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: 102.38.179

November 10, 2016

Ms. Melisa Martel
JL Properties, Inc.
Jillian Square Apartments
3000 Davis Rd.
Fairbanks, AK, 99709

Re: Decision Document: Jillian Square Apartments Bldg. A Pod 2
Cleanup Complete Determination

Dear Ms. Martel:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program, has completed a review of the environmental records associated with the Jillian Square Apartments Bldg. A Pod 2 located at 3040 Davis Road, Fairbanks. 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 Jillian Square Apartments Bldg. A Pod 2 which is located in the offices of ADEC in Fairbanks, Alaska. This decision letter summarizes the site history, cleanup actions, regulatory decisions, and standard site closure conditions that apply.

Site Name and Location:
Jillian Square Apartments Bldg A Pod 2
3040 Davis Road; Building A, Pod 2
Fairbanks, Alaska 99709

Name and Mailing Address of Contact Party:
Melisa Martel
3000 Davis Road
Fairbanks, Alaska 99709

ADEC Site Identifiers:
File No: 102.38.179
Hazard ID: 26228

Regulatory Authority for Determination:
18 AAC 75

Site Description and Background

On November 21, 2013, 130 gallons of heating oil was released when a fuel line fitting burst in a crawlspace at Jillian Square Apartments Building A Pod 2. Fuel was released to the apartment subfloor, structural supports, and the floor of the crawlspace. Initial response actions included relocation of occupants from apartments impacted by vapor intrusion, collection of free product from plastic sheeting that covered the crawlspace floor under the fuel line, petroleum vapor field screening using a photoionization detector (PID), excavation of contaminated soil and installation of a temporary crawlspace vapor extraction system (VES).

Spill response activities included the excavation of contaminated soil from the crawlspace, which began at the spill location and continued to the north and south until clean soil was reached and to the east and west until either clean soil or the building foundation was reached. A total of 22 cubic yards of contaminated soil was excavated and disposed of at the Columbia Ridge Landfill, Arlington, Oregon. An estimated 10 cubic yards (CY) of contaminated soil remains along the west foundation wall, and another 10 CY along a partition wall footing to the east of the spill area. A perforated pipe ventilation system was placed in the bottom of the excavated area and covered with a new plastic vapor barrier. This system removed heating oil fumes from beneath the vapor barrier and from the crawlspace. This cleanup occurred within three days of the initial spill.

Contaminants of Concern (COCs)

During the site investigation and cleanup activities, samples were collected from soil, air and groundwater and analyzed for one or more of the following: gasoline range organics (GRO); diesel range organics (DRO); residual range organics (RRO); benzene, ethylbenzene, toluene, and xylene (BTEX) and; polycyclic aromatic hydrocarbons (PAH).

Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered Contaminants of Concern at this site.

- Diesel Range Organics (DRO)

Cleanup Levels

Diesel range organics were detected in the soil above the approved Method Two migration to groundwater cleanup levels for the under 40-inch precipitation zone, established in 18 AAC 75.341(c), Table B1, and 18 AAC 75.341 (d), Table B2. Since groundwater was within two feet of the soil contamination, the migration to groundwater cleanup level was selected as the most applicable level.

No contaminants of concern (COCs) were detected in groundwater above the approved cleanup levels established in 18 AAC 75.345 Table C, or in air above the approved target cleanup levels established in Appendix D of the October 2012 ADEC Vapor Intrusion Guidance for Contaminated Sites.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)
DRO	250[1]

mg/kg = milligrams per kilogram

[1] – Migration to groundwater pathway, Method 2, 18 AAC 75.341 (d), Table B2

Characterization and Cleanup Activities

Characterization and cleanup activities conducted under the regulatory authority of the Contaminated Sites Program began in March, 2014. These activities are described below.

Site characterization under 18 AAC 75.335 conducted on August 29, 2014, included the collection of eight soil analytical samples, including one duplicate, from various locations within and adjacent to the excavation. Sampling locations within the excavation were based upon highest PID headspace readings. All eight samples were analyzed for DRO, GRO and BTEX, while two samples were also analyzed for PAHs. Concentrations of DRO exceeding migration to groundwater cleanup levels were observed in two samples. The highest DRO was measured in soil sample from boring SS-6 at 2,370 mg/kg which was collected from 20 inches below crawlspace surface near the interior partition footing. The other DRO cleanup level exceedance of 293 mg/kg was from boring SS-5, also at a depth of 20 inches below the crawlspace surface. Besides DRO, the only other analytes observed in soil samples were observed in SS-6 and included GRO, toluene, and xylene; all of which were less than one-tenth of their respective cleanup levels.

A groundwater monitoring well was installed to a depth of 5.5 feet below the crawlspace surface (10.5 feet below ground surface) and sampled on September 4, 2014. The monitoring well was installed a few feet away from boring SS-6 (see Figure 1) at a location suspected to have the greatest potential for groundwater contamination. The sample and a duplicate were analyzed for DRO, GRO and BTEX. Xylene was detected in both samples but at less than one-tenth of the cleanup level. No other contaminants were detected in the groundwater.

Additional site characterization and long-term modification of the VES began in August 2016. Groundwater samples were collected from the monitoring well on August 11, and analyzed for DRO, GRO, RRO, BTEX and PAHs. Contaminants were not detected above cleanup levels. After it was confirmed that groundwater did not exceed cleanup levels, the well point was removed and backfilled with bentonite. Pea gravel was then added to the excavated area to enhance vapor removal through the perforated pipe of the VES system. A 20-mil vapor barrier was placed over the pea gravel, extending at least five feet beyond the excavated area. The vapor barrier was sealed with an adhesive to the footings on the east and west edges of the excavation and folded down into a trench a minimum of six inches deep. Concrete was poured over the vapor barrier and leveled flush with the crawlspace footing.

On September 23, 2016, two air samples were collected from the crawlspace and one from the outside air. Contaminants were not detected above ADEC vapor intrusion residential target levels.

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 non-carcinogenic 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 meet the human health cumulative risk criteria for residential land use for all pathways.

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 2.

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis Exposure	Contaminants detected in analytical samples taken from the locations of highest PID readings did not exceed the direct contact cleanup levels.
Sub-Surface Soil Contact	De-Minimis Exposure	Chemicals detected in analytical samples taken from the locations of highest PID readings did not exceed the direct contact cleanup levels.
Inhalation – Outdoor Air	De-Minimis Exposure	Soil contaminants are present, but do not exceed the outdoor inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De-Minimis Exposure	Air samples did not contain contaminants above residential screening levels for vapor intrusion
Groundwater Ingestion	De-Minimis Exposure	Two sampling events indicate groundwater does not exceed cleanup levels for groundwater ingestion.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in this area.
Wild and Farmed Foods Ingestion	Pathway Incomplete	The site is in a developed high-density residential area where hunting, fishing, and harvesting of wild or farmed foods are not expected activities.
Exposure to Ecological Receptors	Pathway Incomplete	There are no complete exposure pathways to ecological receptors at the site.

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.

ADEC Decision

Soil contamination remains on site, however sufficient site characterization has been completed and the Contaminated Sites Program has determined that contaminants in soil have achieved steady-state equilibrium and will not migrate to groundwater. This site will receive a "Cleanup Complete" designation on the Contaminated Sites Database, subject to the following 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 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.

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.

ADEC recommends that the VES system be operated and maintained in accordance with the Vapor Extraction System Operations and Maintenance Manual, 3040 Davis Road; Building A, Pod 2, Fairbanks, AK 99709, prepared by Nortech and dated November 3, 2016. A copy of this manual is available at the ADEC office in Fairbanks, Alaska.

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.

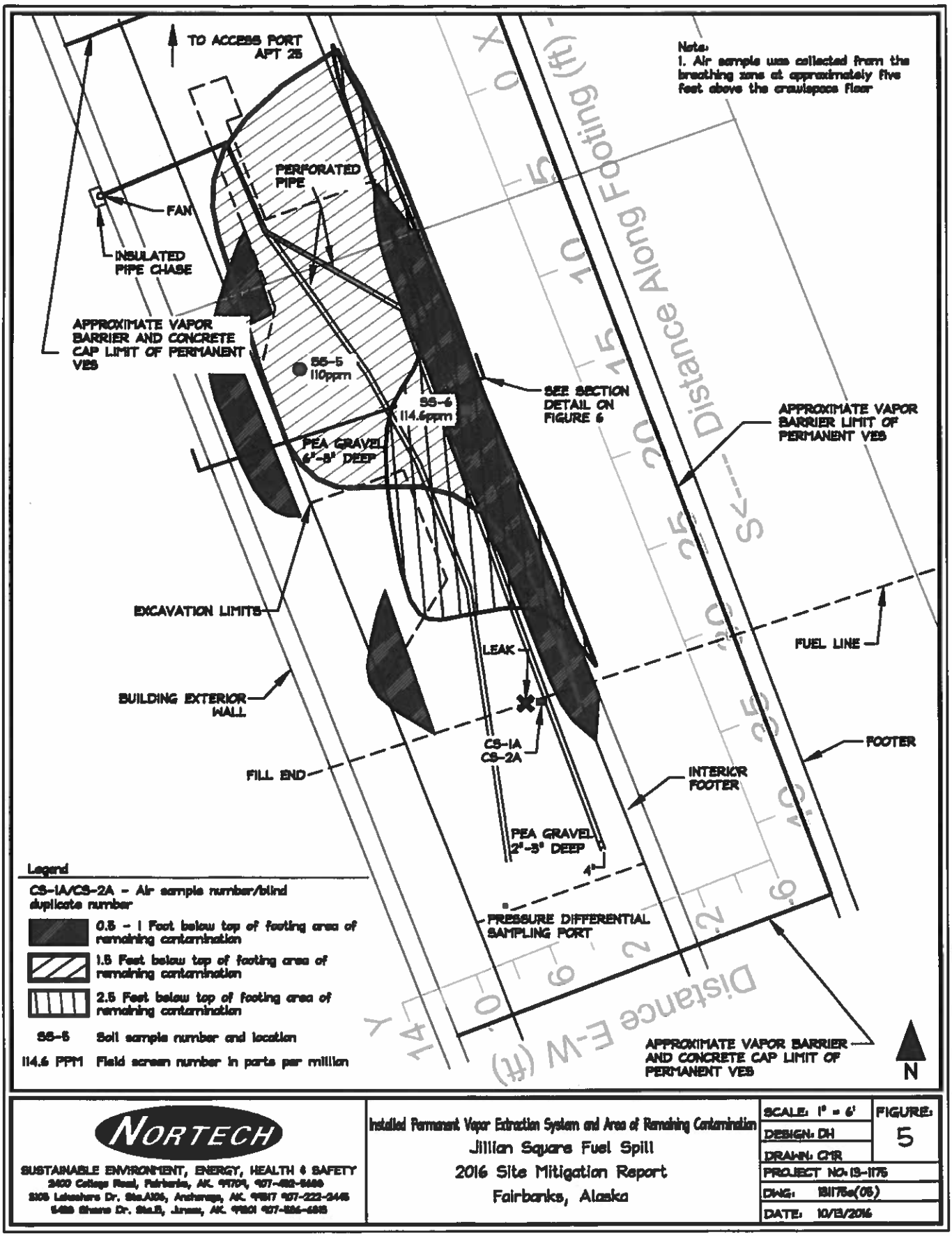
If you have questions about this closure decision, please feel free to contact me at (907) 451-2752, or email at shawn.tisdell@alaska.gov.

Sincerely,

Shawn Tisdell
Project Manager

Enclosure: Site Figure showing extent of residual soil contamination

cc: Spill Prevention and Response, Cost Recovery Unit (via email)



NORTECH
SUSTAINABLE ENVIRONMENT, ENERGY, HEALTH & SAFETY
3400 College Road, Fairbanks, AK. 99709, 907-452-5688
3105 Lakeshore Dr. Ste.A106, Anchorage, AK. 99517 907-222-2445
5429 Shaune Dr. Ste.B, Juneau, AK. 99801 907-586-6813

Installed Permanent Vapor Extraction System and Area of Remaining Contamination
Jillian Square Fuel Spill
2016 Site Mitigation Report
Fairbanks, Alaska

SCALE: 1" = 6'	FIGURE: 5
DESIGN: DH	
DRAWN: CTR	
PROJECT NO: 13-1176	
DWG: 131176a(05)	
DATE: 10/13/2016	