

OFFSITE GROUNDWATER PLUME DELINEATION

Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

MR. STEVE SHAUB

ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue Northeast, Suite 300
Bellevue, Washington 98004
(425) 455-9025 Office
(888) 453-5394 Toll Free
(425) 455-2316 Fax

February 11, 2005

JN-5102-5

Mr. Steve Shaub
Shaub-Ellison Company, Inc.
1117 Broadway Plaza, Suite 500
Tacoma, Washington 98402

Subject: Offsite Groundwater Plume Delineation

Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

Gentlemen:

Environmental Associates, Inc. (EAI), has completed sampling and laboratory testing of groundwater obtained from selected localities on the subject and northwest adjacent property located in Tacoma, Washington. This report, prepared in accordance with the terms of our proposal dated December 27, 2004, summarizes our approach to the project along with results and conclusions. This letter is governed by the same limitations included in the attached report of which it is a part.

The contents of this report are confidential and are intended solely for your use and those of your representatives. Two (2) original copies of this report are being distributed to you. Acknowledging the terms of the access agreement you negotiated with the adjacent property owner, one copy each is also being distributed to Robert Shea (adjacent property owner) and his consultant (Spencer Environmental). No other distribution or discussion of this report will take place without your prior approval. Additional copies are available for a small fee.

Relying solely upon the information developed in the course of our study, the current additional groundwater sampling and testing appears to have been successful in further delineating the off-site extent of the chlorinated solvent impacted groundwater. Interpretation of the current distribution of contaminants taken in the context of the deduced groundwater flow direction suggests that the groundwater contaminant plume may extend under the warehouse building on the northwest adjacent Shea property as implied on Plate 4.

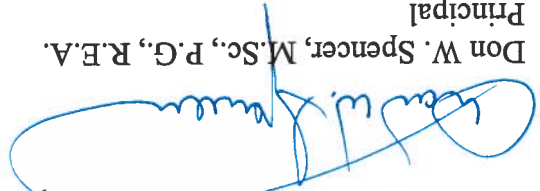


The contaminant distribution and groundwater flow direction suggests that the source area for the suspect solvent release may not have been localized to the southwest corner of the former service bay, but rather may have included a broader area to the southwest on the subject property.

Four (4) additional permanent groundwater monitoring wells were installed on the northwest adjacent Shea property.

Limited additional characterization may be useful in evaluation of the full limits of the impacted groundwater, particularly under the Shea property building, and to provide a basis for selecting an appropriate remediation / management strategy for the release encountered. Additional discussions regarding these findings along with recommendations are offered in the Summary Discussion section of this report.

We appreciate the opportunity to be of service on this assignment. If you have any questions or if we may be of additional service, please do not hesitate to contact us.

Respectfully submitted,
ENVIRONMENTAL ASSOCIATES, INC.

Don W. Spencer, M.Sc., P.G., R.E.A.
Principal



EPA-Certified Asbestos Inspector/Management Planner
I.D. # AM 48151

Registered Site Assessor/Licensed UST Supervisor
State Certification #0878545-U7

License: 604 (Washington)
License: 11464 (Oregon)
License: 876 (California)
License: 5195 (Illinois)
License: 0327 (Mississippi)

OFFSITE GROUNDWATER PLUME DELINEATION

Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

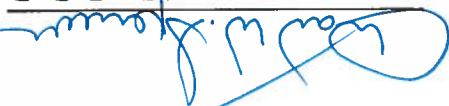
Prepared for:

Mr. Steve Shaub
Shaub-Ellison Company, Inc.
1117 Broadway Plaza, Suite 500
Tacoma, Washington 98402

Questions regarding this investigation, the conclusions reached and the recommendations given should be addressed to one of the following undersigned.


Robert B. Roe, M. Sc., P.G.
Hydrogeologist
License: 1125
(Washington)

WDOE Registered Site Assessor
Certification #1060219-U7


Don W. Spencer, M.Sc., P.G., R.E.A.
Principal



EPA-Certified Asbestos Inspector/Management Planner
I.D. # AM 48151

Registered Site Assessor/Licensed UST Supervisor
State Certification #0878545-U7

License: 604
License: 11464
License: 876
License: 5195
License: 0327
(Washington)
(Oregon)
(California)
(Illinois)
(Mississippi)

Reference Job Number: JN-5102-5

February 11, 2005

ENVIRONMENTAL ASSOCIATES, INC.

TABLE OF CONTENTS

INTRODUCTION/SCOPE OF WORK	5
Site Description	5
Background	5
Methodology/Scope of Work	6
Geologic Setting	6
SUBSURFACE EXPLORATION	7
Strataprobe Borings	7
Mobile Laboratory Analysis / Results	8
Monitoring Well Installation & Water Table Survey	9
Monitoring Well Development & Confirmation Sampling	9
SUMMARY DISCUSSION	10
LIMITATIONS	14
REFERENCES	15
TABLES	
Table 1 - Water Table Survey	
Table 2 - Strataprobe - Groundwater Sampling Results	
Table 3 - Monitoring Well - Groundwater Sampling Results	
PLATES	
Plate 1 - Vicinity / Topographic Map	
Plate 2 - Site Overview Plan	
Plate 3 - Water Table Survey	
Plate 4 - VOC Distribution - Groundwater	
APPENDIX	
Appendix A - Boring Logs	
Appendix B - Laboratory Reports	

INTRODUCTION/SCOPE OF WORK

SITE DESCRIPTION

The study area for this project includes two (2) adjoining parcels owned by separate entities. Additional information regarding these parcels is provided in the following table:

Parcel Name	Parcel Owner	Parcel Size	Improvements
Main Parcel Pierce Co. Tax Id# 6965000502 Site Address: 1132 Thorne Road	Shaub Scott TTEE, Etal Represented by Steve Shaub	0.79 Ares	1973-vintage, 7,750 square foot, masonry, commercial building, currently occupied by Revchem Plastics.
Adjacent Parcel Pierce Co. Tax Id# 2275200661 Site Address: 1940 E 11 th Street	Sound Mattress & Felt Co. Represented by Robert Shea	5.77 Ares	1960-vintage, 112,280 square foot, masonry, warehouse building, currently occupied by Brown & Haley

The approximate location of the study area is shown on the Vicinity/Topographic Map, Plate 1, appended herewith. Plate 2, also provides an aerial overview of the subject and surrounding parcels.

BACKGROUND

On June 10, 2004, EAI presented a Preliminary Subsurface Exploration report to Mr. Doug Dennis with Revchem Plastics, a prospective purchaser of the main subject parcel. Predicated upon the results of sampling and testing conducted by EAI in March of 2004, the findings of that effort included the discovery of tetrachloroethene (PCE) impacted groundwater in the vicinity of the southwest corner of the warehouse. EAI recommended additional on-site and offsite exploration to further delineate the extent of the impacted groundwater and the installation of permanent groundwater monitoring wells. EAI further recommended completing the additional on-site explorations and monitoring well installations prior to proceeding with off-site explorations. This proposed plan of action was further discussed and mutually agreed upon at a site meeting on June 11, 2004 between the client, the prospective purchaser, and EAI. It was further agreed that from that point forward the property owner would take responsibility for conducting site evaluations.

In July 2004, additional Strataprobe borings supported by a mobile laboratory further delineated the on-site extent of the groundwater plume. Additionally, four (4) permanent groundwater monitoring wells were installed on the main subject parcel. The results of this effort continued to suggest that the solvent plume likely extended off-site in a northerly direction onto the northwest adjacent Shea property.

Additional discussions regarding the history of the subject property and previous environmental work are provided in the reports listed in the Reference section of this report.

METHODOLOGY/SCOPE OF WORK

Your expressed interests to further delineate the off-site extent of chlorinated solvent-impacted groundwater, formed the basis for the current scope of work:

- Complete additional soil borings on the northwest adjacent Shea property in an effort to further deduce the extent of chlorinated solvent impacted groundwater.
- Perform "real-time" laboratory analysis on select groundwater samples using an onsite mobile laboratory to efficiently guide the exploration process;
- Use the results the above referenced findings along with previous site explorations to select locations and install up to four (4) permanent groundwater monitoring wells on the subject property.
- Deduce the local groundwater flow direction by surveying the elevations of both the existing and new monitoring well casings and depths to groundwater.
- Prepare a summary report documenting our methodology, findings, conclusions, and recommendations.

GEOLOGIC SETTING

Physiographically, the site is situated on a delta (known locally as the Tacoma "tide flats") formed by the Puyallup River, Wapato Creek, and Hylebos Creek where they discharge into Commencement Bay. Sediments were deposited to the delta and constantly modified by the rivers and by tidal action. Eventually, shallow marshlands occupied the broad tidal flats.

Published geologic maps for the site vicinity (Walters and Kimmel, 1968) suggest that much of the material underlying the subject site has been modified extensively by excavation, filling or construction. These man-made processes have greatly modified or obscured the original geology. Materials that may underlie the site at some depth may include imported fill materials and recent alluvium of silt, sand, and gravel. Marine deposits of very fine grained sediments, which typically underlie the recent alluvium, may also conceivably be present at depth beneath the subject site.

Acknowledging that the primary focus of this exploration was the delineation of the chlorinated solvent groundwater plume, no soil samples were collected for laboratory analysis. Additionally, in an effort to maximize the number of groundwater sample locations for purposes of plume delineation, soil sample collection and retrieval was not performed for borings B37 through B40.

At each exploration location, the boring was completed by advancing the 2-inch diameter sampling core in 4-foot intervals beginning at the ground surface. Each 4-foot core was retrieved and the inner acrylic liner extracted. The soil sample liner was then opened to allow for a visual examination and logging of the soil core. Discrete soil samples were collected from each core and field screened for the presence of volatile organic compounds (VOCs) by sealing a small volume of soil in a zip-lock bag. A photo-ionization detector was then used to measure the concentration of VOCs (if any) in the "head space" of the bag. The field screening results and soil descriptions (where collected) are presented on the boring logs included in Appendix-A.

On January 24, 2005, Strataprobe borings B33 through B40 were made at the approximate locations depicted on Plate 4, using a truck mounted Strataprobe hydraulic ram soil boring rig. Borings B37 through B40 were completed following the detection of chlorinated solvents at elevated concentrations at locations B33 through B36.

Boring and Soil Sampling

STRATAPROBE BORINGS

SUBSURFACE EXPLORATION

With respect to surface water resources, as previously discussed, the site is located on the delta of the Puyallup River, Wapato Creek, and Hylebos Creek. The Puyallup River is located approximately one-half mile west of the site, and the Blair Waterway, a channelized portion of the Wapato Creek, is located approximately one-half mile to the east.

The site is situated on a generally level area, approximately 15 feet above sea level. Based upon inference from topography and local drainage patterns, it appears that shallow seated groundwater (if present) may flow toward the west-northwest. This area of the Tacoma "tide flats" can be subject to tidal influences, hence the direction of the groundwater flow may vary depending on the tidal cycle. Depth to groundwater during this current study averaged approximately 6 to 7 feet below the ground surface.

Strataprobe Groundwater Sampling

Groundwater "grab samples" were collected at boring locations B33 through B40 by extending a temporary stainless steel well screen in each boring spanning a depth from approximately 7 to 11 feet below the ground surface. A peristaltic pump was then used to extract a groundwater sample. Each recovered groundwater sample was then submitted to the mobile laboratory chemist for analysis.

Subsurface Conditions

Subsurface soils consisted of a sand-gravel fill to an average depth of approximately 2 feet below the ground surface. Below the fill soil a black, fine to medium grain-size sand, with occasional lenses of silt was encountered to a depth of approximately 15 feet at which depth a lower permeability silt and clayey-silt was encountered to the 16-foot maximum depth explored.

From previous explorations by EAI and others throughout the "Tacoma Tide Flats," this lower silt / clayey-silt, likely represents the base of the upper unconfined water-bearing zone.

In general the depth to groundwater averaged approximately 6 to 7 feet below the ground surface.

MOBILE LABORATORY ANALYSIS / RESULTS

The groundwater "grab samples" from Strataprobe borings B33 through B40 were analyzed by the mobile laboratory for chlorinated volatile organic compounds (VOCs) by EPA Method 8021B.

As presented on Table 2, chlorinated VOCs were detected in all four (4) initial boring locations (B33 through B36), which as stated earlier lead to the completion of the additional borings (B37 through B40). The chlorinated solvent tetrachloroethene (PCE) was present in the groundwater samples from B33 and B36 at concentrations of 5.9 and 19 parts per billion (ppb). For reference, the Washington State Department of Ecology's Method-A target compliance level for PCE is 5 ppb. As summarized in Table 2, with the exception of B37, the remaining Strataprobe groundwater samples also contained detectable concentrations of PCE and some of the related breakdown products (trichloroethene, dichloroethene, and vinyl chloride). The groundwater sample from B39 contained cis-1,2 dichloroethene (cis-DCE) at a concentration of 170 ppb, which is above the WDOE action level of 80 ppb.

While the mobile laboratory was at the site, monitoring wells MW-1 through MW-4, which were installed on the main subject parcel in July 2004 were also sampled and analyzed by the mobile lab. The results are presented in the Monitoring Well Development and Confirmation Sampling section of this report. A copy of the laboratory report is included in Appendix B.

MONITORING WELL INSTALLATION & WATER TABLE SURVEY

Using the preliminary mobile laboratory data from boring's B33 through B40, three (3) of these locations (B36, B37, and B39) were selected for the installation of permanent monitoring wells (MW-8, MW-5, and MW-6). A fourth monitoring well MW-7 was also installed at the approximate location depicted on Plates 3 and 4.

Locations B7/MW-5 and MW-7 were selected in an effort to establish the southwesternly and northeastern extent of the groundwater plume, while location's B36/MW-8 and B39/MW-6 were selected to be within the contaminant plume. All four (4) monitoring wells were drilled using the Strataprobe rig equipped with a 3-inch interior diameter casing. Once the casing was advanced to the desired depth (approximately 16 feet to fully penetrate the unconfined aquifer) a 2-inch diameter PVC pipe, screened between 5.5 and 15.5 feet below the ground surface was installed through the center of the casing. The casing was then removed from the ground and the annulus of each well was sand packed approximately two feet above the well screen; a bentonite seal was then placed above the sand and carried to within two feet of the ground surface to prevent infiltration of surface contamination along the well casing. A concrete plug and traffic-grade well monument was installed to protect and control access to each wellhead. Monitoring well installation and design methods conformed to the requirements and specifications outlined in revisions of WAC 173-160 for "resource protection wells" in the State of Washington.

On January 27, 2005, a builder's level and a depth-to-water meter were employed to survey the elevation of the shallow water table. The relative elevations of the tops of each monitoring well casing and corresponding depths to groundwater are provided in Table 1. This data was used to deduce the groundwater table elevations depicted as blue lines on Plate 3, Water Table Survey. The water table survey suggests that shallow groundwater flows toward the north-northwest under a 0.4% gradient, which is consistent with the previous survey of monitoring wells MW-1 through MW-4 in July 2004.

MONITORING WELL DEVELOPMENT & CONFIRMATION SAMPLING

On January 27, 2005, following completion of the water table survey, monitoring wells MW-5 through MW-8 were developed using a disposal plastic bailer (one disposable bailer per monitoring well). The developing process consisted of using the bailer to "surge" each well casing in an effort to establish good hydraulic coupling with the aquifer formation. Following a brief period of surging, approximately 10 gallons of development water (approximately 4.6 well volumes) was removed from each monitoring well and stored in a 55-gallon drum.

Each monitoring well was then allowed to recover, prior to collecting a groundwater sample using a disposable bailer. Upon retrieval, each groundwater sample was transferred to laboratory-prepared glassware and stored in cooler maintained at or below 4 degrees C for transport to the project laboratory.

Monitoring Well Laboratory Analysis

The four (4) groundwater samples (MW-5 through MW-8) were analyzed by the project laboratory for chlorinated volatile organic compounds (VOCs) by EPA method 8260B. Table 3 summarizes the laboratory results along with the mobile laboratory results for monitoring wells MW-1 through MW-4.

Four (4) of the eight (8) monitoring wells (MW-1, MW-2, MW-6, and MW-8) contained PCE at concentrations above the WDOE's 5 ppb target compliance level. Two (2) of these monitoring wells are on the main subject parcel (MW-1 and MW-2) and two (2) are on the adjacent Shea property (MW-6 and MW-8). Monitoring well MW-6 also contained concentrations of trichloroethylene (TCE) and vinyl chloride at concentrations above their individual target compliance levels. The presence of TCE, DCE, and vinyl chloride are likely the byproducts of degradation of PCE.

With the exception of MW-3, all the remaining monitoring wells contained trace detections of PCE and other associated degradation products at concentrations below WDOE action levels.

SUMMARY DISCUSSION

Relying upon the most recent groundwater sampling and testing data, it appears that a "plume" of chlorinated solvent impacted groundwater significantly extends onto the northwest adjacent property (Shea property).

Plate 4 provides a preliminary interpretation of distribution of PCE impacted groundwater. The area denoted with red shading represents the approximate extent of PCE in the groundwater at concentrations above the WDOE's 5 ppb Method-A target compliance level. The darker red shading outlines the portion of the plume with the higher PCE concentrations.

Initial explorations on the main subject parcel in the spring and summer of 2004, suggested a smaller area of impact on the main parcel constrained in the proximity of the southwest corner of the former service bay (vicinity of MW-1 and previous borings B27 and B28). Although it was previously presumed that some off-site migration might have occurred onto the adjacent Shea property, the true extent was unknown. The detection of PCE in monitoring well MW-2 during this current sampling event suggests that the extent of the plume was greater than originally speculated, thus validating this sampling and testing.

Prior to the installation of MW-2 in July 2004, a groundwater "grab sample" analyzed by the mobile laboratory did not detect PCE in the groundwater at that location. The apparent discrepancy between that initial sample in July 2004 and the current findings may be due to several factors including

differences in laboratory methodology (mobile lab method EPA 8021B versus method 8260B), differences in sample collection (Strataprobe partially penetrating well screen [7 to 11 feet] versus fulling penetrating 2-inch monitoring well), seasonal changes in groundwater levels, etc. A similar difference in contaminant concentrations was noted between the mobile laboratory analysis of Strataprobe groundwater sample B39 (Table 2) and the followup confirmation sample from MW-6 (Table 3), during this current phase of study. While the Strataprobe used in combination with a mobile laboratory is clearly useful in attempting to delineate groundwater plumes, the WDOE considers the analysis of groundwater samples recovered from permanent monitoring wells to be more representative of actual groundwater environmental conditions. This current study represents the first time the original four (4) monitoring wells have been sampled.

Additionally, the distribution of the contaminants, as depicted on Plate 4, along with the deduced groundwater flow direction to the north, suggests that the original "source area" for the solvent release may be further southwest on the main subject parcel, and may not have been solely related to a part-washer that existed in the southwest corner of the former service bay area. To date, no significant soil sampling/testing has been performed in that part of the property (south and southwest, and east of MW-1 and MW-2), therefore the presence or absence of a "source" in that area has not yet been thoroughly evaluated.

The full down-gradient limits of the solvent plume likely extend under the warehouse building on the northwest adjacent Shea property. The transverse lateral extent of the solvent plume (above Method-A target compliance levels) appears to be reasonably defined by monitoring wells MW-4, MW-5 and MW-7.

Given the size of the PCB plume along with density of chlorinated solvents (greater than water) there exists the possibility that the WDOE could require limited evaluation of deeper groundwater bearing zones to verify that the clayey-silt encountered at 16 feet below the ground surface is confining the vertical migration of the solvent-impacted groundwater. From EAI's experience on other nearby sites in the Tacoma tide flats industrial district, the next water bearing zone may occur below approximately 20 to 25 feet.

Although it is somewhat premature to settle upon a specific remediation / management approach that could eventually be selected, the following preliminary discussion is offered as a point of departure for future discussions. In broad conceptual terms, three (3) avenues may exist for this site, each with specific positive and negative factors. For convenience, these avenues can simply be referred to as the "minimalist" approach, the "intermediary" approach, and the "maximum" effort approach. Each of these approaches along with some perceived positive and negative factors for each, are outlined in the following table format:

Scenario	Potential Positive Factors	Potential Negative Factors
Minimalist Approach Perform no additional work or at a minimum conduct periodic sampling and monitoring of the existing monitoring wells.	- Minimal expenditure of funds compared with other approaches - Minimal disruption of site use and tenants.	- If a source area exists and is continuing to leach solvents into the groundwater...the plume may continue to grow / migrate. - Not likely to receive NFA or regulatory "closure" within the foreseeable future. - Both parcels might be devalued due to perceived impairment by future buyers - May also be harder to secure financing without resolution. -Adjacent property owner may seek some form of indemnification or other legal protections / compensations.
Intermediate Approach Define the full extent of the plume, establish "conditional points of compliance" with the WDOE, and possibly use alternative Method-B or C cleanup levels. In short develop a "management" solution instead of performing active soil and/or groundwater remediation.	- May lead to the WDOE granting a "conditional" NFA. -With WDOE involvement, future financing and property sales may be easier than with the "Minimalist" approach. - May be a more agreeable approach for both property owners.	-More expensive than Minimal approach. May require additional site exploration and possibly some limited cleanup. -Conditional NFA may require filing of a restrictive covenant. -Some form of periodic long-term groundwater monitoring may have to continue. -May still experience difficulties with some lenders and buyers. -Adjacent property owner still likely to seek some form of indemnification or other legal protections / compensations.

Scenario	Potential Positive Factors	Potential Negative Factors
Maximum Effort Approach Define extent of the impact, actively remove accessible impacted soil in source area (if present), actively remediate groundwater to extent practicable.	- Best chance of receiving an unconditional NFA from the WDOE if all cleanup objectives can be met. - If cleanup is successful, property sales and financing options may be substantially greater. - If successful, both property owners can "go their separate ways."	- Most expensive option requiring additional exploration and active remediation. May require some disruption of tenants and temporarily restrict access to portions of the two parcels. - Even with the best efforts, not all of the cleanup objectives may be met. The WDOE could still require a restrictive covenant and/or periodic monitoring if areas of impacted soil and/or groundwater remain.

Prior to arriving at a specific remediation or management approach to address the chlorinated solvent plume, further exploration in the following areas may be beneficial, especially if both parties favor either the intermediary or the maximum effort scenario outlined above:

- Collect and analyzed multiple soil samples from the expanded suspected source area on the main subject parcel in an attempt to evaluate whether or not there is a "source area" creating an ongoing impact to the shallow groundwater.
- Complete additional soil borings for the purpose of evaluating the down-gradient extent of the contaminant plume on the adjacent Shea property. This would include completing borings inside the warehouse space, provided that access is granted by the adjacent property owner.

- The eventual installation of additional permanent groundwater monitoring wells may also be necessary to satisfy the WDOE that the extent of the impact has been established and/or may be necessary to establish alternative "conditional points of compliance." In the interim, and as a means of complying with the provisions of the Model Toxics Control Act (MTCOA; WAC 173-340), EAI recommends initiation of a groundwater monitoring program to sample the existing monitoring wells on a quarterly basis (every 3 months). The monitoring program should continue as long as contaminants remain and/or until WDOE is satisfied with the environmental conditions associated with the encountered release and/or agrees that the frequency of sampling could be reduced.

Decision making authority with regard to pursuing additional site explorations and/or remedial actions / management options as outline above, or consideration of other approaches, clearly lies with the client and the adjacent property owner, depending upon their individual risk tolerances and property management objectives.

Regulatory Reporting Requirements

To achieve lawful compliance with Chapter 173-340-300, WAC, EAI recommends that a copy of this report (once finalized after review by both property owners, and/or their representatives) along with any future reports regarding the environmental conditions thus far encountered be forwarded to the Department of Ecology by the owner within 90 days.

LIMITATIONS

This report has been prepared for the exclusive use of Mr. Steve Shaub and Robert T. Shea (Sound mattress & Felt, Inc.), along with their several representatives for specific application to this site. Our work for this project was conducted in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area, and in accordance with the terms and conditions set forth in our proposal dated December 27, 2004. The opinions expressed in this report are based upon interpretations, observations and testing made at separated sampling locations and conditions may vary between those locations or at other locations or depths. EAI makes no warranty with respect to future actions of regulatory agencies with respect to this property. No other warranty, expressed or implied, is made. If new information is developed in future site work that may include excavations, borings, studies, etc., Environmental Associates, Inc., must be retained to reevaluate the conclusions of this report and to provide amendments as required.

REFERENCES

- Environmental Associates, Inc., May 2, 2000, Phase-I Environmental Audit, Commercial Building, 1132 Thorne Road, Tacoma, Washington.
- Environmental Associates, Inc., June 10, 2004, Preliminary Subsurface Exploration, Revchem Plastics, Inc., 1132 Throne Road, Tacoma, Washington, 20 pages, attachments.
- Environmental Associates, Inc., July 23, 2004, Groundwater Plume Delineation, Revchem Plastics Facility, 1132 Thorne Road, Tacoma, Washington, 12 pages, attachments.
- Walters, K.L. and Kimmel, G.E., 1968, Groundwater Occurrence and Stratigraphy of Unconsolidated Deposits - Central Pierce County, Washington, USGS Water Supply Bulletin No. 22, 13 pps., 3 plates, 19 figures, 9 tables.

TABLE 1 Water Table Survey (feet)				
Monitoring Well Number	TOC Elevation	Depth to Water Below TOC	Net Change	Elevation of Water Table
MW-1 Jul-04 Jan-05	15.00 15.00	7.76 7.43	--- 0.33	7.24 7.57
MW-2 Jul-04 Jan-05	13.87 13.88	6.48 6.11	--- 0.37	7.39 7.77
MW-3 Jul-04 Jan-05	14.93 14.93	7.46 7.11	--- 0.35	7.47 7.82
MW-4 Jul-04 Jan-05	15.11 15.10	7.99 7.68	--- 0.31	7.12 7.42
MW-5 Jan-05	13.33	6.06	---	7.27
MW-6 Jan-05	13.51	6.18	---	7.33
MW-7 Jan-05	13.64	5.98	---	7.66
MW-8 Jan-05	13.68	6.18	---	7.50
Notes:				
(1) TOC, Top of well casing elevation.				
(2) Elevations based upon assigning the ground surface in the vicinity of MW-1 an approximate elevation of 15 feet above sea-level.				

TABLE 2 - Strataprobe - Groundwater Sampling Results
All results and limits in parts per billion (ppb)

Monitoring Well	Sample Date	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Existing Cleanup Level ⁴			
							Reporting Limit ³	5 (A)	5 (A)	80 (B)
B-33	Jan-05 ⁽⁵⁾	5.9	<1	4	1.3	<5		0.2	0.2	0.2 (A)
B-34	Jan-05 ⁽⁵⁾	2.2	<1	<1	<1	<5		0.2	0.2	0.2 (B)
B-35	Jan-05 ⁽⁵⁾	4.6	<1	11	<1	<5		0.2	0.2	0.2 (B)
B-36	Jan-05 ⁽⁵⁾	19	2.3	17	2.6	<5		0.2	0.2	0.2 (B)
B-37	Jan-05 ⁽⁵⁾	<1	<1	<1	<1	<5		0.2	0.2	0.2 (B)
B-38	Jan-05 ⁽⁵⁾	1.1	<1	52	6.2	<5		0.2	0.2	0.2 (B)
B-39	Jan-05 ⁽⁵⁾	4.8	1.4	170	14	<5		0.2	0.2	0.2 (B)
B-40	Jan-05 ⁽⁵⁾	2.4	<1	43	2.9	<5		0.2	0.2	0.2 (B)

Notes:

1 - "ND" denotes analyte not detected at or above listed Reporting Limit.

2 - "NA" denotes sample not analyzed for specific analyte.

3 - "Reporting Limit" represents the laboratory lower quantitation limit.

4 - Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCOA) 173-340-WAC, amended 2/12/01.

5 - Groundwater samples were analyzed by a mobile laboratory using EPA method 8021-B.

Bold and Italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.

All results and limits in parts per billion (ppb)

Monitoring Well		Sample Date	MW-1	MW-2	MW-3	MW-4	MW-5 (B37)	MW-6 (B39)	MW-7	MW-8 (B36)	Reporting Limit ³	Existing Cleanup Level ⁴
Vinyl Chloride		Jan-05 ⁽⁵⁾	6.2								0.2	5 (A)
	Tetrachloroethene (PCE)			9.9	<1	1.6	1.9	53	3.3	21	0.2	5 (A)
	Trichloroethene (TCE)			3.5	<1	<1	0.57	12	0.93	3.9	0.2	5 (A)
	(cis) 1,2 Dichloroethene			3.2	<1	<1	0.29	75	3.8	15	0.2	80 (B)
	(trans) 1,2 Dichloroethene			<1	<1	<1	<0.20	6.9	0.95	1.8	0.2	160 (B)
			<5	<5	<1	<5	<0.20	0.63	<0.20	<0.20	0.2	0.2 (A)



ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number: JN 5102-5

Date: February 2005

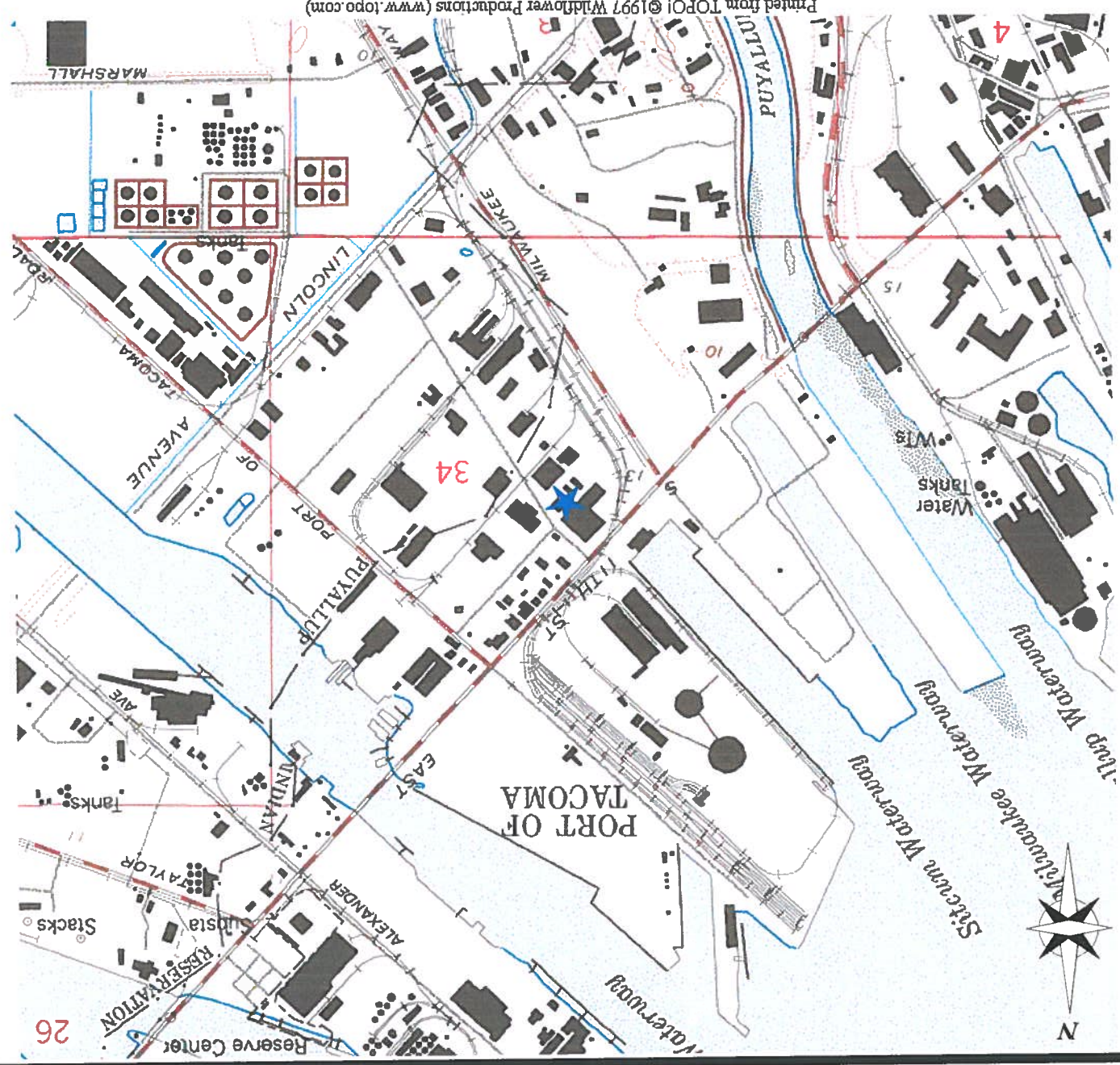
Plate: 1

Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

VICINITY / TOPOGRAPHIC MAP

★ Subject Property

Printed from TOPOI ©1997 Wildflower Productions (www.topo.com)





ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number: JN-5102-5

Date: February 2005

Scale:

Plate: 2

Site Overview Plan Former Automotive Tire Service Facility 1132 Thorne Road Tacoma, Washington

Area of chlorinated solvent impacted groundwater delineated to date.

Approximate boundary of the two subject parcels.





ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number: JN-5102-5

Date: February 2005

Scale: 1"=60'

Plate: 3

Water Table Survey

Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

Water Table Contour Lines. Water table elevations are in feet and assume an arbitrary ground surface elevation of approximately 15 feet in the vicinity of MW-1. Groundwater flow appears to be northerly.



Monitoring wells MW-1 through MW-4 installed by EAI in July 2004. Monitoring Wells MW-5 through MW-8 installed by EAI in January 2005.





ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number: JN-5102-5

Date: February 2005

Scale: 1"=60'

Plate: 4

VOC Distribution - Groundwater

Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

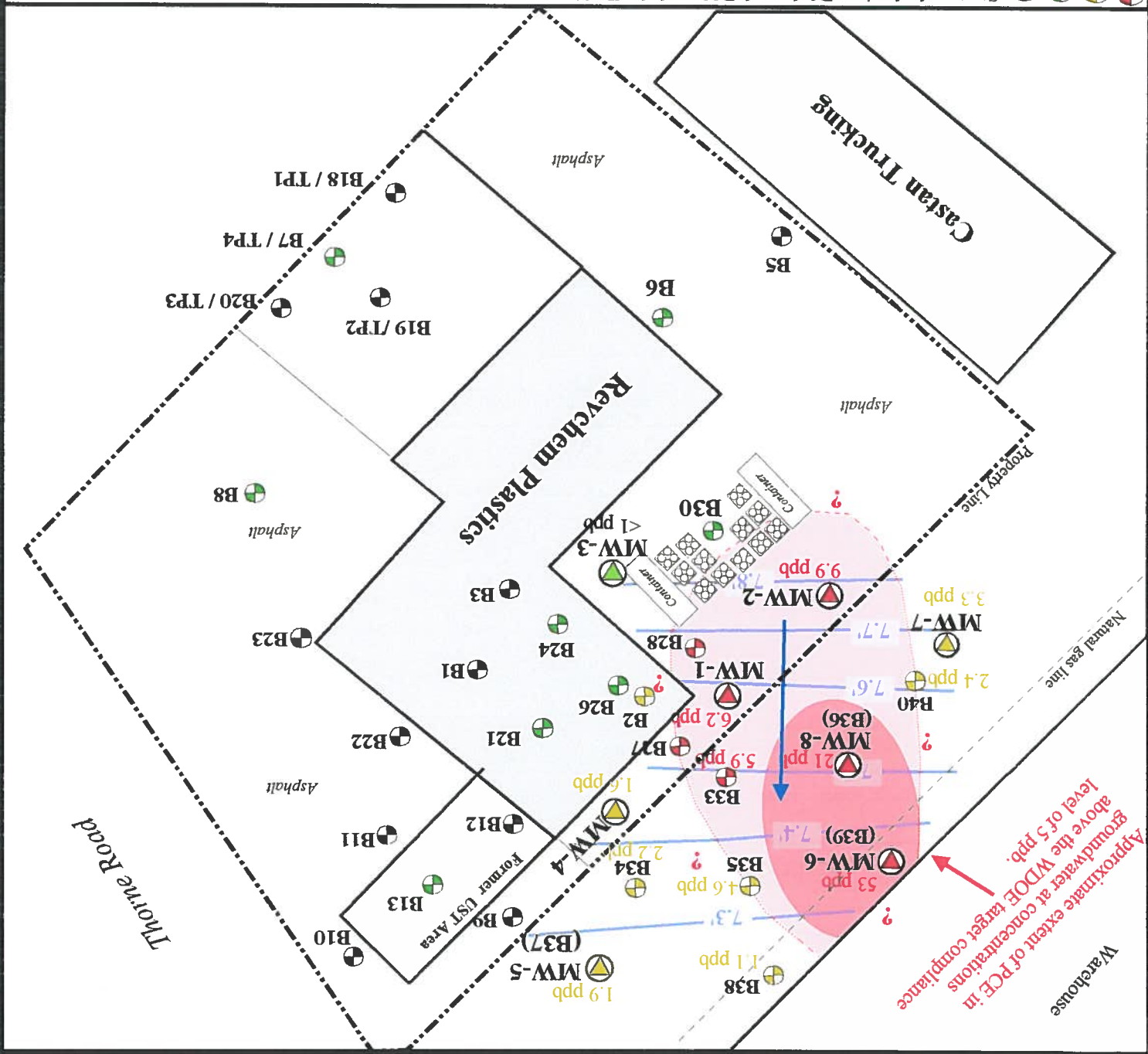
Stratigraphic borings B1 through B32 made by EAI between April and July 2004. Borings B33 through B40 installed by EAI in January 2005. Monitoring wells MW-1 through MW-4 installed by EAI in July 2004. Monitoring Wells MW-5 through MW-8 installed by EAI in January 2005.

Red denotes locations where contaminants were found in groundwater at concentrations above WDOE target compliance levels.

Yellow denotes locations where contamination was found at detectable concentrations.

Green denotes locations tested and found not to contain detectable concentrations of chlorinated VOCs.

Black denotes locations not tested. Denoted concentrations are for PCE in parts per billion (ppb).



APPENDIX A
Boring Logs



ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number:
JN-5102-5

Date:
1/24/05

Logged by:
RBR

Plate:
A-1

Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

BORING B33

Sampler: Continuous Sample collected in 4-foot sections.
Driller: ESN-Strataprobe. Groundwater "grab sample" collected with temporary well screen between 7 and 11 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0		Damp		(F)	Fill, sand-gravel mix, brown	0.0
5	▲	Damp		SP	Sand, fine to medium grained, minor silt, black.	0.0
10		Wet		SP	Sand, fine to medium grained, minor silt, black.	0.0
15		Wet		ML	Silt / Clayey-silt, brown/black.	0.0
16					Boring terminated at 16 feet.	
20						
25						
30						
35						
40						

BORING B33



ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number:
JN-5102-5

Date:
1/24/05

Logged by:
RBR

Plate:
A-2

BORING B34
Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

Sampler: Continuous Sample collected in 4-foot sections.
Driller: ESN-Strataprobe. Groundwater "grab sample" collected with temporary well screen between 7 and 11 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0		Damp		(F)	Fill, sand-gravel mix, brown	0.0
5	▲	Damp		SP	Sand, fine to medium grained, minor silt, black.	0.0
10		Wet		SP	Sand, fine to medium grained, minor silt, shell fragments, black.	0.0
15		Wet		ML	Silt / Clayey-silt, brown/black.	0.0
40					Boring terminated at 16 feet.	

BORING B34



**ENVIRONMENTAL
ASSOCIATES, INC.**
1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number:
JN-5102-5

Date:
1/24/05

Logged by:
RBR

Plate:
A-3

BORING B35
Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

Sampler: Continuous Sample collected in 4-foot sections.
Driller: ESN-Strataprobe. Groundwater "grab sample" collected with temporary well screen between 7 and 11 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0		Damp		(F)	(Poor recovery) Fill, sand-gravel mix, brown	0.0
5	▲	Damp		SP	Sand, fine to medium grained, minor silt, black.	0.0
10		Moist		SP	Sand, fine to medium grained, minor silt, black.	0.0
15		Wet		SP	Sand, fine to medium grained, minor silt, shell fragments, black.	0.0
15		Wet		ML	Silt / Clayey-silt, brown/black.	0.0
40					Boring terminated at 16 feet.	

BORING B35



ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number:
JN-5102-5

Date:
1/24/05

Logged by:
RBR

Plate:
A-4

BORING B36 (MW-8)
Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

Sampler: Continuous Sample collected in 4-foot sections.
Driller: ESN-Strataprobe. Groundwater "grab sample B36" collected with temporary well screen between 7 and 11 feet BGS.
2" Diameter PVC monitoring well screened from 5.5 feet to 15.5 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0	Concrete	Damp		(F)	(Poor recovery) Fill, sand-gravel mix, brown	0.0
5	bentonite	Damp		SP	Sand, fine to medium grained, minor silt, black.	0.0
10	Sand-pack	Moist		SP	Sand, fine to medium grained, minor silt, black.	0.0
15		Wet		ML	Silt / Clayey-silt, brown/black.	0.0
40					Boring terminated at 16 feet.	

BORING B36 (MW-8)



**ENVIRONMENTAL
ASSOCIATES, INC.**
1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number:
JN-5102-5

Date:
1/24/05

Logged by:
RBR

Plate:
A-5

BORING B37 (MW-5)
Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

No soil samples collected.
Driller: ESN-Strataprobe. Groundwater "grab sample B37" collected with temporary well screen between 7 and 11 feet BGS.
2" Diameter PVC monitoring well screened from 5.5 feet to 15.5 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0	Concrete				No soil samples collected.	
5	Bentonite					
15	Sand pack				Boring terminated at 16 feet.	
20						
25						
30						
35						
40						

BORING B37 (MW-5)



**ENVIRONMENTAL
ASSOCIATES, INC.**

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number: JN-5102-5	Date: 1/24/05	Logged by: RBR	Plate: A-6
--------------------------	------------------	-------------------	---------------

BORING B38
Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

No soil samples collected.
Driller: ESN-Strataprobe. Groundwater "grab sample B38" collected with temporary well screen between 7 and 11 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0					No soil samples collected.	
5						
10						
15						
20						
25						
30						
35						
40					Boring terminated at 16 feet.	

BORING B38



**ENVIRONMENTAL
ASSOCIATES, INC.**

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number:
JN-5102-5

Date:
1/24/05

Logged by:
RBR

Plate:
A-7

BORING B39 (MW-6)
Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

No soil samples collected.
Driller: ESN-Strataprobe. Groundwater "grab sample B39" collected with temporary well screen between 7 and 11 feet BGS.
2"-Diameter PVC monitoring well screened from 5.5 feet to 15.5 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0	Concrete				No soil samples collected.	
5	Bentonite					
15	Sand-pack				Boring terminated at 16 feet.	
20						
25						
30						
35						
40						

BORING B39 (MW-6)



**ENVIRONMENTAL
ASSOCIATES, INC.**

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number: JN-5102-5	Date: 1/24/05	Logged by: RBR	Plate: A-8
---------------------------------	-------------------------	--------------------------	----------------------

BORING B40
Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

No soil samples collected.
Driller: ESN-Strataprobe. Groundwater "grab sample B40" collected with temporary well screen between 7 and 11 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0					No soil samples collected.	
5						
10						
15						
20						
25						
30						
35						
40					Boring terminated at 16 feet.	

BORING B40



ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112th Avenue NE, Suite 300
Bellevue, Washington 98004

Job Number:	JN-5102-5
Date:	1/24/05
Logged by:	RBR
Plate:	A-9

BORING MW-7
Former Automotive Tire Service Facility
1132 Thorne Road
Tacoma, Washington

No soil samples collected.
Driller: ESN-Strataprobe.
2"-Diameter PVC monitoring well screened from 5.5 feet to 15.5 feet BGS.

Depth/ Sample	Well Design	Moisture/ Water Table	Blows / Foot	USCS	DESCRIPTION	Head Space Analysis (ppm)
0	Concrete				No soil samples collected.	
5	Bentonite					
15	Sand-pack					
16					Boring terminated at 16 feet.	
20						
25						
30						
35						
40						

BORING MW-7

Laboratory Reports

APPENDIX B

ESN
NORTHWEST

Environmental
Services Network

January 27, 2005

Robert Roe
Environmental Associates
1380 112th Avenue NE
Suite 300
Bellevue, WA 98004

Dear Mr. Roe:

Please find enclosed the analytical data report for the RevChem Plastics Project in Tacoma, Washington. Direct Push and Mobile Lab services were conducted on January 25, 2005. Water samples were analyzed for Specific Halogenated Hydrocarbons and BTEX by Method 8021B.

The results of these analyses are summarized in the attached table. Applicable detection limits and QA/QC data are included. An invoice for this analytical work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Environmental Associates for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A. Korosec

Michael A. Korosec
President

677 Woodland Square Lp, SE, Suite D ■ Lacey, Washington 98503 ■ 360.459.4670 ■ FAX 360.459.3432
Web Site: www.esnnw.com
E-Mail: info@esnnw.com

ENVIRONMENTAL SERVICES NETWORK NORTHWEST, INC.

REVCHEM PLASTICS PROJECT

Tacoma, Washington
Environmental Associates, Inc.
Client Project #5102-5

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Water

Sample Description	Method	Date Sampled	Date Analyzed	MDL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
B-36	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-35	Dup.	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-34	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
B-33	Blank	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05												

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65%-135%

ANALYSES PERFORMED BY: T. McCall

ENVIRONMENTAL SERVICES NETWORK NORTHWEST, INC.

REVCHEM PLASTICS PROJECT

Tacoma, Washington

Environmental Associates, Inc.

Client Project #5102-5

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Water

Sample Description	B-37	B-38	B-39	B-40	MW-1	MW-2
--------------------	------	------	------	------	------	------

Date Sampled	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05
Date Analyzed	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05	1/24/05

MDL (ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
------------	--------	--------	--------	--------	--------	--------

Vinyl chloride	5.0	nd	nd	nd	nd	nd
Benzene	1.0	nd	nd	nd	nd	nd
Toluene	1.0	nd	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd	nd
Total Xylenes	1.0	nd	nd	nd	nd	nd
1,1-Dichloroethene	1.0	nd	nd	nd	nd	nd
Methylene chloride	1.0	nd	nd	nd	nd	nd
<i>trans</i> -1,2-Dichloroethene	1.0	nd	6.2	1.4	2.9	nd
1,1-Dichloroethane	1.0	nd	nd	nd	nd	nd
<i>cis</i> -1,2-Dichloroethene	1.0	nd	52	170	43	nd
Chloroform	1.0	nd	nd	nd	nd	nd
1,1,1-Trichloroethane (TCA)	1.0	nd	nd	nd	nd	nd
Carbon tetrachloride	1.0	nd	nd	nd	nd	nd
1,2-Dichloroethane	1.0	nd	nd	nd	nd	nd
Trichloroethene (TCE)	1.0	nd	1.4	nd	nd	nd
1,1,2-Trichloroethane	1.0	nd	nd	nd	nd	nd
Tetrachloroethene (PCE)	1.0	nd	4.8	2.4	6.2	nd
1,1,1,2-Tetrachloroethane	1.0	nd	nd	nd	nd	nd

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65%- 135%

ANALYSES PERFORMED BY: T. McCall

ENVIRONMENTAL SERVICES NETWORK NORTHWEST, INC.

REVACHEM PLASTICS PROJECT

Tacoma, Washington
Environmental Associates, Inc.
Client Project #5102-5

Specific Halogenated and Aromatic Hydrocarbons (EPA 8021B) in Water

Sample Description

MW-3
MW-4

Date Sampled 1/24/05
Date Analyzed 1/24/05

MDL (ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

(ug/l)

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

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Chlorobenzene): 65%- 135%

ANALYSES PERFORMED BY: T. McCall

QA/QC Data - EPA 8021B Analyses

Sample Description: B-37		Matrix Spike			Matrix Spike Duplicate		
		Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)	Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)
Benzene	5.00	5.41	108	5.00	5.45	109	0.74
	5.00	4.92	98	5.00	5.17	103	4.96
	5.00	5.65	113	5.00	5.72	114	1.23
	5.00	5.14	103	5.00	5.41	108	5.12
Tetrachloroethene (PCE)		5.00					
Trichloroethene (TCE)		5.00					
Toluene		5.00					

Laboratory Control Sample			
Spiked Conc. (ug/l)	Measured Conc. (ug/l)	Spike Recovery (%)	
5.00	4.75	95	Benzene
5.00	4.51	90	Toluene
5.00	4.84	97	Trichloroethene (TCE)
5.00	4.74	95	Tetrachloroethene (PCE)

ACCEPTABLE RECOVERY LIMITS FOR MATRIX SPIKES: 80%-120%
ACCEPTABLE RPD IS 20%
ANALYSES PERFORMED BY: T. McCall

CHAIN-OF-CUSTODY RECORD

CLIENT: Environmental Associates, Inc. DATE: 1/24/05 PAGE 1 OF 1

ADDRESS: 1380 - 112th Ave NE, Suite 500 PROJECT NAME: WestChew Plastics

PHONE: (425) 467-9025 FAX: (425) 467-2316 LOCATION: Tacoma, WA

CLIENT PROJECT #: 5102-5 PROJECT MANAGER: Robert Ro COLLECTOR: Robert Roe DATE OF COLLECTION: 1/24/05

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES										NOTES	Total Number of Containers	Laboratory Note Number
					VOA 8021B BTEX only	VOA 8021B	TPH - HClO	TPH 8015 (aqueous)	TPH 8015 (diesel)	PAH 8100	PCBS 8082	EPH	VPH	Methamphetamine			
1. B32		9:00 AM	H ₂ O	11 mL	X												
2. B34		9:30			X												
3. B35		10:12			X												
4. B36		10:45			X												
5. B37		11:15			X												
6. B38		11:30			X												
7. B39		11:50			X												
8. B40 B40		12:00			X												
9. MW-4		1:00			X												
10. MW-1		1:50			X												
11. MW-2		2:47			X												
12. MW-3		3:17			X												
13.																	
14.																	
15.																	
16.																	
17.																	
18.																	

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
<i>Robert Roe</i>	1/25/05	<i>Robert Roe</i>	1/25/05

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE DISPOSAL INSTRUCTIONS	
☐ ESN DISPOSAL @ \$2.00 each ☐ Return ☐ Pickup	

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/A	
SEALS INTACT? Y/N/A	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:	

Turn Around Time: 24 HR 48 HR 5 DAY	

Analytical Testing and Mobile Laboratory Services

Environmental Inc.

OnSite



February 2, 2005

Rob Roe
Environmental Associates, Inc.
1380 112th Avenue NE, Suite 300
Bellevue, WA 98004

Re: Analytical Data for Project JN-5102-5
Laboratory Reference No. 0501-218

Dear Rob:

Enclosed are the analytical results and associated quality control data for samples submitted on January 28, 2005.

The standard policy of OnSite Environmental Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baunmeister
Project Manager

Enclosures

Date of Report: February 2, 2005
Samples Submitted: January 28, 2005
Laboratory Reference: 0501-218
Project: JN-5102-5

Case Narrative

Samples were collected on January 27, 2005 and received by the laboratory on January 28, 2005. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

HALOGENATED VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 2-1-05
 Date Analyzed: 2-1-05
 Matrix: Water
 Units: ug/L (ppb)
 Lab ID: 01-218-01
 Client ID: MW-5

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Iodomethane	ND		1.0
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	0.29		0.20
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	0.57		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

HALOGENATED VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 01-218-01
 Client ID: MW-5

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	1.9		0.20
1,3-Dichloropropane	ND		0.20
Dibromochloromethane	ND		0.20
1,2-Dibromomethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Bromobenzene	ND		1.0
Bromoforn	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2-Dibromomethane	ND		0.20
1,3-Dichloropropane	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
1,2,3-Trichlorobenzene	ND		0.20
Surrogate			
Dibromofluoromethane	90		70-123
Toluene, d8	97		70-119
4-Bromofluorobenzene	90		70-119

HALOGENATED VOLATILES by EPA 8260B

Page 1 of 2

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

Date Extracted: 2-1-05
 Date Analyzed: 2-1-05
 Matrix: Water
 Units: ug/L (ppb)
 Lab ID: 01-218-02
 Client ID: MW-6

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.40
Chloromethane	ND		0.40
Vinyl Chloride	0.63		0.40
Bromomethane	ND		0.40
Chloroethane	ND		0.40
Trichlorofluoromethane	ND		0.40
1,1-Dichloroethene	ND		0.40
Iodomethane	ND		2.0
Methylene Chloride	ND		2.0
(trans) 1,2-Dichloroethene	6.9		0.40
1,1-Dichloroethane	ND		0.40
2,2-Dichloropropane	ND		0.40
(cis) 1,2-Dichloroethene	75		0.40
Bromochloromethane	ND		0.40
Chloroform	ND		0.40
1,1,1-Trichloroethane	ND		0.40
Carbon Tetrachloride	ND		0.40
1,1-Dichloropropane	ND		0.40
1,2-Dichloroethane	12		0.40
1,2-Dichloropropane	ND		0.40
Dibromomethane	ND		0.40
Bromodichloromethane	ND		0.40
2-Chloroethyl Vinyl Ether	ND		2.0
(cis) 1,3-Dichloropropene	ND		0.40
(trans) 1,3-Dichloropropene	ND		0.40

Date of Report: February 2, 2005
Samples Submitted: January 28, 2005
Laboratory Reference: 0501-218
Project: JN-5102-5

HALOGENATED VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 01-218-02
Client ID: MW-6

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.40
Tetrachloroethene	53		0.40
1,3-Dichloropropane	ND		0.40
Dibromochloromethane	ND		0.40
1,2-Dibromomethane	ND		0.40
Chlorobenzene	ND		0.40
1,1,1,2-Tetrachloroethane	ND		0.40
Bromobenzene	ND		2.0
1,1,2,2-Tetrachloroethane	ND		0.40
1,2,3-Trichloropropane	ND		0.40
2-Chlorotoluene	ND		0.40
4-Chlorotoluene	ND		0.40
1,3-Dichloroethene	ND		0.40
1,4-Dichlorobenzene	ND		0.40
1,2-Dichloroethene	ND		0.40
1,2-Dibromo-3-chloropropane	ND		2.0
1,2,4-Trichlorobenzene	ND		0.40
Hexachlorobutadiene	ND		0.40
1,2,3-Trichlorobenzene	ND		0.40
Surrogate			
Dibromofluoromethane	95		70-123
Toluene, d8	91		70-119
4-Bromofluorobenzene	97		70-119

JnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881
This report pertains to the samples analyzed in accordance with the chain of custody and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 2, 2005
Samples Submitted: January 28, 2005
Laboratory Reference: 0501-218
Project: JN-5102-5

HALOGENATED VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 2-1-05
Date Analyzed: 2-1-05
Matrix: Water
Units: ug/L (ppb)
Lab ID: 01-218-03
Client ID: MW-7

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Iodomethane	ND		1.0
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	0.95		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	3.8		0.20
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloroethene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	0.93		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

HALOGENATED VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 01-218-03
 Client ID: MW-7

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	3.3		0.20
1,3-Dichloropropane	ND		0.20
Dibromochloromethane	ND		0.20
1,2-Dibromomethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Bromobenzene	ND		1.0
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
1,2,3-Trichlorobenzene	ND		0.20
Surrogate			
Dibromofluoromethane	90		70-123
Toluene, d8	92		70-119
4-Bromofluorobenzene	93		70-119

OnSite Environmental, Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

HALOGENATED VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted: 2-1-05
 Date Analyzed: 2-1-05
 Matrix: Water
 Units: ug/L (ppb)
 Lab ID: 01-218-04
 Client ID: MW-8

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Iodomethane	ND		1.0
Methylene Chloride	ND		1.0
(trans) 1,2-D chloroethene	1.8		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	15		0.20
Bromochloromethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloroethene	ND		0.20
1,2-Dichloroethane	ND		0.20
Trichloroethene	3.9		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
(trans) 1,3-D chloropropene	ND		0.20

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

HALOGENATED VOLATILES by EPA 8260B

Page 2 of 2

Lab ID: 01-218-04
 Client ID: MW-8

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	21		0.20
1,3-Dichloropropane	ND		0.20
Dibromochloromethane	ND		0.20
1,2-Dibromomethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Bromobenzene	ND		1.0
Bromobenzene	ND		0.20
1,1,2,2-Tetra chloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
1,2-Dibromo 3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorobutadiene	ND		0.20
1,2,3-Trichlorobenzene	ND		0.20
Surrogate	Percent Recovery	Control Limits	
Dibromofluoromethane	93	70-123	
Toluene, d8	91	70-119	
4-Bromofluorobenzene	87	70-119	

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

**HALOGENATED VOLATILES by EPA 8260B
 METHOD BLANK QUALITY CONTROL**

Page 1 of 2

Date Extracted: 2-1-05
 Date Analyzed: 2-1-05
 Matrix: Water
 Units: ug/L (ppb)
 Lab ID: MB0201W1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.20
Chloromethane	ND		0.20
Vinyl Chloride	ND		0.20
Bromomethane	ND		0.20
Chloroethane	ND		0.20
Trichlorofluoromethane	ND		0.20
1,1-Dichloroethene	ND		0.20
Iodomethane	ND		1.0
Methylene Chloride	ND		1.0
(trans) 1,2-Dichloroethene	ND		0.20
1,1-Dichloroethane	ND		0.20
2,2-Dichloropropane	ND		0.20
(cis) 1,2-Dichloroethene	ND		0.20
Bromochloroethane	ND		0.20
Chloroform	ND		0.20
1,1,1-Trichloroethane	ND		0.20
Carbon Tetrachloride	ND		0.20
1,1-Dichloropropane	ND		0.20
1,2-Dichloroethane	ND		0.20
1,2-Dichloropropane	ND		0.20
Dibromomethane	ND		0.20
Bromodichloromethane	ND		0.20
2-Chloroethyl Vinyl Ether	ND		1.0
(cis) 1,3-Dichloropropene	ND		0.20
(trans) 1,3-Dichloropropene	ND		0.20

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

**HALOGENATED VOLATILES by EPA 8260B
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Lab ID: MB0201W1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.20
Tetrachloroethene	ND		0.20
1,3-Dichloropropane	ND		0.20
Dibromochloromethane	ND		0.20
1,2-Dibromoethane	ND		0.20
Chlorobenzene	ND		0.20
1,1,1,2-Tetrachloroethane	ND		0.20
Bromobenzene	ND		1.0
Bromobenzene	ND		0.20
1,1,2,2-Tetrachloroethane	ND		0.20
1,2,3-Trichloropropane	ND		0.20
2-Chlorotoluene	ND		0.20
4-Chlorotoluene	ND		0.20
1,3-Dichlorobenzene	ND		0.20
1,4-Dichlorobenzene	ND		0.20
1,2-Dichlorobenzene	ND		0.20
1,2-Dibromo-3-chloropropane	ND		1.0
1,2,4-Trichlorobenzene	ND		0.20
Hexachlorocyclopentadiene	ND		0.20
1,2,3-Trichlorobenzene	ND		0.20
Surrogate			
Dibromofluoromethane	98		70-123
Toluene, d8	94		70-119
4-Bromofluorobenzene	96		70-119
Percent Recovery			Control Limits

Date of Report: February 2, 2005
 Samples Submitted: January 28, 2005
 Laboratory Reference: 0501-218
 Project: JN-5102-5

HALOGENATED VOLATILES by EPA 8260B MS/MSD QUALITY CONTROL

Date Extracted: 2-1-05
 Date Analyzed: 2-1-05

Matrix: Water
 Units: ug/L (ppb)

Lab ID: 01-143-09

Compound	Sample Amount	Spike Amount	MS	Percent Recovery	MSD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	ND	10.0	12.5	125	12.4	124	70-130	
Benzene	ND	10.0	10.9	109	11.8	118	71-128	
Trichloroethene	ND	10.0	8.88	89	9.48	95	76-124	
Toluene	ND	10.0	9.78	98	10.0	100	74-124	
Chlorobenzene	ND	10.0	9.44	94	9.43	94	72-118	
1,1-Dichloroethene	1	17	13	12	6	3	0	9
Benzene	8	13	12	14	6	3	0	9
Trichloroethene	6	12	14	6	3	0	9	9
Toluene	3	14	6	3	0	9	9	9
Chlorobenzene	0	9	3	0	9	9	9	9

OnSite Environmental Inc. 14648 NE 95th Street, Redmond, WA 98052 (425) 883-3881

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.



Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- G - Insufficient sample quantity for duplicate analysis.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- C - Hydrocarbons indicative of diesel fuel are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a silica gel cleanup procedure.
- Y - Sample extract treated with an acid/silica gel cleanup procedure.
- Z -

ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference

py