



Department of Environmental Conservation

2245.38.027

DIVISION OF SPILL PREVENTION & RESPONSE Contaminated Sites Program

File:

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October 2, 2013

Peter "Skip" Bush HSE&T Corporate Director Peak Oilfield Service Company LLC. 2525 C Street, Suite 201 Anchorage, AK 99503

Re: Decision Document: Arctic Structures, LLC (former) Cleanup Complete Determination

Dear Mr. Bush;

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the referenced site. This decision letter memorializes the site history, cleanup actions, and standard conditions for long-term site management. No further remedial action is required.

Site Name and Location: Arctic Structures, LLC (former) 200 East Commercial Drive Palmer, AK 99645

DEC Site Identifiers: File No: 2245.38.027 Hazard ID: 4264 Name and Mailing Address of Contact Party: Peter Bush Peak Oilfield Service Company LLC 2525 C Street, Suite 201 Anchorage, AK 99503

Regulatory Authority for Determination: 18 AAC 75

Site Description and Background

Contamination at the site resulted from surface spills associated with drum storage areas, leaking vehicles, and possibly the location of a former underground heating oil tank that served a mobile home formerly at the property. Investigation of potential contaminant sources took place in 2006 in anticipation of a property transfer.

Contaminants of Concern

The following petroleum contaminants of concern, those above approved cleanup levels, were identified in soil during the course of the site investigations summarized in the Characterization and Cleanup Activities section of this decision letter.

- Diesel Range Organics (DRO)
- Residual Range Organics (RRO)

Groundwater was not encountered during investigations at the site, and no contaminants remain in site soils at concentrations exceeding the migration to groundwater cleanup level.

Cleanup Levels

Applicable site cleanup levels are the migration to groundwater soil cleanup level for DRO and the ingestion cleanup level for RRO under 18 AAC 75.340, Method Two, 40 inch precipitation zone. Groundwater was not encountered during environmental work at the site and the depth to groundwater at the site is not known. DRO and RRO were detected in soil above the inhalation, ingestion and migration to groundwater cleanup levels established in 18 AAC 75.341 (d), Table B2.

Contaminant	Soil (mg/kg)
DRO	250
RRO	10,000

Table 1 – Approved Cleanup Levels

mg/kg = milligrams per kilogram mg/L = milligrams per liter ug/L = micrograms per liter

Characterization and Cleanup Activities

Contamination was reported to ADEC on June 16, 2006 when soil excavation contractor Alaska Interstate Construction (AIC) requested ADEC approval to transport soil from the subject site to Anchorage Soil Recycling (ASR) for thermal remediation. AIC reported that contaminated soil identified in a 2006 Phase II report¹ not yet submitted to ADEC had been excavated the previous week and that the environmental consulting firm Clarus Environmental Services (Clarus) provided qualified third-party oversight of the work. Following receipt of the Phase II report that identified the contaminants of concern as diesel range organics (DRO) and residual range organics (RRO), ADEC approved transport and thermal remediation of 72 tons of soil on June 20, 2006.

A report for the 2006 sampling by Clarus Environmental was not submitted to ADEC; therefore ADEC requested reports and other information not previously submitted in a letter dated September 8, 2008 to property owner Precision Power, a division of Peak Oilfield Service Company (referred to after this as Precision Power/Peak).

In response to ADEC's September 8, 2008 information request, Precision Power/Peak provided 2006 Phase I and II reports by Shannon & Wilson and documentation that 72 tons of petroleum contaminated soil excavated June 12th through 16th, 2006 was successfully thermally treated at Alaska Soil Recycling (ASR).

¹ See Limited Phase II Site Assessment Report dated April 28, 2006 and Phase I Environmental Site Assessment...April 2006, both prepared by Shannon & Wilson.

The 2006 Phase II report documented the excavation of six investigatory test pits and and the collection and analysis of four samples for DRO, RRO, gasoline range organics (GRO), Volatile Organic Compounds (VOCs) (various) by EPA 8260B, Volatile Aromatic Compounds benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8021B; and RCRA metals. Compounds from two samples exceeded the cleanup levels for the contaminants of concern (DRO and RRO); these were sample SS1 from a surface stain associated with a crushed oil container and sample TP4S3 from test pit TP4. Sample SS1 contained 22,100 mg/kg DRO at a depth of 0.1 - 0.3 feet and 35,700 mg/kg RRO; sample TP4S3 contained 10,400 mg/kg DRO at a depth of 2 - 2.5 feet. Shannon & Wilson concluded that the extent of contamination in each of these areas was likely very limited, stating "Considering both field screening and analytical results, the contamination identified in Test Pit TP4 and the surface stain beneath the truck (SS1) appear to be limited to near-surface soils, specifically, the impacted soil identified in TP4 appears to be contained within 5 feet of the ground surface."

Noting data gaps in the information provided in 2008, ADEC again requested information not previously submitted and a work plan in a letter to Precision Power/Peak dated February 22, 2013.

On June 27, 2013 consultant SLR submitted a work plan² that proposed test pit excavations in the areas where contamination was encountered in 2006. The plan also included partial documentation of excavation and sampling work done on June 16, 2006 by consultant Clarus including annotated photographs, chain of custody sheets, and laboratory analytical results for four samples collected on June 16, 2006. The samples were analyzed for DRO and RRO with results below the cleanup level for both compounds.

The information submitted by SLR was not sufficient to close the site based on the limited number of samples taken and lack of supporting information including a narrative of activities, field notes and field



screening results. ADEC conditionally approved SLR's work plan in a letter dated July 3, 2013.

SLR's September 2013 report³ confirmed that the 2006 environmental work successfully removed contaminated soil and that the remaining contaminant levels met applicable ADEC 18 AAC 75.341 soil cleanup levels for DRO and RRO. Field activities conducted on July 17, 2013 included excavation of trenches and test pits, in-situ and heated headspace field screening of soil using a photoionization detector (PID), and soil sampling for laboratory analyses. Soil samples were collected from native soil below the gravel cover, with five near-surface and 15 subsurface samples collected for DRO and RRO analyses and one sample each from the near-surface and subsurface sites also analyzed for PAHs. All laboratory results

² See Soil Assessment at 200 East Commercial Drive, Palmer...June 2003

³ See Soil Assessment Report, 200 East Commercial Drive, Palmer, Alaska...September 2013 prepared by SLR.

for DRO, RRO and PAHs were either non-detect or below ADEC 18 AAC 75.341 Method Two soil cleanup levels



Above - Photographs of site work by SLR from September 2013 Soil Assessment Report

Cumulative Risk Evaluation

Pursuant to 18 AAC 75.325(g), when detectable contamination remains on-site following a cleanup, a cumulative risk determination must be made that the risk from hazardous substances does not exceed a cumulative carcinogenic risk standard of 1 in 100,000 across all exposure pathways and does not exceed a cumulative noncarcinogenic risk standard at a hazard index of one across all exposure pathways.

Based on a review of the environmental record, ADEC has determined that residual contaminant concentrations do not pose a cumulative human health risk.

Exposure 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, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 2.

Table 2			
Pathway	Result	Explanation	
Direct Contact with Surface Soil	De Minimis	Contaminants were excavated; remaining soil does not exceed the most stringent ADEC cleanup levels.	
Direct Contact with Subsurface Soil	De Minimis	Contaminants were excavated, and not detected above the most stringent ADEC cleanup levels following cleanup.	
Outdoor Air Inhalation	Pathway Incomplete	The remaining subsurface contamination is below inhalation cleanup levels.	

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Groundwater Ingestion	Pathway Incomplete	Groundwater was not encountered and remaining soil contamination is below migration to groundwater levels.
Surface Water Ingestion	Pathway	Surface water contamination was not documented at the
	Incomplete	site.
Wild or Farmed Foods	Pathway	Wild foods are not collected in this area.
Ingestion	Incomplete	
Indoor Air Inhalation	Pathway	Contaminants do not remain in site soil or groundwater
(Vapor Intrusion)	Incomplete	at levels above the most stringent ADEC cleanup levels.
Other Human Health	Pathway	Contaminants do not remain in site soil or groundwater
	Incomplete	at levels above the most stringent ADEC cleanup levels.
Ecological	Pathway	There are no complete exposure pathways to ecological
_	Incomplete	receptors at the site.

<u>Notes to Table 2:</u> "De-Minimis Exposure" means that in ADEC's judgment receptors are unlikely to be affected by the minimal volume or concentration of remaining contamination. "Pathway Incomplete" means that in ADEC'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.

ADEC Decision

Remaining petroleum contamination in soil is below approved cleanup levels. This site will receive a "Closed" designation on the Contaminated Sites Database, subject to the following standard conditions.

Standard Conditions

- 1. Any proposal to transport soil or groundwater off-site requires ADEC approval in accordance with 18 AAC 78.600(h). A "site" [as defined by 18 AAC 75.990 (115)] means an area that is contaminated, including areas contaminated by the migration of hazardous substances from a source area, regardless of property ownership. (See attached site figure.)
- 2. Movement or use of contaminated material in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

This determination is in accordance with 18 AAC 75.380 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.

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 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 feel free to contact me at (907) 269-7527.

Sincerely,

Ellen Olso

Eileen Olson Project Manager

cc: Stan Flagel, SLR, Inc.