

# STATE OF ALASKA

**SARAH PALIN, GOVERNOR**

## DEPT. OF ENVIRONMENTAL CONSERVATION

### DIVISION OF SPILL PREVENTION AND RESPONSE CONTAMINATED SITES PROGRAM

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File: 1513.26.049

March 25, 2009

Anastasia E. Duarte-Wilkinson, RS  
Tesoro Refining and Marketing Company  
3450 S. 344<sup>th</sup> Way, Suite 201  
Auburn, WA 98001-5931

Re: DEC Cleanup Complete Determination  
Unocal - #5785 – Airport Union

Dear Ms. Duarte-Wilkinson:

The Alaska Department of Environmental Conservation (DEC), Contaminated Sites Program, reviewed the assessment and cleanup records associated with the Unocal - #5785- Airport Union located at 9190 Glacier Highway in Juneau. This site had been contaminated by the release of a hazardous substance; however, based on the information provided to date, the hazardous substance contamination has been adequately addressed and does not pose an unacceptable risk to human health or the environment. Therefore, DEC has determined that no further remedial action is required, and that this site can be closed subject to the institutional controls (conditions) outlined in this document.

This decision is based on the administrative record for this site which is located in the offices of the DEC in Juneau, 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 DEC determination.

#### **Introduction**

##### Site name and location:

Unocal - #5785 – Airport Union  
9190 Glacier Highway  
Juneau, Alaska.

Name and mailing address of contact person:

Anastasia E. Duarte-Wilkinson, RS  
Tesoro Refining and Marketing Company  
3450 S. 344<sup>th</sup> Way, Suite 201  
Auburn, WA 98001-5931

Database Record Key and CS file number:

Hazard ID: 23568  
CS File No: 1513.26.049

Regulatory authorities under which the site is being cleaned up:

18 AAC 75 and 18 AAC 78

**Background**

Mike's Airport Express (Former Unocal #5785) facility is a retail fuel and convenience store located at the corner of Glacier Highway and Lee Smith Drive in Juneau. The facility was constructed in 1966 and the original underground storage tank (UST) system consisted of two (2) 5,000-gallon tanks. It operated for nearly 30 years as Airport Union 76, and was owned briefly by Tesoro prior to its sale in 2001.

In 1986 the fuel storage and dispensing system was upgraded. The upgrades included the removal of the 5,000-gallon tanks, the installation of two 12,000-gallon composite tanks (steel with fiberglass) and new dispensers. The new tanks were installed at the same approximate location as the former tanks and some of the existing steel piping was utilized.

Additional upgrades were made in 1998 to meet cathodic protection requirements for regulated UST systems. The work was limited to the replacement of the steel piping that was used for connections at the tank turbines and under the fuel dispensers.

**Site Investigation and Cleanup Chronology**

A 550-gallon underground storage tank which contained waste oil was excavated in August 1997. Approximately two cubic yards of petroleum contaminated soil were excavated and temporarily stockpiled onsite until being transported to an appropriate disposal facility. Two soil samples were taken from the excavation walls. Laboratory results showed they were below the cleanup levels for diesel range organics (DRO) and residual range organics (RRO).

In October 1997 the site was listed as a contaminated site on DEC's database due to a confirmed release associated with an underground storage tank regulated under 18 AAC 78.

Fill material used at the site in the 1980s contained intact batteries and metal debris. In December 1998 the fill material was excavated and a total of 22 automotive batteries and numerous pieces of metal debris were removed from an area of 20 by 20 feet by 4.5 feet deep. No additional work was needed for this part of the site.

A leaking underground storage tank release investigation conducted in February 2000 indicated the presence of soil and groundwater contamination. Contaminants were benzene, DRO, and heavy metals.

Additional assessment work conducted in March 2001 identified soil contamination in two distinct areas of the property. The first area, near the northwest corner of the property, was suspected to be from a spill on the neighboring property. The second area was associated with an 850-gallon aboveground storage tank (AST) and dispenser along the side of the station.

In April 2001 Mike's Airport Express removed the hydraulic lift inside the service station. Approximately 13 cubic yards of contaminated material were excavated from around the lift and stockpiled on-site. A second hydraulic lift was removed later in April and approximately three cubic yards of contaminated soil were removed. The contaminated soil from both lift removals was transported to the United Soil Recycling Juneau facility for treatment in May 2001. A "no further remedial action required" letter was sent to the owners of Mike's Airport Express in November 2002 for this part of the cleanup project, and a deed notice documenting the presence of residual contamination was filed at the Juneau Recording District.

In August 2001 contaminated soil totaling approximately 150 cubic yards was removed from the vicinity of the 850-gallon AST and sent to the United Soil Recycling facility. The size of the excavation (20'x19'x8' deep) was limited due to the presence of the UST system, diesel AST tank, and fuel dispenser. The origin of the contamination appeared to be from more than one source. During the site work, soil vapor extraction piping was installed in order to do a pilot test to determine the effectiveness of a soil vapor extraction system as an active in-situ treatment option for the residual contamination associated with the south and east excavation sidewalls.

Soil samples taken from the excavation documented the presence of benzene, heavy metals, DRO, and gasoline range organics (GRO) along the south and east sidewalls in concentrations above 18 AAC 75.341 cleanup levels. At the time it was determined the metal results likely represented background levels.

The highest concentrations found during the 2001 soil sampling are as follows:

<u>Contaminant</u>	<u>Concentration (mg/kg)</u>
DRO	11200*
GRO	397*
Benzene	0.712*
Toluene	1.23
Ethylbenzene	1.78
Total Xylenes	3.32

\*Above cleanup levels

A soil vapor extraction (SVE) system installation was completed at this site in the spring of 2003. The SVE system operated on a 24-hour basis from 2003 through 2007. The system

initially removed high levels of volatile contaminants but over time contaminant recovery diminished. Use of the system was discontinued in 2007 as a result of a rebound test that documented decreased effectiveness.

### **Groundwater Use**

A groundwater well search completed in 2002 documented five groundwater wells within ¼ mile of the site. Four of the wells are upgradient and one well is cross gradient from the site. These wells likely pre-date the construction of the city water distribution system in the Mendenhall Valley. The majority of residences and businesses in the area, including Mike's Airport Express, have been on the city water system for many years. The primary drinking water source for the system is the Last Chance Basin well field, located near downtown Juneau about 10 miles away. The secondary source is the Salmon Creek reservoir, an intermittent source due to seasonal high turbidity. Salmon Creek typically supplies about one third of the water throughout the area when on-line. When both sources are available, residents and businesses north of Hospital Drive are served by water from Salmon Creek, while residents south of Hospital Drive and all of Douglas Island are served by Last Chance Basin water.

### **Groundwater Monitoring Program**

The groundwater surface in the area ranges from five to eight feet below ground surface. The 20 groundwater monitoring events conducted at the site between May 2000 and May 2008 have shown the groundwater flow characteristics to be relatively consistent. Groundwater flow direction is to the southwest (toward Duck Creek) at an average gradient of 0.0029 feet per foot.

Benzene is the remaining groundwater contaminant of concern at this site, with concentrations below cleanup levels in all but two monitoring wells. All other wells have shown a decreasing or stable trend for at least the last three years. The groundwater monitoring wells still showing benzene levels above cleanup levels in May 2008 are monitoring well G-1 (0.0095 mg/L) and well G-11 (0.0211 mg/L), both located within the property boundaries.

In order to rule out heavy metal contamination in the groundwater, the 2001 samples were filtered for heavy metals before laboratory analysis. The analysis showed non-detect for heavy metals, indicating that previous detections were associated with suspended sediments.

### **Approved Cleanup Levels**

Applicable soil cleanup levels for this site were approved in the "no further remedial action" letter issued to Mike's Airport Express in November 2002. These cleanup levels are the most stringent levels for the over 40-inch precipitation zone found at 18 AAC 75.341 Tables B1 and B2 for detected contaminants.

<u>Contaminant</u>	<u>Cleanup Level (mg/kg)</u>
Gasoline Range Hydrocarbons	260
Diesel Range Hydrocarbons	230
Residual Range Hydrocarbons	8,300

Benzene	0.02
Toluene	4.8
Ethylbenzene	5
Total Xylenes	69
Barium	982
Chromium	23
Nickel	78
Vanadium	580

The groundwater cleanup levels for the site are established in 18 AAC 75.345 Table C.

### **Exposure Pathway Analysis**

Exposure pathways are the conduits by which contamination may reach human or ecological receptors. Potential exposure pathways, presented in Table 1, were evaluated using DEC's Exposure Tracking Model (ETM).

All potential exposure pathways are either de-minimis, incomplete, or controlled. "De-minimis exposure" means that in DEC's judgment humans or wildlife will be minimally affected by the small volume of remaining contamination. "Pathway incomplete" means that in DEC's judgment contamination has no potential to contact humans or wildlife. "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.

**Table 1 – Exposure Tracking Model Results**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	Exposure Controlled	Presence of pavement
Sub-Surface Soil Contact	Exposure Controlled	Presence of pavement
Inhalation – Outdoor Air	Exposure Controlled	Presence of pavement
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	Residual contamination beneath building is de minimis volume; volatilization not expected
Groundwater Ingestion	Exposure Controlled	Deed notice excludes installation of drinking water wells
Surface Water Ingestion	Pathway Incomplete	Surface water in the area not used
Wild Foods Ingestion	Pathway Incomplete	No wild foods harvesting in the area
Exposure to Ecological Receptors	Pathway Incomplete	Groundwater in this area was found to move in a southwest direction toward Duck Creek but contaminants were not detected in the monitoring wells closest to the creek.

### **Data Evaluation/Quality Assurance Summary**

Tesoro's current contractor for the project, MWH, was requested by DEC to review data from groundwater monitoring reports and other document submittals spanning approximately the past 10 years. Following is a summary of the 23 reports reviewed:

- Eight contained lab notes, none of which significantly impacted the integrity of the data;
- Three had hold time issues, usually associated with the air samples taken from the SVE system;
- Eight had precision calculation issues, most of which were fairly minor and confined to a single analyte;
- Four noted samples that were received in poor condition, but backup samples were used;
- Four noted temperature blank or cooler temperature ranges that were beyond acceptance limits, all of which were within 2 or 3 degrees; and
- Every report contained a copy of the chain of custody.

Generally, the lab reports contained standard anomalies, and none of the instances appear to have caused significant bias with the data sets.

### **Determination**

The cleanup actions employed at the Unocal - #5785 – Airport Union facility were effective in removing a majority of the contaminant source material. Based on the information provided to date, DEC has determined that the residual contamination remaining on site poses no unacceptable risk to human health or the environment and no further remedial action is required.

This determination is subject to the following conditions:

1. This information will be recorded on the DEC database to document that residual contamination remains. The information is publically accessible through the Contaminated Sites Program web site.
2. DEC approval is required prior to off site transport of soil or groundwater in accordance with 18 AAC 78.274(b).
3. Soil containing residual contamination may not be placed in surface water or other environmentally sensitive areas.
4. Further ground water monitoring will not be required. Existing monitoring wells shall be decommissioned in accordance with the DEC guidance titled *Monitoring Well Design and Construction for Investigation of Contaminated Sites* (available on the Contaminated Sites Program web page at <http://www.dec.state.ak.us/spar/guidance.htm> under the site characterization and

cleanup banner). Wells must be decommissioned within 60 days of receipt of this letter and verification provided to the Juneau Contaminated Sites Program office.

5. Groundwater wells shall not be installed on this property without prior approval by DEC's Contaminated Sites Program.
6. Every five years, beginning March 2014, DEC's Contaminated Sites Program will contact the owner of the facility to document that residual soil contamination remains capped by pavement and that no groundwater wells have been installed on the property.

A deed notice was filed at the Juneau Recording District (Book 0560 Page 423) in conjunction with the 2002 cleanup decision issued to Mike's Airport Express. The deed notice, which restricts the placement of groundwater supply wells, negates the need for an additional deed notice filed by Tesoro.

This determination is subject to 18 AAC 78.276 (f) whereby additional investigation and cleanup may be required if new information is discovered that indicates the cleanup described in this decision is not protective of human health or the environment.

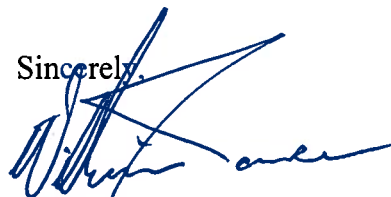
Full site closure, which includes lifting the groundwater use restriction, will be considered if DEC is provided with documentation that approved soil and groundwater cleanup levels have been met throughout the site.

### Appeal

Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195-340 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, P.O. Box 111800, Juneau, Alaska 99811-1800 within 15 days of the decision date. 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 of the decision date. The right to appeal is waived if a hearing is not requested within 30 days.

If you have questions about this closure decision, please contact me at (907) 465-5208.

Sincerely,



William Janes  
Environmental Program Manager

cc: Mike Holloway, Mike's Airport Express