



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: 907.451.2192
Fax: 907.451.5105

File: 780.38.014

July 6, 2012

Don Eller
Tanana Power Company, Inc.
6270 Beechcraft Road
Wasilla, Alaska 99654

Re: Decision Document, Tanana Power Company
Cleanup Complete Determination – Institutional Controls

Dear Mr. Eller:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Tanana Power Company located at Lot 8 Block 10, Tanana, 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 Tanana Power Company 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:

Tanana Power Company
Lot 8 Block 10
Tanana, Alaska 99777

Name and Mailing Address of Contact Party:

Don Eller
Tanana Power Company, Inc.
6270 Beechcraft Road
Wasilla, Alaska 99654

ADEC Site Identifiers

ADEC Reckey: 2002310108501

File: 780.38.014
Hazard ID: 3946

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

Background

This site has been impacted by historic power plant operations, including power generation and spills and leaks from several fuel storage tanks and associated piping. Soil and water samples collected at this site have been tested for: gasoline range organics (GRO); diesel range organics (DRO); residual range organics (RRO); benzene, toluene, ethylbenzene, and xylenes (BTEX); volatile organic compounds (VOCs); polycyclic aromatic hydrocarbons (PAH); polychlorinated biphenyls (PCBs); and metals.

Site Characterization and Cleanup Actions

Power was generated at the former location of the Tanana Power Company on Lot 8, Block 10 from 1966 to 1983, when it was abandoned. This ½ acre property consisted of a power plant, two 500 gallon day tanks and a livery on the North portion of the property. A three inch fuel pipe connected the day tanks to a 75,000 gallon tank farm on the southern part of the property.

In 2001, the Environmental Protection Agency Superfund Technical Assessment and Response Team conducted an areawide investigation that included several properties in Tanana, including Lot 8. This investigation was part of an attempt to identify the source of benzene detections in the public drinking water well. A soil sample collected at the former power plant location showed elevated petroleum hydrocarbon levels and trace pesticides.

In 2005, strong hydrocarbon odors and stained soil were encountered during the excavation of a sewer line trench along 2nd Avenue north of the Tanana Power Company property. Soil samples collected at an approximate depth of 13.5 feet below ground surface (ft bgs) during the excavation work were analyzed for DRO, GRO, BTEX, RRO, metals, PCB's, and VOC's. The only contaminants above the ADEC cleanup levels were DRO at concentrations up to 21,500 milligrams per kilogram (mg/kg); GRO at up to 415 mg/kg, and naphthalene at 25.2 mg/kg. Because this contamination was found on the right-of-way and is currently beneath the roadbed, further excavation has not been completed. Although the source of this contamination is unclear, it is assumed to be associated with activities at the power company. Later investigation included a test pit 85 feet north of the northern boundary of Lot 8. A sample collected at 18 feet bgs indicated no contamination was present at this depth.

In 2008, Tanana Power Company hired Amundsen Environmental Services to conduct additional site characterization as requested by ADEC. Five soil test pits were excavated to a maximum depth of 13.5 ft bgs; permafrost was encountered at 10-13.5 ft bgs. Soil samples contained up to 8,910 mg/kg DRO, 497 mg/kg GRO, 0.081 mg/kg benzene, 6.67 mg/kg ethylbenzene, 14.3 mg/kg 1-methylnaphthalene, and 19.3 mg/kg 2-methylnaphthalene. Most detections above the ADEC cleanup levels were in the sample from test pit 1 (see Figure 1). Excavated test pit soil was placed back into the excavations.

Further site characterization was conducted in 2010 with the excavation of nine additional soil test pits to or below permafrost (present at 8-9 ft bgs), to a maximum depth of 24.5 ft bgs. Soil samples contained up to 758 mg/kg DRO. Groundwater was observed in 3 test pits excavated below 21.5 ft bgs. At this depth the samples are suspected to have been collected below the elevation of the Yukon River located approximately 100 feet south of the property. Only one groundwater sample was collected from the bottom of a test pit (test pit 7) at 24.5 ft bgs. This sample resulted in a concentration of 18 mg/L DRO. This result is likely to be

biased high because the sample was collected directly from an excavation instead of from a properly installed and developed monitoring well. Excavated test pit soil was again placed back into the excavations.

During a meeting between ADEC and Tanana Power Company in 2011, an alternate point of compliance for potential groundwater contamination was established at the edge of the Yukon River, in the assumed downgradient direction from the property. Water from the groundwater/surface water interface was sampled in 2012 from three 3-4 ft deep temporary well points adjacent to the Yukon River and at the low stage of the river to capture any groundwater flowing into the river. No contaminants were detected in any of the samples.

Properties adjacent to the former Tanana Power Plant location are mostly residential. Most of the community is served by a public water system. Drinking water for the community is obtained from a well located at the edge of the Yukon River over 1000 feet downgradient of the Tanana Power Plant property. This well has been impacted in the past with an unknown source of benzene. No benzene detections have been noted in the well for several years. In addition, water from the well is treated prior to entering the distribution system.

Contaminants of Concern

During the investigations at this site, soil and water samples were analyzed for gasoline range organics (GRO); diesel range organics (DRO); residual range organics (RRO); benzene, toluene, ethylbenzene, and xylenes (BTEX); volatile organic compounds (VOCs); polycyclic aromatic hydrocarbons (PAH); polychlorinated biphenyls (PCBs); and metals. Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Diesel Range Organics
- Gasoline Range Organics
- 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
• Gasoline Range Organics	300
• 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

Pathway Evaluation

Following investigation 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, Pathway Incomplete or Exposure Controlled. 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	According to the responsible party, any soil staining present prior to investigation is no longer present due to the soil disturbance during test pit sampling.
Sub-Surface Soil Contact	Exposure Controlled	Contamination remains in the subsurface at the site, but is below direct contact cleanup levels. Contamination above direct contact levels is present outside the property on the right of way. Institutional controls have been established to prevent exposure.
Inhalation – Outdoor Air	Exposure Controlled	Contamination remains at the site in the subsurface, but is below outdoor inhalation cleanup levels. Contamination above inhalation cleanup levels is present outside the property on the right of way. Institutional controls have been established to prevent exposure.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings on the property. The closest building is 20 feet from the property line. Samples collected closest to this boundary (TP5, TP9, and TP10) did not show presence of volatile compounds above cleanup levels. Vapors are unlikely to intrude into buildings constructed on this property in the future due to the depth of the remaining contamination.
Groundwater Ingestion	Exposure Controlled	Contamination remains in the subsurface soil above migration to groundwater cleanup levels. However, permafrost is present at depths of 8 feet and below. Groundwater was encountered at the bottom of a test pit (at depths below 20 feet) during an investigation; an alternate point of compliance was established at the edge of the river. No contamination was detected. ADEC must be notified prior to installing wells on the property.
Surface Water Ingestion	Pathway Incomplete	Surface water is located within 100 feet off the property boundary. A groundwater-surface water interface sampling indicated no contamination is migrating to surface water.
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	Remaining levels of contamination are mostly in the subsurface at depths below 10 feet where exposure to ecological receptors is unlikely.

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- ICs 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 ICs may not be protective and ADEC may require additional remediation and/or ICs. Therefore Tanana Power Company shall report to ADEC every three years to document land use, or report as soon as Tanana Power Company plans to change land ownership and/or use, if earlier. **The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov.**
2. 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 (Attachment C). Please provide proof of the recorded document within 60 days of the receipt of this letter.
3. Installation of groundwater wells will require approval from ADEC.
4. Any proposal to excavate and 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).
5. Soil contamination is located in multiple locations in the subsurface of the property and the northern right-of-way. If and when the soil becomes accessible due to construction or excavation activities, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan.
6. 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. 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.

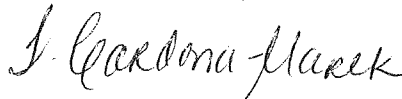
Please sign and return *Attachment A* to ADEC within 30 days of receipt of this letter. If you have questions about this closure decision, please contact the ADEC project manager, Tamara Cardona-Marek at (907) 451-2192.

Approved By,


for Rich Sundet

Environmental Program Manager

Recommended By,

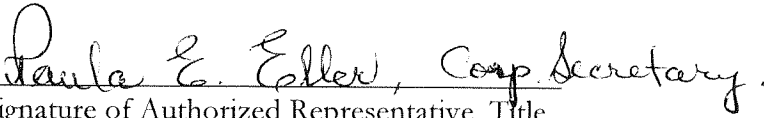


Tamara Cardona-Marek, Ph.D
Environmental Program Specialist

Enclosure: Attachment A – Cleanup Complete – ICs Agreement signature page
 Attachment B – Site Figure
 Attachment C – Notice of Environmental Contamination

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

Tanana Power Company agrees to the terms of this Cleanup Complete with ICs determination as stated in this Closure Decision Document dated **July 5, 2012** for the Tanana Power Plant. 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).


Signature of Authorized Representative, Title

Tanana Power Company


Printed Name of Authorized Representative, Title

Tanana Power Company

*** 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.

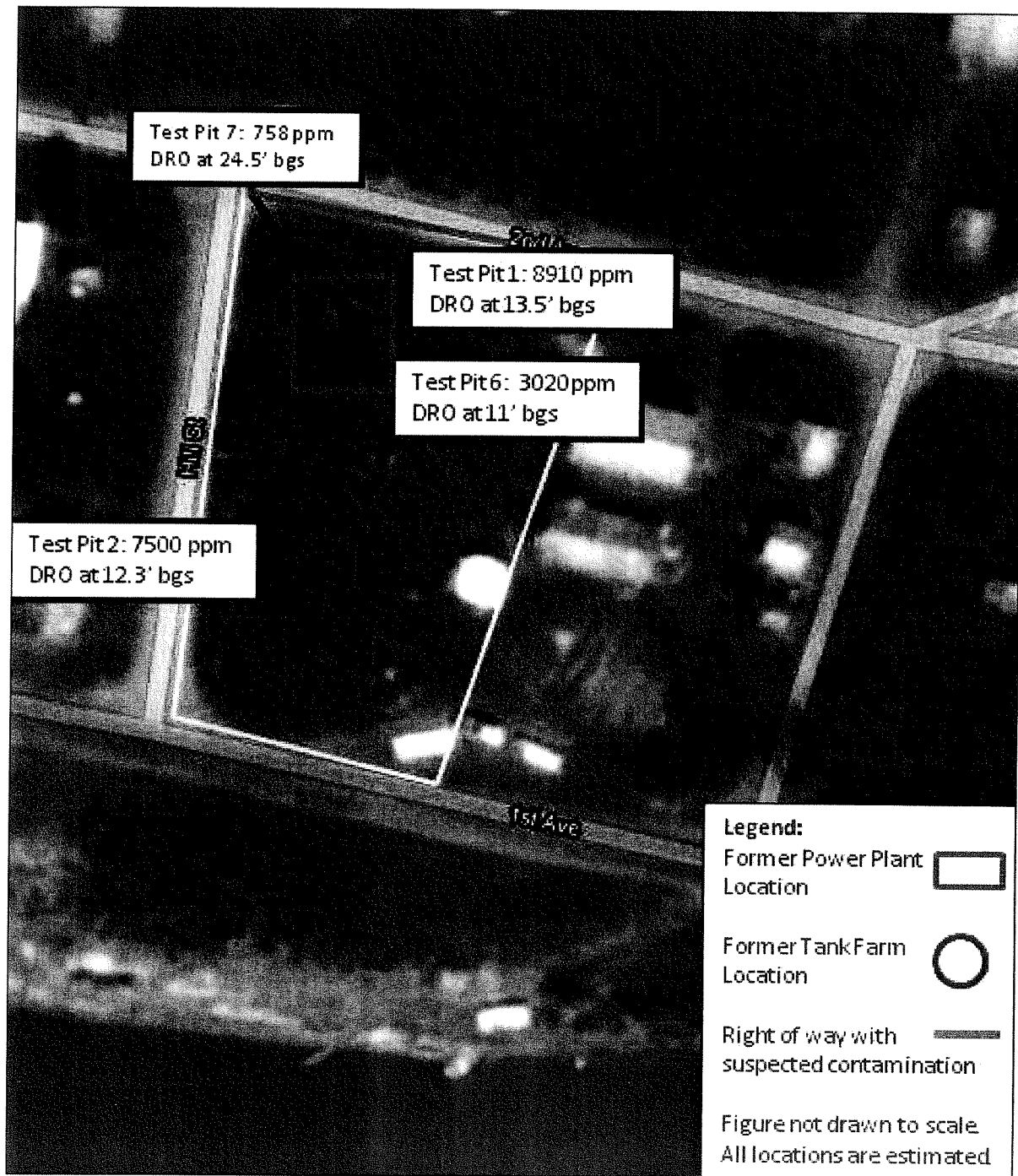
ADEC File No. 780.38.14
Hazard ID: 3946
ADEC Project Manager: Tamara Cardona-Marek

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).
4. Provide the Correspondence folder (with the filed *Attachment A* hard copy) to the ADEC Project Manager so that the PM can update the CS database.

Attachment B: Site Figure



Attachment C: Notice of Environmental Contamination

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RECEIVED JUL 16 2012

File: 780.38.014

July 9, 2012

City of Tanana
P.O. Box 249
Tanana, AK 99777

Re: Remaining contamination on Second Avenue right-of-way, Tanana, Alaska

To Whom it May Concern:

The Alaska Department of Environmental Conservation (DEC), Contaminated Sites Program would like to inform you that a Cleanup Complete with Institutional Controls has been granted for the former Tanana Power Plant site located in Tanana, AK and listed on the DEC Contaminated Sites database. However, residual contamination from an unknown source is suspected to remain on the right-of-way of Second Ave. near the former Tanana Power Plant property (Lot 8).

Remaining contamination is not expected to pose a risk to human health and/or the environment as long as the established requirements are followed. The following requirements apply to the former Tanana Power Company property (Lot 8) as well as to the right-of-way:

- Any proposal to excavate and 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 letter).
- If and when the soil becomes accessible due to construction or excavation activities, the soil must be evaluated and contamination addressed in accordance with an ADEC approved work plan.
- Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

Please share this and the enclosed document with any group or agency that plans a construction project in the area to ensure that any potential risks that workers may be exposed to during construction are properly handled. If you have any questions or believe someone else should be receiving this letter please contact the project manager assigned to this site at tamara.cardona-marek@alaska.gov or at (907)-451-2192. Your attention to this matter is greatly appreciated.

Sincerely,

A handwritten signature in cursive script that reads "T. Cardona-Marek".

Tamara Cardona-Marek, Ph.D.
Environmental Program Specialist

Enclosure: ADEC Decision Document, Tanana Power Company with attachments A and B

cc: Don Eller