THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Environmental Conservation

Division of Spill Prevention and Response
Contaminated Sites Program

610 University Ave.
Fairbanks, Alaska 99709-3643
Main: 907.451.2702
Fax: 907.451.5105

File: 100.38.239

October 3, 2012

Desmond Isaacson
200 A Street Stop 474
Clear AFS, Alaska 99704

Re: Decision Document, Residence – 1095 Brock Road
Cleanup Complete Determination – Institutional Controls

Dear Mr Isaacson:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the residence at 1095 Brock Road located in North Pole, 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 as long as the site is in compliance with established institutional controls (ICs).

This decision is based on the administrative record for the Residence – 1095 Brock Road which is located in the offices of the ADEC in Fairbanks, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Cleanup Complete with ICs determination.

Introduction

Site Name and Location:
Residence – 1095 Brock Road
North Pole, Alaska 99705

Legal Description
PARCEL FOUR ROSSON PROPERTY WAIVER 019-84 7-2-84 PREVIOUSLY ASSESSED AS TL-2086 SEC 20 T1S-R2E OUT OF TL-2016 SEC 20 T1S-R2E Parcel Four Unrecorded Waiver 019-84 7-2-84

Name and Mailing Address of Contact Party:

Desmond Isaacson
200A Street Stop 474
Clear AFS AK 99704

Sharon Isaacson
P.O. Box 58756
Fairbanks AK 99711

ADEC Site Identifiers
File: 100.38.239
Hazard ID: 25799

Regulatory authority under which the site is being cleaned up:
18 AAC 75

Background

A release of approximately 450 gallons of #2 diesel heating fuel oil was reported in March 2008 at a residence on Brock Road. The spill occurred due to corrosion of a 500-gallon underground storage tank located on the north side of the garage and a faulty return line. The tank was removed in April of 2008 at which time petroleum contaminated soil was excavated and disposed of under the oversight of the ADEC Prevention and Emergency Response Program. The property is served by a drinking water well, however the current homeowner reports that they haul their drinking water and do not use the tap water for drinking. The existing well is about 42 feet deep. Groundwater in the unconfined aquifer is about 6 to 9 feet below ground surface.

Soil and groundwater samples collected at this site have been tested for: diesel range organics (DRO) and benzene, toluene, ethylbenzene, and xylenes (BTEX).

Site Characterization and Cleanup Actions

During the April 2008 cleanup, complete removal of the contaminated soil was not possible due to structural limitations of the residence and the presence of contaminated soils below the groundwater table. Approximately 30 cubic yards of petroleum contaminated soils were removed from between 5 and 9 feet below ground surface (bgs) which included smear zone soils from 6 to 9 feet bgs. Ground water was encountered at 9 feet bgs. All excavated contaminated soils were hauled off site for thermal remediation at OIT in Moose Creek.

Following the soil cleanup, site characterization was performed by Alaska Resources and Environmental Services, LLC (ARES) in April 2008. Six soil samples and one water sample were collected on April 3, 2008 from the excavation and analyzed for DRO and BTEX compounds. Soil sample results were generally above ADEC 18 AAC 75.341 and 18 AAC 75.345 cleanup levels. The highest levels were observed at a depth of 9 feet in the middle of the excavation and included BTEX and DRO levels of 11.2 mg/kg (benzene), 75.5 mg/kg (toluene), 33.2 mg/kg (ethylbenzene), 267 mg/kg (total xylenes), and 11,400 mg/kg (DRO). (see Site Figure 4, sample location IS-5-42008). The water sample was collected from the middle of the excavation at 9 feet below ground surface (bgs) and also contained high levels of BTEX and DRO.

In July 2008, ARES installed a product recovery well (RW) at the release point and installed two monitoring wells (MW1 and MW2) downgradient from the release point. The homeowner collected free product from the RW well through the summer of 2011. Groundwater samples taken in 2008 and 2009 indicated benzene levels were decreasing but still above ADEC cleanup levels in all three wells (MW1, MW2, and RW). DRO was above ADEC cleanup levels in the recovery well in 2008 and 2009 and not detected or below ADEC cleanup levels in the two monitoring wells. The drinking water well is upgradient from the release and is not used as drinking water by the occupants.

In 2011 another round of samples was taken from MW1, MW2 and the RW, and the decreasing trend of benzene continued. All groundwater samples were below ADEC cleanup levels for benzene, with the exception of one sample from MW2 that contained 0.00525 mg/L, slightly above its ADEC cleanup level of 0.005 mg/L. DRO was not detected in either monitoring well but was present in the recovery well at 5.27 mg/L and above its cleanup level of 1.5 mg/L.

A drinking water well sample was taken in August 2012 and neither BTEX nor PAH (polynuclear aromatic hydrocarbon) compounds were detected. Analytical results were found to be below the reporting limit for DRO but above the method detection limit (MDL) in both the drinking water sample and the blind field duplicate sample, i.e., at 0.0286 mg/L and 0.0279 mg/L, respectively.

Contaminants of Concern

During the investigations at this site, soil and water samples were analyzed for diesel range organics (DRO), glycol, and benzene, toluene, ethylbenzene, and xylenes (BTEX). Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Diesel Range Organics (DRO)
- Benzene

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B2 Under 40 inch Zone, Migration to Groundwater.

Contaminant	Site Cleanup Level (mg/kg)
• Diesel Range Organics	250
• Benzene	0.025

The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels.

Contaminant	Site Cleanup Level (mg/L)
• Diesel Range Organics	1.5
• Benzene	0 .005

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 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Due to the soil cleanup, contamination is no longer expected to be present at the surface.
Sub-Surface Soil Contact	Exposure controlled.	Contamination remains in the subsurface near the groundwater table and limited contamination may remain beneath the garage foundation. If contamination is exposed during future excavations, contaminant levels are not expected to remain above direct contact cleanup levels.
Inhalation – Outdoor Air	De-minimis exposure	Contamination remains in the subsurface, but is well below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De-minimis exposure	Limited soil contamination and groundwater contamination may remain within 30 feet of the building; however, the distance between the crawl space and the living space within this home exceeds 30 feet. Therefore, vapor intrusion is unlikely to be a significant pathway.
Groundwater Ingestion	Exposure Controlled	Contamination remains in the subsurface soil above migration to groundwater cleanup levels at 6-9 feet

		bgs. The source area and 30 cubic yards of contaminated soil has been removed. Institutional Controls on installation of drinking water wells is in place. DRO was detected in the existing drinking water well on the property but below the maximum contaminant level (MCL) for a public drinking water source .
Surface Water Ingestion	Pathway Incomplete	There is no surface water located within ¼ mile of the site
Wild Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	Any exposure to ecological receptors is considered de minimis.

Notes to Table 1: "De-minimis exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume 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

Contamination remains on site above established default cleanup levels; however ADEC has determined there is no unacceptable risk to human health or the environment. Therefore this site will be issued a Cleanup Complete with Institutional Controls (ICs) determination subject to the following.

Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, current ICs may not be protective and ADEC may require additional remediation and/or ICs, therefore, Desmond or Sharon Isaacson or the current land owner shall report to ADEC any change in property ownership and/or use to document that change. **The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov.**

1. Installation of groundwater wells, potable or non-potable will require approval from ADEC.
2. 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. No excavation of soil will occur within a 25 foot radius of the recovery well/release site without the collection of a soil field screen sample to determine if the soil is contaminated above the ADEC cleanup levels for DRO and Benzene (see attached site figure).
3. The monitoring wells and recovery well (MW1, MW2 and the RW) must be decommissioned in accordance with ADEC's *Monitoring Well Guidance* (dated November 201) by October 31, 2012 and documented in a report submitted to ADEC by December 30, 2012.
4. A Notice of Environmental Contamination (deed notice) shall be recorded in the State Recorder's Office that identifies the nature and extent of contamination at the property and any conditions that the owners and operators are subject to in accordance with this decision document.
5. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

Due to the detection of DRO in the drinking water sample, ADEC recommends that the well water be tested again each spring and fall until the results are non-detect before using the well as a potable source of water.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. When the site meets the requirements for a Cleanup Complete determination, Institutional Controls will be terminated.

This determination is in accordance with 18 AAC 75.380(d) 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.

Please sign and return *Attachment A* to ADEC <u>within 30 days of receipt of this letter</u>. If you have questions about this closure decision, please contact the ADEC project manager, Will Boger at (907) 451-2370.

Approved By,

Rich Sundet
Environmental Manager

Recommended By

Will Boger
Environmental Program Specialist

Enclosure: Notice of Environmental Contamination
Attachment A – Cleanup Complete – ICs Agreement Signature Page
Attachment B – Site Figures

cc: Sharon Isaccson
Alaska Resources & Environmental Services, LLC

*Attachment A: Cleanup Complete-ICs Agreement and Signature Page**

Desmond Isaacson agrees to the terms of this Cleanup Complete with ICs determination as stated in this Closure Decision Document dated **October 3, 2012** for the Residence – 1095 Brock Road. Failure to comply with the terms of this agreement may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 18 AAC 75.380(d).

Responsible Parties – Signatures

Responsible Parties - Printed Names

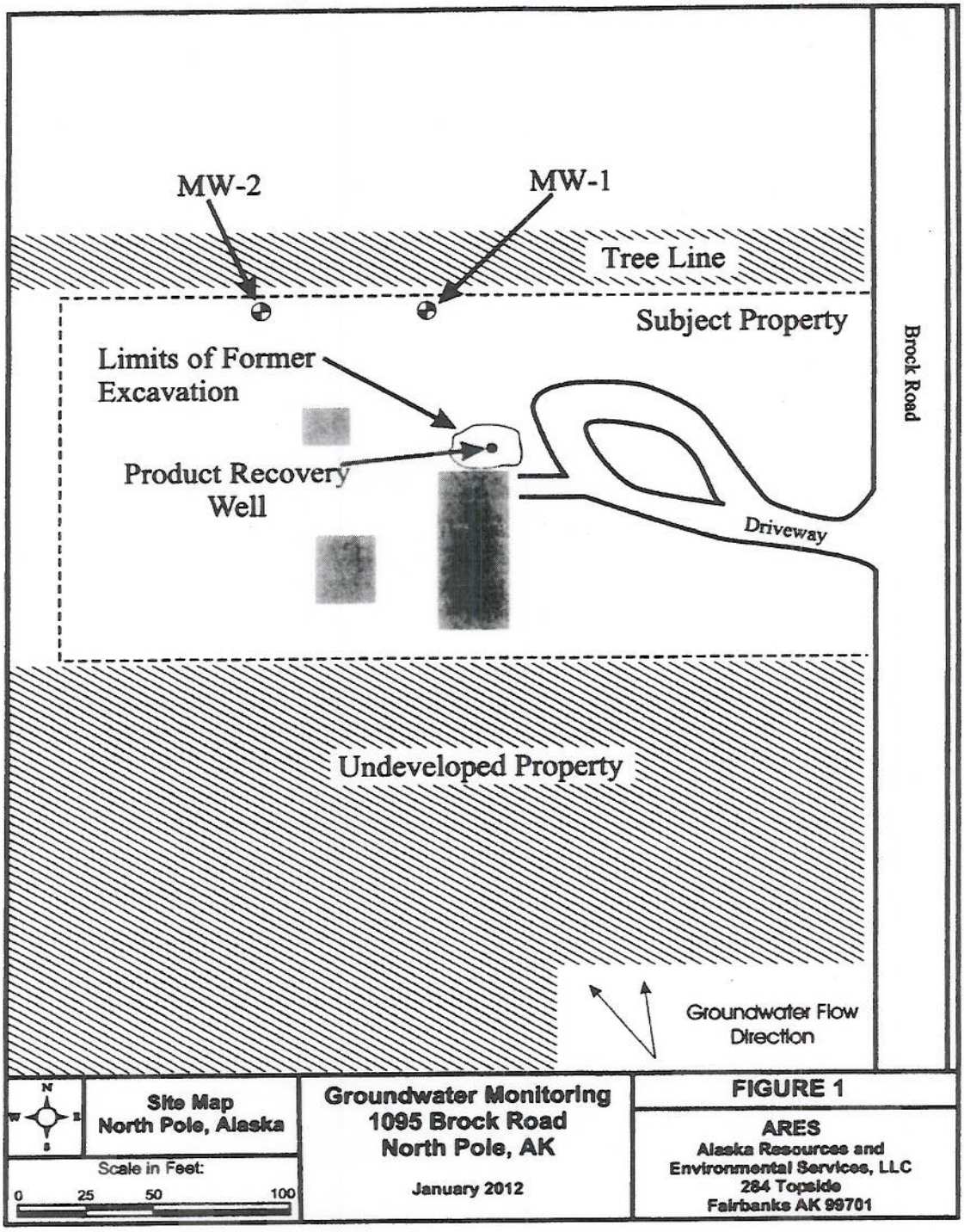
Land Owner – Signature

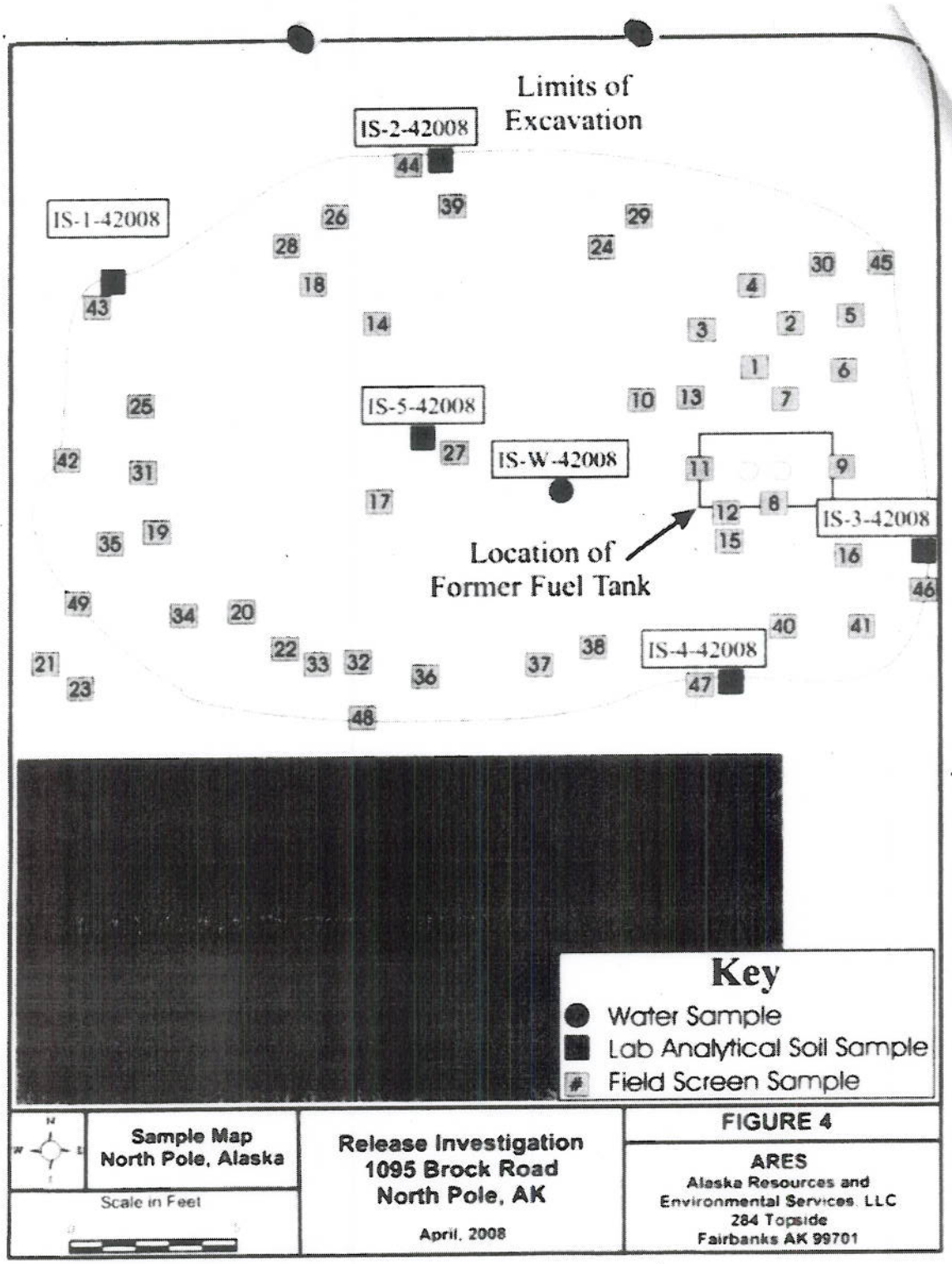
Land Owner – Printed Name

Note to Responsible Person (RP):
After making a copy for your records, please return a signed copy of this form to the ADEC project manager at the address on this correspondence within 30 days of receipt of this letter.

ADEC File No. 100.38.239
Hazard ID: 25799
ADEC Project Manager: Will Boger

Attachment B: Site Figures





Sample Map
North Pole, Alaska

Release Investigation
1095 Brock Road
North Pole, AK

April, 2008

FIGURE 4

ARES
Alaska Resources and Environmental Services, LLC
284 Topside
Fairbanks AK 99701

NOTICE OF ENVIRONMENTAL CONTAMINATION

Recording District: **Fairbanks**
Official State Business – No Charge

As required by the Alaska Department of Environmental Conservation, Grantee, pursuant to 18 AAC 75.375 Desmond and Sharon Isaacson, Grantor, as the owner of the subject property, hereby provides public notice that the property located at: 1095 Brock Road, Fairbanks, Alaska, 99705, and more particularly described as follows:

PAN - 0415171
PARCEL FOUR ROSSON PROPERTY WAIVER
WAIVER 019-84 7-2-84 PREVIOUSLY ASSESSED AS TL-2086 SEC 20 T1S-R2E OUT OF TL-2016 SEC 20 T1S-R2E Parcel Four Unrecorded Waiver 019-84 7-2-84

has been subject to a discharge or release and subsequent cleanup of oil or other hazardous substances, regulated under 18 AAC 75, Article 3, as amended October 9, 2008. This release and cleanup are documented in the Alaska Department of Environmental Conservation (ADEC) contaminated sites database at http://www.dec.state.ak.us/spar/csp/db_search.htm under Hazard ID number 25799.

ADEC reviewed and approved, subject to this and other institutional controls, the cleanup as protective of human health, safety, welfare, and the environment. No further cleanup is necessary at this site unless new information becomes available that indicates to ADEC that the site may pose an unacceptable risk to human health, safety, welfare, or the environment. ADEC determined, in accordance with 18 AAC 75.325 – 390 site cleanup rules, that cleanup has been performed to the maximum extent practicable even though residual petroleum contamination in soil and groundwater exists on-site. Further cleanup was determined to be impracticable because remaining soil contamination is at or beneath the groundwater table or beneath the north side of the garage, and additional groundwater cleanup will continue through natural processes.

Attached is the ADEC Decision Document with two site diagrams drawn to scale that show the property boundaries, locations of existing structures, the area that has been cleaned up, and the location of soil and groundwater samples.

In the event that the remaining contaminated soil becomes accessible or other information becomes available which indicates that the site may pose an unacceptable risk to human health, safety, welfare or the environment, the land owner and/or operator are required under 18 AAC 75.300 to notify ADEC and evaluate the environmental status of the contamination in accordance with applicable laws and regulations; further site characterizations and cleanup may be necessary under 18 AAC 75.325-.390.

Pursuant to 18 AAC 75.325(i)(1) and (2), DEC approval is required prior to moving soil or groundwater that is, or has been, subject to the cleanup rules found at 18 AAC 75.325-.370. At this site, in the future, if soil is removed from the site or groundwater is brought to the surface (for example to dewater in support of construction) it must be characterized and managed following regulations applicable at that time.

This NEC remains in effect until a written determination from ADEC is recorded that states that soil and groundwater at the site has been shown to meet the most stringent soil cleanup levels in method two of 18 AAC 75.340 and groundwater meets the cleanup levels in Table C in 18 AAC 75.345 and that off-site transportation of soil or groundwater is not a concern.

This document will be filed in the Fairbanks recording district.

Please return original copy of this NEC to the address below:

Signature(s): (landowner(s) and holders of property interest)

_____

Printed Name(s): _____

Mailing Address(s): _____

_____

Subscribed and sworn to before me this ___ day of _____, 20___.

Notary Public in and for the State of _____
My commission expires:_____