

ASSOCIATED ENVIRONMENTAL GROUP, LLC

# GROUNDWATER INVESTIGATION REPORT

## Conducted on: Days Inn (AKA Big Valley Motel) 1504 N 1<sup>st</sup> Street Yakima, Washington 98901

June 18, 2004

City Bank 14807 Highway 99 Lynnwood WA 98037

#### Associated Environmental Group, LLC

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Days Inn (formerly Big Valley Motel) Additional Groundwater Monitoring Well Installation Report Project #: 22-118-01

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1. Quarterly Groundwater Analytical Summary

2. Groundwater Elevation Summary

3. Monitoring Well Installation June 20, 2002

4. Site Characterization May 20, 2002

APPENDIX A: Monitoring well and boring location map

APPENDIX B: Well logs

APPENDIX C: Laboratory results

APPENDIX D: Site photographs

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### **1.0 INTRODUCTION**

This groundwater investigation report has been prepared for Days Inn (formerly Big Valley Motel) located at 1504 N. 1<sup>st</sup> Street, Yakima, Washington. This report presents results from the additional monitoring well installation at the site and summarizes field activities, groundwater monitoring well construction details, and the groundwater sample analytical results.

The purpose of this investigation is to further identify the magnitude and extent of petroleumrelated impacts to soil and groundwater at the site, and develop appropriate cleanup goals and remedies for those areas of the site that are determined to pose an unacceptable risk to human health and the environment.

#### 1.1 Site Description

The subject site is located at 1504 N 1<sup>st</sup> Street, Yakima, Washington. The property lies within Section 13, Township 13 North and Range 18 East. The property's Yakima County tax parcel is 18131311492. The legal description is Central Addition; Lots 8, 9, 10, 11, 12, 13 and 14 of Block 1, except the east 5 feet of lot 14 for street.

Currently the property consists of a two-story 14,500 square feet motel, which was constructed in 1975. The subject site is 0.76 acres in size.

#### 1.2 Site History

On May 15, 2002, AEG conducted a Phase II Site Characterization study by collecting soil and groundwater samples from the subject area by utilizing Geoprobe hydraulic sampling equipment. All borings were extended to final depth of fifteen feel below ground surface (bgs) except boring #3 due to a cave in at twelve feet bgs. Boring #4 was extended one foot north of Boring #3 and a final depth of 15 feet bgs was reached.

Three soil samples from Boring #2, two soil samples from Boring #3 and #5, one soil sample' from Boring #4 and groundwater samples from Boring #2, #3 and #5 were submitted under chain of custody for laboratory analysis. The results are presented in *Table 4 Site Characterization May 20, 2002.* As a result of this field investigation, AEG recommended installing three groundwater monitoring wells in the vicinity of Boring #2, Boring #3, and Boring #5.

On June 17, 2002, three 2-inch diameter polyvinyl chloride casing groundwater monitoring wells were installed on site to determine the contaminant extent, characterize site hydrology, determine the physical and chemical water-bearing zone characteristics, and evaluate the potential for contaminant migration. AEG subcontractor, Cascade Drilling Co. of Woodinville, Washington conducted the installation utilizing a truck mounted hollow stem auger drill rig. The monitoring

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well design and construction methods conform to requirements and specifications outlined in Washington Administrative Code 173-160 for "resource protection wells" in the State of Washington.

The well number assignments are indicated on the site map provided in Appendix-A – Site Diagram. Monitoring wells, MW-1, MW-2 and MW-3, were installed to a total vertical depth of twenty feet below ground surface (bgs). Monitoring wells were then developed by surging and purging methods, and sampled. Analytical results are presented in Table 3: Monitoring Well Installation June 20, 2002.

Starting June 20, 2002, quarterly groundwater monitoring was completed for four quarters through May 20, 2003, *see Tables: Quarterly Groundwater Analytical Summary*. Monitoring wells #1 and #3 were consistently non-detect for hydrocarbons in the gasoline range. Monitoring Well #2 was detect for gasoline range hydrocarbons and benzene above the MTCA Method A cleanup levels for all four quarters of sampling.

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### 2.0 GROUNDWATER INVESTIGATION

On June 3, 2004, AEG and subcontractor, Cascade Drilling, installed two additional groundwater monitoring wells on the Days Inn/Big Valley Motel site. MW4 was installed on the south side of the motel, just east of the pool area and MW-5 was installed north of the motel, east of the former UST area. The well materials are comprised of 2-inch diameter polyvinyl chloride casing and were installed utilizing a truck mounted Air Rotary rig. The well locations were dictated by the groundwater flow direction, location of the former UST's onsite and to further characterize potential off site groundwater contaminates impacting the subject property.

#### 2.1 Monitoring Well Construction

The monitoring well design and construction methods conformed to requirements and specifications outlined in Washington Administrative Code 173-160 for "resource protection wells" in the State of Washington. Monitoring wells MW4 and MW5 were installed to total vertical depths of 21 feet and 22 feet bgs respectively. Fifteen feet of 1 inch 0.010 machine slotted well screen and an approximate five-foot length of blank riser pipe was installed for maximum range of the anticipated seasonal groundwater fluctuation, thus facilitating representative sampling at any time of the year.

The annulus of each casing was sand-packed within four-feet of the ground surface. A bentonite seal was placed above the sand and carried within 2-feet of the ground surface to prevent infiltration of surface contamination along the well casing. A non-shrinking cement grout was used to set and stabilize the upper section of each well.

#### 2.2 Groundwater Sampling Procedures

The completed monitoring wells were developed by surging and purging methods approximately one week after the installation on June 15, 2004 and were then sampled along with the three previously installed groundwater monitoring wells. Prior to sampling, the static groundwater levels were measured and three times the well casing volume was purged from each well. Depth to water in the wells ranged from 10.96 feet bgs to 11.86 feet bgs. The groundwater samples were collected in laboratory supplied and labeled 40-milliliter glass vials. The water samples were analyzed for gasoline, diesel and BTEX compounds.

To reasonably ensure the purity of AEG's samples, the following actions were taken (1) N-DEX gloves were used in handling all sampling jars and sampling devices; (2) The sampling equipment was scrubbed with ADALOX detergent and triple-rinsed with distilled water prior to each sample extracted; and (3) The containers were then placed in a cooler to keep the sample temperature at 34 degrees F and transported under a chain-of-custody to Libby Environmental of Olympia, Washington. The groundwater results are presented in *Tables – Summary of Quarterly Groundwater Monitoring*.

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#### 3.0 CONCLUSIONS

Based on field sampling, laboratory analysis and site observation, AEG has concluded the following:

• All five wells onsite were non-detect for gasoline range hydrocarbons and BTEX compounds.

AEG recommends continued quarterly sampling to monitor the migration/natural attenuation in pursuit of a No Further Action status (NFA) from the Department of Ecology.

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Days Inn (formerly Big Valley Motel) Additional Groundwater Monitoring Well Installation Report Project #: 22-118-01

#### 4.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement. It has been prepared using generally accepted professional practices related to the nature of the work accomplished. This report was prepared for the exclusive use of City Bank for the specific application to the project purpose.

Recommendations, opinions, site history and proposed actions contained in this report apply to conditions and information available at the time this report was created. Since conditions and regulations beyond our control can change at any time after completion of this report, or our proposed work, we are not responsible for any impacts of any changes in conditions, standards, practices and/or regulations subsequent to our performance of services. We cannot warrant or validate the accuracy of information supplied by other persons, in whole or part.



Monitoring Well #4 installation

Well installation



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## LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

### **BIG VALLEY DAYS INN PROJECT**

Yakima, Washington

AEG, Inc.

# Analyses of Diesel & Oil (NWTPH-Dx/Dx Extended) in Water

7 '

Sample	Date	Surrogate	Diesel	Mineral Oil	Oil
Number	Analyzed	Recovery (%)	(ug/l)	(ug/l)	(ug/l)
Method Blank	6/20/04	83	nd	nd	nd
MW1	6/20/04	121	nd	nd	nd
MW2	6/20/04	<b>90</b>	nd	nd	nd
MW3	6/20/04	82	nd	nd	nd
MW4	6/20/04	77	nd	nd	🗸 nd
MW5	6/20/04	104	nd	/ nd	nd
MW5 Dup	6/20/04	73 📐	nd	nd	• nd
Practical Ouant	itation Limit		200	400	400

"nd" Indicates not detected at the listed detection limits. "int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (2-F Biphenyl): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

### LIBBY ENVIRONMENTAL CHEMISTRY LABORATORY

BIG VALLEY DAYS INN PROJECT Yakima, Washington AEG, Inc.

Analyses of Gasoline (	NWTPH-Gx	) & BTEX (E	EPA Method 8021B	) in Water
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Sample	Date	Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Surrogate
Number	Analyzed	(ug/l)	(ug/l)	(ug/I)	(ug/l)	(ug/l)_	Recovery (%)
Method Blank	6/20/04	nd	nd	nd	nd	nd	91
LCS	6/20/04	103%	107%				88
MW1	6/20/04	nd	nd	nd	nd	nd	103
MW2	6/20/04	nd	nd	nd	nd	nd	75
MW3	6/20/04	nd	nd	nd	nd	nd	120
MW4	6/20/04	nd	nd	nd	nd	nd	105
MW5	6/20/04	nd	nd	nd	nd	nd	105
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"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Trifluorotoluene): 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

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