



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

**Department of Environmental  
Conservation**

DIVISION OF SPILL PREVENTION AND RESPONSE  
Contaminated Sites Program

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Anchorage, AK 99501  
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www.dec.alaska.gov

File No: 2100.38.549

January 22, 2015

Michael Brodie  
Chugach Electric Association, Inc.  
P.O. Box 196300  
Anchorage, AK 99519

Re: Decision Document: Chugach Electric Raspberry Substation  
Cleanup Complete Determination – Institutional Controls

Dear Mr. Brodie:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the Chugach Electric Raspberry Substation site. This decision letter memorializes the site history, cleanup actions, and specific conditions required to effectively manage remaining contamination. No further remedial action will be required as long as compliance with these conditions is maintained.

**Site Name and Location:**

Chugach Electric Raspberry Substation  
7020 Caravelle Drive  
Anchorage, AK 99502

**Name and Mailing Address of Contact Party:**

Michael Brodie  
Chugach Electric Association, Inc.  
P.O. Box 196300  
Anchorage, AK 99519

**DEC Site Identifiers:**

File No: 2100.38.549  
Hazard ID: 26275

**Regulatory Authority for Determination:**

18 AAC 75

**Site Description and Background**

The Chugach Electric Raspberry Substation site is located on the west side of Caravelle Drive, between Hunter Drive and Raspberry Road. The site is surrounded by a chain-link fence, and access is limited to primarily Chugach Electric Association, Inc. (CEA) personnel. There are no occupied buildings and site use is limited. The site is surrounded by residential housing, and the Kincaid Elementary School to the west.

Roughly 150 gallons of mineral oil was released from the Load Tab Changer (LTC) compartment of the Raspberry Substation TRF 178 in January of 2014. The mineral oil was discharged to the ground surface and pooled around the concrete slab support for the transformer.

Excavation began in July 2014, and continued to the maximum extent practicable without compromising buried utilities or structural components. Approximately 30 cubic yards (cy) of impacted soil were removed and disposed of offsite at Alaska Soil Recycling (ASR). Confirmation soil samples collected from the base of the excavation exhibited varying levels of diesel range organics (DRO) up to a maximum concentration of 17,000 mg/kg at roughly four feet below ground surface (bgs). Residual range organics (RRO) were identified up to 3,160 mg/kg. The vertical and horizontal extent of contamination was not defined. Further excavation was impractical due to buried utilities and other structural components.

### Contaminants of Concern and Cleanup Levels

Residual range organics (RRO) and DRO were identified during the course of the site investigations summarized below. DRO was identified in soil above the migration to groundwater (MTG), ingestion, and inhalation cleanup levels established in 18 AAC 75.341 (d), Table B2.

**Table 1 – ADEC Cleanup Levels**

Contaminant	Soil – Ingestion (mg/kg)	Soil – Inhalation (mg/kg)	Soil – MTG (mg/kg)	Maximum Remaining Concentration (mg/kg)
DRO	10,250	12,500	250	<b>17,000</b>
RRO	10,000	22,000	11,000	3,160

MTG = migration to groundwater

mg/kg = milligrams per kilogram

**bold** = exceeds ADEC MTG cleanup level

### Characterization and Cleanup Activities

To further delineate the extent of the remaining contamination, three soil borings were advanced to roughly 30 feet below ground surface (bgs) in November 2014. The borings were placed to the north (CRS-1), west (CRS-2), and south (CRS-3) of the Raspberry Substation, and outside the fenced area to avoid buried utilities. Each boring consisted of a primarily dense silt and clay material. A sand layer was encountered in Boring CRS-2 at about 29.5 feet bgs. The sand layer was dark, coarse, and dry, with wood-like debris interspersed throughout. Contamination remains in the sub-surface soils at this site above ingestion, inhalation, and MTG cleanup levels; however, further excavation is impractical due to buried utilities and other structural components.

Two samples were collected from each boring and were analyzed for DRO and RRO. DRO and RRO were only present in one sample collected from approximately 30 feet bgs in Boring CRS-2; however, both DRO and RRO were below the most stringent ADEC MTG cleanup levels. None of the other samples exhibited DRO or RRO above the laboratory detection limits. Groundwater was not encountered in any of the borings. Please see the enclosed figure (Attachment C) for soil sampling locations.

### 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 2.

**Table 2 – Exposure Pathway Evaluation**

Pathway	Result	Explanation
Surface Soil Contact	De-Minimis Exposure	Contamination remains in the surface, but is below ingestion cleanup levels.
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination remains in the sub-surface above ingestion cleanup levels; however, further excavation was impractical due to buried utilities and other structural components; site access is restricted; and site use is limited.
Inhalation – Outdoor Air	De-Minimis Exposure	Contamination remains in the sub-surface above inhalation cleanup levels; however, further excavation is not practical, site access is restricted, and site use is limited.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no occupied buildings onsite and remaining contamination is not volatile.
Groundwater Ingestion	Pathway Incomplete	Groundwater contamination is not present.
Surface Water Ingestion	Pathway Incomplete	Surface water contamination is not present.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Site access is restricted and foraging activities are impractical.
Exposure to Ecological Receptors	Pathway Incomplete	There are no aquatic or terrestrial routes.

**Notes to Table 2:** “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**

Petroleum contamination remains in surface and sub-surface soil above ADEC 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 in accordance with the following conditions.

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, CEA shall report to ADEC every 5 years to document land use, or report as soon as CEA becomes aware of any change in land ownership and/or use, if earlier. **The report can be sent to the local ADEC office or electronically to [DEC.ICUnit@alaska.gov](mailto:DEC.ICUnit@alaska.gov).**
2. A Notice of Environmental Contamination (NEC) will be recorded by ADEC at the State Recorder's Office that identifies the nature and extent of contamination at the property, and the conditions the owners and operators are subject to in accordance with this decision document. (See Attachment B.)
3. Installation of groundwater wells requires ADEC approval.
4. Contamination remains in the sub-surface soils at this site above ingestion, inhalation, and MTG cleanup levels; however, further excavation is impractical due to buried utilities and other structural components. When the contaminated soil becomes accessible, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan; and/or to the satisfaction of ADEC.
5. Attachment A must be signed and dated by an authorized representative and returned to ADEC within 30 days.
6. 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.
7. 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 and 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 feel free to contact me at (907) 269-7691.

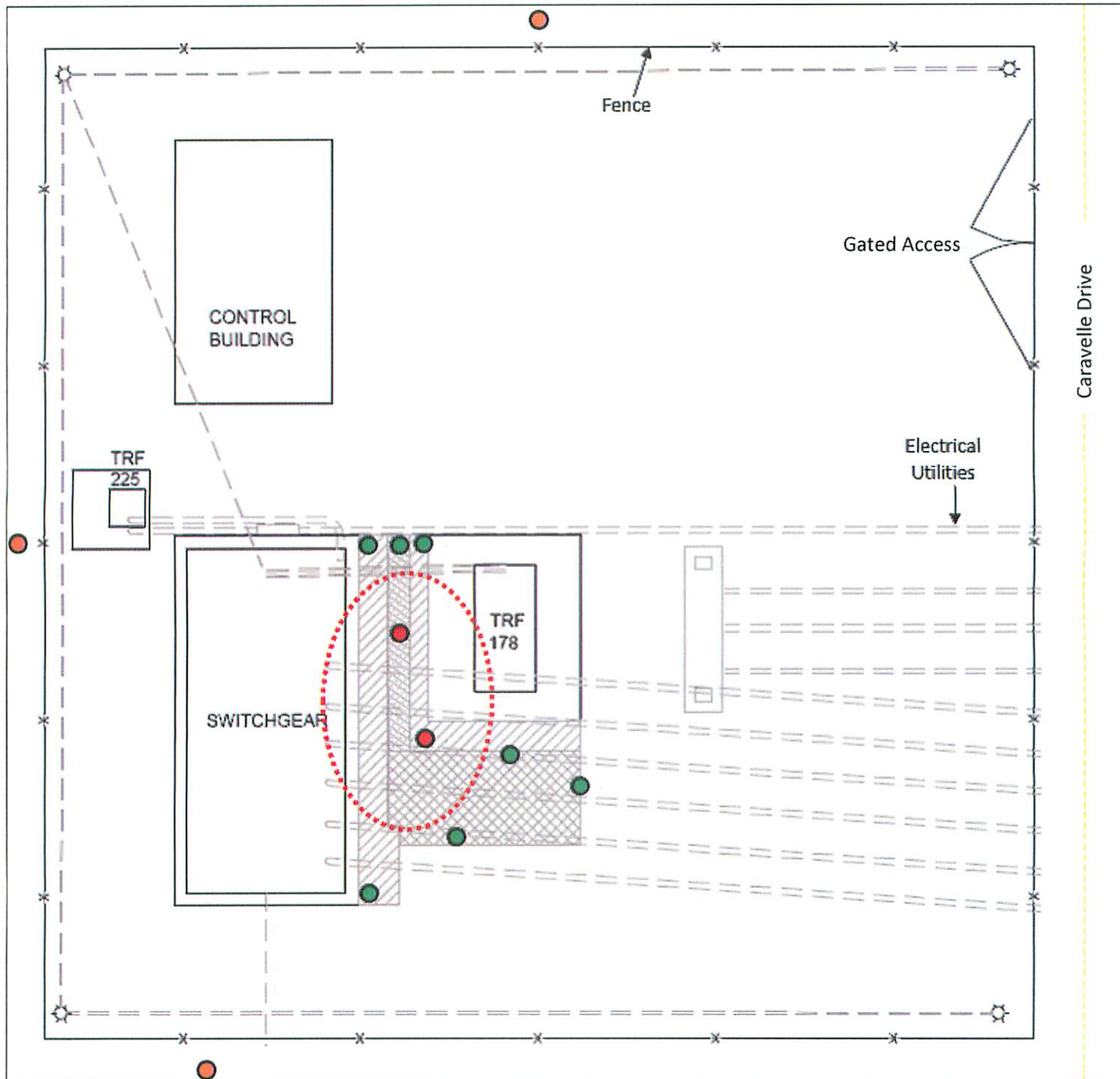
Sincerely,



Joshua Barsis  
Environmental Program Specialist

cc: RFA via email at [dec.spar.cr@alaska.gov](mailto:dec.spar.cr@alaska.gov)  
Kamie Willis, DOL (via email)

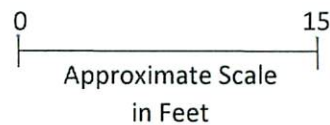
Enclosures: Attachment A: Cleanup Complete-ICs Agreement and Signature Page  
Attachment B: Notice of Environmental Contamination  
Attachment C: Soil Sampling Map



**LEGEND**

- = Approximate location of excavation soil sample; above ADEC cleanup criteria.
- = Approximate location of excavation soil sample; below ADEC cleanup criteria.
- = Approximate location of soil boring sample; below ADEC cleanup criteria.
- ⋯ = Approximate extent of remaining DRO soil contamination.

Note: diesel range organics (DRO) remains up to 17,000 mg/kg. The ADEC migration to groundwater (MTG) cleanup level for DRO is 250 mg/kg. Further excavation is not feasible because of onsite utilities.



**Chugach Electric Raspberry Substation**  
Soil Sampling Locations Map  
7020 Caravelle Drive, Anchorage  
ADEC File Number: 2100.38.549  
ADEC Hazard ID: 26275

Attachment C  
January 2015

Alaska Department of  
Environmental Conservation

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

CEA agrees to the terms and conditions of this Cleanup Complete Determination, as stated in this decision letter for the Chugach Electric Raspberry Substation site dated **January 22, 2015**. 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 75.380.

\_\_\_\_\_  
Signature of Authorized Representative, Title

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Authorized Representative, Title

**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.

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**For Internal Use Only**

ADEC File No. 2100.38.549

Hazard ID: 26275

ADEC Project Manager: Joshua Barsis

**\*Attention ADEC Administration Staff:** Please follow the procedure below after Attachment A is signed/returned to ADEC.

1. Log-in and Date Stamp *Attachment A*
2. Scan and Save to the appropriate electronic folder on the network Drive
3. File the hard copy in the appropriate project/site file Correspondence Folder (blue in Anchorage).
4. Provide the Correspondence folder (with the filed *Attachment A* hard copy) to the ADEC Project Manager

# Notice of Environmental Contamination

**Grantor:** State of Alaska  
Department of Environmental Conservation  
Contaminated Sites Program

**Grantee:** Chugach Electric Association, Inc.  
Chugach Electric Raspberry Substation

**Legal Description:** Sand Lake School Site TR B Kincaid Elementary in Section 3, Township 12 North, Range 4 West, Seward Meridian, within the Anchorage Recording District, Alaska

**Recording District:** 301 – Anchorage

**Return to:** Joshua Barsis  
Environmental Program Specialist  
555 Cordova Street  
Anchorage, AK 99507

**State Business- No Charge**



## NOTICE OF ENVIRONMENTAL CONTAMINATION

As required by the Alaska Department of Environmental Conservation, Grantor, pursuant to 18 AAC 75.375 Chugach Electric Association, Inc. (CEA), Grantee, as the owner [and operator] of the subject property, hereby provides public notice that the property located at: 7020 Caravelle Drive in Anchorage, Alaska, 99502, and more particularly described as follows:

Sand Lake School Site TR B Kincaid Elementary in Section 3, Township 12 North, Range 4 West, Seward Meridian, within the Anchorage Recording District, Alaska

has been subject to a discharge or release and subsequent cleanup of oil or other hazardous substances, regulated under 18 AAC 75, Article 3, revised as of April 8, 2012. 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](http://www.dec.state.ak.us/spar/csp/db_search.htm) under Hazard ID number 26275.

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 diesel range organics (DRO) impacted soil exists on-site. Further cleanup was determined to be impracticable because of onsite electrical utilities.

Attached is a site survey or diagram drawn to scale that shows the locations of existing structures, the approximate location and extent of remaining soil contamination and the locations where confirmation soil samples were collected. ADEC has determined there is no unacceptable risk to human health or the environment as long as the contamination is properly managed in accordance with the following conditions.

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, CEA shall report to ADEC every 5 years to document land use, or report as soon as CEA becomes aware of any change in land ownership and/or use, if earlier. **The report can be sent to the local ADEC office or electronically to [DEC.ICUnit@alaska.gov](mailto:DEC.ICUnit@alaska.gov).**
2. Installation of groundwater wells requires ADEC approval.
3. Contamination remains in the sub-surface soils at this site above ingestion, inhalation, and migration to groundwater cleanup levels; however, further excavation is impractical due to buried utilities and other structural components. When the contaminated soil becomes accessible, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan; and/or to the satisfaction of ADEC.

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

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 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 at the site has been shown to meet the most stringent soil cleanup levels in method two of 18 AAC 75.340 and that off-site transportation of soil is not a concern.

For more information on the contaminated site in this Notice of Environmental Contamination, please see ADEC Contaminated Sites Program file number 2100.38.549 for the site named Chugach Electric Raspberry Substation.

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Signature of Authorized ADEC Representative

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Date