



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

**Department of Environmental
Conservation**

DIVISION OF SPILL PREVENTION &
RESPONSE
Contaminated Sites Program

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ADEC File: 2332.38.036

March 11, 2013

James T. Pruitt, President
Seward Ship's Drydock, Incorporated
P.O. Box 944
Seward, Alaska 99664

FILE COPY

Re: ADEC Decision Document: Seward Ship's Drydock
Cleanup Complete Determination

Dear Mr. Pruitt:

The Alaska Department of Environmental Conservation, Contaminated Sites Program (ADEC) has completed a review of the environmental records associated with the Seward Ship's Drydock site located at Mile 7 Nash Road, Seward, Alaska. Based on the information available 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 further remedial action will be required at this time.

This decision is based on the administrative record for this site, which is located in the offices of the ADEC in Soldotna, Alaska. This letter summarizes the decision process used to determine the environmental status of this site and provides a summary of the regulatory issues considered in this Cleanup Complete Determination.

Introduction

Site Name and Location:

Seward Ship's Drydock
Mile 7 Nash Road
Seward, Alaska 99664

Property Legal Description:

Lot 1-A, Lot 3 and Lot 4, Block 7 Fourth of July Creek Subdivision Seward Marine Industrial Center
Seward Ship's Drydock Replat, T1S, R1E, Section 18, Seward Meridian, SW 2002022.

Name and Mailing Address of Operator and Responsible Party:

James T. Pruitt, President
Seward Ship's Drydock, Incorporated
P.O. Box 944
Seward, Alaska 99664

Landowner Contact:

Phillip Oates, City Manager
City of Seward
P.O. Box 167
Seward, Alaska 99664-0167

ADEC Site Identifiers

ADEC Reckey: 2007230131301
ADEC File Number: 2332.38.036
Hazard ID: 4505

Regulatory authority under which the site is being cleaned up:

18 AAC 75

Background

Seward Ship's Drydock, Incorporated (SSDI), is an active boat refurbishing facility located on the shore of Resurrection Bay in Seward, Alaska. SSDI began operations in 1973, and has operated at this site since 1985. The facility performs sandblasting and painting of commercial ships. The site consists of a covered sandblasting area, outdoor sand blasting area, vehicle maintenance shop, two sheds, office, transfer pit, spent sandblast media stockpile area, former landspreading area, above ground storage tanks (AST's), and a solvent storage area. In 2007, Ecology and Environment, Incorporated, performed a site inspection at the SSDI facility, under contract to the United States Environmental Protection Agency (EPA). Ecology and Environment prepared and provided a September 2007 Seward Ship's Dry Dock Site Inspection report for EPA, covering their work efforts. A total of 19 soil samples were collected at the SSDI facility, including spent sandblast media. Diesel range organics (DRO), tributyltin, arsenic, copper, benzo[a]pyrene, polychlorinated biphenyls (PCB), nickel, benzo[b]fluoranthene, dibenzo[a,b]anthracene, barium, chromium and thallium were detected above the ADEC soil cleanup levels, and were evaluated as contaminants of potential concern. Following the Ecology and Environment site inspection, soils visibly impacted by spent sandblast media, and stockpiles of spent sandblast media, were removed from the site and disposed of at the Kenai Peninsula Borough landfill near Soldotna, Alaska.

Site Characterization and Cleanup Actions

Ongoing facility operations at SSDI generates spent sandblast media that is stockpiled, sampled, and shipped to the Kenai Peninsula Borough landfill for disposal. It was reported that shipments of the spent sandblast media had been disposed of in 1992, 1995, 1997, 2000, and 2004. The 2004 stockpiles of spent sandblast media consisted of approximately 189 cubic yards stored at an off-site

nearby residential property, and approximately 178 cubic yards of spent sandblast media that remained on-site. Stockpile sample analyses detected DRO in the off-site stockpile at a concentration of 324 mg/kg, and 298 to 361 mg/kg in the on-site stockpile.

In 2007 a site inspection was performed at the SSDI facility for the EPA. Two (2) soil samples were collected from locations physically distant from the SSDI facility, in the effort to establish background concentrations for contaminants of potential concern. Nineteen (19) soil samples were collected from the SSDI facility. Samples from the pullout dock area detected tributyltin at 30.9 mg/kg, and copper at 952 mg/kg. The south gate area did not detect any analytes above the background concentrations. The transfer pit area detected copper at 1,560 to 1,900 mg/kg, benzo[a]pyrene at 0.52 and 1.4 mg/kg, and DRO at 487 mg/kg. The spent sandblast media stockpile detected copper at 724 and 3,690 mg/kg, benzo[a]pyrene at 1.4 mg/kg, PCB at 1.5 mg/kg, and DRO at 346 mg/kg. The covered sandblasting area detected copper at 4,190 to 9,060 mg/kg, nickel at 186 mg/kg, benzo[a]pyrene at 1.7 and 2.6 mg/kg, benzo[b]fluoranthene at 5.9 mg/kg, dibenzo[a,h]anthracene at 4.3 mg/kg, and DRO at 546 mg/kg. The solvent storage area detected copper at 2,270 mg/kg and DRO at 445 mg/kg. The outdoor sandblasting area detected barium at 1,330 mg/kg, copper at 3,030 to 9,390 mg/kg and DRO at 238 mg/kg. The maintenance shed detected DRO at 1,010 mg/kg, and the east gate area detected copper at 462 mg/kg. All samples collected detected arsenic, chromium and thallium exceeding ADEC's most stringent soil cleanup levels, but at levels reasonably representative of the background concentrations established for this area. Sediment samples were collected from the overland pathway and near Resurrection Bay with DRO being detected at 355 mg/kg from the overland pathway. Arsenic and chromium were detected at concentrations exceeding the ADEC most stringent levels in samples collected from the overland pathway and near Resurrection Bay, but at levels representative of the background samples collected in this area.

In October of 2008 approximately 450 cubic yards of spent sandblast media that had been stockpiled on site was transported to the Kenai Peninsula Borough landfill. This shipment included approximately 25 cubic yards of material that had been removed from the Solvent Storage Area prior to the installation of a new concrete pad.

In July and August of 2009 confirmation soil sampling was performed to characterize petroleum hydrocarbon concentrations in site soils. The samples were collected at a depth of 1.5 to 2.5 feet below ground surface and analyzed for petroleum hydrocarbons, only. Twelve areas were sampled across the site, with no hydrocarbon contamination being detected.

Average soil contaminant concentrations were calculated from the September 2007 EPA site inspection soil sample data in order to evaluate the environmental risk at the site. These 2007 samples were collected from locations anticipated to exhibit higher than average contaminant concentrations, having been collected from locations likely to have been impacted from SSDI facility operations. The average contaminant concentrations were compared to ADEC Table B1 (residential-based) 'direct health' soil cleanup levels. Benzo[a]pyrene and arsenic were the two contaminants of concern detected at an average concentration exceeding ADEC Table B1 'direct contact' cleanup levels. However, arsenic occurs naturally in Alaska soils, and the concentration of

naturally occurring arsenic detected in 'background' soil samples collected near this facility also exceeded ADEC Table B1 'direct contact' soil cleanup level.

Benzo[a]pyrene is one of a group of polycyclic aromatic hydrocarbons (PAHs). PAHs are not produced or used commercially but are ubiquitous in that they are formed as a result of incomplete combustion of organic materials. PAHs are found in exhaust from motor vehicles and other gasoline and diesel engines (especially from diesel engines), emissions from coal-, oil-, and wood-burning stoves and furnaces, cigarette smoke, and general soot and smoke of industrial, municipal, and domestic origin. The main source of atmospheric benzo[a]pyrene is considered to be residential wood burning stoves. At the SSDI facility, benzo[a]pyrene was only detected in soil samples collected within, and adjacent to, the covered (roofed) sandblasting area, and from the spent sandblast media stockpiles. Exhaust emissions from internal combustion engines is the likely source, with the benzo[a]pyrene collecting on the spent sandblast media during sandblasting operations, and on soils in the immediate presence of these exhaust fumes. The spent sandblast media is periodically excavated and disposed of at the Kenai Peninsula Borough landfill. As such, the benzo[a]pyrene is also periodically removed from the facility with the spent sandblast media as an industrial waste product.

The average contaminant concentrations were also compared to ADEC 'migration to groundwater' soil cleanup levels. Arsenic, chromium (total), and copper exceeded their ADEC 'migration to groundwater' soil cleanup levels. However, both arsenic and chromium (total) are common, naturally occurring elements in Alaska soils, and the concentration of arsenic and chromium (total) detected in background soil samples also exceeded the ADEC 'migration to groundwater' soil cleanup levels. Copper was frequently detected at concentrations that significantly exceeded the concentration present in the background soil samples. The groundwater ingestion pathway is considered to be incomplete since this facility is serviced by the City of Seward's public water system, no drinking water wells currently exist in potentially affected locations, and the City of Seward public water system is available to adjacent properties for purposes of any future drinking water supply systems. Therefore, the ADEC 'migration to groundwater' soil cleanup levels are not applicable at this site.

SSDI has operated at this property since 1985. Due to the ongoing industrial use, industrial/commercial-based soil cleanup levels were also developed for evaluation at this site. None of the average concentrations of the contaminants of concern exceeded their industrial/commercial-based soil cleanup levels.

Many of the higher contaminant concentrations detected in soil samples collected from the SSDI facility were directly associated with spent sandblast media; samples collected from the covered sandblasting area, the outdoor sandblasting area, and the spent sandblast media stockpiles. Spent sandblast media is readily identifiable by visual observation. In 2009, soils across the facility visibly displaying spent sandblast media were excavated and transported offsite. These materials were disposed at the Kenai Peninsula Borough's permitted landfill, near Soldotna. No additional soil sampling was performed following the removal of spent sandblast media impacted soils.

Contaminants of Potential Concern

During the investigations at this site, soil samples were analyzed for contaminants of potential concern with the following laboratory analyses; DRO, GRO, RRO, volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, and xylenes (BTEX), PAHs, semivolatile organic compounds, metals, and tributyltin. These laboratory analyses identified the contaminants of potential concern which were presented and discussed in both the **Background** and **Site Characterization and Cleanup Actions** sections of this ADEC Decision Document, above.

Cleanup Levels

ADEC default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B1 and Table B2, Over 40 inch Zone, 'Direct Contact', 'Ingestion', or 'Inhalation', whichever is most stringent. These default soil cleanup levels are developed to be protective of human health in residential-type property use, exposures, and durations, and are more stringent than industrial/commercial cleanup levels which may be more applicable for this industrial facility.

Pathway Evaluation

Following investigation and cleanup at the site, exposure to any remaining contamination 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 showed all pathways to be: De minimis Exposure, Pathway Incomplete, or Low Potential Exposure. A summary of this pathway evaluation is included in Table 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	De minimus Exposure	Surface soils observed to be visibly impacted with spent sandblasting media were excavated and disposed off site.
Sub-Surface Soil Contact	De minimus Exposure	Sub-Surface soils observed to be visibly impacted with spent sandblasting media were excavated and disposed off site.
Inhalation – Outdoor Air	Pathway Incomplete	The remaining contaminants of concern in soils at this facility are non-volatile and have virtually no potential to impact outdoor air.
Inhalation – Indoor Air (vapor intrusion)	Pathway Incomplete	The contaminants of concern in soils at this facility are non-volatile and have virtually no potential to impact indoor air.
Groundwater Ingestion	Pathway Incomplete	The SSDI facility is serviced by the City of Seward public water system; therefore, this pathway is considered incomplete.
Surface Water Ingestion	Pathway Incomplete	The SSDI facility is serviced by the City of Seward public water system therefore; this pathway is considered incomplete.
Wild Foods Ingestion	Pathway Incomplete	The ground surface has been cleared of vegetation, and there is no potential for gathering of wild foods at the facility.

Exposure to Ecological Receptors	Low Potential Exposure	Ecological receptors are unlikely to be affected by the contaminants of concern.
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Notes to Table 1: “De minimis Exposure” means that in ADEC’s judgment, receptors are unlikely to be affected by the minimal mass of remaining contamination. “Pathway Incomplete” means that in ADEC’s judgment, contamination has no potential to contact receptors. “Low Potential Exposure” means that analytical data are not sufficient to determine if exposure is a concern, but site conditions indicate it is unlikely.

ADEC Decision

Using the 2007 soil sample data from the EPA preliminary assessment report, average soil contaminant concentrations at the site did not exceed ADEC soil cleanup levels. In addition, after the 2007 soil sampling and analysis work was completed, soils across the facility visibly displaying spent sandblast media were excavated and transported offsite. ADEC has determined that the contamination remaining following excavation and removal of spent sandblast media does not pose an unacceptable risk to human health or the environment, particularly under the historical and current industrial/commercial use of the property. Therefore, we are issuing this ‘Cleanup Complete’ decision.

In accordance with 18 AAC 75.325(i), contaminated soil or water may not be moved or disposed without ADEC’s prior written approval. The excavation of soil on this property may expose contaminated soil or water requiring proper safety, management, and disposal practices. Seward Ship’s Drydock, Incorporated is responsible for any residual contamination, and shall provide for the proper handling, treatment, and disposal of spent sandblast media or other industrial waste and of contaminated soils or groundwater encountered in accordance with all applicable ADEC regulations at that time.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status to ‘Cleanup Complete’, and will include a description of the contamination remaining at the site.

This determination is in accordance with 18 AAC 75.380(d) 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. The spent sandblast media generated during facility operations is defined as an industrial waste under ADEC Solid Waste Disposal regulations. It is required to be managed, stored, and disposed of as an industrial waste, at an ADEC permitted solid waste disposal facility. Should ADEC determine that spent sandblast media are being improperly stored, managed, or disposed of at this facility, additional assessment and cleanup work could be required.

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.

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 ADEC decision document, you may contact me, the current ADEC project manager, at (907) 262-3422 or via e-mail at paul.horwath@alaska.gov



Paul Horwath
Engineer I, DEC

Cc: Phillip Oates, City Manager, City of Seward
Mack Funk, Harbormaster, City of Seward
Bill Janes, ADEC, CSP, Juneau via e-mail
Bob Blankenburg, ADEC, Solid Waste, via e-mail
Brent Andrews, ADEC, Division of Water, via e-mail
Jim Baumgartner, ADEC, Division of Air Quality, via e-mail