THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

555 Cordova St
Anchorage, AK 99501
Main: 907-269-8685
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File No: 2100.26.293
Article: 7014 0510 0001 5871 2354

December 30, 2014

Steve Cochran
Regulatory Manager, Facilities
Anchorage School District (ASD)
1301 Labar Street
Anchorage, Alaska 99515

Re: Decision Document; ASD Facilities and Maintenance Complex
Cleanup Complete – Institutional Controls Determination

Dear Mr. Cochran:

The Alaska Department of Environmental Conservation (ADEC) has reviewed the environmental records for the ASD Facilities and Maintenance Complex. 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:
ASD Facilities & Maintenance Complex
1301 Labar Street
Anchorage, Alaska 99515

Name and Mailing Address of Contact Party:
Steve Cochran
Regulatory Manager, ASD Facilities
1301 Labar Street
Anchorage, Alaska 99515

ADEC Site Identifiers:
File: 2100.26.293
Hazard ID: 24606

Regulatory Authority for Determination:
18 AAC 75 and 18 AAC 78

Background

In 1997, contamination was encountered during the removal of four regulated underground storage tanks (USTs) with associated piping. These included a 6,000-gallon diesel UST and two 10,000-gallon gasoline USTs removed from the same excavation located 100 feet off the southeast corner of the Maintenance Complex and one 15,000 gallon diesel UST located adjacent on the north side of the Maintenance Complex. The three USTs removed from the same excavation were used to fuel

ASD vehicles via four dispensers. The 15,000 gallon UST adjacent to the north of the complex was used as an emergency generator.

This site is located in a mixed residential/commercial area and is still being used for facilities and maintenance by the ASD. Legal description is the Huffman Business Park, Tract A-1, and is located with the southwest 1/4 section 20, township 12 north, range 3 west, Seward Meridian.

Contaminants of Concern

During the investigations at the site, soil samples were analyzed for gasoline range organics (GRO), diesel range organics (DRO), lead, and the volatile organic compounds (VOCs) benzene, toluene, ethylbenzene, and xylenes. Based on these analyses and knowledge of the source area, the following contaminants of concern (COC) were identified in soil and groundwater:

- GRO
- DRO
- Benzene
- Ethylbenzene
- Xylenes
- Toluene

ADEC Cleanup Levels

The default soil cleanup levels for this site are established in 18 AAC 75.341, Method Two, Table B1 and B2, *Under 40 Inch Zone*. The default groundwater cleanup levels for this site are established in 18 AAC 75.345 Table C Groundwater Cleanup Levels

Table 1- Soil and Groundwater Cleanup Levels

Contaminants of Concern	Soil- Method Two, Direct Contact /Ingestion*	Soil- Method Two, Inhalation*	Soil- Migration to Groundwater(MTG)*	Groundwater#
DRO	10,250	12,500	250	1.5
GRO	1,400	1,400	300	2.2
Benzene	150	11	0.025	0.005
Ethylbenzene	10,100	110	6.9	0.7
Toluene	8,100	220	6.5	1.0
Xylenes	20,300	63	63	10

Notes to Table 1. *All soil contaminant concentrations are presented in mg/kg.
#All groundwater contaminant concentrations are presented in mg/L.

Site Characterization and Cleanup Actions

Emergency Generator UST:

Contamination was encountered at the fill end of the tank. A total of 100.84 tons of contaminated soil were removed from the fill end of the tank 15 feet below ground surface (bgs) and thermally remediated off site. Only one of four confirmation soil samples collected was above MTG cleanup levels. This sample collected along the south sidewall of the excavation– 7 feet north of the Complex – contained GRO at 440 mg/kg and DRO at 4,400 mg/kg. A test pit advanced 17 feet bgs at this area did not encounter groundwater.

Three Fueling USTs:

Leakage was encountered at several piping connections. To remove the three USTs, 423.53 tons of soil were excavated 10 feet bgs and thermally remediated off site. Contaminated soil observed beneath the USTs was left in place. Soil samples collected 6 to 16 feet bgs contained contaminant concentrations above MTG cleanup levels. A soil sample with the highest concentrations of contaminants, collected at the

perched groundwater interface 14 feet bgs, contained GRO at 35,000 mg/kg, DRO at 6,400 mg/kg, benzene at 600 mg/kg, ethylbenzene at 1,100 mg/kg, toluene at 4,800 mg/kg, and xylenes at 5,600 mg/kg.

In September 1997, twelve soil borings were advanced with five completed as monitoring wells: MW-1, MW-2, MW-4, MW-7, and MW-8. Soil samples from borings one to six and eleven, located within the former fueling USTs source area, exhibited contaminant concentrations above MTG cleanup levels. In contrast the soil borings that were stepped out from the source area did not exhibit detectable concentrations. Soil samples collected from the source area borings at a depth of 10 to 17 feet bgs at the groundwater interface contained GRO up to 3,600 mg/kg, benzene up to 65 mg/kg, ethylbenzene up to 140 mg/kg, toluene up to 480 mg/kg, and xylenes up to 320 mg/kg. Three of the five monitoring wells were not sampled because MW-1 and MW-4, located in the former fueling USTs source area, contained free product and MW-8, located 200 feet south of the source area, was dry. The groundwater from MW-2 and MW-7 located adjacent to the source area was sampled. Only MW-2 contained contaminants above groundwater cleanup levels with benzene at 0.0704 mg/L.

In 1998, excavation of contaminated soil and removal of free product was conducted. Approximately 24.2 gallons of free product were recovered from MW-1 and MW-4. Clean overburden was excavated to a depth of 9 feet bgs and stockpiled on site. Contaminated soil was encountered and removed from a depth of 9 to 23 feet bgs. The depth of the excavation was limited to 2 feet below the groundwater table. The eastern and western extent of the excavation was limited by Student Nutrition Center Building and buried utility lines respectively. Confirmation samples collected contained benzene up to 10.7 mg/kg and toluene up to 14.0. The excavation was backfilled with clean fill to three feet above the groundwater interface, then with the onsite overburden, and capped with clean fill. A total of 5,397 tons of excavated contaminated soil was transported to Alaska Soil Recycling for thermal remediation. As part of this excavation work, monitoring wells located within the excavation were removed and replaced.

In 1998, to further evaluate extent of contamination, two boreholes were advanced and competed as monitoring wells MW-13 and MW-14. In addition to MW-13 and MW-14, historic monitoring wells MW1, MW2, MW-4, and MW-7 were sampled. Only one soil sample collected out of seven, from boreholes MW-13 and MW-14, contained detectable levels of contaminants. A soil sample collected from borehole MW14 at the groundwater interface 16.5 feet bgs contained benzene at 1.46 mg/kg. Groundwater was sampled quarterly in March, April, June, and October. Only MW2, MW4, and MW14 contained contaminant concentrations above groundwater cleanup levels. MW-04 located in the source area contained benzene at 22 mg/L, toluene at 51 mg/L, ethylbenzene at 5.3 mg/L, GRO at 220 mg/L, and DRO at 5.7 mg/L. MW-2, up-gradient of the source area, contained benzene at 0.27 mg/L and MW-14 down-gradient of the source area contained GRO at 400 mg/L.

In 2003, MW-15 was advanced adjacent to the north east corner of the Student Nutrition Building to further evaluate extent of contamination. In addition to MW-15, monitoring wells MW1, MW2, MW-4, MW-7, MW-13 and MW-14 were sampled in June and September. Only MW4, and MW14 contained contaminant concentrations above groundwater cleanup levels. MW-4 located in the source area contained benzene at 0.366 mg/L, toluene at 4.34 mg/L, ethylbenzene at 1.4 mg/L, GRO at 29 mg/L, and DRO at 11 mg/L. MW-14 assumed down gradient of the source area contained benzene at 4.85 mg/L, toluene at 1.17 mg/L and GRO at 11.4 mg/L.

Monitoring wells MW-4 and MW-14 were sampled seven times from 2004 to 2014. The contaminant concentrations in the monitoring wells generally showed a decreasing trend. Results

from the latest sampling event contained benzene up to 0.119 mg/L and DRO up to 1.88 mg/L. (See attachment B.)

In 2014, eight out of nine monitoring wells were decommissioned; MW-08, which has historically been dry, could not be located. MW-07 and MW-15 were decommissioned by complete removal and the other six monitoring wells were decommissioned in place.

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, residual contaminant concentrations are exceeded in the groundwater risk pathways as follows. Groundwater at the site is contaminated above 18 AAC 75.345 Table C Groundwater Cleanup Levels; however, there are no drinking water wells on site and no receptors. In addition, the contaminated groundwater plume is located within the property and is stable or decreasing. Additionally, a Notice of Environmental Contamination (NEC) has been filed notifying future property owners of the presence of remaining contamination. Exposure risk for both pathways is considered acceptable. (See *Exposure Pathway Evaluation* table below for further details.)

Exposure Pathway Evaluation

Following investigation and cleanup at this site, exposure to remaining contaminants was evaluated using ADEC's Exposure Tracking Model (ETM). Exposure pathways are conduits by which contamination may reach human or ecological receptors. ETM results show all pathways to one of the following: De Minimis Exposure, Exposure Controlled, or Pathway Incomplete. A summary of this pathway evaluation is included in Table 1.

Table 1 – Exposure Pathway Evaluation

Pathway	Result	Explanation
Surface Soil Contact	Pathway Incomplete	Contaminated surface soil at the source area has been excavated and brought to grade with clean fill. Remaining contamination on site is considered de minimis.
Sub-Surface Soil Contact	De Minimis Exposure	Sub-Surface soil samples collected were below ingestion cleanup levels. Exposure through this pathway is considered insignificant.
Inhalation – Outdoor Air	De Minimis Exposure	Soil samples collected were below outdoor inhalation cleanup levels. Exposure through this pathway is considered insignificant.
Inhalation – Indoor Air (vapor intrusion)	De Minimis Exposure	Groundwater samples do not contain contaminants above ADEC screening levels. Additionally, the source area has been removed and is capped with 9 feet of clean fill. Exposure through this pathway is considered insignificant.
Ground-water Ingestion	De Minimis Exposure	Petroleum constituents remaining in the groundwater above cleanup levels are localized to the immediate area of the former fueling USTs and are confined to the property. Groundwater is not used as a drinking water source at this site because Municipal water is available.

Surface Water Ingestion	Pathway Incomplete	Surface water is not utilized as a drinking water source in this area
Wild Foods Ingestion	Pathway Incomplete	Contaminants of concern do not have the potential to bioaccumulate in plants or animals. This area is not used for harvesting wild foods.
Exposure to Ecological Receptors	Pathway Incomplete	There are no complete exposure pathways to ecological receptors at the 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 ground water use, or a physical barrier in place that deters contact with residual contamination.

ADEC Decision

There is contamination remaining above established cleanup levels at the ASD Facilities and Maintenance Complex**,** but ADEC has determined there is no unacceptable risk to human health or the environment, and this site will be granted a Cleanup Complete- Institutional Controls Determination subject to the following:

1. Any future change in land use may impact the exposure assumptions cited in this document. If land use and/or ownership changes, current institutional controls may not be protective and ADEC may require additional remediation and/or institutional controls. Therefore, the Owner(s) will report to ADEC every five years to document land use, or as soon as the Owner(s) becomes aware of any change in land ownership and/or use. **The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov**.

2. A *Notice of Environmental Contamination* (NEC) will be recorded by ADEC at the State Recorder's Office that identifies the nature and extent of contamination at the property, and any conditions the owners and operators are subject to in accordance with this decision document. (See Attachment C.)

3. Installation of groundwater wells at this site will require approval from ADEC.

4. Movement or use of potentially contaminated soil in a manner that results in a violation of 18 AAC 70 water quality standards is unlawful.

5. Any proposal to transport soil or groundwater off site requires ADEC approval in accordance with 18 AAC 75.325(i). 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 Attachment C).

6. Attachment A must be signed and dated by an authorized representative of ASD and returned to ADEC.

The ADEC Contaminated Sites Database will be updated to reflect the change in site status as detailed above, and will include a description of the contamination remaining at the site. Institutional controls will be removed in the future if documentation can be provided that shows cleanup levels have been met. Note: management conditions 4 and 5 will remain in effect after ICs are removed.

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.

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, 555 Cordova Street, Anchorage, AK 99501, 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, AK 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.

Please sign and return *Attachment A* to ADEC within 30 days of receipt of this letter. If you have questions about this closure decision, please feel free to contact Grant Lidren at (907) 269-8685.

Sincerely,

Grant Lidren
Environmental Specialist

Attachment A: Cleanup Complete-ICs Agreement Signature Page
Attachment B: Table
Attachment C: NEC with Site Figure

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

ASD agrees to the terms of this Cleanup Complete with Institutional Controls determination as stated in this closure decision document dated **December 30, 2014** for the *ASD Facilities and Maintenance Complex* site. Failure to comply with the terms of this agreement may result in ADEC reopening this site and requiring further remedial action in accordance with 18 AAC 78.276(f).

_____

Signature of Steve Cochran or Authorized Representative, Title
ASD

_____

Printed name of Steve Cochran or Authorized Representative, Title
ASD

Note to Responsible Person (RP):
After making a copy for your records, please return a signed copy of this form to the ADEC project manager at the address on this correspondence within 30 days of receipt of this letter.

ADEC File No.: 2100.26.293
Hazard ID: 24606
ADEC Project Manager: Grant Lidren

For Internal Use Only

***Attention ADEC Administration Staff:** Please follow the procedure below after Attachment A is signed/returned to ADEC.

1. Log-in and Date Stamp *Attachment A*
2. Scan *and* Save to the appropriate electronic folder on the network Drive
3. File the hard copy in the appropriate project/site file Correspondence Folder (blue in Anchorage).
4. Provide the Correspondence folder (with the filed *Attachment A* hard copy) to the ADEC Project Manager

Attachment B: Table

MONITORING WELL ID	SAMPLE ID	Date Sampled	Benzene (mg/L)	Toluene (mg/L)	Ethyl-benzene (mg/L)	Total Xylenes (mg/L)	GRO (mg/L)	DRO (mg/L)
Current Results, February 2014								
MW-04	ASD-FM-MW4	2/7/14	0.00366	0.00191	0.0236	0.0635	1.22	1.88
MW-14	ASD-FM-MW14	2/7/14	0.103	ND	0.133	0.228	1.03	0.672
MW-14 (duplicate)	ASD-FM-MW14D	2/7/14	0.119	ND	0.157	0.271	1.21	ND
Historical Results from October 2012 Groundwater Monitoring Report								
MW-04	ASD-FM-MW04	10/03/12	0.00347	0.00165	0.0394	0.0976	1.6	1.7
MW-14	ASD-FM-MW14	10/03/12	0.453	ND	0.260	0.3409	2.14	ND
MW-14 (duplicate)	ASD-FM-MW14D	10/03/12	0.485	ND	0.290	0.3919	2.34	ND
Historical Results from September 2006 Groundwater Monitoring Report								
MW-04	FM-MW04-01	9/19/06	0.016	0.013	0.3	1.5	13	2.9
MW-14	FM-MW14-01	9/19/06	2.5	1.4	1.1	4.8	36	0.68
Historical Results from October 2005 Groundwater Monitoring Report								
MW-04	MW-04	10/27/05	0.0664	0.095	0.703	4.77	14.9	0.326
MW-14	MW-14	10/27/05	3.62	3.13	1.4	5.42	28.0	1.76
MW-14	Duplicate MW-14	10/27/05	3.59	3.12	1.36	5.4	27.5	0.319
Historical Results from April 2005 Groundwater Monitoring Report								
MW-04	FM-MW04-01	4/25/05	0.0694	0.226	0.716	4.65	15.8	3.40
MW-14	FM-MW14-01	4/25/05	7.36	11.2	1.99	8.11	51.5	1.12
Historical Results from September 2004 Groundwater Monitoring Report								
MW-04	FM-MW04-01	09/16/04	0.219	0.725	1.00	7.95	28.3	6.42
MW-14	FM-MW14-01	09/16/04	2.42	0.916	0.698	1.483	13.5	0.359
Historical Results from March 2004 Groundwater Monitoring Report								
MW-04	FM-MW04-01	03/16/04	0.368	3.22	2.30	18.75	50.6	13.7
MW-14	FM-MW14-01	03/16/04	0.373	0.0334	0.0720	0.1271	1.31[a]	1.49
Historical Results from September 2003 Groundwater Monitoring Report								
MW-01	FM-MW01-01	09/09/03	ND	ND	ND	ND	ND	ND
MW-02	FM-MW02-01	09/09/03	ND	ND	ND	ND	ND	ND
MW-04	FM-MW04-01	09/09/03	0.27	2.8	1.1	6.9	29	11
MW-07	FM-MW07-01	09/09/03	ND	ND	ND	ND	ND	ND
MW-13	FM-MW13-01	09/09/03	ND	ND	ND	ND	ND	ND
MW-14	FM-MW14-01	09/10/03	2.4	0.42	0.33	0.61	8.7	0.88
MW-15	FM-MW15-01	09/09/03	ND	ND	ND	ND	ND	ND
MW-01	Duplicate FM-MW04-02	09/09/03	0.25	2.5	0.95	6.2	26	6.4
CURRENT ADEC GROUNDWATER CLEANUP LEVELS (mg/L)[b]			0.005	1.0	0.7	10.0	2.2	1.5

Attachment C

Notice of Environmental Contamination
(To be filed by DEC)

Grantor: Alaska Department of Environmental Conservation-Contaminated Sites Program

Grantee: MOA or Municipality of Anchorage or ASD or Anchorage School District as Owner of the subject property ("Owner")

Legal Description: Tract A-1, Huffman Business Park

Recording District: 301 - Anchorage

Return to: Grant Lidren
ADEC Contaminated Sites Program
555 Cordova Street
Anchorage, AK 99501

State Business- No Charge

NOTICE OF ENVIRONMENTAL CONTAMINATION

As required by the Alaska Department of Environmental Conservation; Grantor; pursuant to 18 AAC 75.375 Owner(s) and/or operators of the subject property, hereby provides public notice that the property located at Tract A1, Huffman Business Park, Anchorage, Alaska 99519, and more particularly described as:

> Tract A-1, Huffman Business Park, according to the official Plat thereof, filed under Plat No. 82-343, records of the Anchorage Recording District, Third Judicial District, State of Alaska.

has been subject to a discharge or release of oil or other hazardous substances, regulated under 18 AAC 75, Article 3, as amended October 9, 2008.This release is documented in the ADEC contaminated sites database at http://www.dec.state.ak.us/spar/csp/db_search.htm under Hazard ID number 2150.

Petroleum contamination remains in the subsurface soil above the default migration to groundwater cleanup levels established in 18 AAC 75.341, Method Two, Table B1 and B2, Under 40 Inch Zone. Petroleum contamination remains in groundwater above the default groundwater cleanup levels established in 18 AAC 75.345 Table C Groundwater Cleanup Levels. These institutional controls are required to control exposure to remaining contamination located at this property, and include the following:

1. Any future change in land use may impact the exposure assumptions cited in the closure decision document. If land use and/or ownership changes, current institutional controls may not be protective and ADEC may require additional remediation and/or institutional controls. Therefore, the Owner(s) will report to ADEC every five years to document land use, or as soon as the Owner(s) becomes aware of any change in land ownership and/or use. The report can be sent to the local ADEC office or electronically to DEC.ICUnit@alaska.gov

2. Installation of groundwater wells at this site will require approval from ADEC.

3. Movement or use of potentially contaminated soil or groundwater in a manner that results in a violation of 18 AAC 70 water quality standards is prohibited.

Any proposal to transport soil or groundwater off site requires ADEC approval in accordance with 18 AAC 75.325(i). 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. Attached is a site figure that shows locations of existing structures, and the approximate location and extent of known soil and groundwater contamination (see site figure).

This Notice of Environmental Contamination (NEC) remains in effect until a written determination from ADEC is recorded that states the soil and groundwater at this site has been shown to meet the most stringent soil cleanup levels in "Method Two" of 18 AAC 75.340 and

groundwater meets the cleanup levels in Table C 18 AAC 75.345 and that off-site transportation of soil and/or groundwater is not a concern.

For more information on the contaminated site in this NEC, please see ADEC Contaminated Sites Program file number 2100.26.293 for the site named ASD Facilities and Maintenance Complex.

Signature of ADEC Representative: _____ Date: _____

Printed Name: Grant Lidren

Site Figure: Soil & Groundwater Contamination