No Department of Defense Action Indicated Report

Containerized Hazardous, Toxic, or Radioactive Waste Project # F10AK1016-09 Haines-Fairbanks Pipeline Milepost 475.25 (Gate Valve #59) Near Dot Lake, Alaska

April 2016



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1.0 INTRODUCTION

The Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) authorizes the cleanup of contamination resulting from past military activities at sites no longer owned by the Department of Defense (DOD). A hazardous, toxic, or radioactive waste (HTRW) project (F10AK1016-01) was authorized for the Haines-Fairbanks Pipeline (HFP) in 2002. The Haines-Fairbanks Pipeline was formerly used by the DOD and is eligible for cleanup under the DERP-FUDS. In 2012, a revised Inventory Project Report (INPR) was completed to modify the existing -01 HTRW project and add 13 containerized hazardous, toxic, or radioactive waste (CON/HTRW) projects (F10AK1016-02 through -14). As part of the 2012 HFP INPR revision, a separate CON/HTRW project (F10AK1016-09) was established for Haines-Fairbanks Pipeline Milepost 475.25, also known as the Gate Valve #59 Site. The approximate location of the site is 63.67640° North Latitude, 144.15352° West Longitude.

Based on the results of several environmental investigations and a limited soil excavation at the Gate Valve #59 Site, the F10AK1016-09 CON/HTRW project of the Haines-Fairbanks Pipeline is being recommended for closure and No DOD Action Indicated (NDAI) status.

The United States Army Corps of Engineers (USACE) is an agent for the Department of Defense and has been assigned the responsibility of coordinating activities at Formerly Used Defense Sites. This NDAI report is issued by the United States Army Corps of Engineers, Alaska District (USACE-AK); the lead agency for the Haines-Fairbanks Pipeline FUDS.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Haines-Fairbanks Pipeline History

The United States Army Corps of Engineers was responsible for pipeline design and construction. The HFP, its five pumping stations, and two associated bulk storage terminals were constructed by private contractors with oversight from USACE over a period of 22 months from 1953 to 1955. The HFP was built to transport fuels from the port at Haines, Alaska, to the military bases in interior Alaska. The pipeline was run by federal civilians supervised by the Petroleum Division on Fort Richardson. Four types of fuel were transported through the pipeline including diesel, automotive gas, jet fuel, and aviation gas; however the majority of the fuel transported was jet fuel (JP4). Much of the 8-inch diameter pipeline was laid on the ground surface, although approximately 96 miles of the HFP near Delta Junction, Alaska, and most of the 42 miles of HFP between the Haines Fuel Terminal and the Canadian border were buried. Other portions of the HFP were also buried, although these intervals were short and intermittent.

Originally, the HFP was constructed with five pump stations located at Haines and Tok, Alaska, and Border, Haines-Junction, and Donjek in Yukon Territory, Canada. Bulk fuel storage facilities were also constructed at Haines and Tok, Alaska. Six new pump stations were added to the HFP in 1962 in response to increased military fuel demands. The new pump stations were located at Blanchard River, Destruction Bay, and Beaver Creek in Yukon Territory, Canada, and at Lakeview, Sears Creek, and Timber, Alaska.

The Haines-to-Tok section of the pipeline was shut down in July 1971. In 1973, the Tok-to-Eielson section of the HFP was deactivated. The bulk fuel storage facilities in Haines and Tok, Alaska, continued to operate until 1979, when the U.S. Army closed the Tok fuel storage facility. The Tok-to-Fairbanks section of the HFP was briefly reactivated to pump the remaining fuel from the station. All of the fuel was removed from the Tok terminal in July 1979 and the pipeline was shut down. Most of the unused pipeline has been removed or salvaged by nonmilitary entities.

The HFP was plagued with leaks from corrosion, ice damage, and vandalism (e.g., bullet holes) throughout its operational history. Underground portions of the pipeline experienced damage from broken welds and at least one accidental breach from borehole drilling. Ice plugs formed in the pipeline during system startup and resulted in spills at a number of sites; however, most of these ice plugs were located in Canadian sections of the pipeline (CRREL 1972).

2.2 Site Location and Background

The Haines-Fairbanks Pipeline extends a total of 626 miles from Haines, Alaska, through the Canadian provinces of British Columbia and the Yukon Territory, through Tok, Alaska, and up to Fairbanks, Alaska. The pipeline route generally parallels the Haines Highway from Haines, Alaska, to Haines Junction, Yukon Territory. It then follows the Alaska and Richardson Highways to Delta Junction, Alaska, continuing along the Richardson Highway to Fort Wainwright, Alaska. Approximately 52 percent of the pipeline route lies within United States territory.

Pipeline Milepost (PMP) 475.25 (Gate Valve #59 Site)

Gate Valve #59 is located at Pipeline Milepost 475.25 near Alaska Highway Milepost 1364.5 (Figure 1). No known releases are associated with this site, although fuel-contaminated soil was confirmed near the valve and vault during the 2007 Site Investigation by CH2M HILL. A 2008 Site Investigation by the United States Army Corps of Engineers (USACE) indicated fuel contamination at a depth of 33 feet below ground surface, possibly near the groundwater table. Groundwater contamination was confirmed approximately 50 feet northwest of the former gate valve location by Fairbanks Environmental Services, Inc (FES) in 2011.

3.0 REMOVAL ACTIVITIES

Several limited environmental investigations and cleanup activities have occurred at various locations along the HFP since its closure in 1973. The most recent activities concerning the Gate Valve #59 Site occurred between 2007 and 2015.

A site investigation was performed at the Gate Valve #59 Site in 2007 by CH2M HILL. The effort included the removal of the gate valve and associated vault, along with the completion of a test pit (measuring 4 feet wide, 16 feet long, and 8 feet deep) in the location of the former valve and vault. Approximately 20 cubic yards of fuel-impacted soil were removed from the test pit and disposed of. A soil sample collected from the base of the excavation indicated that gasoline-range organics (GRO) and diesel-range organics (DRO) were present at or above the applicable Alaska Department of Environmental Conservation (ADEC) Method Two soil cleanup levels, as

promulgated in Table B1 and B2, Title 18 of the Alaska Administrative Code 75.341 (18 AAC 75) for the "Over 40 Inches" precipitation zone. Based on the results of this effort, it was determined that additional investigation of the site was necessary (CH2M HILL 2008).

USACE-AK completed a follow-on site investigation in 2008 using the rapid optical screening tool (ROST). Results from the ROST investigation indicated that fuel-impacted soil was present, most prevalent at depths at and beyond 24 feet below ground surface (bgs). A soil sample was collected adjacent to ROST probe GV59-01 at a depth of 24 feet bgs. The soil sample registered a DRO concentration of 1,000 milligrams per kilogram (mg/kg), exceeding the applicable ADEC cleanup level of 250 mg/kg (USACE 2010). The vertical and horizontal extents of fuel contamination were not delineated during this effort and additional investigation of the site was recommended (USACE 2010).

In 2011, Fairbanks Environmental Services, Inc. (FES) drilled eleven soil borings, collected twenty primary soil samples, and installed and sampled six groundwater monitoring wells at the site. Soil samples were analyzed for GRO, DRO, residual-range organics (RRO), polycyclic aromatic hydrocarbon (PAHs), benzene, ethylbenzene, toluene, xylenes (BTEX), and Resource Conservation and Recovery Act (RCRA) metals (plus nickel and vanadium). None of the analytes (except arsenic) exceeded the most stringent Alaska Department of Environmental Conservation (ADEC) Method Two soil cleanup levels, as promulgated in Table B1 and B2 of 18 AAC 75 for the "Over 40 Inches" precipitation zone. Arsenic concentrations at the site are assumed to be representative of background conditions. The six newly-installed groundwater wells were sampled for GRO, DRO, RRO, PAHs, BTEX, and RCRA metals (plus nickel and vanadium). One of the wells (59-MW4) registered a DRO concentration (1.8 milligrams per liter [mg/L]) in excess of the applicable ADEC cleanup level (1.5 mg/L), as listed in Table C of 18 AAC 75. No other exceedances were noted at the site (FES 2012).

USACE-AK performed a follow-on groundwater sampling event at the site in May 2012. Once again, the groundwater sample from monitoring well 59-MW4 exceeded the ADEC cleanup level for DRO, with a concentration of 1.61 mg/L (USACE 2012).

FES completed a follow-on groundwater sampling event at the site in September 2013, which consisted of additional sampling of the six groundwater monitoring wells at the site. There were no exceedances of applicable ADEC cleanup levels in any of the wells, including 59-MW4, which registered a DRO concentration of 1.1 mg/L. Based on the results of this effort, the overall decreasing trend of contaminant concentrations at the site, and the work completed by CH2M HILL in 2007 to remove contaminated soil, site closure and groundwater well decommissioning was recommended by FES (FES 2013).

The six groundwater monitoring wells installed at the site in 2011 were decommissioned by Bristol Environmental Remediation Services, LLC (Bristol) on September 16, 2015. Site activities were conducted in accordance with the State of Alaska Department of Transportation and Public Facilities (ADOT&PF) special use permit. The wells were decommissioned in-place in accordance with applicable ADEC guidance and the site was restored as required (Bristol 2015).

4.0 SUMMARY OF REMEDY

Based on the results of the aforementioned investigation efforts and cleanup activities, USACE-AK has recommended that no further action is required at the Gate Valve #59 Site (F10AK1016-09). This NDAI determination may be reevaluated in the event that additional information becomes available or that previously undiscovered and FUDS-eligible contamination is present at the site.

5.0 REFERENCES

- Bristol, 2015. Gate Valve No. 59 Well Decommissioning Technical Memorandum Report, Draft, October. (F10AK101609_07.08_0500_p)
- CRREL, 1972. Preliminary Investigations of Petroleum Spillage, Haines-Fairbanks Military Pipeline, Alaska, April. (F10AK101601_01.09_0501_a)
- FES, 2012. Final Remedial Investigation Report, Gate Valve #45, Gate Valve #49, Gate Valve #52, and Gate Valve #59 Sites, Haines-Fairbanks Pipeline FUDS, Various Locations along the Alaska and Richardson Highways, Alaska, October. (F10AK101602_03.10_0500_a)
- FES, 2013. Final Remedial Investigation Report, Haines Area Sites (PMP 1.9, 17.7, 19.5, and 25.5) Haines-Fairbanks Pipeline Formerly Used Defense Site, Haines, Alaska, April. (F10AK101602_03.10_0500_a)
- USACE, 2010. Final Report, 2008 Rapid Optical Screening Tool (ROST) Site Investigation. Haines-Fairbanks Pipeline FUDS F10AK1016, Various locations along the Alaska and Richardson Highways, Alaska. March. (F10AK101601_01.09_0503_a)
- USACE, 2012. Spring 2012 Groundwater Sampling Chemical Data Report, Haines-Fairbanks Pipeline: Gate Valve 52 and 59 FUDS, Near Tok, Alaska. September. (F10AK101601_03.02_0502_a)

Figures



Attachments

DECLARATION OF PROJECT CLOSURE DECISION And NO DEPARTMENT OF DEFENSE ACTION INDICATED For FORMERLY USED DEFENSE SITE CON/HTRW PROJECT PIPELINE MILEPOST 475.25 (GATE VALVE #59 - F10AK1016-09) NEAR DOT LAKE, ALASKA

STATEMENT OF BASIS

Authority for the Defense Environmental Restoration Program for Formerly Used Defense Sites (DERP-FUDS) for Containerized Hazardous, Toxic, or Radioactive Waste (CON/HTRW) projects is derived from the Defense Environmental Restoration Program, 10 United States Code (USC) 2701-2707. The decision to close out the CON/HTRW project (F10AK1016-09) is based on the 2016 No Department of Defense Action Indicated (NDAI) Report and the results of site investigations and removal activities completed by or on behalf of the United States Army Corps of Engineers – Alaska District (USACE-AK) between 2007 and 2015.

SITE DESCRIPTION AND HISTORY

The Haines-Fairbanks Pipeline (HFP) extends a total of 626 miles from Haines, Alaska, through the Canadian provinces of British Columbia and the Yukon Territory, through Tok, Alaska, and up to Fairbanks, Alaska. The pipeline route generally parallels the Haines Highway from Haines, Alaska, to Haines Junction, Yukon Territory. It then follows the Alaska and Richardson Highways to Delta Junction, Alaska, continuing along the Richardson Highway to Fort Wainwright, Alaska. Approximately 52 percent of the pipeline route lies within United States territory.

An original HTRW project (F10AK1016-01) was authorized for the HFP in 2002 after completing a Findings and Determination of Eligibility (FDE). The results of the FDE indicated that the Haines-Fairbanks Pipeline was formerly used by the Department of Defense (DOD) and eligible for cleanup under the DERP-FUDS. In 2012, a revised Inventory Project Report (INPR) was completed to modify the existing -01 HTRW project and add 13 CON/HTRW projects (F10AK1016-02 through -14).

As part of the 2012 HFP INPR revision, the F10AK1016-09 CON/HTRW project was established for Haines-Fairbanks Pipeline Milepost 475.25, also known as the Gate Valve #59 Site.

DESCRIPTION OF THE SELECTED REMEDY AND IMPLEMENTATION

Based on the results of cleanup and remedial investigation efforts completed between 2007 and 2015, USACE-AK has recommended that no further action is required at the Gate Valve #59 Site.

DECLARATION

In accordance with the Defense Environmental Restoration Program for Formerly Used Defense Sites, the U.S. Army Engineer District, Alaska, has completed all CON/HTRW activities at the

Haines-Fairbanks Pipeline Milepost 475.25 – Gate Valve #59 FUDS (F10AK1016-09), near Dot Lake, Alaska. This Declaration of Project Closure Decision supports the conclusion that all known sources of CON/HTRW have been remediated. No further CON/HTRW actions are required by the DOD at this project location. This decision may be reviewed and modified in the future if any new information becomes available which indicates the presence of eligible CON/HTRW that may cause a risk to human health or the environment.

This Declaration of Project Closure Decision has been prepared and approved by the undersigned in accordance with the FUDS Program Policy, Engineer Regulation (ER) 200-3-1, May 10, 2004.

13APR/6 Date

MICHAEL S/BROOKS COL, EN Commanding

The State of Alaska, through the Department of Environmental Conservation agrees this Haines-Fairbanks Pipeline Milepost 475.25 Gate Valve #59 Site CON/HTRW F10AK1016-09 project closure is consistent with state cleanup requirements. The decision may be reviewed and modified in the future if information becomes available that indicates the presence of contaminants or waste that may cause unacceptable risk to human health or the environment.

Date_____

Kim DeRuyter Environmental Program Manager Alaska Department of Environmental Conservation
