THE STATE of ALASKA
GOVERNOR SEAN PARNELL

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION & RESPONSE
Contaminated Sites Program

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File No: 1525.38.016

March 27, 2014

Mark Gorman
Municipal Administrator
City and Borough of Sitka
100 Lincoln Street
Sitka, AK 99835

Re: Decision Document: Sitka Waste to Energy Facility
Cleanup Complete Determination – Institutional Controls

Dear Mr. Gorman:

The Alaska Department of Environmental Conservation (DEC) has reviewed the environmental records for the referenced site. This decision letter memorializes the site history, cleanup actions, and specific conditions required to effectively manage remaining contamination. No further remedial action will be required as long as compliance with these conditions is maintained.

Site Name and Location
Sitka Waste to Energy Facility
Jeff Davis Street and Sawmill Creek Rd.
Sitka

Name and Mailing Address of Contact Party
City and Borough of Sitka
100 Lincoln Street
Sitka, AK 99835

DEC Site Identifiers
File No: 1525.38.016
Hazard ID: 1991

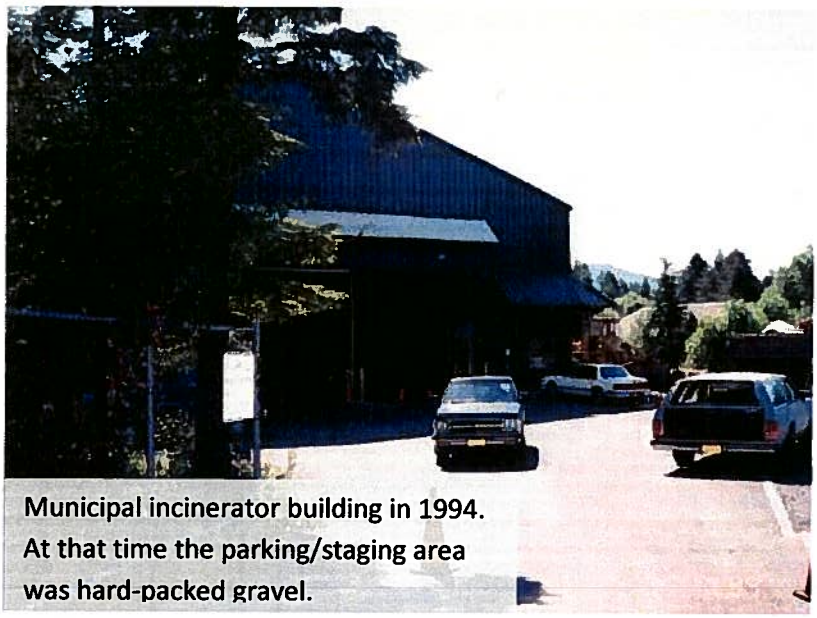
Regulatory Authority
18 AAC 75

Site Description and Background
Sitka's former municipal solid waste incinerator, located adjacent to Sawmill Creek Road across from Sitka National Cemetery, was operated as a "waste-to-energy" facility by the City and Borough of Sitka (CBS) from 1985 to 2000. In addition to the former incinerator, a separate boiler and associated fuel tanks located on the property were operated by Sheldon Jackson College for campus steam heat. A 25,000-gallon above-ground tank received from the Navy was placed on the property for fuel storage

shortly after World War II. A concrete secondary containment system was later installed, and the tank was subsequently used to store used oil collected by the Harbor Department from various locations throughout the city.

The site is bordered by forested land to the east and west, Sawmill Creek Road to the north, and the former Sheldon Jackson College campus (now Sitka Fine Arts Camp) to the south. A small freshwater wetland is located about 150' southeast of the incinerator building pad behind the Hames Center (Sheldon Jackson College swimming pool). The wetland, connected to a constructed flume that provides water to the Sheldon Jackson Hatchery downstream, is salmon rearing habitat. The water source for the flume is the Indian River, about 1,300' northeast of the small wetland. Sitka Tribe of Alaska historic grave sites are present in the forested area immediately to the east. The border of the Sitka National Historic Park is located less than 500' east.

The building housing the incinerator has been torn down and the site is now a paved staging area for the CBS recycling program. The Sheldon Jackson College fuel tanks are empty. The boiler, as well as an older boiler, remain on-site but are no longer functional. The used oil tank currently holds about 800 gallons of viscous oil and sludge. The tank is not regularly utilized any longer; however, small volumes of lighter used oil are periodically added to the tank to thin the viscosity and make it easier to pump. Final cleanout may eventually require cutting an entry hole in the tank (tank decommissioning is not part of this regulatory decision).



Municipal incinerator building in 1994. At that time the parking/staging area was hard-packed gravel.

The Environmental Protection Agency (EPA) sampled fly ash, bottom ash, and soil at the facility in the late 1980s and early 1990s. A 1994 report by an EPA contractor indicated a release of heavy metals into soil. Soil totaling approximately 14,400 cubic yards was thought to be contaminated. The facility was added to the DEC contaminated sites database after the 1994 EPA report was issued. No further investigatory work occurred until 2000, when the facility was decommissioned and closed.

DEC and CBS conducted a joint site inspection in October 2000 in preparation for site characterization activities under the Oil and Other Hazardous Substances Pollution Control Regulations (18 AAC 75) site cleanup rules. During the inspection, it was noted that the facility yard had been paved as a requirement of the facility's air quality permit renewal. The pavement covered the contaminated soil identified by EPA six years earlier.

Contaminants of Concern

Contaminants of concern are those above regulatory action levels. Contaminants confirmed during site characterization activities, and subsequently evaluated in the human health and ecological risk assessment, included metals (cadmium, chromium, lead, and mercury); polycyclic aromatic hydrocarbons; dioxins/furans; and petroleum hydrocarbons (diesel- and residual range organics). The tables and figures in the Human Health and Ecological Risk Assessment (Exponent, 2004) list contaminant concentrations and sampling locations.[1]

Cleanup Levels

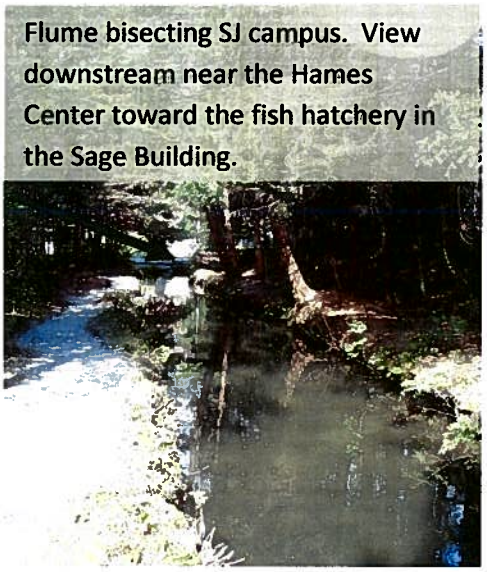
Under the site cleanup rules, alternative cleanup levels may be requested by a responsible person who elects to undertake a risk assessment. CBS did not request alternative cleanup levels: Default soil cleanup levels, the action levels applicable to a residential use scenario, are therefore the direct contact levels found in 18 AAC 75.341 (c), Table B1, and the ingestion levels found in 18 AAC 75.341 (d), Table B2, for the over 40-inch precipitation zone.

Forested wetland behind Hames Center. Incinerator facility building pad is about 150' northwest (white arrow). Black arrow shows culvert leading under path to flume.

Characterization and Cleanup Activities

Site characterization conducted under the regulatory authority of the Contaminated Sites Program began in 2000. Following the October 2000 site visit and scoping meeting, CBS contracted with a local consulting engineer to prepare a site characterization work plan. DEC approved the work plan in December 2000 under 18 AAC 75.335. The focus of the work plan was to evaluate where contamination was likely to have migrated off-site, including the toe of the fill, the adjacent forested area on all sides, and the small freshwater wetland behind the Hames Center. Soil beneath the paved parking and staging area and the concrete building pad where the former incinerator was located was not sampled. A second work plan was submitted by CBS and approved by DEC in June 2001. Additional samples were collected for metals, petroleum and dioxins/furans in soil, water, and flume sediment. Semi-volatile contaminants were screened out based on the initial characterization effort. Again, soil beneath the asphalt was not sampled.

[1] This closure determination is not intended to duplicate the detailed information found in the Human Health and Ecological Risk Assessment. The electronic link to the report can be found in the Contaminated Sites Database Closure Details report at http://dec.alaska.gov/applications/spar/CSPSearch/results.asp


Flume bisecting SJ campus. View downstream near the Hames Center toward the fish hatchery in the Sage Building.

Analytical results from both characterization efforts showed contaminant migration had occurred through surface water runoff from the building pad. Elevated concentrations of heavy metals and dioxins/furans were detected in surface soils in the forested areas to the south and west, and sediments in the small downgradient wetland.

Stakeholder collaboration began in the summer and fall of 2001, with input received from the Sitka Tribe of Alaska, National Park Service, and Sheldon Jackson College. DEC concluded that a human health and ecological risk assessment would quantify site risks and help the City fine-tune its remedial action options, if any were required.

In late 2002, after receiving funding approval from the City Assembly, CBS selected Exponent, a consulting firm based in Washington State, to conduct the risk assessment. Soil, sediment, water, and biota sampling occurred in the spring of 2003 in support of the risk assessment. Additional sediment samples were collected in 2004. DEC approved the risk assessment in December 2004 under 18 AAC 75.340.

Risk Assessment Conclusions

Human Health – Total risk (cumulative risk for all contaminants evaluated) for the hypothetical resident exposure scenario exceeded DEC's regulatory risk threshold. This scenario assumed long term residence (30 years). The risk assessment report recommended no residential use, as well as restrictions on future uses of the former facility building pad that would require removing the pavement.

Ecological – Cadmium, chromium, lead and mercury exceed ecological screening criteria, indicating potential adverse effects to ecological receptors occurring in habitats adjacent to the former incinerator facility. However, DEC concluded in its December 16, 2004 risk assessment approval letter that the small area affected (the vegetated area and forested wetland) posed no unacceptable risk to ecological receptor populations that inhabit the Sitka area. Moreover, flume sediment sampling confirmed that contaminants posed no risk to downgradient aquatic receptors.

Exposure Pathway Evaluation

At the time of site closure, DEC evaluates the exposure to remaining contaminants using the 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.

Table 2 – Waste to Energy Facility Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Exposure Controlled	Contamination is present, but exposure is controlled through capping and zoning.

Sub-Surface Soil Contact	Exposure Controlled	Contamination assumed present, although sub-surface soil was not sampled. Potential exposure is controlled through capping and zoning.
Inhalation – Outdoor Air	Pathway Incomplete	Volatile contaminants are not present.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	Volatile chemicals are not present and there are no occupied buildings on the site.
Groundwater Ingestion	Pathway Incomplete	Groundwater in the area is not a current or reasonably anticipated future source of drinking water. The City obtains its drinking water from Blue Lake, located about five miles east of the site.
Surface Water Ingestion	Pathway Incomplete	Surface water is not used as a drinking water source in the vicinity of the site. Blue Lake is located about five miles east.
Wild and Farmed Foods Ingestion	De-Minimis Exposure	Wild foods harvesting may occur incidentally along the nearby marine shoreline. Based on flume sediment sampling, DEC has determined that the likelihood of contamination affecting wild foods is inconsequential for people that might harvest these foods, now and in the future.
Exposure to Ecological Receptors	Pathway Incomplete	Exposure is not expected to significantly impact any aquatic or wildlife populations.

Notes to Table 1: "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.

DEC Decision

Contamination remains above residential cleanup levels in the forested areas at the toe of the fill, and extending downslope to the small wetland behind the Hames Center. Contamination in wetland and flume sediments is present above ecological screening thresholds. Based on the 1994 EPA study, it is assumed that contamination exceeding residential cleanup levels also remains beneath the paved area now used as a staging area for recycling.

DEC recognized at the outset of this project that cleanup in the wetland and the forested areas adjacent to the building pad would be logistically difficult, damaging to the aquatic habitat, and economically challenging. Because the risk assessment concluded that contaminant levels are safe for commercial occupation, DEC worked with CBS to rezone the parcel. In 2010, the parcel was rezoned from R-2 Residential to P Public. This designation is defined as: "The public lands district is intended to contain government-owned lands or lands owned by nonprofit institutions serving the public interest which are utilized for public recreation, education or institutional uses" CBS 22.16.020." The Conditional Use Permit was approved at the same time with the condition that "the facility will serve as a transfer facility only (no shredding, processing, etc.). In the event that the intent changes, the City of Sitka will provide the Planning Commission the opportunity for comment." The re-zoned parcel (# 802 on the city's Geographic Information System) encompasses approximately 1.7 acres.

This rezoning serves as the institutional control to ensure that human exposure to residual contamination remains within safe limits. DEC has determined there is no unacceptable risk to human health or the environment as long as the institutional control remains in place and the contamination is properly managed. The Sitka Waste to Energy Facility is therefore **closed with institutional controls** with the following conditions:

1. Any future change in land use or ownership may impact the exposure assumptions cited in this document. If land use rezoning is proposed, or if the land is sold, DEC must be notified immediately via email at DEC.ICUnit@alaska.gov. Remediation and/or revised conditions may be necessary.

2. The paved area, which serves as a cap to prevent exposure to likely contamination, appeared to be in good condition at the time of the November 12, 2013 final site inspection. The pavement must be maintained to ensure the integrity of the contaminant cap. The condition of the pavement cap must be reported via email to DEC every five years from the date of this letter at DEC.ICUnit@alaska.gov. DEC must be immediately notified if planned future construction activities will result in permanent removal of the pavement. The site will be reopened and a sampling plan must be submitted to DEC for review and approval.

The DEC contaminated sites database, at: http://dec.alaska.gov/spar/csp/db_search.htm, will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining. The site may be rezoned for residential use in the future if documentation can be provided that shows residential cleanup levels have been met. The following conditions, applicable to all closed contaminated sites, remain permanently in effect.

1. Any proposal to transport soil off-site requires DEC approval in accordance with 18 AAC 75.325. 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.

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 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 Spill Prevention and Response 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 99811, 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 99811, 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.

Please sign and return *Attachment A* to DEC <u>within 30 days of receipt of this letter</u>. If you have questions about this closure decision, please feel free to contact me at (907) 465-5208.

William Janes
State and Private Sites Manager

cc: General Manager, Sitka Tribe of Alaska
Administrative Office, Sitka National Historic Park
Roger Schmidt, Executive Director, Sitka Fine Arts Camp

Attachment A: Cleanup Complete-ICs Agreement and Signature Page*

The City and Borough of Sitka agrees to the terms and conditions of the Cleanup Complete Determination, as stated in the decision letter for the Sitka Waste to Energy Facility, dated March 27, 2014. Failure to comply with the terms and conditions of the determination may result in DEC reopening this site and requiring further remedial action in accordance with 18 AAC 18 AAC 75.380.

Mark Gorman, Municipal Administrator
City and Borough of Sitka

April 1, 2014
Date

Mark Gorman, Municipal Administrator
Printed Name of Authorized Representative, Title

After making a copy for your records, please return a signed copy of this form to the DEC project manager at the address on this correspondence within 30 days of receipt of this letter.