

# STATE OF ALASKA

FRANK H. MURKOWSKI, GOVERNOR

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

410 Willoughby Ave., Suite 302  
Juneau, AK 99801-1795

PHONE: (907) 465-5210

FAX: (907) 465-5218

<http://www.state.ak.us/dec/>

File: 1521.38.001

September 27, 2005

Via Electronic and Regular Mail

Ted Deats  
Division of Land, Mining and Water  
Department of Natural Resources  
400 Willoughby  
Juneau, AK 99801

Re: No Further Remedial Action Planned Decision  
Three Lakes Road Parcel,  
Contaminated Sites Database #2002120106701

The Department of Environmental Conservation (DEC) Juneau Office has recently completed a review of the file associated with the referenced site also known as the Falls Creek Parcel, 60 S., R. 79 E., Section 11, CRM, ASLS 87-111, 2.2 acres. The property is located on Three Lakes Loop Road that intersects at 10 Mile Mitkof Highway south of Petersburg, Alaska. Based on our review of the project file, DEC finds that the referenced site does not pose a significant threat to human health or safety, or the environment.

### **Site Background History**

The 2.2 acre parcel was offered for sale in the Mental Health Trust Land Office (TLO) 2000 land sale and was sold to Robert and Kelly Padgett through a TLO 20-year purchase contract. The sale contract ended in default in 2003. TLO had a basic Phase I Site Assessment completed in November 2002 that identified petroleum odor and sheen adjacent to an above ground fuel storage tank and surface drainage behind the shop building.

The follow-up Phase II Site Characterization for TLO was completed in August 2003 by consultant Carson Dorn, Inc. (CDI) with on-site observation, comment and approval by DEC. Metals detected in soil were in concentrations comparable to natural conditions for the area. Chemical specific parameters of benzene, toluene, ethylbenzene, total xylenes and polycyclic aromatic hydrocarbons as well as volatile aromatic hydrocarbons were consistently non-detect in the DEC approved Site Characterization data. DEC determined that laboratory analyses in the Site Cleanup Plan would be limited to diesel range hydrocarbons (DRO) and residual range hydrocarbons (RRO). The property was subsequently transferred to the Department of Natural Resources (DNR) Lands Program.

### **Site Cleanup Workplan**

The DEC Contaminated Sites Program approved the Site Characterization and Cleanup Plan with Method Three alternative cleanup levels by letter in May, 2004. The alternative cleanup levels

for soil calculated using site specific fractional organic carbon (Foc) data are 1,360 milligrams per kilogram mg/kg for diesel range hydrocarbons (DRO) and 8,300 mg/kg for residual range hydrocarbons (RRO). The alternative soil cleanup levels were requested by the responsible party with full knowledge that after the site cleanup was completed, minor restrictions on the property would be necessary.

### **Site Excavation and Cleanup**

In May 2005, DEC reviewed and approved a site cleanup workplan submitted by DMC Technologies, Inc., a qualified environmental consultant contracted to excavate soil from the property and conduct on-site active remediation of the petroleum contamination. Excavated clean material was segregated from oily soil by a combination of observation and field instrument testing known as field screening. Material with petroleum was immediately transferred to a bioremediation cell on the property directly adjacent to the cleanup site. Removal began at the former fuel storage area southwest of the shop building, continued across the rear of the shop building until clean soil was consistently found, then resumed again at the north edge of the property line where non-hazardous buried solid waste was recovered and transported off-site to the City of Petersburg Landfill. An estimated volume of 730 cubic yards of shot rock and native peat material was placed in the remediation biocell. The excavation was left open and bermed while remedial treatment of the contaminated soil was conducted.

### **Soil Remediation and Backfill**

Final confirmation analytical samples of undisturbed soil in the excavation were collected at 15 discrete locations at the limits of the excavation. The sample locations were selected based on headspace method field screening results and spatial representation. The laboratory analysis of these samples document that the horizontal and vertical limits of hydrocarbon contamination are reached in the excavation for compliance with DEC approved soil cleanup concentrations. After DEC review and approval of the sample data, it is determined that the maximum concentration that remained in subsurface soil in the excavation was DRO at 1,170 milligrams per kilogram (mg/kg) and RRO at 2,530 mg/kg.

The biochemical treatment cell (biocell) soil received a nutrient and bacterial addition to promote accelerated chemical and biological breakdown of hydrocarbons bound in the soil particles and was tilled to promote aeration. Final confirmation soil sample locations in the biocell were selected randomly and collected immediately after boring 18 inches below the surface. Following DEC review of the data, the approved sample set was accepted at 15. The maximum DRO concentration in the biocell soil was 1,110 mg/kg and the statistically derived average was just under 650 mg/kg. The maximum RRO concentration in the biocell soil was 5,110 mg/kg and the average was just over 3,225 mg/kg. DMC Technologies, Inc. submitted *Final Cleanup Report, Petersburg Falls Creek Property* in August 2005 (DMC 2005).

Assured that the confirmation sample analysis results were below the approved cleanup DRO concentration of 1,360 milligrams per kilogram mg/kg and RRO of 8,300 mg/kg, DEC approved backfilling the excavation with the biochemically activated soil from the treatment cell. The approved DRO cleanup concentrations are determined to be protective of the migration to groundwater pathway based on the site specific physical parameters of the property and the area.

### **Remaining On-Site Soil Contamination**

The portion of the property where soil was excavated, biochemically treated and tilled on-site, and then backfilled is located on the rear half of the northwest corner of the 2.2 acre property. The area begins at the former fuel storage area southwest of the shop building, continues behind

the building to the north side where a stretch of clean soil was found, and then resumed for a short distance north of the shop near the north property line where buried solid waste was recovered.

The DEC is confident that concentrations of DRO in soil on the property are protective of the ingestion, inhalation and migration to groundwater exposure risk pathways. Natural attenuation will eventually reduce DRO concentrations in soil below default most conservative Method Two Table B2 migration to groundwater cleanup concentrations that allow unrestricted placement of soil that has been impacted by oil. The biochemical breakdown of hydrocarbons is expected to continue in the biocell soil used to backfill the excavations on the property. The influence on soil surrounding the excavation is likely to enhance natural attenuation of petroleum that remains bound to soil in low concentrations.

### **Ecological Receptors**

Ecological receptors are not present at the site. Migration pathways are not present to transport contaminants in concentrations that will have deleterious effects to off-site ecological receptors.

### **Cumulative Risk**

Pursuant to 18 AAC 75.325 (g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be calculated. 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.

### **Determination**

The investigation and cleanup of petroleum contamination of soil at the Three Lakes Road Parcel, also known as the Falls Creek Shop, has met all requirements specified in 18 Alaska Administrative Code (AAC) 75 Article 3 - Discharge, Reporting, Cleanup, and Disposal of Oil and Other Hazardous Substances. Based on the information provided by your consultant regarding the condition of contaminated subsurface material, groundwater use at the site and in the area, and human health and ecological risks, DEC has determined that an issuance of **No Further Remedial Action Planned (NFRAP)** is appropriate for this site. This determination is subject to the following Institutional Control.

### **Institutional Controls**

The condition specified below and the total volume of contaminated soil remaining on-site will be noted on DEC's Contaminated Sites Program Database until such time that petroleum concentrations in soil within the cleanup area have reached a DRO concentration of 230 mg/kg, the most stringent soil cleanup criteria. The Database record is accessible to the public by site name using the internet Contaminated Sites Database web page search engine.

A deed notice with information pertaining to the location and estimated quantity of petroleum contaminated soil that remains onsite will be signed by a land manager representative and recorded. Pursuant to 18 AAC 75.370 (b), the Deed Notice informs prospective purchasers that if removal of soil from the areas of contaminant soil on the property becomes necessary, DEC must be notified in advance to ensure that final placement of the soil does not violate water quality or petroleum regulations.

This Institutional Control was verbally reviewed with the current property owner representative Ted Deats, Thursday, September 1, 2005. Mr. Deats agrees with the controls and was advised that the deed notice on the property can be superseded by the DEC given adequate soil confirmation sampling data results.

#### Closure

In accordance with 18 AAC 75.380(d)(1) and 18 AAC 78.276, additional investigation and cleanup may be required if new information is discovered which leads the DEC to make a determination that the cleanup described in this decision is not protective of human health, safety, and welfare or the environment.

Persons who disagree 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 302, Juneau, Alaska 99801, within 15 days of the decision. **Adjudicatory hearing requests** must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 301, Juneau, Alaska 99801, within 30 days of this decision letter. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have questions regarding this letter or concerns please contact me by telephone at 907-465-5210 or email at [Bruce\\_Wanstall@dec.state.ak.us](mailto:Bruce_Wanstall@dec.state.ak.us).



Bruce Wanstall  
Project Manager

cc: Dan McNair, DNC Technologies, Inc.

#### References:

*2.2 acre parcel, ASLS 87-111, T60S, R79E, Sec 11, CRM, Mitkof Island, Near Petersburg Alaska Environmental Site Assessment Phase I Report*, James Claire P.E., November 2002 (Claire 2002)

*Petersburg Three Lakes Loop Road Parcel Remediation; Characterization Report and Cleanup Action Plan*, Carson Dorn, Inc., September 2003. (CDI 2003)

*Final Cleanup Report, Petersburg Falls Creek Property*, DMC Technologies, Inc., August 2005 (DMC 2005)

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