

# STATE OF ALASKA

## DEPT. OF ENVIRONMENTAL CONSERVATION DIVISION OF SPILL PREVENTION AND RESPONSE CONTAMINATED SITES PROGRAM

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File: 2337.38.037

October 6, 2010

Barry Staskywicz  
Cook Inlet Pipeline Company  
3800 Centerpoint Drive Suite 100  
Anchorage, Alaska 99503

Re: Decision Document; West Forelands Junction  
Cleanup Complete with Institutional Controls (ICs) Determination

Dear Mr. Staskywicz:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with West Forelands Junction located north of the Drift River Terminal, on the west side of Cook Inlet, in Trading Bay, Alaska. Based on the information provided to date and the administrative record, the ADEC has determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment, and this site will be closed.

This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Cleanup Complete Determination.

### **Introduction**

#### Site Name and Location:

West Forelands Junction  
North of Drift River Terminal  
Trading Bay, Alaska 99682

#### Name and Mailing Address of Contact Party:

Barry Staskywicz; Health, Environmental and Safety Specialist  
Cook Inlet Pipeline Company  
3800 Centerpoint Drive Suite 100  
Anchorage, Alaska 99503

#### Database Identifiers and File Number:

ADEC Reckey: 1990230113604  
File No.: 2337.38.037  
Hazard ID: 985



Regulatory authority under which the site is being cleaned up:  
18 AAC 75

### **Background**

Petroleum impacted soil was encountered in May 1990 when a crude oil leak was discovered during monthly maintenance of the pipeline. A valve where the spur line from West Forelands Junction meets the main pipeline to the Drift River Terminal facility was damaged.

### **Contaminants of Concern**

Soil and groundwater samples collected at this site have been tested for: gasoline range organics (GRO); diesel range organics (DRO); benzene, toluene, ethylbenzene and xylenes (BTEX); as well as metals and organics analyses by the Toxicity Characteristic Leaching Procedure (TCLP). Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- GRO
- DRO
- Benzene

### **Cleanup Levels**

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Tables B1 and B2, Migration to Groundwater.

<u>Contaminant</u>	<u>Site Cleanup Level</u>
GRO	300 mg/kg
DRO	250 mg/kg
Benzene	0.025 mg/kg

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels.

<u>Contaminant</u>	<u>Site Cleanup Level</u>
GRO	2.2 mg/L
DRO	1.5 mg/L
Benzene	0.005 mg/L

### **Site Characterization and Cleanup Activities**

Initial cleanup activities were completed in November 1990. The faulty valve was repaired and fenced in to prevent another incident. Ten exploratory borings were drilled, ranging in depth from 7 to 14.5 feet. Soil samples showed petroleum hydrocarbons and benzene above the most stringent migration to groundwater cleanup levels. Twenty drums of oily soil and approximately ten gallons of crude oil recovered from the surface of two temporary ponds on-site were taken to the Drift River Terminal Facility for treatment and disposal.

Additional soil samples were collected during the installation of the four monitoring wells (MW) in November 1991, and analyzed for GRO, DRO, and BTEX. All analytes were below the most stringent migration to groundwater cleanup levels in the soil samples from the

installation boring for MW-1, with GRO, and BTEX not detected. DRO was detected up to 22 mg/kg at nine feet below ground surface (bgs).

The soil borings from the 1991 monitoring well installation of MW-2, MW-3, and MW-4 showed that GRO, DRO, and benzene were detected above the most stringent migration to groundwater cleanup levels. The highest levels detected were all detected at a depth of five feet bgs. DRO was detected up to 5,600 mg/kg in the soil boring for MW-2; GRO was found up to 780 mg/kg in the soil boring for MW-3; and benzene was found up to 0.0112 mg/kg in the soil boring for MW-4. All results were below the ADEC maximum allowable cleanup levels for the inhalation and ingestion pathways.

Groundwater samples were collected annually between 1991 and 1993 and then again from 2001 to 2009. Benzene has been the only BTEX constituent detected above cleanup levels in any monitoring well. In 2009 it was detected at 0.077 mg/L in MW-4. The numerous groundwater monitoring events have shown that groundwater contaminant levels were either non-detect, stable or decreasing. In 2010, the four monitoring wells were decommissioned in accordance with ADEC guidance.

### Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminants were evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are the conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to be one of the following: De Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 1.

**Table 1 – Exposure Pathway Evaluation**

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis Exposure	Contaminated soil was excavated from the surface; transported to Drift River for treatment & disposal.
Sub-Surface Soil Contact	De-Minimis Exposure	Contaminated soil was excavated from the subsurface, and concentrations in subsurface soil are now below direct contact cleanup levels.
Inhalation – Outdoor Air	De-Minimis Exposure	Contamination remains in the subsurface, but is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De-Minimis Exposure	There are no buildings at this remote site and workers are present for routine maintenance only. Any remaining contamination is approximately 8 feet below ground surface. As a condition of closure, ADEC must be notified of any change in land use and construction of buildings.
Groundwater Ingestion	De-Minimis Exposure	There are no drinking water wells in the area and none are being planned. As a condition of closure installation of groundwater wells must be approved by ADEC.

Surface Water Ingestion	Pathway Incomplete	There are no permanent surface water bodies located within ¼ mile of the site.
Wild Foods Ingestion	Pathway Incomplete	This site is not used for wild foods collection.
Exposure to Ecological Receptors	De-Minimis Exposure	The remaining contamination is not expected to bioaccumulate and is not expected to reach ecological receptors. It is considered de-minimis in volume. Therefore risk via this pathway is considered insignificant.

Notes to Table 1: “De-Minimis Exposure” means that in ADEC’s judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. “Pathway Incomplete” means that in ADEC’s judgment contamination has no potential to contact receptors. “Exposure Controlled” means there is an administrative mechanism in place limiting land or groundwater use, or a physical barrier in place that deters contact with residual contamination.

### **ADEC Decision**

Contamination remains on site above established default cleanup levels; however ADEC has determined there is no unacceptable risk to human health or the environment. Therefore this site will be issued a Cleanup Complete - ICs determination subject to the following.

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, current ICs may not be protective and ADEC may require additional remediation and/or ICs. Therefore the Cook Inlet Pipeline Company shall report to ADEC every five years to document land use, or report as soon as Cook Inlet Pipeline Company becomes aware of any change in land ownership and/or use, if earlier. **The report can be sent to the local ADEC office or electronically to [DEC.ICUnit@alaska.gov](mailto:DEC.ICUnit@alaska.gov).**
2. Installation of groundwater wells will require approval from ADEC.
3. Any proposal to transport soil or groundwater off site requires ADEC approval in accordance with 18 AAC 75.325 (i). A “site” [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership. (See attached site figure.)
4. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. When the site meets the requirements for a Cleanup Complete determination, Institutional Controls will be terminated.

This determination is in accordance with 18 AAC 75.380(d) and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

**Appeal**

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 -18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185. Informal review requests must be delivered to the Division Director, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 15 days after receiving the department's decision reviewable under this section. Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99801, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have questions about this closure decision, please contact the ADEC project manager, Pam Clemens at (907) 269-7551.

Approved By,



Linda Nuechterlein  
Environmental Manager

Recommended By



Pam Clemens  
Environmental Program Specialist

Attachment: Site Figure

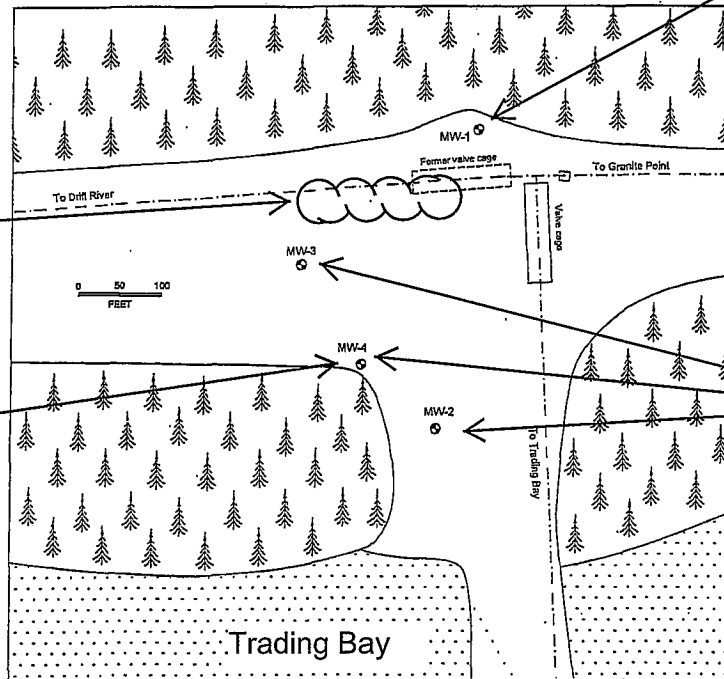
cc: Jennifer Murrell, ADNR

West Forelands Junction

File: 2337.38.037

Area of 1990  
contaminated soil  
excavation

In 2009 the only analyte  
remaining above  
groundwater cleanup  
levels was Benzene at  
0.077 mg/L



Soil borings from  
the installation of  
monitoring well  
(MW) #1 in 1991  
showed that GRO  
and BTEX were not  
detected and DRO  
was below  
migration to  
groundwater  
cleanup levels

Soil borings from  
the installation of  
MW #2, MW #3,  
and MW #4 in 1991  
showed DRO,  
GRO, and BTEX  
above the migration  
to groundwater  
cleanup levels but  
below inhalation  
and ingestion  
cleanup levels

North

Attachment: Site Figure