

# STATE OF ALASKA

**SEAN PARNELL, GOVERNOR**

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

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File: 1504.26.001

May 24, 2011

Mr. Steve Warren  
P. O. Box 257  
Craig, Alaska 99921

Re: Decision Document; C&W Repair contaminated site  
Corrective Action Complete Determination  
Hazard ID# 24521

Dear Mr. Warren:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the former C&W Repair located at 1507 Craig-Klawock Highway in Craig on Prince of Wales Island. 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 future remedial action is required.

This decision is based on the administrative record for the C&W Repair – Craig regulated underground storage tank facility that is located in the offices of the DEC in Juneau, Alaska. This letter will summarize 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:

C&W Repair – Craig  
1507 Craig-Klawock Highway  
Craig, Alaska 99921

Name and Mailing Address of Contact Party:

Mr. Steve Warren  
P.O. Box 257  
Craig, Alaska 99921

Database Record Key and File Number:

DEC Reckey: 1993130027801  
File: 1504.26.001  
Hazard ID: 24521

Regulatory Authority for Site Cleanup:

18 Alaska Administrative Code (AAC) 78

Legal Property Description

Facility: Lot 4B, United States Survey No. 2611, East Craig Group of Homesites, Craig, Alaska

### **Background Site Assessment**

The October 1993 underground storage tank (UST) Closure by Removal Site Characterization found leaks and spills from UST appurtenances associated with two 2,000-gallon gasoline USTs and one 1,000-gallon diesel UST. The USTs were closed by a State Certified tank worker and were in good condition with no signs of holes or corrosion. Periodic tightness tests and fuel gauge meter records for the UST system gave no indication of a release prior to closure of the USTs. After removal of the contaminated soil surrounding the USTs, a new system of double-walled USTs, piping and dispensers was installed and the area was paved. The facility is now under new ownership and is operated under the name Shaub-Ellison Tire & Fuel (regulated UST Facility #363).

Soil samples collected during the UST site assessment and release investigation have been analyzed for gasoline (GRO) and diesel (DRO) range hydrocarbons using methods EPA 8015-G and 8015-D, respectively, and for benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method 8020 BTEX.

### **Release Investigation and Corrective Actions**

In accordance with Site Assessment requirements in 18 AAC 78.090, the environmental firm, Smith Bayliss LeResche (SBL), identified contaminated soil by field screening as it was excavated during removal of the USTs by certified tank workers in fall 1993. The subsurface investigation was completed to the maximum extent possible and, in accordance with 18 AAC 78.230(4), contaminated material was placed between liners on-site behind the main building. Subsurface petroleum contamination formed a soil layer beginning under the dispenser island and extended to the edge of the utility corridor in the Craig-Klawock Highway Right of Way. Clean overburden was set aside and the lens of contaminated soil was excavated and stockpiled until the edge of the property boundary was reached. The soil contamination layer was much thinner than it was under the dispenser island but clearly had reached the bedding material of the utility corridor. Since these utility structures supply water and sewer to the community, excavation was halted. Notification was provided to DEC staff, who contacted the City of Craig to discuss the situation.

In accordance with 18 AAC 78.200 – 78.280, during the subsurface excavation process SBL conducted a Release Investigation that included collection of soil samples from three areas of concern identified by the UST closure Site Assessment. Soil samples were collected in ten locations from the UST-pump island removal excavation, in two locations at the north property boundary side of the gasoline UST removal excavation and in six locations from the on-site contaminated soil stockpiles. The greatest concentration detected in soil samples collected in each of the three locations during the cleanup process is displayed by contaminant of concern in Table 1.

Sampling Location	Benzene	Toluene	Ethylbenzene	Xylenes	GRO	DRO
UST Pit/Pump Island	1.5	69	1,100	8,200	19	170
North Property Line	ND	ND	ND	ND	1,700	540
Soil Stockpiles	ND	ND	ND	ND	7,700	6,300

In June, 1994, in accordance with 18 AAC 78.250 and 18 AAC 78.274, DEC sent SBL a Corrective Action Plan approval letter to construct on-site aeration and bioremediation cells from the estimated volume of 71.3 cubic yards of contaminated material. Based on cleanup at other petroleum release sites, the SBL CAP estimated that the aeration and tilling would remediate petroleum concentrations in the contaminated soil to cleanup levels by 1997. Since groundwater in the island community only occurs intermittently in bedrock depressions or is tidally influenced, groundwater contamination was not investigated as part of the approved Corrective Action Plan.

In May, 1995, DEC sent a determination letter to the City of Craig, stating that a thin lens of subsurface petroleum contamination entering the utility corridor along the Craig Klawock Road will remain to attenuate naturally to regulatory soil cleanup levels. The letter further stated that when aeration treatment of the petroleum contaminated soil on-site reaches cleanup levels, that a letter indicating no further cleanup action is required will be provided to the facility owner Steve Warren.

In 2002, Mr. Warren moved the on-site contaminated stockpiles from the facility in Craig to remote personal property in Hollis where additional remedial treatment could take place. In accordance with requirements in 18 AAC 78.274, the soil was placed in two bioremediation cells with approved covers and liners and oil-water separators that captured and treated any possible run-off to surface water drainages. DEC inspected the bioremediation cells in 2002 for compliance with 18 AAC 78.273 off-site remediation treatment requirements and to conduct photo-ionization detector readings on representative soil samples. No petroleum vapors readings were detected in the headspace soil samples. No sheen was observed in run-off water drainages, even when soil in the drainage was disturbed. Vegetation growing in the treated soil was mature and showed no signs of stress.

By 2006 thirteen years of remedial treatment had been completed on the contaminated soil. Nine years beyond the 1997 target date for treatment completion specified in the CAP. DEC discussed the treatment completion process requirements in 18 AAC 78.273 and 18 AAC 78.276(a) for off-site soil remediation with Mr. Warren. As an indication that concentrations of residual contamination in the treated soil are protective of human health and safety and of the environment, regulation requires demonstration that the soil does not produce petroleum leachate. Hot water sheen tests performed on representative samples from the soil treatment cells did not produce any petroleum sheen.

Based on the extended period of treatment and field tests and observations conducted by DEC of the stockpiles, third party requirements in 18 AAC 78.090(f) and requirements for post-treatment sampling and analysis are hereby waived. In accordance with 18 AAC 78.276 evidence indicates

corrective action for this UST release is adequately protective of human health, safety and the environment. Final disposal of the treated soil is approved for spreading on the property in Hollis.

**Contaminants of Concern**

- Diesel Range Organics (DRO)
- Gasoline Range Organics (GRO)
- Benzene
- Toluene
- Ethylbenzene
- Total Xylenes

**Cleanup Levels**

The soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Tables B1 and B2 Over 40-inch Zone, Migration to Groundwater.

<u>Contaminant</u>	<u>Migration to Groundwater (mg/kg)</u>	<u>Direct Contact/ Ingestion (mg/kg)</u>	<u>Outdoor Inhalation (mg/kg)</u>
Benzene	0.025	120	8.5
Toluene	6.5	6,600	220
Ethylbenzene	6.9	8,300	81
Xylenes (total)	63	16,600	63
GRO	260	1,400	1,400
DRO	230	8,250	12,500
DRO	230	8,250	12,500

**Pathway Evaluation**

Following investigation and cleanup at the site, exposure to the remaining contaminants was evaluated using DEC'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, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Attachment A, Table 1.

**Cumulative Health Risk Calculation**

Pursuant to 18 AAC 75.325 (g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be calculated. A chemical that is detected at one-tenth or more of the Table B1 inhalation or ingestion values set out in 18 AAC 75.341(c) or the Table B2 values set out in 18 AAC 75.341(d) must be included when calculating cumulative risk under 18 AAC 75.325(g). Cumulative risk from petroleum contamination of environmental media at the site is addressed using the BTEX analyte concentration data. With data currently available, the DEC has determined that petroleum compounds remaining at the referenced site following cleanup are in concentrations that do not present a cumulative risk to human health.

**DEC Decision**

The cleanup actions to date have served to excavate and adequately remove contaminated soil from the site. Any remaining soil contamination is either controlled or has de minimis volume and concentration. Based on the information available, DEC has determined no further assessment or cleanup action is required. There is no longer a risk to human health or the environment, and this site will be designated as closed on the Department's database.

Although a Corrective Action Complete determination has been granted, DEC 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.

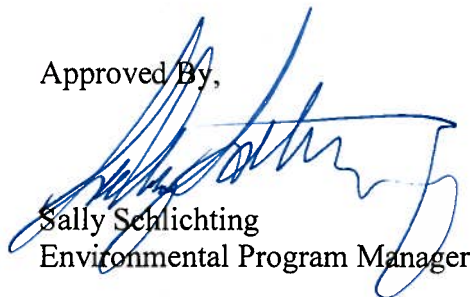
This determination is in accordance with 18 AAC 78.276(f) and does not preclude DEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

### 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 DEC project manager, Bruce Wanstall at (907) 465-5210.

Approved By,



Sally Schlichting  
Environmental Program Manager

Recommended By



Bruce Wanstall  
Bruce Wanstall  
Environmental Program Specialist

Attachment A: Table 1 Exposure Pathway Evaluation

cc: Shaub-Ellison Tire & Fuel, via regular mail  
Larry Brinkerhoff, UST Program, via electronic mail

**Attachment A**

**Table 2 – Exposure Pathway Evaluation**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	De-minimis exposure	The soil stockpile has been transported off-site and remediated by nutrient addition, tilling and aeration then land spread in a non-sensitive location on private property where access is controlled.
Sub-Surface Soil Contact	De-minimis exposure	Residual contamination remains in the subsurface in concentration between migration to groundwater and ingestion soil cleanup levels, is not accessible and is in minor quantity.
Inhalation – Outdoor Air	De-minimis exposure	The small pocket of volatile compounds that were identified in subsurface soil was capped with asphalt and is below outdoor air inhalation action levels.
Inhalation – Indoor Air (vapor intrusion)	Exposure Controlled	Elevated concentrations of volatile compounds detected one subsurface soil sample near the building. DEC approved Corrective Action Plan capped the dispenser island hot spot with asphalt.
Groundwater Ingestion	De-Minimis exposure	Subsurface water that was encountered during the investigations is not present in quantity or quality for use as a drinking water resource. The remaining soil contamination is between migration to groundwater the ingestion/direct contact soil cleanup levels.
Surface Water Ingestion	Pathway Incomplete	There is no surface water body suitable for drinking water located within ¼ mile of the site.
Wild Foods Ingestion	Pathway Incomplete	Wild foods are not available for human contact or for harvest on this commercial facility property.
Exposure to Ecological Receptors	De-minimis exposure	Aquatic receptors are present in nearby off-site Crab Bay but source removal has reduced potential exposure. Terrestrial receptors are not present.

Notes to Table 1: “De-minimis exposure” means that in DEC’s judgment receptors are unlikely to be affected by the minimal volume of remaining contamination. “Pathway incomplete” means that in DEC’s judgment contamination has no potential to contact receptors. “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.