

SEAN PARNELL, GOVERNOR

**DEPT. OF ENVIRONMENTAL CONSERVATION**

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

43335 Kalifornsky Beach Rd.  
Soldotna, AK 99669  
PHONE: (907) 262-5210  
FAX: (907) 262-2294  
www.dec.state.ak.us

File: 2333.38.016

July 26, 2011

Mr. Daniel L. Carrier  
Chevron Environmental Management Company  
145 South State College Blvd., Room 8046  
Brea, CA 92821

Re: Closure Decision Document; Former Unocal Bulk Facility #0745  
Cleanup Complete Determination with Conditions

Dear Mr. Carrier:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC), has completed a review of the environmental records associated with the Former Unocal Bulk Facility #0745, located at 44604 Sterling Highway in Soldotna, 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 conditions.

This decision is based on the administrative record for the Former Unocal Bulk Facility #0745, 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 Cleanup Complete Determination with Conditions.

**Introduction**

Site Name and Location:

Former Unocal Bulk Facility #0745  
44604 Sterling Highway  
Soldotna, Alaska 99669

Name and Mailing Address of Land Owner:

Denali Properties II LLC  
Chuck Kim, President  
1230 W. International Airport Road  
Anchorage, Alaska 99518

Property Legal Description:

Lot 2, Block 2, Soldotna Central Properties Subdivision, according to Plat Number 77-18, in the Kenai Recording District, Third Judicial District, State of Alaska.

ADEC Site Identifying Numbers:

File: 2333.38.016  
Hazard ID: 455  
Reckey: 1988230130406

Regulatory authority under which the site is being cleaned up:

18 AAC 75

**Background**

This site is the location of the Former Unocal Bulk Facility #0745 above ground bulk fuel facility which began operation in 1962 under Union Oil Company ownership. The facility operated nine above ground petroleum storage tanks, an above ground propane tank, a truck fuel-loading rack, and an office/warehouse building. The bulk fuel facilities were removed in 1977, and the site remained vacant until 2006 when the site was redeveloped with the construction of a commercial building. The site had been impacted by diesel fuel and gasoline from leaks and/or spills associated with former fuel facility operations. During site assessment and cleanup response measures, soil and groundwater samples collected at this site were tested for: diesel range organics (DRO), gasoline range organics (GRO), residual range organics (RRO), benzene, toluene, ethylbenzene, and xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), and selective metals.

Groundwater has historically been measured and reported at depths from 2 to 15 feet below the ground surface (bgs). This site and adjacent properties are served by City of Soldotna public water and sewer systems.

**Site Characterization and Cleanup Actions**

Fuel contamination was encountered in May of 1988 by a telephone utility contractor while digging a trench for the installation of an underground utility line. Site assessment work was initially performed in 1990 to evaluate the soil and groundwater conditions. Soil samples contained benzene at 0.84 mg/kg and total petroleum hydrocarbons at 323 mg/kg at 10 to 11.5 feet below ground surface (bgs), and groundwater contained total petroleum hydrocarbons at 702 mg/L in the area of the former fuel dispenser island.

A supplemental site evaluation was conducted in June of 1991 in order to provide additional information regarding the soil contamination at the site. Ten excavation pits were advanced to characterize the subsurface soils at depths from 4 to 9.5 feet bgs. Total petroleum hydrocarbon soil contamination was encountered along the eastern property boundary at a concentration of 4,600 mg/kg at a depth of 9 feet bgs.

A supplemental site characterization was conducted in 1994 to further characterize the site by advancing six test pits and removing the remaining underground product piping. Soil analytical

results detected DRO at 1,100 to 2,400 mg/kg at 2 to 2.5 feet bgs within the former underground piping excavation area. In addition, benzene was detected at 0.75 to 2.8 mg/kg, GRO at 320 to 1,000 mg/kg, DRO at 1,000 to 3,800 mg/kg and ethylbenzene at 7.7 mg/kg at depths of 6 to 10 feet bgs along the eastern property boundary. Benzene was also detected at 0.13 and 0.17 mg/kg and DRO at 400 mg/kg along the southern property boundary and the former office/warehouse location at 9 to 16 feet bgs.

Additional soil and groundwater investigation was conducted in 1995 to assess the potential for off-property migration of contamination. Soil and groundwater contamination was detected on the private property to the northeast, as well as within the Sterling Highway right-of-way to the southeast. Benzene was detected at 0.21 and 0.51 mg/kg, GRO at 310 and 470 mg/kg, and DRO at 860 and 2,300 mg/kg, in soil at a depth of 10 feet bgs. Groundwater contamination was encountered with benzene detected at 0.16 and 0.2 mg/L, GRO at 2.7 and 10 mg/L, DRO at 3.5 and 50 mg/L, and 1, 2 Dichlorethane at 0.0062 and 0.048 mg/L.

Subsurface soil vapor samples were collected in 1997 along the northeast property boundary to assess the risk of vapor intrusion into the commercial building on the adjacent property. Analytical results detected benzene at 0.0047 parts per million by volume (ppm-V) at 6 feet bgs and GRO at 0.550 to 1,200 ppm-V at 3 to 8 feet bgs.

Additional remedial actions were performed in 2000 for the purpose of supporting a risk-based closure to accommodate the proposed construction of a commercial building on the site. Approximately 1,868 tons of petroleum impacted soil was excavated along the northeast side of the property and the northwestern area of the site and transported off-site for thermal remediation and disposal. Approximately 4,700-gallons of petroleum contaminated groundwater were removed within the excavations using absorbent pads and a vacuum truck. These waters were transported off-site for disposal. Confirmation soil samples taken from the excavation limits at the northwestern excavation met the soil cleanup levels. Confirmation soil samples from the base and sidewalls of the northeastern excavation detected benzene at 0.0292 to 0.295 mg/kg, DRO at 517 to 5,030 mg/kg, and GRO at 481 mg/kg at depths from 10 to 12 feet bgs.

On September 10, 2004, ADEC issued a Record of Decision for this site based on a determination that the shallow groundwater aquifer is not suitable as a drinking water source, and that City of Soldotna Ordinance 13.16.150 requires all structures that use water and are located within 300 feet of their existing public water main connect to the City's public water supply system. A long term groundwater monitoring plan was established, a NOTICE OF ENVIRONMENTAL CONTAMINATION (Deed Notice) was recorded on the property deed for purposes of notification to any future owners/operators of residual petroleum contamination on the property, and alternative soil and groundwater cleanup levels were established for the site.

During site grading activities performed in preparation for construction of a commercial building in 2006, additional soil contamination was encountered. Approximately 49.55 tons of petroleum contaminated soil was excavated and transported to Alaska Soil Recycling in Anchorage, for thermal remediation and disposal. An additional 1,775 tons of petroleum contaminated soil was excavated and transported to the former Chevron USA Refinery

property, located in Nikiski, for thermal remediation by Soil Processing Incorporated. Confirmation soil samples were collected following the completion of these cleanup excavation efforts. GRO was detected at 637 mg/kg, DRO at 1,170 mg/kg, and benzene at 2.22 mg/kg at 5 feet bgs along the northern property line. Additional soil sampling detected benzene at 0.0378 and 0.0498 mg/kg at 5 feet bgs, DRO at 724 mg/kg at 4 feet bgs, and DRO at 774 mg/kg at 9.5 feet bgs.

After the construction of the commercial building, monitoring wells were installed for purposes of continued groundwater quality monitoring. Soil contamination was detected along the northeastern property boundary during the installation of a groundwater monitoring well. GRO was detected at 340 mg/kg and DRO at 1,100 mg/kg at 10 feet bgs.

Groundwater monitoring has been performed at the site from 1990 to present. Groundwater contaminant concentrations have decreased over the past 21 years with only one monitoring well currently detecting concentrations above the established alternative cleanup levels. Two additional monitoring wells have concentrations below the alternative groundwater cleanup levels, but above the ADEC Table C –groundwater cleanup levels. Soil contamination remains above the alternative cleanup levels along the northeast property boundary, with benzene at 0.208 to 2.22 mg/kg and DRO at 5,030 mg/kg at depths ranging from 5 to 13 feet bgs.

### **Contaminants of Concern**

During the field investigations performed at this site, soil and water samples were analyzed for diesel range organics (DRO), gasoline range organics (GRO), benzene, ethylbenzene, toluene and xylenes (BTEX); polycyclic aromatic hydrocarbons (PAHs), and metals. Following the completion of the cleanup work, the following Contaminants of Concern were reported to remain in subsurface soil or groundwater at concentrations exceeding the applicable ADEC cleanup levels:

- Diesel Range Organics (DRO)
- Benzene

### **Cleanup Levels**

The soil cleanup levels for this site were established through ADEC's approval of alternative soil cleanup levels at concentrations 10 times the 18 AAC 75.341, Table B1 and B2 levels. These soil cleanup levels were established in the ADEC Record of Decision, dated September 10, 2004.

<u>Contaminant</u>	<u>Alternative Soil Cleanup Levels (mg/kg)</u>
• Diesel Range Organics	2,500
• Gasoline Range Organics	3,000
• Benzene	0.2

The groundwater cleanup levels for this site were established through ADEC's approval of alternative groundwater cleanup levels at concentrations 10 times the 18 AAC 75.345, Table C Groundwater Cleanup Levels. ADEC determined that the shallow groundwater aquifer is not a

current, or future, source of drinking water. These groundwater cleanup levels were established in the ADEC Record of Decision, dated September 10, 2004.

<u>Contaminant</u>	<u>Alternative Groundwater Cleanup Levels (mg/L)</u>
• Diesel Range Organics	15
• Gasoline Range Organics	13
• Benzene	0.05

### **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, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 1.

**Table 1 – Exposure Pathway Evaluation**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	De-minimis Exposure	Excavation and removal of soil has removed the majority of contaminated surface soil.
Sub-Surface Soil Contact	De-minimis Exposure	Excavation and removal of soil has removed the majority of contaminated sub-surface soil.
Inhalation – Outdoor Air	De-minimis Exposure	Excavation and removal of soil has removed the majority of contaminated soil.
Inhalation – Indoor Air (vapor intrusion)	De-minimis Exposure	Indoor air quality monitoring in the adjacent building did not detect petroleum vapors at unacceptable concentrations.
Groundwater Ingestion	Pathway Incomplete	Groundwater from this site is not used for drinking water. City water is available and in use.
Surface Water Ingestion	Pathway Incomplete	No impact to surface water has been identified, and none is expected.
Wild Foods Ingestion	Pathway Incomplete	No harvest or consumption of wild foods is expected.
Exposure to Ecological Receptors	Pathway Incomplete	No impact to ecological receptors has been identified, and none is expected.

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 the most recent soil and groundwater samples collected at this site, benzene remained on site above the alternative soil and groundwater cleanup levels, and DRO remained on site above the alternative soil cleanup levels. However, ADEC has determined that this site does not pose an unacceptable risk to human health or the environment, subject to the below stipulated conditions. Therefore, we are issuing this 'Corrective Action Complete' decision, subject to the following conditions:

1. Attached is Figure 1, Historical Soil Sample Locations, which was prepared by GeoEngineers. ADEC's estimate of areas with residual soil contamination potentially exceeding ADEC soil cleanup levels at depths shallower than 9 feet below ground surface (bgs), have been illustrated on GeoEngineers' Figure 1. The excavation of, or any proposal to excavate, transport, move, treat, and/or dispose, residual contaminated soil within these areas requires prior ADEC notification and approval. An environmental site assessment, performed by a qualified environmental consultant, will be required. If contaminated soils or waters are encountered, they must be managed and disposed in accordance with regulations applicable at that time. This is consistent with the requirements of 18 AAC 75.325 (i).
2. The City of Soldotna Ordinance 13.16.150 is recognized as an institutional control to prevent the use of the shallow groundwater aquifer at this site as a drinking water source. Water wells may not be installed on this property without the prior review and approval of ADEC. This ADEC Decision will be re-evaluated if the city of Soldotna repeals or modifies Ordinance 13.16.150, such that it allows the shallow groundwater at this site to be used as a drinking water source.

These conditions remain attached to this ADEC Decision unless terminated through a future written ADEC determination that they are no longer needed for the protection of human health or the environment.

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. Chevron Environmental Management Company remains liable for any additional assessment and/or cleanup actions(s), should ADEC impose such a requirement.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as 'Cleanup Complete'. The database will include a description of the contamination potentially remaining at the site, as well as the two Conditions associated with this Cleanup Action Complete decision.

It should be noted that movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

All remaining groundwater monitoring wells must now be properly decommissioned in accordance with ADEC's February 2009 Monitoring Well Guidance. Chevron Environmental Management Company must prepare and provide ADEC with a work plan which identifies

proposed decommissioning procedures for ADEC review and approval prior to implementation of those procedures. The decommissioning of these monitoring wells should occur before September 31, 2011, and must be documented in a written report submitted to ADEC by December 31, 2011. This work must be performed or directly supervised by a 'qualified person', as defined in 18 AAC 75.990(100).

ADEC will file an AMENDMENT TO NOTICE OF ENVIRONMENTAL CONTAMINATION with the State of Alaska, Department of Natural Resources, Kenai Recording District. A copy of this document is attached. The purpose of recording this document on the property deed of Lot 2, Block 2, Soldotna Central Properties is to negate the effect of the NOTICE OF ENVIRONMENTAL CONTAMINATION that was recorded on the property deed on February 7, 2005, identified by Recorder's Office number 2005-001075-0.

### 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 Document, please contact the ADEC project manager, currently Paul Horwath at (907) 262-3422, or via e-mail at [paul.horwath@alaska.gov](mailto:paul.horwath@alaska.gov)

Sincerely,



Paul Horwath, PE  
Environmental Engineer

Attachments: 1) GeoEngineers' Figure 1, Historical Soil Sample Locations  
2) AMENDMENT TO NOTICE OF ENVIRONMENTAL CONTAMINATION

Cc: John Riggi, Conestoga-Rovers & Associates, Colorado  
Paul L. Davis, K&L Gates, Anchorage  
John C. Davis, Soldotna Business Plaza, Inc.

Pdh. Former Unocal Bulk Plant 0745 - Corrective Action Complete\_7-26-11