

STATE OF ALASKA

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

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File: 150.26.033

July 27, 2004

Darren Mulkey
ADOT & PF
2301 Peger Road
Fairbanks, AK 99709-5399

Re: No Further Remedial Action Planned (NFRAP)
ADOT & PF Northern Region
Cantwell Maintenance Station
Event ID 2912

Dear Mr. Mulkey:

The Alaska Department of Environmental Conservation, Contaminated Sites Program, (ADEC) reviewed the Shannon & Wilson, Inc. final site characterization report for the leaking underground storage tank (LUST) site located at the Alaska Department of Transportation and Public Facilities (ADOT&PF) Northern Region Cantwell Maintenance Station. Based on the Shannon & Wilson report and information presented below, ADEC has determined that a NFRAP status for this site is appropriate.

Site Background

Soil:

In June of 1998, five tanks were removed from three locations: one 500-gallon used-oil tank, three 3,000-gallon diesel tanks and one 2,000-gallon gasoline tank. According to the report, an estimated 75 cubic yards of contaminated soil were excavated and stockpiled at the site. Soil samples collected from the excavation area by EMCON at the time of the tank removals contained diesel range organics (DRO) and benzene above the 18 AAC 75.341 soil cleanup levels.

In August and September of 2000, Shannon & Wilson conducted additional corrective action at the station. Approximately 160 cubic yards of contaminated soil were excavated from Tank #6 (10 cubic yards) and Tanks #1, #2, and #3 (150 cubic yards) areas and stockpiled on site. ADOT&PF screened the 2000 stockpile to remove material greater than 2 inches in diameter, removing approximately 50 cubic yards of coarse material from the pile.

A sample collected at the base of the Tank #6 excavation contained DRO at 803 milligrams per kilogram (mg/kg). Benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected at concentrations above the 18 AAC 75.341 Table B1 cleanup levels. Additional soil could not be

excavated at this location without compromising the foundation of a storage building and a power pole.

Soil samples collected from the used-oil tank excavation were analyzed for DRO, BTEX, arsenic and hexavalent chromium. The analytical results indicated that cleanup levels were not exceeded except for arsenic. Since the concentrations of arsenic in the Tank #6 excavation were similar (approximately 11 mg/kg), it was concluded that elevated background concentrations of arsenic are present at the site.

In 1998, soil samples from the excavation were analyzed for gasoline range organics (GRO), DRO, residual range organics (RRO), arsenic, cadmium, chromium, lead, polychlorinated hydrocarbons (PCBs), and halogenated volatile organics (HVOs). Soil samples collected from the base of the three tanks (Tank #1, #2, #3) contained GRO up to 949 mg/kg and DRO up to 7,690 mg/kg. Benzene exceeded the ADEC cleanup level (0.02 mg/kg) in five of the six samples collected, with a maximum benzene concentration of 0.237 mg/kg. Contaminated soil along the southwestern portion of the excavation could not be removed without compromising the foundation of an adjacent storage building.

Groundwater:

In May 2001, a release investigation was conducted at the site that included the installation of three monitoring wells and one soil boring. The depth of the groundwater at the site is approximately 10 to 12 feet below ground surface (bgs). Groundwater samples were collected from the monitoring wells in June, August and October 2001, and September 2002. The on-site drinking water well was sampled in August and October 2001, and September 2002. Samples from all monitoring wells and the drinking water well were non-detect for GRO, DRO, and BTEX.

Stockpile:

Sample results from the stockpile in September 2002 identified DRO ranging from 484 mg/kg to 826 mg/kg. ADOT&PF has proposed to use the stockpile soil as follows:

1. fill material on the Denali Highway,
2. road bed material on the road upgrade next to the camp,
3. pad maintenance at the camp, and/or
4. road sanding during the winter.

Approved Cleanup Levels

Soil:

The soil cleanup levels approved for this site are the migration to groundwater levels for the under 40-inch precipitation zone. The cleanup levels, established in 18 AAC 75.341 Tables B1 and B2, are listed below:

<u>Contaminants</u>	<u>Cleanup Level (mg/kg)</u>
Gasoline Range Hydrocarbons	300
Diesel Range Hydrocarbons	250
Residual Range Hydrocarbons	10,000

(Continued)

<u>Contaminants</u>	<u>Cleanup Level (mg/kg)</u>
Benzene	0.02
Toluene	5.4
Ethylbenzene	5.5
Total Xylenes	78
Polychlorinated Biphenyls (PCBs)	1
Arsenic	2
Cadmium	5
Chromium (total)	26
Lead	400

ADEC Decision

Based on the information provided to date, it was concluded that limited soil contamination remains at the base of the excavation of Tank #6 and at the base of the excavation of Tank #1, #2, and #3. Further excavation was not considered practicable due to the proximity of the building foundations. Three monitoring wells were installed at the site, including one located adjacent to the Tank #1, #2, #3 excavation. All groundwater data were non-detect for GRO, DRO, and BTEX.

ADEC has determined that the cleanup actions employed at this site were effective in removing the majority of the impacted soil and there was no groundwater contamination identified. Furthermore, ADEC evaluated the potential risk posed by the soil contaminant levels and determined that it does not pose a risk to human health or the environment. Therefore, **no further remedial action** at the ADOT& PF Cantwell Maintenance Station is required.

In order to identify the soil contamination (above the 18 AAC 75.341 cleanup levels) remaining on site, an Institutional Control (IC) will be established on the ADEC Contaminated Sites database. This will serve to identify the nature and extent of impacted soil remaining on site and provide notice to owners and/or operators that ADEC approval is required (in accordance with 18 AAC 75.325(i) to remove and/or dispose of the petroleum-impacted soil off-site and/or address any contaminated soil if it becomes accessible after removal of the building.

ADEC also approves of the beneficial re-use of the stockpiled soil as proposed by ADOT&PF provided that it is not in an environmentally sensitive area. A report on how and where the stockpile soil is used shall be provided to ADEC following its removal.

In accordance with 18 AAC 75.380(d)(1), additional investigation and cleanup may be required if new information is discovered which leads the ADEC to make a determination that the cleanup described in this decision is not protective of human health, safety, and welfare or the environment.

If you are in disagreement with this decision you may seek an adjudicatory hearing under 18 AAC 15.200 – 18 AAC 15.920 within 30 days of the mailing of this decision. If you have any questions,

please contact Deborah Williams at (907) 451-5174 or via e-mail at Deborah_Williams@dec.state.ak.us.

Sincerely,



Deborah Williams
Environmental Specialist

Sincerely,



Jim Frechione
Environmental Conservation Manager

cc: Mark Lockwood, Shannon & Wilson Inc. (via e-mail)