



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: 907.451.2127
Fax: 907.451.5105

File: 100.38.229

February 25, 2014

Marin Kuizenga and Jeffrey Merkel
P.O. Box 80343
Fairbanks, Alaska 99708

Re: Decision Document: Residence - 246 Crest Drive
Cleanup Complete Determination – Institutional Controls

Dear Ms. Kuizenga and Mr. Merkel:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the residence at 246 Crest Drive, located in Fairbanks, 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.

This decision is based on the administrative record for the Residence - 246 Crest Drive 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 - 246 Crest Drive
246 Crest Drive
Fairbanks, AK 99712

Name and Mailing Address of Contact Party:

Marin Kuizenga and Jeffrey Merkel
P.O. Box 80343
Fairbanks, Alaska 99708

ADEC Site Identifiers

File No.: 100.38.229
Hazard ID: 25534

Regulatory Authority for Determination:

18 AAC 75

Background

On June 6, 2007 a fuel line from an aboveground heating oil tank began leaking, releasing an estimated 300 gallons of diesel fuel onto the floor of a detached garage. The fuel pooled onto the

garage floor until it was found the next morning by the homeowners. The homeowners removed the pooled fuel with automotive absorbent material. However, some of the fuel may have travelled into two drains present in the garage floor. The drains are reported to be attached to a french drain system on the downslope side of the garage, which drains to a gravel leach box buried in an unknown location outside or beneath the garage building.

Groundwater samples collected from on-site and a nearby drinking water well were tested for benzene, toluene, ethylbenzene, and total xylenes (BTEX), gasoline range organics (GRO), and diesel range organics (DRO).

Contaminants of Concern

The following contaminants of concern, those potentially above approved cleanup levels, were identified during the course of the site investigations summarized in the Characterization and Cleanup Activities section of this decision letter.

- Diesel Range Organics (DRO)
- Benzene, Toluene, Ethylbenzene, and Xylenes (total) (BTEX)

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. The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels. The approved cleanup levels for contaminants of concern at this site are shown in Table 1.

Table 1 – Approved Cleanup Levels

Contaminant	Soil (mg/kg)	Groundwater (mg/L)
• DRO	250	1.5
• Benzene	0.025	0.005
• Toluene	6.9	1.0
• Ethylbenzene	6.5	0.7
• Xylenes (total)	63	10
mg/kg = milligrams per kilogram		
mg/L = milligrams per liter		

Site Characterization and Cleanup Activities

On June 8, 2007, ADEC Prevention and Emergency Response staff responded to the spill and attempted to locate the fuel in the environment. Excavation pits were dug by hand downhill of the release but no fuel was located. Additional efforts were made to determine if fuel had entered the drain system, including monitoring of the downslope side of the garage for fuel or effects to vegetation. No signs of fuel entering the environment were observed.

The one-site drinking water well is located near the south corner of the garage and extends to a depth of 106 feet with a static water table at 70 feet below ground surface (ft bgs). According to the well log, silt is present from the ground surface to 79 ft bgs. On-site drinking water samples were collected by the landowner on January 22, 2008 and January 13, 2013 and tested for BTEX. No contaminants were detected in these groundwater samples. On February 7, 2014, ADEC staff

collected a groundwater sample from the on-site drinking water well. This sample was tested for BTEX, GRO, and DRO. No contaminants were detected in the sample.

ADEC also collected a drinking water sample from the nearest residence located in an assumed downgradient location on February 7, 2014. This sample was collected at 252 Crest Drive, approximately 200 feet from the spill site, and was also tested for BTEX, GRO, and DRO. No contaminants were detected in this sample. There is some uncertainty associated with this sample, which, due to the water system configuration and owner preferences, had to be collected at a point in the system after the water softener.

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 are not likely to pose a cumulative human health risk. As a precautionary measure, ADEC has established institutional controls to require further investigation/cleanup should subsurface soil contamination be found.

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	Incomplete Pathway	Spill went to drains to a buried leach box. Not expected to be in surface soil.
Sub-Surface Soil Contact	Exposure Controlled	Contamination may exist in subsurface soil at unknown concentrations. Institutional controls are established for excavation or construction near garage.
Inhalation – Outdoor Air	Exposure Controlled	Contamination may exist in subsurface soil at unknown concentrations. Institutional controls are established for excavation or construction near garage.
Inhalation – Indoor Air (vapor intrusion)	Exposure Controlled	Contamination may exist in subsurface soil at unknown concentrations. Institutional controls are established for excavation or construction near garage, or for reuse of the garage as a living space.
Groundwater Ingestion	Incomplete pathway	Contaminants not detected in groundwater and are not expected to migrate to groundwater due to depth of water table and nature of soils in the area.

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
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	De-minimis Exposure	Ecological receptors are unlikely to come into contact with contamination.

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

Based on the volume of the release, contamination is assumed to remain in sub-surface soil above approved cleanup levels; however ADEC has determined there is no unacceptable risk to human health or the environment as long as the contamination is properly managed.

A Notice of Environmental Contamination (deed notice) shall be recorded in the State Recorder’s Office as an institutional control (IC) that identifies the nature and extent of contamination at the property and the conditions that the owners and operators are subject to in accordance with this decision document. These conditions are as follows:

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, these management conditions may not be protective and ADEC may require additional remediation and revised conditions. Therefore the property owner shall report to ADEC by December 31st every 5 years to document land use, or report as soon as any change in land ownership and/or use occurs, if earlier. **The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov.**
2. Sub-surface soil contamination may be located near or under the garage. When the garage building is removed and/or the soil becomes accessible, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan. ADEC recommends that the floor drains be sealed to prevent water or other substances from entering the drain system and cause migration of the residual contamination.
3. The garage should not be used as a living space without prior notification to ADEC. Petroleum vapors may be entering the garage from the sub-surface, and indoor air testing may be necessary to ensure residential occupancy is safe.
4. 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 attached site figure)
5. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

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. Institutional controls will be removed in the future if documentation can be provided that shows cleanup levels have been met. Management conditions 6-7 remain in effect after ICs are removed.

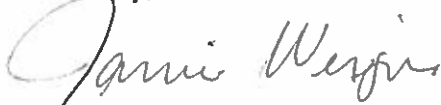
This determination is in accordance with 18 AAC 75.380 and does not preclude ADEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

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 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.

Please sign and return *Attachment A* to ADEC within 30 days of receipt of this letter. If you have questions about this closure decision, please contact me at (907) 451-2127.

Sincerely,



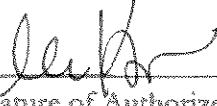
Janice Wiegers
Environmental Program Specialist

Attachment A: Cleanup Complete-ICs Agreement Signature Page

Attachment B: Site Figure

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

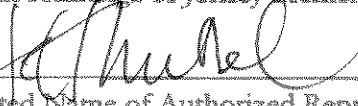
Marin Kuizenga and Jeffrey Merkel, agree to the terms and conditions of the Cleanup Complete Determination, as stated in the decision letter for the Residence – 246 Crest Drive, dated February 25, 2014. Failure to comply with the terms and conditions of the determination may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 18 AAC 75.380.



Signature of Authorized Representative, Title
Marin Kuizenga or Jeffrey Merkel

March 2, 2014

Date



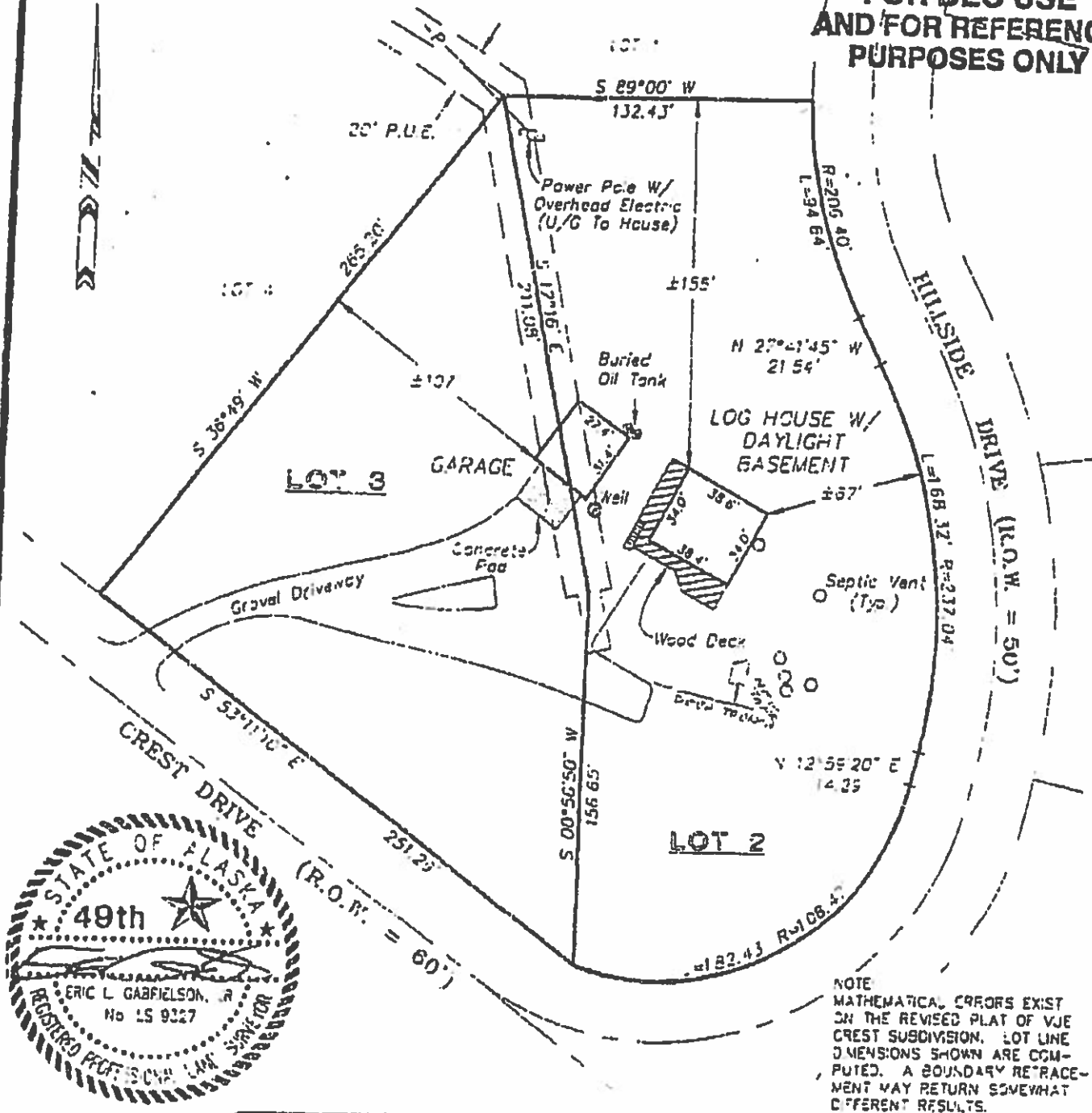
Printed Name of Authorized Representative, Title
Marin Kuizenga or Jeffrey Merkel

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.

LOTS 2 & 3, BLOCK 2 VUE CREST SUBDIVISION PORTION NO. 1

FOR DEC USE
AND FOR REFERENCE
PURPOSES ONLY



MORTGAGE LOAN INSPECTION PLOT PLAN

02-061

LOTS 2 & 3, BLOCK 2, VUE CREST SUBDIVISION, PORTION No. 1 (INST. NO. 65.3325, F.R.D., AK)

MORTGAGEE: None

INSPECTED: 8-09-02

MORTGAGOR OR OWNER: Chris Brown

DRAWN: 8-13-02 BY: EGW

SCALE: 1" = 60'