

STATE OF ALASKA

Frank Murkowski, Governor

**DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM**

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File: 2323.26.003

April 5, 2006

Mr. Jesse Wade
Wade Oil Field Services
P.O. Box 3266
Kenai, Alaska 99611-3266

FILE COPY

Re: **Record of Decision** – No Further Remedial Action Planned
Former Dresser Atlas Site, Nikiski, Alaska
Spill No. 1986230014001, UST Facility I.D. No. 608, Event ID No. 494

Dear Mr. Wade:

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program, has reviewed the Treatment System Decommissioning and Monitoring Well Installation and Sampling report dated February 8, 2006 for the above referenced facility. This report documents the removal of the soil/groundwater treatment system installed and operated by ADEC. The report also documents the installation of two new groundwater monitoring wells, and provides the groundwater quality data for monitoring wells at the site.

Based on the information submitted to date, ADEC has determined that further cleanup action is not required at this time. Although soil and groundwater contamination remain at the site above the most stringent 18 AAC 75 cleanup levels, the nature and extent of this residual contamination no longer poses an unacceptable risk to human health or the environment. Please note that this determination is contingent upon the site-specific conditions presented in this **ADEC Decision** document.

Introduction

This letter summarizes the regulatory issues associated with this facility and the decision process used to determine the environmental status of this site.

Site name and location:

Former Dresser Atlas Facility at Mile 22.5 North Kenai Road, Nikiski, Alaska

Legal Description:

Lot 14 excepting therefrom that portion as per State ROW Permit ADL 26473, Bernice Lake Alaska Industrial Subdivision, Section 16, Township 7 North, Range 12 West, Seward Meridian

Regulatory authority:

This project was reviewed under the applicable regulatory authority in 18 AAC 75, Article 3, and 18 AAC 78, Articles 2 and 6, as amended through January 30, 2003.

Name and address of the Responsible and/or Liable Party:

Mr. Jesse Wade
P.O. Box 3266
Kenai, Alaska 99611-3266

Background

In September 1961, this property was originally leased to Galen and Lottie Gray by the State of Alaska, Department of Natural Resources, Division of Lands. The Grays owned and operated the Tanglewood Store on the property, and their business included retail fuel sales from underground fuel storage tank (UST) systems. The Tanglewood Store went out of business in the late 1960s and the administrative records indicate the land lease was assigned to Jesse Wade in March 1971. The lease was then assigned to Atlas Wireline Services. In 1973, during a national oil/petroleum shortage, Jesse Wade reportedly filled the underground fuel storage tanks (remaining from the Tanglewood Store business) with gasoline, in order to serve as an emergency supply of fuel. The gasoline was left in the tanks until 1988, when the tanks were removed from the ground.

In 1978, the Kenai Peninsula Borough (KPB) selected the property under the Municipal Entitlement Program. The KPB received the property from the State in March 1984 and property ownership was transferred to Jesse Wade in 1999. Mr. Wade currently owns the property and it is currently occupied by the BJ Services Company, U.S.A.

In 1986, the former Atlas Wireline Services (Dresser Atlas) facility complained to ADEC of poor drinking water quality. ADEC inspected the facility and sampled the drinking water well in May and July, 1986 and determined the water had high concentrations of naturally occurring minerals. However benzene contamination was detected at a concentration of 2.6 micrograms per liter (ug/L). ADEC sampled the drinking water well again in January 1988, under the Kenai Special Appropriations project and benzene was detected at 5 ug/L and p+m-Xylenes at 1 ug/L. A new (deeper) drinking water well was installed as an alternative water supply for the property.

A site assessment was conducted to investigate the source of the contamination in the Dresser Atlas well. The investigation confirmed soil and groundwater contamination was present and identified the former Tanglewood Store UST systems as the most likely source. The site information indicated the USTs leaked as early as the mid-1970's but there was no way of confirming the precise date(s) of the release(s).

An air sparge and soil vapor extraction treatment system was installed and operated from 1993 until 1996 under the Kenai Special Projects fund. The treatment system was moderately

effective in treating the contamination due to the site's hydrogeologic conditions. Following the shut down of the treatment system in 1996, no additional sampling activities occurred until 2004.

In May 2004, ADEC contracted to assess the groundwater quality conditions at the Dresser Atlas site and evaluate any possible risk to human health or the environment. The sample data detected GRO and benzene contamination, primarily in the area of the former fuel dispenser island. However, when compared to contaminant levels in the early 1990s, the GRO and benzene concentrations indicated a declining trend.

Contaminants of Concern

Contaminants of concern at the site include:

- Benzene, toluene, ethylbenzene, and xylenes (BTEX)
- Gasoline range organics (GRO)

Soil Contamination

Soil contamination exceeded the 18 AAC 75.341 'migration to groundwater' soil cleanup levels in 1988. Contaminants that were detected above the ADEC cleanup levels at that time included:

1. benzene up to 7.15 mg/kg
2. ethylbenzene up to 10.3 mg/kg

Groundwater Contamination

The area is dependent on groundwater for drinking water supplies. Previous groundwater studies indicate that the water table may be mounded between Bernice Lake (approx. ¼ mile east of the site) and the former pump island area. This mounding may form a divide between groundwater flowing toward Bernice Lake and that flowing to the north and west. Groundwater flow beneath this site, based on water level measurements and survey results has generally been toward the west. However, at the T.B.E. Machine facility (approximately 200 yards north of the former Dresser Atlas site) the groundwater table is relatively flat and generally flows toward Bernice Lake, to the southeast.

The groundwater at this site was encountered approximately 30 feet below ground surface (bgs) in the area of the former UST system. Based on groundwater monitoring data from the last two sample events (May 2004 and October 2005), GRO and benzene levels continue to exceed the groundwater cleanup levels established in 18 AAC 75.345 Table C. GRO and/or benzene contamination was detected above cleanup levels in monitor wells MW-4, MW-7, SPG-2 and SPG-4 during the last two sampling events. GRO levels ranged from 1.67 mg/L to 5.46 mg/L and benzene levels ranged from 0.02 mg/L to 0.07 mg/L.

Groundwater monitoring was conducted over a ten year period and a declining trend in the groundwater contaminant plume has been documented.

A well search was performed for potential drinking water wells located within a ¼ mile downgradient radius (west) of the site. No drinking water wells were located within this radius.

The Class C water supply well that serves this facility is completed in a deeper aquifer and the water has been tested with no contaminants detected.

Exposure Pathways Identified

The following exposure and/or migration pathways were considered in this decision document.

The exposure pathways for human health that were evaluated include: indoor and outdoor inhalation; ingestion of soil; dermal contact with soil; and ingestion of groundwater or surface water.

The site remains an active industrial use (B.J. Services Company) facility. There is residual soil and groundwater contamination remaining in the area of the former UST system. Residual contaminated soil is located at depths greater than 7 feet below ground surface. Ingestion, dermal, and outdoor inhalation exposure could occur if contaminated soil is excavated or otherwise exposed.

The groundwater ingestion pathway is potentially complete at this site; however the site is served by a Class C water supply well completed in a deeper aquifer. This well has been sampled periodically (last sampled in October 2005) over the history of this project and no contaminants of concern have ever been detected. Although the area is served by private drinking water wells, residual soil and groundwater contamination appears to be limited to the area of the former UST system and has not been detected offsite.

The contaminant migration pathways that were evaluated include: migration to groundwater; migration to surface water; and migration to indoor air.

The migration to groundwater pathway is considered complete because GRO and benzene contamination is present in groundwater.

The surface water migration pathway is incomplete based on the distance to the surface water bodies in relation to the contamination.

The indoor air pathway is not considered complete due to the separation distance from the contaminants to existing buildings and the relatively low remaining concentrations.

Cleanup Levels

The soil cleanup levels established for this site are established in 18 AAC 75.341, Tables B1 and B2 migration to groundwater pathway (Under 40 inch zone). The 'migration to groundwater' pathway is the most stringent soil cleanup level and will allow unrestricted closure if the levels are achieved.

The groundwater cleanup levels established for the site are 18 AAC 75.345 Table C levels.

Table 1: Cleanup Levels for the Former Dresser Atlas Facility

Contaminant	Soil Cleanup Level (mg/kg)	Groundwater Cleanup Level (mg/L)
Benzene	0.02	0.005
Ethylbenzene	5.5	0.7
Toluene	5.4	1.0
Xylenes (total)	78	10.0
GRO	300	1.3
DRO	250	1.5
RRO	10,000	1.1

Bolded values indicate contamination remaining on site which exceeds these levels.

ADEC Decision

Based on the information provided to date, ADEC has determined that the cleanup actions employed at the former Dresser Atlas facility in Nikiski, Alaska were reasonably effective in treating the impacted soil and groundwater resulting from the former underground storage tank system. ADEC evaluated the soil and groundwater contaminant concentrations remaining on site and determined that, with the following conditions, it no longer poses an unacceptable risk to human health or the environment.

In accordance with this determination, ADEC will not require further remedial action at the former Dresser Atlas facility subject to the following conditions:

1. In order to document the nature and extent of any contamination remaining at the subject property and to record any requirements or restrictions that apply to the property, the enclosed NOTICE OF ENVIRONMENTAL CLEANUP AND RESIDUAL SOIL AND GROUNDWATER CONTAMINATION shall be signed and recorded with a State of Alaska Land Recorder's Office.
2. The groundwater monitoring wells (MW-2, MW-4, MW-7, MW-9, MW-10, SPG-2, SPG-4, and 22.5-90-3) shall not be damaged or disturbed. In the event the wells are damaged, ADEC will be notified and determine if they should be repaired (or replaced). It is the responsibility of the owner and/or operator of the facility to repair or replace the damaged wells if ADEC determines they are required for future monitoring purposes.
3. In accordance with 18 AAC 78.274(b), contaminated soil or groundwater may not be removed, transported or disposed off-site without ADEC's prior written approval.
4. The owner and/or operator of this property shall allow reasonable access to the property to ADEC (and its contractors) to perform contamination investigation, assessment, monitoring and/or cleanup operations in response to residual soil and groundwater contamination. ADEC or its agents may periodically conduct groundwater sampling at this site. If ADEC determines that groundwater quality meets the applicable groundwater

cleanup levels and no further groundwater monitoring is required, ADEC will decommission the remaining groundwater monitoring wells.

5. No groundwater wells may be installed on this property without the review and approval of ADEC.

In accordance with 18 AAC 78.276(f)(2), ADEC may require additional assessment and/or cleanup action if future information indicates that this site poses an unacceptable risk to human health or the environment.

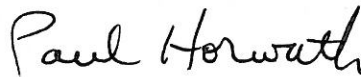
Site closure (without conditions) can be achieved when soil sampling confirms that all soil meets the 18 AAC 75.341 Tables B1 and B2 'migration to groundwater' cleanup levels and groundwater sampling confirms that groundwater meets the 18 AAC 75.345 Table C groundwater cleanup levels.

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 NFRAP decision, or any of the conditions attached to this decision, please contact Monica English at (907)262-5210 extension 229.

Sincerely,



Paul Horwath, P.E.
Environmental Engineer

Pdh.Dresser Atlas NFRAP Decision_4-6-06

Cc: Edwin Post - BJ Services, Inc., Nikiski

Enclosure: NOTICE OF ENVIRONMENTAL CLEANUP AND RESIDUAL SOIL AND GROUNDWATER CONTAMINATION

LEGEND

Approximate location of Monitoring Well 22.5-90-3. Red color indicates monitoring well (MW), or air sparging well (SPG) accessible for water sampling.

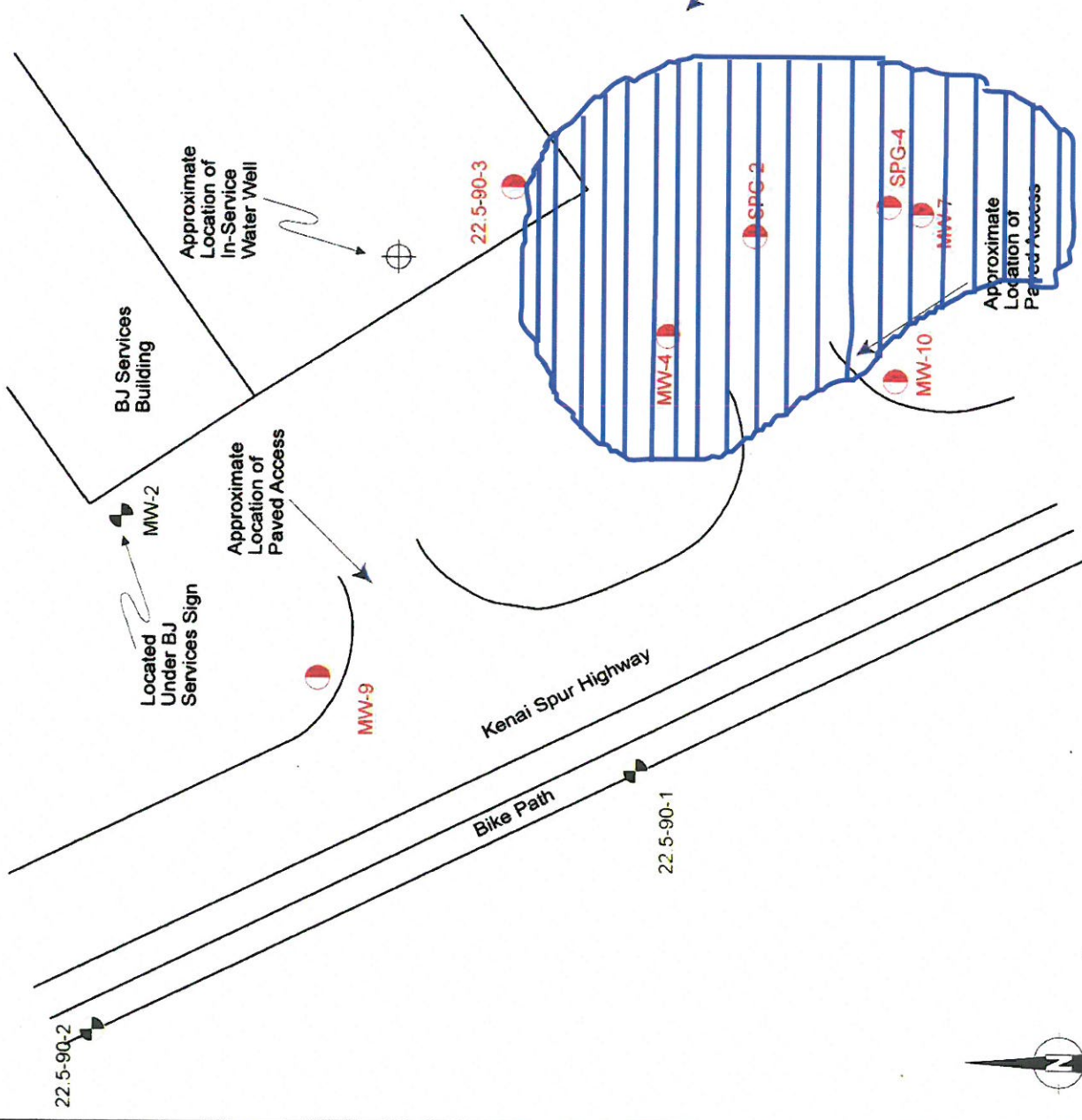
Approximate location of Monitoring Well MW-2. Green color indicates a monitoring well that was located by surveyor but could not be accessed during October or November 2005 field activities.

ADEC's Estimated Area of Residual Soil and Groundwater Contamination

BJ Services Water Supply Well



Approximate Groundwater Flow Direction Based on November 2005 Survey Data and Water Level Measurements



Former Dresser Atlas Facility Kenai, Alaska	
SITE PLAN	
February 2006	32-1-16977
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	

Fig. 1B

