



THE STATE
of **ALASKA**
GOVERNOR BILL WALKER

**Department of
Environmental Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 860.26.002

December 06, 2016

Al Weilbacher
AFCEC/CIBE
2261 Hughes Ave., Suite 155
JBSA Lackland, TX 78236-9853

Re: Decision Document: Galena AFS/Airport - UST 1770 (CST013)
Cleanup Complete Determination

Dear Mr. Weilbacher:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Site Galena AFS/Airport - UST 1770 (CST013) located within the City of Galena, Galena, Alaska. Based on the information provided to date, it has been determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment and no further remedial action will be required unless new information becomes available that indicates residual contaminants may pose an unacceptable risk.

This Cleanup Complete determination is based on the administrative record for the CST013, which is located in the ADEC office in Fairbanks, Alaska. This decision letter summarizes the site history, cleanup actions and levels, and standard site closure conditions that apply.

Site Name and Location:

Galena AFS/Airport - UST 1770 (CST013)
Block 1, Lot 2, Former Bldg. 1770
City of Galena
Galena, Alaska, 99741

Name and Mailing Address of Contact Party:

Al Weilbacher
AFCEC
2261 Hughes Ave., Suite 155
JBSA Lackland, TX 78236-9853

DEC Site Identifiers:

File No.: 860.26.002
Hazard ID.: 25168

Regulatory Authority for Determination:

18 AAC 78 and 18 AAC 75

Site Description and Background

Site CST013 is located within the western side of the Former Galena FOL cantonment "Triangle" on land owned by the City of Galena. The Site consists of the area surrounding two former regulated underground storage tanks (USTs) located just southwest of the former incinerator building (Building 1770). UST 1770-1 was a 1,000-gallon fuel oil tank that supplied the furnace and incinerator building, and UST 1770-2 was a 1,000-gallon waste oil tank. The two USTs were in operation from 1974 until approximately 1993, and were

removed in 1997 along with approximately 100 cubic yards (cy) of petroleum contaminated soil. The Leaking Underground Storage Tanks database indicates the tanks are permanently out of use and were closed on July 23, 1998. Site CST013 is currently vacant of permanent structures, but the concrete building foundation slab remains, covering an area approximately 36 feet (ft) by 40 ft. The area has been used recently as a storage area for surplus and reclaimed building materials.

Contaminants of Concern

Site characterization efforts were conducted at Site CST013 in 2010 and 2011 to identify any remaining impacts to soil and groundwater from releases of fuel oil and waste oil from the two former USTs. The target analytes selected for analysis for Site UST 1770 included gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), volatile organic compounds (VOCs) (including benzene, toluene, ethylbenzene, and xylenes [BTEX], 1,2-dibromoethane (EDB), and 1,2-dibromo-3-chloropropane (DBCP), polycyclic aromatic hydrocarbons (PAHs), metals, and polychlorinated biphenyl (PCBs). The 2010/2011 investigation detected contaminants in subsurface soil beneath and in the general vicinity of the 1997 excavation. The bottom of the contaminated soil interval extended into the variably saturated zone. However, groundwater was not found to be impacted by the source area at Site CST013.

Based on the analyses completed, the following contaminants were detected above the applicable cleanup levels:

- Gasoline range organics (GRO, C6-C10)
- Diesel range organics (DRO, C10-C25)
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene
- 1-Methylnaphthalene
- 2-Methylnaphthalene
- Ethylbenzene
- Naphthalene
- n-Butylbenzene
- n-Propylbenzene
- p-Isopropyltoluene
- sec-Butylbenzene
- Xylenes, total

Characterization and Cleanup Activities

Site characterization and cleanup activities conducted under the regulatory authority of the Contaminated Sites Program began in 1997. These activities are described below.

USTs 1770-1 and 1770-2 were removed along with approximately 100 cubic yards of soil in 1997 (HLA/Wilder, February 1999). The UST excavation area extended north of the UST locations to the southern edge of Building 1770. Former supply, return, and vent pipelines, which ran from the USTs directly north to Building 1770, were cut and capped near the building foundation (HLA/Wilder, February 1999). Both USTs were empty when removed and did not require special handling or disposal. Excavated soil was placed in a temporary stockpile on a reinforced 20-mil liner over a concrete pad south of Building 1499. Eight soil samples were collected as confirmation samples from the UST excavation. The results for the confirmation soil samples indicated elevated concentrations of DRO, GRO, and several other petroleum-related chemicals were detected above the Method Two cleanup levels. However, the excavation was backfilled with clean gravel.

A reconnaissance-level site visit and ecological site survey were conducted at Site CST013 in October 2009 as part of the Preliminary Assessment (PA) (CH2M HILL, September 2011). The PA reported that the site appeared to have been graded in the recent past, and gravel may have been stockpiled or placed in the area. With the addition of gravel and recent grading, the existing ground surface no longer represents the ground surface when the incinerator building was in operation. In addition, no viable habitat for plants or animals was observed at Site, therefore, terrestrial ecological exposure pathways are considered incomplete at Site.

During the spring and summer of 2010 and 2011 a Site Characterization (SC) investigation was conducted for the site. The objective of the SC investigation was to evaluate the nature and extent of petroleum contamination at the Site and determine whether a Method Two closure would be appropriate for the Site. The SC report recommended proceeding to a cleanup plan. In November 2014, DEC approved a Site Characterization addendum that proposed excavating an estimated 500 cubic yards of petroleum contaminated soil.

The Cleanup levels for the site are the more restrictive of either the Migration to groundwater soil cleanup level or the Human Health cleanup level established in 18 AAC 75.341 (d), Table B2 (ADEC, Nov. 2016).

A cleanup plan for Site CST013 was received in June 2015. The cleanup plan proposed excavation of petroleum contaminated soil greater than Method Two soil cleanup levels and treating the soil at the Galena landfarm. The cleanup plan was approved in August 2015. Approximately 340 loose cubic yards of petroleum contaminated soil was excavated and transported to the Galena landfarm for treatment between August 25 and August 30, 2015. Site cleanup and restoration was completed by September 3, 2015. The approved cleanup levels and remaining soil concentrations on site are presented in Table 1 below.

Table 1 – Approved Cleanup Levels and Remaining Contaminant Concentrations

Contaminant	Soil Cleanup level (mg/kg)	Remaining Soil Concentrations (mg/kg)	Groundwater (mg/L)
GRO	300	320	N/A
DRO	250	2,500	N/A
1,2,4-Trimethylbenzene	0.016	ND	N/A
1,3,5-Trimethylbenzene	1.3	ND	N/A
1-Methylnaphthalene	0.41	ND	N/A
2-Methylnaphthalene	1.3	ND	N/A
Ethylbenzene	0.13	0.039	N/A
Naphthalene	0.038	0.014	N/A
n-Butylbenzene	20	ND	N/A
n-Propylbenzene	9.1	ND	N/A
p-Isopropyltoluene	51	ND	N/A
sec-Butylbenzene	28	ND	N/A
Xylenes, total	1.5	0.077	N/A

N/A – not applicable. Groundwater not impacted above Table C.

ND – Not detected above 1/10th human health cleanup level.

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

Cumulative Risk Evaluation

Pursuant to 18 AAC 75.325(g), If using method two or method three for determining the applicable soil cleanup levels as described in 18 AAC 75.340 - 18 AAC 75.341, or if applying the groundwater cleanup levels at Table C in 18 AAC 75.345, a responsible person shall ensure that, after completing site cleanup, the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, and an evaluation of the remaining concentrations of contaminants using the on line Cumulative risk Calculator, ADEC has determined that residual contaminant concentrations meet the human health cumulative risk criteria for residential land use.

Exposure Pathway Evaluation

Following investigation and cleanup at the site, exposure pathways 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, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Contamination is not present in surface soil (0 to 2 feet below ground surface).
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination remains in the sub-surface, but is below human health cleanup levels. Approximately 3 cubic yards of DRO and GRO impacted soil remains below a concrete slab on the site. Cumulative risk from all chemicals of concern is below a cumulative carcinogenic risk of 10-5.
Inhalation – Outdoor Air	De-Minimis Exposure	Contamination remains in the sub-surface, but is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	No occupied buildings located on this site and none are expected. The area is used for outdoor storage of building materials.
Groundwater Ingestion	De-Minimis Exposure	No chemicals of concern have been detected above the Table C groundwater cleanup levels.
Surface Water Ingestion	Pathway Incomplete	Surface water is not present in the vicinity of the site.
Wild and Farmed Foods Ingestion	Pathway Incomplete	The site is gravel covered with no ecologic habitat and is not used for Wild or Farmed Foods.
Exposure to Ecological Receptors	Pathway Incomplete	The site is gravel covered with no ecologic habitat.

Notes to Table 2: “De-Minimis Exposure” means that in ADEC’s judgment receptors are unlikely to be adversely 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. “Exposure Controlled” means there is an institutional control in place limiting land or groundwater use and there may be a physical barrier in place that prevents contact with residual contamination.

ADEC Decision

Soil and groundwater contamination at the site have generally been cleaned up to concentrations below the approved cleanup levels suitable for residential land use. A De-Minimis amount of petroleum contaminated soil remains below a concrete slab on site, but concentrations are below human health cleanup levels and do not pose a migration to groundwater concern. This site will receive a “Cleanup Complete” designation on 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(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 figures.)
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. Groundwater throughout Alaska is protected for use as a water supply for drinking, culinary and food processing, agriculture including irrigation and stock watering, aquaculture, and industrial use. Contaminated site cleanup complete determinations are based on groundwater being considered a potential drinking water source. In the event that groundwater from this site is to be used for other purposes in the future, such as aquaculture, additional testing and treatment may be required to ensure the water is suitable for its intended use.

This determination is in accordance with 18 AAC 75.380 and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that contaminants at this site may pose an unacceptable risk to human health, safety, or welfare or to 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, 555 Cordova Street, Anchorage, Alaska 99501-2617, 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, P.O. Box 111800, 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 any questions, please do not hesitate to contact the ADEC Project Manager at (907) 451-2180, or by email at dennis.shepard@alaska.gov .

Approved By:

M. Dennis Shepard
Environmental Program Specialist

cc: Kim DeRuyter, ADEC DSMOA Section Manager, via email



Figure 1-1 State and Site Vicinity Maps

Cleanup Complete Report for UST1770,
Former Incinerator Underground Storage
Tanks (USTs) (Site CST013)

Galena, Alaska



Map Units: Meters
Coordinate System: UTM ZONE 4N NAD 1983 Meters

0	250	500
Feet		
0	76	152
Meters		

Notes:
1. Image credit: Aerometric, 2012.



Prepared by: jrb, 8/2/2016, L:\GCH\20284_001\GIS\Map\Final\F1_15SiteAerial.mxd

Analyte / CUL Source / CUL mg/kg
1,2,4-Trimethylbenzene / ADEC Method 2 Migration to Groundwater CUL / 23
1,3,5-Trimethylbenzene / ADEC Method 2 Migration to Groundwater CUL / 23
1-Methylnaphthalene / ADEC Method 2 Migration to Groundwater CUL / 6.2
2-Methylnaphthalene / ADEC Method 2 Migration to Groundwater CUL / 6.1
C10-C25 DRO / ADEC Method 2 Migration to Groundwater CUL / 250
C6-C10 GRO / ADEC Method 2 Migration to Groundwater CUL / 300
Ethylbenzene / ADEC Method 2 Migration to Groundwater CUL / 6.9
Naphthalene / ADEC Method 2 Migration to Groundwater CUL / 20

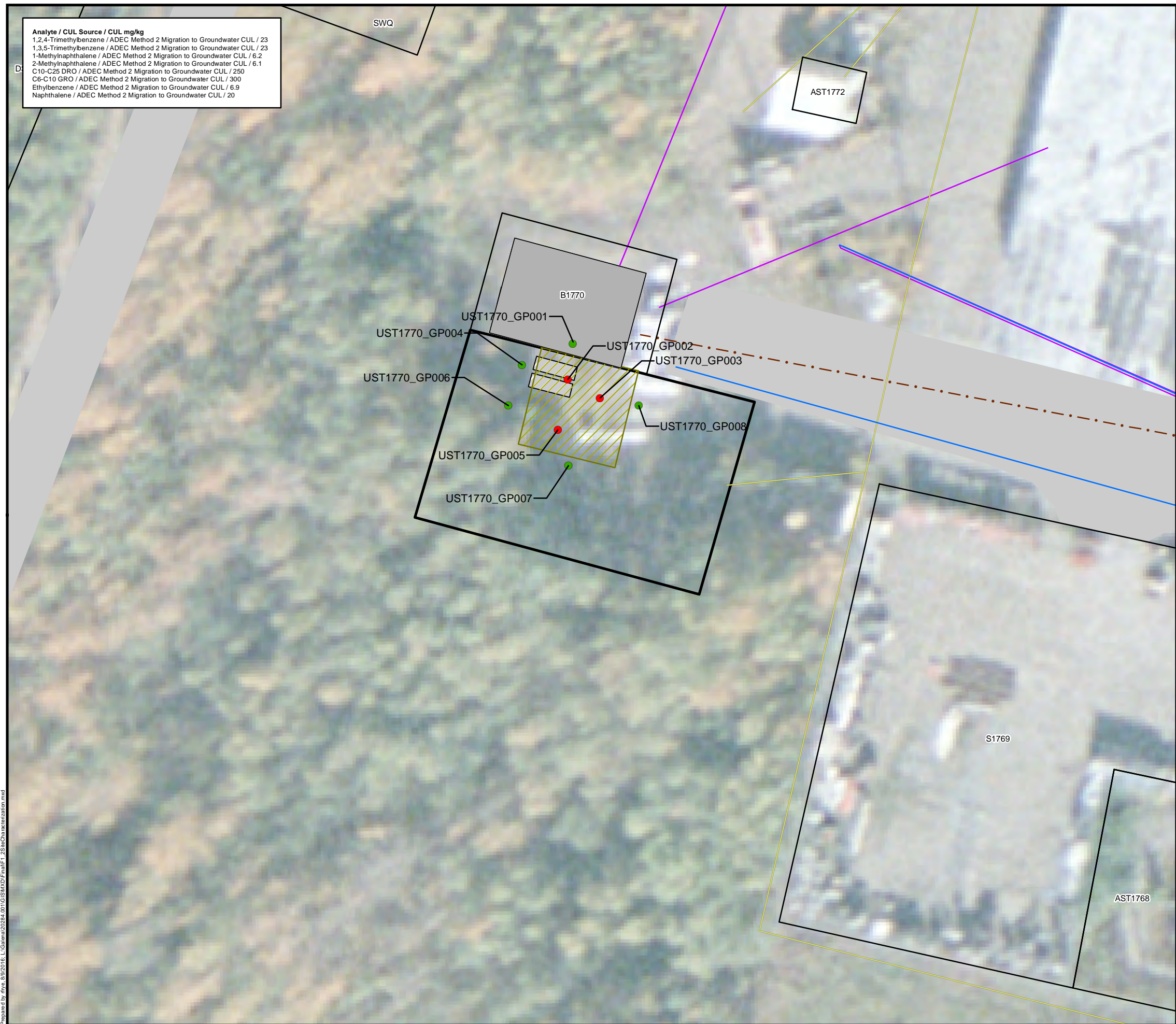


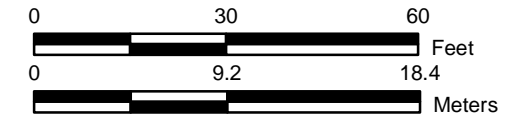
Figure 1-2 Site Characterization and Cleanup Plan

Cleanup Complete Report for UST1770,
Former Incinerator Underground Storage
Tanks (USTs) (Site CST013)

Galena, Alaska



Map Units: Meters
Coordinate System: UTM ZONE 4N NAD 1983 Meters



LEGEND

- 2010/2011 Sample Does Not Exceed Method 2 CUL
- 2010/2011 Sample Exceeds Method 2 CUL
- - - Abandoned Wastewater Line
- Electrical Line
- Heating/Cooling Line
- Water Line
- Adjacent Site
- Approximate Locations of Former USTs
- Building 1770 Foundation Slab
- Road
- Soil Contamination Area

Notes:
1. Image credit: Aerometric, 2012.



Prepared by: jnyb, 8/9/2016, L:\Gis\Map20284_001\GIS\Map20284_001\Final\F1_2SiteCharacterization.mxd