

# STATE OF ALASKA

**SEAN PARNELL, GOVERNOR**

## DEPT. OF ENVIRONMENTAL CONSERVATION

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

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File: 1525.38.005

October 28, 2011

Mr. Robert G. Loiselle  
Shee Atika, Inc.  
315 Lincoln Street. Suite 300  
Sitka, AK 99835

Re: Record of Decision (ROD); Charcoal Island HOT USTs  
Cleanup Complete Determination

Dear Mr. Loiselle,

The Alaska Department of Environmental Conservation, Contaminated Sites Program (DEC) has completed a review of the environmental records associated with the Charcoal Island HOT USTs contaminated site located on Charcoal and Alice Islands in Sitka. Based on the information provided to date, the DEC has determined that the contaminant concentrations remaining on site do not pose an unacceptable risk to human health or the environment, and this site will be closed.

This decision is based on the administrative record for Charcoal Island HOT USTs, which is located in the offices of the Alaska Department of Environmental Conservation (DEC) in Juneau, Alaska. The following summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in the Cleanup Complete Determination.

#### **Introduction**

##### Site Name and Location:

Charcoal Island HOT USTs  
Charcoal Island and Alice Islands  
Sitka, Alaska 99835  
Lot 170 and Lot 172, Block 4, Sitka Airport

##### Name and Mailing Address of Contact Party:

Mr. Robert G. Loiselle  
Shee Atika, Inc.  
315 Lincoln Street, Suite 300  
Sitka, AK 99835

DEC Reckey: 2001120113501  
File: 1525.38.005  
Hazard ID: 3722  
Source Area ID: 74697

Regulatory authority under which the site is being cleaned up:  
18 AAC 75

### **Background**

During the Second World War, the hills on Charcoal and Alice Islands were leveled to construct an army base. Additional surface area was created by adding fill in shallow marine waters between the islands. Soil on the island properties generally consists of imported shot rock and bedrock frequently appears at the ground surface. Due to the porosity of the fill material, rainfall infiltrates quickly and drainages or surface water bodies are not present. Groundwater is shallow and occurs perched intermittently in bedrock depressions. As a result, DEC determined that it would be unwarranted to require that groundwater be investigated for contamination at the sites on Charcoal and Alice Islands. The determination is authorized in Chapter 18 Alaska Administrative Code (AAC) 75.350 when the resource is unsuitable for current or future use as a drinking water resource.

U. S. Army Fort Ray Garrison had an estimated 64 buildings consisting of barracks and warehouses. The land was transferred to the Bureau of Indian Affairs after the war and then to Shee Atika Inc. in 1985. By 1995, most of the buildings were demolished and 32 underground fuel tanks (USTs) had been removed.

### **Historical Characterization and Cleanup**

In 1995 all of the known underground fuel storage tanks (USTs) on Charcoal and Alice Islands were identified and all 32 of the tanks were subsequently excavated, cleaned and disposed offsite. Although most of the UST sites showed no signs of fuel leakage, 21 of the UST removal sites were investigated and soil samples were collected for laboratory testing. The *Underground Storage Tank Environmental Assessment* by D.G. Jones/Associates (Jones (1995)) reported test results showing that eight of the suspected 21 USTs had been releasing heating oil to subsurface soil.

In April 1995 Smith Bayliss LeResche, Inc. (SBL) removed three of the USTs from Shee Atika property on Charcoal Island. Heating oil had been leaking from the USTs into the surrounding soil. The release was reported to DEC which subsequently authorized an Interim Removal Action for SBL to excavate the contaminated soil and transfer it to bioremediation cells on nearby Shee Atika property on Charcoal Island. The 240-cubic yard volume of soil was fertilized and tilled until 1996. Based on laboratory tests for petroleum concentrations in soil compared to the most conservative values in Chapter 18 Alaska Administrative Code 75.341(d) Method Two Table B2, DEC authorized land-spreading of the material on Alice Island and the cleanup oversight for file 1525.38.023 named Charcoal Island was closed.

*Characterization, Cleanup and Remediation-Voluntary Cleanup Program*

During a water line replacement along Fairview Avenue on Charcoal Island in 1996, the excavation workers discovered petroleum contaminated soil. Shee Atika submitted a cleanup plan authored by Southeast Management Services (SMS) to the DEC to address any contamination found in association with eight of the UST release sites and the Fairview Avenue Waterline site. In August, 2001, DEC approved entry of the site per the SMS cleanup plan into the Voluntary Cleanup Program (VCP). Shallow groundwater on Charcoal and Alice Islands appeared intermittently in bedrock depressions and no private wells were present. As a result, drinking water and sewer are supplied to the area by Sitka Public Works. DEC agreed that due to the low volumes of recoverable water, availability of an onsite public water supply and future use of the site properties, that investigation of the perched groundwater would be unnecessary unless gross, persistent contamination was encountered.

Between June and August 2001, SMS conducted investigative subsurface excavations at the Fairview Avenue Waterline site and at all but one of the eight UST release sites identified in Jones (1995). The seven UST sites cleaned up under the VCP Plan in 2001 are as follows:

- Site #18 at Fort Ray Building (Building) #406 (located on Lot 172 of Charcoal Is.),
- Site #21 at Building #437 (located on Lot 170 of Charcoal Is.),
- Site #9/9A at Building #442 (located on Lot 172 of Charcoal Is.),
- Site #19/20 at Building #405 (located on Lot 172 of Charcoal Is.),
- Site #3 at Building VS-4 (located on Alice Island),
- Site #5 at Building #460 (located on Lot 172 of Charcoal Island), and
- Site #6 at Building #449 (located on Lot 172 of Charcoal Island).

Site cleanup involved excavation at the above sites, screening the contaminated from clean material and placing it in a treatment cell on Shee Atika property. Since field screening showed that all the contaminated material was impacted with weathered heating oil, the DEC approved combining the soil into a single bioremediation treatment cell. After screening out oversize material, the remaining volume was reduced to 110 cubic yards. Since GRO, BTEX and PAHs were not detected in soil samples during the investigation, DRO and RRO were determined to be the contaminants of concern for all sample analysis on the soil.

In addition, the 2001 SMS VCP Plan successfully removed all contamination from the Fairview Waterline Site on Charcoal Island. A ninth Shee Atika site, UST Site #7 at Building #459 located on Alice Island was not cleaned up under the SMS VCP Plan because the site was being used to store gravel and SMS could not gain access.

In October 2001, SMS submitted the *Final Report of Oil-Contaminated Soil Cleanups on Charcoal Island Lots 170 & 172 with a Summary of 6/11-6/13/2001 Cleanup Actions for Other Charcoal Island & Alice Island Sites* (SMS (2001)). The following lists the maximum DRO concentrations detected in soil before cleanup in Jones 1995 and after cleanup in SMS 2001. At each site the DRO was below the migration to groundwater cleanup levels in 18 AAC 75.341 except for a small bedrock depression at the Fairview Avenue Waterline site.

Fairview Avenue Waterline

Jones (1995) reported a soil DRO concentration at 4,100 mg/kg. SMS (2001) reported excavation confirmation soil results of DRO at 350 mg/kg and RRO at 360 mg/kg in a thin layer of soil over bedrock at which SMS concluded that removal was taken to the maximum extent practicable. Due to the fact that all other soil confirmation samples were below Table B2 cleanup levels for DRO and RRO, DEC concluded that the residual contamination at this location was de minimis in volume.

Site #18 Fort Ray Bldg #406

Jones (1995) reported a soil DRO concentration at 4,100 mg/kg and the greatest SMS (2001) reported excavation confirmation sample for DRO was 17 mg/kg and for RRO was 45 mg/kg.

Site #21 Bldg #437

Jones (1995) reported a soil DRO concentration at 36,100 mg/kg and the greatest SMS (2001) reported excavation confirmation soil result for DRO was 130 mg/kg and for RRO was 380 mg/kg.

Site #9/9A Bldg #442

Jones (1995) reported a soil DRO concentration at 1,320 mg/kg and SMS (2001) reported excavation confirmation soil result for DRO was 5 mg/kg and for RRO was <10 mg/kg.

Site #19/20 Bldg #405

Jones (1995) reported a soil DRO concentration at 4,100 mg/kg and SMS (2001) reported excavation confirmation soil result for DRO was 24 mg/kg and for RRO was 47 mg/kg.

Site #3 Bldg VS-4

Jones (1995) reported a soil DRO concentration at 4,100 mg/kg and SMS (2001) reported excavation confirmation soil result for DRO was 200 mg/kg and RRO was 110 mg/kg.

Site #5 Bldg #460

Jones (1995) reported a soil DRO concentration at 3,760 mg/kg and SMS (2001) reported excavation confirmation soil result for DRO was <5.0 mg/kg and RRO was 14 mg/kg.

Site #6 Bldg #449

Jones (1995) reported a soil DRO concentration at 266 mg/kg and SMS (2001) reported excavation confirmation soil result for DRO was 6.0 mg/kg and RRO at 18 mg/kg.

In order to facilitate a land sale transaction involving Lots 170/172 on Charcoal Island, DEC provided a limited review and approval of the SMS 2001 Report. Since the soil sample results met the most conservative Method Two Migration to Groundwater soil concentrations listed in 18 AAC 75.341(d) Table B2, DEC issued a letter approving cleanup of the Fairview Avenue Waterline site and four of the seven UST sites (Sites 18, 21, 9/9A & 19/20). In its December 2001 letter, DEC noted that all petroleum-contaminated soils excavated during the VCP SMS Cleanup Plan had been successfully excavated from Lots 170/172, but noted that the soils were still pending remediation at a biocell/storage site on a nearby Shee Atika property.

In April 2003, DEC received a letter/report titled 11/18/02 *Sampling Results: Charcoal Island Bioremediation Soil Cell* by SMS (SMS (2003)). SMS (2003) presented the results of sampling of contaminated soils undergoing treatment on Shee Atika property from the VCP SMS Cleanup Plan in 2001. The 60 cubic yard volume of soil had a mean DRO concentration of less than 223 mg/kg (95% confidence level). Since the result met the most conservative Method Two Migration to Groundwater soil concentrations listed in 18 AAC 75.341(d) Table B2, DEC approved the material for landspreading on Shee Atika property on Alice Island.

#### **Final Characterization and Cleanup: UST Site #7 Building # 459**

In December 2007, DEC requested by letter that Shee Atika submit a work plan for cleanup of UST release Site #7, former Building #459, which had not been accessible for the VCP SMS Plan cleanup in 2001. The letter also requested a summary of the three sites on the eastern portion of Lot 172 on Charcoal Island (Sites #5 and #6) and on Alice Island (Site #3) located near Site #7.

In September 2008, DEC approved a cleanup workplan by SMS for Shee Atika to investigate and cleanup Site #7. DRO and RRO were determined to be the contaminants of concern for all sample analysis on the soil.

In January 2009, DEC received *Final Cleanup Report – 2001-2008 Contaminated Soil Excavations on Charcoal & Alice Islands* (SMS (2008)) submitted by Southeast Management Services. SMS (2008) documents the cleanup of contaminated material at Site #7 and summarizes the cleanups at Sites #3, #5, and #6 under the VCP (see SMS (2001)).

#### Site #7, Building #459

The Jones (1995) UST Assessment reported a DRO concentration in soil of 577 mg/kg at this site. The UST cleanup could not be excavated in 2001 because of an overlying stockpile of shot rock. In September 2008 the rock pile was removed and the site was excavated to a depth of four to five feet over a 275-square foot area. During the investigation, the excavated soil was screened for volatile compounds as it was segregated into three stockpiles which were lined and covered on-site.

Soil screening samples collected from the bottom and sidewalls of the excavation had zero readings for volatile compounds. Three confirmation soil samples were collected from the perimeter of the subsurface search excavation. Analysis of confirmation soil samples had all concentrations of DRO and RRO less than Method Two Migration to Groundwater soil cleanup levels in 18 AAC 75.341(d) Table B2 with the highest concentration of DRO at 40 mg/kg and of RRO at 170 mg/kg.

Each of the three stockpiles was sampled for laboratory analysis. Stockpile #1 had concentrations of DRO at 3,100 mg/kg and RRO at 8,400 mg/kg; the other two stockpiles had concentrations of DRO and RRO below the Method Two Table B2 soil cleanup levels. The volume of stockpile #1 was less than one cubic yard and weighed 305 pounds. In November 2008, SMS transported the 305 pounds of contaminated material to the Juneau Hazardous Waste Recycling Center for remedial treatment. The remaining two stockpiles with acceptable laboratory results were returned to the excavation.

#### Closure Summary

#### **Contaminants of Concern**

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

### Cleanup Levels

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

<u>Contaminant</u>	<u>Migration to Groundwater (mg/kg)</u>	<u>Ingestion (mg/kg)</u>	<u>Outdoor Air Inhalation (mg/kg)</u>
DRO	230	8,250	12,500
RRO	9,700	8,300	22,000

### 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 1 as an attachment to this letter

### DEC Decision

The cleanup actions to date have served to excavate and adequately remove contaminated soil from the nine subsurface contaminated sites on Charcoal and Alice Islands. 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. The site is now suitable for reuse and redevelopment.

Although a Cleanup Complete has been granted, DEC approval is required for off-site soil use or disposal in accordance with 18 AAC 75.325(i). 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.

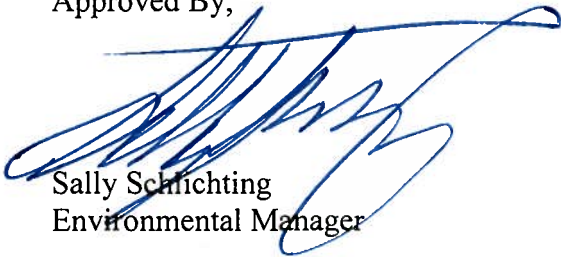
This Cleanup Complete determination is in accordance with 18 AAC 75.380(d) and does not preclude DEC from requiring additional assessment and/or cleanup action if future information indicates that this site may pose an unacceptable risk to human health or the environment.

### 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 directly by telephone at (907) 465-5210 or by electronic mail at [bruce.wanstall@alaska.gov](mailto:bruce.wanstall@alaska.gov).

Approved By,



Sally Schlichting  
Environmental Manager

Recommended By,



Bruce Wanstall  
Bruce Wanstall  
Environmental Program Specialist

Attachment A: Table 1 - Exposure Pathway Evaluation

cc: Thomas R. Hanna, Southeast Management Services, via regular mail

**Table 1 – Exposure Pathway Evaluation**

<b>Pathway</b>	<b>Result</b>	<b>Explanation</b>
Surface Soil Contact	De Minimis Exposure	Contamination remains in soil below migration to groundwater levels but no volatile petroleum compounds were detected in the site investigation laboratory samples. More heavily contaminated soil stockpiles have been remediated off-site.
Sub-Surface Soil Contact	De Minimis exposure	Contamination remains in the subsurface but is below migration to groundwater levels.
Inhalation – Outdoor Air	Pathway Incomplete	Contamination remains in soil below migration to groundwater levels at the sites and no volatile petroleum compounds were detected in the site investigation laboratory tests.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	There are no buildings at the site and no volatile petroleum compounds were detected in the site investigation laboratory samples. Any remaining contamination is below migration to groundwater levels.
Groundwater Ingestion	Pathway Incomplete	A groundwater resource was not encountered on the island sites and was not investigated. No volatile petroleum compounds were detected in soil and any remaining contamination is below the migration to groundwater screening levels.
Surface Water Ingestion	Pathway Incomplete	There is no potable surface water located within ¼ mile of the sites.
Wild Foods Ingestion	Pathway Incomplete	Contamination remains in soil below migration to groundwater levels and no volatile petroleum compounds were detected in the site investigation laboratory samples. More heavily contaminated soil stockpiles have been remediated off-site.
Exposure to Ecological Receptors	Pathway Incomplete	Contamination remains in soil below migration to groundwater levels but no volatile petroleum compounds were detected in the site investigation laboratory samples. More heavily contaminated soil stockpiles have been remediated off-site.

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. “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.