



**DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM**

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File: 2320.26.020

July 20, 2010

Mr. Peter Ribbens
Tesoro Alaska Company
P.O. Box 3369
Kenai, Alaska 99611-3369

Re: ADEC Decision Document, North Road Tesoro
Corrective Action Complete Determination

Dear Mr. Ribbens:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the former North Road Tesoro underground storage tank (UST) facility. 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 at this time.

This decision is based on the administrative record for this site, which is located in the offices of the ADEC in Soldotna, 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 this Corrective Action Complete determination.

Introduction

ADEC Site Name:

North Road Tesoro

Location:

Mile 15.4 Kenai Spur Highway
42665 Kenai Spur Highway

Legal Description:

Kenai Peninsula Borough Parcel Number 01719019
T6N, R12W, Section 23, Seward Meridian, KN, Portion of Government Lot 60 Lying West of
North Kenai Road

Name and Mailing Address of Contact Party:

Mr. Peter Ribbens
Tesoro Alaska Company
P.O. Box 3369
Kenai, Alaska 99611-3369

Name and Mailing Address of Land Owner:

Gary R Kernan
P.O. Box 642
Kenai, AK 99611-0642

ADEC Site Identifiers:

ADEC Reckey: 1992230003101
ADEC File Number: 2320.26.020
Hazard ID: 23224

Regulatory authority under which the site is being cleaned up:

18 AAC 75 and 18 AAC 78

Background

This property was developed into a retail fuel sales business in 1971. One 8,000-gallon gasoline underground storage tank (UST), one 4,000-gallon gasoline UST, one 4,000-gallon diesel UST, and associated piping & fuel dispensers were installed at the facility. These UST systems were last used in January 1986, and were removed from the site in September 1987. This property is currently vacant. The surrounding properties are developed with a mixture of both commercial buildings/businesses and residences.

Groundwater is the source of drinking water in this area, and groundwater is first encountered at a depth of approximately 55 feet below the ground surface.

Site Characterization and Cleanup Actions

In 1987, the three underground storage tanks and associated piping and fuel dispensers were removed. Limited environmental assessment sampling was performed at that time and there was concern that the UST systems had polluted site soils. In 1992, Dames & Moore oversaw release investigation work to determine if soil and groundwater had been impacted by the operation of the former UST systems. Dames & Moore concluded that soil and groundwater in the vicinity of the former USTs were contaminated with petroleum hydrocarbons. The gasoline additive 1,2-dichloroethane (EDC) was detected in one of the soil samples.

Continuing assessment work over a period of years identified a dissolved-phase groundwater plume resulting from a release of leaded gasoline at the former service station. This groundwater plume extended approximately 900 feet downgradient from the UST systems, where it emerged from the subsurface into the Cook Inlet intertidal zone. The plume was unusually narrow (less than approximately 60 feet in width), and benzene, EDC, and Gasoline Range Organics (GRO) were the principal contaminants of concern.

Tesoro installed three phases of air sparge (AS) groundwater treatment systems with Phase 1 starting in July 2000 and consisting of three (3) AS wells installed across the central portion of the plume. The Phase 1 wells were operated between 2000 and 2004. By April 2001 benzene and EDC concentrations were below detectable concentrations downgradient of the Phase 1 sparge zone.

Phase 2 began in April 2001 and consisted of three (3) additional AS wells installed about 300 feet upgradient of the Phase 1 AS wells. The Phase 2 system operated between 2001 and 2006. Benzene and EDC concentrations downgradient of the Phase 2 system fell below their ADEC groundwater cleanup levels by October 2003 for benzene, and by November 2004 for EDC.

The Phase 3 system began in November 2005 and consisted of 3 additional AS wells installed along the eastern edge of the former service station. The Phase 3 system operated through 2006. Benzene and EDC concentrations downgradient and upgradient of the Phase 3 wells were below the ADEC groundwater cleanup levels by November 2006 except for one well, monitoring well B-22, located on the former service station parcel. The results from three rounds of subsequent sampling, October 2007, May 2008, and October 2008, demonstrated that benzene, EDC, and GRO concentrations were below ADEC groundwater cleanup levels in all site monitoring wells, including B-22.

Tesoro also installed a soil vapor extraction (SVE) treatment system with two vapor extraction wells at the service station site in March 2000, near the site of the historical fuel release(s). The SVE system operated until May 2001, and then again operated discontinuously between July 2002 and February 2007.

Tesoro completed closure activities at the site in 2009, consisting of collecting confirmation soil samples in the vicinity of the former UST systems (location of the fuel releases), and decommissioning the remaining groundwater monitoring wells and treatment wells. Soil sample data indicate that soils at this site now meet applicable ADEC soil cleanup levels.

Contaminant of Concern

During the investigations at this site, soil and water samples were analyzed for gasoline range organics (GRO), the volatile organic compounds benzene, toluene, ethylbenzene, and xylenes (BTEX), 1,2-Dichloroethane (EDC), and ethylene dibromide (EDB). Based on these analyses, knowledge of the source area, knowledge of the in-situ soil and groundwater treatment efforts expended at this site, and review of soil and groundwater sample analytical reports, these contaminants of concern now appear to meet the applicable ADEC soil and groundwater cleanup levels at this site.

Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B1, 'Migration to Groundwater'.

Contaminant	Site Cleanup Level (mg/kg)
• benzene	0.025
• toluene	6.5
• ethylbenzene	6.9
• xylenes	63
• 1,2-Dichloroethane	0.016
• ethylene dibromide	0.00016
• GRO	300

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)
• benzene	0.005
• toluene	1
• ethylbenzene	0.7
• xylenes	10
• 1,2-Dichloroethane	0.005
• ethylene dibromide	0.00005
• GRO	2.2

Pathway Evaluation

Following investigation and cleanup at the site, exposure to the residual contamination 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 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	The upper two feet of soil ('Surface Soil') meets direct contact soil cleanup levels.
Sub-Surface Soil Contact	Pathway Incomplete	Subsurface soil to a depth of 15 feet, meets direct contact soil cleanup levels.
Inhalation – Outdoor Air	De-minimis exposure	Surface, and subsurface soil to a depth of 15 feet, meets outdoor inhalation soil cleanup levels.
Inhalation – Indoor Air (vapor intrusion)	De-minimis exposure	The residual soil and groundwater concentrations are sufficiently low to preclude any unacceptable risk to indoor air quality.

Groundwater Ingestion	De-minimis exposure	Groundwater quality meets ADEC groundwater cleanup levels.
Surface Water Ingestion	Pathway Incomplete	Contaminant concentrations have been reduced, such that there is no potential to impact surface water, and Cook Inlet is not used for drinking water.
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	Contaminant concentrations have been reduced to ADEC's most stringent soil and groundwater cleanup levels. There is no longer potential for unacceptable risk to ecological receptors.

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

The in-situ cleanup actions have served to reduce residual soil and groundwater contaminant concentrations to meet the applicable ADEC soil and groundwater cleanup levels. ADEC has determined there is no unacceptable risk to human health or the environment. Therefore this site will be issued a Corrective Action Complete determination.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above.

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. The Tesoro Refining and Marketing Company would remain liable for any additional assessment and/or cleanup action(s), should ADEC impose such a requirement.

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 Corrective Action Complete decision, or any other aspect of this project, you may phone me at (907) 262-5210 x250, or contact me via e-mail at paul.horwath@alaska.gov

Sincerely,

A handwritten signature in black ink that reads "Paul Horwath". The signature is written in a cursive style with a long horizontal flourish extending to the right.

Paul Horwath, PE
Environmental Engineer

C: Sue Kent, Kent & Sullivan, Inc., Kenai

Gary R Kernan
P.O. Box 642
Kenai, AK 99611-0642

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