THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

410 Willoughby Ave. Suite 302
P.O. Box 111800
Juneau, AK 99811-1800
Phone: 907-465-5229
Fax: 907-465-5218
http://dec.alaska.gov/
File No: 1513.38.078

August 22, 2013

Michael Schmidt
517 Fourth Street
Juneau, Alaska 99801

Re: Decision Document: Residence – 517 4th Street HHOT,
Cleanup Complete Determination

Dear Mr. Schmidt:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the Residential Property – 517 Fourth Street site. This decision letter memorializes the site history, cleanup actions, and standard conditions for long-term site management. No further remedial action is required.

Site Name and Location:
Residence – 517 4th Street HHOT
517 4th Street
Juneau, Alaska 99801

Name and Mailing Address of Contact Party:
Michael Schmidt
517 4th Street
Juneau, Alaska 99801

DEC Site Identifiers:
File No: 1513.38.078
Hazard ID: 4649

Regulatory Authority for Determination:
18 AAC 75

Background
In 2007, Michael Schmidt, owner of the residence located at 517 4th Street in Juneau hired NORTECH to investigate a fuel leak that occurred at the property. The above ground storage tank (AST) that services the home lost fuel during spring 2007 when heavy snow and ice slid off the home's roof and onto the fuel supply line. Use estimates and fuel purchases indicated that the tank may have lost up to 200 gallons of heating oil onto the ground.

Contaminants of Concern
During the investigation at the site, soil samples were analyzed for diesel range organics (DRO). Based on these analyses and knowledge of the source area, the following contaminant of concern (COC), above approved cleanup levels, was identified during the course of the site investigations summarized in the Characterization and Cleanup Activities section of this decision letter.

- Diesel Range Organics (DRO)

ADEC Cleanup Levels
The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B1 and B2, *Over 40 Inch Zone.*

Table 1 – Soil Cleanup Levels

Contaminant of Concern	Soil – Method Two, Direct Contact/Ingestion*	Soil – Method Two, Inhalation*	Soil – Migration to Groundwater*
DRO	8,250	12,500	230

Notes to Table 1: *All soil contamination concentrations are presented in mg/kg.
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
ug/L = micrograms per liter

Characterization and Cleanup Activities
Characterization and cleanup activities conducted under the regulatory authority of the Contaminated Sites Program began on October 17, 2007 when NORTECH completed an inspection and assessment of the spill. Seventeen test pits were field screened along with the collection of one laboratory soil sample. The analysis results from the soil sample confirmed that contamination existed above ADEC Cleanup Levels at a concentration of 3,110 mg/kg on the property. The affected soil extended in a plume along

the uphill side of the house, and continued down slope toward Harris Street. A total of six nutrient addition ports were installed by NORTECH within the spill affected area, along with a total of 200 pounds of high nitrogen fertilizer addition added to the spill affected area.

On May 28, 2013 characterization and cleanup activities were, again, conducted under the regulatory authority of the Contaminated Sites Program when NORTECH completed an additional assessment of the spill affected area(s). A total of 11 hand auger borings were advanced to the depth intersecting sub-soil, between 24 inches and 30 inches below ground surface (bgs), or until auger refusal (Figure 1). Soil samples were collected from each boring at one foot increments and at the bottom of each boring for field screening, utilizing the hot water sheen testing technique. A total of 27 soil screening samples were collected and assessed using the hot water sheen test and two laboratory soil samples were collected to characterize the remaining contamination at the property. Sample CS13-1 was collected from boring 11 at a depth of 12 inches bgs. Sample CS13-2 was collected from boring 2 at a depth of 30 inches bgs. Each sample was analyzed for DRO using method AK 102 (Table 2). In general, sheen was not observed or was observed in light concentrations (<2% to 5%) in the unsaturated soil, with the exception to three locations. Boring 11 was collected adjacent to the AST and the originating source of the release had a significant sheen, along with boring samples 2 and 7 which indicated an iridescent sheen.

Table 2 – Sample results from 2013

Sample ID	DRO (mg/kg)
CS13-1	**1110**
CS13-2	224

Notes to Table 2: Sample results in **boldface** exceed ADEC applicable cleanup levels for this site.

Groundwater was not encountered and no groundwater samples were collected. The Juneau city water system serves the downtown area.

Cumulative Risk Evaluation

Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that 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, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

Exposure 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 3.

Table 3 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis Exposure	There is no surface soil contamination at levels above the direct contact cleanup levels at the site.
Sub-Surface Soil Contact	De-Minimis Exposure	A De-Minimis volume of soil contamination remains in the sub-surface above migration to groundwater levels located near the tank, 24 to 30 inches below ground surface, and future excavation at this area is not planned.
Inhalation – Outdoor Air	Pathway Incomplete	The remaining petroleum constituents are below inhalation cleanup levels. Therefore risk via this pathway is considered insignificant.
Inhalation – Indoor Air (vapor intrusion)	De-Minimis Exposure	Buildings are present, but volatile petroleum levels are below inhalation screening levels.
Groundwater Ingestion	Pathway Incomplete	Groundwater was not encountered and if present does not influence a current or future drinking water source. Juneau Public Works supplies water to the residence of this area.
Surface Water Ingestion	Pathway Incomplete	Surface water is not utilized as a drinking water source in this area.
Wild and Farmed Foods Ingestion	Pathway Incomplete	There are no complete exposure pathways to wild food ingestion at this site.
Exposure to Ecological Receptors	Pathway Incomplete	There are no complete exposure pathways to ecological receptors at this site.

Notes to Table 3: "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. "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

Remaining petroleum contamination in soil is below approved cleanup levels. This site will receive a "Closed" 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 78.600(h). 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 figure.)

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

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 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 questions about this closure decision, please feel free to contact me at (907) 465-5229.

Sincerely,

Elmer Reese for Erik Norberg

Erik Norberg
Project Manager

cc: Jason Ginter, NORTECH

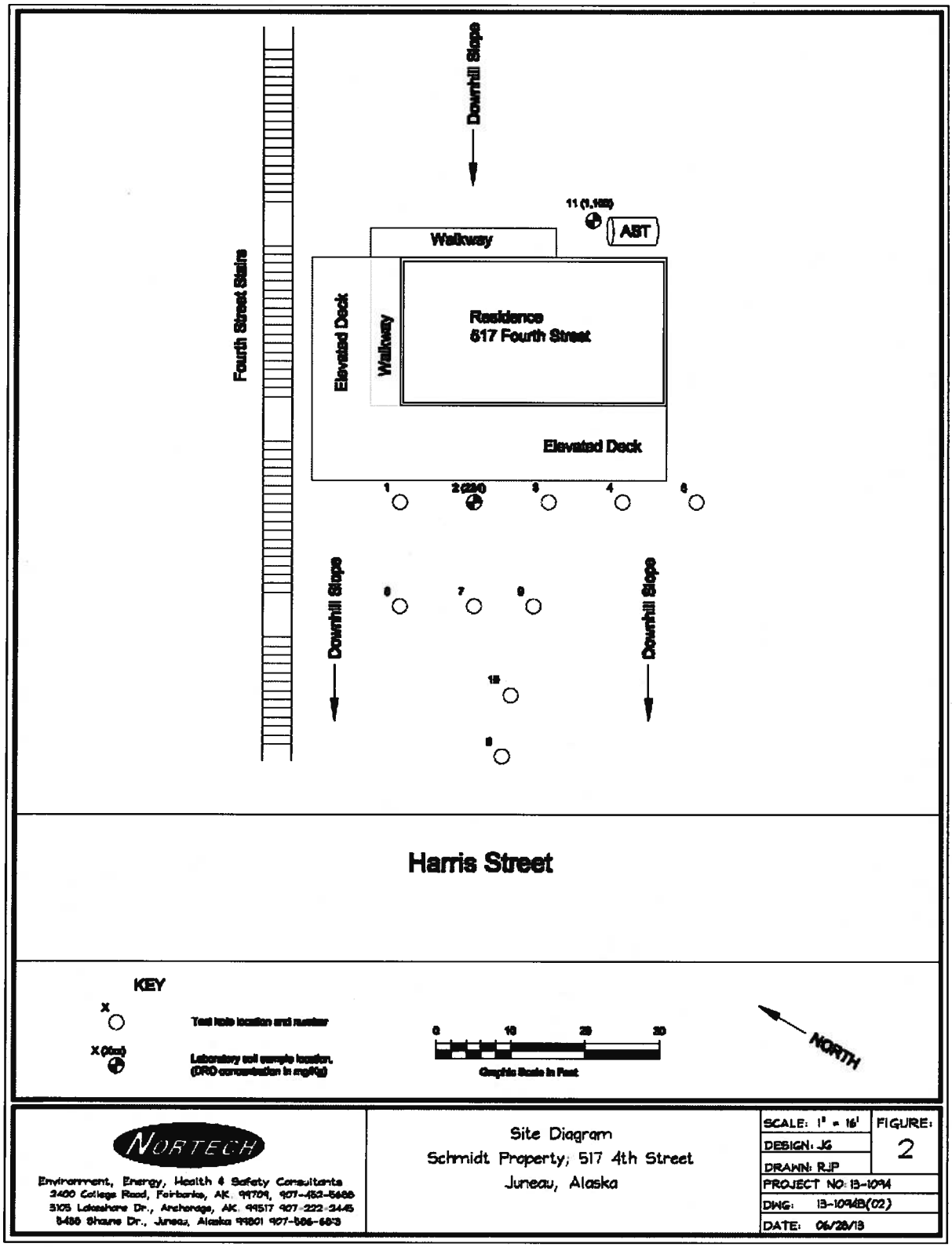

Figure 1. Site Diagram, Schmidt Property, 517 4th Street.