THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

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File: 2407.38.028

Certified Mail, Return Receipt Requested
Article No.: 7016 1370 0000 0242 0823

August 15, 2016

Prathap Kodial
CPD Alaska, LLC
201 Arctic Slope Avenue
Anchorage, AK 99518

Re: Decision Document: Crowley Tank Farm Bethel – Tank 18
Cleanup Complete Determination – Institutional Controls

Dear Mr. Kodial:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Crowley Tank Farm Bethel – Tank 18 site, located at 380 Standard Oil Road in Bethel. 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 institutional controls are maintained and effective and no new information becomes available that indicates residual contamination poses an unacceptable risk.

This Cleanup Complete with Institutional Controls (ICs) determination is based on the administrative record for the Crowley Tank Farm Bethel – Tank 18 site, which is located in the offices of the ADEC in Anchorage, Alaska. This decision letter summarizes the site history, cleanup actions, regulatory decisions, and specific conditions required to effectively manage remaining contamination at this site.

Site Name and Location:
Crowley Tank Farm Bethel – Tank 18
380 Standard Oil Road
Bethel, AK 99559

Name and Mailing Address of Contact Party:
Prathap Kodial
CPD Alaska, LLC
201 Arctic Slope Avenue
Anchorage, AK 99518

DEC Site Identifiers:
File No.: 2407.38.028
Hazard ID.: 26292

Regulatory Authority for Determination:
18 AAC 75

Site Description and Background

On August 8, 2013, approximately 2,100 gallons of diesel fuel leaked through a ¼ inch diameter hole in the bottom of tank 18 at the Crowley South tank farm in Bethel. Leaked diesel accumulated in a lined secondary containment area. The liner contained a hole, which was repaired after it was discovered. The spill was immediately reported to the Prevention Preparedness and Response Program (PPR) and guidance for initial response was provided. An undetermined amount of fuel was inadvertently pumped into the adjacent unlined tertiary containment area. Cleanup of the tertiary containment area was performed separately under the Prevention Preparedness and Response Program and is not discussed in this closure document.

Contaminants of Concern

During the site investigation and cleanup activities at this site, samples were collected from soil and groundwater and analyzed for gasoline range organics (GRO), diesel range organics (DRO), residual range organics (RRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), and polynuclear aromatic hydrocarbons (PAHs). Based on these analyses, the following contaminants were detected above the applicable cleanup levels and are considered Contaminants of Concern at this site.

- Diesel Range Organics (DRO)
- Gasoline Range Organics (GRO)
- Benzene

Cleanup Levels

DRO, GRO, and benzene were detected in soil above the approved Method Two migration to groundwater (MTG) cleanup levels for the under 40-inch precipitation zone, established in 18 AAC 75.341(c), Table B1, and 18 AAC 75.341 (d), Table B2.

No contaminants were detected in groundwater above the approved cleanup levels established in 18 AAC 75.345 Table C.

Table 1 – ADEC Cleanup Levels

Contaminant	Soil Cleanup Level – MTG (mg/kg)	Soil Cleanup Level – Inhalation (mg/kg)	Soil Cleanup Level – Ingestion (mg/kg)	Groundwater (mg/L)	Soil – Maximum Remaining Concentrations (mg/kg)
DRO	250	12,500	10,250	1.5	8,310
GRO	300	1,400	1,400	2.2	447
Benzene	0.025	11	150[1]	0.005	0.144

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
[1] – Direct contact pathway, Method 2

Characterization Activities

Ahtna Engineering Services, LLC was contracted to perform site characterization which initiated in June, 2015. Five holes were drilled through the base of Tank 18 to allow for the collection of soil samples beneath the tank. One soil sample was collected from each drilled hole, from roughly two to eight inches below ground surface (bgs) and above the liner present beneath the tank. Results of this investigation revealed that

DRO exceeded ADEC Method Two MTG cleanup levels in all five samples with a maximum detection of 8,310 mg/kg (sample BT02). GRO exceedances were detected in all but sample BT05, with a maximum detection of 447 mg/kg (sample BT02). Benzene was also detected above MTG cleanup levels in samples BT02, BT03, and BT04 with a maximum detection of 0.144 mg/kg (sample BT02).

In addition to the samples collected from beneath the tank, ten soil borings were advanced in the vicinity of the tank; six borings in an equally spaced array around the tank, three to the north of the tank, and one to the southeast of the tank, in the presumed direction of groundwater flow. A total of 20 soil samples and two duplicates were collected from the soil borings. All results from these samples were either non-detect or below cleanup levels for all analytes.

After soil sample collection, five borings were completed as groundwater monitoring wells. Monitoring well depths ranged from 21 to 25 feet with a ten foot screened interval centered in the soil-groundwater interface. Groundwater was sampled for the same analytes as soil. Initial groundwater sampling showed no contaminants detected above cleanup levels; however, it was recommended that additional sampling be conducted in the fall to evaluate whether active layer water was present and to confirm that there were no impacts to groundwater above ADEC cleanup levels surrounding the tank. Additional groundwater sampling was conducted in October, 2015. All wells except MW-1, which was dry, were again sampled for the same analytes. No results exceeded ADEC cleanup levels.

All five groundwater wells were decommissioned in June, 2016. Remaining contamination at this site is limited to soil underneath the tank and does not exceed ingestion and inhalation levels. This soil appears to be contained within the liner and will not be easily accessible until the tank is removed.

Cumulative Risk Evaluation

Pursuant to 18 AAC 78.325(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 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 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 surface soil but does not exceed ingestion cleanup levels, and is limited to the soil beneath Tank 18.
Sub-Surface Soil Contact	De-Minimis Exposure	Contamination remains in sub-surface soil, but does not exceed ingestion cleanup levels.
Inhalation – Outdoor Air	De-Minimis Exposure	Contamination remains in sub-surface soil, but is below inhalation cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no occupied buildings on site and none are expected to be built in the area.
Groundwater Ingestion	De-Minimis Exposure	Residual groundwater contaminant concentrations are below Table C groundwater cleanup levels.
Surface Water Ingestion	Pathway Incomplete	Contaminants are not expected to migrate to nearby surface waters.
Wild and Farmed Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals.
Exposure to Ecological Receptors	Pathway Incomplete	No terrestrial or aquatic exposure routes present.

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.

ADEC Decision

Petroleum contamination remains in surface soils above MTG cleanup levels; however ADEC has determined due to the inability to access these soils without removal of the tank, and the low risk to human health and the environment, the site can be closed subject to the following conditions.

1. When contaminated soil beneath tank 18 becomes accessible, additional remediation shall occur in accordance with an ADEC-approved work plan.
2. The tank liner shall remain intact and maintained until such point that remediation is conducted.

Standard site closure conditions that apply to all sites include:

1. Any proposal to transport soil or groundwater off-site requires ADEC approval in accordance with 18 AAC 75.325(i) or 18 AAC 78.600(h). A "site" as defined by 18 AAC 75.990 (115) or 18 AAC 78.995(134) means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership.

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

3. Groundwater throughout Alaska is protected for use as a water supply for drinking, culinary and food processing, agriculture including irrigation and stock watering, aquaculture, and industrial use. Contaminated site cleanup complete determinations are based on groundwater being considered a potential drinking water source. In the event that groundwater from this site is to be used for other purposes in the future, such as aquaculture, additional testing and treatment may be required to ensure the water is suitable for its intended use.

ADEC has determined the cleanup is complete as long as the institutional controls are properly implemented and no new information becomes available that indicates residual contamination may pose an unacceptable risk.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status to "Cleanup Complete with Institutional Controls" and will include a description of the contamination remaining at the site. The institutional controls will be removed in the future if documentation is provided that shows concentrations of all residual hazardous substances remaining at the site are below the levels that allow for unrestricted exposure to, and use of, the contaminated media and that the site does not pose a potential unacceptable risk to human health, safety or welfare, or to the environment. Standard conditions 1-3 above will remain in effect after ICs are removed.

This determination is in accordance with 18 AAC 75.380 or 18 AAC 78.276(f) and does not preclude ADEC from requiring additional assessment and/or cleanup action if the institutional controls are determined to be ineffective or if new information indicates that contaminants at 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, 555 Cordova Street, Anchorage, Alaska 99501-2617, 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, P.O. Box 111800, 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.

If you have questions about this closure decision, please feel free to contact me at (907) 269-3083 or email at nathan.maxwell@alaska.gov.

Sincerely,

Nathan Maxwell
Project Manager

Kara Kusche
Environmental Program Manager

Enclosures: Attachment A: Signed IC Agreement Page
Site Figure

cc: Spill Prevention and Response, Cost Recovery Unit

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

CPD Alaska, LLC agrees to the terms and conditions of this Cleanup Complete Determination, as stated in decision letter for the Crowley Tank Farm Bethel – Tank 18 site, dated (August 15, 2016). 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 with18 AAC 18 AAC 78.276(f).

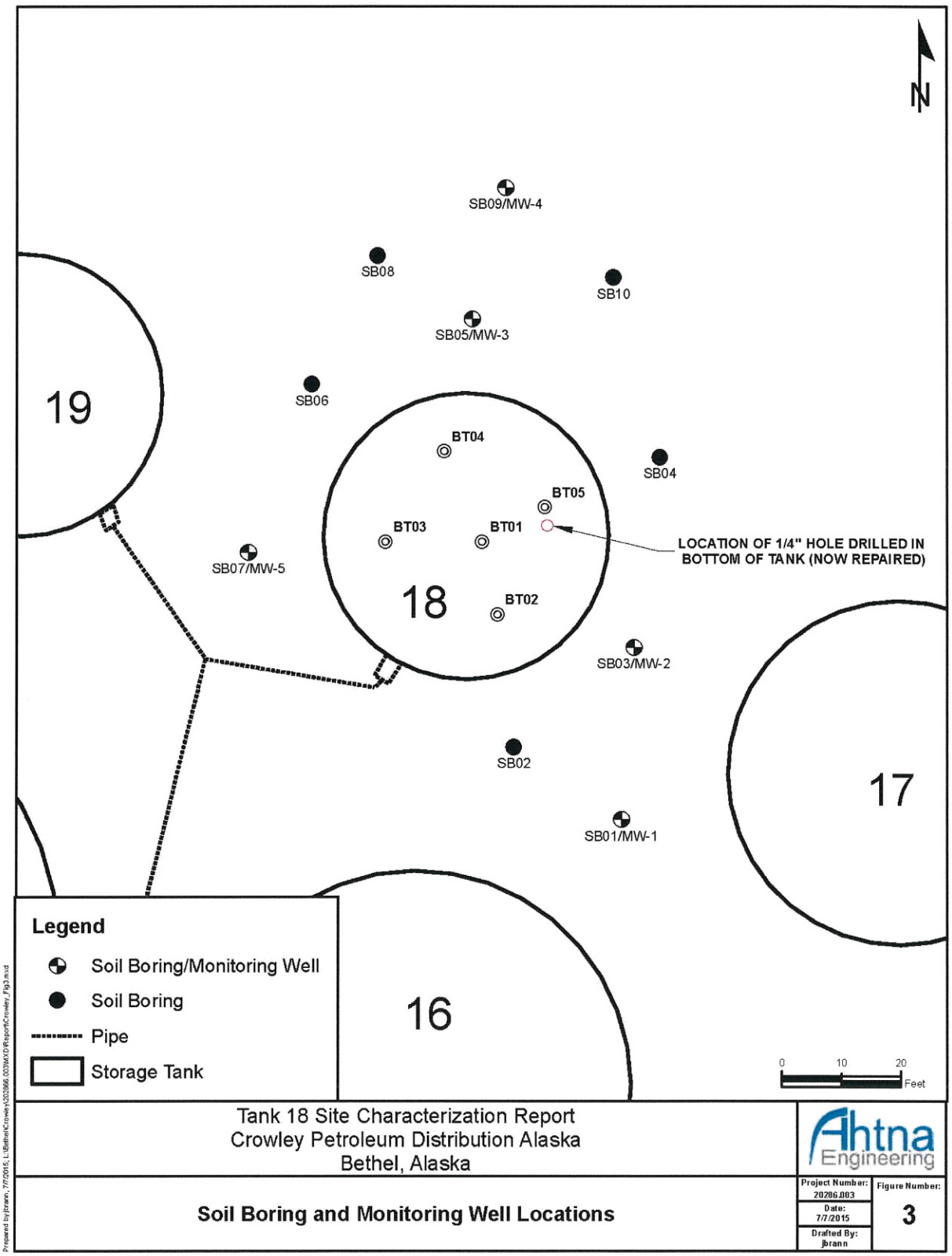
_____ _____

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.


N
SB09/MW-4
SB08
SB10
SB05/MW-3
SB06
19
BT04
SB04
BT05
BT03
BT01
LOCATION OF 1/4" HOLE DRILLED IN BOTTOM OF TANK (NOW REPAIRED)
SB07/MW-5
18
BT02
SB03/MW-2
SB02
17
SB01/MW-1
16
Legend
Soil Boring/Monitoring Well
Soil Boring
Pipe
Storage Tank
0 10 20
Feet
Tank 18 Site Characterization Report
Crowley Petroleum Distribution Alaska
Bethel, Alaska
Ahtna Engineering
Soil Boring and Monitoring Well Locations
Project Number: 20286.003
Figure Number: 3
Date: 7/7/2015
Drafted By: jbrann