



THE STATE  
of **ALASKA**  
GOVERNOR SEAN PARNELL

Department of  
**Environmental Conservation**

DIVISION OF SPILL PREVENTION & RESPONSE  
Contaminated Sites Program

555 Cordova Street  
Anchorage, Alaska 99501  
Phone: 907.269.7503  
Fax: 907.269.7649  
dec.alaska.gov

File No: 2560.38.003  
Return Receipt Requested  
Article: 7012 1010 0003 0389 1846

October 29, 2014

George Hornberger  
Iliamna-Newhalen Nondalton Electric Coop (INNEC)  
P.O. Box 210  
Iliamna, Alaska 99606

Re: Decision Document; Former Iliamna Newhalen Nondalton Electric  
Cleanup Complete – Institutional Controls Determination

Dear Mr. Hornberger:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the Former Iliamna Newhalen Nondalton Electric 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:  
Contact Party:**

Former Iliamna Newhalen Nondalton Electric  
Iliaska Subdivision Lot 1  
Iliamna, Alaska 99606

**Name and Mailing Address of**

George Hornberger  
INNEC  
Iliamna, Alaska 99606

**ADEC Site Identifiers:**

File: 2560.38.003  
Hazard ID: 2150

**Regulatory Authority for  
Determination:**

18 AAC 75

**Background**

The Former Iliamna Newhalen Nondalton Electric Coop (INNEC) former tank farm consisted of six 15,000 gallon aboveground storage tanks (ASTs) in use from approximately 1968 to 1982. The ASTs were used to store diesel fuel off-loaded from barges on Iliamna Lake and sold for heating and power generation in Newhalen and Iliamna. The tank farm area consists of gravel with semi-circular gravel berm separating the tank farm from Iliamna Lake.

In 1994, a 20 x 40 foot area of diesel impacted soil was encountered from a former above ground storage tank (AST) area. The spill may have occurred from a slow leaky valve from the ASTs. Reportedly, INNEC will turn the land over to the Lake and Peninsula Borough. The Borough plans to fill-in the former tank farm area above the berm with gravel for use as a parking lot.

### Contaminants of Concern

During the investigations at the site, soil and groundwater samples were analyzed for one or more of the following: diesel range organics (DRO); gasoline range organics (GRO); total petroleum hydrocarbons (TPH) by EPA Method 418.1 (which is roughly equivalent to GRO, DRO, and residual range organics combined); and the volatile organic compounds (VOCs); benzene, toluene, ethylbenzene, and xylenes. Based on these analyses and knowledge of the source area, DRO was identified as a contaminant of concern (COC) in soil and groundwater.

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

**Table 1- Soil Cleanup Levels: Method Two, Table B2, *Under 40 Inch Zone***

Contaminants of Concern	Soil Method Two, Direct Contact /Ingestion*	Soil Inhalation*	Soil Method Two Migration to Groundwater*	Ground-water#	Highest Remaining Contaminant Level in Soil (S) & Groundwater (GW)
DRO	10,250	12,500	250	1.5	S=4,210 GW=2.65

**Notes to Table 1.** \*All soil contaminant concentrations are presented in mg/kg.

#All groundwater contaminant concentrations are presented in mg/L.

### Site Characterization and Cleanup Actions

In 1994, seven surface soil samples collected from a 20 x 40 foot stained area contained TPH up to 2,590 mg/kg. Groundwater with a petroleum odor was encountered 12 to 18 inches below ground surface (bgs). In 1995 approximately 80 cubic yards of contaminated soil were excavated and put into a treatment biocell onsite. No visible sheen was detected on the shallow groundwater at the site and no confirmation samples were collected. In 1998, three soil samples collected from the biocell contained DRO up to 2,800 mg/kg.

In 2012, a total of six soil samples were collected at the site. Two surface soil samples collected into the biocell contained DRO up to 526 mg/kg. Four surface soil samples collected at the former AST location contained DRO up to 2,310 mg/kg.

On June 9<sup>th</sup> and 10<sup>th</sup> of 2014, removal of the biocell, advancement of well points, and evaluation of the soil and groundwater were conducted. Approximately 80 cubic yards of contaminated soil from



the biocell were transported to the Newhalen Landfill. The former pipe to the tank farm was bent to seal it off and left in situ because it was not practical to remove it without damaging the semi-circular gravel berm. Well points GW1 and GW2, located at the berm, did not contain groundwater for sampling. Well point GW3 installed within the tank farm source area contained DRO up to 2.65 mg/L. GW4 installed downgradient of the source area beyond the berm and 20 feet upgradient of Lake Iliamna did not produce enough groundwater for sampling, but contained a strong hydrocarbon odor and sheen. A soil sample collected from the GW4 groundwater interface at 20 inches bgs contained DRO at 4,210 mg/kg. Ten soil samples collected 12 inches bgs from the former AST farm area contained DRO up to 1,830 mg/kg. Three of these samples contained a strong hydrocarbon odor. Seven shovel sheen tests along the beach did not contain evidence of petroleum contamination.

An additional investigation was conducted on July 25, 2014 to determine extent of contamination encountered at GW4. The lake level was higher during this investigation; within 2.7 feet of GW4. Six soil samples were collected upgradient of GW4 at the groundwater interface (12 inches bgs) that contained DRO up to 3,250 mg/kg. The two well points, GW1 and GW2, did not contain groundwater for sampling. A groundwater sample collected from GW4 contained detectable levels of DRO, but below ADEC Method Two cleanup levels. (Note: this sample is considered bias low due to limited recharge in the well). A surface water sample collected from the lake was non-detect for total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAQH) but had detectable levels of DRO which were below groundwater cleanup levels.

On September 17, 2014, well points GW1, GW2, and GW3 were decommissioned in accordance with ADEC guidance. Well Point GW4 was discovered underwater due a higher lake level. GW4 will be removed once it can be accessed.

### **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 this site, exposure to remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to 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	De Minimis Exposure	Surface soil samples collected were below ingestion cleanup levels. Exposure through this pathway is considered insignificant.
Sub-Surface Soil Contact	De Minimis Exposure	Sub-Surface soil samples collected were below ingestion cleanup levels. Exposure through this pathway is considered insignificant.
Inhalation – Outdoor Air	De Minimis Exposure	Soil samples collected were below outdoor inhalation cleanup levels. Exposure through this pathway is considered insignificant.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings at the site and future use of this site is a parking lot.
Groundwater Ingestion	De Minimis Exposure	A shallow groundwater sample collected at the source area contained DRO above groundwater cleanup levels. However, down gradient ground water samples indicate the groundwater contamination is limited in extent. The future use of this site is a parking lot. Exposure through this pathway is considered insignificant.
Surface Water Ingestion	De Minimis Exposure	Surface water is not utilized as a drinking water source in this area.
Wild Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals. This area is not used for harvesting wild foods.
Exposure to Ecological Receptors	De Minimis Exposure	DRO contamination is assumed de minimis in quantity adjacent to Lake Iliamna. Furthermore, removal of gravel could physically damage sessile communities. Exposure through this pathway is considered insignificant.

**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 ground water use, or a physical barrier in place that deters contact with residual contamination.

**ADEC Decision**

There is contamination remaining above established cleanup levels at the Former Iliamna Newhalen Nondalton Electric site, but ADEC has determined there is no unacceptable risk to human health or the environment, and this site will be granted a Cleanup Complete- Institutional Controls Determination subject to the following:

1. Any future change in land use may impact the exposure assumptions cited in this document.



If land use and/or ownership changes, current institutional controls may not be protective and ADEC may require additional remediation and/or institutional controls. Therefore, the Owner(s) will report to ADEC every five years to document land use, or as soon as the Owner(s) becomes aware of any change in land ownership and/or use. **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 any conditions the owners and operators are subject to in accordance with this decision document. (See Attachment B.)
3. Installation of groundwater wells at this site will require approval from ADEC
4. Well point GW4 must be decommissioned in accordance with ADEC guidance when it becomes accessible.
5. Movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.
6. 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 Attachment B).

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. Note: management conditions 5 and 6 will remain in effect after ICs are removed.

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 within 30 days of receipt of this letter. If you have questions about this closure decision, please feel free to contact Grant Lidren at (907) 269-8685.

Sincerely,


A handwritten signature in blue ink that reads "Grant Lidren" with a long horizontal flourish extending to the right.

Grant Lidren  
Environmental Specialist

Attachment A: Cleanup Complete-ICs Agreement Signature Page  
Attachment B: NEC with Site Figure

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

INNEC agrees to the terms of this Cleanup Complete with Institutional Controls determination as stated in this closure decision document dated **October 29, 2014** for the *Former Iliamna Newhalen Nondalton Electric* site. 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 78.276(f).

 General Manager

Signature of George Hornberger or Authorized Representative, Title  
INNEC

George Hornberger General Manager

Printed name of George Hornberger or Authorized Representative, Title  
INNEC

**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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ADEC File No.: 2560.38.003  
Hazard ID: 2150  
ADEC Project Manager: Grant Lidren

**For Internal Use Only**

**\*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).

Provide the Correspondence folder (with the filed *Attachment A* hard copy) to the ADEC Project Manager

**Attachment B**

**Notice of Environmental Contamination  
(To be filed by DEC)**

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

**Grantee:** Iliamna Newhalen Electric Cooperative, INC. or INNEC, as Owner of the subject property ("Owner")

**Legal Description:** Lot 1 of the Iliaska subdivision; Plat 71-3

**Recording District:** 320 - Iliamna

**Return to:** Grant Lidren  
ADEC Contaminated Sites Program  
555 Cordova Street  
Anchorage, AK 99501

**State Business- No Charge**



## NOTICE OF ENVIRONMENTAL CONTAMINATION

As required by the Alaska Department of Environmental Conservation; Grantor; pursuant to 18 AAC 75.375 Owner(s) and/or operators of the subject property, hereby provides public notice that the property located at lot 1 of the Iliaska Subdivision Iliamna, Alaska 99606, and more particularly described as:

Lot 1 of the Iliaska Subdivision as recorded in Book 11, Page 136, Iliamna Recording District on August 27, 1981

has been subject to a discharge or release of oil or other hazardous substances, regulated under 18 AAC 75, Article 3, as amended October 9, 2008. This release is documented in the 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 2150.

Diesel Range Organic (DRO) contamination remains in the surface above the default soil cleanup levels established in 18 AAC 75.341, Method Two, Table B2, *Under 40 Inch Zone*. Petroleum contamination remains in groundwater above the default groundwater cleanup levels established in 18 AAC 75.345 Table C Groundwater Cleanup Levels. ADEC requires the soil shall not be disturbed and must remain in place and the groundwater cannot be accessed. These institutional controls are required to control direct contact, ingestion, inhalation, and groundwater exposure risks to contaminated surface soil and groundwater located at this property. These institutional controls consist of the following:

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, current institutional controls may not be protective and ADEC may require additional remediation and/or institutional controls. Therefore, the Owner(s) will report to ADEC every five years to document land use, or as soon as the Owner(s) becomes aware of any change in land ownership and/or use. **The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov**
2. Installation of groundwater wells at this site will require approval from ADEC
3. Well point GW4 must be decommissioned in accordance with ADEC guidance when it becomes accessible.
4. Movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

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. Attached, is a site figure that shows locations of

existing structures, and the approximate location and extent of known soil and groundwater contamination (see site Figure).

This Notice of Environmental Contamination (NEC) remains in effect until a written determination from ADEC is recorded that states the soil and groundwater at this site have 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 18 AAC 75.345 and that off-site transportation of soil and/or groundwater is not a concern.

For more information on the contaminated site in this NEC, please see ADEC Contaminated Sites Program file number 2560.38.003 for the site named Former Iliamna Newhalen Nondalton Electric.

Signature of ADEC Representative: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: Grant Lidren

# Site Figure: Soil & Groundwater Contamination

