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DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

File No. 2100.26.020

October 12, 2005

Ms. Terrie Blackburn
Senior Project Manager Environmental Engineer
One Williams Center, MD 48-6
Tulsa, Oklahoma 74172

Subject: Record of Decision
Williams Express Store #5004
5159 Old Seward Highway, Anchorage, Alaska 99503
Facility ID #1500, Event ID #136

Dear Ms. Blackburn:

The Alaska Department of Environmental Conservation, Contaminated Sites Program, (ADEC) has reviewed the assessment and cleanup history for the Williams Express Store #5004 (WES #5004). The most recent submittal includes the *Petition for No Further Remedial Action Planned (NFRAP), Williams Express Site #5004,* dated April 8, 2005.

Based on the site information provided to date, ADEC has determined that there is soil and groundwater contamination remaining on site above the most stringent 18 AAC 75 cleanup levels. However, it does not pose a risk to human health or the environment and the following determination was made regarding the environmental status of this site.

Site Background

The former on-site filling station, operated by Union Oil, Toppers, and MAPCO Express, was constructed in 1980 and operated until 1992. The locations of the three underground storage tanks (USTs) used during this period, including two 10,000-gallon gasoline tanks and one 5,000-gallon diesel tank, are shown on Figure 1. The tanks were removed in June 1992, and have not been replaced. The site was subsequently leased to a church and an automobile dealership. It was eventually purchased by the dealership in 1995. The current owner is identified as D, M, & A, LLC.

Initial site characterization assessments were conducted at the subject site between 1987 and 1990. Borings and groundwater monitoring wells installed during these efforts indicated the presence of elevated hydrocarbon levels in the vicinity of the former UST array, at depths between 5 and 10 feet below ground surface. Following the observation of up to 5.2 inches of free product on separate occasions in September 1987 and October 1991, a collection gallery was installed in 1991. About 47 gallons of product were recovered from the collection gallery,

designated CGMW on Figure 1, prior to its conversion to a conventional groundwater monitoring well in December 1993.

During the 1992 tank removal effort, stained soil was noted throughout the excavation in the depth interval extending from 6 feet below the ground surface (bgs) to groundwater at 9 feet bgs. Soil samples collected from the excavation base at about 8.5 feet bgs contained elevated concentration of benzene, toluene, ethylbenzene, and xylenes (BTEX); gasoline range organic compounds (GRO); and diesel range organic compounds (DRO). (See Table 1.)

Table 1. Soil Sampling Data from 1992 Tank Decommissioning

All results are in feet and mg/kg.

Sample Number	Depth Below Surface	Constituent			
		GRO	DRO	Benzene	Total BTEX
S9	8.5	12.2	188	0.3	1.76
S11	8.5	3,220	322	86.5	1,862
S13	7.5-8	88.7	46	0.693	50.4
S14	8.5	13,700	3,890	701	10,576
S15	8.5	1,620	868	16.2	440
S16	8.5	2,570	5,620	44.3	1,272
S18	8.5	1,480	35,500	27.5	278
S19	8.5	533	7,330	3.17	105
S20	7.5-8	1,120	15,300	ND	115
S21	3-3.5	9.75	89.8	0.205	3.82
ADEC Cleanup Levels		300	250	0.02	

Potentially impacted soil removed from the excavation was returned as backfill, with the expectation that treatment would be accomplished using an in-situ remediation system. A vapor extraction and air injection system (VEAIS) was installed in October 1992. Shortly after startup, the system was shut down due to site flooding caused by a break in an Anchorage Water and Wastewater Utility water line. Following the water line repair and excavation of impacted soil and water from the surrounding subsurface areas, the system was restarted for continuous operation in December 1992. Stockpile sampling results taken from the soil removed after the water main break showed lower levels than were found in the tank excavation, but this could be due to many factors such as soil mixing, water flushing, or high moisture content in the samples. For this reason, final confirmation soil sampling should use the excavation sample points as a guide when choosing screening and sampling locations. Benzene ranged from non-detect (ND) to 0.04 mg/kg. The range for BTEX was ND to 6.11 mg/kg. Gasoline range organics in the stockpile ranged from ND to 220 mg/kg. Diesel range organics ranged from ND to 4,100 mg/kg.

The remedial strategy at this site prior to 1995 was to treat impacted soil and groundwater in the hydrocarbon source area, which was assumed to be confined within the former UST and dispenser excavation footprint. The system was switched from continuous operation to a pulse schedule in 1995, reflecting a shift in remedial emphasis from physical removal to enhanced natural attenuation, although both mechanisms are presumed to reduce hydrocarbon levels at this site. In 1996, oxygen-releasing compound (ORC) was used as an additive to Well CGW. Neither ORC nor other additives are presently used at the site.

The VEAIS system was shut down in June 2003 to evaluate potential rebound effects. Seven groundwater monitoring events have been conducted since that date and the data is presented in Table 2.

Table 2. Historical Groundwater Sampling Records

All results are in mg/L.

Monitoring Well	Constituent					
	Date	**GRO**	**DRO**	**RRO**	**Benzene**	**Total BTEX**
M4MW1	9/9/02	ND	ND	ND	ND	ND
	3/17/03	ND	ND	0.420	ND	ND
	7/7/03	ND	ND	ND	ND	ND
	9/10/03	ND	ND	0.370	ND	ND
	12/5/03	ND	ND	ND	ND	0.0129
	3/26/04	ND	ND	1.5	ND	ND
	8/5/04	ND	1.21	0.545	ND	ND
	9/24/04	ND	ND	ND	ND	ND
	3/22/05	ND	1.14	1.13	ND	ND
M4MW4	9/9/02	ND	ND	ND	ND	ND
	3/17/03	ND	ND	0.370	ND	ND
	7/7/03	ND	ND	ND	ND	ND
	9/10/03	ND	0.130	0.300	ND	ND
	12/5/03	ND	ND	ND	ND	ND
	3/26/04	ND	ND	0.660	ND	ND
	8/5/04	ND	ND	0.725	ND	ND
	9/24/04	ND	ND	ND	ND	ND
	3/22/05	NS	NS	NS	NS	NS
M4MW5	9/9/02	ND	ND	ND	ND	ND
	3/17/03	ND	ND	ND	ND	ND
	7/7/03	ND	ND	0.240	ND	ND
	9/10/03	ND	ND	0.240	ND	ND
	12/5/03	ND	ND	0.360	ND	ND
	3/26/04	NS	NS	NS	NS	NS
	8/5/04	ND	ND	0.661	ND	ND

Monitoring Well	Constituent					
	Date	**GRO**	**DRO**	**RRO**	**Benzene**	**Total BTEX**
	9/24/04	ND	ND	0.637	ND	ND
	3/22/05	NS	NS	NS	NS	NS
4T8MW	9/9/02	ND	0.400	ND	ND	ND
	3/17/03	ND	0.410	0.620	ND	ND
	7/7/03	ND	ND	ND	ND	ND
	9/10/03	ND	0.350	0.330	ND	ND
	12/5/03	ND	0.330	0.590	ND	ND
	3/26/04	ND	8.88	0.59	ND	0.00228
	8/5/04	ND	0.553	0.684	ND	ND
	9/24/04	ND	0.463	ND	ND	ND
	3/22/05	ND	ND	ND	ND	ND
CGMW	9/9/02	4.5	5.6	1.1	2.2	2.4
	3/17/03	5.9	7.5	1.5	1.7	2.35
	7/7/03	0.91	5.4	ND	0.29	0.32
	9/10/03	0.67	7.5	1.8	0.25	0.27
	12/5/03	0.35	6.8	2.2	0.14	0.15
	3/26/04	1.11	11.4	5.41	0.979	1.09
	8/5/04	3.69	9.42	3.47	1.25	1.57
	9/24/04	4.57	4.32	2.81	1.26	1.69
	3/22/05	0.81	5.31	7.61	0.362	0.419
AIS3	7/7/05	ND	2.91	NS	ND	ND
AIS4	7/7/05	ND	5.57	NS	0.00503	0.00503
ADEC Cleanup Levels		1.3	1.5	1.1	0.005	

Samples collected from Well CGMW, which is located in the vicinity of the former USTs, continue to exceed the applicable cleanup levels, but there are indications of decreasing trends. With the exception of the March 2004 monitoring well sample results from Well 4T8MW, levels of hydrocarbon constituents exceeding the applicable cleanup criteria show a decreasing trend. Data from this well continue to exhibit long-term decreasing trends and suggest that the remaining plume is contained on-site.

Groundwater samples were collected from AIS wells AIW3 and AIW4 in July 2005 to more completely define concentration gradients in the area adjacent to the presumed source area and directly downgradient with respect to groundwater flow direction. As shown on Figure 1, the samples from these two wells contain DRO concentrations similar in magnitude to the levels measured in the March 2005 sample from Well CGMW. In comparison, the two AIS well samples did not contain other detectable hydrocarbon constituents, with the exception of benzene in the Well AIW4 sample. These results support the conclusion that the impacted plume is contained on site.

Based on current site conditions and land use, no complete inhalation or ingestion exposure pathways are associated with the known residual impacted media. The potential for a complete inhalation/ingestion exposure pathway is mitigated by the absence of subsurface structures in contact with the residual impacted soil and/or groundwater and the presence of the asphalt pavement over the site surface. The project site and surrounding properties are served by the Municipal water supply, based on a 2002 drinking water well survey.

Exposure Pathways

This determination is based largely upon the absence of potential receptors on or near the subject site, the current and future land use, and the paved ground surface. The site is in a largely commercial area, and drinking water wells are not located in the site's immediate vicinity. The nearest surface water body, Campbell Creek, is located hydraulically upgradient from the site at its nearest point and there is no evidence to suggest that impacted media at the subject site has impacted the creek.

Soil and Groundwater Cleanup Levels

The chemicals of concern at this site are BTEX, DRO, RRO, and GRO.

The exposure pathways evaluated are:

1. Migration to groundwater
2. Ingestion
3. Inhalation

Since the migration to groundwater pathway is the most stringent cleanup level of the pathways considered at this site, the applicable soil cleanup levels are listed below.

The following soil cleanup levels established for this site are 18 AAC 75.341 Tables B1 and B2 levels:

Contaminant	Site Cleanup Level (mg/kg)
Gasoline Range Organics (GRO)	300
Diesel Range Organics	250
Residual Range Organics	11,000
Benzene	0.02
Toluene	5.4
Ethylbenzene	5.5
Total Xylenes	78

The following groundwater cleanup levels established for this site are the 18 AAC 74.345 Table C levels:

Contaminant	Site Cleanup Level (mg/L)
Gasoline Range Organics	1.3
Diesel Range Organics	1.5
Residual Range Organics	1.1
Benzene	0.005
Toluene	1.0
Ethylbenzene	0.7
Total Xylenes	10.0

ADEC Decision

The cleanup efforts at this site have removed the majority of the contamination associated with the former UST system. There is soil contamination above the established cleanup levels remaining on site beneath and along the perimeter of the excavation but it was not determined practicable to remove. There is also groundwater contamination at the site but recent monitoring data indicates the majority of this contamination has decreased to acceptable levels.

Based on the decreasing trend in contaminant concentrations and in the dissolved-phase plume dimensions, further remedial action will not be required at this time. The groundwater plume appears to be stable and has not migrated off site.

ADEC has determined that no further remedial action is required at the former UST location at 5159 Old Seward Highway. This determination is based upon information provided to date and is subject to the following conditions:

1. ADEC shall be notified prior to excavation and off-site transport of soil or groundwater from this site in accordance with 18 AAC 78.274(b);
2. Groundwater monitoring will be conducted on an annual basis, with sampling to be performed in April or May, as weather conditions allow, for benzene, toluene, ethylbenzene, and xylenes. Samples will be collected from monitoring wells M4MW1, CGMW, 4T8MW, AIS3, and AIS4. The report will be submitted to ADEC within thirty (30) days of the sampling event;
3. Monitoring wells M4MW4 and M4MW5 and the VEAIS aboveground components shall be permanently decommissioned in accordance with accepted practices;
4. The installation of groundwater wells at this site is prohibited without the prior approval of ADEC;
5. A deed notice (Notice of Environmental Contamination) shall be recorded in the State Recorder's Office that identifies the nature and extent of contamination at the property and any conditions that the owners and operators are subject to in accordance with this decision document. A copy of the recorded notice shall be submitted to ADEC within thirty (30) days of its recordation.

This determination is also subject to 18 AAC 78.276(f) whereby additional investigation and cleanup may be required if new information is discovered that indicates the cleanup described in this decision is not protective of human health, safety, and welfare or the environment.

The closure of this site (without conditions) will be issued when ADEC has determined site cleanup levels are achieved.

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 of the decision. 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 of the decision. If a hearing is not requested within 30 days, the right to appeal is waived.

If you have any questions or comments, please contact Lynne Bush at (907) 269-7526 or by e-mail at lynne_bush@dec.state.ak.us.

Sincerely,

Jim Frechione
Environmental Program Manager

cc: Bruce Anthony, Holiday Companies (*4567 American Boulevard West, Minneapolis, Minnesota 55437)*
Matt Hemry, Shannon & Wilson
Linda Nuechterlein, ADEC Contaminated Sites Program
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