

STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION

DIVISION OF SPILL PREVENTION AND RESPONSE CONTAMINATED SITES PROGRAM

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File: 2245.26.032

July 21, 2011

Richard Tzou
500 East Railroad Avenue
Wasilla, AK 99654-8157

Re: Decision Document; Mom & Pop Grocery
Corrective Action Complete Determination

Dear Mr. Tzou:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with Mom & Pop Grocery located at Mile 4.5 Palmer-Wasilla Highway, Palmer. Based on the information provided to date, the ADEC has determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment, and this site will be closed.

This decision is based on the project file and associated environmental records located in the offices of the ADEC in Anchorage, 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 Corrective Action Complete determination.

Introduction

Site Name and Location:

Mom & Pop Grocery
Mile 4.5 Palmer-Wasilla Highway
Palmer, Alaska 99645
SE ¼ Section 34, Township 18North, Range 1East, Seward Meridian

Name and Mailing Address of Contact Party:

Richard Tzou
500 East Railroad Avenue
Wasilla, AK 99654-8157

ADEC Site Identifiers

File: 2245.26.032

Hazard ID: 25459

Regulatory authority under which the site is being cleaned up:

18 AAC 75 and 18 AAC 78

Background

This subject site is roughly 3 acres in size and located at Four Corners, the junction of Trunk Road at mile 4.5 Palmer-Wasilla Highway. A small mostly vacant commercial building is located on-site and is partially occupied by a liquor store. To the east is a residence on a large lot; to the north is Pioneer Peak Elementary; to the west, past Trunk Road is the Three Bears Store; and, to the south, is a potato farm. Unconfined groundwater in this area is found at depths of 14 to 19 feet below ground surface (bgs) and flows south. There are no drinking water wells ¼ mile downgradient of the subject site. Soil and groundwater samples collected at this site have been tested for Gasoline Range Organics (GRO), Volatile Organic Compounds (VOC), and lead.

Site Characterization and Cleanup Actions

In October 2009, AlaskChem Engineering supervised the removal of two 10,000 gallon regulated underground storage tanks (USTs) and associated piping and dispensers. The USTs contained gasoline, were installed in 1986, and were in operation until 2006 at which time they were classified as temporary out of use. Petroleum hydrocarbon soils were encountered during the UST excavation and contaminated soil (i.e. roughly 415 cubic yards) was removed stockpiled for testing, and eventually spread on the north eastern portion of the lot to be treated by landfarming. The excavation pit measured 12 feet by 68 feet by 16 feet deep. Field screen readings were collected at 10 foot intervals from the base and sidewalls of the excavation pit and sample results suggested that a release had occurred near the fill end of the north UST. Field screen readings adjacent and underneath the southern tank as well as the fuel lines and dispensers did not reveal a suspected release point; however, elevated readings suggested gasoline impacted soil may be present. Nine discrete soil samples were collected from locations with the highest field screen readings and analyzed for GRO and VOCs by ADEC approved methods. In these samples, benzene and toluene were the only contaminants detected at levels that exceeded 18 AAC 75.341 Table B1 or B2 migration to groundwater cleanup levels. Benzene levels ranged from nondetect to 0.138 mg/Kg and toluene levels ranged from nondetect to 6.91 mg/Kg.

Following confirmatory soil sample collection AlaskChem Engineering determined that further excavation of contaminated soil was not feasible due to the presence of existing structures. Consequently, clean soil from off-site was backfilled into the excavation pit to bring the area back to surface grade. AlaskChem Engineering subsequently collected a multi-increment sample of the 415 cubic yard contaminated stockpile. In this sample, benzene (at 0.397 mg/kg) and toluene (at 10.9 mg/Kg) were the only contaminants detected above 18 AAC 75.341 Table B1 or B2 migration to groundwater cleanup levels.

In November 2009, AlaskChem Engineering installed three monitoring wells (MP-A, MP- B, and MP- C) and sampled the on-site drinking water well (MP-D) for GRO and BTEX according to ADEC approved methods. Monitoring well MP-A was installed within the footprint of the former USTs; well MP-B was installed roughly 100 feet south of well MP-A; well MP-C was installed roughly 25 feet southeast of well A MP-A; and well MP-D was located roughly 130 feet east of well MP-A. Groundwater elevations in each well were measured and results revealed the groundwater flow direction was southerly. In these samples, benzene was the only contaminant of concern detected above 18 AAC 75.345 Table C values. Benzene only exceeded cleanup values from samples collected from well MP-A where benzene was detected at 0.014 mg/L.

The 415 cubic yard stockpile was landspread on-site. In October 2010, AlaskChem Engineering sampled the landfarmed area (which consisted of an 80 feet by 120 feet area with an average depth of 14 inches) by dividing it into 48 cells (10 ft by 20 ft). Five soil samples were then collected from the locations with the highest field screen readings and analyzed for GRO and BTEX by ADEC approved methods. Benzene was the only contaminant of concern detected above 18 AAC 75.341 Table B1 or B2 migration to groundwater cleanup levels. Benzene in sample MPS-3 was detected at a level of 0.026 mg/kg. This sample was re-analyzed by the laboratory with a mass spectrometer to reduce background interference and the result was 0.022 mg/kg. The average of both results is 0.024 mg/kg which is less than benzene's 18 AAC.75.341 Table B1 value of 0.025 mg/kg. Therefore, ADEC has determined that the levels of benzene in MPS-3 do not exceed 18 AAC.75.341 migration to groundwater cleanup values, and the landspread soil is considered clean.

In August 2010 and February 2011, AlaskChem Engineering conducted groundwater monitoring events to evaluate the levels of GRO and BTEX in on-site wells. No contaminants of concern have been detected above 18 AAC 75.345 Table C values during the 2010 and 2011 monitoring events. Table 1 provides the groundwater monitoring results from 2009 through 2011.

In June 2011, AlaskChem Engineering decommissioned monitoring wells MP-A, MP-B, and MP-C by cutting the well casings 3 feet below ground surface and then filling the casing void space with a bentonite and silt slurry mixture. The former well locations were then brought up to grade by applying additional bentonite and gravel. All monitoring wells associated with the subject site have been decommissioned.

Table 1. Groundwater Analytical Data 2009 through 2011

Well ID	Sample Date	GRO (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
MP-A	11/8/2009	0.334	14	3.45	11.9	110.8
	8/18/2010	ND	3.24	ND	ND	3.48

	2/23/11	ND	0.876	ND	ND	ND
MP-B	11/8/2009	ND	1.26	ND	ND	ND
	8/18/2010	NS	NS	NS	NS	NS
	2/23/11	NS	NS	NS	NS	NS
MP-C	11/8/2009	ND	ND	2.55	ND	2.23
	8/18/2010	NS	NS	NS	NS	NS
	2/23/11	NS	NS	NS	NS	NS
MP-D	11/8/2009	NS	ND	ND	ND	ND
	8/18/2010	NS	NS	NS	NS	NS
	2/23/11	ND	ND	ND	ND	ND

Notes: ND = nondetect; NS = not sampled

Contaminants of Concern

During the investigations at this site, soil samples were analyzed for gasoline range organics (GRO), volatile organic compounds (VOC), and lead. Based on these analyses and knowledge of the source area, the following Contaminants of Concern were identified:

- Benzene
- Toluene

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.

<u>Contaminant</u>	<u>Site Cleanup Level (mg/kg)</u>
• Benzene	0.025
• Toluene	6.5

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

<u>Contaminant</u>	<u>Site Cleanup Level (mg/L)</u>
• Benzene	0.005
• Toluene	1.0

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, and Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Table 2 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Contaminants were not detected in surface soil.
Sub-Surface Soil Contact	De-minimis exposure	Contamination remains in the subsurface, but does not exceed 18 AAC 75.341 Table B1 or B2 values for direct contact.
Inhalation – Outdoor Air	De-minimis exposure	Contamination remains in the subsurface, but does not exceed 18 AAC 75.341 Table B1 or B2 values for outdoor air inhalation.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Contaminants were not detected within 30 feet of an occupied building, and there is at least five feet of clean oxygenated soil above the contamination left in place at 16 feet below ground surface. Therefore, volatile organic compounds are expected to attenuate and not impact any present or future on-site buildings.
Groundwater Ingestion	De-minimis exposure	Groundwater contaminants do not exceed 18 AAC 75.345 Table C values and there are no domestic drinking water wells within ¼ mile downgradient of the source area.
Surface Water Ingestion	Pathway Incomplete	Groundwater has not impacted downgradient properties and therefore, surface water is not expected to be impacted.
Wild 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 are present.

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.

ADEC Decision

Based on a review of the administrative file for Mom & Pop Grocery, contaminated soil (above 18 AAC 75.341 Table B1 migration to groundwater values) remains in place in the footprint of the former 10,000 gallon USTs at roughly 16 feet below ground surface. However, the levels of contaminants in on-site groundwater do not exceed 18 AAC 75.345 Table C values. Remaining contaminated soil is de-minimis in volume, completed exposure pathways are believed to pose an insignificant exposure risk. In summary, ADEC has determined there is no unacceptable risk to human health or the environment, and this site will be granted a Corrective Action Complete determination.

Although a Corrective Action Complete determination has been granted, ADEC approval is required for off-site soil disposal in accordance with 18 AAC 78.600(h). It should be noted that movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.

This determination is in accordance with 18 AAC 78.276(f) 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.

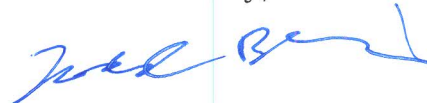
If you have questions about this closure decision, please contact the ADEC project manager, Todd Blessing at (907) 269-7699.

Approved By,



Linda Nuechterlein
Environmental Program Manager

Recommended By,



Todd Blessing
Environmental Program Specialist

cc: Ralph Hulbert, AlaskChem Engineering