THE STATE
of ALASKA
GOVERNOR SEAN PARNELL

Department of
Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

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File No: 2268.26.002

June 11, 2013

Alaska Department of Transportation and Public Facilities
Maintenance and Operations
Attn: Jennifer Micolichek
P.O. Box 196900, MS-2525
Anchorage, AK 99519-6900

Re: Decision Document; Former ADOT&PF Willow Maintenance Station, Mile 71.4 George Parks Highway, Willow, Alaska- Cleanup Complete Determination

Dear Ms. Micolichek:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the former Alaska Department of Transportation and Public Facilities (ADOT&PF) maintenance station located at mile 71.4 George Parks Highway, Willow, Alaska. Based on the information provided to date, 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 decision is based on the administrative record for the Former ADOT&PF Willow Maintenance Station, which is located in the offices of the ADEC in Anchorage, Alaska. 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.

Introduction

Site Name and Location:
Former ADOT&PF Willow Maintenance Station
Mile 71.4 George Parks Highway
Willow, Alaska
Parcel D14, Lot 1, Willow Billyville Subdivision

Name and Mailing Address of Contact Party:
Alaska Department of Transportation and Public Facilities
Jennifer Micolichek, Environmental Impact Analyst
P.O. Box 196900, MS-2525
Anchorage, Alaska 99519-6900

Database Record Key and File Number:
ADEC Reckey: 1993220112701 & 1997220027601
File: 2268.26.002
Hazard IDs: 1089 & 24622

Regulatory authority under which the site is being cleaned up:
18 AAC 75 and 18 AAC 78

Background

The ADOT&PF's former Willow Maintenance Station is located on the west side of the highway at Mile 71.4 George Parks Highway in Willow, Alaska, at the southeast ¼ of Section 6, Township 19 North, Range 4 West, Seward Meridian. The site consists of an approximately 3 acre gravel pad elevated above adjacent native forest and wetlands. The site is currently unoccupied, although it historically has been used as a maintenance shop and fuel storage and dispensing facility. Potable water was formerly provided by an onsite drinking water well. There are no permanent buildings on the site, and the site is currently used for storage of ADOT&PF equipment and supplies

Petroleum hydrocarbon contaminated soil was encountered during fuel storage tank removals in 1993 (ADEC Hazard ID 1089) and 1997 (ADEC Hazard ID 24622). After the shop building burned in the early 2000s, the ADOT&PF maintenance facility moved to a new location across the highway. Subsequent investigations found petroleum hydrocarbon and volatile organic compound (VOC) contaminated soil and groundwater at several other areas, which are also tracked under ADEC Hazard ID 1089. These areas include two EPA-regulated Class V underground injection control (UIC) wells which were identified in a 2007 site characterization.

Contaminants of Concern

During the investigations at this site, soil and groundwater samples were analyzed for diesel range organics (DRO), gasoline range organics (GRO), residual range organics (RRO), volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and xylenes (BTEX), and Resource Conservation and Recovery Act (RCRA) metals. Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Gasoline Range Organics (GRO)
- Diesel Range Organics (DRO)
- Residual Range Organics (RRO)
- Benzene
- Tetrachloroethene (PCE)

Cleanup Levels

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

Contaminant	Site Cleanup Level (mg/kg)
GRO	300
DRO	250
RRO	11,000
Benzene	0.025
PCE	0.024

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

Contaminant	Site Cleanup Level (mg/L)
GRO	2.2
DRO	1.5
RRO	1.1
Benzene	0.005
PCE	0.005

Site Characterization and Cleanup Activities

A 1,000-gallon heating oil storage tank was removed from the site in 1993 and suspected release(s) from the tank were noted. It is not known if the tank was above or below ground, where the tank was located at the site, or what evidence was encountered to indicate the presence of contamination.

In 1997, two 3,000-gallon underground storage tanks (USTs) were removed from a common excavation. The tanks formerly contained leaded gasoline, unleaded gasoline, and diesel fuel. Samples from the bottom of the UST excavation and the excavation stockpile contained up to 1,400 milligrams per kilogram (mg/kg) GRO, 8,300 mg/kg DRO, and 25.7 mg/kg total BTEX, which exceeded the 10 mg/kg total BTEX cleanup level applicable at the time. Benzene was not detected although the detection limits were elevated to greater than the cleanup level. Stockpiled soils were placed back into the excavation. The shop building burned down in the early 2000s and the facility was rebuilt on the opposite side of the highway.

Site characterization was conducted in 2007 which included excavating 21 test pits, advancing 8 soil borings that were completed as monitoring wells MW-1 through MW-8, removing and disposing of a heating oil UST, and collecting soil and groundwater samples. Two EPA-regulated Class V injection wells were identified at the site: one dry well east of the former building, and the outlet of an underground holding tank south of the former building. Both are thought to have been connected to floor drains in the former building's concrete pad. The holding tank was removed during the 2007 site characterization activities.

The site characterization identified petroleum hydrocarbon impacted soil in the vicinity of the dry well, at the former heating oil UST removed in 2007, at the former floor drain holding tank removed in 2007, and at the former diesel and gasoline USTs removed in 1997. DRO and RRO were detected up to 51,900 mg/kg and 151,000 mg/kg, respectively, in a sediment sample collected from the dry well, and benzene was detected up to 0.424 mg/kg in Test Pit TP21, located north of the

former gasoline UST. A sediment sample collected beneath the dry well contained tetrachloroethene (PCE) at 0.856 mg/kg. Arsenic, cadmium, and chromium were also detected above the cleanup level, but these detections are likely the result of naturally occurring background metals and not associated with site contamination. Groundwater samples collected from the 8 monitoring wells contained DRO up to 5.80 mg/l in well MW-3, GRO up to 3.33 mg/l in MW-4 and benzene up to 0.0498 mg/l in MW-5. Groundwater sampling indicated a hydrocarbon plume was present at the former facility, but had not migrated offsite. Because road salt had been stored at the facility, groundwater samples were also analyzed for chloride, which was detected up to 1,560 mg/l.

Approximately 140 cubic yards (cy) of contaminated soil were excavated from the four source areas in 2009 and stockpiled for future landfarming on the concrete pad of the former building. The floor drains on the concrete slab were sealed with gravel and concrete prior to placing the soil. The dry well's concrete ring walls and drain pipes were removed. Confirmation samples collected from the former holding tank, former heating oil UST, and former gasoline and diesel UST excavations did not contain contaminants above cleanup levels. At the dry well excavation, DRO concentrations greater than the cleanup level were measured in four of the six sample locations, with a maximum concentration of 4,220 mg/kg DRO. Approximately 8 cy of soil from the dry well excavation were stockpiled separately from the landfarming area. The drinking water well was decommissioned at this time. Groundwater sample results exceeding the cleanup level were limited to Well MW-4, located near the former gasoline and diesel USTs, which contained estimated 0.0245 mg/L benzene. The remaining groundwater samples did not contain contaminants above cleanup levels.

In 2010 monitoring well MW-9 was installed within the former dry well excavation, the landfarmed soil was tilled, soil samples were collected from the landfarm area and the 8-cy soil stockpile generated from the dry well excavation, and groundwater samples were collected from 7 monitoring wells. Contaminant concentrations in soil samples collected from Boring B9 were less than the cleanup levels. This boring was advanced in the vicinity of the 2009 sample from the dry well excavation with the highest DRO results. The 2009 dry well soil stockpile was incorporated into the main portion of the landfarm in September 2010, after analytical testing indicated that the PCE concentration had been reduced to less than the cleanup level. DRO and benzene were detected at 1.88 mg/l and 0.0185 mg/l respectively, in a groundwater sample from well MW-4; no other groundwater samples contained contaminants greater than cleanup levels.

The landfarmed soil was tilled on four occasions in 2011 and four occasions in 2012. A soil sample collected in 2011 contained DRO at 1,720 mg/kg and the 2012 sample contained DRO at 689 mg/kg. PCE and other contaminants were not detected above cleanup levels. Groundwater samples collected in 2012 did not contain contaminants above cleanup levels. The monitoring wells were decommissioned in accordance with ADEC guidance in October 2012.

Pathway Evaluation

Following investigation and cleanup at the site, exposure to the remaining contaminants was 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	Contaminants were not detected in surface soils and contaminant concentrations in the landfarmed soil are below direct contact and ingestion cleanup levels.
Sub-Surface Soil Contact	De Minimis Exposure	Contaminant concentrations remaining in subsurface soil are below direct contact and ingestion cleanup levels and covered by clean fill
Inhalation – Outdoor Air	De Minimis Exposure	Contaminant concentrations in soil are less than the inhalation cleanup levels and covered by clean fill
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Buildings are not present at the site and contaminants are not present above inhalation cleanup levels.
Groundwater Ingestion	De Minimis Exposure	Contaminants are present in groundwater, but at concentrations less than cleanup levels and groundwater is not currently used as a drinking water source at the site.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in this area and is unlikely to be impacted by contamination at the site.
Wild Foods Ingestion	Pathway Incomplete	Wild foods are not likely to be harvested near the area.
Exposure to Ecological Receptors	Pathway Incomplete	There are no complete exposure pathways to ecological receptors at the site.

Notes to Table 1: "De-minimis exposure" means that in ADEC's judgment receptors are unlikely to be affected by the 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

Based on the information available, ADEC has determined no further assessment or cleanup action is required. There is no longer a risk to human health or the environment, and this site will be designated as closed on the Department's database.

Although a Cleanup Complete determination has been granted, ADEC approval is required for off-site soil disposal in accordance with 18 AAC 75.325(i). It should be noted that movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.

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 any questions regarding this letter, please do not hesitate to contact me at (907) 269-7691 or you can reach me via email at Jake.Gano@alaska.gov.

Sincerely,

Jake Gano, P.E.
Environmental Program Specialist

Cc: Al Gilbert, ADOT&PF M&O
Tom VanHove, ADOT&PF M&O