to monitor.
West Bank Keystone Creek culvert, PLMP 518.89	ANC-06-S-061	Replaced culvert. Follow-up surveillance to be completed in 2007.
South Fork Little Nasty Creek culvert, PLMP 282.14	ANC-06-S-093	Replaced damaged culvert discussed in 2006 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports. ADNR follow-up completed.
East Fork Spring Slough culvert, PLMP 240.13	ANC-06-S- 095	Replaced Culvert reported and removed blockage to restore safe fish passage reported in the 2005 and 2006 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports.
East Fork Spring Slough culvert, PLMP 240.26	ANC-06-S-096	Removed blockage to restore safe fish passage reported in the 2006 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports.
Donnelley Creek culvert, PLMP 566.73	ANC-06-S-147	Repair work mentioned to mitigate sluffing into Donnelley Creek at PLMP 566.72 reported in 2006 Annual Fish Stream Drainage Structure Surveillance and Maintenance Reports. ADNR follow-up completed.

5.5.4 Thermal Erosion

5.5.4.1 Surveillance Results and Discussion

Stipulation 2.2.3.1 states "Permittees shall conduct all TAPS activities in a manner that complies with State water quality standards for thermal pollution as approved by the Environmental Protection Agency ." The degree of erosion and thermal erosion caused by effluent discharge from the waste water treatment outfall at PS-5 was observed unsatisfactory with respect to stipulations 2.2.1.1, 2.4.1.2 and 2.4.1.3 presented in surveillance FBU-06-S-061.

The degree of thermal erosion presented in surveillance FBU-06-S-061, conducted in March 2006, was observed to be unsatisfactory because the outfall was not being operated in a manner that avoided or minimized degradation of land and water quality. Later in June of 2006, APSC requested approval for a 20-man temporary man camp to support the Strategic Reconfiguration construction at PS-5. APSC also requested approval to discharge the treated effluent from the temporary 20-man camp through the PS-5 waste water treatment plant outfall. Contingent upon approval, BLM requested APSC provide a 3rd party geo-technical evaluation regarding the likely impact to the thermal regime at the PS-5 outfall location as a result of the added volume of effluent associated with the occupancy of the temporary camp. This report indicated the temporary increase in effluent flows for the summers of 2006 and 2007 will likely have minimal impact on the thermal regime as it currently exists within the PS-5 effluent outfall area. BLM has required no further action based on this submittal.

In addition this is outfall area was inspected by ADEC on July 26, 2006. ADEC indicated thermal erosion taking place in the effluent receiving area that appears to be at least partially attributable to the temperature and quantity of the effluent that is being discharged. ADEC also indicated it is difficult to determine if the effluent is causing the thermal erosion in its entirety or if it is also attributable to runoff and snowmelt from the pad and natural runoff from the surrounding area.

APSC has recently submitted the 2006 outfall survey conducted in October 2006 showing three profiles from the PS-5 outfall area. BLM will continue to monitor the degree of erosion at the PS-5 outfall.

5.6 Air Quality

5.6.1 Surveillance Results and Discussion

BLM prepared over thirty (30) surveillances with satisfactory findings to document records in support of compliance with Title V Air Quality Permits issued by the ADEC. BLM spot checked records including incinerator operating records, sewage stack injection records, source operational records and fuel consumption records. Any unsatisfactory findings with respect to air quality are forwarded by BLM to

the ADEC for their evaluation.

BLM has reviewed ADEC issued Full Compliance Evaluation (FCE) reports covering the period from January 2003 through December 2004, for each Title V Air Quality Permit issued to APSC. ADEC determinations of noncompliance were issued to APSC by cover letter for the following facilities: Valdez Marine Terminal (VMT), PS-12, PS-10, PS-9, PS-7, PS-3 and PS-1 summarized in the Table 5-3. BLM has followed-up on APSC corrective actions regarding these procedural requirements but have deferred to the ADEC for compliance resolution. During the follow-up surveillances conducted by BLM, documentation of ADEC compliance resolution was still open in all cases except for PS-10.

Table 5-2 Summary of Corrective Action for ADEC Issued Air Quality Operating Permits

Location	ADEC Air Permit No.	FCE Reporting Period	Compliance Issue	Corrective Action Status	BLM Surveillance
Valdez Marine Terminal	082TVP01	January 2003 through December 2004	Violation with regard to procedural requirements (paperwork violations)	APSC response Letter No.05-0346-37-4390	FBU-05-S-309 FBU-05-S-394
Pump Station 12	AQ0081TVP01	January 2003 through December 2004	Violation with regard to procedural requirements (paperwork violations)	APSC response Letter No. 4803	FBU-05-S-306 FBU-05-S-398
Pump Station 10	AQ0080TVP01	January 2003 through December 2004	Violation with regard to procedural requirements (paperwork violations)	APSC response Letter No 4790 Case closed by ADEC tracking No 2005-0198-37-4277	FBU-05-S-302 FBU-05-S-393
Pump Station 9	AQ0079TVP01	January 2003 through December 2004	Violation with regard to procedural requirements (paperwork violations)	APSC response Letter No.5090	FBU-05-S-296 FBU-05-S-392
Pump	AQ0079TVP0	January 2003 through	Violation with regard to procedural	APSC response	FBU-05-S-291

Location	ADEC Air Permit No.	FCE Reporting Period	Compliance Issue	Corrective Action Status	BLM Surveillance
Station 7	1	December 2004	requirements (paperwork violations)	Letter No.4685 State of Alaska Department of Law response to Enforcement Tracking No. 05-0140-37-4193 APSC response Letter No.5704	FBU-05-S-388
Pump Station 3	AQ0074TVP0 1	January 2003 through December 2004	Violation with regard to procedural requirements (paperwork violations)	APSC response Letter No. 4789	FBU-05-S-263 FBU-05-S-389
Pump Station 1	AQ0072TVP0 1	January 2003 through December 2004	Violations identified during ADEC inspection	APSC response Letter No. 4788	FBU-05-S-261 FBU-05-S-391

BLM will continue the surveillance effort to document records in support of compliance with Title V Air Quality Permits issued by the ADEC.

5.7 Waste Management and Solid Waste Disposal

5.7.1 Waste Management Surveillance

BLM conducted a total of seven (7) surveillances, with satisfactory findings, at active pump stations, documenting waste container inspection logs were used to aid in proper waste management and disposal practices as per APSC protocol.

Two unsatisfactory findings during surveillance revealed uncontrolled solid waste at the VMT transfer station (VMT-04-S-045); and improper management of air knife cuttings generated at PS-3 under the strategic reconfiguration construction (FBU-05-S-034 and 035). BLM will continue to monitor waste management scenarios for possible trends that may later rise into findings that would require corrective action.

5.7.2 Solid Waste Disposal Assessment

BLM conducted an assessment of Solid Waste Disposal Sites (SWDSs) 100-1 and 117-1B operated by APSC based on requirements of Stipulation 2.2.6.2.

Under Stipulation 2.2.6.2, the major conditions of regulatory compliance are based on SWDS permits issued to APSC by the ADEC. This assessment was based on field surveillances of applicable permit conditions conducted in 2004 at each SWDS. APSC permit required monitoring records for each SWDS were also evaluated as part of the assessment.

Fifty five (55) total surveillances were conducted— thirty (31) at SWDS 100-1 and twenty four (24) at SWDS 117-1B. The attributes of all surveillances were found to be satisfactory. Based on the surveillances conducted at SWDSs 117-1B and 100-1, BLM believes APSC to be in compliance with Stipulation 2.2.6.2 and the specific permit conditions evaluated.

BLM mentioned one observation regarding water quality monitoring required prior to dewatering the SWDS 117-1B disposal cell. APSC was found satisfactory with the condition of compliance but the permit is lacking detail in its requirements for specific water quality standards. The permit requires the pit dewatering discharge to meet Alaska Water Quality Standards (18 AAC 70) as per the Enhanced Management Plan for SWDS 117-1B; however, APSC has not specifically referenced maximum contaminant levels (mcls) for the permit required analyses. In an ADEC letter to APSC dated December 16, 1999 approving the Enhanced Management Plan it is written that *“If ponded surface water in the disposal exceeds Alaska Water Quality Standards (18 AAC 70) for the water quality parameters which are analyzed, the surface water will be considered leachate and transported to a permitted waste water treatment plant for disposal.”* This scenario was forwarded to the BLM Liaison to ADEC for further evaluation. In regard to this issue, BLM recommended APSC to clarify the maximum contaminant levels (mcls) to be used for the pit dewatering effort and record the volume of water pumped prior to sampling the pit and the total volume of water pumped during subsequent dewatering of the pit.

5.8 Contaminated Sites

5.8.1 Surveillance Results and Discussion

BLM conducted twelve (12) surveillances with satisfactory findings to spot check that corrective clean-up actions were being conducted in accordance with ADEC approved clean-up work plans. ADEC approval is required prior to cleanup for the following conditions

- Spills of petroleum or chemicals greater than 10 gallons
- Historical spills discovered during TAPS operation, maintenance, and construction activities; and

- Spills to water where the spill product reaches the shoreline.

These surveillances were conducted at the PLMP 400 spill site; Happy Valley West spill site, PS-9 Mainline Turbine Sump Product Recovery; PS-6 Fuel Island Area. In addition, surveillances were conducted and at the PS-5 historical contamination discovered during installation of pilings as part of the strategic reconfiguration effort.

Currently, APSC contaminated sites registered with the ADEC include 41 active sites, 26 closed sites, 9 inactive sites, and 23 sites with the status no further remedial action planned. These sites are managed under the ADEC Contaminated Sites Program until closure is achieved.

BLM identified in Surveillance Report No FBU-04-S-356 an unsatisfactory observation during a soil clean-up activity at PLMP 635.5 on September 9, 2004. The soil was suspected to be contaminated with diesel fuel and the BLM found no site records regarding the volume of affected soil removed or other records to document its disposition.

BLM will continue to spot check that corrective clean-up actions are being conducted per APSC protocol. In addition, specific contaminated sites may be further investigated to ensure ADEC clean up levels meet future land use requirements required by BLM as specific purposes and needs arise.

5.9 Vegetative Screen and Aesthetic Requirements

5.9.1 Surveillance Results and Discussion

BLM conducted approximately 19 (nineteen) surveillances along TAPS documenting the vegetative screen requirements along access roads and at highway right-of way crossings as well as aesthetic requirements under the Grant and Lease. The surveillances identified 4 (four) unsatisfactory findings for concrete spall identified on TAPS facilities; 8 (eight) unsatisfactory findings for improper vegetative screening; and 1(one) unsatisfactory finding for aesthetics of the radiator fins located on the right-of-way at PLMP 167.5. The unsatisfactory surveillance findings are summarized in Table 5-3.

Table 5-3 Summary of Minor Unsatisfactory Vegetative Screen and Aesthetic Findings

Surveillance	Location	Minor Unsatisfactory Finding
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Surveillance	Location	Minor Unsatisfactory Finding
VMT-05-S-084	PLMP 742 Remote Gate Valve (RGV) -115	Conducted as follow-up to FBU-04-S-242 and -333. Consideration of aesthetics under stipulation 2.10.1: concrete spall.
FBU-04-S-307	PLMP 605.2	Consideration of aesthetics under stipulation 2.10.1.
FBU-04-S-306	PLMP 579.5	Consideration of aesthetics under stipulation 2.10.1 and vegetative screen requirements under stipulation 2.3.2.
FBU-04-S-305	PLMP 574	Consideration of esthetics under stipulation 2.10.1 and vegetative screen requirements under stipulation 2.3.2.
FBU-04-S-304	PLMP 570.4	Consideration of aesthetics under stipulation 2.10.1 and vegetative screen requirements under stipulation 2.3.
FBU-04-S-303	PLMP 564	Consideration of aesthetics under stipulation 2.10.1 and vegetative screen requirements under stipulation 2.3.
FBU-04-S-242	PLMP 747.22, RGV 116	Consideration of aesthetics under stipulation 2.10.1: concrete spall.
FBU-04-S-258	PLMP 167.5	Consideration of aesthetics under stipulation 2.10.1.
FBU-04-S-236	PLMP 167.5	Consideration of aesthetics under stipulation 2.10.1.
FBU-04-S-236	PLMP 755.64 RGV 117	Consideration of aesthetics under stipulation 2.10.1: concrete spall.
VMT-05-S-080	PLMP 747.22, RGV 116	Consideration of aesthetics under stipulation 2.10.1: concrete spall.
VMT-05-S-082	PLMP 755.64 RGV 117	Consideration of aesthetics under stipulation 2.10.1: concrete spall .

5.10 APSC' S Compliance Reports

This section presents conclusions from the following:

- APSC's 2006 Compliance Summary (APSC Government Letter No 11618);
- 2006 Annual Report Rivers and Floodplains Program; and the
- *2004 Report of Compliance to The Federal and State Agreement and Grant of Right-of-Way Lease* dated May 2, 2005. The primary function of this report is to describe APSC's compliance monitoring and reporting on a company wide basis for the year 2004. This report also evaluates monitoring and reporting activity to indicate where the company is most susceptible to compliance issues.

The 2006 APSC Compliance Summary (APSC Government Letter No 11618) indicated APSC received eighteen (18) compliance notices from the ADEC related to air permit reporting requirements. These notices were the result of APSC amending facility air emissions semi-annual reports and the agency citing APSC for not initially filing an accurate report.

The 2006 Annual Report Rivers and Floodplains Program report completed eleven (11) recommended corrective actions and recommended ten (10) corrective actions in 2007. BLM may prepare engineering reports for these projects to ensure compliance with the Grant/Lease, BLM approved design bases and criteria for the TAPS based on NTP applications and supporting IFC packages received from APSC. As part of the compliance evaluation, applicable environmental stipulations are outlined based on the contents of the NTP and IFC packages.

Conclusions drawn APSC's *2004 Report of Compliance to The Federal and State Agreement and Grant of Right-of-Way Lease* dated May 2, 2005 are summarized in Table 5-4. In this document, the phrase "substantially in compliance" may be used to describe the general conformity to requirements if there is no evidence of pervasive or persistent compliance weakness. The phrase "generally in compliance" may be used to describe status of compliance when issues have been identified in audit findings, oversight agency assessments with unsatisfactory observations, or other means of non-conformance identification and matters are under control by management through ongoing corrective and preventive actions. The primary function of this report is to describe APSC's compliance monitoring and reporting on a company wide basis for the year 2004. This report also evaluates monitoring and reporting activity to indicate where the company is most susceptible to compliance issues. APSC concluded vulnerability ratings of medium to high for Stipulations 2.2.4.1-2 (Air Pollution and Ice Fog) and high vulnerability ratings for Stipulations 2.5.1.1-4 (Fish & Wildlife/Passage of Fish), Stipulations 2.5.2.1-4 (Fish Spanning Beds) Stipulation 2.5.4.1 (Big Game Movements) and Stipulations 2.13.1-2 (Reporting of Oil Discharges).

Table 5-4 Summary of APSC's 2004 Report of Compliance

Stipulation	General Description	Conclusions drawn from APSC's 2004 Report of Compliance
Stipulation 2.2.1	Environmental Briefing	Not included
Stipulation 2.2.1.1	Pollution Control - General	APSC is substantially in compliance with this stipulation.
Stipulation 2.2.2.1 Stipulation 2.2.2.2	Pollution Control - Water and Land Pollution	APSC is substantially in compliance with these stipulations.
Stipulation 2.2.3.1	Pollution Control - Thermal Pollution	Generally this stipulation is not monitored
Stipulation 2.2.4.1 Stipulation 2.2.4.2	Pollution Control - Air Pollution and Ice Fog	APSC is substantially in compliance with these stipulations.
Stipulation 2.2.5.1	Pollution Control – Pesticides, Herbicides and other Chemicals	APSC is substantially in compliance with this stipulation.
Stipulation 2.2.6.1 Stipulation 2.2.6.2	Pollution Control – Sanitation and Waste Disposal	APSC is substantially in compliance with these stipulations.
Stipulation 2.3.1.1	Buffer Strips – Public Interest Areas	This stipulation is primarily related to original construction. When compliance is applicable to material sites, conditions of permits are monitored.
Stipulation 2.3.2.1	Buffer Strips – Vegetative Screen	There is no significant evidence that suggests APSC is not in compliance with this stipulation.
Stipulation 2.3.2.2	Buffer Strips – Vegetative Screen	APSC is substantially in compliance with this stipulation.
Stipulation 2.3.3.1	Buffer Strips – Streams	APSC is substantially in compliance with this stipulation.
Stipulation 2.4.1.1 Stipulation 2.4.1.2 Stipulation 2.4.1.3	Erosion Control – General	APSC is substantially in compliance with these stipulations.
Stipulation 2.4.2.1 Stipulation 2.4.2.2	Erosion Control – Stabilization	APSC is substantially in compliance with this stipulation.
Stipulation 2.4.3.1	Erosion Control –	APSC is substantially in compliance with

Stipulation	General Description	Conclusions drawn from APSC's 2004 Report of Compliance
Stipulation 2.4.3.2	Crossing of Streams, Rivers or Flood Plains	these stipulations.
Stipulation 2.4.4.1	Erosion Control – Seeding and Planting	APSC is substantially in compliance with this stipulation.
Stipulation 2.4.5.1	Erosion Control – Excavated Material	APSC is substantially in compliance with this stipulation.
Stipulation 2.5.1.1	Fish and Wildlife Protection – Passage of Fish	APSC is substantially in compliance with this stipulation.
Stipulation 2.5.1.2 Stipulation 2.5.1.3 Stipulation 2.5.1.4	Fish and Wildlife Protection – Passage of Fish	APSC is substantially in compliance with these stipulations.
Stipulation 2.5.2.1 Stipulation 2.5.2.2 Stipulation 2.5.2.3 Stipulation 2.5.2.4	Fish and Wildlife Protection – Fish Spawning Beds	APSC is substantially in compliance with these stipulations.
Stipulation 2.5.3.1	Fish and Wildlife Protection – Zones of Restricted Activities	APSC demonstrates compliance through the use of the permitting process and by monitoring conditions of permits.
Stipulation 2.5.4.1	Fish and Wildlife Protection – Big Game Movements	APSC is substantially in compliance with this stipulation.
Stipulation 2.6.1.1 Stipulation 2.6.1.2 Stipulation 2.6.1.3	Material Sites – Purchase of Materials	Material Sites (presented under separate cover)
Stipulation 2.6.2.1	Material Sites – Layout of Material Sites	Material Sites (presented under separate cover)

Stipulation	General Description	Conclusions drawn from APSC's 2004 Report of Compliance
Stipulation 2.7.1.1 Stipulation 2.7.2.1 Stipulation 2.7.2.2 Stipulation 2.7.2.3 Stipulation 2.7.2.4 Stipulation 2.7.2.5 Stipulation 2.7.2.6 Stipulation 2.7.2.7 Stipulation 2.7.2.8	Clearing – Boundaries Clearing – Timber	Maintenance Coordinators verify provisions of permits and NTPs are followed.
Stipulation 2.8.1	Disturbance of Natural Water	ROW surveillance by Maintenance Coordinators and provisions of NTPs are monitored.
Stipulation 2.9.1	Off Right-of-Way Traffic	APSC is substantially in compliance with this stipulation.
Stipulation 2.10.1	Aesthetics	APSC is generally in compliance with this stipulation.
Stipulation 2.11.1 Stipulation 2.11.2	Use of Explosives	There is no significant evidence that suggests APSC is not in compliance with this stipulation.
Stipulation 2.12.1 Stipulation 2.12.2 Stipulation 2.12.3 Stipulation 2.12.4 Stipulation 2.12.5	Restoration	Maintenance Coordinators are expected to implement restoration plans in State and Federal Permits.
Stipulation 2.13.1 Stipulation 2.13.2	Reporting of Oil Discharges	Refer to Environmental Trending Report for 2004 for details on spill prevention, reporting and clean up.
Stipulation 2.14.1 Stipulation 2.14.2 Stipulation 2.14.3 Stipulation 2.14.4	Contingency Plans	Contaminated Sites Oil spill contingency plan documents covered under separate cover

6.0 CONCLUSIONS

BLM concludes, to a large degree, that APSC is in compliance with the Grant and Lease Environmental Stipulations during the period from October 2003 to October 2006. BLM also believes APSC to be in compliance with most environmental laws and regulations. Some noncompliance issues identified by BLM, ADNR and the ADEC were unresolved or have not formally closed during the period covered by this report. Information reviewed showed minor problems with collection and management of accurate environmental compliance records. The dewatering records management issue was resolved; however, ADEC continues to cite APSC for air quality permit violations for procedural requirements (paperwork violations). BLM recommends APSC develop monitoring procedures similar to their Monitoring Program Procedures (MP-166) protocol to address environmental compliance issues or conduct environmental owner assessments on a regular frequency to evaluate compliance with Grant and Lease Environmental Stipulations.

7.0 FUTURE SURVEILLANCE AND ASSESSMENT

In the future, the BLM will continue its environmental surveillance and assessment program to evaluate the degree of APSC's compliance to the Grant and Lease Environmental Stipulations. This effort will be conducted in cooperation with the stakeholder regulatory agencies. The focus will continue on oversight of APSC's TAPS environmental protection program. Additional effort may focus during conduct of environmental briefings where BLM, at its discretion, may expand upon specific areas of concern to insure compliance with the Environmental Stipulations. Field verification during project execution of 2007 recommendations presented in APSC's 2006 Annual Report for the Rivers and Floodplain Program shall be inspected at BLM discretion.