



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: 2102.38.010

June 4, 2014

Doug Deters
AFCEC/OLAJ
6346 Arctic Warrior Drive
JBER, AK 99506-3221

Re: Cleanup Complete Determination for JBER-Ft. Richardson TU036 Bldg 47022 UST

Dear Mr. Deters;

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the referenced site. This decision document memorializes the site history, cleanup actions, cleanup complete determination, and standard conditions for long-term site management for CS DB Hazard ID 2763 and file number 2102.38.010.

Site Name and Location

JBER-Ft. Rich TU036 Bldg 47022 UST
West Randall Road, east of the
intersection with the Davis Highway
Joint Base Elmendorf-Richardson (JBER-Richardson), Alaska 99505.

Regulatory Authority for Determination: 18 AAC 75

Site Description and Background

Previous investigations and cleanup actions were conducted at TU036 in 1996 and 1997. In 1996, a UST was discovered and removed in association with the removal of Building 47022, and samples were collected from the bottom of the excavation. Based on the results of the 1996 excavation, a follow-up investigation was conducted in 1997 when six soil borings were advanced, and soil samples were collected at depths ranging from 5 to 30 feet below ground surface (bgs) to assess the extent of contamination in the vicinity of the former tank. Soil samples were analyzed for the following: diesel-range organics (DRO), residual-range organics (RRO), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), total organic carbon (TOC), and a sieve analysis (ASTM International [ASTM] C136) (Final Release Investigation Report, Building 47022, Fort Richardson, Alaska, Dowl/Ogden, December, 1997).

Contaminants of Concern

Diesel Range Organics (DRO)

Cleanup Levels

The cleanup level for the site containing DRO contamination in the Under 40-Inch Zone for the ingestion pathway is 10,250 mg/kg for soil. Migration to groundwater soil cleanup levels are not applicable in this circumstance, because groundwater is not likely to be impacted by petroleum contamination, based on the depth to groundwater (150 feet below ground surface) and maximum depth of contamination (20 feet below ground surface).

Characterization and Cleanup Activities

In 1996, a release investigation detected DRO at a maximum concentration of 5,777 mg/kg (from soils beneath the edge of the underground storage tank (UST). DRO was also detected at 3,000 mg/kg (directly east of the location of the former UST) and 2,000 mg/kg (AP-3799). In 2013, a follow-up investigation detected a maximum concentration of 3,000 mg/kg DRO at 15-20' bgs, 10-15' bgs and 486 mg/kg 5-10' bgs (TU036-SB03). The soil source area for TU036 (defined as the three-dimensional soil volume with DRO concentrations greater than 250 mg/kg) begins at approximately 10 feet bgs, extends vertically to approximately 20 feet bgs, and covers an area approximately 54 by 10 feet (for an approximate volume of 5,400 cubic feet, or 200 cubic yards).

As described in the approved site characterization work plan, the borings were terminated after collecting two samples beyond the last evidence of contamination, as determined from photoionization detector (PID) field-screening and visual/olfactory evidence. Groundwater was not encountered during the investigation, and no groundwater monitoring wells have been constructed at TU036.

Based on information from nearby TU110 located southeast of TU036, the depth to groundwater is estimated at 150 feet bgs. Regional groundwater flow direction is toward the northwest. There is no current use of groundwater as a drinking water source at the site.

Cumulative Risk Evaluation

The Method Three Hydrocarbon Risk Calculator (HRC) was used to evaluate risk from petroleum contamination at TU036. The HRC is designed for sites with petroleum contamination—specifically the petroleum fractions, BTEX, PAHs, and other compounds dissolved in petroleum—with the intention and purpose of providing an improved tool for assessing human health risk from this type of contamination.

The estimated rounded cumulative cancer risk at TU036 for the current industrial and hypothetical residential exposure scenarios, across all exposure pathways, (1×10^{-6} and 7×10^{-6}) is below the regulatory risk standard of 1×10^{-5} for petroleum hydrocarbons.

The estimated cumulative noncancer HI at TU036 for the current industrial and hypothetical residential exposure scenarios, across all exposure pathways, (0.03 and 0.1) is below the regulatory risk standard of 1. TU036 meets the ADEC risk criteria [18 AAC 75.325(g)] for petroleum hydrocarbons.

An ecoscoping form was completed for TU036 and no potential risks to the environment/ecological receptors were observed, and petroleum hydrocarbon contamination in soil is considered insignificant (less than 0.5 acre).

Pathway	Result	Explanation
Direct Contact with Surface Soil	Pathway Incomplete	No contamination present
Direct Contact with Subsurface Soil:	De Minimis* Exposure	Contamination remains in the sub-surface, but is below ingestion cleanup levels.
Outdoor Air Inhalation:	Pathway Incomplete	Contamination remains in the sub-surface, but is below inhalation cleanup levels.
Groundwater Ingestion:	Pathway Incomplete	Groundwater is not used as a drinking water source in the vicinity of the site.
Surface Water Ingestion:	Pathway Incomplete*	Surface water is not used as a drinking water source in the vicinity of the site.
Wild or Farmed Foods Ingestion:	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Indoor Air Inhalation (Vapor Intrusion):	Pathway Incomplete	There are no buildings present within 30 horizontal or vertical feet of the source area; therefore, the vapor intrusion pathway is considered incomplete for the current industrial exposure scenario.
Ecological:	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.

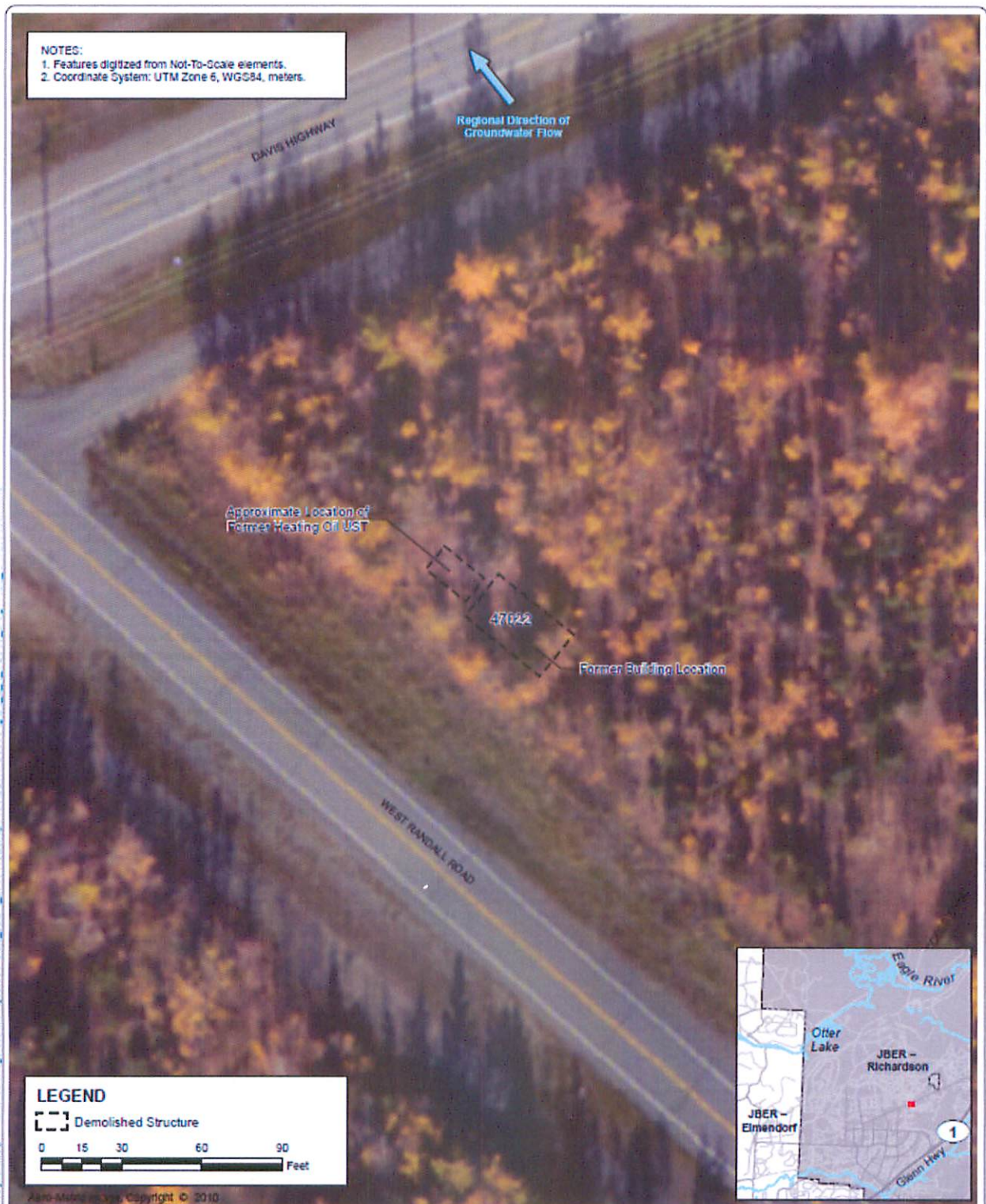
*De-Minimis Exposure” means that in ADEC’s judgment receptors are unlikely to be affected by the minimal volume or concentration of remaining contamination. “Pathway Incomplete” means that in ADEC’s judgment contamination has no potential to contact receptors/

ADEC Decision

Based on a review of the environmental records, ADEC has determined that TU036 has been adequately characterized and has achieved the applicable requirements under the site cleanup rules. ADEC is issuing this written determination that cleanup is complete, subject to a future department determination that the cleanup is not protective of human health, safety, welfare, or of the environment [18 AAC 75.380(d)]. A “Closed” designation will be entered for TU036 in the Contaminated Sites Database, subject to the following standard conditions.

Standard Conditions

1. Any proposal to transport soil or groundwater off-site requires ADEC approval in accordance with 18 AAC 75.325. 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 figure below).



2. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

3. Notations of these requirements shall be made on the Environmental Restoration map/
Base General Plan which will show up during a dig permit review/work clearance request
process.

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 99811-1800, 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 99811-1800, 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 feel free to contact me at (907) 269-7552.

Sincerely,



Louis Howard
Environmental Program Specialist

cc: Gary Fink via email