



**PACIFIC CREST ENVIRONMENTAL**

1533 BENDIGO BOULEVARD NORTH PO BOX 952 NORTH BEND, WA 98045  
T 425 . 888 . 4990 F 425 . 888 . 4994

**REMEDIAL INVESTIGATION REPORT**

**FORMER SOUND MATTRESS AND FELT PROPERTY  
1940 EAST 11<sup>TH</sup> STREET  
TACOMA, WASHINGTON  
FS ID 1232087**

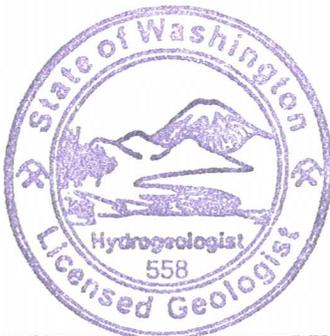
Submitted by:

**Pacific Crest Environmental, LLC  
1531 Bendigo Boulevard North  
North Bend, Washington 98045**

Pacific Crest PN: 110-001

For:

**Mr. Robert Shea  
Sound Mattress and Felt Company  
7424 Bridgeport Way, Suite 206  
Lakewood, Washington 98499-8134**



**William E. Carroll**

December 9, 2009

Prepared by:

William Carroll, LHG  
Principal Hydrogeologist

Monty Busbee  
Staff Geologist

Reviewed by:

Lauren Carroll, LHG  
Principal Hydrogeologist

# TABLE OF CONTENTS

<b>1.</b>	<b>INTRODUCTION.....</b>	<b>1-1</b>
1.1	PURPOSE.....	1-1
1.2	REMEDIAL ACTION RESPONSIBILITIES.....	1-1
<b>2.</b>	<b>BACKGROUND.....</b>	<b>2-1</b>
2.1	SITE LOCATION.....	2-1
2.1.1	Site Discovery and Regulatory Status.....	2-1
2.1.2	Site and Property Description.....	2-1
2.1.3	Property Development and Uses.....	2-1
2.1.4	Surrounding Properties.....	2-2
2.2	NATURAL CONDITIONS.....	2-2
2.2.1	Physiographic Setting.....	2-2
2.2.2	Geologic Setting.....	2-3
2.2.3	Hydrogeologic Setting.....	2-3
2.2.1	Surface Water.....	2-3
<b>3.</b>	<b>SITE INVESTIGATION.....</b>	<b>3-1</b>
3.1	SUMMARY OF HISTORIC SITE INVESTIGATION ACTIVITIES.....	3-1
3.2	RECENT SITE INVESTIGATION ACTIVITIES.....	3-2
3.2.1	Well Borings.....	3-2
3.2.2	Monitoring Well Installation.....	3-3
3.2.3	Groundwater Monitoring and Sampling.....	3-3
3.2.4	Direct-Push Soil Borings.....	3-4
3.2.5	72-Hour Tidal Study.....	3-5
3.2.6	Indoor Air Sampling.....	3-5
3.2.7	Passive Soil Vapor Survey.....	3-5
3.2.8	Decontamination and Waste Management.....	3-6
3.3	RESULTS.....	3-6
3.3.1	Underground Utility Locate.....	3-6
3.3.2	Soil.....	3-6
3.3.3	Groundwater.....	3-7
3.3.4	Soil Vapor.....	3-9
3.3.5	Indoor Air.....	3-10
<b>4.</b>	<b>REGULATORY ELEMENTS.....</b>	<b>4-1</b>
4.1	CONTAMINANTS OF CONCERN.....	4-1
4.2	CONCEPTUAL SITE MODEL.....	4-1
4.3	CLEANUP STANDARDS.....	4-2
4.3.1	Cleanup Levels.....	4-3
4.3.1.1	Groundwater.....	4-3
4.3.1.2	Upland Soil.....	4-4
4.3.1.3	Air.....	4-4
4.3.2	Point of Compliance.....	4-5
4.3.2.1	Point of Compliance for Groundwater.....	4-5
4.3.2.2	Point of Compliance for Soil.....	4-5
4.3.2.3	Point of Compliance for Air.....	4-5

<b>5.</b>	<b>CONCLUSTIONS .....</b>	<b>5-1</b>
5.1	SOIL .....	5-1
5.2	GROUNDWATER .....	5-1
5.3	SOIL VAPOR AND INDOOR AIR.....	5-2
<b>6.</b>	<b>DATA GAPS.....</b>	<b>6-1</b>
<b>7.</b>	<b>REFERENCES.....</b>	<b>7-1</b>
<b>8.</b>	<b>LIMITATIONS .....</b>	<b>8-1</b>

## FIGURES

Figure 1	Site Location Map
Figure 2	Site Plan with Cross Section Location
Figure 3	Cross Section A - A'
Figure 4	Groundwater Potentiometric Surface (March 10, 2009)
Figure 5	Conceptual Site Model
Figure 6	Estimated Extent of HVOCs Exceeding Cleanup Levels

## TABLES

Table 1	Soil Analytical Results Summary
Table 2	Groundwater Elevation Data Summary
Table 3	Groundwater Quality Parameters Summary
Table 4	Groundwater Analytical Results Summary
Table 5	Reconnaissance Groundwater Analytical Results Summary
Table 6	Summary of Groundwater Elevations – 72 Hour Tidal Study
Table 7	Summary of Analytical Results - Air

## APPENDICES

Appendix A	Well and Boring Logs
Appendix B	Laboratory Analytical Reports
Appendix C	72-Hour Tidal Study Data
Appendix D	Gore Soil Vapor Survey Report
Appendix E	Indoor Air Sampling Report
Appendix F	Cleanup Level Calculation Worksheets and Excess Risk Calculation

# 1. INTRODUCTION

Pacific Crest Environmental, LLC (Pacific Crest) has prepared this Remedial Investigation (RI) Report to document the results of the activities conducted to characterize the nature and extent of a release of halogenated volatile organic compounds (HVOCs) that occurred at the former Sound Mattress and Felt Company (Sound Mattress and Felt) property located at 1940 East 11<sup>th</sup> Street in Tacoma, Washington (the former Sound Mattress Property) (Figure 1). The Sound Mattress and Felt Site (the Site) has been assigned Facility/Site No. 1232087 and Voluntary Cleanup Program (VCP) Project No. SW0857 by the Washington State Department of Ecology (Ecology) and is defined as the areal and vertical extent of the contaminants of concern (COCs) in the media of concern. The RI activities documented in this report were conducted to assess the Site under the Ecology VCP in accordance with the Model Toxics Control Act (MTCA) Cleanup Regulation (Chapter 173-340 of the Washington Administrative Code [WAC 173-340] as amended November 2007).

## 1.1 PURPOSE

The purpose of the RI activities was to provide sufficient information regarding the nature and extent of the COCs to support the development of a conceptual site model (CSM) and a RI which will meet the substantive requirements of MTCA.

## 1.2 REMEDIAL ACTION RESPONSIBILITIES

The remedial action is being conducted under the direction of the former Sound Mattress and Felt owner:

Mr. Robert Shea  
Sound Mattress and Felt Company  
7424 Bridgeport Way, Suite 206  
Lakewood, Washington 98499-8134

The environmental consultant for the remedial action is:

Ms. Lauren Carroll, Principal Hydrogeologist  
Pacific Crest Environmental, LLC  
P.O. Box 952  
1531 Bendigo Boulevard North  
North Bend, Washington 98045

## 2. BACKGROUND

### 2.1 SITE LOCATION

#### 2.1.1 Site Discovery and Regulatory Status

In April 2004, during a preliminary due diligence subsurface investigation performed by Environmental Associates, Inc. (EAI) at the neighboring property located at 1132 Thorne Road (Shaub-Ellison Property), laboratory analysis detected tetrachloroethene (PCE) in one groundwater sample (boring B2) (EAI 2004a). Further investigation on the former Sound Mattress and Shaub-Ellison properties identified apparent source areas where releases of PCE appear to have occurred (EAI 2004a, EAI 2004b, EAI 2005, EMS 2005, LSI Adapt 2005, Pacific Crest 2006) and have resulted in PCE and associated daughter products generated by the reductive dechlorination, including trichloroethene (TCE), cis-1,2-dichloroethene (c-DCE), and vinyl chloride (VC) in groundwater at concentrations above applicable MTCA cleanup levels.

In March 2007, Sound Mattress and Felt enrolled the Site in the VCP for the purpose of obtaining Opinion Letters from Ecology regarding the sufficiency of the remedial action activities in meeting the substantive requirements of MTCA and, ultimately, to obtain a No Further Action (NFA) determination for the Site.

#### 2.1.2 Site and Property Description

The Site is located within a portion of the former Sound Mattress Property and marginally extends onto the adjacent Shaub-Ellison Property (Figure 2). Both the former Sound Mattress Property and the Shaub-Ellison Property are currently owned by the Port of Tacoma, which purchased the properties in October 2006 and August 2007, respectively.

The former Sound Mattress Property is an irregular-shaped parcel that covers an area of approximately 5.77 acres. Improvements to the former Sound Mattress Property include an 112,280-square-foot masonry warehouse building (Building).

#### 2.1.3 Property Development and Uses

A chronologic summary of the development of the former Sound Mattress Property and the Shaub-Ellison Property is provided below:

- Prior to 1948, the former Sound Mattress Property was vacant and undeveloped.
- In 1948, Washington Steel Products (Washington Steel) constructed the northern portion of the existing Building. Washington Steel extended the Building with additions in 1950 and 1953 (Tacoma Public Library - Tacoma-Pierce County Buildings Index).
- Between 1948 and 1959, Washington Steel conducted manufacturing operations in the Building that included the manufacture of hardware including enameled metal drawers, knobs, pulls and hinges (Tacoma Library Photo Archive).
- In 1959, Ekco Products Company (Ekco) purchased Washington Steel and in 1965 American Home Products Corp (American Home Products) purchased Ekco.
- In 1964, Sound Mattress and Felt purchased the Property. Contrary to previously available information, Sound Mattress never occupied or conducted manufacturing

operations on the former Sound Mattress Property but, instead, continued to lease portions of the Building to Ekco and later American Home Products until at least 1967.

- In 1965, Sound Mattress leased a portion of the Building to Brown and Haley, Inc. (Brown and Haley), the existing tenant, for commercial activities associated with the sales and distribution of Brown and Haley candy (Pacific Crest 2006).
- The Polk City Directory identifies the tenants of the former Sound Mattress Property as “Washington Steel Products” in 1960 and as Brown & Haley, Ekco Products Co., Dell’s Copy Shop, Washington Line Federal Credit Union, and Washington Steel Products in 1967. From 1972 through the present, the former Sound Mattress Property tenants are listed as Brown & Haley (1972, 1977, 1982, 1987, 1992, 2001, and 2005) and/or Westlocknational (1997); Cardservice International (2001 and 2005), Northwest Cardservice (2001); Hoops Unlimited (2001) and Westpac Marketing (2001).
- In 1970, the Shaub-Ellison Property consisted of undeveloped tide flats and was purchased by Mr. Sanford Shaub from Mr. Robert Shea Sr. (Sound Mattress and Felt).
- In 1973, the Shaub-Ellison property was first developed with a 7,300-square-foot, split-level, concrete tilt-up building erected on approximately 0.78 acre. Additional improvements to the Shaub-Ellison Property include an asphalt-paved storage yard in the western portion of the parcel, and an asphalt-paved parking area on the eastern portion of the parcel.
- From 1974 through 1998, the property was operated by the Shaub-Ellison Company, an automotive retail tire service facility.
- Since 2000, the Shaub-Ellison Property has operated as RevChem Plastics, an industrial chemical and supply company.

#### **2.1.4 Surrounding Properties**

The former Sound Mattress Property is bounded to the north by Thorne Road and beyond by Suburban Propane; to the west by East 11<sup>th</sup> Street and beyond by the Port of Tacoma operations office; to the south and east by the Shaub-Ellison Property; and to the south by Castan Trucking, a general freight trucking company.

## **2.2 NATURAL CONDITIONS**

### **2.2.1 Physiographic Setting**

The Site is located in the near-shore tide flats area of the Port of Tacoma. In the late 1800s, the southern and eastern shoreline of Commencement Bay consisted of tide flats formed as part of the Puyallup River delta. Dredge and fill activities conducted since the 1920s have significantly changed the estuarine nature of this shoreline and the tide flats. The historic meandering streams and rivers were dredged to form waterways; and the intertidal areas between the waterways were filled with dredge material to create usable land. The newly created land has since been used for commercial and industrial operations including shipbuilding, chemical manufacturing, ore smelting, oil refining, food preservation, and transportation facilities.

### **2.2.2 Geologic Setting**

The regional unconsolidated geology in the vicinity of the Site consists primarily of interbedded Pleistocene Era clays, silts, and sands deposited as a result of glacial activity. Glacial outwash sediments in the region were deposited, eroded, and re-deposited by rivers and streams. The advance and retreat of glacial ice sheets also resulted in the compaction of underlying clay sediments into glacial till. Alluvial deposits in the region are present in the vicinity of streams in the major regional river valleys and typically consist of unconsolidated, stratified, clay, silt, and very fine to fine sand, with considerable organic matter. Medium to coarse sand and gravel units underlie much of the fine-grained floodplain sediment in the region and are common in small stream valley bottoms (Galster and Laprade. 1991).

### **2.2.3 Hydrogeologic Setting**

Groundwater aquifers in the Puget Sound region are generally confined to recent alluvial deposits of sands and gravel, which are stratigraphically delimited by aquitards (low permeability units) consisting of glacial till deposits. Discontinuous perched shallow groundwater zones may be seasonally or locally present above the glacial till deposits (Galster, and Laprade. 1991).

### **2.2.4 Surface Water**

The Site is located approximately 350 feet southeast of the Sitcum Waterway and Commencement Bay. In 1983, the United States Environmental Protection Agency (EPA) placed portions of Commencement Bay, including the Sitcum Waterway, on the Superfund National Priorities List due to widespread contamination of the water, sediments, and upland areas.

### 3. SITE INVESTIGATION

#### 3.1 SUMMARY OF HISTORIC SITE INVESTIGATION ACTIVITIES

Since 2004, subsurface investigation activities have been conducted at the Site to assess the nature and extent of affected soil and groundwater, and characterize the geologic and hydrogeologic conditions. The investigation activities conducted between 2004 and 2006 have been documented in reports previously submitted to Ecology and have included: advancing soil borings; installing groundwater monitoring wells; collecting soil and groundwater samples for laboratory analysis; performing a passive soil vapor survey; and, assessing the results in accordance with industry practice. A chronologic summary of the investigation activities is provided below:

- In April 2004, EAI advanced 17 soil borings (Borings B1 through B17) during a preliminary due diligence subsurface investigation at the Shaub-Ellison Property. EAI collected soil and groundwater samples from the borings and submitted the samples to an independent laboratory for analysis (EAI 2004a).
- In April and May 2004, EAI, advanced an additional 11 borings (Borings B18 through B28) and four test pits (TP1 through TP4) on the Shaub-Ellison Property. EAI collected soil samples from the borings and test pits, and groundwater samples from select borings, and submitted the samples to an independent laboratory for analysis (EAI 2004a).
- In July 2004, EAI advanced five borings (B29 through B32 and MW-4) and converted four of the borings into groundwater monitoring wells (MW-1 through MW-4). EAI collected groundwater samples from the borings and wells and submitted the samples to an independent laboratory for analysis (EAI 2004b).
- In January 2005, EAI advanced eight borings (B-33 through B-40) and converted four of the borings, located in the alley between the Sound Mattress Property and the Shaub-Ellison Property, into groundwater monitoring wells (MW-5 through MW-8). EAI collected groundwater samples from the borings and wells and submitted the samples to an independent laboratory for analysis (EAI 2005).
- In July 2005, LSI Adapt collected groundwater samples from monitoring wells MW-1 through MW-8 and submitted the samples to an independent laboratory for analysis. During the same groundwater monitoring event, Environmental Management Services (EMS) collected split samples from wells MW-5 through MW-8 (EMS 2005).
- In August 2005, LSI Adapt advanced five borings to 16 feet below ground surface (bgs) (SC-1 through SC-4, and MW-9) and converted one boring into a groundwater monitoring well (MW-9) (LSI Adapt 2005).
- In April 2006, Pacific Crest assessed the alley between the former Sound Mattress Property and the Shaub-Ellison Property for conductive and non-conductive underground utilities (Pacific Crest 2006).
- In May 2006, Pacific Crest conducted a soil gas survey for concentrations of HVOCs in the Site vadose zone using W.L. Gore and Associates (Gore) soil vapor sorbent modules (Sorbors) and submitted the Sorbors to Gore for analysis of HVOCs by modified SW-846 Method 8260/8270 (Pacific Crest 2006).

## **3.2 RECENT SITE INVESTIGATION ACTIVITIES**

The further investigation activities were conducted between October 2006 and August 2009 to characterize the nature and extent of the contaminants of concern and fill remedial investigation data gaps. The investigation activities included:

- Advancing five borings using hollow-stem auger drilling methods, collecting soil samples from the borings, and converting the borings into groundwater monitoring wells;
- Advancing four soil borings using direct-push sampling methods, and collecting soil and reconnaissance groundwater samples from the borings;
- Submitting select samples to an independent laboratory for analysis of HVOCs;
- Developing the monitoring wells, and surveying the vertical elevation of the top of the well casings to a datum in common with existing Site monitoring wells;
- Conducting groundwater monitoring and sampling;
- Submitting groundwater samples to an independent laboratory for analysis for HVOCs;
- Monitoring water level fluctuations in select Site monitoring wells over a 72-hour period as part of a tidal study;
- Installing and retrieving Gore Sorbers beneath the Building floor to assess the areal distribution of HVOCs for the purpose of identifying source areas; and
- The Port of Tacoma retained a separate contractor to collect indoor air samples for laboratory analysis.

A narrative summary of the field activities for the recent investigation activities is provided in the following sections.

### **3.2.1 Well Borings**

Borings MW-10 through MW-14 were advanced using hollow-stem auger drilling methods during field events conducted in October 2006, November 2008, and March 2009. Upon completion, each boring was converted into a groundwater monitoring well. The boring and subsequent well locations were selected to provide the following data to characterize the nature and extent of the Site COCs:

- The location of boring MW-10 was selected to provide soil and groundwater data in the southeastern portion of the Site;
- The location of boring MW-11 was selected to provide soil and groundwater data in the portion of the Site underlying the Building; and
- The locations of borings MW-12 through MW-14 were selected to provide soil and groundwater data in the portion of the Site located north and west of the Building.

Cascade Drilling, Inc. of Woodinville, Washington (Cascade) advanced boring MW-10 on October 20, 2006; and ESN Northwest, Inc. (ESN) advanced borings MW-11 through MW-14 on November 19, 2008 and March 6, 2009, respectively. Borings MW-10 through MW-14 were advanced to total depths ranging from 13.5 to 24 feet bgs under the direction of a Pacific Crest

field geologist. Groundwater was encountered between the depths of approximately 6 and 10 feet bgs. The boring locations are illustrated on Figure 2.

Soil samples were collected at 2-foot to 2.5-foot intervals during advancement of the borings, using an 18-inch by 2-inch Dames and Moore split-spoon sampler. Samples collected from the borings were described in accordance with the Unified Soils Classification System (USCS), and inspected for evidence of visual and olfactory indication of contamination. Soil vapor headspace analysis was conducted to field screen the samples for total volatile organic compound (TVOC) concentration using a photoionization detector (PID). The soil vapor headspace analysis was performed by placing a portion of soil from each sample interval into a re-sealable plastic bag, allowing the sample to warm for several minutes, and recording the highest TVOC concentration inside the bag measured over a 30-second span using a PID. The USCS descriptions, observations of contamination, and field screening data were recorded on boring logs. Copies of the boring logs are provided in Appendix A.

The soil sample collected from the interval with the highest headspace TVOC concentration in each boring was prepared for submittal to the analytical laboratory using SW-846 Method 5035A. The soil samples were submitted to OnSite Environmental, Inc. (OnSite) of Redmond, Washington, for analysis for HVOCs by SW-846 Method 8260B. A copy of the laboratory analytical report is provided in Appendix B.

### **3.2.2 Monitoring Well Installation**

Monitoring wells were installed in borings MW-10 through MW-14 in accordance with the *Minimum Standards for Construction and Maintenance of Wells* (WAC 173-160) immediately after reaching the total boring depth. The wells were constructed using either 5 feet (well MW-14) or 10 feet (wells MW-10 through MW-13) of 2-inch inner diameter, Schedule 40 PVC 0.010-inch well screen, flush threaded to blank PVC casing. Following installation, the elevation of the top of each well casing was surveyed relative to the arbitrary datum used for the existing monitoring well network at the Site. Well construction diagrams are provided on the boring logs in Appendix A.

### **3.2.3 Groundwater Monitoring and Sampling**

Pacific Crest conducted groundwater monitoring in the existing monitoring wells during events conducted on February 6, 2007, November 20, 2008, and March 10, 2009. Due to the presence of standing water above the top of the well MW-5 well casing during the November 2008 and March 2009 groundwater monitoring events, groundwater level measurements were not collected from well MW-5 on these dates.

Groundwater monitoring was conducted at the Site by removing the manhole and well caps in each of the existing wells, and permitting the water level in each well to equilibrate with atmospheric pressure for a minimum of 15 minutes prior to collecting groundwater level data. Groundwater levels were measured relative to a surveyed mark located on the north side of each well casing to an accuracy of 0.01 foot using an electronic water level indicator.

Groundwater samples were collected as follows:

- On February 6, 2007, groundwater samples were collected from monitoring wells MW-1 through MW-8 and well MW-10. A groundwater sample was not collected from well MW-9

during the February 6, 2007 sampling event for the following reasons: the upgradient location of well MW-9, and the laboratory analysis of the sample collected during the previous sampling event from well MW-9 either detected HVOCs at concentrations below the preliminary screening levels or HVOCs were not detected.

- On November 20 and 21, 2008, groundwater samples were collected from wells MW-1 through MW-11.
- On March 10, 2009, groundwater samples were collected from wells MW-12, MW-13, and MW-14.

All groundwater sampling was performed using EPA Low-Flow (minimal drawdown) Groundwater Sampling Procedures (EPA, 1996). Prior to groundwater sample collection, each well was purged using a peristaltic pump and dedicated polyethylene tubing at a flow rate of approximately 300 milliliters per minute. During purging, groundwater geochemical parameters, including temperature, specific conductivity, pH, dissolved oxygen, and oxidation/reduction potential (ORP) were recorded approximately every three minutes using either a YSI 600 or YSI 556 multi-parameter water quality meter equipped with a flow-through cell. Groundwater samples were collected from upstream of the flow-through cell upon stabilization of the geochemical parameters.

Groundwater samples were transferred directly from dedicated tubing on the peristaltic pump into laboratory-prepared 40-milliliter sample vials preserved with hydrochloric acid. The vials were completely filled with water to eliminate potential loss of volatiles to headspace. Each vial was checked to ensure that there were no air bubbles present in the sample, labeled, placed on ice in a cooler, and transported to OnSite under standard chain-of-custody protocols on a standard turnaround time. OnSite analyzed the groundwater samples collected during each event for HVOCs by SW-846 Method 8260B. OnSite further analyzed the samples collected from wells MW-5 through MW-8 on February 6, 2007 for methane, ethane and ethane (MEE) by SW-846 Method 8015M. Copies of the laboratory analytical reports are provided in Appendix B.

### **3.2.4 Direct-Push Soil Borings**

On November 29, 2007, four soil borings (borings B-1 through B-4) were advanced by Cascade Drilling under the direction of a Pacific Crest geologist using direct-push hydraulic sampling methods. The borings were completed on the northeast side of Thorne Road to provide data regarding the extent of HVOCs in soil and groundwater in the eastern portion of the Site. An evaluation of City of Tacoma permitting requirements for right-of-way work indicated that the most expedient and cost-effective means of collecting data in the right-of-way were through the collection of soil and reconnaissance groundwater samples through soil borings.

Soil samples were collected continuously during advancement of the borings. Soil sample description, field screening, and sample preparation were conducted as described in Section 3.1. The borings were each advanced to a total depth of 12 feet bgs, and between 2.5 and 3.5 feet below first encountered groundwater to facilitate collection of a reconnaissance groundwater sample. Copies of the boring logs are provided in Appendix A.

The reconnaissance groundwater samples were collected from a depth of approximately 12 feet bgs through the screened section of a Geoprobe™ Screen Point 15 Water Sampler, direct-push well screen. Prior to collecting each sample, approximately one gallon of groundwater was purged from the boring using a peristaltic pump and 0.25-inch dedicated polyethylene tubing.

Groundwater samples were transferred directly from tubing on the peristaltic pump into laboratory-prepared 40-milliliter sample vials preserved with hydrochloric acid. The vials were completely filled with water to eliminate potential loss of volatiles to headspace. Each vial was checked to ensure that there were no air bubbles present in the sample, labeled, and placed on ice in a cooler.

Soil and reconnaissance groundwater samples collected from the borings were transported to OnSite under standard chain-of-custody protocols. OnSite analyzed the soil and groundwater samples for HVOCs by SW-846 Method 8260B on a standard turnaround time. A copy of the laboratory analytical report is provided in Appendix B.

### **3.2.5 72-Hour Tidal Study**

Beginning April 24, 2009 and ending on April 27, 2009, Pacific Crest conducted an evaluation of water level fluctuations in select monitoring wells over a 72-hour period. The tidal study was conducted to assess the extent to which tidal fluctuations in the Sitcum Waterway affect groundwater conditions at the Site.

The tidal study activities included measuring water levels in monitoring wells MW-1, MW-12, and MW-14 at a rate of one time per minute during the event. Prior to the start of testing and immediately following the completion of testing, the water level in each of the test wells was measured using an electronic water level indicator and recorded on a field form. During testing, the water levels in the test wells were measured using data logging pressure transducers. The tidal study data are provided in Appendix C.

### **3.2.6 Indoor Air Sampling**

The Port of Tacoma retained an occupational health and safety consultant (Stephen Frost, MSH, CIH) to assess indoor air in the Building. On June 17, 2009, the Port's consultant collected two indoor air samples (BH6170905 and BH6170906) and one ambient outdoor air sample (BH6170904) using Summa® canisters and submitted the samples to an independent laboratory (Air Toxics, Inc.) for analysis by EPA Method TO-15 SIM. The Port's consultant also collected duplicate air samples adjacent to the Summa® canisters using low flow air sampling pumps to draw a continuous sample of air through a carbon tube in accordance with NIOSH Method 1003. The duplicate air samples were submitted to Galson Laboratory for analysis. A copy of the report documenting the air sampling activities is provided in Appendix D.

### **3.2.7 Passive Soil Vapor Survey**

Pacific Crest conducted a passive soil vapor survey at the Site from August 12, 2009 to August 28, 2009. The soil vapor survey was initiated on August 12, 2009, by installing 33 Gore Sorbers at locations inside the Building. Each Sorber consists of a Gore-Tex® membrane tube that encloses an adsorbent material designed to adsorb VOCs.

On August 12, 2009, Washington's One-Call Utility Locate Service and Applied Professional Services, Inc. of North Bend, Washington, a private utility locating company, utilized non-invasive methods to identify the locations of underground utilities in the locations of the proposed Sorber locations. Upon completion of the utility locate, a Pacific Crest geologist advanced thirty-three 0.75-inch-diameter soil vapor survey borings to a depth of 3 feet bgs using an electric rotary hammer. Sorbers having Serial Numbers 604229 through 604267 were inserted into each of the borings by removing the Sorber from its numbered shipping vial;

suspending the Sorber from a cord; and, pushing the Sorber into the borehole using a clean stainless-steel insertion rod. The boring was sealed at the surface by pushing a cork into the boring and tamping down until flush with the surface grade. Each Sorber location was measured and plotted on a scaled Site plan. The unique serial number assigned to each Sorber was recorded at the boring location on the Site plan. The stainless-steel insertion rod was decontaminated between each use at successive sampling points by washing in a phosphate-free detergent and double rinsing in deionized water.

The Sorbers were retrieved from the Site on August 28, 2009, following a 16-day exposure period. To retrieve the Sorbers, the cork above each location was removed and the exposed Sorber recovered. The cork and cord attached to each Sorber were discarded, and the Sorber was resealed into its respective numbered shipping vial and placed in the shipping container. The 33 field-exposed Sorbers, three trip blanks, and chain-of-custody documentation were submitted to the Gore laboratory in Elkton, Maryland, via overnight courier for analysis of HVOCs, following modified SW-846 Method 8260/8270. A copy of the Gore laboratory report is provided in Appendix E.

### **3.2.8 Decontamination and Waste Management**

All non-dedicated field sampling equipment was cleaned and decontaminated between each use and prior to leaving the Site using an aqueous solution of Alconox, and triple rinsed in deionized water. Investigation-derived waste, including soil, purge water, and decontamination wash water were temporarily contained on the Property in sealed and appropriately labeled Washington State Department of Transportation-approved 55-gallon steel drums pending waste profiling and proper disposal.

## **3.3 RESULTS**

The results of historic and recent Site investigations are summarized in the following sections.

### **3.3.1 Underground Utility Locate**

In 2006, Pacific Crest used non-invasive methods to locate unidentified underground utilities. The utility locate identified a 4-inch PVC sanitary sewer line situated between approximately 25 and 43 feet east of, and running semi-parallel to, the Building. Three laterals to the sanitary sewer line extending from the Sound Mattress building were also identified by the utility locate (Lat1, Lat2, and Lat3).

### **3.3.2 Soil**

The RI investigation indicates the following with respect to soil conditions at the Site:

- The Site subsurface is described as consisting of sand and gravel fill to a depth of up to 3 feet bgs, overlying fine sand with occasional minor silt and shell fragments to between approximately 13.5 feet and 15 feet bgs in the southern portion of the Site, and to greater than 24 feet in the northern portion of the Site. The sand overlies a clayey silt layer which has been interpreted to represent the former tide flat mud. In the vicinity of the Site, the depth to the top of the clayey silt generally increases to the north.

- The laboratory analysis of soil samples collected from borings MW-10, MW-11, MW-13 and MW-14 detected PCE at concentrations ranging from 0.002 milligrams per kilogram (mg/kg) to 1.5 mg/kg.
- The laboratory analysis of soil samples collected from borings MW-10, MW-11, MW-13 and MW-14 detected TCE at concentrations ranging from 0.0015 mg/kg to 0.013 mg/kg.
- The laboratory analysis of soil samples collected from borings MW-10 and MW-13 detected concentrations of c-DCE at concentrations ranging from 0.0035 mg/kg to 0.012 mg/kg.
- In the remaining soil samples analyzed, concentrations of HVOCs were not detected above the laboratory (practical quantitation limit) PQL.
- The 24-hour hold-time for one sample (MW-11-8-10-111908) was inadvertently exceeded prior to reaching the analytical laboratory. An exceedance of a hold time is of concern for “false negative” results in which the results may be biased low due to potential volatilization. However, laboratory analysis of sample MW-11-8-10-111908 detected a high concentration of PCE and the potential for a “false negative” result does not appear to be of concern.

The soil analytical data are summarized in Table 1.

### 3.3.3 Groundwater

The RI results indicate the following with respect to the condition of groundwater at the Site:

- Shallow groundwater beneath the Site is encountered in the upper sand (described above) between the depths of approximately 5 to 9 feet bgs, and saturated conditions extend to the top of the clayey silt that is interpreted to represent the base of the shallow water-bearing zone. The depth to groundwater at the Site ranged from a high of 4.35 feet below the top of casing (BTOC) in well MW-9 on February 6, 2007 to a low of 9.22 feet BTOC in well MW-13 on March 10, 2009. The groundwater elevation data are summarized in Table 2.
- The potentiometric surface calculated for the Site, based on the March 10, 2009 groundwater monitoring data, indicates a groundwater flow direction to the north-northwest under an average hydraulic gradient of 0.014 feet per foot (ft/ft). The potentiometric surface map calculated for March 10, 2009 is presented as Figure 3.
- Groundwater geochemical parameters collected during purging included temperature, specific conductivity, pH, dissolved oxygen, and ORP. No significant trends or anomalies were noted in temperature, pH, dissolved oxygen, or ORP. A discrepancy in the specific conductivity results was noted between the February 2007 and November 2008 monitoring events for wells MW-1 through MW-8. The groundwater geochemical data are summarized in Table 3.
- The laboratory analytical results for groundwater samples collected from monitoring wells are summarized on Table 4 and the results of samples collected between February 2007 and March 2009 presented below:
  - Laboratory analysis detected PCE in samples collected from wells MW-1 through MW-11, MW-13 and MW-14 at concentrations ranging from 0.84 micrograms per liter (µg/l) to 2,600 µg/l.

- Laboratory analysis detected TCE in samples collected from wells MW-1, MW-2, MW-4 through MW-11, MW-13 and MW-14 at concentrations ranging from 0.36 µg/l to 1,400 µg/l.
- Laboratory analysis detected c-DCE in samples from wells MW-1, MW-2, MW-5, MW-6, MW-7, MW-8, MW-10, MW-11, MW-13 and MW-14 at concentrations ranging from 0.22 µg/l to 4,800 µg/l.
- Laboratory analysis detected trans-1,2-dichloroethene (t-DCE) in samples from wells MW-2, MW-6, MW-7, MW-8, MW-10, MW-13 and MW-14 at concentrations ranging from 0.21 µg/l to 7.5 µg/l.
- Laboratory analysis detected VC in samples collected from wells MW-6, MW-10, MW-13 and MW-14 at concentrations ranging from 0.039 µg/l to 28 µg/l.
- Laboratory analysis detected 1,1-dichloroethane in one sample collected from well MW-3 at a concentration of 0.45 µg/l.
- There were no additional detections of HVOCs in the groundwater samples at concentrations above the laboratory PQLs.

For each of the four samples for which MEE analysis was conducted (wells MW-5 through MW-8), methane was detected at concentrations ranging from 360 µg/l to 2,300 µg/l. Concentrations of ethane and ethene were not detected in the samples above the laboratory PQL.

- The laboratory analytical results for reconnaissance groundwater samples collected to date are presented in Table 5 and summarized below:
  - Laboratory analysis detected PCE in samples collected from borings B-2, B-25, B-27, B-28, B-33, B-34, B-35, B-36, B-38, B-39, B-40, SC-1, SC-2 and SC-4 at concentrations ranging from 0.24 µg/l to 20 µg/l.
  - Laboratory analysis detected TCE in samples collected from borings B-36 and B-39 at concentrations of 2.3 µg/l to 1.4 µg/l, respectively.
  - Laboratory analysis detected c-DCE in samples from borings B-33, B-35, B-36, B-38, B-39 and B-40 at concentrations ranging from 1.3 µg/l to 170 µg/l.
  - Laboratory analysis detected t-DCE in samples from borings B-33, B-36, B-38, B-39, and B-40 at concentrations ranging from 1.3 µg/l to 14 µg/l.
  - Laboratory analysis did not detect concentrations of VC above the laboratory PQL in the samples collected.
  - Laboratory analysis of the reconnaissance groundwater sample collected from boring B-2 detected chlorobenzene, 1,4-dichlorobenzene, and 1,2-dichlorobenzene at concentrations above the laboratory PQL.

There were no additional detections of HVOCs in the reconnaissance groundwater samples at concentrations above laboratory PQLs.

- The tidal influence study indicates groundwater fluctuations of 0.03 feet in MW-1, 3.5 feet in MW-12, and 0.41 feet in MW-14 over the 72-hour monitoring period. The tidal study results are summarized in Table 6.
- The Site groundwater meets the MTCA criteria for non-potability (WAC 173-340-720(2)(d)). The applicable criteria to demonstrate non-potability are presented below:

- The sources of drinking water in the Tacoma tideflats area are treated surface water (Green River watershed) and a network of 24 high-capacity wells that are screened in deep aquifers. Shallow groundwater does not serve as a current source of drinking water either at the Site or in the vicinity of the Site.
- Due to the proximity of shallow site groundwater to marine surface water (Sitcum Waterway) and the Site geologic setting, COCs in groundwater are unlikely to be transported to groundwater that is a current or potential future source of drinking water.

Shallow groundwater at the Site is unlikely to be a potential future source of drinking water for the following reasons: the marine surface water is not classified as a suitable source of domestic supply, as defined by WAC 173-201a, because of the marine content of the surface water; the Site groundwater is hydraulically connected to marine surface water based on proximity to surface water and observed tidal influence; and intrusion of marine water is likely under pumping conditions due to the close proximity and hydraulic connection to Site groundwater

### 3.3.4 Soil Vapor

The results of the soil vapor survey are qualitative in nature, and provide an indication of where concentrations of analytes have come to be located in the shallow subsurface. The laboratory results of the Sorbers are reported as “micrograms per Sorber” ( $\mu\text{g}/\text{Sorber}$ ) and indicate the concentration of the VOC analyte adsorbed during the Sorber exposure period. The soil vapor survey results indicate the following:

- The analytical data for the soil gas surveys indicate that soil vapor plumes of HVOCs are present in the Site subsurface.
- Laboratory analysis detected PCE concentrations ranging from 7.12  $\mu\text{g}/\text{Sorber}$  to 463.45  $\mu\text{g}/\text{Sorber}$ .
- Laboratory analysis detected TCE concentrations ranging from 0.15  $\mu\text{g}/\text{Sorber}$  to 134.14  $\mu\text{g}/\text{Sorber}$ .
- Laboratory analysis also detected concentrations of c-DCE, t-DCE, 1,1,1-trichloroethane (1,1,1-TCA), chloroform, and 1,1,2,2-tetrachloroethane.
- Of the HVOCs detected by the analysis of the Sorbers, PCE was detected at the highest concentration, followed by TCE, c-DCE, and t-DCE. The single highest concentrations of PCE, TCE, and DCE were detected adjacent to the south side of the sanitary sewer line and approximately midway between the second and third side sewer laterals identified at the Site (LAT2 and LAT3). An additional source area appears to be located north of the former plating area, inside the Building.

Tabularized analytical data and isoconcentration contour maps presenting the soil vapor survey data are presented in Appendix D.

### 3.3.5 Indoor Air

The RI results indicate the following with respect to the condition of indoor air at the Site:

- Laboratory analysis detected benzene, toluene, ethylbenzene, and total xylenes (BTEX) in indoor and ambient air samples collected using Summa® canisters. The maximum concentrations of BTEX detected in indoor and ambient air were 1.4 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ), 2.7  $\mu\text{g}/\text{m}^3$ , 1.3  $\mu\text{g}/\text{m}^3$ , and 5.6  $\mu\text{g}/\text{m}^3$ , respectively. The highest concentrations of benzene, ethylbenzene and total xylenes were detected in sample BH6170903, located near the southeast corner of the Building.
- Laboratory analysis detected HVOCs only in indoor air samples collected using Summa® canisters. The maximum concentrations of the HVOCs detected (PCE, TCE, c-DCE, and 1,1,1-TCA) were 25  $\mu\text{g}/\text{m}^3$ , 1.2  $\mu\text{g}/\text{m}^3$ , and 10  $\mu\text{g}/\text{m}^3$ , respectively.
- Laboratory analysis of the air samples collected using charcoal tubes in accordance with NIOSH Method 1003 did not detect concentrations of PCE, TCE, c-DCE, t-DCE, or VC.
- The Port's consultant concluded that the detected concentrations of HVOCs in indoor air were not above actionable limits (Occupational Safety and Health Agency Permissible Exposure Limits).

The analytical data for the air samples are summarized in Table 7. A copy of the report documenting the air sampling activities is provided in Appendix E.

## 4. REGULATORY ELEMENTS

The regulatory elements applicable to the evaluation of the nature and extent of concentrations of COCs include: applicable regulations; a CSM with the applicable exposure pathways; and the development of cleanup standards for COCs in the media of concern.

The Site has been entered into Ecology's VCP, and investigation and cleanup of the Site are governed by MTCA. MTCA regulations establish stringent default cleanup standards and methods for developing site-specific cleanup levels.

Other potential applicable or relevant and appropriate requirements (ARARs) evaluated in the development of the RI Cleanup Levels included:

- Ch. 173-204 WAC - Sediment Management Standards;
- Ch. 173-201A WAC - Aquatic Life – Marine (Acute and Chronic);
- Clean Water Act §304 – Human Health and Aquatic Life – Marine (Acute and Chronic);
- National Toxics Rule, 40 CFR 131 – Human Health and Aquatic Life – Marine (Acute and Chronic); and
- Washington State Dangerous Waste Regulations (WAC 173-303).

### 4.1 CONTAMINANTS OF CONCERN

The Site COCs include PCE and daughter products generated by the reductive dechlorination, including TCE, c-DCE, t-DCE and VC. The distribution of the COCs in groundwater at the Site is affected by biologic, hydrogeologic, and geochemical variables. Concentrations of chlorinated ethenes such as PCE and TCE adsorbed to soil and dissolved in groundwater are subject to biodegradation processes including reductive dechlorination, aerobic oxidation, anaerobic oxidation and anaerobic co-metabolism. Select bacteria that thrive in anaerobic environments are capable of utilizing PCE, TCE, and other HVOC constituents as energy sources and, through the process of biodegradation, transform the HVOCs into innocuous byproducts. The typical breakdown sequence for PCE and HVOCs under anaerobic conditions is summarized below:

- PCE ► TCE ► c-DCE (primarily)/t-DCE(secondary) ► VC ► ethene and carbon dioxide (CO<sub>2</sub>)

The concentrations of TCE, c-DCE, t-DCE, and VC detected in samples collected at the Site are likely degradation constituents associated with the reductive dechlorination process described above.

### 4.2 CONCEPTUAL SITE MODEL

A CSM has been developed that is based on the data collected during the RI activities conducted at the Site by Pacific Crest and others. The CSM identifies plausible exposure pathways for human receptors. The CSM is illustrated on Figure 5 and the CSM elements are discussed below:

- The primary sources of hazardous materials appear to be PCE-containing metal cleaning solvents used during former operations at the facility. The COCs include: PCE and its HVOC degradation products that exceed the preliminary screening levels (TCE, c-DCE, and VC).
- The distribution of HVOC contamination suggests that the primary contaminant source area is associated with a historical release of PCE beneath the existing building. The HVOC contamination in groundwater located beneath the alley to the southeast of the Building is likely associated with a secondary release from the sanitary sewer line that services the Building from the alley. The presently estimated distribution and extent of HVOCs in soil and groundwater at the Site is illustrated in cross-sectional view, in and plan view on Figures 3 and 6, respectively.
- The media of concern where concentrations of COCs have been detected include: soil, groundwater, and indoor air. The existing characterization data do not indicate that HVOCs in groundwater have migrated to surface water. However, due to the close proximity to surface water and observed tidal influence, migration to surface water is considered possible under potential future exposure scenarios.
- The applicable transport mechanisms for the migration of COCs include: direct release to soil; migration to subsurface soil; migration/leaching to groundwater; volatilization from soil and groundwater to air; future groundwater migration to surface water; and future uptake by plants or animals.
- Inhalation was identified as the only current complete exposure pathway for commercial and industrial workers. Future receptors exposed to contaminants in air at the Site include: commercial and construction workers. The Site is located in a designated industrial zone; therefore, residents are not considered plausible future receptors under future land use.
- Future receptors exposed to contaminants in soil at the Site include commercial/industrial workers and construction workers for the ingestion and dermal exposure pathways.
- Future receptors exposed to contaminants in groundwater at the Site include construction workers for the dermal exposure pathway. Groundwater at the Site is not potable; therefore, ingestion of groundwater is not a complete exposure pathway.
- Potential future receptors exposed to contaminants in surface water and sediment include: commercial and industrial worker; construction worker, and recreational users for the dermal exposure pathway.
- Potential future receptors exposed to contaminants in marine biota resulting from uptake of contaminants in surface water or sediment include: recreational users.

### **4.3 CLEANUP STANDARDS**

As defined in WAC 173-340-700, cleanup standards for a site include establishing cleanup levels and points of compliance at which those cleanup levels will be attained. The preliminary cleanup standards for the Site have been established in accordance with WAC 173-340-700 through WAC 173-340-760, which are protective of human health and the environment, and also comply with the ARARs for the Site.

### 4.3.1 Cleanup Levels

Pacific Crest developed cleanup levels for the RI COCs in the media of concern that are protective of human health and the environment under specified exposure conditions (WAC 173-340-200). Pacific Crest obtained technical information related to the establishment of cleanup levels under MTCA from Ecology's Cleanup Levels and Risk Calculation (CLARC) available at <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>. The MTCA methods for establishing cleanup levels are summarized below:

- Method A provides tables of default cleanup levels (Method A Cleanup Levels) that are protective of human health for common hazardous substances detected in media of concern. Method A Cleanup Levels are applicable for use at sites with relatively few hazardous substances. Method A Cleanup Levels have been developed for unrestricted land use and industrial land use scenarios. Applicable Method A Cleanup Levels were used as Preliminary Screening Levels (PSLs) for the Site.
- Method B provides a set of equations that use chemical-specific, site-specific, and exposure-specific parameters to develop risk-based cleanup levels (Method B Cleanup Levels). Method B Cleanup Levels are applicable for use at all sites governed by MTCA. Method B Cleanup Levels are calculated based on a residential exposure scenario, assuming a target cancer risk of 1 in 1,000,000 (1.0E-06) for carcinogens (PCE, TCE, and VC) and a hazard index of 1 for non-carcinogens (c-DCE). After calculation of Method B Cleanup Levels, the values are compared to laboratory practical quantitation limits (PQLs) and adjusted upward, if necessary, in order to insure that Method B Cleanup Levels are not less than the PQLs.
- Method C provides a set of equations and modified criteria used primarily for industrial properties. The Site meets the industrial land use criteria for Method C. The MTCA Method C concentrations were calculated based on an industrial exposure scenario, assuming a target cancer risk of 1 in 100,000 (1.0E-05) for carcinogens (PCE, TCE, and VC) and a hazard index of 1 for non-carcinogens (c-DCE). When multiple hazardous substances are present, cleanup levels for individual hazardous substances are adjusted downward to ensure that the total excess cancer risk does not exceed 1 in 100,000 (1.0E-05) and the total non-carcinogenic risk does not exceed a hazard quotient of 1.0.

The final RI Cleanup Levels are discussed in the following sections.

#### 4.3.1.1 Groundwater

The basis for derivation of the RI Cleanup Levels for COCs detected in groundwater at the Site is presented as follows:

- The cleanup levels for PCE, TCE, c-DCE, and VC were calculated in accordance with Method C of MTCA for the surface water exposure pathway that is protective of human exposure scenarios for ingestion of seafood. The cleanup levels for PCE, TCE and VC were adjusted downward to ensure that the total excess cancer risk does not exceed 1.0E-05. No adjustment was necessary for the cleanup level of c-DCE.

A copy of the risk adjustment worksheet is provided as Table 1 in Appendix F. Copies of the calculation worksheets for the surface water exposure pathway are provided in Appendix F. The RI Cleanup Levels for groundwater are summarized below:

COC	Method A (µg/l)	Method C (µg/l)	RI Cleanup Level (µg/l)	RI Cleanup Level Regulatory Basis
PCE	5	9.7	7.76	MTCA Method C – Adjusted
TCE	5	165.5	16.55	MTCA Method C - Adjusted
c-DCE	--	13,000	13,000	MTCA Method C
VC	0.2	90	9	MTCA Method C - Adjusted

Note: "--" no established cleanup level

#### 4.3.1.2 Upland Soil

The RI Cleanup Levels for COCs detected in upland soil at the Site including PCE, TCE, c-DCE, and VC, were calculated in accordance with Method B of MTCA for the dermal exposure route and for Method C for surface water exposure pathway that is protective of human exposure scenarios for ingestion of seafood. The lower of the values (dermal exposure vs. surface water) was selected as the RI Cleanup Level.

Copies of the calculation worksheets for the surface water exposure pathway are provided in Appendix F. The RI Cleanup Levels for soil are summarized below:

COC	Method A (mg/kg)	Dermal Exposure (mg/kg)	Surface Water (mg/kg)	RI Cleanup Level (mg/kg)	RI Cleanup Level Regulatory Basis
PCE	0.05	1.85	0.334	0.334	MTCA Method C - Adjusted
TCE	0.03	11	0.296	0.296	MTCA Method C - Adjusted
c-DCE	--	800	65	65	MTCA Method C
VC	--	0.667	0.057	0.057	MTCA Method C - Adjusted

Note: "--" no established cleanup level

#### 4.3.1.3 Air

The cleanup levels for the COCs in air at the Site were calculated based on an exposure scenario for workers in an industrial setting. The Method C air cleanup levels were calculated assuming a workday of 10 hours/day and an exposure frequency of 250 days per year (i.e., a typical 5 day/week work schedule). When multiple hazardous substances are present, cleanup levels for individual hazardous substances are adjusted downward to ensure that the total excess cancer risk does not exceed 1 in 100,000 (1.0E-05) and the total non-carcinogenic risk does not exceed a hazard quotient of 1.0. The cleanup levels for PCE, TCE and VC were adjusted downward to ensure that the total excess cancer risk does not exceed 1.0E-05. No adjustment was necessary for the cleanup level of c-DCE. Copies of the calculation worksheets are provided in Appendix F. The RI Cleanup Levels for air are summarized below:

COC	Air Cleanup Level (µg/m <sup>3</sup> )	RI Cleanup Level Regulatory Basis
PCE	6.57	MTCA Method C – Adjusted
TCE	1.55	MTCA Method C –Adjusted
c-DCE	122.7	MTCA Method C
VC	0.99	MTCA Method C –Adjusted

## **4.3.2 Point of Compliance**

The point of compliance is defined in WAC 173-340-200 as the point where cleanup levels, established in accordance with WAC 173-340-720 through WAC 173-340-760, shall be attained. Once the cleanup levels are attained at the point of compliance, the concentrations of COCs have achieved the regulatory requirements established under MTCA.

### **4.3.2.1 Point of Compliance for Groundwater**

The standard point of compliance (SPOC) for groundwater is defined as all groundwater from the uppermost level of the saturated zone extending vertically to the lowest depth that is affected by any of the COCs. A conditional point of compliance (CPOC) for groundwater at sites abutting surface water is defined as a point in surface water located as close as technically possible to points where groundwater flows into surface water. A CPOC is subject to Ecology approval, in addition to the following regulatory conditions specified in WAC 173-340-720(8)(i):

- Demonstration that contaminated groundwater is entering surface water and will continue to enter surface water even after implementation of the selected cleanup action;
- Demonstration that it is not practicable to meet the cleanup level at a point within groundwater before entering the surface water within a reasonable restoration time frame;
- Implementation of all known available and reasonable methods of treatment for groundwater remediation prior to discharge into surface water;
- Demonstration that groundwater discharges shall not result in violations of sediment quality values published in WAC 173-204;
- Implementation of long-term groundwater and surface water monitoring; and
- Submittal of notice of, and invitation to comment on, the proposal for a CPOC to natural resource trustees, the Washington State Department of Natural Resources and United States Army Corps of Engineers.

For the purposes of this report, the SPOC will be used for evaluation of compliance with the cleanup standards. However, proposals to utilize a CPOC may be developed in the future.

### **4.3.2.2 Point of Compliance for Soil**

The point of compliance for soil based on the protection of groundwater is defined as all soil throughout the Site. The point of compliance for soil cleanup levels based on direct contact is soil between ground surface and 15-feet bgs.

### **4.3.2.3 Point of Compliance for Air**

Air cleanup standards apply to ambient (outdoor) air and to air within any building or other structure large enough to fit a person. The point of compliance for air is defined as ambient air throughout the Site.

## 5. CONCLUSIONS

The results of the RI activities described in this report are summarized in the following sections.

### 5.1 SOIL

The RI investigation indicates the following with respect to soil conditions at the Site:

- The unsaturated soil at the Site consists of sand and gravel fill to a depth of up to 3 feet bgs, overlying fine sand with occasional minor silt and shell fragments.
- The laboratory analysis of a soil sample collected from boring MW-11 detected PCE at a concentration that exceeded the RI Cleanup Level of 0.334 mg/kg. The laboratory analysis of soil samples collected from borings MW-10, MW-13, and MW-14 detected PCE at concentrations above the laboratory PQL, but below the RI Cleanup Level. In the remaining samples, concentrations of PCE were not detected above the laboratory PQL.
- The laboratory analysis of soil samples collected from borings MW-10, MW-11, MW-13 and MW-14 detected TCE and/or c-DCE at concentrations which were above the laboratory PQL, but below the applicable RI cleanup levels. In the remaining soil samples analyzed, concentrations of HVOCs were not detected above the laboratory PQL.
- Soil with concentrations of HVOCs exceeding applicable RI Cleanup Levels has been confirmed only at the location of well MW-11, located beneath the building footprint. The areal and vertical extent of HVOCs in soil at concentrations exceeding their applicable RI Cleanup Levels appears to be generally defined and limited to the general vicinity around well MW-11. The estimated areal extent of soil requiring remedial action is illustrated on Figure 6.

### 5.2 GROUNDWATER

The RI results indicate the following with respect to the condition of groundwater at the Site:

- Shallow groundwater at the Site is located in a shallow unconfined aquifer which ranges in thickness from between 7 to 15 feet deep, directly overlying a competent silt layer recorded to be up to 11 feet thick at the Port of Tacoma. In the vicinity of the Site, the top of the silt layer appears to dip to the north, towards the Sitcum Waterway.
- The tidal study indicates that groundwater elevations beneath the northwestern portion of the Site are influenced by tidal fluctuation in the nearby Sitcum Waterway, while groundwater beneath the northeastern and southern portions of the Site does not appear to be significantly affected by tidal fluctuation.
- The laboratory analysis of groundwater samples collected from monitoring wells between February 2007 and March 2009 indicate the following:
  - The concentration of PCE in the groundwater sample collected from well MW-11 in March 2009 (2,600 µg/l.) is considered to be potentially indicative of the presence of dense non-aqueous phase liquid (DNAPL).

- Concentrations of PCE exceeded the RI cleanup level during at least one sampling event in samples collected from wells MW-1, MW-2, MW-5, MW-6, MW-7, MW-8, MW-10, MW-11, MW-13 and MW-14. In the remaining samples, concentrations of PCE were either below the RI Cleanup Level, or were not detected above the laboratory PQL.
- Concentrations of TCE exceeded the RI Cleanup Level during at least one sampling event in samples collected from wells MW-11 and MW-13. In the remaining samples, concentrations of TCE were either below the RI Cleanup Level, or were not detected above the laboratory PQL.
- Concentrations of c-DCE were either below their applicable RI Cleanup Levels, or were not detected above the laboratory PQL.
- Concentrations of VC exceeded the RI Cleanup Level during at least one sampling event in samples collected from wells MW-10, and MW-14. In the remaining samples, concentrations of VC were either below the RI Cleanup Level, or were not detected above the laboratory PQL.
- There were no additional detections of HVOCs in the groundwater samples that exceeded applicable screening levels.
- The laboratory analysis of reconnaissance groundwater samples collected on November 29, 2007 (Borings B-1 through B-4) indicate the following:
  - Laboratory analysis of the samples did not detect PCE or the related HVOC daughter products at concentrations above the laboratory PQLs in any of the reconnaissance groundwater samples.
  - Laboratory analysis of the reconnaissance groundwater sample collected from boring B-2 detected chlorobenzene, 1,4-dichlorobenzene, and 1,2-dichlorobenzene at concentrations above the laboratory PQL, but below the applicable screening level (MTCA Method B cleanup levels).
- The lateral extent of HVOC contamination in groundwater appears to be delineated to below applicable RI Cleanup Levels to the west by MW-12, to the south by MW-9, to the southeast by MW-3, MW-4 and MW-5, and to the east by borings B-1 through B-4. The estimated areal extent of groundwater requiring remedial action is illustrated on Figure 6.
- The Site conditions are supportive of anaerobic reductive dechlorination of PCE and its HVOC degradation products by naturally occurring populations of bacteria.
- The areal and vertical extent of HVOC contamination in groundwater is not delineated to the north of wells MW-13 and MW-14.

### **5.3 SOIL VAPOR AND INDOOR AIR**

The soil vapor survey and indoor air results indicate the following:

- The distribution of the concentrations of HVOCs in soil gas in the alley south of the Building form a southwest-northeast trending elongated plume, with the plume axis corresponding to the approximate location of the sanitary sewer line in the location of the alley. The detected concentrations of PCE attenuate with increasing distance from the sewer line hot spot.

- The distribution of the concentrations of HVOCs in soil gas located under the Building form a northwest trending elongated plume. The detected concentrations of PCE attenuate with increasing distance from the hot spot located near the former plating area. The maximum detected concentrations of TCE and c-DCE are located north of the PCE source areas. The apparent explanation for this phenomenon is that the concentrations of TCE and c-DCE detected in soil gas are the result of reductive dechlorination that is occurring in groundwater.
- The concentrations of PCE, TCE and c-DCE detected in indoor air appear to be the result of vapor intrusion of soil gas into indoor air. In accordance with Ecology's draft *Guidance for Evaluating Vapor Intrusion in Washington State: Investigation and Remedial Action* dated October 9, 2009 (VI Guidance), Pacific Crest compared the indoor air results to cleanup levels calculated in accordance with MTCA, rather than to OSHA PELs. The detected concentration of PCE in one indoor air sample exceeds the MTCA Method C cleanup level by a factor of 3.8. In accordance with Ecology's VI Guidance, mitigation of vapor intrusion is required when analytical results of indoor air exceed the applicable cleanup level or screening level by a factor of 10. Ecology's guidance recommends periodic sampling of indoor air in situations where detected concentrations of contaminants in indoor air exceed the screening levels by less than a factor of 10.
- The sources of the other compounds detected in either indoor air or soil gas (BTEX, 1,1,1-TCA, 1,1,2,2-tetrachloroethane, and chloroform) are not known. However, these compounds have not been detected in soil or groundwater and may be present in soil and/or indoor air due to their presence in substances located inside the Building.

## 6. DATA GAPS

The following RI data gap has been identified based on the available site characterization data and the CSM:

- Data Gap No. 1 - The location of the source area(s) where releases of PCE occurred within the building appears to be the in the vicinity of the former plating area. Further detailed characterization of the nature and extent of concentrations of the COCs in soil and groundwater is necessary to characterize the exact location and extent of the source area within the Building where the release of PCE occurred.
- Data Gap No. 2 - The characterization of the nature and areal and vertical extent of COCs in groundwater is incomplete. Further characterization of groundwater quality to the north of the former Sound Mattress and Felt Property is necessary to delineate the extent of concentrations of HVOCs in groundwater to below RI Cleanup Levels.

## 7. REFERENCES

- Environmental Associates, Inc. 2004a. Preliminary Subsurface Exploration, RevChem Plastics, Inc., 1132 Thorne Road, Tacoma, Washington. June 10.
- \_\_\_\_\_, 2004b. Groundwater Plume Delineation, Revchem Plastics Facility, 1132 Thorne Road, Tacoma, Washington. July 23.
- \_\_\_\_\_, 2005. Offsite Groundwater Plume Delineation, Former Automotive Tire Service Facility, 1132 Thorne Road, Tacoma, Washington. February 11.
- Environmental Management Services, LLC. 2005. Groundwater Sampling Report. July 20.
- Galster, R.W. and W.T. Laprade. 1991. *Geology of Seattle*, Washington, United States of America. Bulletin of the Association of Engineering Geologists Vol. XXVIII, No. 3: 235-302.
- LSI Adapt. 2005. Supplemental Characterization, Groundwater Monitoring Well Installation and July 2005 Groundwater Quality Monitoring Report, Former Automotive Tire Service Facility, 1132 Thorne Road, Tacoma, WA 98421. November 10.
- Pacific Crest Environmental, LLC. 2006a. *Focused Site Investigation Report, Shaub-Ellison Company, 1132 Thorne Road, Tacoma, Washington, Pacific Crest No. 105-001. June 13.*
- Puls, R.W. and M.J. Barcelona. 1996. Low-Flow (Minimal Drawdown) Ground-water Sampling Procedures, EPA/540/S-95/504.
- Tacoma Public Library - Tacoma Pierce County Buildings Index – Building No. 1960 – 1940 East 11<sup>th</sup> Street - <http://search.tacomapubliclibrary.org/buildings/bldg1up.asp?n=1960>*
- Tacoma Public Library – Photograph Archive – Washington Steel Products - <http://search.tpl.lib.wa.us/images/dt6n.asp>*
- Washington State Department of Ecology. 2007. Letter Re: Opinion under WAC 173-340-515(5) on Remedial Action for the following Hazardous Waste Site: Name: Former Sound Mattress & Felt Company/Brown & Haley Warehouse, Address: 1940 East 11<sup>th</sup> Street, Tacoma, Facility/Site No.: 1232087, VCP No.: SW0857. May 30.
- Wiedemeier, T. H., Rifai, H. S., Newell, C. J., and Wilson, J. T., 1999, Natural Attenuation of Fuels and Chlorinated Solvents in the Subsurface, John Wiley & Sons.

## 8. LIMITATIONS

The conclusions and recommendations contained in this report are based on professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location and are subject to the following inherent limitations:

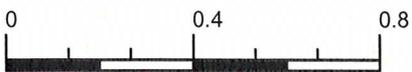
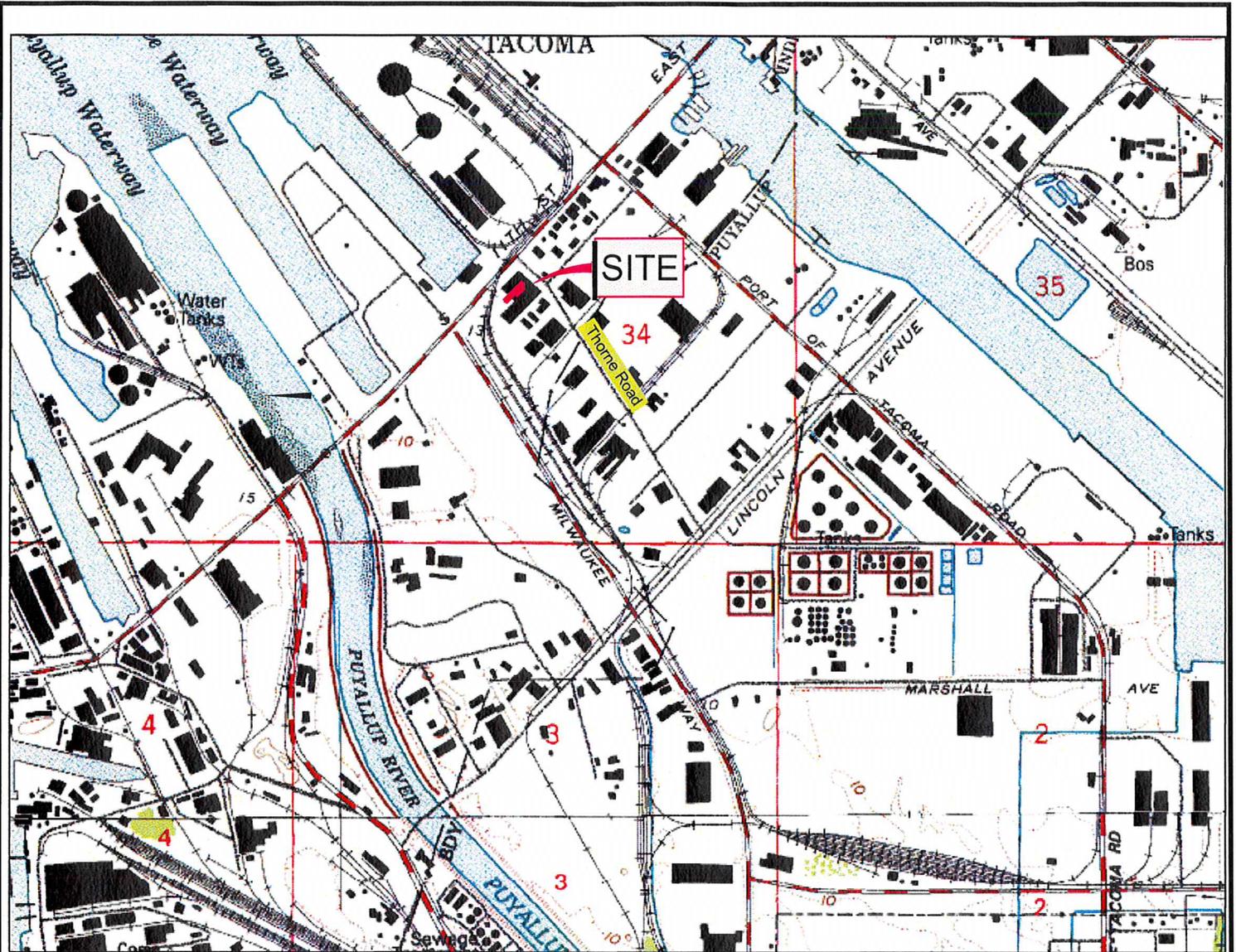
- **Accuracy of Information.** Certain information used by Pacific Crest in this report has been obtained, reviewed, and evaluated from various sources believed to be reliable. Although the conclusions, opinions, and recommendations are based in part on such information, Pacific Crest's services did not include the verification of its accuracy or authenticity. Should such information prove to be inaccurate or unreliable, Pacific Crest reserves the right to amend or revise its conclusions, opinions, and/or recommendations.

## **FIGURES**

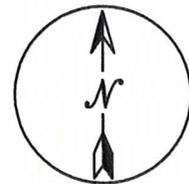
### **REMEDIAL INVESTIGATION REPORT**

**Former Sound Mattress and Felt Property  
1940 East 11<sup>th</sup> Street  
Tacoma, Washington**

**Pacific Crest PN: 110-001**



Approximate Scale in Miles



# Figure 1

## Site Location Map

Former Sound Mattress & Felt Company  
Property

1940 East 11th Street  
Tacoma, Washington

Project No: 110-001

DWN: AG

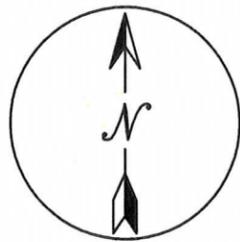
CKD: LC

DATE: 10/13/06



**PACIFIC CREST ENVIRONMENTAL**

**WWW.PCENV.COM 425-888-4990**



Approximate Scale in Feet

East 11th Street

Thorne Road

Ross Way

Manufacturing/Painting  
Packing/Shipping

Painting &  
Drying  
Plating  
Buffing

RevChem  
Plastics

Warehouse

Castan  
Trucking

C.O.

Lat1

Lat2

Lat3

MW-12

MW-13

MW-14

MW-11

MW-10

B-2

B-3

B-4

B-1

MW-4

MW-6

MW-8

MW-1

MW-7

MW-2

MW-3

MW-9

### Legend

- ◆ MW-9 Groundwater Monitoring Well
- B-4 Soil Boring
- Road
- Building Exterior
- - - Property Boundary
- - - Pre-1965 Operations
- SS — Sanitary Sewer
- G — Gas Line
- A—A' Cross Section A - A' Location



PACIFIC CREST ENVIRONMENTAL  
WWW.PCENV.COM 425-888-4990

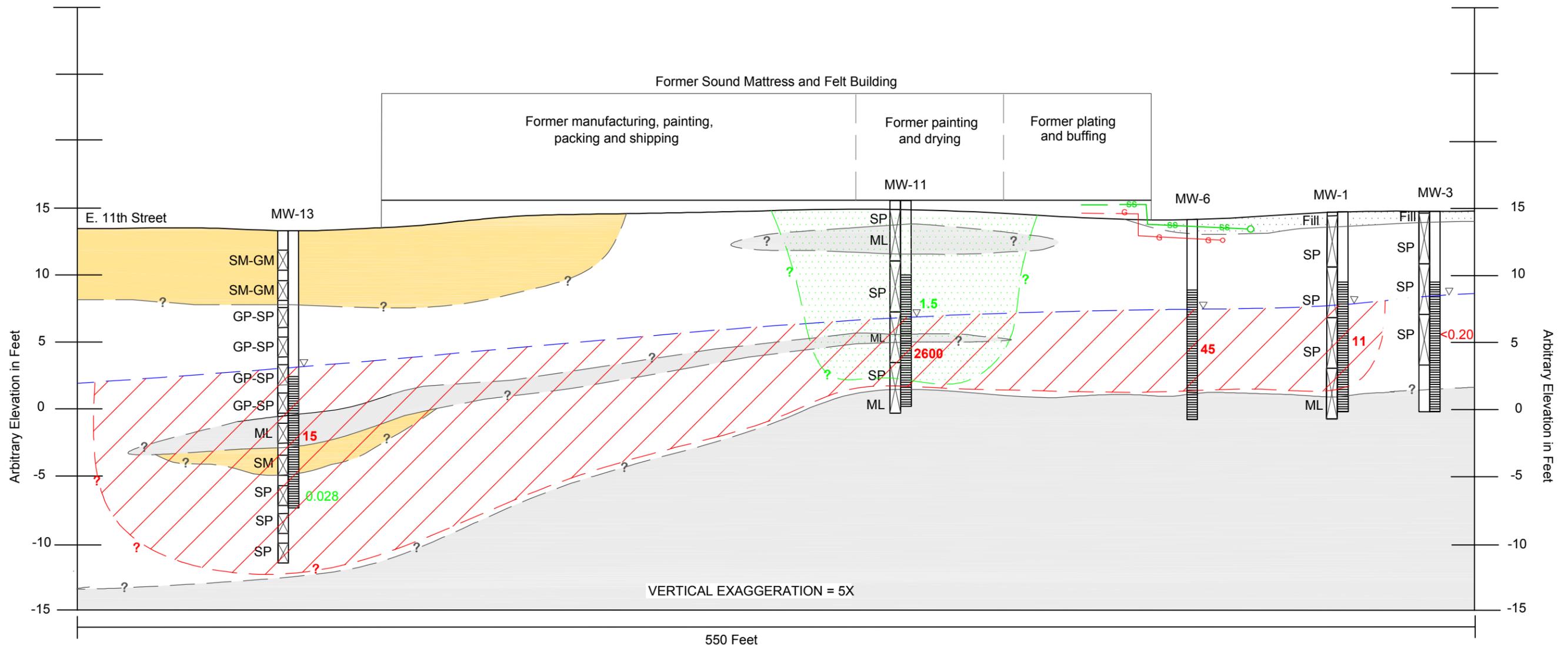
### Figure 2

#### Site Plan with Cross Section Location

Former Sound Mattress and Felt Company Property  
1940 East 11th Street Tacoma, Washington

**A**  
(NORTHWEST)

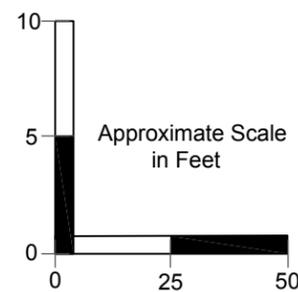
**A'**  
(SOUTHEAST)



**LEGEND**

- Blank Well Casing
- Potentiometric Elevation in Well
- Soil Sample Interval
- Screened Interval
- FILL
- SP, SM, GP-SP = Sand, Gravel and Sand
- SM, SM-GM = Sand or Sand and Gravel containing Silt
- ML = Silt
- Contact Between Sediment Types (Dashed Where Inferred)
- Groundwater Potentiometric Surface
- Sanitary Sewer
- Gas Line

- 45** Concentration of PCE in Groundwater in ug/L (Bold Indicates Concentration Above RI Cleanup Level)
- 1.5** Concentration of PCE in Soil in mg/kg (Bold Indicates Concentration Above RI Cleanup Level)
- Estimated Extent of Groundwater with Concentrations of PCE Greater Than the RI Cleanup Level
- Estimated Extent of Soil with Concentrations of PCE Greater Than the RI Cleanup Level

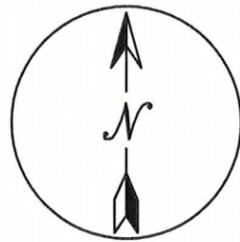


**Note:**  
PCE = tetrachloroethylene  
 $\mu\text{g/l}$  = micrograms per liter  
 $\text{mg/kg}$  = milligrams per kilogram

**PACIFIC CREST ENVIRONMENTAL**  
WWW.PCENV.COM 425-888-4990

**Figure 3**  
**Cross Section A - A'**  
Former Sound Mattress and Felt Company  
Property  
1940 East 11th Street Tacoma, Washington

Created with Print2PDF. To remove this line, buy a license at: <http://www.software602.com/>



East 11th Street

Thorne Road

Ross Way

Manufacturing/Painting  
Packing/Shipping

Painting & Drying  
Plating

Buffing

Warehouse

RevChem  
Plastics

Castan  
Truck

**Legend**

- ◆ MW-14 Groundwater Monitoring Well
- B-4 Soil Boring
- Road
- Building Exterior
- - - Property Boundary
- - - Pre-1965 Operations
- SS — Sanitary Sewer
- G — Gas Line
- ~ Potentiometric Contour (dashed where inferred)
- 9.00 Potentiometric Contour Elevation (feet)
- (9.02) Potentiometric Elevation in Well (feet)
- Approximate Direction of Groundwater Flow

MW-12 (3.92)

MW-13 (3.68)

MW-14 (6.54)

B-4

B-3

B-2

B-1

MW-10 (7.21)

MW-11 (7.12)

MW-5 (NM)

MW-6 (7.61)

MW-8 (8.99)

MW-4 (7.67)

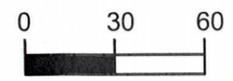
MW-1 (7.85)

MW-7 (9.02)

MW-2 (8.06)

MW-3 (8.13)

MW-9 (8.45)



Approximate Scale in Feet

NOTES:  
Groundwater potentiometric elevations are relative to an arbitrary datum.  
NM = not measured

**PACIFIC CREST ENVIRONMENTAL**  
WWW.PCENV.COM 425-888-4990

**Figure 4**  
**Groundwater Potentiometric Surface**  
**(March 10, 2009)**

Former Sound Mattress and Felt Company Property  
1940 East 11th Street Tacoma, Washington

Drawn By: AG/MB

Checked By: LC

Date: 05/11/09

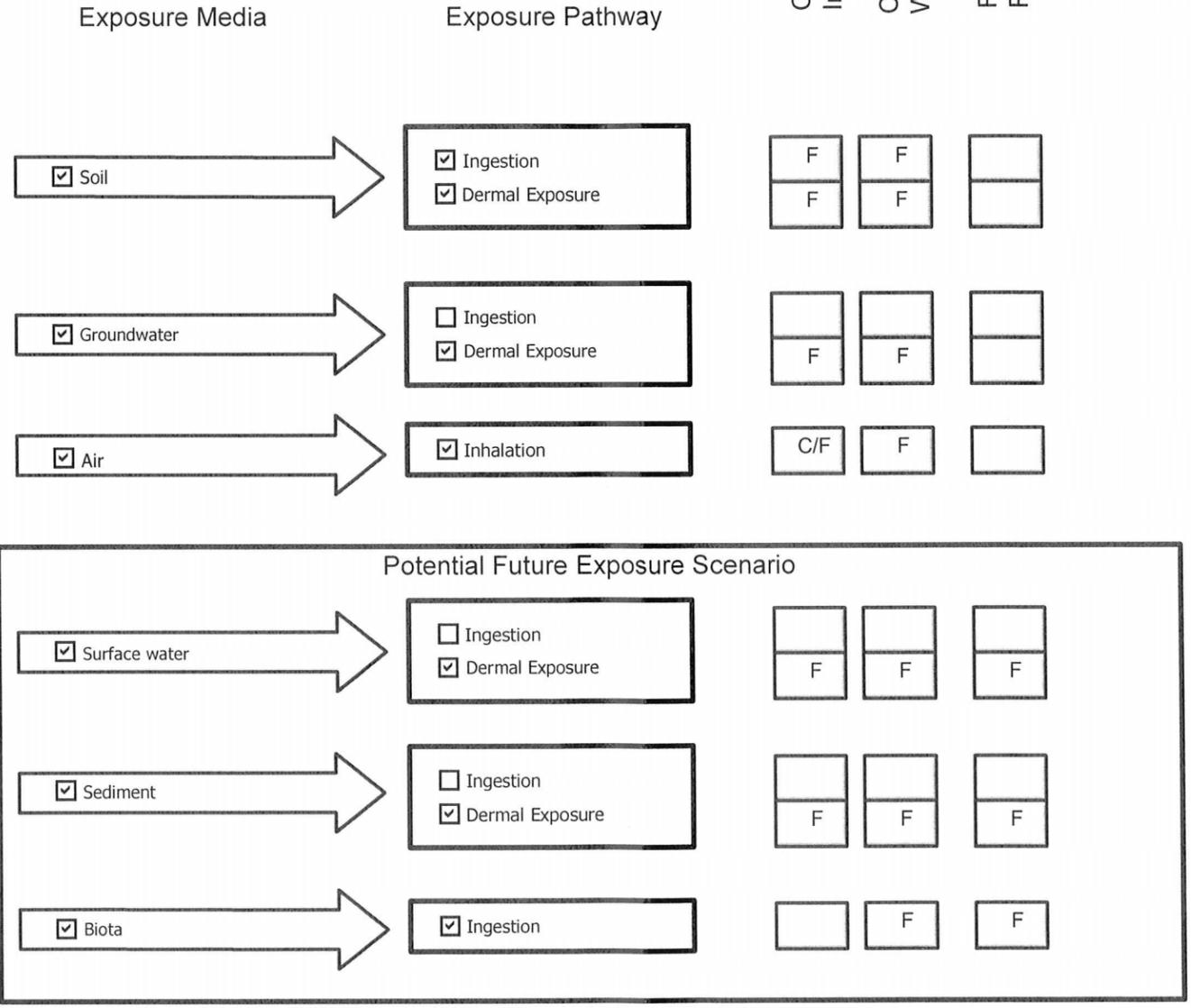
Project Number: 110-001

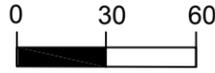
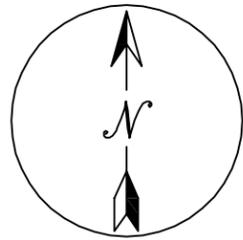
**Figure 5**  
**Conceptual Site Model**  
Former Sound Mattress & Felt Co.  
1940 East 11<sup>th</sup> Street  
Tacoma, Washington

Current (C) and Future (F)  
Human Receptors

Commercial/ Industrial	Construction Worker	Residential/ Recreant
---------------------------	------------------------	--------------------------

Primary Sources	Contaminant of Concern	Media of Concern	Transport Mechanism
Facility Operations PCE containing metal cleaning solvent	Halogenated Volatile Organic Compounds (HVOCs)  <input checked="" type="checkbox"/> Adsorbed onto soil <input checked="" type="checkbox"/> Dissolved in water <input type="checkbox"/> Non-aqueous phase	<input type="checkbox"/> Surface Soil (0-2-ft bgs)	<input type="checkbox"/> Direct release to soil <input type="checkbox"/> Migration to subsurface <input type="checkbox"/> Migration to groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> Runoff or erosion <input type="checkbox"/> Uptake by plant or animal <input type="checkbox"/> Other (list) _____
		<input checked="" type="checkbox"/> Soil (>2-ft bgs)	<input checked="" type="checkbox"/> Direct release to soil <input checked="" type="checkbox"/> Migration to groundwater <input checked="" type="checkbox"/> Volatilization <input type="checkbox"/> Other (list) _____
		<input checked="" type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Release to groundwater <input checked="" type="checkbox"/> Volatilization <input checked="" type="checkbox"/> Future Migration to surface water <input checked="" type="checkbox"/> Future Migration to sediment <input type="checkbox"/> Uptake by plant or animal <input type="checkbox"/> Other (list) _____
		<input type="checkbox"/> Surface Water	<input type="checkbox"/> Release to surface water <input type="checkbox"/> Volatilization <input type="checkbox"/> Sedimentation <input type="checkbox"/> Uptake by plant or animal <input type="checkbox"/> Other (list) _____
		<input type="checkbox"/> Sediment	<input type="checkbox"/> Release to sediment <input type="checkbox"/> Resuspension or erosion <input type="checkbox"/> Uptake by plant or animal <input type="checkbox"/> Other (list) _____





Approximate Scale in Feet

### Legend

- MW-9 Groundwater Monitoring Well
- B-4 Soil Boring
- Road
- Building Exterior
- Property Boundary
- Pre-1965 Operations
- Gas Line
- Sanitary Sewer
- Estimated Extent of Groundwater with HVOC Concentration Exceeding a MTCA Cleanup Level (dashed where inferred)
- Estimated Extent of Soil with HVOC Concentration Exceeding a MTCA Cleanup Level

**NOTES:**  
 HVOC = Halogenated Volatile Organic Compounds  
 PCE = Tetrachloroethene  
 TCE = Trichloroethene  
 c-DCE = cis-1,2-dichloroethene  
 VC = Vinyl Chloride  
 MTCA = Model Toxics Control Act cleanup regulation  
 Groundwater concentrations in micrograms per liter (ug/l)  
**BOLD** indicates concentrations exceeding the RI Cleanup Level  
 RI Cleanup Levels:  
 PCE = 7.76 ug/l  
 TCE = 16.55 ug/l  
 c-DCE = 13,000 ug/l  
 VC = 9 ug/l  
 < indicates concentrations less than the laboratory practical quantitation limit  
 Groundwater data collected 11/20/08 - 11/24/08, except as noted:  
 • B-1 through B-4 (reconnaissance samples) collected 11/29/07  
 • MW-12 through MW-14 collected 3/10/09  
 Estimated extent of soil contamination based on one soil sample from MW-11 with a PCE concentration of 1.5 milligrams per kilogram(mg/kg) which exceeds the RI Cleanup Level for soil for this contaminant of 0.138 mg/kg.

PCE	<b>15</b>
TCE	<b>17</b>
c-DCE	35
VC	0.39

PCE	<b>9</b>
TCE	6.5
c-DCE	20
VC	<b>28</b>

PCE	<0.20
TCE	<0.20
c-DCE	<0.20
VC	<0.20

PCE	<0.20
TCE	<0.20
c-DCE	<0.20
VC	<0.20

PCE	<0.20
TCE	<0.20
c-DCE	<0.20
VC	<0.20

PCE	<0.20
TCE	<0.20
c-DCE	<0.20
VC	<0.20

PCE	3
TCE	0.46
c-DCE	<0.20
VC	<0.20

PCE	0.84
TCE	1.2
c-DCE	<0.20
VC	<0.20

PCE	<b>11</b>
TCE	2.1
c-DCE	0.35
VC	<0.20

PCE	<0.20
TCE	<0.20
c-DCE	<0.20
VC	<0.20

PCE	<0.20
TCE	<0.20
c-DCE	<0.20
VC	<0.20

PCE	<b>2600</b>
TCE	<b>1400</b>
c-DCE	4800
VC	<30

PCE	2.7
TCE	2.3
c-DCE	58
VC	<b>21</b>

PCE	<b>45</b>
TCE	6.5
c-DCE	91
VC	1.2

PCE	<0.20
TCE	0.3
c-DCE	24
VC	<0.20

PCE	<b>24</b>
TCE	11
c-DCE	8.4
VC	<0.20

PCE	0.91
TCE	0.31
c-DCE	<0.20
VC	<0.20

PCE	<b>30</b>
TCE	3.8
c-DCE	1.6
VC	<0.20



**PACIFIC CREST ENVIRONMENTAL**  
 WWW.PCENV.COM 425-888-4990

**Figure 6**  
**Estimated Extent of HVOCs Exceeding Cleanup Levels**  
 Former Sound Mattress and Felt Company Property  
 1940 East 11th Street Tacoma, Washington

## **TABLES**

# **REMEDIAL INVESTIGATION REPORT**

**Former Sound Mattress and Felt Property  
1940 East 11<sup>th</sup> Street  
Tacoma, Washington**

**Pacific Crest PN: 110-001**

**Table 1**  
**Soil Analytical Results Summary**  
**Remedial Investigation Report**  
**Sound Mattress and Felt Company**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Location ID	Sample ID	Sampled By	Sample Date	Sample Depth <sup>2</sup>	Soil Analytical Results (milligrams per kilogram) <sup>1</sup>				
					Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride
B26	B26-1'-2'	EAI	5/14/2004	1-2	<0.05	<0.03	<0.05	<0.05	<0.5
B26	B26-5'-6'	EAI	5/14/2004	5-6	<0.05	<0.03	<0.05	<0.05	<0.5
SC-1	SC1-14.5	LSI	8/23/2005	14-14.5	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
SC-2	SC2-14.5	LSI	8/23/2005	14-14.5	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
SC-3	SC3-14.5	LSI	8/23/2005	14-14.5	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
SC-4	SC4-14.5	LSI	8/23/2005	14-14.5	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
MW-9	MW9/14.5	LSI	9/21/2005	14-14.5	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
MW-10	MW10-5-6.5	Pacific Crest	10/20/2006	5-6.5	0.024	0.0015	0.0035	<0.0012	<0.0012
B-1	B1-6-8	Pacific Crest	11/29/2007	6-8	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
B-2	B2-6-8	Pacific Crest	11/29/2007	6-8	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
B-3	B3-6-8	Pacific Crest	11/29/2007	6-8	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
B-4	B4-6-8	Pacific Crest	11/29/2007	6-8	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
MW-11	MW11-8-10-111908	Pacific Crest	11/19/2008	8-10	<b>1.5</b>	0.013	<0.0013	<0.0013	<0.0066
MW-12	MW12-18-22	Pacific Crest	3/4/2009	18-22	<0.00092	<0.00092	<0.00092	<0.00092	<0.0046
MW-13	MW13-18-19	Pacific Crest	3/4/2009	18-19	0.028	0.013	0.012	<0.0012	<0.0061
MW-14	MW14-7	Pacific Crest	3/6/2009	7	0.002	0.0025	<0.0012	<0.0012	<0.006
<b>Preliminary Screening Levels<sup>3</sup></b>					<b>0.05</b>	<b>0.03</b>	<b>800</b>	<b>1,600</b>	<b>0.667</b>
					<b>0.334</b>	<b>0.296</b>	<b>65</b>	<b>--</b>	<b>0.057</b>

**NOTE:**

<sup>1</sup>Analyzed by U.S. Environmental Protection Agency (EPA) Method 8260B.

<sup>2</sup>Depth in feet below ground surface.

<sup>3</sup>Method A or Method B Cleanup Levels Model Toxics Control Act Cleanup Regulation Chapter 173-340 of the Washington Administrative Code, as amended November 2007.

<sup>4</sup>Site Specific RI Cleanup Levels

Soil Samples collected from borings MW-1 through MW-8 were not submitted for laboratory analysis.

Results in **BOLD** denote concentrations above MTCA Method A cleanup levels.

< denotes result is less than laboratory practical quantitation limit listed or analyte not detected at or above the reporting limit.

- = not applicable

EAI = Environmental Associates, Inc.

LSI = LSI Adapt

Pacific Crest = Pacific Crest Environmental, LLC

**Table 2**  
**Groundwater Elevation Data Summary**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Well Identification	Date Gauged	Collected By	Top of Casing Elevation (feet) <sup>1</sup>	Total Well Depth (feet) <sup>2</sup>	Depth to Groundwater (feet) <sup>2</sup>	Potentiometric Surface (feet)
MW-1	7/12/2004	EAI	15.00	--	7.76	7.24
	1/27/2005	EAI	15.00	--	7.43	7.57
	7/7/2005	LSI	15.00	--	7.54	7.46
	9/27/2005	LSI	14.94 <sup>3</sup>	--	8.13	6.81
	2/6/2007	Pacific Crest	14.94	14.60	6.44	8.50
	11/20/2008	Pacific Crest	14.94	--	7.71	7.23
	3/10/2009	Pacific Crest	14.94	--	7.09	7.85
MW-2	7/12/2004	EAI	13.88	--	6.48	7.40
	1/27/2005	EAI	13.88	--	6.11	7.77
	7/7/2005	LSI	13.88	--	6.22	7.66
	9/27/2005	LSI	13.88	--	6.96	6.92
	2/6/2007	Pacific Crest	13.88	14.68	5.15	8.73
	11/20/2008	Pacific Crest	13.88	--	6.45	7.43
	3/10/2009	Pacific Crest	13.88	--	5.82	8.06
MW-3	7/12/2004	EAI	14.93	--	7.46	7.47
	1/27/2005	EAI	14.93	--	7.11	7.82
	7/7/2005	LSI	14.93	--	7.22	7.71
	9/27/2005	LSI	14.93	--	7.95	6.98
	2/6/2007	Pacific Crest	14.93	14.92	6.17	8.76
	11/20/2008	Pacific Crest	14.93	--	7.45	7.48
	3/10/2009	Pacific Crest	14.93	--	6.80	8.13
MW-4	7/12/2004	EAI	15.10	--	7.99	7.11
	1/27/2005	EAI	15.10	--	7.68	7.42
	7/7/2005	LSI	15.10	--	7.80	7.30
	9/27/2005	LSI	15.10	--	8.40	6.70
	2/6/2007	Pacific Crest	15.10	14.85	6.81	8.29
	11/20/2008	Pacific Crest	15.10	--	8.02	7.08
	3/10/2009	Pacific Crest	15.10	--	7.43	7.67
MW-5	1/27/2005	EAI	13.33	--	6.06	7.27
	7/7/2005	LSI	13.33	--	6.21	7.12
	9/27/2005	LSI	13.33	--	NM	--
	2/6/2007	Pacific Crest	13.33	14.58	5.45	7.88
	11/20/2008	Pacific Crest	13.33	--	NM	--
	3/10/2009	Pacific Crest	13.33	--	NM	--
MW-6	1/27/2005	EAI	13.51	--	6.18	7.33
	7/7/2005	LSI	13.51	--	6.29	7.22
	9/27/2005	LSI	13.51	--	NM	--
	2/6/2007	Pacific Crest	13.51	14.03	5.35	8.16
	11/20/2008	Pacific Crest	13.51	--	6.43	7.08
	3/10/2009	Pacific Crest	13.51	--	5.90	7.61
MW-7	1/27/2005	EAI	13.64	--	5.98	7.66
	7/7/2005	LSI	13.64	--	6.11	7.53
	9/27/2005	LSI	13.64	--	NM	--
	2/6/2007	Pacific Crest	13.64	14.59	5.05	8.59
	11/20/2008	Pacific Crest	13.64	--	6.23	7.41
	3/10/2009	Pacific Crest	13.64	--	4.62	9.02
MW-8	1/27/2005	EAI	13.68	--	6.18	7.50
	7/7/2005	LSI	13.68	--	6.27	7.41
	9/27/2005	LSI	13.68	--	NM	--
	2/6/2007	Pacific Crest	13.68	14.44	5.21	8.47
	11/20/2008	Pacific Crest	13.68	--	5.84	7.84
	3/10/2009	Pacific Crest	13.68	--	4.69	8.99

**Table 2**  
**Groundwater Elevation Data Summary**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Well Identification	Date Gauged	Collected By	Top of Casing Elevation (feet) <sup>1</sup>	Total Well Depth (feet) <sup>2</sup>	Depth to Groundwater (feet) <sup>2</sup>	Potentiometric Surface (feet)
MW-9	9/27/2005	LSI	13.57	--	6.46	7.11
	2/6/2007	Pacific Crest	13.57	14.74	4.35	9.22
	11/20/2008	Pacific Crest	13.57	--	5.69	7.88
	3/10/2009	Pacific Crest	13.57	--	5.12	8.45
MW-10	2/6/2007	Pacific Crest	12.81	14.79	5.19	7.62
	11/20/2008	Pacific Crest	12.81	--	5.89	6.92
	3/10/2009	Pacific Crest	12.81	--	5.60	7.21
MW-11	11/20/2008	Pacific Crest	15.42	15.8	8.79	6.63
	3/10/2009	Pacific Crest	15.42	--	8.30	7.12
MW-12	3/10/2009	Pacific Crest	12.01	20	8.09	3.92
MW-13	3/10/2009	Pacific Crest	12.90	20	9.22	3.68
MW-14	3/10/2009	Pacific Crest	12.34	11	5.80	6.54

**NOTES**

<sup>1</sup>Elevations are relative to an arbitrary Site benchmark

<sup>2</sup>Depth below top of well casing.

<sup>3</sup>MW-1 casing was repaired and resurveyed.

— = not available

NM = Not Measured

EAI = Environmental Associates, Inc.

LSI = LSI Adapt

Pacific Crest = Pacific Crest Environmental, LLC

**Table 3**  
**Groundwater Quality Parameters Summary**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Location ID	Sample ID	Measured By	Sample Date	Groundwater Quality Parameters				
				Temperature (°C)	Specific Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	pH	Oxidation Reduction Potential (mV)
MW-1	MW-1	LSI	7/7/2005	17.6	-	1.73	7.37	-21.4
	MW-1	LSI	9/27/2005	18.2	-	-	7.36	-33.9
	MW1-020707 <sup>1</sup>	Pacific Crest	2/7/2007	12.46	36.23	2.38	7.49	13.6
	MW1-112008 <sup>2</sup>	Pacific Crest	11/20/2008	15.04	0.367	0.66	7.1	-151.2
MW-2	MW-2	LSI	7/7/2005	17.8	-	1.5	7.19	-11.2
	MW-2	LSI	9/27/2005	18.5	-	-	7.19	-24.2
	MW2-020707 <sup>1</sup>	Pacific Crest	2/7/2007	12.4	29.09	2.52	7.25	53.9
	MW2-112008 <sup>2</sup>	Pacific Crest	11/20/2008	14.88	0.287	0.99	6.82	-98.1
MW-3	MW-3	LSI	7/7/2005	16.7	-	1.54	7.12	-7.8
	MW3-020707 <sup>1</sup>	Pacific Crest	2/7/2007	12.42	32.95	1.49	7.43	-40.6
	MW3-112108 <sup>2</sup>	Pacific Crest	11/21/2008	15.25	0.341	0.17	7.25	-171.5
MW-4	MW-4	LSI	7/7/2005	15	-	1.53	7.25	-13.8
	MW4-020707 <sup>1</sup>	Pacific Crest	2/7/2007	12.97	35.64	0.65	7.56	12.3
	MW4-112008 <sup>2</sup>	Pacific Crest	11/20/2008	15.08	0.34	0.45	7.02	-153.2
MW-5	MW-5	LSI	7/7/2005	17.3	-	1.51	7.5	-28.9
	MW-5 <sup>3</sup>	EMS	7/7/2005	17.1	-	1.48	7.53	-30.7
	MW5-020707 <sup>1</sup>	Pacific Crest	2/7/2007	12.05	37.38	0.91	7.69	-71.4
	MW5-112108 <sup>2</sup>	Pacific Crest	11/21/2008	14.38	0.391	5.43	7.88	-176.7
MW-6	MW-6	LSI	7/7/2005	17.2	-	1.21	7.68	-39.8
	MW-6 <sup>3</sup>	EMS	7/7/2005	17.2	-	1.21	7.68	-39.8
	MW6-020707 <sup>1</sup>	Pacific Crest	2/7/2007	12.09	33.79	0.51	7.77	-9.7
	MW6-112108 <sup>2</sup>	Pacific Crest	11/21/2008	14.75	0.28	0.7	7.82	-138.4
MW-7	MW-7	LSI	7/7/2005	17.3	-	1.22	7.8	-45.6
	MW-7 <sup>3</sup>	EMS	7/7/2005	17.3	-	1.22	7.8	-45.6
	MW7-020707 <sup>1</sup>	Pacific Crest	2/7/2007	11.67	34.69	1.48	7.56	10.2
	MW7-112008 <sup>2</sup>	Pacific Crest	11/20/2008	14.53	0.311	0.58	7.32	-121.3
MW-8	MW-8	LSI	7/7/2005	16.9	-	1.1	7.12	-7.7
	MW-8 <sup>3</sup>	EMS	7/7/2005	16.9	-	1.1	7.12	-7.7
	MW8-020607 <sup>1</sup>	Pacific Crest	2/6/2007	11.99	31.2	1.41	7.25	-89.8
	MW8-112408-B <sup>2</sup>	Pacific Crest	11/24/2008	14	0.391	1.35	7.24	-64.2
MW-9	MW-9	LSI	9/27/2005	17.5	--	-	6.92	-9.6
	MW9-112108	Pacific Crest	11/21/2008	14.63	0.26	0.35	6.77	-159.7
MW-10	MW10-020707 <sup>1</sup>	Pacific Crest	2/7/2007	9.36	10.67	3.3	7.27	39.5
	MW10-112108 <sup>2</sup>	Pacific Crest	11/21/2008	12.63	0.094	2.22	6.81	-69.1
MW-11	MW11-112108 <sup>2</sup>	Pacific Crest	11/21/2008	12.9	0.457	0.2	7.12	-121.7
MW-12	MW12-031009 <sup>2</sup>	Pacific Crest	3/10/2009	13.10	0.788	0.18	6.64	-75.3
MW-13	MW13-031009 <sup>2</sup>	Pacific Crest	3/10/2009	11.05	3.478	0.72	6.19	113.4
MW-14	MW14-031009 <sup>2</sup>	Pacific Crest	3/10/2009	8.50	0.750	3.46	7.44	36.9

**NOTE:**

<sup>1</sup> Measurements by YSI 600 XL Water Analyze

<sup>2</sup> Measurements by YSI 566 MPS

<sup>3</sup> Split samples collected by EMS

C = celsius

mS/cm = millisiemen per centimeter

mg/L = milligrams per liter

mV = millivolts

- = not reported

EMS = Environmental Management Services

LSI = LSI Adapt

Pacific Crest = Pacific Crest Environmental, LLC

**Table 4**  
**Groundwater Analytical Results Summary**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Location ID	Sample ID	Sampled By	Sample Date	Groundwater Analytical Results (micrograms per liter)									
				HVOCs <sup>1</sup>							MEE <sup>2</sup>		
				Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	Methylene Chloride	Methane	Ethane	Ethene
MW-1	MW-1	EAI	7/12/2004	4.1	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
	MW-1	EAI	1/24/2005	6.2	<1.0	<1.0	<1.0	<5.0	-	-	-	-	-
	MW-1	LSI	7/7/2005	<b>13</b>	0.69	<0.20	<0.20	<0.20	<0.20	<1.0	-	-	-
	MW-1	LSI	9/27/2005	<b>6.6</b>	0.48	<0.20	<0.20	<0.20	<0.20	<1.0	-	-	-
	MW1-020707	Pacific Crest	2/7/2007	<b>37</b>	1.2	<0.20	<0.20	<0.20	<0.20	<1.0	NA	NA	NA
	MW1-112008	Pacific Crest	11/20/2008	<b>11</b>	2.1	0.35	<0.20	<0.20	<0.20	<1.0	NA	NA	NA
MW-2	MW-2	EAI	7/12/2004	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
	MW-2	EAI	1/24/2005	<b>9.9</b>	3.5	3.2	<1.0	<5.0	-	-	-	-	-
	MW-2	LSI	7/7/2005	<b>29</b>	4.5	1.3	0.26	<0.20	<0.20	<1.0	-	-	-
	MW-2	LSI	9/27/2005	<b>23</b>	4.2	2.4	0.58	<0.20	<0.20	<1.0	-	-	-
	MW2-020707	Pacific Crest	2/7/2007	<b>72</b>	4.4	0.75	<0.40	<0.40	<0.40	<2.0	NA	NA	NA
	MW2-112008	Pacific Crest	11/20/2008	<b>30</b>	3.8	1.6	0.33	<0.20	<0.20	<1.0	NA	NA	NA
MW-3	MW-3	EAI	7/12/2004	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
	MW-3	EAI	1/24/2005	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	-	-	-
	MW-3	LSI	7/7/2005	1.9	<0.20	<0.20	<0.20	<0.20	0.35	<1.0	-	-	-
	MW-3	LSI	9/27/2005	NA	NA	NA	NA	NA	-	-	-	-	-
	MW3-020707	Pacific Crest	2/7/2007	2.2	<0.20	<0.20	<0.20	<0.20	<0.20	<1.0	NA	NA	NA
	MW3-112108	Pacific Crest	11/21/2008	<0.20	<0.20	<0.20	<0.20	<0.20	0.45	<1.0	NA	NA	NA

**Table 4**  
**Groundwater Analytical Results Summary**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Location ID	Sample ID	Sampled By	Sample Date	Groundwater Analytical Results (micrograms per liter)									
				HVOCs <sup>1</sup>							MEE <sup>2</sup>		
				Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	Methylene Chloride	Methane	Ethane	Ethene
MW-4	B25 (MW-4)	EAI	5/14/2004	1	ND	ND	ND	ND	-	-	-	-	-
	MW-4	EAI	1/24/2005	1.6	<1.0	<1.0	<1.0	<5.0	-	-	-	-	-
	MW-4	LSI	7/7/2005	2.7	<0.20	<0.20	<0.20	<0.20	<0.20	<1.0	-	-	-
	MW-4	LSI	9/27/2005	NA	NA	NA	NA	NA	-	-	-	-	-
	MW4-020707	Pacific Crest	2/7/2007	4.9	0.36	<0.20	<0.20	<0.20	0.2	1.1	NA	NA	NA
	MW4-112008	Pacific Crest	11/20/2008	0.84	1.2	<0.20	<0.20	<0.20	<0.20	<1.0	NA	NA	NA
MW-5	MW-5	EAI	1/27/2005	1.9	0.57	0.29	0.20	<0.20	-	-	-	-	-
	MW-5 <sup>3</sup>	EMS	1/27/2005	1.8	<1.0	<1.0	<1.0	<0.2	<1.0	<1.0	-	-	-
	MW-5	LSI	7/7/2005	6.0	0.82	<0.20	<0.20	<0.20	<0.20	<1.0	-	-	-
	MW-5 <sup>3</sup>	EMS	7/7/2005	5.9	1.0	<1.0	<1.0	<0.20	<1.0	<1.0	-	-	-
	MW-5	LSI	9/27/2005	NA	NA	NA	NA	NA	-	-	-	-	-
	MW5-020707	Pacific Crest	2/7/2007	<b>9.8</b>	1.6	0.22	<0.20	<0.20	<0.20	<1.0	2300	<500 <sup>4</sup>	<500 <sup>4</sup>
	MW5-112108	Pacific Crest	11/21/2008	3	0.46	<0.20	<0.20	<0.20	<0.20	<1.0	NA	NA	NA
MW-6	MW-6	EAI	1/27/2005	<b>53</b>	12	75	6.9	0.63	-	-	-	-	-
	MW-6	LSI	7/7/2005	<b>11</b>	2.3	91	9.1	1.3	<0.40	<2.0	-	-	-
	MW-6 <sup>3</sup>	EMS	7/7/2005	<b>9.7</b>	2.8	64	5.7	0.48	-	-	-	-	-
	MW-6	LSI	9/27/2005	NA	NA	NA	NA	NA	-	-	-	-	-
	MW6-020707	Pacific Crest	2/7/2007	<b>67</b>	7.0	110	7.5	6.0	<1.0	<5.0	1800	<500 <sup>4</sup>	<500 <sup>4</sup>
	MW6-112108	Pacific Crest	11/21/2008	<b>45</b>	6.5	91	4.2	1.2	<0.40	<2.0	NA	NA	NA

**Table 4**  
**Groundwater Analytical Results Summary**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Location ID	Sample ID	Sampled By	Sample Date	Groundwater Analytical Results (micrograms per liter)									
				HVOCs <sup>1</sup>							MEE <sup>2</sup>		
				Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	Methylene Chloride	Methane	Ethane	Ethene
MW-7	MW-7	EAI	1/27/2005	3.3	0.93	3.8	0.95	<0.20	-	-	-	-	-
	MW-7 <sup>3</sup>	EMS	1/27/2005	2.7	<1.0	2.8	<1.0	<0.2	<1.0	<1.0	-	-	-
	MW-7	LSI	7/7/2005	<b>33</b>	3.1	2.8	0.96	<0.20	<0.20	<1.0	-	-	-
	MW-7 <sup>3</sup>	EMS	7/7/2005	<b>27</b>	3.1	2.3	<1.0	<0.2	-	-	-	-	-
	MW-7	LSI	9/27/2005	NA	NA	NA	NA	NA	-	-	-	-	-
	MW7-020707	Pacific Crest	2/7/2007	<b>140</b>	12	3.3	<1.0	<1.0	<1.0	<5.0	360	<250 <sup>4</sup>	<250 <sup>4</sup>
	MW7-112008	Pacific Crest	11/20/2008	<b>24</b>	11	8.4	1.2	<0.20	<0.20	<1.0	NA	NA	NA
MW-8	MW-8	EAI	1/27/2005	<b>21</b>	3.9	15	1.8	<0.20	-	-	-	-	-
	MW-8	LSI	7/7/2005	<b>100</b>	6.6	10	1.4	<0.20	-	-	-	-	-
	MW-8 <sup>3</sup>	EMS	7/7/2005	<b>79</b>	7.4	7.5	1.2	<0.2	-	-	-	-	-
	MW-8	LSI	9/27/2005	NA	NA	NA	NA	NA	-	-	-	-	-
	MW8-020607	Pacific Crest	2/6/2007	<b>83</b>	15	24	1.6	<0.40	<0.40	<2.0	910	<500 <sup>4</sup>	<500 <sup>4</sup>
	MW8-112408-B	Pacific Crest	11/24/2008	<0.20	0.3	24	2.1	<0.20	<0.20	<1.0	NA	NA	NA
MW-9	MW-9	LSI	9/27/2005	0.56	0.24	<0.20	<0.20	<0.20	<0.20	<1.0	-	-	-
	MW9-112108	Pacific Crest	11/21/2008	0.91	0.31	<0.20	<0.20	<0.20	<0.20	<1.0	NA	NA	NA
MW-10	MW10-020707	Pacific Crest	2/7/2007	<b>26</b>	2	19	0.23	3.3	<0.20	1.4	NA	NA	NA
	MW10-112108	Pacific Crest	11/21/2008	2.7	2.3	58	0.65	<b>21</b>	<0.40	<2.0	NA	NA	NA
MW-11	MW11-112108	Pacific Crest	11/21/2008	<b>2600</b>	<b>1400</b>	4800	<30 <sup>4</sup>	<30 <sup>4</sup>	<30 <sup>4</sup>	<150 <sup>4</sup>	NA	NA	NA

**Table 4**  
**Groundwater Analytical Results Summary**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Location ID	Sample ID	Sampled By	Sample Date	Groundwater Analytical Results (micrograms per liter)									
				HVOCs <sup>1</sup>							MEE <sup>2</sup>		
				Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	1,1-Dichloroethane	Methylene Chloride	Methane	Ethane	Ethene
MW-12	MW12-031009	Pacific Crest	3/10/2009	<0.2	<0.2	<0.20	<0.20	<0.20	<0.20	<1.0	NA	NA	NA
MW-13	MW13-031009	Pacific Crest	3/10/2009	<b>15</b>	<b>17</b>	35	0.21	0.39	<0.20	<1.0	NA	NA	NA
MW-14	MW14-031009	Pacific Crest	3/10/2009	<b>9</b>	6.5	20	0.54	<b>28</b>	<0.20	<1.0	NA	NA	NA
<b>Preliminary Screening Levels for Groundwater<sup>5</sup></b>				<b>5</b>	<b>5</b>	<b>80</b>	<b>60</b>	<b>0.2</b>	<b>800</b>	<b>5</b>	--	--	--
<b>RI Cleanup Levels for Groundwater<sup>6</sup></b>				<b>7.76</b>	<b>16.55</b>	<b>13,000</b>	--	<b>9</b>	--	--	--	--	--

**NOTES:**

<sup>1</sup>Analyzed by United States Environmental Protection Agency (EPA) Method 8260B

<sup>2</sup>Analyzed by United States EPA Method 8015M.

<sup>3</sup>Split samples collected by EMS

<sup>4</sup>Practical Quantitation Limit raised due to the necessary dilution of

<sup>5</sup>Method A or Method B Cleanup Levels in accordance with the Model Toxics Control Act Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code, as

<sup>6</sup>Cleanup Levels and Risk Calculations under the Model Toxics Control Act Cleanup Regulation, Version 3.1, Ecology Publication No. 94-145, updated November 2007.

< denotes result is less than laboratory practical quantitation limit listed or analyte not detected at or above the reporting limit.

*ITALICS* denotes Practical Quantitation Limit higher than applicable MTCA Cleanup level.

**BOLD** indicates concentrations exceeding applicable RI Cleanup Levels

**Table 5**  
**Reconnaissance Groundwater Analytical Results Summary**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Company Property**  
**Pacific Crest No.: 110-001**

Location ID	Sample ID	Sampled By	Sample Date	Sample Depth <sup>2</sup>	Reconnaissance Groundwater Analytical Results (micrograms per liter) <sup>1</sup>								
					Tetrachloroethene	Trichloroethene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	Vinyl Chloride	Chlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	
B2	B2	EAI	4/6/2004	9-12	5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B6	B6	EAI	4/6/2004	9-12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B7	B7	EAI	4/6/2004	9-12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B8	B8	EAI	4/6/2004	9-12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B13	B13	EAI	4/7/2004	9-12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B14	B14	EAI	4/7/2004	9-12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
B21	B21	EAI	5/14/2004	9-12	<1.0	<1.0	<1.0	<1.0	<0.2j	NA	NA	NA	NA
B24	B24	EAI	5/14/2004	9-12	<1.0	<1.0	<1.0	<1.0	<0.2j	NA	NA	NA	NA
B25	B25	EAI	5/14/2004	9-12	1	<1.0	<1.0	<1.0	<0.2j	NA	NA	NA	NA
B26	B26	EAI	5/14/2004	9-12	<1.0	<1.0	<1.0	<1.0	<0.2j	NA	NA	NA	NA
B27	B27	EAI	5/14/2004	9-12	13	<1.0	<1.0	<1.0	<0.2j	NA	NA	NA	NA
B28	B28	EAI	5/14/2004	9-12	20	<1.0	<1.0	<1.0	<0.2j	NA	NA	NA	NA
B30	B30	EAI	7/12/2004	9-12	<1.0	<1.0	<1.0	<1.0	<5.0	NA	NA	NA	NA
B-33	B-33	EAI	1/24/2005	7-11	5.9	<1.0	4	1.3	<5.0	NA	NA	NA	NA
B-34	B-34	EAI	1/24/2005	7-11	2.2	<1.0	<1.0	<1.0	<5.0	NA	NA	NA	NA
B-35	B-35	EAI	1/24/2005	7-11	4.6	<1.0	11	<1.0	<5.0	NA	NA	NA	NA
B-36	B-36	EAI	1/24/2005	7-11	19	2.3	17	2.6	<5.0	NA	NA	NA	NA
B-37	B-37	EAI	1/24/2005	7-11	<1.0	<1.0	<1.0	<1.0	<5.0	NA	NA	NA	NA
B-38	B-38	EAI	1/24/2005	7-11	1.1	<1.0	52	6.2	<5.0	NA	NA	NA	NA
B-39	B-39	EAI	1/24/2005	7-11	4.8	1.4	170	14	<5.0	NA	NA	NA	NA
B-40	B-40	EAI	1/24/2005	7-11	2.4	<1.0	43	2.9	<5.0	NA	NA	NA	NA
SC-1	SC1-W	LSI	9/27/2005	11-14	0.26	<0.20	<0.20	<0.20	<0.20	<0.2	<0.2	<0.2	<0.2
SC-2	SC2-W	LSI	9/27/2005	11-14	0.23	<0.20	<0.20	<0.20	<0.20	<0.2	<0.2	<0.2	<0.2
SC-3	SC3-W	LSI	9/27/2005	11-13	<0.2	<0.20	<0.20	<0.20	<0.20	<0.2	<0.2	<0.2	<0.2
SC-4	SC4-W	LSI	9/27/2005	10-13	0.26	<0.20	<0.20	<0.20	<0.20	<0.2	<0.2	<0.2	<0.2
B-1	B1-RGW-12	Pacific Crest	11/29/2007	12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
B-2	B2-RGW-12	Pacific Crest	11/29/2007	12	<0.20	<0.20	<0.20	<0.20	<0.20	5.8	0.43	1.3	1.3
B-3	B3-RGW-12	Pacific Crest	11/29/2007	12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
B-4	B4-RGW-12	Pacific Crest	11/29/2007	12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
<b>Preliminary Screening Levels for Groundwater<sup>3</sup></b>					<b>5</b>	<b>5</b>	<b>80</b>	<b>160</b>	<b>0.2</b>	<b>160</b>	<b>1.8</b>	<b>720</b>	
<b>RI Cleanup Levels for Groundwater<sup>4</sup></b>					<b>7.76</b>	<b>16.55</b>	<b>13,000</b>	<b>--</b>	<b>9</b>	<b>--</b>	<b>--</b>	<b>--</b>	

**NOTE:**

<sup>1</sup>Analyzed by United States Environmental Protection Agency (EPA) Method 8260B.

<sup>2</sup>Depth in feet below ground surface.

<sup>3</sup>Method A or Method B in accordance with the Model Toxics Control Act Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code, as

<sup>4</sup> RI Cleanup Levels and Risk Calculations under the Model Toxics Control Act Cleanup Regulation, Version 3.1, Ecology Publication No. 94-145, updated

< denotes result is less than laboratory practical quantitation limit listed or analyte not detected at or above the reporting limit.

- indicates not applicable

Pacific Crest = Pacific Crest Environmental, LLC

**Table 6**  
**Summary of Groundwater Elevations - 72-Hour Tidal Study**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Location ID	Start	End	Maximum Elevation (feet) <sup>1</sup>	Minimum Elevation (feet) <sup>1</sup>	Average Elevation (feet) <sup>1</sup>	Fluctuation (feet)
MW-1 <sup>2</sup>	5/24/2009	5/27/2009	6.91	6.88	6.90	0.03
MW-12 <sup>2</sup>			11.03	7.53	9.85	3.50
MW-14 <sup>2</sup>			7.28	6.87	7.07	0.41
Tide <sup>3</sup>			11.73	-3.15	6.41	14.88

**NOTE:**

<sup>1</sup>Monitoring well elevations relative to arbitrary Site datum. Tidal elevations relative to Mean Lower Low Water.

<sup>2</sup>Heron Instruments Dipper-Log and INW PTX2 used to measure fluctuations in groundwater elevations.

<sup>3</sup>Tidal data obtained from National Oceanic and Atmospheric Administration (NOAA) for Seattle Station #9446484 at <http://tidesandcurrents.noaa.gov>

**Table 7**  
**Summary of Analytical Results - Air**  
**Remedial Investigation Report**  
**Former Sound Mattress and Felt Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

Sample ID	Location	Sampled By	Sample Date	Summary of VOC Analytical Results in Air (micrograms per cubic meter) <sup>1</sup>									
				Tetrachloroethene	Trichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	Vinyl Chloride	1,1,1-trichloroethane	Benzene	Toluene	Ethylbenzene	Total Xylenes
BH6170901	Outside at SW-Side of Bldg	Port of Tacoma	6/17/2009	<0.16	<0.21	<0.16	<0.78	<0.050	<0.21	0.44	1.1	0.17	0.65
BH6170902	NW corner of office	Port of Tacoma	6/17/2009	6.2	0.56	0.16	<0.67	<0.43	3.8	0.51	2.7	0.42	1.67
BH6170903	SE Corner of Warehouse	Port of Tacoma	6/17/2009	<b>25</b>	1.2	<0.14	<0.69	<0.045	10	1.4	1.2	1.3	5.6
MTCA Method B Screening Level				0.42	0.1	16	32	0.28	4800	0.32	2200	460	46
MTCA Method C Cleanup Level <sup>2</sup>				6.57	1.55	122.7	--	0.99	--	--	--	--	--

**NOTES:**

VOCs = volatile organic compounds

< detected result is less than laboratory practical quantitation limit listed or analyte not detected at or above the reporting limit.

**BOLD** denotes analytical result above applicable MTCA cleanup level.

<sup>1</sup>Analyzed by TO-15

<sup>2</sup>The MTCA Method C Cleanup Level was calculated based on an industrial exposure scenario and applies to indoor air.

MTCA = Model Toxics Control Act

NA=Not applicable

**APPENDIX A  
WELL AND BORING LOGS**

**REMEDIAL INVESTIGATION REPORT**

**Former Sound Mattress and Felt Property  
1940 East 11<sup>th</sup> Street  
Tacoma, Washington**

**Pacific Crest PN: 110-001**

# LOG OF BORING B-1

(Page 1 of 1)

Date/Time Started : 11-29-07/0925  
 Date/Time Completed : 11-29-07/0950  
 Total Boring Depth : 12'  
 Depth to water ATD : 9.5'  
 Elevation (ft) : NA  
 Drilling Method : Direct Push  
 Sampler Type : Macro-Core



Site Name: Former Sound Mattress  
and Felt Company Property

Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0 - 1.0 SAND with silt, with gravel, (65% fine to coarse sand, 15% silt, 15% fine gravel), brown to tan, moist, no odor.	SP				
		1.0 - 4.0 SAND (100% fine to medium sand), brown, moist, no odor.	SP		95	0.0	-
5		4.0 - 8.0 SAND (100% fine to medium sand), brown, moist, no odor.	SP		100	0.0	B1-6-8
		8.0 - 9.5 SAND (100% fine to medium sand), brown, moist, no odor.	SP				
10		9.5 - 11.75 SAND trace silt (95% fine to medium sand, 5% silt), dark gray, wet, no odor.	SP		80	0.0	B1-RGW-12
		11.75 - 12.0 SAND trace silt (95% fine sand, 5% silt), brown, wet, no odor.	SP				

Drilling Company : Cascade Drilling  
 Drilling Foreman : Casey Goble  
 Equipment : Geoprobe  
 Pacific Crest Rep. : Annica Nord

## LOG OF BORING B-1

(Page 1 of 1)

# LOG OF BORING B-2

(Page 1 of 1)

Date/Time Started : 11-29-07/0958  
 Date/Time Completed : 11-29-07/1020  
 Total Boring Depth : 12'  
 Depth to water ATD : 8.5'  
 Elevation (ft) : NA  
 Drilling Method : Direct Push  
 Sampler Type : Macro-Core



Site Name: Former Sound Mattress and Felt Company Property  
 Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0 - 1.0 SAND minor silt, minor gravel, (80% fine to coarse sand, 10% silt, 10% fine gravel), brown, moist, no odor.	SP				
		1.0 - 4.0 SAND (100% fine to medium sand), brown, moist, no odor, shell fragments.	SP		95	0.0	-
5		4.0 - 8.0 SAND trace silt (95% fine to medium sand, 5% silt), brown, moist, no odor.	SP		100	0.0	B2-6-8
		8.0 - 8.5 SAND trace silt (95% fine to medium sand, 5% silt), brown, moist, no odor.	SP				
10		8.5 - 11.75 SAND trace silt (95% fine to medium sand, 5% silt), brown, wet, no odor, shell fragments.	SP		75	0.0	B2-RGW-12
		11.75 - 12.0 SAND trace silt (95% fine sand, 5% silt), brown, wet, no odor.	SP				

Drilling Company : Cascade Drilling  
 Drilling Foreman : Casey Goble  
 Equipment : Geoprobe  
 Pacific Crest Rep. : Annica Nord

## LOG OF BORING B-2

(Page 1 of 1)

# LOG OF BORING B-3

(Page 1 of 1)

Date/Time Started : 11-29-071039  
 Date/Time Completed : 11-29-071100  
 Total Boring Depth : 12'  
 Depth to water ATD : 8.5'  
 Elevation (ft) : NA  
 Drilling Method : Direct Push  
 Sampler Type : Macro-Core



Site Name: Former Sound Mattress  
 and Felt Company Property  
 Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0 - 2.5 SAND minor silt, minor gravel, (80% fine to coarse sand, 10% silt, 10% fine gravel), brown to tan, moist, no odor.	SP		80	0.0	-
		2.5 - 4.0 SAND (100% fine to medium sand), brown, moist, no odor.	SP				
5		4.0 - 8.0 SAND (100% fine to medium sand), brown, moist, no odor.	SP		90	0.0	B3-6-8
		8.0 - 9.5 SAND (100% fine to medium sand), brown, moist, no odor.	SP				
10		9.5 - 11.75 SAND trace silt (95% fine to medium sand, 5% silt), dark gray, wet, no odor.	SP		65	0.0	B3-RGW-12
		11.75 - 12.0 SAND trace silt (95% fine sand, 5% silt), brown, wet, no odor.	SP				
15							
20							

Drilling Company : Cascade Drilling  
 Drilling Foreman : Casey Goble  
 Equipment : Geoprobe  
 Pacific Crest Rep. : Annica Nord

## LOG OF BORING B-3

(Page 1 of 1)

# LOG OF BORING B-4

(Page 1 of 1)

Date/Time Started : 11-29-071109  
 Date/Time Completed : 11-29-071130  
 Total Boring Depth : 12'  
 Depth to water ATD : 9'  
 Elevation (ft) : NA  
 Drilling Method : Direct Push  
 Sampler Type : Macro-Core



Site Name: Former Sound Mattress  
 and Felt Company Property  
 Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	PID (ppm)	Sample ID
0		0.0 - 1.5 SAND minor silt, minor gravel, (80% fine to coarse sand, 10% silt, 10% fine gravel), brown to tan, moist, no odor.	SP				
		1.5 - 4.0 SAND (100% fine to medium sand), brown, moist, no odor.	SP		90	0.0	-
		4.0 - 5.0 SAND minor silt, minor gravel, (80% fine to coarse sand, 10% silt, 10% fine gravel), dark brown, moist, no odor.	SP				
5		5.0 - 8.0 SAND (100% fine to medium sand), brown, moist, no odor.	SP		100	0.0	B4-6-8
		8.0 - 9.0 SAND trace silt, trace gravel, (90% fine sand, 5% silt, 5% fine gravel), brown, moist, no odor.	SP				
		9.0 - 10.5 SAND trace silt, (95% fine sand, 5% silt), dark brown, wet, no odor.	SP		90	174	B4-11-12
10		10.5 - 11.5 SAND trace silt, (95% fine sand, 5% silt), dark brown, wet, no odor.	SP				B4-RGW-12
		11.5 - 12.0 SAND trace silt (95% fine sand, 5% silt), brown, wet, strong rotten egg odor.	SP				

Drilling Company : Cascade Drilling  
 Drilling Foreman : Casey Goble  
 Equipment : Geoprobe  
 Pacific Crest Rep. : Annica Nord

## LOG OF BORING B-4

(Page 1 of 1)

# LOG OF WELL MW-10

(Page 1 of 1)

Date/Time Started : 10-20-06/0847  
 Date/Time Completed : 10-20-06/1010  
 Total Boring Depth : 15.5  
 Total Well Depth : 15.0  
 Depth to water ATD : 6.5  
 Elevation (ft) : 12.81  
 Drilling Method : HSA  
 Sampler Type : D+M S.S. 2" diameter 18"  
 Drive Hammer (lbs) : 140

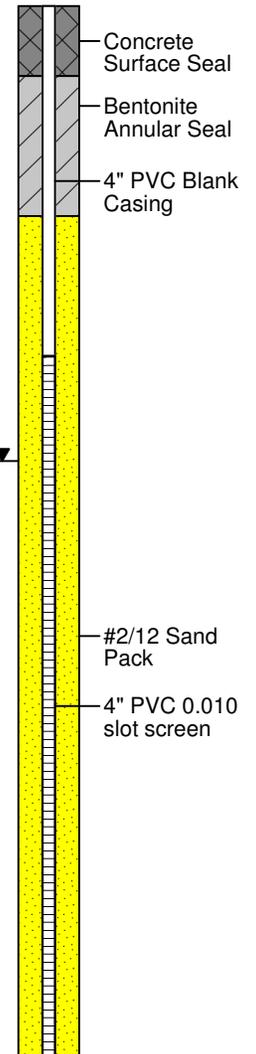


Site Name: Former Sound Mattress  
 and Felt Company Property  
 Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID
0								
1.0 - 3.0		SAND with silt, trace gravel. (85% fine to medium sand, 10% silt, 5% fine to coarse gravel), moist, dark brown, no odor, from cuttings.	SP			-	11.7	-
3.0 - 4.0		SAND with silt, trace gravel. (85% fine to coarse sand, 10% silt, 5% fine to coarse gravel), moist, dark brown, no odor, from cuttings.	SP			-	12.0	-
4.0 - 5.0		SAND with silt, trace gravel. (85% fine to coarse sand, 10% silt, 5% fine to coarse gravel), moist, dark brown, no odor, from cuttings.	SP			-	13.2	-
5.0 - 6.5		SAND trace silt (95% fine to coarse sand, 5% silt), moist, dark brown, no odor, silt lenses ~2 inches in diameter.	SP		90	15/20/26	15.7	MW10-5-6.5
7.5 - 8.5		SAND trace silt (95% fine to coarse sand, 5% silt), moist, dark brown, no odor, silt lenses ~2 inches in diameter.	SP		95	20/28/31	7.4	-
8.5 - 8.75		SAND trace silt (95% fine to medium sand, 5% silt), wet, dark brown, no odor.	SP					
8.75 - 9.0		Sandy SILT (50% silt, 50% fine sand), wet, brown, no odor.	SM-ML					
10.0 - 11.0		SAND trace silt (95% fine to coarse sand, 5% silt), wet, dark brown, no odor, silt lenses ~2 inches in diameter.	SP		100	6/8/8	7.3	-
11.0 - 11.5		Sandy SILT (50% silt, 50% fine sand), wet, brown, no odor.	SM-ML					
12.5 - 13.0		SAND trace silt (95% fine to coarse sand, 5% silt), wet, dark brown, no odor, silt lenses ~2 inches in diameter.	SP					
13.0 - 13.5		SILT with sand, (70% silt, 30% fine to medium sand), wet, brown-gray, no odor.	ML		95	2/6/6	8.2	-
13.5 - 14.0		Silty SAND (55% fine to coarse sand, 45% silt), wet, brown-gray, no odor.	SM					
15.0 - 15.25		Silty SAND (55% fine to coarse sand, 45% silt), wet, brown-gray, no odor.	SM		50	3/3/4	11.3	-
15.25 - 15.5		SAND (100% fine to coarse sand), wet, dark brown-grey, no odor.	SP					

Well: MW-10



Drilling Company : Cascade Drilling, Inc.  
 Drilling Foreman : Steve Choate  
 Equipment : CME 55  
 Pacific Crest Rep. : Annica Nord

# LOG OF WELL MW-10

(Page 1 of 1)

# LOG OF WELL MW-11

(Page 1 of 1)

Date/Time Started : 11-19-08 / 10:57  
 Date/Time Completed : 11-19-08 / 14:06  
 Total Boring Depth : 16.0  
 Total Well Depth : 15.8  
 Depth to water ATD : 10  
 Elevation (ft) : 15.42  
 Drilling Method : HSA  
 Sampler Type : ~2 inch AMS probe core  
 Drive Hammer (lbs) : NA



Site Name: Former Sound Mattress  
 and Felt Company Property  
 Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID	Well: MW-11
0		0 - 1.5 SAND trace silt (95% fine to medium sand, 5% silt), light brown, dry, no odor, from cuttings.	SP						<p>Concrete Surface Seal                      Bentonite Annular Seal                      2" PVC Blank Casing                      #2/12 Sand Pack                      2" PVC 0.010 slot screen</p>
1.5		1.5 - 4.0 SILT trace sand (95% silt, 5% fine to medium sand), light brown, dry, no odor.	ML		90	-	8.1	-	
4.0		4.0 - 4.5 SAND (100% fine to medium sand), dark brown, dry, no odor.	SP						
4.5		4.5 - 8.0 SAND (100% fine to medium sand), dark brown, dry, no odor.	SP		90	-	6.9	-	
8.0		8.0 - 10.0 SAND trace silt (95% fine to medium sand, 5% silt), dark brown, moist, no odor.	SP						
10.0		10.0 - 11.0 Sandy SILT (60% silt, 40% fine to medium sand), dark brown, wet, with wood fragments, no odor.	ML		90	-	8.0	MW11-8.0-10.0-111908	
11.0		11.0 - 12.0 Silty SAND (60% silt, 40% fine to medium sand), dark brown, wet, no odor.	SM						
12.0		12.0 - 15.0 SAND with silt (80% fine to medium sand, 20% silt), dark brown, wet, no odor.	SM						
15.0		15.0 - 16.0 SILT (100% silt), dark gray, wet, no odor.	ML		100	-	17.2	-	
		End of boring.							

Drilling Company : Environmental Services Network - Northwest  
 Drilling Foreman : Noel Knopf  
 Equipment : AMS 9630  
 Pacific Crest Rep. : Monty Busbee

## LOG OF WELL MW-11

(Page 1 of 1)

# LOG OF WELL MW-12

(Page 1 of 1)

Date/Time Started : 3-4-2009 / 9:40  
 Date/Time Completed : 3-4-2009 / 13:00  
 Total Boring Depth (bgs) 22 feet  
 Total Well Depth (bgs) : 20 feet  
 Depth to water ATD (bgs) 7 feet  
 Elevation (ft) : 12.01  
 Drilling Method : Hollow Stem Auger  
 Sampler Type : 18" D+M. S.S.  
 Drive Hammer (lbs) : 140



Site Name: Former Sound Mattress  
 and Felt Company Property  
 Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID	Well: MW-12
0									Concrete Surface Seal
2 - 3.5		SAND trace silt (95% fine to medium sand, 5% silt), medium brown, dry, no odor.	SP		80	3/4/5	2.4	-	2" PVC Blank Casing
4 - 5.5		SAND minor silt (90% fine to medium sand, 10% silt), medium brown, moist, no odor	SP		100	2/3/3	1.7	-	Bentonite Annular Seal
6 - 7.5		SAND with silt (80% fine to medium sand, 20% silt), dark brown, wet, no odor	SM		50	2/3/2	1.6	-	
8 - 9		Silty SAND (70% fine to medium sand, 30% silt), dark brown, wet, shell fragments, no odor	SM		80	1 for 18	2.2	-	
9 - 9.5		SILT (100% silt), dark gray, wet, no odor	ML						
10 - 11.5		SAND minor silt (85% fine to medium sand, 15% silt), dark gray, wet, no odor	SM		90	3/5/3	4.6	-	
12 - 13		SILT with sand (80% silt, 20% fine to medium sand), dark gray, wet, slight chemical odor	ML		100	1/1/2	3.0	-	
13 - 13.5		SAND with silt (80% fine to medium sand, 20% silt) dark gray, wet, slight chemical odor	SM						
14 - 15.5		SILT (100% silt), medium gray, moist, slight chemical odor	ML		10	0/0/2	4.4	-	2" PVC 0.010 slot screen
16 - 17.5		No recovery			0	1/1/3	-	-	#10/20 Sand Pack
18 - 22		SAND trace silt (95% fine to medium sand, 5% silt), dark gray, wet, no odor	SP		50	-	8.2	MW12-18-22	

Drilling Company : ESN Northwest, Inc.  
 Drilling Foreman : Noel Knopf  
 Equipment : AMS 9630  
 Pacific Crest Rep. : Monty Busbee

## LOG OF WELL MW-12

(Page 1 of 1)

# LOG OF WELL MW-13

(Page 1 of 1)

Date/Time Started : 3-4-2009 / 13:32  
 Date/Time Completed : 3-4-2009 / 18:00  
 Total Boring Depth (bgs) 24 feet  
 Total Well Depth (bgs) : 20 feet  
 Depth to water ATD (bgs) 7 feet  
 Elevation (ft) : 12.90  
 Drilling Method : Hollow Stem Auger  
 Sampler Type : 18" D+M. S.S.  
 Drive Hammer (lbs) : 140



Site Name: Former Sound Mattress  
 and Felt Company Property  
 Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID	Well: MW-13
0									Concrete Surface Seal
2 - 3.5	X	Gravelly SAND with silt (50% coarse sand, 30% grave, 20% silt)(FILL) medium orange-brown, moist, no odor	SM-GM	[Yellow with black dots]	20	3/4/5	7.6	-	2" PVC Blank Casing
4 - 5.5	X	As above (FILL)	SM-GM	[Yellow with black dots]	50	5/5/5	2.5	-	Bentonite Annular Seal
6 - 7.5	X	Sandy GRAVEL (60% gravel, 40% coarse sand)(FILL), brown-orange, wet, slight chemical odor	GP-SP	[Grey with black dots]	20	3/3/4	2.3	-	
8 - 9.5	X	As above (FILL)	GP-SP	[Grey with black dots]	80	3/2/1	3.0	-	
10 - 11.5	X	Sandy GRAVEL (60% gravel, 40% coarse sand), light gray, wet, no odor	GP-SP	[Grey with black dots]	30	2/4/3	1.4	-	
12 - 13.5	X	Sandy GRAVEL, trace silt (55% gravel, 40% coarse sand, 5% silt), light gray, wet, slight chemical odor	GP-SP	[Grey with black dots]	30	3/4/3	0.4	-	
14 - 15.5	X	Sandy SILT (70% silt, 30% fine to medium sand), dark gray, wet, no odor	ML	[Brown with black dots]	90	1/1/1	4.0	-	
16 - 17.5	X	Silty SAND (60% fine to medium sand, 40% silt), dark gray, wet, no odor	SM	[Yellow with black dots]	100	2/3/6	1.4	-	
18 - 19.5	X	SAND (100% fine to medium sand), dark gray, wet, no odor	SP	[Yellow with black dots]	100	4/8/10	4.7	MW13-18-19	2" PVC 0.010 slot screen
20 - 21.5	X	SAND (100% fine to medium sand), dark gray, wet, no odor	SP	[Yellow with black dots]	100	3/3/8	3.7	-	#10/20 Sand Pack
21.5 - 24	X	SAND (100% fine to medium sand), dark gray, wet, no odor	SP	[Yellow with black dots]	100	-	3.6	-	

Drilling Company : ESN Northwest, Inc.  
 Drilling Foreman : Noel Knopf  
 Equipment : AMS 9630  
 Pacific Crest Rep. : Monty Busbee

## LOG OF WELL MW-13

(Page 1 of 1)

# LOG OF WELL MW-14

(Page 1 of 1)

Date/Time Started : 3-6-2009 / 9:10  
 Date/Time Completed : 3-6-2009 / 12:00  
 Total Boring Depth : 13.5 feet  
 Total Well Depth (bgs) : 11 feet  
 Depth to water ATD : 8 feet  
 Elevation (ft) : 12.34  
 Drilling Method : Hollow Stem Auger  
 Sampler Type : 18" D+M. S.S.  
 Drive Hammer (lbs) : 140



Site Name: Former Sound Mattress  
 and Felt Company Property  
 Client: Mr. Robert Shea

Project #: 110-001

Depth In Feet	Samples	Description	USCS	Graphic	% Recovery	Blow Count	PID (ppm)	Sample ID	Well: MW-14
0									
2 - 3.5	X	SAND (95% medium to coarse sand, 5% shell fragments), dark brown to red, moist, no odor	SP	[Yellow pattern]	50	2/3/4	0	-	
4 - 5.5	X	SAND (100% medium to coarse sand), dark brown to red, moist, no odor	SP	[Yellow pattern]	70	2/3/5	0	-	
6 - 7.5	X	SAND (100% medium to coarse sand), dark brown to red, moist, no odor	SP	[Yellow pattern]	50	3/4/4	0	MW14-7	
8 - 9	X	SAND (100% medium to coarse sand), dark brown to red, wet, no odor	SP	[Yellow pattern]	60	1/1/2	0	-	
9 - 9.5	X	Silty SAND (60% fine to coarse sand, 40% silt), dark brown to black, shell fragments, wet, no odor	SM	[Yellow pattern]					
10.5 - 11	X	Silty SAND (60% fine to coarse sand, 40% silt), dark brown to black, shell fragments, wet, no odor	SM	[Yellow pattern]	90	1/1/2	0	-	
11 - 12	X	SILT (100% silt), wood, dark gray, wet, no odor	ML	[Brown pattern]					
13 - 13.5	X	SILT (100% silt), wood, dark gray, wet, no odor	ML	[Brown pattern]	30	1/1	0	-	

Drilling Company : ESN Northwest, Inc.  
 Drilling Foreman : Noel Knopf  
 Equipment : AMS 9630  
 Pacific Crest Rep. : Michael Pagel

## LOG OF WELL MW-14

(Page 1 of 1)

**APPENDIX B  
LABORATORY ANALYTICAL REPORTS**

**REMEDIAL INVESTIGATION REPORT**

**Former Sound Mattress and Felt Property  
1940 East 11<sup>th</sup> Street  
Tacoma, Washington**

**Pacific Crest PN: 110-001**

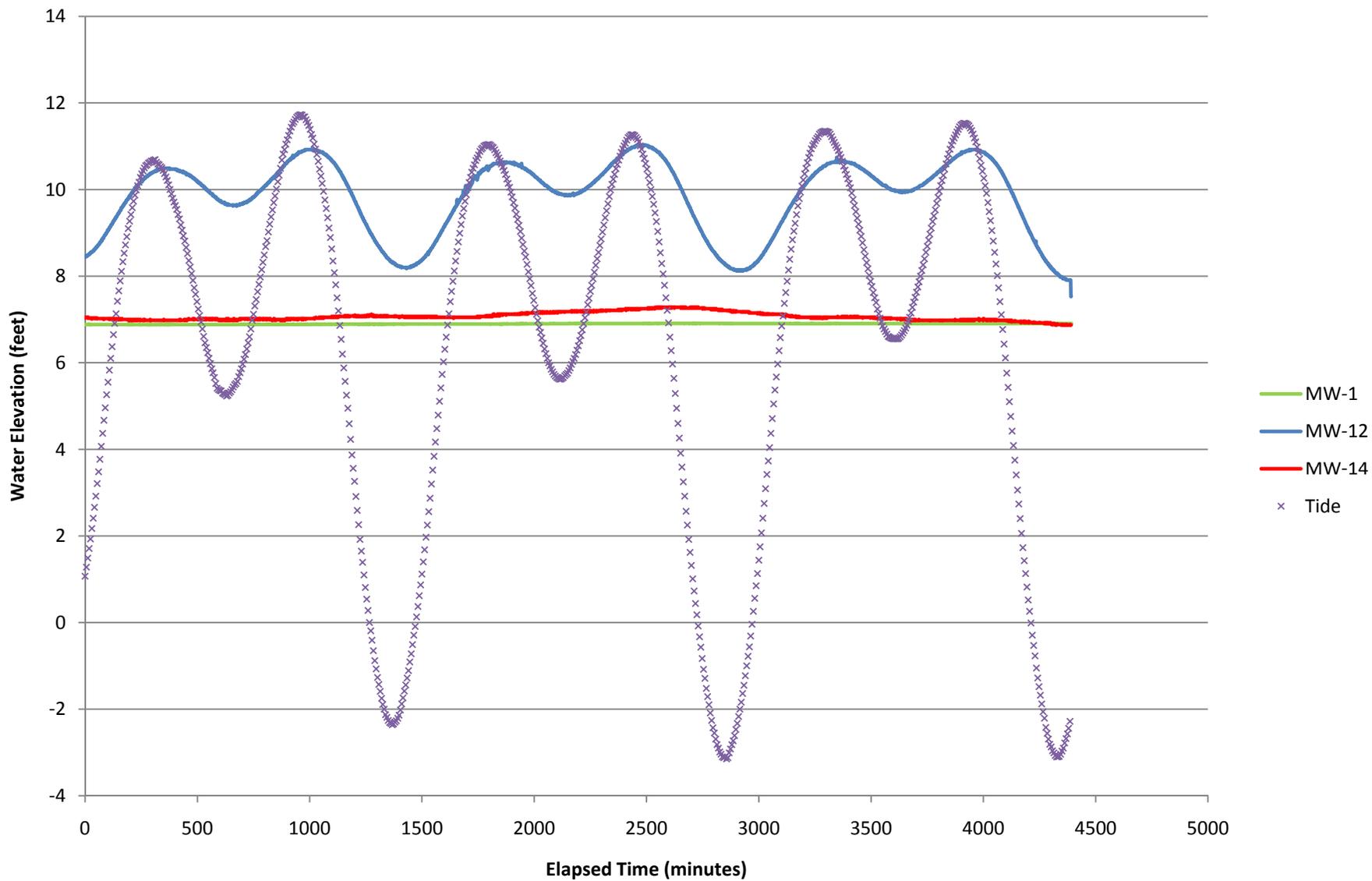
**APPENDIX C  
72-HOUR TIDAL STUDY DATA**

**REMEDIAL INVESTIGATION REPORT**

**Former Sound Mattress and Felt Property  
1940 East 11<sup>th</sup> Street  
Tacoma, Washington**

**Pacific Crest PN: 110-001**

**Tidal Study Data  
Former Sound Mattress and Felt Property  
Tacoma, Washington**



**Tidal Study Data**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN:110-001**

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/24/2009	13:00:00	0	6.88	8.44	7.03	1.07	34.138
4/24/2009	13:01:00	1	6.88	8.44	7.05		
4/24/2009	13:02:00	2	6.88	8.44	7.05		
4/24/2009	13:03:00	3	6.88	8.46	7.05		
4/24/2009	13:04:00	4	6.88	8.46	7.05		
4/24/2009	13:05:00	5	6.88	8.46	7.05		
4/24/2009	13:06:00	6	6.88	8.46	7.05	1.28	34.138
4/24/2009	13:07:00	7	6.88	8.47	7.05		
4/24/2009	13:08:00	8	6.88	8.47	7.05		
4/24/2009	13:09:00	9	6.88	8.46	7.05		
4/24/2009	13:10:00	10	6.88	8.47	7.05		
4/24/2009	13:11:00	11	6.88	8.49	7.03		
4/24/2009	13:12:00	12	6.88	8.49	7.05	1.49	34.137
4/24/2009	13:13:00	13	6.88	8.49	7.03		
4/24/2009	13:14:00	14	6.88	8.49	7.05		
4/24/2009	13:15:00	15	6.88	8.49	7.03		
4/24/2009	13:16:00	16	6.88	8.49	7.03		
4/24/2009	13:17:00	17	6.88	8.50	7.03		
4/24/2009	13:18:00	18	6.88	8.50	7.03	1.71	34.136
4/24/2009	13:19:00	19	6.88	8.50	7.03		
4/24/2009	13:20:00	20	6.88	8.52	7.03		
4/24/2009	13:21:00	21	6.88	8.52	7.03		
4/24/2009	13:22:00	22	6.88	8.52	7.03		
4/24/2009	13:23:00	23	6.88	8.52	7.03		
4/24/2009	13:24:00	24	6.88	8.54	7.02	1.93	34.136
4/24/2009	13:25:00	25	6.88	8.55	7.03		
4/24/2009	13:26:00	26	6.88	8.54	7.03		
4/24/2009	13:27:00	27	6.88	8.55	7.03		
4/24/2009	13:28:00	28	6.88	8.55	7.03		
4/24/2009	13:29:00	29	6.88	8.55	7.02		
4/24/2009	13:30:00	30	6.88	8.55	7.03	2.17	34.136
4/24/2009	13:31:00	31	6.88	8.55	7.02		
4/24/2009	13:32:00	32	6.88	8.57	7.02		
4/24/2009	13:33:00	33	6.88	8.57	7.03		
4/24/2009	13:34:00	34	6.88	8.58	7.02		
4/24/2009	13:35:00	35	6.88	8.58	7.03		
4/24/2009	13:36:00	36	6.88	8.58	7.03	2.41	34.135
4/24/2009	13:37:00	37	6.88	8.58	7.03		
4/24/2009	13:38:00	38	6.88	8.58	7.03		
4/24/2009	13:39:00	39	6.88	8.60	7.03		
4/24/2009	13:40:00	40	6.88	8.60	7.03		
4/24/2009	13:41:00	41	6.88	8.62	7.03		
4/24/2009	13:42:00	42	6.88	8.62	7.02	2.66	34.135
4/24/2009	13:43:00	43	6.88	8.62	7.03		
4/24/2009	13:44:00	44	6.88	8.62	7.03		
4/24/2009	13:45:00	45	6.88	8.63	7.03		
4/24/2009	13:46:00	46	6.88	8.65	7.02		
4/24/2009	13:47:00	47	6.88	8.65	7.02		
4/24/2009	13:48:00	48	6.88	8.65	7.02	2.92	34.134
4/24/2009	13:49:00	49	6.88	8.65	7.02		
4/24/2009	13:50:00	50	6.88	8.66	7.02		
4/24/2009	13:51:00	51	6.88	8.68	7.02		
4/24/2009	13:52:00	52	6.88	8.68	7.02		
4/24/2009	13:53:00	53	6.88	8.68	7.03		
4/24/2009	13:54:00	54	6.88	8.68	7.02	3.21	34.133
4/24/2009	13:55:00	55	6.88	8.68	7.02		
4/24/2009	13:56:00	56	6.88	8.70	7.02		
4/24/2009	13:57:00	57	6.88	8.71	7.02		
4/24/2009	13:58:00	58	6.88	8.71	7.02		
4/24/2009	13:59:00	59	6.88	8.71	7.02		
4/24/2009	14:00:00	60	6.88	8.73	7.02	3.48	34.131
4/24/2009	14:01:00	61	6.88	8.73	7.02		
4/24/2009	14:02:00	62	6.88	8.74	7.02		
4/24/2009	14:03:00	63	6.88	8.74	7.02		
4/24/2009	14:04:00	64	6.88	8.74	7.02		
4/24/2009	14:05:00	65	6.88	8.76	7.02		
4/24/2009	14:06:00	66	6.88	8.78	7.02	3.77	34.128
4/24/2009	14:07:00	67	6.88	8.78	7.02		
4/24/2009	14:08:00	68	6.88	8.78	7.02		
4/24/2009	14:09:00	69	6.88	8.79	7.02		
4/24/2009	14:10:00	70	6.88	8.79	7.02		
4/24/2009	14:11:00	71	6.88	8.81	7.02		
4/24/2009	14:12:00	72	6.88	8.81	7.02	4.07	34.126
4/24/2009	14:13:00	73	6.88	8.81	7.02		
4/24/2009	14:14:00	74	6.88	8.84	7.02		
4/24/2009	14:15:00	75	6.88	8.82	7.02		
4/24/2009	14:16:00	76	6.88	8.84	7.02		
4/24/2009	14:17:00	77	6.88	8.86	7.02		
4/24/2009	14:18:00	78	6.88	8.87	7.02	4.37	34.125
4/24/2009	14:19:00	79	6.88	8.87	7.02		
4/24/2009	14:20:00	80	6.88	8.87	7.02		
4/24/2009	14:21:00	81	6.88	8.87	7.02		
4/24/2009	14:22:00	82	6.88	8.89	7.02		
4/24/2009	14:23:00	83	6.88	8.90	7.00		
4/24/2009	14:24:00	84	6.88	8.90	7.02	4.67	34.124
4/24/2009	14:25:00	85	6.88	8.92	7.02		
4/24/2009	14:26:00	86	6.88	8.94	7.02		
4/24/2009	14:27:00	87	6.88	8.94	7.02		
4/24/2009	14:28:00	88	6.88	8.94	7.02		
4/24/2009	14:29:00	89	6.88	8.95	7.02		
4/24/2009	14:30:00	90	6.88	8.95	7.02	4.96	34.123
4/24/2009	14:31:00	91	6.88	8.97	7.02		
4/24/2009	14:32:00	92	6.88	8.97	7.02		
4/24/2009	14:33:00	93	6.88	8.98	7.02		
4/24/2009	14:34:00	94	6.88	8.98	7.02		
4/24/2009	14:35:00	95	6.88	9.00	7.02		
4/24/2009	14:36:00	96	6.88	9.00	7.02	5.26	34.122
4/24/2009	14:37:00	97	6.88	9.00	7.02		
4/24/2009	14:38:00	98	6.88	9.02	7.02		
4/24/2009	14:39:00	99	6.88	9.03	7.02		
4/24/2009	14:40:00	100	6.88	9.06	7.02		
4/24/2009	14:41:00	101	6.88	9.06	7.02		
4/24/2009	14:42:00	102	6.88	9.06	7.02	5.55	34.122
4/24/2009	14:43:00	103	6.88	9.06	7.02		
4/24/2009	14:44:00	104	6.88	9.06	7.02		
4/24/2009	14:45:00	105	6.88	9.08	7.02		

Notes:  
<sup>1</sup>In feet below site datum.  
<sup>2</sup>In feet relative to Mean Lower Low Water.  
<sup>3</sup>Data from NOAA station # 9446484 located at Sitcum Waterway, Tacoma, Washington.

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/24/2009	14:46:00	106	6.88	9.08	7.02		
4/24/2009	14:47:00	107	6.88	9.10	7.00		
4/24/2009	14:48:00	108	6.88	9.11	7.02	5.83	34.121
4/24/2009	14:49:00	109	6.88	9.11	7.02		
4/24/2009	14:50:00	110	6.88	9.13	7.02		
4/24/2009	14:51:00	111	6.88	9.13	7.02		
4/24/2009	14:52:00	112	6.88	9.14	7.02		
4/24/2009	14:53:00	113	6.88	9.14	7.02		
4/24/2009	14:54:00	114	6.88	9.16	7.02	6.10	34.121
4/24/2009	14:55:00	115	6.88	9.16	7.00		
4/24/2009	14:56:00	116	6.88	9.18	7.02		
4/24/2009	14:57:00	117	6.88	9.19	7.02		
4/24/2009	14:58:00	118	6.88	9.19	7.02		
4/24/2009	14:59:00	119	6.88	9.19	7.02		
4/24/2009	15:00:00	120	6.88	9.21	7.02	6.37	34.121
4/24/2009	15:01:00	121	6.88	9.21	7.02		
4/24/2009	15:02:00	122	6.88	9.22	7.02		
4/24/2009	15:03:00	123	6.88	9.24	7.02		
4/24/2009	15:04:00	124	6.88	9.24	7.02		
4/24/2009	15:05:00	125	6.88	9.26	7.00		
4/24/2009	15:06:00	126	6.88	9.26	7.00	6.65	34.118
4/24/2009	15:07:00	127	6.88	9.27	7.00		
4/24/2009	15:08:00	128	6.88	9.27	7.00		
4/24/2009	15:09:00	129	6.88	9.29	7.02		
4/24/2009	15:10:00	130	6.88	9.29	7.02		
4/24/2009	15:11:00	131	6.88	9.30	7.02		
4/24/2009	15:12:00	132	6.88	9.32	7.00	6.91	34.116
4/24/2009	15:13:00	133	6.88	9.32	7.00		
4/24/2009	15:14:00	134	6.88	9.32	7.00		
4/24/2009	15:15:00	135	6.88	9.34	7.00		
4/24/2009	15:16:00	136	6.88	9.34	7.00		
4/24/2009	15:17:00	137	6.88	9.35	7.00		
4/24/2009	15:18:00	138	6.88	9.35	7.00	7.13	34.114
4/24/2009	15:19:00	139	6.88	9.38	7.00		
4/24/2009	15:20:00	140	6.88	9.38	7.02		
4/24/2009	15:21:00	141	6.88	9.38	7.00		
4/24/2009	15:22:00	142	6.88	9.38	7.00		
4/24/2009	15:23:00	143	6.88	9.40	7.00		
4/24/2009	15:24:00	144	6.88	9.42	7.00	7.42	34.111
4/24/2009	15:25:00	145	6.88	9.42	7.00		
4/24/2009	15:26:00	146	6.88	9.43	7.00		
4/24/2009	15:27:00	147	6.88	9.43	7.00		
4/24/2009	15:28:00	148	6.88	9.45	7.02		
4/24/2009	15:29:00	149	6.88	9.45	7.00		
4/24/2009	15:30:00	150	6.88	9.45	7.00	7.66	34.109
4/24/2009	15:31:00	151	6.88	9.46	7.00		
4/24/2009	15:32:00	152	6.88	9.48	7.00		
4/24/2009	15:33:00	153	6.88	9.48	7.00		
4/24/2009	15:34:00	154	6.88	9.50	7.00		
4/24/2009	15:35:00	155	6.88	9.51	7.02		
4/24/2009	15:36:00	156	6.88	9.51	7.00	7.89	34.108
4/24/2009	15:37:00	157	6.88	9.51	7.00		
4/24/2009	15:38:00	158	6.88	9.53	7.00		
4/24/2009	15:39:00	159	6.88	9.53	7.00		
4/24/2009	15:40:00	160	6.88	9.54	7.00		
4/24/2009	15:41:00	161	6.88	9.58	7.00		
4/24/2009	15:42:00	162	6.88	9.58	7.00	8.11	34.108
4/24/2009	15:43:00	163	6.88	9.58	7.00		
4/24/2009	15:44:00	164	6.88	9.58	7.02		
4/24/2009	15:45:00	165	6.88	9.59	7.00		
4/24/2009	15:46:00	166	6.88	9.59	7.00		
4/24/2009	15:47:00	167	6.88	9.61	7.00		
4/24/2009	15:48:00	168	6.88	9.61	7.00	8.33	34.109
4/24/2009	15:49:00	169	6.88	9.62	7.00		
4/24/2009	15:50:00	170	6.88	9.62	7.00		
4/24/2009	15:51:00	171	6.88	9.64	7.00		
4/24/2009	15:52:00	172	6.88	9.64	7.00		
4/24/2009	15:53:00	173	6.88	9.66	7.00		
4/24/2009	15:54:00	174	6.88	9.66	7.00	8.53	34.108
4/24/2009	15:55:00	175	6.88	9.67	7.00		
4/24/2009	15:56:00	176	6.88	9.67	7.00		
4/24/2009	15:57:00	177	6.88	9.69	7.00		
4/24/2009	15:58:00	178	6.88	9.70	7.00		
4/24/2009	15:59:00	179	6.88	9.70	7.00		
4/24/2009	16:00:00	180	6.88	9.70	7.00	8.72	34.106
4/24/2009	16:01:00	181	6.88	9.70	7.00		
4/24/2009	16:02:00	182	6.88	9.72	7.00		
4/24/2009	16:03:00	183	6.88	9.74	7.00		
4/24/2009	16:04:00	184	6.88	9.74	7.00		
4/24/2009	16:05:00	185	6.88	9.75	7.00		
4/24/2009	16:06:00	186	6.88	9.75	7.00	8.91	34.104
4/24/2009	16:07:00	187	6.88	9.77	7.00		
4/24/2009	16:08:00	188	6.88	9.77	7.00		
4/24/2009	16:09:00	189	6.88	9.77	7.00		
4/24/2009	16:10:00	190	6.88	9.78	7.00		
4/24/2009	16:11:00	191	6.88	9.78	7.00		
4/24/2009	16:12:00	192	6.88	9.78	7.00	9.10	34.101
4/24/2009	16:13:00	193	6.88	9.80	6.98		
4/24/2009	16:14:00	194	6.88	9.82	7.00		
4/24/2009	16:15:00	195	6.88	9.83	6.98		
4/24/2009	16:16:00	196	6.88	9.83	7.00		
4/24/2009	16:17:00	197	6.88	9.83	6.98		
4/24/2009	16:18:00	198	6.88	9.85	7.00	9.27	34.101
4/24/2009	16:19:00	199	6.88	9.85	7.00		
4/24/2009	16:20:00	200	6.88	9.86	7.00		
4/24/2009	16:21:00	201	6.88	9.86	6.98		
4/24/2009	16:22:00	202	6.88	9.86	7.00		
4/24/2009	16:23:00	203	6.88	9.88	6.98		
4/24/2009	16:24:00	204	6.88	9.88	7.00	9.42	34.101
4/24/2009	16:25:00	205	6.88	9.90	7.00		
4/24/2009	16:26:00	206	6.88	9.90	7.00		
4/24/2009	16:27:00	207	6.88	9.91	6.98		
4/24/2009	16:28:00	208	6.88	9.93	6.98		
4/24/2009	16:29:00	209	6.88	9.93	6.98		
4/24/2009	16:30:00	210	6.88	9.93	6.98	9.58	34.097
4/24/2009	16:31:00	211	6.88	9.93	6.98		
4/24/2009	16:32:00	212	6.88	9.94	7.00		
4/24/2009	16:33:00	213	6.88	9.96	6.98		
4/24/2009	16:34:00	214	6.88	9.96	6.98		
4/24/2009	16:35:00	215	6.88	9.96	6.98		
4/24/2009	16:36:00	216	6.88	9.98	6.98	9.73	34.096
4/24/2009	16:37:00	217	6.88	9.99	6.98		
4/24/2009	16:38:00	218	6.88	9.98	6.98		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/24/2009	16:39:00	219	6.88	9.99	6.98		
4/24/2009	16:40:00	220	6.88	9.99	6.98		
4/24/2009	16:41:00	221	6.88	10.01	7.00		
4/24/2009	16:42:00	222	6.88	10.02	7.00	9.87	34.094
4/24/2009	16:43:00	223	6.88	10.02	7.00		
4/24/2009	16:44:00	224	6.88	10.02	6.98		
4/24/2009	16:45:00	225	6.88	10.04	7.00		
4/24/2009	16:46:00	226	6.88	10.04	6.98		
4/24/2009	16:47:00	227	6.88	10.07	7.00		
4/24/2009	16:48:00	228	6.88	10.09	7.00	9.99	34.094
4/24/2009	16:49:00	229	6.88	10.04	6.98		
4/24/2009	16:50:00	230	6.88	10.06	7.00		
4/24/2009	16:51:00	231	6.88	10.09	6.98		
4/24/2009	16:52:00	232	6.88	10.09	7.00		
4/24/2009	16:53:00	233	6.88	10.09	6.98		
4/24/2009	16:54:00	234	6.88	10.09	6.98	10.09	34.094
4/24/2009	16:55:00	235	6.88	10.09	7.00		
4/24/2009	16:56:00	236	6.88	10.10	7.00		
4/24/2009	16:57:00	237	6.88	10.09	7.00		
4/24/2009	16:58:00	238	6.88	10.12	7.00		
4/24/2009	16:59:00	239	6.88	10.12	7.00		
4/24/2009	17:00:00	240	6.88	10.12	7.00	10.17	34.091
4/24/2009	17:01:00	241	6.88	10.14	7.00		
4/24/2009	17:02:00	242	6.88	10.14	6.98		
4/24/2009	17:03:00	243	6.88	10.14	6.98		
4/24/2009	17:04:00	244	6.88	10.15	6.98		
4/24/2009	17:05:00	245	6.88	10.15	6.98		
4/24/2009	17:06:00	246	6.88	10.15	6.98	10.28	34.090
4/24/2009	17:07:00	247	6.88	10.17	7.00		
4/24/2009	17:08:00	248	6.88	10.17	6.98		
4/24/2009	17:09:00	249	6.88	10.17	6.98		
4/24/2009	17:10:00	250	6.88	10.18	6.98		
4/24/2009	17:11:00	251	6.88	10.18	6.98		
4/24/2009	17:12:00	252	6.88	10.25	6.98	10.36	34.090
4/24/2009	17:13:00	253	6.88	10.22	6.98		
4/24/2009	17:14:00	254	6.88	10.18	6.98		
4/24/2009	17:15:00	255	6.88	10.20	6.98		
4/24/2009	17:16:00	256	6.88	10.22	6.98		
4/24/2009	17:17:00	257	6.88	10.22	6.98		
4/24/2009	17:18:00	258	6.88	10.22	6.98	10.43	34.089
4/24/2009	17:19:00	259	6.88	10.23	6.98		
4/24/2009	17:20:00	260	6.88	10.23	7.00		
4/24/2009	17:21:00	261	6.88	10.23	6.98		
4/24/2009	17:22:00	262	6.88	10.25	6.98		
4/24/2009	17:23:00	263	6.88	10.25	6.98		
4/24/2009	17:24:00	264	6.88	10.25	7.00	10.50	34.087
4/24/2009	17:25:00	265	6.88	10.25	7.00		
4/24/2009	17:26:00	266	6.88	10.26	6.98		
4/24/2009	17:27:00	267	6.88	10.26	6.98		
4/24/2009	17:28:00	268	6.88	10.28	6.98		
4/24/2009	17:29:00	269	6.88	10.28	6.98		
4/24/2009	17:30:00	270	6.88	10.28	6.98	10.55	34.087
4/24/2009	17:31:00	271	6.88	10.28	6.98		
4/24/2009	17:32:00	272	6.88	10.28	6.98		
4/24/2009	17:33:00	273	6.88	10.30	6.98		
4/24/2009	17:34:00	274	6.88	10.30	6.98		
4/24/2009	17:35:00	275	6.88	10.30	6.98		
4/24/2009	17:36:00	276	6.88	10.31	6.98	10.57	34.085
4/24/2009	17:37:00	277	6.88	10.31	6.98		
4/24/2009	17:38:00	278	6.88	10.31	6.98		
4/24/2009	17:39:00	279	6.88	10.31	6.98		
4/24/2009	17:40:00	280	6.88	10.31	6.98		
4/24/2009	17:41:00	281	6.88	10.34	6.98		
4/24/2009	17:42:00	282	6.88	10.34	6.98	10.61	34.085
4/24/2009	17:43:00	283	6.88	10.34	6.98		
4/24/2009	17:44:00	284	6.88	10.34	6.98		
4/24/2009	17:45:00	285	6.88	10.34	6.98		
4/24/2009	17:46:00	286	6.88	10.34	6.98		
4/24/2009	17:47:00	287	6.88	10.34	6.98		
4/24/2009	17:48:00	288	6.88	10.34	6.98	10.63	34.085
4/24/2009	17:49:00	289	6.88	10.36	6.98		
4/24/2009	17:50:00	290	6.88	10.36	7.00		
4/24/2009	17:51:00	291	6.88	10.36	6.98		
4/24/2009	17:52:00	292	6.88	10.38	6.98		
4/24/2009	17:53:00	293	6.88	10.38	6.98		
4/24/2009	17:54:00	294	6.88	10.38	6.98	10.66	34.082
4/24/2009	17:55:00	295	6.88	10.38	6.98		
4/24/2009	17:56:00	296	6.88	10.38	6.98		
4/24/2009	17:57:00	297	6.88	10.38	6.98		
4/24/2009	17:58:00	298	6.88	10.38	6.98		
4/24/2009	17:59:00	299	6.88	10.39	6.98		
4/24/2009	18:00:00	300	6.88	10.39	6.98	10.66	34.081
4/24/2009	18:01:00	301	6.88	10.39	6.98		
4/24/2009	18:02:00	302	6.88	10.39	6.98		
4/24/2009	18:03:00	303	6.88	10.41	6.98		
4/24/2009	18:04:00	304	6.88	10.41	6.98		
4/24/2009	18:05:00	305	6.88	10.41	6.98		
4/24/2009	18:06:00	306	6.88	10.41	6.98	10.68	34.081
4/24/2009	18:07:00	307	6.88	10.41	6.98		
4/24/2009	18:08:00	308	6.88	10.41	6.98		
4/24/2009	18:09:00	309	6.88	10.41	6.98		
4/24/2009	18:10:00	310	6.88	10.41	6.98		
4/24/2009	18:11:00	311	6.88	10.42	6.98		
4/24/2009	18:12:00	312	6.88	10.42	6.98	10.69	34.079
4/24/2009	18:13:00	313	6.88	10.42	6.98		
4/24/2009	18:14:00	314	6.88	10.44	6.98		
4/24/2009	18:15:00	315	6.88	10.44	6.98		
4/24/2009	18:16:00	316	6.88	10.42	6.98		
4/24/2009	18:17:00	317	6.88	10.44	6.98		
4/24/2009	18:18:00	318	6.88	10.44	6.98	10.63	34.078
4/24/2009	18:19:00	319	6.88	10.44	6.98		
4/24/2009	18:20:00	320	6.88	10.46	6.98		
4/24/2009	18:21:00	321	6.88	10.44	6.98		
4/24/2009	18:22:00	322	6.88	10.46	6.98		
4/24/2009	18:23:00	323	6.88	10.44	6.98		
4/24/2009	18:24:00	324	6.88	10.46	6.98	10.59	34.079
4/24/2009	18:25:00	325	6.88	10.47	6.98		
4/24/2009	18:26:00	326	6.88	10.46	6.98		
4/24/2009	18:27:00	327	6.88	10.47	6.98		
4/24/2009	18:28:00	328	6.88	10.47	6.98		
4/24/2009	18:29:00	329	6.88	10.47	6.98		
4/24/2009	18:30:00	330	6.88	10.46	6.98	10.57	34.079
4/24/2009	18:31:00	331	6.88	10.47	6.98		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/24/2009	18:32:00	332	6.88	10.46	6.98		
4/24/2009	18:33:00	333	6.88	10.47	6.98		
4/24/2009	18:34:00	334	6.88	10.47	6.98		
4/24/2009	18:35:00	335	6.88	10.47	6.98		
4/24/2009	18:36:00	336	6.88	10.47	6.98	10.53	34.078
4/24/2009	18:37:00	337	6.88	10.47	6.98		
4/24/2009	18:38:00	338	6.88	10.47	6.98		
4/24/2009	18:39:00	339	6.88	10.47	6.98		
4/24/2009	18:40:00	340	6.88	10.47	6.98		
4/24/2009	18:41:00	341	6.88	10.47	6.98		
4/24/2009	18:42:00	342	6.88	10.47	6.98	10.50	34.080
4/24/2009	18:43:00	343	6.88	10.49	6.98		
4/24/2009	18:44:00	344	6.88	10.49	6.98		
4/24/2009	18:45:00	345	6.88	10.49	6.98		
4/24/2009	18:46:00	346	6.88	10.47	6.98		
4/24/2009	18:47:00	347	6.88	10.47	6.98		
4/24/2009	18:48:00	348	6.88	10.47	6.98	10.44	34.080
4/24/2009	18:49:00	349	6.88	10.47	6.98		
4/24/2009	18:50:00	350	6.88	10.49	7.00		
4/24/2009	18:51:00	351	6.88	10.49	6.98		
4/24/2009	18:52:00	352	6.88	10.49	6.98		
4/24/2009	18:53:00	353	6.88	10.49	6.98		
4/24/2009	18:54:00	354	6.88	10.49	6.98	10.37	34.080
4/24/2009	18:55:00	355	6.88	10.49	6.98		
4/24/2009	18:56:00	356	6.88	10.49	6.98		
4/24/2009	18:57:00	357	6.88	10.49	6.98		
4/24/2009	18:58:00	358	6.88	10.49	6.98		
4/24/2009	18:59:00	359	6.88	10.49	6.98		
4/24/2009	19:00:00	360	6.88	10.49	6.98	10.29	34.079
4/24/2009	19:01:00	361	6.88	10.49	6.98		
4/24/2009	19:02:00	362	6.88	10.49	6.98		
4/24/2009	19:03:00	363	6.88	10.49	6.98		
4/24/2009	19:04:00	364	6.88	10.49	6.98		
4/24/2009	19:05:00	365	6.88	10.49	6.98		
4/24/2009	19:06:00	366	6.88	10.49	6.98	10.21	34.078
4/24/2009	19:07:00	367	6.88	10.49	6.98		
4/24/2009	19:08:00	368	6.88	10.49	6.98		
4/24/2009	19:09:00	369	6.88	10.49	6.98		
4/24/2009	19:10:00	370	6.88	10.49	6.98		
4/24/2009	19:11:00	371	6.88	10.49	6.98		
4/24/2009	19:12:00	372	6.88	10.49	6.98	10.11	34.079
4/24/2009	19:13:00	373	6.88	10.49	6.98		
4/24/2009	19:14:00	374	6.88	10.47	6.98		
4/24/2009	19:15:00	375	6.88	10.49	6.98		
4/24/2009	19:16:00	376	6.88	10.49	6.98		
4/24/2009	19:17:00	377	6.88	10.49	6.98		
4/24/2009	19:18:00	378	6.88	10.47	6.98	10.00	34.080
4/24/2009	19:19:00	379	6.88	10.47	6.98		
4/24/2009	19:20:00	380	6.88	10.47	6.98		
4/24/2009	19:21:00	381	6.88	10.47	6.98		
4/24/2009	19:22:00	382	6.88	10.47	6.98		
4/24/2009	19:23:00	383	6.88	10.47	6.98		
4/24/2009	19:24:00	384	6.88	10.47	6.98	9.90	34.083
4/24/2009	19:25:00	385	6.88	10.47	6.98		
4/24/2009	19:26:00	386	6.88	10.47	6.98		
4/24/2009	19:27:00	387	6.88	10.47	6.98		
4/24/2009	19:28:00	388	6.88	10.47	6.98		
4/24/2009	19:29:00	389	6.88	10.47	6.98		
4/24/2009	19:30:00	390	6.88	10.47	6.98	9.80	34.087
4/24/2009	19:31:00	391	6.88	10.47	6.98		
4/24/2009	19:32:00	392	6.88	10.47	6.98		
4/24/2009	19:33:00	393	6.88	10.47	6.98		
4/24/2009	19:34:00	394	6.88	10.47	6.98		
4/24/2009	19:35:00	395	6.88	10.47	6.98		
4/24/2009	19:36:00	396	6.88	10.47	6.98	9.71	34.091
4/24/2009	19:37:00	397	6.88	10.47	6.98		
4/24/2009	19:38:00	398	6.88	10.47	6.98		
4/24/2009	19:39:00	399	6.88	10.47	6.98		
4/24/2009	19:40:00	400	6.88	10.47	6.98		
4/24/2009	19:41:00	401	6.88	10.47	6.98		
4/24/2009	19:42:00	402	6.88	10.47	6.98	9.63	34.090
4/24/2009	19:43:00	403	6.88	10.47	6.98		
4/24/2009	19:44:00	404	6.88	10.46	6.98		
4/24/2009	19:45:00	405	6.88	10.46	6.98		
4/24/2009	19:46:00	406	6.88	10.46	6.98		
4/24/2009	19:47:00	407	6.88	10.46	6.98		
4/24/2009	19:48:00	408	6.88	10.46	6.98	9.54	34.091
4/24/2009	19:49:00	409	6.88	10.46	6.98		
4/24/2009	19:50:00	410	6.88	10.44	6.98		
4/24/2009	19:51:00	411	6.88	10.46	6.98		
4/24/2009	19:52:00	412	6.88	10.44	6.98		
4/24/2009	19:53:00	413	6.88	10.44	6.98		
4/24/2009	19:54:00	414	6.88	10.44	6.98	9.42	34.094
4/24/2009	19:55:00	415	6.88	10.44	6.98		
4/24/2009	19:56:00	416	6.88	10.44	6.98		
4/24/2009	19:57:00	417	6.88	10.44	6.98		
4/24/2009	19:58:00	418	6.88	10.44	6.98		
4/24/2009	19:59:00	419	6.88	10.44	6.98		
4/24/2009	20:00:00	420	6.88	10.42	6.98	9.32	34.094
4/24/2009	20:01:00	421	6.88	10.44	7.00		
4/24/2009	20:02:00	422	6.88	10.42	6.98		
4/24/2009	20:03:00	423	6.88	10.42	6.98		
4/24/2009	20:04:00	424	6.88	10.42	7.00		
4/24/2009	20:05:00	425	6.88	10.42	6.98		
4/24/2009	20:06:00	426	6.88	10.42	6.98	9.18	34.094
4/24/2009	20:07:00	427	6.88	10.42	6.98		
4/24/2009	20:08:00	428	6.88	10.41	6.98		
4/24/2009	20:09:00	429	6.88	10.41	6.98		
4/24/2009	20:10:00	430	6.88	10.41	6.98		
4/24/2009	20:11:00	431	6.88	10.41	6.98		
4/24/2009	20:12:00	432	6.88	10.41	6.98	9.06	34.094
4/24/2009	20:13:00	433	6.88	10.41	6.98		
4/24/2009	20:14:00	434	6.88	10.41	6.98		
4/24/2009	20:15:00	435	6.88	10.39	6.98		
4/24/2009	20:16:00	436	6.88	10.39	6.98		
4/24/2009	20:17:00	437	6.88	10.41	6.98		
4/24/2009	20:18:00	438	6.88	10.39	6.98	8.93	34.094
4/24/2009	20:19:00	439	6.88	10.41	6.98		
4/24/2009	20:20:00	440	6.88	10.39	6.98		
4/24/2009	20:21:00	441	6.88	10.39	6.98		
4/24/2009	20:22:00	442	6.88	10.39	7.00		
4/24/2009	20:23:00	443	6.88	10.39	7.00		
4/24/2009	20:24:00	444	6.88	10.39	7.00	8.81	34.094

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/24/2009	20:25:00	445	6.88	10.39	6.98		
4/24/2009	20:26:00	446	6.88	10.38	7.00		
4/24/2009	20:27:00	447	6.88	10.38	7.00		
4/24/2009	20:28:00	448	6.88	10.38	7.00		
4/24/2009	20:29:00	449	6.88	10.38	7.00		
4/24/2009	20:30:00	450	6.88	10.36	7.00	8.66	34.097
4/24/2009	20:31:00	451	6.88	10.38	7.00		
4/24/2009	20:32:00	452	6.88	10.34	6.98		
4/24/2009	20:33:00	453	6.88	10.36	7.00		
4/24/2009	20:34:00	454	6.88	10.36	6.98		
4/24/2009	20:35:00	455	6.88	10.34	7.00		
4/24/2009	20:36:00	456	6.88	10.34	7.00	8.52	34.101
4/24/2009	20:37:00	457	6.88	10.34	7.00		
4/24/2009	20:38:00	458	6.88	10.34	7.00		
4/24/2009	20:39:00	459	6.88	10.34	7.00		
4/24/2009	20:40:00	460	6.88	10.34	7.00		
4/24/2009	20:41:00	461	6.88	10.34	7.02		
4/24/2009	20:42:00	462	6.88	10.34	7.00	8.36	34.104
4/24/2009	20:43:00	463	6.88	10.33	7.00		
4/24/2009	20:44:00	464	6.88	10.34	7.00		
4/24/2009	20:45:00	465	6.88	10.34	7.00		
4/24/2009	20:46:00	466	6.88	10.31	7.00		
4/24/2009	20:47:00	467	6.88	10.33	7.00		
4/24/2009	20:48:00	468	6.88	10.31	7.00	8.21	34.101
4/24/2009	20:49:00	469	6.88	10.31	7.00		
4/24/2009	20:50:00	470	6.88	10.31	7.00		
4/24/2009	20:51:00	471	6.88	10.31	7.00		
4/24/2009	20:52:00	472	6.88	10.31	7.00		
4/24/2009	20:53:00	473	6.88	10.31	7.00		
4/24/2009	20:54:00	474	6.88	10.30	7.00	8.06	34.101
4/24/2009	20:55:00	475	6.88	10.30	7.00		
4/24/2009	20:56:00	476	6.88	10.28	7.00		
4/24/2009	20:57:00	477	6.88	10.28	7.00		
4/24/2009	20:58:00	478	6.88	10.28	7.00		
4/24/2009	20:59:00	479	6.88	10.28	7.00		
4/24/2009	21:00:00	480	6.88	10.28	7.00	7.90	34.101
4/24/2009	21:01:00	481	6.88	10.28	7.02		
4/24/2009	21:02:00	482	6.88	10.26	7.02		
4/24/2009	21:03:00	483	6.88	10.26	7.02		
4/24/2009	21:04:00	484	6.88	10.26	7.00		
4/24/2009	21:05:00	485	6.88	10.25	7.00		
4/24/2009	21:06:00	486	6.88	10.25	7.02	7.73	34.101
4/24/2009	21:07:00	487	6.88	10.25	7.00		
4/24/2009	21:08:00	488	6.88	10.25	7.00		
4/24/2009	21:09:00	489	6.88	10.23	7.00		
4/24/2009	21:10:00	490	6.88	10.23	7.00		
4/24/2009	21:11:00	491	6.88	10.23	7.00		
4/24/2009	21:12:00	492	6.88	10.22	7.00	7.58	34.101
4/24/2009	21:13:00	493	6.88	10.22	7.00		
4/24/2009	21:14:00	494	6.88	10.22	7.00		
4/24/2009	21:15:00	495	6.88	10.22	7.00		
4/24/2009	21:16:00	496	6.88	10.22	7.00		
4/24/2009	21:17:00	497	6.88	10.20	7.00		
4/24/2009	21:18:00	498	6.88	10.20	7.00	7.41	34.101
4/24/2009	21:19:00	499	6.88	10.18	7.00		
4/24/2009	21:20:00	500	6.88	10.18	7.00		
4/24/2009	21:21:00	501	6.88	10.18	7.00		
4/24/2009	21:22:00	502	6.88	10.18	7.00		
4/24/2009	21:23:00	503	6.88	10.17	7.02		
4/24/2009	21:24:00	504	6.88	10.18	7.00	7.24	34.101
4/24/2009	21:25:00	505	6.88	10.17	7.00		
4/24/2009	21:26:00	506	6.88	10.15	7.00		
4/24/2009	21:27:00	507	6.88	10.15	7.00		
4/24/2009	21:28:00	508	6.88	10.15	7.00		
4/24/2009	21:29:00	509	6.88	10.15	7.00		
4/24/2009	21:30:00	510	6.88	10.15	7.00	7.09	34.101
4/24/2009	21:31:00	511	6.88	10.14	7.00		
4/24/2009	21:32:00	512	6.88	10.14	7.00		
4/24/2009	21:33:00	513	6.88	10.14	7.00		
4/24/2009	21:34:00	514	6.88	10.12	7.00		
4/24/2009	21:35:00	515	6.88	10.14	7.02		
4/24/2009	21:36:00	516	6.88	10.12	7.02	6.94	34.101
4/24/2009	21:37:00	517	6.88	10.12	7.00		
4/24/2009	21:38:00	518	6.88	10.10	7.00		
4/24/2009	21:39:00	519	6.88	10.10	7.00		
4/24/2009	21:40:00	520	6.88	10.10	7.02		
4/24/2009	21:41:00	521	6.88	10.09	7.00		
4/24/2009	21:42:00	522	6.88	10.09	7.02	6.78	34.094
4/24/2009	21:43:00	523	6.88	10.09	7.02		
4/24/2009	21:44:00	524	6.88	10.09	7.02		
4/24/2009	21:45:00	525	6.88	10.09	7.00		
4/24/2009	21:46:00	526	6.88	10.09	7.02		
4/24/2009	21:47:00	527	6.88	10.06	7.02		
4/24/2009	21:48:00	528	6.88	10.06	7.00	6.61	34.087
4/24/2009	21:49:00	529	6.88	10.06	7.02		
4/24/2009	21:50:00	530	6.88	10.04	7.02		
4/24/2009	21:51:00	531	6.88	10.06	7.02		
4/24/2009	21:52:00	532	6.88	10.04	7.02		
4/24/2009	21:53:00	533	6.88	10.02	7.02		
4/24/2009	21:54:00	534	6.88	10.04	7.00	6.46	34.084
4/24/2009	21:55:00	535	6.88	10.02	7.02		
4/24/2009	21:56:00	536	6.88	10.02	7.02		
4/24/2009	21:57:00	537	6.88	10.02	7.00		
4/24/2009	21:58:00	538	6.88	10.01	7.02		
4/24/2009	21:59:00	539	6.88	10.01	7.00		
4/24/2009	22:00:00	540	6.88	10.01	7.02	6.35	34.091
4/24/2009	22:01:00	541	6.88	9.99	7.00		
4/24/2009	22:02:00	542	6.88	9.99	7.02		
4/24/2009	22:03:00	543	6.88	9.99	7.02		
4/24/2009	22:04:00	544	6.88	9.99	7.02		
4/24/2009	22:05:00	545	6.88	9.98	7.02		
4/24/2009	22:06:00	546	6.88	9.98	7.02	6.23	34.089
4/24/2009	22:07:00	547	6.88	9.96	7.00		
4/24/2009	22:08:00	548	6.88	9.96	7.00		
4/24/2009	22:09:00	549	6.88	9.96	7.00		
4/24/2009	22:10:00	550	6.88	9.96	7.02		
4/24/2009	22:11:00	551	6.88	9.96	7.02		
4/24/2009	22:12:00	552	6.88	9.94	7.02	6.10	34.088
4/24/2009	22:13:00	553	6.88	9.96	7.00		
4/24/2009	22:14:00	554	6.88	9.93	7.02		
4/24/2009	22:15:00	555	6.88	9.93	7.02		
4/24/2009	22:16:00	556	6.88	9.93	7.00		
4/24/2009	22:17:00	557	6.88	9.93	7.00		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/24/2009	22:18:00	558	6.88	9.91	7.00	5.98	34.091
4/24/2009	22:19:00	559	6.88	9.91	7.02		
4/24/2009	22:20:00	560	6.88	9.91	7.02		
4/24/2009	22:21:00	561	6.88	9.91	7.00		
4/24/2009	22:22:00	562	6.88	9.90	7.00		
4/24/2009	22:23:00	563	6.88	9.90	7.00		
4/24/2009	22:24:00	564	6.88	9.90	7.02	5.86	34.087
4/24/2009	22:25:00	565	6.88	9.90	7.00		
4/24/2009	22:26:00	566	6.88	9.90	7.00		
4/24/2009	22:27:00	567	6.88	9.90	7.02		
4/24/2009	22:28:00	568	6.88	9.86	7.00		
4/24/2009	22:29:00	569	6.88	9.86	7.02		
4/24/2009	22:30:00	570	6.88	9.86	7.02	5.77	34.087
4/24/2009	22:31:00	571	6.88	9.86	7.02		
4/24/2009	22:32:00	572	6.88	9.85	7.00		
4/24/2009	22:33:00	573	6.88	9.85	7.00		
4/24/2009	22:34:00	574	6.88	9.85	7.00		
4/24/2009	22:35:00	575	6.88	9.85	7.00		
4/24/2009	22:36:00	576	6.88	9.83	7.00	5.66	34.087
4/24/2009	22:37:00	577	6.88	9.83	7.02		
4/24/2009	22:38:00	578	6.88	9.83	7.02		
4/24/2009	22:39:00	579	6.88	9.83	7.02		
4/24/2009	22:40:00	580	6.88	9.83	7.00		
4/24/2009	22:41:00	581	6.88	9.83	7.02		
4/24/2009	22:42:00	582	6.88	9.83	7.02	5.52	34.087
4/24/2009	22:43:00	583	6.88	9.82	7.02		
4/24/2009	22:44:00	584	6.88	9.80	7.00		
4/24/2009	22:45:00	585	6.88	9.80	7.00		
4/24/2009	22:46:00	586	6.88	9.78	7.00		
4/24/2009	22:47:00	587	6.88	9.78	7.02		
4/24/2009	22:48:00	588	6.88	9.78	7.00	5.41	34.091
4/24/2009	22:49:00	589	6.88	9.78	7.00		
4/24/2009	22:50:00	590	6.88	9.78	7.00		
4/24/2009	22:51:00	591	6.88	9.77	7.00		
4/24/2009	22:52:00	592	6.88	9.77	7.00		
4/24/2009	22:53:00	593	6.88	9.77	6.98		
4/24/2009	22:54:00	594	6.88	9.77	7.00	5.38	34.090
4/24/2009	22:55:00	595	6.88	9.75	7.00		
4/24/2009	22:56:00	596	6.88	9.75	7.00		
4/24/2009	22:57:00	597	6.88	9.74	7.00		
4/24/2009	22:58:00	598	6.88	9.74	7.00		
4/24/2009	22:59:00	599	6.88	9.74	6.98		
4/24/2009	23:00:00	600	6.88	9.74	6.98	5.36	34.094
4/24/2009	23:01:00	601	6.88	9.74	7.00		
4/24/2009	23:02:00	602	6.88	9.74	7.00		
4/24/2009	23:03:00	603	6.88	9.72	6.98		
4/24/2009	23:04:00	604	6.88	9.72	7.00		
4/24/2009	23:05:00	605	6.88	9.74	7.00		
4/24/2009	23:06:00	606	6.88	9.72	6.98	5.35	34.094
4/24/2009	23:07:00	607	6.88	9.72	7.00		
4/24/2009	23:08:00	608	6.88	9.70	6.98		
4/24/2009	23:09:00	609	6.88	9.70	6.98		
4/24/2009	23:10:00	610	6.88	9.70	7.00		
4/24/2009	23:11:00	611	6.88	9.70	6.98		
4/24/2009	23:12:00	612	6.88	9.70	7.00	5.30	34.093
4/24/2009	23:13:00	613	6.88	9.70	7.00		
4/24/2009	23:14:00	614	6.88	9.70	7.00		
4/24/2009	23:15:00	615	6.88	9.70	7.00		
4/24/2009	23:16:00	616	6.88	9.70	7.00		
4/24/2009	23:17:00	617	6.88	9.70	7.00		
4/24/2009	23:18:00	618	6.88	9.69	7.00	5.28	34.093
4/24/2009	23:19:00	619	6.88	9.69	6.98		
4/24/2009	23:20:00	620	6.88	9.69	7.00		
4/24/2009	23:21:00	621	6.88	9.67	7.00		
4/24/2009	23:22:00	622	6.88	9.70	7.00		
4/24/2009	23:23:00	623	6.88	9.67	7.00		
4/24/2009	23:24:00	624	6.88	9.69	6.98	5.26	34.097
4/24/2009	23:25:00	625	6.88	9.67	7.00		
4/24/2009	23:26:00	626	6.88	9.67	6.98		
4/24/2009	23:27:00	627	6.88	9.67	6.98		
4/24/2009	23:28:00	628	6.88	9.67	6.98		
4/24/2009	23:29:00	629	6.88	9.67	7.00		
4/24/2009	23:30:00	630	6.88	9.66	7.02	5.23	34.102
4/24/2009	23:31:00	631	6.88	9.67	7.00		
4/24/2009	23:32:00	632	6.88	9.64	7.00		
4/24/2009	23:33:00	633	6.88	9.66	7.00		
4/24/2009	23:34:00	634	6.88	9.66	6.98		
4/24/2009	23:35:00	635	6.88	9.66	7.00		
4/24/2009	23:36:00	636	6.88	9.64	7.00	5.25	34.104
4/24/2009	23:37:00	637	6.88	9.66	7.02		
4/24/2009	23:38:00	638	6.88	9.66	6.98		
4/24/2009	23:39:00	639	6.88	9.66	7.00		
4/24/2009	23:40:00	640	6.88	9.64	7.00		
4/24/2009	23:41:00	641	6.88	9.64	6.98		
4/24/2009	23:42:00	642	6.88	9.64	7.00	5.30	34.111
4/24/2009	23:43:00	643	6.88	9.64	7.00		
4/24/2009	23:44:00	644	6.88	9.64	6.98		
4/24/2009	23:45:00	645	6.88	9.64	7.00		
4/24/2009	23:46:00	646	6.88	9.64	6.98		
4/24/2009	23:47:00	647	6.88	9.64	7.00		
4/24/2009	23:48:00	648	6.88	9.64	7.00	5.33	34.110
4/24/2009	23:49:00	649	6.88	9.64	7.00		
4/24/2009	23:50:00	650	6.88	9.64	7.00		
4/24/2009	23:51:00	651	6.88	9.64	7.00		
4/24/2009	23:52:00	652	6.88	9.64	7.00		
4/24/2009	23:53:00	653	6.88	9.64	6.98		
4/24/2009	23:54:00	654	6.88	9.64	6.98	5.38	34.112
4/24/2009	23:55:00	655	6.88	9.64	6.98		
4/24/2009	23:56:00	656	6.88	9.64	6.98		
4/24/2009	23:57:00	657	6.88	9.64	7.00		
4/24/2009	23:58:00	658	6.88	9.64	6.98		
4/24/2009	23:59:00	659	6.88	9.62	7.00		
4/25/2009	0:00:00	660	6.88	9.64	6.98	5.44	34.112
4/25/2009	0:01:00	661	6.89	9.64	7.00		
4/25/2009	0:02:00	662	6.88	9.64	7.00		
4/25/2009	0:03:00	663	6.88	9.64	7.02		
4/25/2009	0:04:00	664	6.88	9.64	7.00		
4/25/2009	0:05:00	665	6.88	9.64	7.00		
4/25/2009	0:06:00	666	6.88	9.64	7.00	5.49	34.112
4/25/2009	0:07:00	667	6.88	9.64	7.00		
4/25/2009	0:08:00	668	6.88	9.64	6.98		
4/25/2009	0:09:00	669	6.88	9.64	7.00		
4/25/2009	0:10:00	670	6.88	9.64	6.98		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	0:11:00	671	6.88	9.64	7.00		
4/25/2009	0:12:00	672	6.88	9.64	7.00	5.52	34.108
4/25/2009	0:13:00	673	6.88	9.64	6.98		
4/25/2009	0:14:00	674	6.88	9.62	7.00		
4/25/2009	0:15:00	675	6.88	9.64	7.00		
4/25/2009	0:16:00	676	6.88	9.62	6.98		
4/25/2009	0:17:00	677	6.88	9.64	7.00		
4/25/2009	0:18:00	678	6.88	9.64	7.00	5.57	34.104
4/25/2009	0:19:00	679	6.88	9.64	7.00		
4/25/2009	0:20:00	680	6.88	9.64	7.00		
4/25/2009	0:21:00	681	6.88	9.64	6.98		
4/25/2009	0:22:00	682	6.88	9.64	7.00		
4/25/2009	0:23:00	683	6.88	9.64	7.00		
4/25/2009	0:24:00	684	6.88	9.64	7.00	5.68	34.105
4/25/2009	0:25:00	685	6.89	9.64	7.00		
4/25/2009	0:26:00	686	6.89	9.64	7.00		
4/25/2009	0:27:00	687	6.89	9.66	7.00		
4/25/2009	0:28:00	688	6.89	9.64	7.00		
4/25/2009	0:29:00	689	6.89	9.66	7.02		
4/25/2009	0:30:00	690	6.89	9.66	7.00	5.77	34.105
4/25/2009	0:31:00	691	6.89	9.66	7.02		
4/25/2009	0:32:00	692	6.88	9.66	7.02		
4/25/2009	0:33:00	693	6.88	9.66	7.00		
4/25/2009	0:34:00	694	6.89	9.67	7.00		
4/25/2009	0:35:00	695	6.88	9.66	7.00		
4/25/2009	0:36:00	696	6.89	9.66	7.00	5.86	34.105
4/25/2009	0:37:00	697	6.89	9.66	7.02		
4/25/2009	0:38:00	698	6.89	9.67	7.02		
4/25/2009	0:39:00	699	6.89	9.67	7.02		
4/25/2009	0:40:00	700	6.89	9.67	7.02		
4/25/2009	0:41:00	701	6.89	9.69	7.02		
4/25/2009	0:42:00	702	6.89	9.67	7.02	5.97	34.106
4/25/2009	0:43:00	703	6.89	9.67	7.02		
4/25/2009	0:44:00	704	6.89	9.67	7.02		
4/25/2009	0:45:00	705	6.89	9.67	7.02		
4/25/2009	0:46:00	706	6.89	9.69	7.02		
4/25/2009	0:47:00	707	6.89	9.69	7.02		
4/25/2009	0:48:00	708	6.89	9.70	7.02	6.08	34.103
4/25/2009	0:49:00	709	6.88	9.70	7.02		
4/25/2009	0:50:00	710	6.89	9.70	7.02		
4/25/2009	0:51:00	711	6.89	9.69	7.02		
4/25/2009	0:52:00	712	6.89	9.70	7.00		
4/25/2009	0:53:00	713	6.89	9.70	7.02		
4/25/2009	0:54:00	714	6.89	9.70	7.02	6.19	34.105
4/25/2009	0:55:00	715	6.89	9.70	7.02		
4/25/2009	0:56:00	716	6.89	9.70	7.02		
4/25/2009	0:57:00	717	6.89	9.70	7.02		
4/25/2009	0:58:00	718	6.89	9.72	7.02		
4/25/2009	0:59:00	719	6.89	9.70	7.02		
4/25/2009	1:00:00	720	6.89	9.70	7.02	6.32	34.107
4/25/2009	1:01:00	721	6.89	9.72	7.02		
4/25/2009	1:02:00	722	6.89	9.72	7.00		
4/25/2009	1:03:00	723	6.89	9.72	7.02		
4/25/2009	1:04:00	724	6.89	9.72	7.02		
4/25/2009	1:05:00	725	6.88	9.74	7.02		
4/25/2009	1:06:00	726	6.89	9.74	7.02	6.46	34.104
4/25/2009	1:07:00	727	6.88	9.74	7.02		
4/25/2009	1:08:00	728	6.88	9.74	7.02		
4/25/2009	1:09:00	729	6.88	9.75	7.02		
4/25/2009	1:10:00	730	6.88	9.74	7.00		
4/25/2009	1:11:00	731	6.88	9.75	7.02		
4/25/2009	1:12:00	732	6.88	9.75	7.02	6.60	34.102
4/25/2009	1:13:00	733	6.88	9.77	7.02		
4/25/2009	1:14:00	734	6.88	9.75	7.02		
4/25/2009	1:15:00	735	6.88	9.77	7.02		
4/25/2009	1:16:00	736	6.88	9.77	7.02		
4/25/2009	1:17:00	737	6.88	9.77	7.02		
4/25/2009	1:18:00	738	6.88	9.77	7.02	6.78	34.103
4/25/2009	1:19:00	739	6.88	9.77	7.00		
4/25/2009	1:20:00	740	6.88	9.77	7.02		
4/25/2009	1:21:00	741	6.88	9.78	7.00		
4/25/2009	1:22:00	742	6.88	9.80	7.00		
4/25/2009	1:23:00	743	6.88	9.80	7.02		
4/25/2009	1:24:00	744	6.88	9.80	7.00	6.98	34.105
4/25/2009	1:25:00	745	6.89	9.80	7.02		
4/25/2009	1:26:00	746	6.89	9.80	7.02		
4/25/2009	1:27:00	747	6.89	9.80	7.00		
4/25/2009	1:28:00	748	6.89	9.83	7.00		
4/25/2009	1:29:00	749	6.88	9.83	7.02		
4/25/2009	1:30:00	750	6.89	9.83	7.02	7.12	34.103
4/25/2009	1:31:00	751	6.88	9.83	7.02		
4/25/2009	1:32:00	752	6.88	9.83	7.02		
4/25/2009	1:33:00	753	6.88	9.83	7.02		
4/25/2009	1:34:00	754	6.88	9.83	7.02		
4/25/2009	1:35:00	755	6.89	9.85	7.00		
4/25/2009	1:36:00	756	6.89	9.86	7.02	7.31	34.102
4/25/2009	1:37:00	757	6.89	9.86	7.00		
4/25/2009	1:38:00	758	6.89	9.86	7.00		
4/25/2009	1:39:00	759	6.88	9.86	7.00		
4/25/2009	1:40:00	760	6.88	9.86	7.00		
4/25/2009	1:41:00	761	6.89	9.88	7.00		
4/25/2009	1:42:00	762	6.89	9.88	7.00	7.46	34.101
4/25/2009	1:43:00	763	6.89	9.90	7.00		
4/25/2009	1:44:00	764	6.89	9.90	7.00		
4/25/2009	1:45:00	765	6.88	9.90	7.00		
4/25/2009	1:46:00	766	6.89	9.90	7.02		
4/25/2009	1:47:00	767	6.88	9.91	7.00		
4/25/2009	1:48:00	768	6.88	9.93	7.00	7.64	34.100
4/25/2009	1:49:00	769	6.88	9.93	7.00		
4/25/2009	1:50:00	770	6.88	9.94	7.02		
4/25/2009	1:51:00	771	6.88	9.94	7.00		
4/25/2009	1:52:00	772	6.89	9.94	7.00		
4/25/2009	1:53:00	773	6.89	9.94	7.00		
4/25/2009	1:54:00	774	6.89	9.96	7.00	7.81	34.098
4/25/2009	1:55:00	775	6.89	9.96	7.02		
4/25/2009	1:56:00	776	6.89	9.96	7.00		
4/25/2009	1:57:00	777	6.89	9.96	7.02		
4/25/2009	1:58:00	778	6.88	9.96	7.00		
4/25/2009	1:59:00	779	6.89	9.96	7.02		
4/25/2009	2:00:00	780	6.89	9.98	7.02	7.98	34.099
4/25/2009	2:01:00	781	6.89	9.98	7.02		
4/25/2009	2:02:00	782	6.89	9.98	7.02		
4/25/2009	2:03:00	783	6.89	9.99	7.02		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	2:04:00	784	6.89	9.99	7.00		
4/25/2009	2:05:00	785	6.88	9.99	7.00		
4/25/2009	2:06:00	786	6.88	9.99	7.00	8.15	34.097
4/25/2009	2:07:00	787	6.88	10.01	7.00		
4/25/2009	2:08:00	788	6.88	10.01	7.00		
4/25/2009	2:09:00	789	6.88	10.01	7.00		
4/25/2009	2:10:00	790	6.88	10.02	7.00		
4/25/2009	2:11:00	791	6.88	10.02	7.02		
4/25/2009	2:12:00	792	6.89	10.04	7.00	8.32	34.094
4/25/2009	2:13:00	793	6.89	10.02	7.02		
4/25/2009	2:14:00	794	6.89	10.04	7.00		
4/25/2009	2:15:00	795	6.89	10.04	7.02		
4/25/2009	2:16:00	796	6.88	10.06	7.02		
4/25/2009	2:17:00	797	6.88	10.06	7.00		
4/25/2009	2:18:00	798	6.89	10.06	7.00	8.49	34.094
4/25/2009	2:19:00	799	6.89	10.07	7.00		
4/25/2009	2:20:00	800	6.89	10.07	7.00		
4/25/2009	2:21:00	801	6.89	10.09	7.00		
4/25/2009	2:22:00	802	6.89	10.09	7.00		
4/25/2009	2:23:00	803	6.89	10.09	7.00		
4/25/2009	2:24:00	804	6.89	10.09	7.00	8.68	34.093
4/25/2009	2:25:00	805	6.89	10.09	7.02		
4/25/2009	2:26:00	806	6.89	10.10	7.00		
4/25/2009	2:27:00	807	6.89	10.10	7.02		
4/25/2009	2:28:00	808	6.89	10.12	7.00		
4/25/2009	2:29:00	809	6.89	10.12	7.00		
4/25/2009	2:30:00	810	6.88	10.12	7.00	8.82	34.088
4/25/2009	2:31:00	811	6.89	10.12	7.00		
4/25/2009	2:32:00	812	6.89	10.14	7.02		
4/25/2009	2:33:00	813	6.89	10.15	7.00		
4/25/2009	2:34:00	814	6.88	10.15	7.00		
4/25/2009	2:35:00	815	6.89	10.15	7.00		
4/25/2009	2:36:00	816	6.89	10.15	7.00	9.02	34.088
4/25/2009	2:37:00	817	6.88	10.15	7.00		
4/25/2009	2:38:00	818	6.89	10.17	7.00		
4/25/2009	2:39:00	819	6.88	10.17	7.00		
4/25/2009	2:40:00	820	6.89	10.18	7.02		
4/25/2009	2:41:00	821	6.89	10.18	7.02		
4/25/2009	2:42:00	822	6.89	10.18	7.00	9.20	34.091
4/25/2009	2:43:00	823	6.89	10.18	7.00		
4/25/2009	2:44:00	824	6.89	10.20	7.02		
4/25/2009	2:45:00	825	6.89	10.22	7.00		
4/25/2009	2:46:00	826	6.88	10.22	7.00		
4/25/2009	2:47:00	827	6.88	10.22	7.00		
4/25/2009	2:48:00	828	6.88	10.23	7.00	9.37	34.093
4/25/2009	2:49:00	829	6.89	10.22	7.00		
4/25/2009	2:50:00	830	6.88	10.23	7.00		
4/25/2009	2:51:00	831	6.88	10.25	6.98		
4/25/2009	2:52:00	832	6.88	10.25	7.00		
4/25/2009	2:53:00	833	6.88	10.25	7.00		
4/25/2009	2:54:00	834	6.88	10.26	7.00	9.53	34.094
4/25/2009	2:55:00	835	6.89	10.26	7.00		
4/25/2009	2:56:00	836	6.89	10.26	6.98		
4/25/2009	2:57:00	837	6.89	10.28	7.00		
4/25/2009	2:58:00	838	6.89	10.28	7.00		
4/25/2009	2:59:00	839	6.88	10.28	7.00		
4/25/2009	3:00:00	840	6.88	10.30	7.00	9.70	34.092
4/25/2009	3:01:00	841	6.88	10.26	7.00		
4/25/2009	3:02:00	842	6.88	10.28	7.02		
4/25/2009	3:03:00	843	6.88	10.30	7.00		
4/25/2009	3:04:00	844	6.88	10.30	6.98		
4/25/2009	3:05:00	845	6.88	10.30	7.00		
4/25/2009	3:06:00	846	6.89	10.31	7.00	9.85	34.097
4/25/2009	3:07:00	847	6.88	10.31	7.00		
4/25/2009	3:08:00	848	6.88	10.33	7.00		
4/25/2009	3:09:00	849	6.88	10.34	7.00		
4/25/2009	3:10:00	850	6.88	10.34	7.00		
4/25/2009	3:11:00	851	6.88	10.34	6.98		
4/25/2009	3:12:00	852	6.88	10.34	7.00	10.01	34.094
4/25/2009	3:13:00	853	6.88	10.36	7.00		
4/25/2009	3:14:00	854	6.88	10.36	7.00		
4/25/2009	3:15:00	855	6.88	10.38	7.00		
4/25/2009	3:16:00	856	6.88	10.38	7.00		
4/25/2009	3:17:00	857	6.89	10.38	7.00		
4/25/2009	3:18:00	858	6.89	10.38	7.00	10.18	34.094
4/25/2009	3:19:00	859	6.89	10.39	7.00		
4/25/2009	3:20:00	860	6.89	10.39	7.00		
4/25/2009	3:21:00	861	6.89	10.41	7.00		
4/25/2009	3:22:00	862	6.89	10.41	7.00		
4/25/2009	3:23:00	863	6.88	10.41	7.00		
4/25/2009	3:24:00	864	6.88	10.42	7.00	10.33	34.099
4/25/2009	3:25:00	865	6.88	10.42	7.00		
4/25/2009	3:26:00	866	6.88	10.42	7.00		
4/25/2009	3:27:00	867	6.89	10.44	7.00		
4/25/2009	3:28:00	868	6.88	10.44	7.00		
4/25/2009	3:29:00	869	6.88	10.44	6.98		
4/25/2009	3:30:00	870	6.88	10.46	7.00	10.49	34.094
4/25/2009	3:31:00	871	6.88	10.46	6.98		
4/25/2009	3:32:00	872	6.88	10.47	6.98		
4/25/2009	3:33:00	873	6.88	10.47	6.98		
4/25/2009	3:34:00	874	6.88	10.49	7.00		
4/25/2009	3:35:00	875	6.89	10.49	7.00		
4/25/2009	3:36:00	876	6.88	10.49	6.98	10.68	34.090
4/25/2009	3:37:00	877	6.89	10.50	7.00		
4/25/2009	3:38:00	878	6.89	10.50	7.00		
4/25/2009	3:39:00	879	6.89	10.50	7.00		
4/25/2009	3:40:00	880	6.89	10.52	6.98		
4/25/2009	3:41:00	881	6.89	10.52	7.00		
4/25/2009	3:42:00	882	6.89	10.54	7.00	10.82	34.088
4/25/2009	3:43:00	883	6.89	10.54	7.00		
4/25/2009	3:44:00	884	6.89	10.54	6.98		
4/25/2009	3:45:00	885	6.89	10.54	7.00		
4/25/2009	3:46:00	886	6.89	10.55	7.00		
4/25/2009	3:47:00	887	6.89	10.55	7.00		
4/25/2009	3:48:00	888	6.89	10.57	6.98	10.92	34.088
4/25/2009	3:49:00	889	6.89	10.57	7.00		
4/25/2009	3:50:00	890	6.89	10.58	7.00		
4/25/2009	3:51:00	891	6.89	10.60	6.98		
4/25/2009	3:52:00	892	6.89	10.60	7.00		
4/25/2009	3:53:00	893	6.89	10.60	7.00		
4/25/2009	3:54:00	894	6.89	10.60	7.00	11.05	34.092
4/25/2009	3:55:00	895	6.89	10.60	7.00		
4/25/2009	3:56:00	896	6.88	10.60	7.02		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	3:57:00	897	6.88	10.60	7.00		
4/25/2009	3:58:00	898	6.88	10.62	7.00		
4/25/2009	3:59:00	899	6.88	10.62	7.02		
4/25/2009	4:00:00	900	6.89	10.63	7.00	11.15	34.088
4/25/2009	4:01:00	901	6.89	10.65	7.02		
4/25/2009	4:02:00	902	6.89	10.65	7.02		
4/25/2009	4:03:00	903	6.89	10.65	7.02		
4/25/2009	4:04:00	904	6.89	10.66	7.02		
4/25/2009	4:05:00	905	6.89	10.66	7.00		
4/25/2009	4:06:00	906	6.89	10.66	7.02	11.25	34.089
4/25/2009	4:07:00	907	6.89	10.66	7.00		
4/25/2009	4:08:00	908	6.89	10.68	7.00		
4/25/2009	4:09:00	909	6.89	10.68	7.00		
4/25/2009	4:10:00	910	6.89	10.68	7.00		
4/25/2009	4:11:00	911	6.89	10.68	7.00		
4/25/2009	4:12:00	912	6.88	10.70	7.02	11.35	34.084
4/25/2009	4:13:00	913	6.88	10.68	7.02		
4/25/2009	4:14:00	914	6.88	10.70	7.00		
4/25/2009	4:15:00	915	6.89	10.70	7.02		
4/25/2009	4:16:00	916	6.89	10.70	7.00		
4/25/2009	4:17:00	917	6.89	10.71	7.00		
4/25/2009	4:18:00	918	6.89	10.73	7.02	11.44	34.084
4/25/2009	4:19:00	919	6.89	10.73	7.02		
4/25/2009	4:20:00	920	6.89	10.73	7.02		
4/25/2009	4:21:00	921	6.89	10.73	7.02		
4/25/2009	4:22:00	922	6.89	10.73	7.02		
4/25/2009	4:23:00	923	6.89	10.74	7.02		
4/25/2009	4:24:00	924	6.89	10.74	7.02	11.52	34.085
4/25/2009	4:25:00	925	6.89	10.79	7.02		
4/25/2009	4:26:00	926	6.89	10.73	7.02		
4/25/2009	4:27:00	927	6.88	10.76	7.00		
4/25/2009	4:28:00	928	6.89	10.74	7.02		
4/25/2009	4:29:00	929	6.89	10.76	7.02		
4/25/2009	4:30:00	930	6.88	10.76	7.02	11.56	34.083
4/25/2009	4:31:00	931	6.88	10.76	7.02		
4/25/2009	4:32:00	932	6.88	10.78	7.02		
4/25/2009	4:33:00	933	6.88	10.78	7.00		
4/25/2009	4:34:00	934	6.88	10.78	7.00		
4/25/2009	4:35:00	935	6.88	10.79	7.00		
4/25/2009	4:36:00	936	6.88	10.79	7.00	11.62	34.084
4/25/2009	4:37:00	937	6.88	10.79	7.00		
4/25/2009	4:38:00	938	6.88	10.79	7.00		
4/25/2009	4:39:00	939	6.88	10.79	7.00		
4/25/2009	4:40:00	940	6.88	10.79	7.00		
4/25/2009	4:41:00	941	6.89	10.81	7.00		
4/25/2009	4:42:00	942	6.89	10.81	7.00	11.67	34.083
4/25/2009	4:43:00	943	6.89	10.82	7.02		
4/25/2009	4:44:00	944	6.89	10.81	7.02		
4/25/2009	4:45:00	945	6.88	10.82	7.00		
4/25/2009	4:46:00	946	6.88	10.82	7.00		
4/25/2009	4:47:00	947	6.89	10.82	7.00		
4/25/2009	4:48:00	948	6.89	10.82	7.00	11.70	34.080
4/25/2009	4:49:00	949	6.88	10.84	7.02		
4/25/2009	4:50:00	950	6.88	10.86	7.00		
4/25/2009	4:51:00	951	6.89	10.84	7.02		
4/25/2009	4:52:00	952	6.89	10.86	7.02		
4/25/2009	4:53:00	953	6.89	10.86	7.02		
4/25/2009	4:54:00	954	6.89	10.86	7.02	11.72	34.085
4/25/2009	4:55:00	955	6.89	10.86	7.02		
4/25/2009	4:56:00	956	6.89	10.86	7.02		
4/25/2009	4:57:00	957	6.89	10.86	7.02		
4/25/2009	4:58:00	958	6.89	10.86	7.02		
4/25/2009	4:59:00	959	6.88	10.86	7.02		
4/25/2009	5:00:00	960	6.88	10.86	7.02	11.73	34.087
4/25/2009	5:01:00	961	6.89	10.87	7.02		
4/25/2009	5:02:00	962	6.89	10.87	7.02		
4/25/2009	5:03:00	963	6.89	10.87	7.02		
4/25/2009	5:04:00	964	6.89	10.87	7.00		
4/25/2009	5:05:00	965	6.89	10.87	7.02		
4/25/2009	5:06:00	966	6.89	10.89	7.00	11.72	34.092
4/25/2009	5:07:00	967	6.89	10.89	7.02		
4/25/2009	5:08:00	968	6.88	10.89	7.02		
4/25/2009	5:09:00	969	6.88	10.89	7.02		
4/25/2009	5:10:00	970	6.88	10.89	7.00		
4/25/2009	5:11:00	971	6.88	10.89	7.02		
4/25/2009	5:12:00	972	6.88	10.89	7.02	11.68	34.094
4/25/2009	5:13:00	973	6.89	10.89	7.02		
4/25/2009	5:14:00	974	6.89	10.89	7.00		
4/25/2009	5:15:00	975	6.89	10.90	7.02		
4/25/2009	5:16:00	976	6.89	10.90	7.02		
4/25/2009	5:17:00	977	6.89	10.90	7.02		
4/25/2009	5:18:00	978	6.89	10.90	7.02	11.68	34.095
4/25/2009	5:19:00	979	6.88	10.90	7.02		
4/25/2009	5:20:00	980	6.89	10.92	7.02		
4/25/2009	5:21:00	981	6.89	10.92	7.02		
4/25/2009	5:22:00	982	6.89	10.92	7.00		
4/25/2009	5:23:00	983	6.89	10.92	7.02		
4/25/2009	5:24:00	984	6.89	10.92	7.02	11.61	34.094
4/25/2009	5:25:00	985	6.89	10.92	7.02		
4/25/2009	5:26:00	986	6.88	10.92	7.02		
4/25/2009	5:27:00	987	6.88	10.92	7.02		
4/25/2009	5:28:00	988	6.89	10.92	7.02		
4/25/2009	5:29:00	989	6.88	10.92	7.02		
4/25/2009	5:30:00	990	6.89	10.92	7.02	11.55	34.096
4/25/2009	5:31:00	991	6.89	10.92	7.02		
4/25/2009	5:32:00	992	6.89	10.92	7.02		
4/25/2009	5:33:00	993	6.89	10.92	7.02		
4/25/2009	5:34:00	994	6.89	10.92	7.02		
4/25/2009	5:35:00	995	6.89	10.92	7.02		
4/25/2009	5:36:00	996	6.89	10.92	7.02	11.48	34.098
4/25/2009	5:37:00	997	6.89	10.92	7.02		
4/25/2009	5:38:00	998	6.89	10.92	7.02		
4/25/2009	5:39:00	999	6.89	10.92	7.02		
4/25/2009	5:40:00	1000	6.89	10.92	7.02		
4/25/2009	5:41:00	1001	6.89	10.92	7.02		
4/25/2009	5:42:00	1002	6.88	10.92	7.02	11.39	34.101
4/25/2009	5:43:00	1003	6.88	10.92	7.02		
4/25/2009	5:44:00	1004	6.89	10.92	7.02		
4/25/2009	5:45:00	1005	6.89	10.92	7.02		
4/25/2009	5:46:00	1006	6.89	10.92	7.02		
4/25/2009	5:47:00	1007	6.88	10.92	7.02		
4/25/2009	5:48:00	1008	6.89	10.92	7.02	11.27	34.105
4/25/2009	5:49:00	1009	6.89	10.92	7.02		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	5:50:00	1010	6.89	10.94	7.02		
4/25/2009	5:51:00	1011	6.89	10.92	7.02		
4/25/2009	5:52:00	1012	6.89	10.92	7.02		
4/25/2009	5:53:00	1013	6.89	10.92	7.02		
4/25/2009	5:54:00	1014	6.89	10.92	7.02	11.19	34.106
4/25/2009	5:55:00	1015	6.89	10.92	7.02		
4/25/2009	5:56:00	1016	6.89	10.92	7.02		
4/25/2009	5:57:00	1017	6.89	10.92	7.02		
4/25/2009	5:58:00	1018	6.89	10.92	7.02		
4/25/2009	5:59:00	1019	6.89	10.92	7.02		
4/25/2009	6:00:00	1020	6.89	10.92	7.03	11.05	34.106
4/25/2009	6:01:00	1021	6.89	10.90	7.03		
4/25/2009	6:02:00	1022	6.89	10.92	7.02		
4/25/2009	6:03:00	1023	6.89	10.92	7.03		
4/25/2009	6:04:00	1024	6.89	10.92	7.02		
4/25/2009	6:05:00	1025	6.89	10.92	7.03		
4/25/2009	6:06:00	1026	6.89	10.90	7.03	10.93	34.109
4/25/2009	6:07:00	1027	6.89	10.92	7.03		
4/25/2009	6:08:00	1028	6.89	10.92	7.05		
4/25/2009	6:09:00	1029	6.89	10.92	7.03		
4/25/2009	6:10:00	1030	6.89	10.90	7.03		
4/25/2009	6:11:00	1031	6.89	10.90	7.03		
4/25/2009	6:12:00	1032	6.89	10.90	7.03	10.81	34.109
4/25/2009	6:13:00	1033	6.89	10.90	7.03		
4/25/2009	6:14:00	1034	6.89	10.90	7.03		
4/25/2009	6:15:00	1035	6.89	10.89	7.03		
4/25/2009	6:16:00	1036	6.89	10.90	7.03		
4/25/2009	6:17:00	1037	6.89	10.89	7.03		
4/25/2009	6:18:00	1038	6.89	10.89	7.03	10.65	34.110
4/25/2009	6:19:00	1039	6.89	10.89	7.03		
4/25/2009	6:20:00	1040	6.89	10.89	7.03		
4/25/2009	6:21:00	1041	6.89	10.87	7.05		
4/25/2009	6:22:00	1042	6.89	10.89	7.03		
4/25/2009	6:23:00	1043	6.89	10.89	7.03		
4/25/2009	6:24:00	1044	6.89	10.89	7.03	10.47	34.114
4/25/2009	6:25:00	1045	6.89	10.87	7.03		
4/25/2009	6:26:00	1046	6.89	10.87	7.03		
4/25/2009	6:27:00	1047	6.89	10.87	7.03		
4/25/2009	6:28:00	1048	6.89	10.87	7.05		
4/25/2009	6:29:00	1049	6.89	10.86	7.03		
4/25/2009	6:30:00	1050	6.89	10.87	7.03	10.31	34.113
4/25/2009	6:31:00	1051	6.89	10.86	7.05		
4/25/2009	6:32:00	1052	6.89	10.86	7.05		
4/25/2009	6:33:00	1053	6.89	10.86	7.05		
4/25/2009	6:34:00	1054	6.89	10.86	7.05		
4/25/2009	6:35:00	1055	6.89	10.86	7.05		
4/25/2009	6:36:00	1056	6.89	10.86	7.03	10.14	34.117
4/25/2009	6:37:00	1057	6.89	10.86	7.03		
4/25/2009	6:38:00	1058	6.89	10.84	7.05		
4/25/2009	6:39:00	1059	6.89	10.86	7.05		
4/25/2009	6:40:00	1060	6.89	10.84	7.05		
4/25/2009	6:41:00	1061	6.89	10.84	7.05		
4/25/2009	6:42:00	1062	6.89	10.84	7.03	9.96	34.117
4/25/2009	6:43:00	1063	6.89	10.82	7.03		
4/25/2009	6:44:00	1064	6.89	10.82	7.05		
4/25/2009	6:45:00	1065	6.89	10.82	7.05		
4/25/2009	6:46:00	1066	6.89	10.82	7.05		
4/25/2009	6:47:00	1067	6.89	10.82	7.05		
4/25/2009	6:48:00	1068	6.89	10.81	7.05	9.76	34.119
4/25/2009	6:49:00	1069	6.89	10.81	7.05		
4/25/2009	6:50:00	1070	6.89	10.81	7.05		
4/25/2009	6:51:00	1071	6.89	10.81	7.05		
4/25/2009	6:52:00	1072	6.89	10.79	7.05		
4/25/2009	6:53:00	1073	6.89	10.81	7.05		
4/25/2009	6:54:00	1074	6.89	10.79	7.05	9.56	34.123
4/25/2009	6:55:00	1075	6.89	10.79	7.05		
4/25/2009	6:56:00	1076	6.89	10.79	7.05		
4/25/2009	6:57:00	1077	6.89	10.78	7.05		
4/25/2009	6:58:00	1078	6.89	10.78	7.05		
4/25/2009	6:59:00	1079	6.89	10.76	7.05		
4/25/2009	7:00:00	1080	6.89	10.76	7.05	9.35	34.125
4/25/2009	7:01:00	1081	6.89	10.76	7.05		
4/25/2009	7:02:00	1082	6.89	10.76	7.05		
4/25/2009	7:03:00	1083	6.89	10.74	7.05		
4/25/2009	7:04:00	1084	6.89	10.74	7.05		
4/25/2009	7:05:00	1085	6.89	10.74	7.05		
4/25/2009	7:06:00	1086	6.89	10.74	7.05	9.11	34.126
4/25/2009	7:07:00	1087	6.89	10.73	7.05		
4/25/2009	7:08:00	1088	6.89	10.73	7.05		
4/25/2009	7:09:00	1089	6.89	10.73	7.05		
4/25/2009	7:10:00	1090	6.89	10.73	7.05		
4/25/2009	7:11:00	1091	6.89	10.71	7.05		
4/25/2009	7:12:00	1092	6.89	10.71	7.05	8.89	34.128
4/25/2009	7:13:00	1093	6.89	10.70	7.05		
4/25/2009	7:14:00	1094	6.89	10.70	7.05		
4/25/2009	7:15:00	1095	6.89	10.70	7.05		
4/25/2009	7:16:00	1096	6.89	10.68	7.05		
4/25/2009	7:17:00	1097	6.89	10.68	7.05		
4/25/2009	7:18:00	1098	6.89	10.66	7.07	8.63	34.132
4/25/2009	7:19:00	1099	6.89	10.66	7.05		
4/25/2009	7:20:00	1100	6.89	10.66	7.05		
4/25/2009	7:21:00	1101	6.89	10.66	7.05		
4/25/2009	7:22:00	1102	6.89	10.66	7.05		
4/25/2009	7:23:00	1103	6.89	10.65	7.07		
4/25/2009	7:24:00	1104	6.89	10.63	7.07	8.35	34.133
4/25/2009	7:25:00	1105	6.89	10.63	7.05		
4/25/2009	7:26:00	1106	6.89	10.63	7.05		
4/25/2009	7:27:00	1107	6.89	10.63	7.07		
4/25/2009	7:28:00	1108	6.89	10.62	7.07		
4/25/2009	7:29:00	1109	6.89	10.62	7.05		
4/25/2009	7:30:00	1110	6.89	10.60	7.05	8.08	34.134
4/25/2009	7:31:00	1111	6.89	10.60	7.05		
4/25/2009	7:32:00	1112	6.89	10.60	7.05		
4/25/2009	7:33:00	1113	6.89	10.58	7.05		
4/25/2009	7:34:00	1114	6.89	10.58	7.05		
4/25/2009	7:35:00	1115	6.89	10.57	7.05		
4/25/2009	7:36:00	1116	6.89	10.57	7.05	7.80	34.136
4/25/2009	7:37:00	1117	6.89	10.55	7.07		
4/25/2009	7:38:00	1118	6.89	10.54	7.07		
4/25/2009	7:39:00	1119	6.89	10.54	7.07		
4/25/2009	7:40:00	1120	6.89	10.54	7.05		
4/25/2009	7:41:00	1121	6.89	10.52	7.07		
4/25/2009	7:42:00	1122	6.89	10.52	7.05	7.50	34.137

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	7:43:00	1123	6.89	10.50	7.07		
4/25/2009	7:44:00	1124	6.89	10.49	7.07		
4/25/2009	7:45:00	1125	6.89	10.49	7.07		
4/25/2009	7:46:00	1126	6.89	10.49	7.05		
4/25/2009	7:47:00	1127	6.89	10.47	7.05		
4/25/2009	7:48:00	1128	6.89	10.47	7.07	7.20	34.141
4/25/2009	7:49:00	1129	6.89	10.47	7.07		
4/25/2009	7:50:00	1130	6.89	10.46	7.07		
4/25/2009	7:51:00	1131	6.89	10.44	7.07		
4/25/2009	7:52:00	1132	6.89	10.44	7.07		
4/25/2009	7:53:00	1133	6.89	10.42	7.08		
4/25/2009	7:54:00	1134	6.89	10.42	7.07	6.86	34.142
4/25/2009	7:55:00	1135	6.89	10.41	7.07		
4/25/2009	7:56:00	1136	6.89	10.41	7.07		
4/25/2009	7:57:00	1137	6.89	10.41	7.07		
4/25/2009	7:58:00	1138	6.89	10.39	7.07		
4/25/2009	7:59:00	1139	6.89	10.38	7.07		
4/25/2009	8:00:00	1140	6.89	10.38	7.07	6.54	34.140
4/25/2009	8:01:00	1141	6.89	10.36	7.07		
4/25/2009	8:02:00	1142	6.89	10.34	7.07		
4/25/2009	8:03:00	1143	6.89	10.34	7.07		
4/25/2009	8:04:00	1144	6.89	10.34	7.07		
4/25/2009	8:05:00	1145	6.89	10.31	7.07		
4/25/2009	8:06:00	1146	6.89	10.31	7.07	6.20	34.141
4/25/2009	8:07:00	1147	6.89	10.31	7.07		
4/25/2009	8:08:00	1148	6.89	10.30	7.07		
4/25/2009	8:09:00	1149	6.89	10.28	7.07		
4/25/2009	8:10:00	1150	6.89	10.28	7.07		
4/25/2009	8:11:00	1151	6.89	10.28	7.07		
4/25/2009	8:12:00	1152	6.89	10.25	7.07	5.88	34.141
4/25/2009	8:13:00	1153	6.89	10.25	7.07		
4/25/2009	8:14:00	1154	6.89	10.23	7.08		
4/25/2009	8:15:00	1155	6.89	10.22	7.07		
4/25/2009	8:16:00	1156	6.89	10.22	7.08		
4/25/2009	8:17:00	1157	6.89	10.22	7.07		
4/25/2009	8:18:00	1158	6.89	10.20	7.08	5.57	34.137
4/25/2009	8:19:00	1159	6.89	10.18	7.07		
4/25/2009	8:20:00	1160	6.89	10.18	7.08		
4/25/2009	8:21:00	1161	6.89	10.17	7.07		
4/25/2009	8:22:00	1162	6.89	10.15	7.08		
4/25/2009	8:23:00	1163	6.89	10.15	7.07		
4/25/2009	8:24:00	1164	6.89	10.15	7.07	5.25	34.135
4/25/2009	8:25:00	1165	6.89	10.12	7.07		
4/25/2009	8:26:00	1166	6.89	10.12	7.07		
4/25/2009	8:27:00	1167	6.89	10.10	7.08		
4/25/2009	8:28:00	1168	6.89	10.10	7.07		
4/25/2009	8:29:00	1169	6.89	10.09	7.07		
4/25/2009	8:30:00	1170	6.89	10.09	7.07	4.95	34.135
4/25/2009	8:31:00	1171	6.89	10.07	7.08		
4/25/2009	8:32:00	1172	6.89	10.06	7.08		
4/25/2009	8:33:00	1173	6.89	10.06	7.08		
4/25/2009	8:34:00	1174	6.89	10.04	7.07		
4/25/2009	8:35:00	1175	6.89	10.02	7.07		
4/25/2009	8:36:00	1176	6.89	10.02	7.08	4.59	34.139
4/25/2009	8:37:00	1177	6.89	9.99	7.07		
4/25/2009	8:38:00	1178	6.89	9.99	7.07		
4/25/2009	8:39:00	1179	6.89	9.98	7.07		
4/25/2009	8:40:00	1180	6.89	9.98	7.07		
4/25/2009	8:41:00	1181	6.89	9.96	7.07		
4/25/2009	8:42:00	1182	6.89	9.96	7.07	4.23	34.142
4/25/2009	8:43:00	1183	6.89	9.94	7.08		
4/25/2009	8:44:00	1184	6.89	9.93	7.08		
4/25/2009	8:45:00	1185	6.89	9.93	7.08		
4/25/2009	8:46:00	1186	6.89	9.91	7.08		
4/25/2009	8:47:00	1187	6.89	9.91	7.08		
4/25/2009	8:48:00	1188	6.89	9.88	7.08	3.87	34.145
4/25/2009	8:49:00	1189	6.89	9.88	7.08		
4/25/2009	8:50:00	1190	6.89	9.86	7.08		
4/25/2009	8:51:00	1191	6.89	9.85	7.08		
4/25/2009	8:52:00	1192	6.89	9.85	7.08		
4/25/2009	8:53:00	1193	6.89	9.83	7.08		
4/25/2009	8:54:00	1194	6.89	9.83	7.08	3.56	34.147
4/25/2009	8:55:00	1195	6.89	9.82	7.08		
4/25/2009	8:56:00	1196	6.89	9.80	7.07		
4/25/2009	8:57:00	1197	6.89	9.78	7.08		
4/25/2009	8:58:00	1198	6.89	9.78	7.08		
4/25/2009	8:59:00	1199	6.89	9.77	7.08		
4/25/2009	9:00:00	1200	6.89	9.75	7.08	3.26	34.149
4/25/2009	9:01:00	1201	6.89	9.74	7.08		
4/25/2009	9:02:00	1202	6.89	9.72	7.10		
4/25/2009	9:03:00	1203	6.89	9.72	7.08		
4/25/2009	9:04:00	1204	6.89	9.72	7.08		
4/25/2009	9:05:00	1205	6.89	9.70	7.08		
4/25/2009	9:06:00	1206	6.89	9.70	7.07	2.91	34.149
4/25/2009	9:07:00	1207	6.89	9.67	7.08		
4/25/2009	9:08:00	1208	6.89	9.66	7.07		
4/25/2009	9:09:00	1209	6.89	9.66	7.07		
4/25/2009	9:10:00	1210	6.89	9.64	7.07		
4/25/2009	9:11:00	1211	6.89	9.62	7.08		
4/25/2009	9:12:00	1212	6.89	9.62	7.08	2.59	34.151
4/25/2009	9:13:00	1213	6.89	9.61	7.08		
4/25/2009	9:14:00	1214	6.89	9.59	7.08		
4/25/2009	9:15:00	1215	6.89	9.58	7.07		
4/25/2009	9:16:00	1216	6.89	9.58	7.08		
4/25/2009	9:17:00	1217	6.89	9.58	7.07		
4/25/2009	9:18:00	1218	6.89	9.56	7.07	2.26	34.153
4/25/2009	9:19:00	1219	6.89	9.53	7.07		
4/25/2009	9:20:00	1220	6.89	9.53	7.07		
4/25/2009	9:21:00	1221	6.89	9.51	7.07		
4/25/2009	9:22:00	1222	6.89	9.51	7.08		
4/25/2009	9:23:00	1223	6.89	9.50	7.07		
4/25/2009	9:24:00	1224	6.89	9.48	7.07	1.92	34.151
4/25/2009	9:25:00	1225	6.89	9.48	7.07		
4/25/2009	9:26:00	1226	6.89	9.45	7.07		
4/25/2009	9:27:00	1227	6.89	9.45	7.07		
4/25/2009	9:28:00	1228	6.89	9.43	7.07		
4/25/2009	9:29:00	1229	6.89	9.42	7.07		
4/25/2009	9:30:00	1230	6.89	9.42	7.08	1.65	34.151
4/25/2009	9:31:00	1231	6.89	9.40	7.08		
4/25/2009	9:32:00	1232	6.89	9.38	7.07		
4/25/2009	9:33:00	1233	6.89	9.38	7.07		
4/25/2009	9:34:00	1234	6.89	9.38	7.07		
4/25/2009	9:35:00	1235	6.89	9.35	7.07		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	9:36:00	1236	6.89	9.35	7.07	1.39	34.149
4/25/2009	9:37:00	1237	6.89	9.35	7.08		
4/25/2009	9:38:00	1238	6.89	9.32	7.08		
4/25/2009	9:39:00	1239	6.89	9.32	7.07		
4/25/2009	9:40:00	1240	6.89	9.30	7.07		
4/25/2009	9:41:00	1241	6.89	9.29	7.07		
4/25/2009	9:42:00	1242	6.89	9.29	7.07	1.10	34.151
4/25/2009	9:43:00	1243	6.89	9.27	7.08		
4/25/2009	9:44:00	1244	6.89	9.27	7.08		
4/25/2009	9:45:00	1245	6.89	9.26	7.08		
4/25/2009	9:46:00	1246	6.89	9.26	7.07		
4/25/2009	9:47:00	1247	6.89	9.24	7.08		
4/25/2009	9:48:00	1248	6.89	9.22	7.07	0.81	34.151
4/25/2009	9:49:00	1249	6.89	9.21	7.08		
4/25/2009	9:50:00	1250	6.89	9.21	7.07		
4/25/2009	9:51:00	1251	6.89	9.19	7.08		
4/25/2009	9:52:00	1252	6.89	9.19	7.08		
4/25/2009	9:53:00	1253	6.89	9.18	7.07		
4/25/2009	9:54:00	1254	6.89	9.18	7.07	0.54	34.151
4/25/2009	9:55:00	1255	6.89	9.16	7.08		
4/25/2009	9:56:00	1256	6.89	9.14	7.10		
4/25/2009	9:57:00	1257	6.89	9.13	7.10		
4/25/2009	9:58:00	1258	6.89	9.13	7.08		
4/25/2009	9:59:00	1259	6.89	9.11	7.08		
4/25/2009	10:00:00	1260	6.89	9.10	7.08	0.28	34.151
4/25/2009	10:01:00	1261	6.89	9.10	7.08		
4/25/2009	10:02:00	1262	6.89	9.08	7.08		
4/25/2009	10:03:00	1263	6.89	9.06	7.07		
4/25/2009	10:04:00	1264	6.89	9.06	7.08		
4/25/2009	10:05:00	1265	6.89	9.06	7.10		
4/25/2009	10:06:00	1266	6.89	9.06	7.08	0.00	34.151
4/25/2009	10:07:00	1267	6.89	9.03	7.08		
4/25/2009	10:08:00	1268	6.89	9.02	7.08		
4/25/2009	10:09:00	1269	6.89	9.02	7.10		
4/25/2009	10:10:00	1270	6.89	9.00	7.08		
4/25/2009	10:11:00	1271	6.89	9.00	7.08		
4/25/2009	10:12:00	1272	6.89	8.98	7.08	-0.19	34.152
4/25/2009	10:13:00	1273	6.89	8.98	7.10		
4/25/2009	10:14:00	1274	6.89	8.97	7.10		
4/25/2009	10:15:00	1275	6.89	8.97	7.12		
4/25/2009	10:16:00	1276	6.89	8.95	7.08		
4/25/2009	10:17:00	1277	6.89	8.95	7.10		
4/25/2009	10:18:00	1278	6.89	8.94	7.08	-0.41	34.152
4/25/2009	10:19:00	1279	6.89	8.94	7.08		
4/25/2009	10:20:00	1280	6.89	8.92	7.08		
4/25/2009	10:21:00	1281	6.89	8.90	7.07		
4/25/2009	10:22:00	1282	6.89	8.89	7.08		
4/25/2009	10:23:00	1283	6.89	8.90	7.08		
4/25/2009	10:24:00	1284	6.89	8.89	7.08	-0.65	34.151
4/25/2009	10:25:00	1285	6.89	8.87	7.08		
4/25/2009	10:26:00	1286	6.89	8.87	7.10		
4/25/2009	10:27:00	1287	6.89	8.86	7.08		
4/25/2009	10:28:00	1288	6.89	8.84	7.07		
4/25/2009	10:29:00	1289	6.89	8.84	7.08		
4/25/2009	10:30:00	1290	6.89	8.82	7.08	-0.88	34.148
4/25/2009	10:31:00	1291	6.89	8.81	7.07		
4/25/2009	10:32:00	1292	6.89	8.81	7.08		
4/25/2009	10:33:00	1293	6.89	8.81	7.07		
4/25/2009	10:34:00	1294	6.89	8.79	7.08		
4/25/2009	10:35:00	1295	6.89	8.78	7.07		
4/25/2009	10:36:00	1296	6.89	8.78	7.08	-1.07	34.149
4/25/2009	10:37:00	1297	6.89	8.78	7.08		
4/25/2009	10:38:00	1298	6.89	8.76	7.08		
4/25/2009	10:39:00	1299	6.89	8.76	7.07		
4/25/2009	10:40:00	1300	6.89	8.74	7.08		
4/25/2009	10:41:00	1301	6.89	8.74	7.08		
4/25/2009	10:42:00	1302	6.89	8.73	7.08	-1.27	34.151
4/25/2009	10:43:00	1303	6.89	8.71	7.08		
4/25/2009	10:44:00	1304	6.89	8.71	7.08		
4/25/2009	10:45:00	1305	6.89	8.71	7.08		
4/25/2009	10:46:00	1306	6.89	8.70	7.07		
4/25/2009	10:47:00	1307	6.89	8.70	7.07		
4/25/2009	10:48:00	1308	6.89	8.68	7.07	-1.43	34.150
4/25/2009	10:49:00	1309	6.89	8.68	7.07		
4/25/2009	10:50:00	1310	6.89	8.68	7.07		
4/25/2009	10:51:00	1311	6.89	8.66	7.08		
4/25/2009	10:52:00	1312	6.89	8.65	7.08		
4/25/2009	10:53:00	1313	6.89	8.65	7.08	-1.59	34.149
4/25/2009	10:54:00	1314	6.89	8.65	7.08		
4/25/2009	10:55:00	1315	6.89	8.63	7.08		
4/25/2009	10:56:00	1316	6.89	8.62	7.07		
4/25/2009	10:57:00	1317	6.89	8.62	7.08		
4/25/2009	10:58:00	1318	6.89	8.62	7.08		
4/25/2009	10:59:00	1319	6.89	8.60	7.08		
4/25/2009	11:00:00	1320	6.89	8.60	7.07	-1.75	34.151
4/25/2009	11:01:00	1321	6.89	8.58	7.07		
4/25/2009	11:02:00	1322	6.89	8.57	7.07		
4/25/2009	11:03:00	1323	6.89	8.57	7.07		
4/25/2009	11:04:00	1324	6.89	8.57	7.08		
4/25/2009	11:05:00	1325	6.89	8.55	7.08		
4/25/2009	11:06:00	1326	6.89	8.55	7.08	-1.89	34.151
4/25/2009	11:07:00	1327	6.89	8.55	7.08		
4/25/2009	11:08:00	1328	6.89	8.55	7.08		
4/25/2009	11:09:00	1329	6.89	8.55	7.07		
4/25/2009	11:10:00	1330	6.89	8.54	7.08		
4/25/2009	11:11:00	1331	6.89	8.52	7.07		
4/25/2009	11:12:00	1332	6.89	8.52	7.08	-2.00	34.153
4/25/2009	11:13:00	1333	6.89	8.50	7.08		
4/25/2009	11:14:00	1334	6.89	8.50	7.07		
4/25/2009	11:15:00	1335	6.89	8.49	7.07		
4/25/2009	11:16:00	1336	6.89	8.49	7.08		
4/25/2009	11:17:00	1337	6.89	8.49	7.08		
4/25/2009	11:18:00	1338	6.89	8.47	7.08	-2.13	34.153
4/25/2009	11:19:00	1339	6.89	8.47	7.08		
4/25/2009	11:20:00	1340	6.89	8.46	7.08		
4/25/2009	11:21:00	1341	6.89	8.46	7.07		
4/25/2009	11:22:00	1342	6.89	8.44	7.08		
4/25/2009	11:23:00	1343	6.89	8.44	7.07		
4/25/2009	11:24:00	1344	6.89	8.42	7.08	-2.19	34.153
4/25/2009	11:25:00	1345	6.89	8.42	7.07		
4/25/2009	11:26:00	1346	6.89	8.42	7.08		
4/25/2009	11:27:00	1347	6.89	8.42	7.07		
4/25/2009	11:28:00	1348	6.89	8.42	7.07		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	11:29:00	1349	6.89	8.41	7.08		
4/25/2009	11:30:00	1350	6.89	8.41	7.08	-2.26	34.154
4/25/2009	11:31:00	1351	6.89	8.39	7.07		
4/25/2009	11:32:00	1352	6.89	8.39	7.07		
4/25/2009	11:33:00	1353	6.89	8.39	7.07		
4/25/2009	11:34:00	1354	6.89	8.39	7.07		
4/25/2009	11:35:00	1355	6.89	8.38	7.07		
4/25/2009	11:36:00	1356	6.89	8.38	7.07	-2.31	34.153
4/25/2009	11:37:00	1357	6.89	8.36	7.07		
4/25/2009	11:38:00	1358	6.89	8.36	7.07		
4/25/2009	11:39:00	1359	6.89	8.36	7.07		
4/25/2009	11:40:00	1360	6.89	8.34	7.07		
4/25/2009	11:41:00	1361	6.89	8.34	7.07		
4/25/2009	11:42:00	1362	6.89	8.34	7.07	-2.33	34.152
4/25/2009	11:43:00	1363	6.89	8.34	7.07		
4/25/2009	11:44:00	1364	6.89	8.33	7.07		
4/25/2009	11:45:00	1365	6.89	8.33	7.07		
4/25/2009	11:46:00	1366	6.89	8.33	7.07		
4/25/2009	11:47:00	1367	6.89	8.33	7.07		
4/25/2009	11:48:00	1368	6.89	8.31	7.07	-2.36	34.152
4/25/2009	11:49:00	1369	6.89	8.31	7.07		
4/25/2009	11:50:00	1370	6.89	8.33	7.07		
4/25/2009	11:51:00	1371	6.89	8.30	7.07		
4/25/2009	11:52:00	1372	6.89	8.30	7.07		
4/25/2009	11:53:00	1373	6.89	8.30	7.07		
4/25/2009	11:54:00	1374	6.89	8.30	7.07	-2.34	34.151
4/25/2009	11:55:00	1375	6.89	8.30	7.07		
4/25/2009	11:56:00	1376	6.89	8.30	7.07		
4/25/2009	11:57:00	1377	6.89	8.30	7.08		
4/25/2009	11:58:00	1378	6.89	8.30	7.07		
4/25/2009	11:59:00	1379	6.89	8.30	7.07		
4/25/2009	12:00:00	1380	6.89	8.28	7.07	-2.30	34.152
4/25/2009	12:01:00	1381	6.89	8.26	7.07		
4/25/2009	12:02:00	1382	6.89	8.26	7.07		
4/25/2009	12:03:00	1383	6.89	8.26	7.07		
4/25/2009	12:04:00	1384	6.89	8.26	7.08		
4/25/2009	12:05:00	1385	6.89	8.26	7.08		
4/25/2009	12:06:00	1386	6.89	8.26	7.07	-2.27	34.152
4/25/2009	12:07:00	1387	6.89	8.25	7.07		
4/25/2009	12:08:00	1388	6.89	8.25	7.07		
4/25/2009	12:09:00	1389	6.89	8.25	7.07		
4/25/2009	12:10:00	1390	6.89	8.25	7.07		
4/25/2009	12:11:00	1391	6.89	8.23	7.07		
4/25/2009	12:12:00	1392	6.89	8.23	7.07	-2.21	34.154
4/25/2009	12:13:00	1393	6.89	8.23	7.07		
4/25/2009	12:14:00	1394	6.89	8.23	7.07		
4/25/2009	12:15:00	1395	6.89	8.23	7.07		
4/25/2009	12:16:00	1396	6.89	8.23	7.05		
4/25/2009	12:17:00	1397	6.89	8.23	7.07		
4/25/2009	12:18:00	1398	6.89	8.23	7.07	-2.14	34.155
4/25/2009	12:19:00	1399	6.89	8.22	7.07		
4/25/2009	12:20:00	1400	6.89	8.23	7.07		
4/25/2009	12:21:00	1401	6.89	8.22	7.07		
4/25/2009	12:22:00	1402	6.89	8.22	7.05		
4/25/2009	12:23:00	1403	6.89	8.22	7.07		
4/25/2009	12:24:00	1404	6.89	8.22	7.07	-2.02	34.155
4/25/2009	12:25:00	1405	6.89	8.22	7.07		
4/25/2009	12:26:00	1406	6.89	8.22	7.07		
4/25/2009	12:27:00	1407	6.89	8.22	7.07		
4/25/2009	12:28:00	1408	6.89	8.20	7.07		
4/25/2009	12:29:00	1409	6.89	8.22	7.07		
4/25/2009	12:30:00	1410	6.89	8.20	7.07	-1.88	34.155
4/25/2009	12:31:00	1411	6.89	8.20	7.07		
4/25/2009	12:32:00	1412	6.89	8.20	7.08		
4/25/2009	12:33:00	1413	6.89	8.20	7.07		
4/25/2009	12:34:00	1414	6.89	8.20	7.07		
4/25/2009	12:35:00	1415	6.89	8.20	7.07		
4/25/2009	12:36:00	1416	6.89	8.20	7.07	-1.74	34.153
4/25/2009	12:37:00	1417	6.89	8.20	7.07		
4/25/2009	12:38:00	1418	6.89	8.20	7.07		
4/25/2009	12:39:00	1419	6.89	8.20	7.07		
4/25/2009	12:40:00	1420	6.89	8.20	7.07		
4/25/2009	12:41:00	1421	6.89	8.20	7.05		
4/25/2009	12:42:00	1422	6.89	8.20	7.07	-1.58	34.151
4/25/2009	12:43:00	1423	6.89	8.20	7.07		
4/25/2009	12:44:00	1424	6.89	8.20	7.05		
4/25/2009	12:45:00	1425	6.89	8.20	7.05		
4/25/2009	12:46:00	1426	6.89	8.20	7.07		
4/25/2009	12:47:00	1427	6.89	8.20	7.07		
4/25/2009	12:48:00	1428	6.89	8.20	7.07	-1.44	34.151
4/25/2009	12:49:00	1429	6.89	8.20	7.07		
4/25/2009	12:50:00	1430	6.89	8.18	7.07		
4/25/2009	12:51:00	1431	6.89	8.20	7.05		
4/25/2009	12:52:00	1432	6.89	8.20	7.07		
4/25/2009	12:53:00	1433	6.89	8.20	7.07		
4/25/2009	12:54:00	1434	6.89	8.18	7.05	-1.28	34.154
4/25/2009	12:55:00	1435	6.89	8.20	7.07		
4/25/2009	12:56:00	1436	6.89	8.20	7.07		
4/25/2009	12:57:00	1437	6.89	8.20	7.07		
4/25/2009	12:58:00	1438	6.89	8.20	7.07		
4/25/2009	12:59:00	1439	6.89	8.20	7.07		
4/25/2009	13:00:00	1440	6.89	8.20	7.07	-1.11	34.155
4/25/2009	13:01:00	1441	6.89	8.20	7.07		
4/25/2009	13:02:00	1442	6.89	8.20	7.05		
4/25/2009	13:03:00	1443	6.89	8.20	7.07		
4/25/2009	13:04:00	1444	6.89	8.20	7.05		
4/25/2009	13:05:00	1445	6.89	8.20	7.07		
4/25/2009	13:06:00	1446	6.89	8.20	7.07	-0.91	34.153
4/25/2009	13:07:00	1447	6.89	8.22	7.05		
4/25/2009	13:08:00	1448	6.89	8.22	7.05		
4/25/2009	13:09:00	1449	6.89	8.20	7.05		
4/25/2009	13:10:00	1450	6.89	8.22	7.07		
4/25/2009	13:11:00	1451	6.89	8.22	7.07		
4/25/2009	13:12:00	1452	6.89	8.23	7.07	-0.72	34.153
4/25/2009	13:13:00	1453	6.89	8.22	7.07		
4/25/2009	13:14:00	1454	6.89	8.23	7.05		
4/25/2009	13:15:00	1455	6.89	8.23	7.07		
4/25/2009	13:16:00	1456	6.89	8.23	7.07		
4/25/2009	13:17:00	1457	6.89	8.22	7.07		
4/25/2009	13:18:00	1458	6.89	8.23	7.05	-0.51	34.157
4/25/2009	13:19:00	1459	6.89	8.23	7.07		
4/25/2009	13:20:00	1460	6.89	8.23	7.05		
4/25/2009	13:21:00	1461	6.89	8.25	7.07		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	13:22:00	1462	6.89	8.23	7.07		
4/25/2009	13:23:00	1463	6.89	8.25	7.07		
4/25/2009	13:24:00	1464	6.89	8.25	7.07	-0.29	34.157
4/25/2009	13:25:00	1465	6.89	8.25	7.05		
4/25/2009	13:26:00	1466	6.89	8.26	7.07		
4/25/2009	13:27:00	1467	6.89	8.25	7.07		
4/25/2009	13:28:00	1468	6.89	8.25	7.07		
4/25/2009	13:29:00	1469	6.89	8.26	7.07		
4/25/2009	13:30:00	1470	6.89	8.26	7.05	-0.09	34.156
4/25/2009	13:31:00	1471	6.89	8.26	7.07		
4/25/2009	13:32:00	1472	6.89	8.26	7.07		
4/25/2009	13:33:00	1473	6.89	8.26	7.07		
4/25/2009	13:34:00	1474	6.89	8.26	7.07		
4/25/2009	13:35:00	1475	6.89	8.26	7.07		
4/25/2009	13:36:00	1476	6.89	8.28	7.07	0.13	34.157
4/25/2009	13:37:00	1477	6.89	8.30	7.05		
4/25/2009	13:38:00	1478	6.89	8.30	7.07		
4/25/2009	13:39:00	1479	6.89	8.30	7.05		
4/25/2009	13:40:00	1480	6.89	8.30	7.05		
4/25/2009	13:41:00	1481	6.89	8.30	7.05		
4/25/2009	13:42:00	1482	6.89	8.30	7.07	0.37	34.157
4/25/2009	13:43:00	1483	6.89	8.30	7.07		
4/25/2009	13:44:00	1484	6.89	8.30	7.05		
4/25/2009	13:45:00	1485	6.89	8.31	7.07		
4/25/2009	13:46:00	1486	6.89	8.31	7.07		
4/25/2009	13:47:00	1487	6.89	8.31	7.07		
4/25/2009	13:48:00	1488	6.89	8.33	7.07	0.62	34.157
4/25/2009	13:49:00	1489	6.89	8.33	7.07		
4/25/2009	13:50:00	1490	6.89	8.33	7.05		
4/25/2009	13:51:00	1491	6.89	8.33	7.07		
4/25/2009	13:52:00	1492	6.89	8.33	7.07		
4/25/2009	13:53:00	1493	6.89	8.34	7.05		
4/25/2009	13:54:00	1494	6.89	8.36	7.07	0.87	34.156
4/25/2009	13:55:00	1495	6.89	8.36	7.07		
4/25/2009	13:56:00	1496	6.89	8.36	7.07		
4/25/2009	13:57:00	1497	6.89	8.36	7.07		
4/25/2009	13:58:00	1498	6.89	8.36	7.07		
4/25/2009	13:59:00	1499	6.89	8.36	7.07		
4/25/2009	14:00:00	1500	6.89	8.38	7.05	1.12	34.155
4/25/2009	14:01:00	1501	6.89	8.39	7.07		
4/25/2009	14:02:00	1502	6.89	8.39	7.07		
4/25/2009	14:03:00	1503	6.89	8.39	7.05		
4/25/2009	14:04:00	1504	6.89	8.39	7.05		
4/25/2009	14:05:00	1505	6.89	8.39	7.05		
4/25/2009	14:06:00	1506	6.89	8.41	7.07	1.40	34.156
4/25/2009	14:07:00	1507	6.89	8.42	7.07		
4/25/2009	14:08:00	1508	6.89	8.42	7.07		
4/25/2009	14:09:00	1509	6.89	8.42	7.07		
4/25/2009	14:10:00	1510	6.89	8.42	7.05		
4/25/2009	14:11:00	1511	6.89	8.44	7.07		
4/25/2009	14:12:00	1512	6.89	8.44	7.05	1.68	34.155
4/25/2009	14:13:00	1513	6.89	8.44	7.07		
4/25/2009	14:14:00	1514	6.89	8.44	7.07		
4/25/2009	14:15:00	1515	6.89	8.46	7.07		
4/25/2009	14:16:00	1516	6.89	8.46	7.07		
4/25/2009	14:17:00	1517	6.89	8.47	7.05		
4/25/2009	14:18:00	1518	6.89	8.49	7.07	1.97	34.156
4/25/2009	14:19:00	1519	6.89	8.49	7.07		
4/25/2009	14:20:00	1520	6.89	8.49	7.07		
4/25/2009	14:21:00	1521	6.89	8.49	7.07		
4/25/2009	14:22:00	1522	6.89	8.49	7.07		
4/25/2009	14:23:00	1523	6.89	8.50	7.07		
4/25/2009	14:24:00	1524	6.89	8.50	7.07	2.25	34.155
4/25/2009	14:25:00	1525	6.89	8.52	7.05		
4/25/2009	14:26:00	1526	6.89	8.54	7.05		
4/25/2009	14:27:00	1527	6.89	8.55	7.07		
4/25/2009	14:28:00	1528	6.89	8.50	7.07		
4/25/2009	14:29:00	1529	6.89	8.55	7.07		
4/25/2009	14:30:00	1530	6.89	8.55	7.07	2.56	34.153
4/25/2009	14:31:00	1531	6.89	8.55	7.07		
4/25/2009	14:32:00	1532	6.89	8.57	7.07		
4/25/2009	14:33:00	1533	6.89	8.57	7.07		
4/25/2009	14:34:00	1534	6.89	8.58	7.07		
4/25/2009	14:35:00	1535	6.89	8.58	7.07		
4/25/2009	14:36:00	1536	6.89	8.58	7.05	2.87	34.154
4/25/2009	14:37:00	1537	6.89	8.60	7.05		
4/25/2009	14:38:00	1538	6.89	8.62	7.07		
4/25/2009	14:39:00	1539	6.89	8.62	7.05		
4/25/2009	14:40:00	1540	6.89	8.62	7.07		
4/25/2009	14:41:00	1541	6.89	8.63	7.05		
4/25/2009	14:42:00	1542	6.89	8.63	7.07	3.20	34.155
4/25/2009	14:43:00	1543	6.89	8.65	7.07		
4/25/2009	14:44:00	1544	6.89	8.65	7.07		
4/25/2009	14:45:00	1545	6.89	8.66	7.05		
4/25/2009	14:46:00	1546	6.89	8.66	7.05		
4/25/2009	14:47:00	1547	6.89	8.68	7.05		
4/25/2009	14:48:00	1548	6.89	8.68	7.07	3.52	34.151
4/25/2009	14:49:00	1549	6.89	8.70	7.07		
4/25/2009	14:50:00	1550	6.89	8.71	7.07		
4/25/2009	14:51:00	1551	6.89	8.71	7.05		
4/25/2009	14:52:00	1552	6.89	8.71	7.05		
4/25/2009	14:53:00	1553	6.89	8.73	7.05		
4/25/2009	14:54:00	1554	6.89	8.74	7.05	3.84	34.150
4/25/2009	14:55:00	1555	6.89	8.74	7.07		
4/25/2009	14:56:00	1556	6.89	8.74	7.07		
4/25/2009	14:57:00	1557	6.89	8.76	7.07		
4/25/2009	14:58:00	1558	6.89	8.78	7.05		
4/25/2009	14:59:00	1559	6.89	8.78	7.07		
4/25/2009	15:00:00	1560	6.89	8.79	7.05	4.17	34.146
4/25/2009	15:01:00	1561	6.89	8.81	7.05		
4/25/2009	15:02:00	1562	6.89	8.81	7.07		
4/25/2009	15:03:00	1563	6.89	8.81	7.05		
4/25/2009	15:04:00	1564	6.89	8.82	7.05		
4/25/2009	15:05:00	1565	6.89	8.82	7.05		
4/25/2009	15:06:00	1566	6.89	8.84	7.07	4.48	34.145
4/25/2009	15:07:00	1567	6.89	8.84	7.05		
4/25/2009	15:08:00	1568	6.89	8.86	7.05		
4/25/2009	15:09:00	1569	6.89	8.87	7.05		
4/25/2009	15:10:00	1570	6.89	8.87	7.05		
4/25/2009	15:11:00	1571	6.89	8.89	7.05		
4/25/2009	15:12:00	1572	6.89	8.89	7.05	4.79	34.145
4/25/2009	15:13:00	1573	6.89	8.90	7.05		
4/25/2009	15:14:00	1574	6.89	8.92	7.05		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	15:15:00	1575	6.89	8.92	7.05		
4/25/2009	15:16:00	1576	6.89	8.94	7.05		
4/25/2009	15:17:00	1577	6.89	8.94	7.05		
4/25/2009	15:18:00	1578	6.89	8.94	7.05	5.11	34.146
4/25/2009	15:19:00	1579	6.89	8.95	7.05		
4/25/2009	15:20:00	1580	6.89	8.97	7.05		
4/25/2009	15:21:00	1581	6.89	8.97	7.05		
4/25/2009	15:22:00	1582	6.89	8.98	7.05		
4/25/2009	15:23:00	1583	6.89	9.00	7.05		
4/25/2009	15:24:00	1584	6.89	9.00	7.05	5.42	34.146
4/25/2009	15:25:00	1585	6.89	9.02	7.05		
4/25/2009	15:26:00	1586	6.89	9.02	7.05		
4/25/2009	15:27:00	1587	6.89	9.03	7.05		
4/25/2009	15:28:00	1588	6.89	9.05	7.05		
4/25/2009	15:29:00	1589	6.89	9.06	7.05		
4/25/2009	15:30:00	1590	6.89	9.06	7.05	5.73	34.146
4/25/2009	15:31:00	1591	6.89	9.06	7.05		
4/25/2009	15:32:00	1592	6.89	9.06	7.05		
4/25/2009	15:33:00	1593	6.89	9.08	7.05		
4/25/2009	15:34:00	1594	6.89	9.10	7.05		
4/25/2009	15:35:00	1595	6.89	9.11	7.05		
4/25/2009	15:36:00	1596	6.89	9.13	7.05	6.02	34.147
4/25/2009	15:37:00	1597	6.89	9.13	7.05		
4/25/2009	15:38:00	1598	6.89	9.13	7.05		
4/25/2009	15:39:00	1599	6.89	9.14	7.05		
4/25/2009	15:40:00	1600	6.89	9.14	7.05		
4/25/2009	15:41:00	1601	6.89	9.16	7.05		
4/25/2009	15:42:00	1602	6.89	9.16	7.05	6.31	34.147
4/25/2009	15:43:00	1603	6.89	9.19	7.05		
4/25/2009	15:44:00	1604	6.89	9.19	7.05		
4/25/2009	15:45:00	1605	6.89	9.21	7.05		
4/25/2009	15:46:00	1606	6.89	9.21	7.05		
4/25/2009	15:47:00	1607	6.89	9.21	7.05		
4/25/2009	15:48:00	1608	6.89	9.22	7.05	6.59	34.149
4/25/2009	15:49:00	1609	6.89	9.22	7.05		
4/25/2009	15:50:00	1610	6.89	9.24	7.05		
4/25/2009	15:51:00	1611	6.89	9.26	7.05		
4/25/2009	15:52:00	1612	6.89	9.26	7.05		
4/25/2009	15:53:00	1613	6.89	9.26	7.05		
4/25/2009	15:54:00	1614	6.89	9.27	7.05	6.87	34.148
4/25/2009	15:55:00	1615	6.89	9.29	7.05		
4/25/2009	15:56:00	1616	6.89	9.29	7.05		
4/25/2009	15:57:00	1617	6.89	9.30	7.05		
4/25/2009	15:58:00	1618	6.89	9.32	7.05		
4/25/2009	15:59:00	1619	6.89	9.32	7.05		
4/25/2009	16:00:00	1620	6.89	9.32	7.05	7.13	34.148
4/25/2009	16:01:00	1621	6.89	9.34	7.05		
4/25/2009	16:02:00	1622	6.89	9.35	7.05		
4/25/2009	16:03:00	1623	6.89	9.35	7.05		
4/25/2009	16:04:00	1624	6.89	9.37	7.05		
4/25/2009	16:05:00	1625	6.89	9.38	7.05		
4/25/2009	16:06:00	1626	6.89	9.38	7.05	7.41	34.148
4/25/2009	16:07:00	1627	6.89	9.38	7.05		
4/25/2009	16:08:00	1628	6.89	9.42	7.05		
4/25/2009	16:09:00	1629	6.89	9.42	7.05		
4/25/2009	16:10:00	1630	6.89	9.42	7.05		
4/25/2009	16:11:00	1631	6.89	9.42	7.05		
4/25/2009	16:12:00	1632	6.89	9.43	7.05	7.65	34.148
4/25/2009	16:13:00	1633	6.89	9.45	7.05		
4/25/2009	16:14:00	1634	6.89	9.45	7.05		
4/25/2009	16:15:00	1635	6.89	9.46	7.05		
4/25/2009	16:16:00	1636	6.89	9.48	7.05		
4/25/2009	16:17:00	1637	6.89	9.48	7.05		
4/25/2009	16:18:00	1638	6.89	9.50	7.05	7.88	34.147
4/25/2009	16:19:00	1639	6.89	9.51	7.03		
4/25/2009	16:20:00	1640	6.89	9.51	7.05		
4/25/2009	16:21:00	1641	6.89	9.53	7.03		
4/25/2009	16:22:00	1642	6.89	9.51	7.03		
4/25/2009	16:23:00	1643	6.89	9.54	7.05		
4/25/2009	16:24:00	1644	6.89	9.54	7.05	8.12	34.148
4/25/2009	16:25:00	1645	6.89	9.58	7.05		
4/25/2009	16:26:00	1646	6.89	9.58	7.05		
4/25/2009	16:27:00	1647	6.89	9.58	7.05		
4/25/2009	16:28:00	1648	6.89	9.58	7.05		
4/25/2009	16:29:00	1649	6.89	9.59	7.05		
4/25/2009	16:30:00	1650	6.89	9.61	7.05	8.35	34.148
4/25/2009	16:31:00	1651	6.89	9.61	7.05		
4/25/2009	16:32:00	1652	6.89	9.62	7.05		
4/25/2009	16:33:00	1653	6.89	9.62	7.05		
4/25/2009	16:34:00	1654	6.89	9.62	7.05		
4/25/2009	16:35:00	1655	6.89	9.64	7.05		
4/25/2009	16:36:00	1656	6.89	9.66	7.05	8.57	34.148
4/25/2009	16:37:00	1657	6.89	9.77	7.05		
4/25/2009	16:38:00	1658	6.89	9.66	7.05		
4/25/2009	16:39:00	1659	6.89	9.67	7.05		
4/25/2009	16:40:00	1660	6.89	9.69	7.05		
4/25/2009	16:41:00	1661	6.89	9.70	7.05		
4/25/2009	16:42:00	1662	6.89	9.70	7.05	8.79	34.148
4/25/2009	16:43:00	1663	6.89	9.70	7.05		
4/25/2009	16:44:00	1664	6.89	9.72	7.05		
4/25/2009	16:45:00	1665	6.89	9.72	7.05		
4/25/2009	16:46:00	1666	6.89	9.75	7.05		
4/25/2009	16:47:00	1667	6.89	9.75	7.05		
4/25/2009	16:48:00	1668	6.89	9.75	7.05	8.99	34.148
4/25/2009	16:49:00	1669	6.89	9.77	7.05		
4/25/2009	16:50:00	1670	6.89	9.77	7.05		
4/25/2009	16:51:00	1671	6.89	9.78	7.05		
4/25/2009	16:52:00	1672	6.89	9.78	7.05		
4/25/2009	16:53:00	1673	6.89	9.78	7.05		
4/25/2009	16:54:00	1674	6.89	9.80	7.05	9.19	34.148
4/25/2009	16:55:00	1675	6.89	9.82	7.05		
4/25/2009	16:56:00	1676	6.89	9.83	7.05		
4/25/2009	16:57:00	1677	6.89	9.83	7.05		
4/25/2009	16:58:00	1678	6.89	9.83	7.05		
4/25/2009	16:59:00	1679	6.89	9.85	7.05		
4/25/2009	17:00:00	1680	6.89	9.85	7.05	9.39	34.151
4/25/2009	17:01:00	1681	6.89	9.86	7.05		
4/25/2009	17:02:00	1682	6.89	9.86	7.05		
4/25/2009	17:03:00	1683	6.89	9.88	7.05		
4/25/2009	17:04:00	1684	6.89	9.96	7.05		
4/25/2009	17:05:00	1685	6.89	9.96	7.05		
4/25/2009	17:06:00	1686	6.89	9.98	7.05	9.56	34.151
4/25/2009	17:07:00	1687	6.89	9.96	7.05		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	17:08:00	1688	6.89	9.96	7.05		
4/25/2009	17:09:00	1689	6.89	9.96	7.05		
4/25/2009	17:10:00	1690	6.89	9.88	7.05		
4/25/2009	17:11:00	1691	6.89	9.91	7.05		
4/25/2009	17:12:00	1692	6.89	9.94	7.05	9.73	34.154
4/25/2009	17:13:00	1693	6.89	9.94	7.05		
4/25/2009	17:14:00	1694	6.89	9.96	7.05		
4/25/2009	17:15:00	1695	6.89	10.09	7.05		
4/25/2009	17:16:00	1696	6.89	10.02	7.05		
4/25/2009	17:17:00	1697	6.89	10.04	7.05		
4/25/2009	17:18:00	1698	6.89	10.02	7.05	9.88	34.154
4/25/2009	17:19:00	1699	6.89	10.04	7.05		
4/25/2009	17:20:00	1700	6.89	10.04	7.05		
4/25/2009	17:21:00	1701	6.89	10.02	7.05		
4/25/2009	17:22:00	1702	6.89	10.06	7.05		
4/25/2009	17:23:00	1703	6.89	9.96	7.05		
4/25/2009	17:24:00	1704	6.89	9.99	7.05	10.04	34.156
4/25/2009	17:25:00	1705	6.89	10.04	7.05		
4/25/2009	17:26:00	1706	6.89	10.09	7.05		
4/25/2009	17:27:00	1707	6.89	10.10	7.05		
4/25/2009	17:28:00	1708	6.89	10.10	7.05		
4/25/2009	17:29:00	1709	6.89	10.10	7.05		
4/25/2009	17:30:00	1710	6.89	10.10	7.05	10.16	34.155
4/25/2009	17:31:00	1711	6.89	10.10	7.05		
4/25/2009	17:32:00	1712	6.89	10.12	7.05		
4/25/2009	17:33:00	1713	6.89	10.04	7.05		
4/25/2009	17:34:00	1714	6.89	10.06	7.05		
4/25/2009	17:35:00	1715	6.89	10.09	7.05		
4/25/2009	17:36:00	1716	6.89	10.09	7.05	10.28	34.155
4/25/2009	17:37:00	1717	6.89	10.09	7.05		
4/25/2009	17:38:00	1718	6.89	10.10	7.05		
4/25/2009	17:39:00	1719	6.89	10.12	7.05		
4/25/2009	17:40:00	1720	6.89	10.12	7.05		
4/25/2009	17:41:00	1721	6.89	10.14	7.05		
4/25/2009	17:42:00	1722	6.89	10.15	7.05	10.40	34.158
4/25/2009	17:43:00	1723	6.89	10.15	7.05		
4/25/2009	17:44:00	1724	6.89	10.15	7.05		
4/25/2009	17:45:00	1725	6.89	10.17	7.05		
4/25/2009	17:46:00	1726	6.89	10.25	7.05		
4/25/2009	17:47:00	1727	6.89	10.25	7.05		
4/25/2009	17:48:00	1728	6.89	10.23	7.05	10.49	34.158
4/25/2009	17:49:00	1729	6.89	10.23	7.05		
4/25/2009	17:50:00	1730	6.89	10.23	7.05		
4/25/2009	17:51:00	1731	6.89	10.25	7.05		
4/25/2009	17:52:00	1732	6.89	10.26	7.05		
4/25/2009	17:53:00	1733	6.89	10.28	7.05		
4/25/2009	17:54:00	1734	6.89	10.26	7.05	10.57	34.159
4/25/2009	17:55:00	1735	6.89	10.28	7.05		
4/25/2009	17:56:00	1736	6.89	10.28	7.05		
4/25/2009	17:57:00	1737	6.89	10.28	7.05		
4/25/2009	17:58:00	1738	6.89	10.28	7.05		
4/25/2009	17:59:00	1739	6.89	10.31	7.05		
4/25/2009	18:00:00	1740	6.89	10.30	7.05	10.67	34.162
4/25/2009	18:01:00	1741	6.89	10.30	7.05		
4/25/2009	18:02:00	1742	6.89	10.31	7.05		
4/25/2009	18:03:00	1743	6.89	10.30	7.05		
4/25/2009	18:04:00	1744	6.89	10.30	7.05		
4/25/2009	18:05:00	1745	6.89	10.31	7.05		
4/25/2009	18:06:00	1746	6.89	10.22	7.07	10.73	34.164
4/25/2009	18:07:00	1747	6.89	10.25	7.07		
4/25/2009	18:08:00	1748	6.89	10.26	7.07		
4/25/2009	18:09:00	1749	6.89	10.28	7.07		
4/25/2009	18:10:00	1750	6.89	10.31	7.05		
4/25/2009	18:11:00	1751	6.89	10.38	7.05		
4/25/2009	18:12:00	1752	6.89	10.38	7.05	10.80	34.163
4/25/2009	18:13:00	1753	6.89	10.39	7.05		
4/25/2009	18:14:00	1754	6.89	10.38	7.07		
4/25/2009	18:15:00	1755	6.89	10.36	7.05		
4/25/2009	18:16:00	1756	6.89	10.38	7.07		
4/25/2009	18:17:00	1757	6.89	10.38	7.07		
4/25/2009	18:18:00	1758	6.89	10.36	7.05	10.88	34.163
4/25/2009	18:19:00	1759	6.89	10.38	7.05		
4/25/2009	18:20:00	1760	6.89	10.38	7.07		
4/25/2009	18:21:00	1761	6.89	10.39	7.07		
4/25/2009	18:22:00	1762	6.89	10.42	7.07		
4/25/2009	18:23:00	1763	6.89	10.42	7.07		
4/25/2009	18:24:00	1764	6.89	10.44	7.07	10.93	34.164
4/25/2009	18:25:00	1765	6.89	10.41	7.07		
4/25/2009	18:26:00	1766	6.89	10.42	7.07		
4/25/2009	18:27:00	1767	6.89	10.44	7.07		
4/25/2009	18:28:00	1768	6.89	10.44	7.07		
4/25/2009	18:29:00	1769	6.89	10.44	7.07		
4/25/2009	18:30:00	1770	6.89	10.44	7.07	10.96	34.165
4/25/2009	18:31:00	1771	6.89	10.46	7.07		
4/25/2009	18:32:00	1772	6.89	10.47	7.07		
4/25/2009	18:33:00	1773	6.89	10.47	7.07		
4/25/2009	18:34:00	1774	6.89	10.44	7.07		
4/25/2009	18:35:00	1775	6.89	10.44	7.07		
4/25/2009	18:36:00	1776	6.89	10.47	7.07	11.00	34.167
4/25/2009	18:37:00	1777	6.89	10.47	7.07		
4/25/2009	18:38:00	1778	6.89	10.46	7.07		
4/25/2009	18:39:00	1779	6.89	10.47	7.07		
4/25/2009	18:40:00	1780	6.89	10.47	7.07		
4/25/2009	18:41:00	1781	6.89	10.47	7.08		
4/25/2009	18:42:00	1782	6.89	10.47	7.08	11.02	34.168
4/25/2009	18:43:00	1783	6.89	10.50	7.07		
4/25/2009	18:44:00	1784	6.89	10.50	7.07		
4/25/2009	18:45:00	1785	6.89	10.49	7.07		
4/25/2009	18:46:00	1786	6.89	10.49	7.07		
4/25/2009	18:47:00	1787	6.89	10.50	7.07		
4/25/2009	18:48:00	1788	6.89	10.52	7.08	11.03	34.169
4/25/2009	18:49:00	1789	6.89	10.54	7.08		
4/25/2009	18:50:00	1790	6.89	10.54	7.07		
4/25/2009	18:51:00	1791	6.89	10.54	7.08		
4/25/2009	18:52:00	1792	6.89	10.54	7.07		
4/25/2009	18:53:00	1793	6.89	10.52	7.07		
4/25/2009	18:54:00	1794	6.89	10.52	7.07	11.04	34.170
4/25/2009	18:55:00	1795	6.89	10.44	7.07		
4/25/2009	18:56:00	1796	6.89	10.47	7.08		
4/25/2009	18:57:00	1797	6.89	10.47	7.07		
4/25/2009	18:58:00	1798	6.89	10.49	7.08		
4/25/2009	18:59:00	1799	6.89	10.50	7.08		
4/25/2009	19:00:00	1800	6.89	10.50	7.08	11.04	34.171

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	19:01:00	1801	6.89	10.50	7.08		
4/25/2009	19:02:00	1802	6.89	10.52	7.08		
4/25/2009	19:03:00	1803	6.89	10.54	7.07		
4/25/2009	19:04:00	1804	6.90	10.54	7.07		
4/25/2009	19:05:00	1805	6.89	10.54	7.08		
4/25/2009	19:06:00	1806	6.89	10.54	7.08	11.02	34.172
4/25/2009	19:07:00	1807	6.89	10.55	7.08		
4/25/2009	19:08:00	1808	6.89	10.54	7.07		
4/25/2009	19:09:00	1809	6.89	10.55	7.08		
4/25/2009	19:10:00	1810	6.89	10.55	7.07		
4/25/2009	19:11:00	1811	6.89	10.55	7.07		
4/25/2009	19:12:00	1812	6.89	10.57	7.08	10.99	34.174
4/25/2009	19:13:00	1813	6.89	10.57	7.08		
4/25/2009	19:14:00	1814	6.89	10.57	7.08		
4/25/2009	19:15:00	1815	6.89	10.57	7.07		
4/25/2009	19:16:00	1816	6.89	10.57	7.08		
4/25/2009	19:17:00	1817	6.89	10.57	7.12		
4/25/2009	19:18:00	1818	6.89	10.60	7.08	10.97	34.176
4/25/2009	19:19:00	1819	6.89	10.60	7.10		
4/25/2009	19:20:00	1820	6.89	10.60	7.10		
4/25/2009	19:21:00	1821	6.89	10.60	7.08		
4/25/2009	19:22:00	1822	6.89	10.60	7.10		
4/25/2009	19:23:00	1823	6.89	10.60	7.12		
4/25/2009	19:24:00	1824	6.89	10.60	7.08	10.92	34.177
4/25/2009	19:25:00	1825	6.89	10.60	7.10		
4/25/2009	19:26:00	1826	6.89	10.60	7.08		
4/25/2009	19:27:00	1827	6.89	10.60	7.08		
4/25/2009	19:28:00	1828	6.89	10.60	7.10		
4/25/2009	19:29:00	1829	6.89	10.60	7.08		
4/25/2009	19:30:00	1830	6.89	10.60	7.08	10.85	34.181
4/25/2009	19:31:00	1831	6.89	10.60	7.08		
4/25/2009	19:32:00	1832	6.89	10.60	7.10		
4/25/2009	19:33:00	1833	6.89	10.60	7.08		
4/25/2009	19:34:00	1834	6.89	10.60	7.10		
4/25/2009	19:35:00	1835	6.89	10.60	7.08		
4/25/2009	19:36:00	1836	6.89	10.62	7.12	10.80	34.185
4/25/2009	19:37:00	1837	6.89	10.60	7.12		
4/25/2009	19:38:00	1838	6.89	10.60	7.10		
4/25/2009	19:39:00	1839	6.89	10.62	7.12		
4/25/2009	19:40:00	1840	6.89	10.60	7.10		
4/25/2009	19:41:00	1841	6.89	10.60	7.12		
4/25/2009	19:42:00	1842	6.89	10.62	7.08	10.73	34.188
4/25/2009	19:43:00	1843	6.89	10.62	7.08		
4/25/2009	19:44:00	1844	6.89	10.62	7.12		
4/25/2009	19:45:00	1845	6.89	10.62	7.10		
4/25/2009	19:46:00	1846	6.89	10.62	7.08		
4/25/2009	19:47:00	1847	6.89	10.62	7.12		
4/25/2009	19:48:00	1848	6.90	10.63	7.10	10.66	34.191
4/25/2009	19:49:00	1849	6.89	10.62	7.12		
4/25/2009	19:50:00	1850	6.89	10.62	7.12		
4/25/2009	19:51:00	1851	6.89	10.62	7.10		
4/25/2009	19:52:00	1852	6.90	10.63	7.12		
4/25/2009	19:53:00	1853	6.89	10.62	7.10		
4/25/2009	19:54:00	1854	6.89	10.63	7.12	10.59	34.193
4/25/2009	19:55:00	1855	6.89	10.63	7.12		
4/25/2009	19:56:00	1856	6.89	10.62	7.12		
4/25/2009	19:57:00	1857	6.89	10.62	7.10		
4/25/2009	19:58:00	1858	6.90	10.62	7.12		
4/25/2009	19:59:00	1859	6.89	10.63	7.12		
4/25/2009	20:00:00	1860	6.89	10.62	7.12	10.52	34.197
4/25/2009	20:01:00	1861	6.89	10.63	7.10		
4/25/2009	20:02:00	1862	6.89	10.63	7.12		
4/25/2009	20:03:00	1863	6.89	10.63	7.12		
4/25/2009	20:04:00	1864	6.90	10.62	7.12		
4/25/2009	20:05:00	1865	6.90	10.63	7.12		
4/25/2009	20:06:00	1866	6.89	10.63	7.12	10.44	34.200
4/25/2009	20:07:00	1867	6.90	10.62	7.12		
4/25/2009	20:08:00	1868	6.90	10.63	7.12		
4/25/2009	20:09:00	1869	6.90	10.63	7.12		
4/25/2009	20:10:00	1870	6.90	10.63	7.12		
4/25/2009	20:11:00	1871	6.90	10.63	7.12		
4/25/2009	20:12:00	1872	6.90	10.62	7.12	10.35	34.202
4/25/2009	20:13:00	1873	6.90	10.63	7.12		
4/25/2009	20:14:00	1874	6.90	10.63	7.12		
4/25/2009	20:15:00	1875	6.90	10.63	7.10		
4/25/2009	20:16:00	1876	6.90	10.63	7.12		
4/25/2009	20:17:00	1877	6.89	10.62	7.12		
4/25/2009	20:18:00	1878	6.90	10.63	7.12	10.24	34.205
4/25/2009	20:19:00	1879	6.90	10.63	7.12		
4/25/2009	20:20:00	1880	6.90	10.62	7.12		
4/25/2009	20:21:00	1881	6.89	10.62	7.12		
4/25/2009	20:22:00	1882	6.90	10.62	7.12		
4/25/2009	20:23:00	1883	6.90	10.62	7.12		
4/25/2009	20:24:00	1884	6.90	10.62	7.12	10.14	34.207
4/25/2009	20:25:00	1885	6.90	10.62	7.12		
4/25/2009	20:26:00	1886	6.90	10.62	7.12		
4/25/2009	20:27:00	1887	6.90	10.62	7.12		
4/25/2009	20:28:00	1888	6.90	10.62	7.12		
4/25/2009	20:29:00	1889	6.90	10.62	7.12		
4/25/2009	20:30:00	1890	6.90	10.62	7.12	10.05	34.209
4/25/2009	20:31:00	1891	6.90	10.63	7.12		
4/25/2009	20:32:00	1892	6.90	10.62	7.12		
4/25/2009	20:33:00	1893	6.90	10.62	7.12		
4/25/2009	20:34:00	1894	6.90	10.62	7.12		
4/25/2009	20:35:00	1895	6.90	10.62	7.12		
4/25/2009	20:36:00	1896	6.90	10.62	7.12	9.94	34.211
4/25/2009	20:37:00	1897	6.90	10.62	7.12		
4/25/2009	20:38:00	1898	6.90	10.62	7.12		
4/25/2009	20:39:00	1899	6.90	10.62	7.12		
4/25/2009	20:40:00	1900	6.90	10.60	7.12		
4/25/2009	20:41:00	1901	6.90	10.62	7.12		
4/25/2009	20:42:00	1902	6.90	10.62	7.12	9.83	34.212
4/25/2009	20:43:00	1903	6.90	10.60	7.12		
4/25/2009	20:44:00	1904	6.90	10.60	7.12		
4/25/2009	20:45:00	1905	6.90	10.62	7.12		
4/25/2009	20:46:00	1906	6.90	10.60	7.12		
4/25/2009	20:47:00	1907	6.90	10.60	7.12		
4/25/2009	20:48:00	1908	6.90	10.60	7.12	9.70	34.214
4/25/2009	20:49:00	1909	6.90	10.63	7.12		
4/25/2009	20:50:00	1910	6.90	10.63	7.12		
4/25/2009	20:51:00	1911	6.90	10.63	7.12		
4/25/2009	20:52:00	1912	6.90	10.60	7.12		
4/25/2009	20:53:00	1913	6.90	10.57	7.12		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	20:54:00	1914	6.90	10.58	7.13	9.57	34.217
4/25/2009	20:55:00	1915	6.90	10.58	7.12		
4/25/2009	20:56:00	1916	6.90	10.60	7.12		
4/25/2009	20:57:00	1917	6.90	10.60	7.12		
4/25/2009	20:58:00	1918	6.90	10.60	7.12		
4/25/2009	20:59:00	1919	6.90	10.60	7.12		
4/25/2009	21:00:00	1920	6.90	10.60	7.12	9.43	34.220
4/25/2009	21:01:00	1921	6.90	10.58	7.12		
4/25/2009	21:02:00	1922	6.90	10.58	7.12		
4/25/2009	21:03:00	1923	6.90	10.57	7.13		
4/25/2009	21:04:00	1924	6.90	10.57	7.12		
4/25/2009	21:05:00	1925	6.90	10.57	7.12		
4/25/2009	21:06:00	1926	6.90	10.57	7.12	9.31	34.221
4/25/2009	21:07:00	1927	6.90	10.57	7.12		
4/25/2009	21:08:00	1928	6.90	10.57	7.13		
4/25/2009	21:09:00	1929	6.90	10.55	7.12		
4/25/2009	21:10:00	1930	6.90	10.57	7.12		
4/25/2009	21:11:00	1931	6.90	10.55	7.13		
4/25/2009	21:12:00	1932	6.90	10.57	7.13	9.17	34.223
4/25/2009	21:13:00	1933	6.90	10.55	7.13		
4/25/2009	21:14:00	1934	6.90	10.55	7.13		
4/25/2009	21:15:00	1935	6.90	10.55	7.13		
4/25/2009	21:16:00	1936	6.90	10.55	7.12		
4/25/2009	21:17:00	1937	6.90	10.55	7.13		
4/25/2009	21:18:00	1938	6.90	10.54	7.13	9.03	34.224
4/25/2009	21:19:00	1939	6.90	10.54	7.13		
4/25/2009	21:20:00	1940	6.90	10.54	7.13		
4/25/2009	21:21:00	1941	6.90	10.54	7.13		
4/25/2009	21:22:00	1942	6.90	10.54	7.15		
4/25/2009	21:23:00	1943	6.90	10.60	7.15		
4/25/2009	21:24:00	1944	6.90	10.60	7.13	8.88	34.226
4/25/2009	21:25:00	1945	6.90	10.50	7.13		
4/25/2009	21:26:00	1946	6.90	10.52	7.13		
4/25/2009	21:27:00	1947	6.90	10.50	7.13		
4/25/2009	21:28:00	1948	6.90	10.52	7.15		
4/25/2009	21:29:00	1949	6.90	10.50	7.13		
4/25/2009	21:30:00	1950	6.90	10.50	7.13	8.73	34.227
4/25/2009	21:31:00	1951	6.90	10.50	7.13		
4/25/2009	21:32:00	1952	6.90	10.50	7.13		
4/25/2009	21:33:00	1953	6.90	10.50	7.13		
4/25/2009	21:34:00	1954	6.90	10.50	7.13		
4/25/2009	21:35:00	1955	6.90	10.49	7.13		
4/25/2009	21:36:00	1956	6.90	10.49	7.13	8.58	34.229
4/25/2009	21:37:00	1957	6.90	10.49	7.13		
4/25/2009	21:38:00	1958	6.90	10.47	7.13		
4/25/2009	21:39:00	1959	6.90	10.49	7.15		
4/25/2009	21:40:00	1960	6.90	10.47	7.13		
4/25/2009	21:41:00	1961	6.90	10.47	7.13		
4/25/2009	21:42:00	1962	6.90	10.47	7.13	8.44	34.231
4/25/2009	21:43:00	1963	6.90	10.47	7.13		
4/25/2009	21:44:00	1964	6.90	10.47	7.15		
4/25/2009	21:45:00	1965	6.90	10.47	7.15		
4/25/2009	21:46:00	1966	6.90	10.46	7.13		
4/25/2009	21:47:00	1967	6.90	10.44	7.13	8.27	34.231
4/25/2009	21:48:00	1968	6.90	10.46	7.15		
4/25/2009	21:49:00	1969	6.90	10.44	7.13		
4/25/2009	21:50:00	1970	6.90	10.44	7.13		
4/25/2009	21:51:00	1971	6.90	10.44	7.15		
4/25/2009	21:52:00	1972	6.90	10.44	7.13		
4/25/2009	21:53:00	1973	6.90	10.44	7.13		
4/25/2009	21:54:00	1974	6.90	10.42	7.15	8.10	34.232
4/25/2009	21:55:00	1975	6.90	10.42	7.15		
4/25/2009	21:56:00	1976	6.90	10.42	7.15		
4/25/2009	21:57:00	1977	6.90	10.41	7.15		
4/25/2009	21:58:00	1978	6.90	10.42	7.15		
4/25/2009	21:59:00	1979	6.90	10.41	7.15		
4/25/2009	22:00:00	1980	6.90	10.41	7.15	7.94	34.235
4/25/2009	22:01:00	1981	6.90	10.41	7.15		
4/25/2009	22:02:00	1982	6.90	10.41	7.15		
4/25/2009	22:03:00	1983	6.90	10.39	7.15		
4/25/2009	22:04:00	1984	6.90	10.39	7.15		
4/25/2009	22:05:00	1985	6.90	10.39	7.15		
4/25/2009	22:06:00	1986	6.90	10.38	7.15	7.78	34.233
4/25/2009	22:07:00	1987	6.90	10.38	7.15		
4/25/2009	22:08:00	1988	6.90	10.38	7.15		
4/25/2009	22:09:00	1989	6.90	10.36	7.15		
4/25/2009	22:10:00	1990	6.90	10.38	7.15		
4/25/2009	22:11:00	1991	6.90	10.36	7.15		
4/25/2009	22:12:00	1992	6.90	10.36	7.15	7.60	34.233
4/25/2009	22:13:00	1993	6.90	10.36	7.15		
4/25/2009	22:14:00	1994	6.90	10.34	7.17		
4/25/2009	22:15:00	1995	6.90	10.34	7.15		
4/25/2009	22:16:00	1996	6.90	10.34	7.15		
4/25/2009	22:17:00	1997	6.90	10.34	7.15		
4/25/2009	22:18:00	1998	6.90	10.34	7.15	7.44	34.233
4/25/2009	22:19:00	1999	6.90	10.34	7.15		
4/25/2009	22:20:00	2000	6.90	10.33	7.15		
4/25/2009	22:21:00	2001	6.90	10.31	7.15		
4/25/2009	22:22:00	2002	6.90	10.30	7.15		
4/25/2009	22:23:00	2003	6.90	10.30	7.15		
4/25/2009	22:24:00	2004	6.90	10.30	7.15	7.27	34.235
4/25/2009	22:25:00	2005	6.90	10.30	7.15		
4/25/2009	22:26:00	2006	6.90	10.30	7.15		
4/25/2009	22:27:00	2007	6.90	10.28	7.15		
4/25/2009	22:28:00	2008	6.90	10.28	7.15		
4/25/2009	22:29:00	2009	6.90	10.28	7.15		
4/25/2009	22:30:00	2010	6.90	10.28	7.15	7.12	34.235
4/25/2009	22:31:00	2011	6.90	10.28	7.15		
4/25/2009	22:32:00	2012	6.90	10.28	7.15		
4/25/2009	22:33:00	2013	6.90	10.26	7.15		
4/25/2009	22:34:00	2014	6.90	10.26	7.15		
4/25/2009	22:35:00	2015	6.90	10.25	7.15		
4/25/2009	22:36:00	2016	6.90	10.25	7.15	6.97	34.240
4/25/2009	22:37:00	2017	6.90	10.25	7.17		
4/25/2009	22:38:00	2018	6.90	10.23	7.17		
4/25/2009	22:39:00	2019	6.90	10.23	7.15		
4/25/2009	22:40:00	2020	6.90	10.23	7.15		
4/25/2009	22:41:00	2021	6.90	10.23	7.17		
4/25/2009	22:42:00	2022	6.90	10.22	7.17	6.82	34.242
4/25/2009	22:43:00	2023	6.90	10.22	7.17		
4/25/2009	22:44:00	2024	6.90	10.22	7.15		
4/25/2009	22:45:00	2025	6.90	10.22	7.15		
4/25/2009	22:46:00	2026	6.90	10.22	7.17		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/25/2009	22:47:00	2027	6.90	10.20	7.15		
4/25/2009	22:48:00	2028	6.90	10.20	7.15	6.70	34.242
4/25/2009	22:49:00	2029	6.90	10.18	7.17		
4/25/2009	22:50:00	2030	6.90	10.18	7.17		
4/25/2009	22:51:00	2031	6.90	10.18	7.15		
4/25/2009	22:52:00	2032	6.90	10.18	7.15		
4/25/2009	22:53:00	2033	6.90	10.17	7.17		
4/25/2009	22:54:00	2034	6.90	10.17	7.17	6.57	34.244
4/25/2009	22:55:00	2035	6.90	10.15	7.15		
4/25/2009	22:56:00	2036	6.90	10.15	7.17		
4/25/2009	22:57:00	2037	6.90	10.15	7.15		
4/25/2009	22:58:00	2038	6.90	10.15	7.17		
4/25/2009	22:59:00	2039	6.90	10.15	7.15		
4/25/2009	23:00:00	2040	6.90	10.15	7.17	6.45	34.246
4/25/2009	23:01:00	2041	6.90	10.14	7.17		
4/25/2009	23:02:00	2042	6.90	10.14	7.15		
4/25/2009	23:03:00	2043	6.90	10.12	7.15		
4/25/2009	23:04:00	2044	6.90	10.12	7.15		
4/25/2009	23:05:00	2045	6.90	10.12	7.15		
4/25/2009	23:06:00	2046	6.90	10.10	7.17	6.32	34.248
4/25/2009	23:07:00	2047	6.90	10.10	7.15		
4/25/2009	23:08:00	2048	6.90	10.10	7.15		
4/25/2009	23:09:00	2049	6.90	10.09	7.15		
4/25/2009	23:10:00	2050	6.90	10.10	7.15		
4/25/2009	23:11:00	2051	6.90	10.09	7.17		
4/25/2009	23:12:00	2052	6.90	10.09	7.17	6.21	34.251
4/25/2009	23:13:00	2053	6.90	10.09	7.17		
4/25/2009	23:14:00	2054	6.90	10.09	7.17		
4/25/2009	23:15:00	2055	6.90	10.09	7.15		
4/25/2009	23:16:00	2056	6.90	10.09	7.15		
4/25/2009	23:17:00	2057	6.90	10.07	7.17		
4/25/2009	23:18:00	2058	6.90	10.07	7.15	6.10	34.252
4/25/2009	23:19:00	2059	6.90	10.06	7.17		
4/25/2009	23:20:00	2060	6.90	10.06	7.17		
4/25/2009	23:21:00	2061	6.90	10.06	7.17		
4/25/2009	23:22:00	2062	6.90	10.06	7.17		
4/25/2009	23:23:00	2063	6.90	10.04	7.17		
4/25/2009	23:24:00	2064	6.90	10.02	7.15	6.00	34.256
4/25/2009	23:25:00	2065	6.90	10.02	7.15		
4/25/2009	23:26:00	2066	6.90	10.04	7.15		
4/25/2009	23:27:00	2067	6.90	10.02	7.15		
4/25/2009	23:28:00	2068	6.90	10.02	7.15		
4/25/2009	23:29:00	2069	6.90	10.02	7.15		
4/25/2009	23:30:00	2070	6.90	10.01	7.17	5.93	34.258
4/25/2009	23:31:00	2071	6.90	10.01	7.17		
4/25/2009	23:32:00	2072	6.90	10.01	7.15		
4/25/2009	23:33:00	2073	6.90	10.01	7.17		
4/25/2009	23:34:00	2074	6.90	9.99	7.17		
4/25/2009	23:35:00	2075	6.90	10.01	7.17		
4/25/2009	23:36:00	2076	6.90	9.99	7.17	5.85	34.260
4/25/2009	23:37:00	2077	6.90	9.99	7.17		
4/25/2009	23:38:00	2078	6.90	9.99	7.17		
4/25/2009	23:39:00	2079	6.90	9.99	7.17		
4/25/2009	23:40:00	2080	6.90	9.98	7.15		
4/25/2009	23:41:00	2081	6.90	9.96	7.15		
4/25/2009	23:42:00	2082	6.90	9.98	7.15	5.79	34.261
4/25/2009	23:43:00	2083	6.90	9.98	7.17		
4/25/2009	23:44:00	2084	6.90	9.96	7.17		
4/25/2009	23:45:00	2085	6.90	9.96	7.17		
4/25/2009	23:46:00	2086	6.90	9.96	7.18		
4/25/2009	23:47:00	2087	6.90	9.96	7.17		
4/25/2009	23:48:00	2088	6.90	9.96	7.17	5.73	34.263
4/25/2009	23:49:00	2089	6.90	9.96	7.17		
4/25/2009	23:50:00	2090	6.90	9.96	7.15		
4/25/2009	23:51:00	2091	6.90	9.96	7.17		
4/25/2009	23:52:00	2092	6.90	9.94	7.17		
4/25/2009	23:53:00	2093	6.90	9.93	7.17		
4/25/2009	23:54:00	2094	6.90	9.93	7.17	5.69	34.265
4/25/2009	23:55:00	2095	6.90	9.93	7.17		
4/25/2009	23:56:00	2096	6.90	9.93	7.17		
4/25/2009	23:57:00	2097	6.90	9.93	7.17		
4/25/2009	23:58:00	2098	6.90	9.93	7.17		
4/25/2009	23:59:00	2099	6.90	9.93	7.17		
4/26/2009	0:00:00	2100	6.90	9.93	7.18	5.66	34.268
4/26/2009	0:01:00	2101	6.90	9.91	7.17		
4/26/2009	0:02:00	2102	6.90	9.91	7.17		
4/26/2009	0:03:00	2103	6.90	9.91	7.15		
4/26/2009	0:04:00	2104	6.90	9.93	7.18		
4/26/2009	0:05:00	2105	6.90	9.91	7.18		
4/26/2009	0:06:00	2106	6.90	9.91	7.17	5.64	34.271
4/26/2009	0:07:00	2107	6.90	9.91	7.18		
4/26/2009	0:08:00	2108	6.90	9.90	7.18		
4/26/2009	0:09:00	2109	6.90	9.90	7.18		
4/26/2009	0:10:00	2110	6.90	9.91	7.17		
4/26/2009	0:11:00	2111	6.90	9.90	7.18		
4/26/2009	0:12:00	2112	6.90	9.91	7.18	5.62	34.273
4/26/2009	0:13:00	2113	6.90	9.90	7.18		
4/26/2009	0:14:00	2114	6.90	9.90	7.18		
4/26/2009	0:15:00	2115	6.90	9.90	7.18		
4/26/2009	0:16:00	2116	6.90	9.90	7.17		
4/26/2009	0:17:00	2117	6.90	9.90	7.18		
4/26/2009	0:18:00	2118	6.90	9.90	7.18	5.62	34.276
4/26/2009	0:19:00	2119	6.90	9.90	7.17		
4/26/2009	0:20:00	2120	6.90	9.90	7.18		
4/26/2009	0:21:00	2121	6.90	9.90	7.18		
4/26/2009	0:22:00	2122	6.90	9.88	7.18		
4/26/2009	0:23:00	2123	6.90	9.88	7.18		
4/26/2009	0:24:00	2124	6.90	9.88	7.18	5.64	34.276
4/26/2009	0:25:00	2125	6.90	9.88	7.18		
4/26/2009	0:26:00	2126	6.90	9.88	7.18		
4/26/2009	0:27:00	2127	6.90	9.88	7.18		
4/26/2009	0:28:00	2128	6.90	9.88	7.18		
4/26/2009	0:29:00	2129	6.90	9.88	7.18		
4/26/2009	0:30:00	2130	6.90	9.88	7.18	5.66	34.275
4/26/2009	0:31:00	2131	6.90	9.88	7.18		
4/26/2009	0:32:00	2132	6.90	9.88	7.18		
4/26/2009	0:33:00	2133	6.90	9.88	7.18		
4/26/2009	0:34:00	2134	6.90	9.88	7.18		
4/26/2009	0:35:00	2135	6.90	9.86	7.17		
4/26/2009	0:36:00	2136	6.90	9.88	7.18	5.70	34.275
4/26/2009	0:37:00	2137	6.90	9.86	7.18		
4/26/2009	0:38:00	2138	6.90	9.86	7.18		
4/26/2009	0:39:00	2139	6.90	9.86	7.18		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	0:40:00	2140	6.90	9.86	7.18		
4/26/2009	0:41:00	2141	6.90	9.86	7.18		
4/26/2009	0:42:00	2142	6.90	9.88	7.18	5.73	34.276
4/26/2009	0:43:00	2143	6.90	9.86	7.18		
4/26/2009	0:44:00	2144	6.90	9.86	7.18		
4/26/2009	0:45:00	2145	6.90	9.88	7.18		
4/26/2009	0:46:00	2146	6.90	9.86	7.18		
4/26/2009	0:47:00	2147	6.90	9.86	7.18		
4/26/2009	0:48:00	2148	6.90	9.86	7.18	5.76	34.275
4/26/2009	0:49:00	2149	6.90	9.86	7.18		
4/26/2009	0:50:00	2150	6.90	9.86	7.18		
4/26/2009	0:51:00	2151	6.90	9.86	7.18		
4/26/2009	0:52:00	2152	6.90	9.86	7.18		
4/26/2009	0:53:00	2153	6.90	9.86	7.18		
4/26/2009	0:54:00	2154	6.90	9.86	7.18	5.82	34.277
4/26/2009	0:55:00	2155	6.90	9.86	7.18		
4/26/2009	0:56:00	2156	6.90	9.88	7.18		
4/26/2009	0:57:00	2157	6.90	9.86	7.18		
4/26/2009	0:58:00	2158	6.90	9.88	7.18		
4/26/2009	0:59:00	2159	6.90	9.86	7.18		
4/26/2009	1:00:00	2160	6.90	9.86	7.18	5.88	34.276
4/26/2009	1:01:00	2161	6.90	9.86	7.18		
4/26/2009	1:02:00	2162	6.90	9.88	7.18		
4/26/2009	1:03:00	2163	6.90	9.86	7.18		
4/26/2009	1:04:00	2164	6.90	9.88	7.18		
4/26/2009	1:05:00	2165	6.90	9.88	7.18		
4/26/2009	1:06:00	2166	6.90	9.88	7.20	5.96	34.275
4/26/2009	1:07:00	2167	6.90	9.88	7.18		
4/26/2009	1:08:00	2168	6.90	9.88	7.18		
4/26/2009	1:09:00	2169	6.90	9.88	7.20		
4/26/2009	1:10:00	2170	6.90	9.86	7.18		
4/26/2009	1:11:00	2171	6.90	9.90	7.18		
4/26/2009	1:12:00	2172	6.90	9.91	7.18	6.03	34.276
4/26/2009	1:13:00	2173	6.90	9.91	7.18		
4/26/2009	1:14:00	2174	6.90	9.90	7.18		
4/26/2009	1:15:00	2175	6.90	9.91	7.18		
4/26/2009	1:16:00	2176	6.90	9.86	7.18		
4/26/2009	1:17:00	2177	6.90	9.86	7.18		
4/26/2009	1:18:00	2178	6.90	9.90	7.20	6.10	34.278
4/26/2009	1:19:00	2179	6.90	9.90	7.20		
4/26/2009	1:20:00	2180	6.90	9.88	7.18		
4/26/2009	1:21:00	2181	6.90	9.90	7.18		
4/26/2009	1:22:00	2182	6.90	9.90	7.18		
4/26/2009	1:23:00	2183	6.90	9.90	7.18		
4/26/2009	1:24:00	2184	6.90	9.90	7.18	6.19	34.280
4/26/2009	1:25:00	2185	6.90	9.90	7.20		
4/26/2009	1:26:00	2186	6.90	9.90	7.20		
4/26/2009	1:27:00	2187	6.90	9.90	7.20		
4/26/2009	1:28:00	2188	6.90	9.90	7.18		
4/26/2009	1:29:00	2189	6.90	9.91	7.18		
4/26/2009	1:30:00	2190	6.90	9.90	7.18	6.29	34.279
4/26/2009	1:31:00	2191	6.90	9.90	7.18		
4/26/2009	1:32:00	2192	6.90	9.91	7.20		
4/26/2009	1:33:00	2193	6.90	9.91	7.18		
4/26/2009	1:34:00	2194	6.90	9.91	7.18		
4/26/2009	1:35:00	2195	6.90	9.91	7.18		
4/26/2009	1:36:00	2196	6.90	9.91	7.18	6.39	34.279
4/26/2009	1:37:00	2197	6.90	9.91	7.18		
4/26/2009	1:38:00	2198	6.90	9.91	7.18		
4/26/2009	1:39:00	2199	6.90	9.93	7.18		
4/26/2009	1:40:00	2200	6.90	9.93	7.18		
4/26/2009	1:41:00	2201	6.90	9.93	7.18		
4/26/2009	1:42:00	2202	6.90	9.93	7.18	6.51	34.281
4/26/2009	1:43:00	2203	6.90	9.94	7.18		
4/26/2009	1:44:00	2204	6.90	9.93	7.18		
4/26/2009	1:45:00	2205	6.90	9.94	7.18		
4/26/2009	1:46:00	2206	6.90	9.94	7.20		
4/26/2009	1:47:00	2207	6.90	9.93	7.20		
4/26/2009	1:48:00	2208	6.90	9.96	7.20	6.63	34.282
4/26/2009	1:49:00	2209	6.90	9.96	7.18		
4/26/2009	1:50:00	2210	6.90	9.96	7.18		
4/26/2009	1:51:00	2211	6.90	9.96	7.18		
4/26/2009	1:52:00	2212	6.90	9.96	7.18		
4/26/2009	1:53:00	2213	6.90	9.96	7.18		
4/26/2009	1:54:00	2214	6.90	9.98	7.18	6.76	34.285
4/26/2009	1:55:00	2215	6.90	9.96	7.20		
4/26/2009	1:56:00	2216	6.90	9.96	7.18		
4/26/2009	1:57:00	2217	6.90	9.98	7.20		
4/26/2009	1:58:00	2218	6.90	9.98	7.18		
4/26/2009	1:59:00	2219	6.90	9.99	7.18		
4/26/2009	2:00:00	2220	6.90	9.98	7.18	6.90	34.286
4/26/2009	2:01:00	2221	6.90	9.98	7.20		
4/26/2009	2:02:00	2222	6.90	9.98	7.18		
4/26/2009	2:03:00	2223	6.90	9.99	7.18		
4/26/2009	2:04:00	2224	6.90	9.99	7.20		
4/26/2009	2:05:00	2225	6.90	9.99	7.18		
4/26/2009	2:06:00	2226	6.90	10.01	7.18	7.04	34.287
4/26/2009	2:07:00	2227	6.90	10.01	7.18		
4/26/2009	2:08:00	2228	6.90	10.02	7.18		
4/26/2009	2:09:00	2229	6.90	10.01	7.20		
4/26/2009	2:10:00	2230	6.90	10.01	7.18		
4/26/2009	2:11:00	2231	6.90	10.02	7.20		
4/26/2009	2:12:00	2232	6.90	10.02	7.18	7.17	34.287
4/26/2009	2:13:00	2233	6.90	10.02	7.18		
4/26/2009	2:14:00	2234	6.90	10.04	7.18		
4/26/2009	2:15:00	2235	6.90	10.04	7.20		
4/26/2009	2:16:00	2236	6.90	10.04	7.18		
4/26/2009	2:17:00	2237	6.90	10.06	7.18		
4/26/2009	2:18:00	2238	6.90	10.06	7.20	7.34	34.289
4/26/2009	2:19:00	2239	6.90	10.06	7.20		
4/26/2009	2:20:00	2240	6.90	10.06	7.18		
4/26/2009	2:21:00	2241	6.90	10.06	7.18		
4/26/2009	2:22:00	2242	6.90	10.06	7.18		
4/26/2009	2:23:00	2243	6.90	10.06	7.20	7.49	34.291
4/26/2009	2:24:00	2244	6.90	10.09	7.18		
4/26/2009	2:25:00	2245	6.90	10.09	7.18		
4/26/2009	2:26:00	2246	6.90	10.09	7.20		
4/26/2009	2:27:00	2247	6.90	10.09	7.18		
4/26/2009	2:28:00	2248	6.90	10.09	7.18		
4/26/2009	2:29:00	2249	6.90	10.09	7.20		
4/26/2009	2:30:00	2250	6.90	10.10	7.20	7.65	34.291
4/26/2009	2:31:00	2251	6.90	10.09	7.18		
4/26/2009	2:32:00	2252	6.90	10.12	7.20		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	2:33:00	2253	6.90	10.12	7.18		
4/26/2009	2:34:00	2254	6.90	10.12	7.18		
4/26/2009	2:35:00	2255	6.90	10.12	7.18		
4/26/2009	2:36:00	2256	6.90	10.12	7.18	7.79	34.292
4/26/2009	2:37:00	2257	6.90	10.12	7.18		
4/26/2009	2:38:00	2258	6.90	10.14	7.18		
4/26/2009	2:39:00	2259	6.90	10.14	7.18		
4/26/2009	2:40:00	2260	6.90	10.15	7.18		
4/26/2009	2:41:00	2261	6.90	10.15	7.20		
4/26/2009	2:42:00	2262	6.90	10.15	7.20	7.94	34.293
4/26/2009	2:43:00	2263	6.90	10.15	7.18		
4/26/2009	2:44:00	2264	6.90	10.15	7.20		
4/26/2009	2:45:00	2265	6.90	10.17	7.18		
4/26/2009	2:46:00	2266	6.90	10.18	7.20		
4/26/2009	2:47:00	2267	6.90	10.17	7.18		
4/26/2009	2:48:00	2268	6.90	10.18	7.20	8.09	34.294
4/26/2009	2:49:00	2269	6.90	10.18	7.20		
4/26/2009	2:50:00	2270	6.90	10.18	7.20		
4/26/2009	2:51:00	2271	6.90	10.20	7.20		
4/26/2009	2:52:00	2272	6.90	10.20	7.20		
4/26/2009	2:53:00	2273	6.90	10.22	7.20		
4/26/2009	2:54:00	2274	6.90	10.22	7.20	8.25	34.298
4/26/2009	2:55:00	2275	6.90	10.22	7.18		
4/26/2009	2:56:00	2276	6.90	10.22	7.20		
4/26/2009	2:57:00	2277	6.90	10.22	7.20		
4/26/2009	2:58:00	2278	6.90	10.22	7.18		
4/26/2009	2:59:00	2279	6.90	10.23	7.20		
4/26/2009	3:00:00	2280	6.90	10.25	7.20	8.40	34.299
4/26/2009	3:01:00	2281	6.90	10.25	7.20		
4/26/2009	3:02:00	2282	6.90	10.25	7.20		
4/26/2009	3:03:00	2283	6.90	10.25	7.20		
4/26/2009	3:04:00	2284	6.90	10.25	7.18		
4/26/2009	3:05:00	2285	6.90	10.25	7.20		
4/26/2009	3:06:00	2286	6.90	10.26	7.20	8.55	34.300
4/26/2009	3:07:00	2287	6.90	10.26	7.20		
4/26/2009	3:08:00	2288	6.90	10.28	7.20		
4/26/2009	3:09:00	2289	6.90	10.28	7.20		
4/26/2009	3:10:00	2290	6.90	10.28	7.20		
4/26/2009	3:11:00	2291	6.90	10.30	7.20		
4/26/2009	3:12:00	2292	6.90	10.30	7.20	8.71	34.299
4/26/2009	3:13:00	2293	6.90	10.30	7.20		
4/26/2009	3:14:00	2294	6.90	10.31	7.20		
4/26/2009	3:15:00	2295	6.90	10.31	7.21		
4/26/2009	3:15:00	2295	6.90	10.31	7.20		
4/26/2009	3:16:00	2296	6.90	10.31	7.20		
4/26/2009	3:17:00	2297	6.90	10.33	7.21		
4/26/2009	3:18:00	2298	6.90	10.33	7.20	8.86	34.298
4/26/2009	3:19:00	2299	6.90	10.34	7.20		
4/26/2009	3:20:00	2300	6.90	10.34	7.20		
4/26/2009	3:21:00	2301	6.90	10.34	7.20		
4/26/2009	3:22:00	2302	6.90	10.34	7.21		
4/26/2009	3:23:00	2303	6.90	10.34	7.20		
4/26/2009	3:24:00	2304	6.90	10.34	7.20	9.02	34.299
4/26/2009	3:25:00	2305	6.90	10.36	7.20		
4/26/2009	3:26:00	2306	6.90	10.36	7.21		
4/26/2009	3:27:00	2307	6.90	10.38	7.20		
4/26/2009	3:28:00	2308	6.90	10.38	7.20		
4/26/2009	3:29:00	2309	6.90	10.38	7.20		
4/26/2009	3:30:00	2310	6.90	10.39	7.20	9.18	34.300
4/26/2009	3:31:00	2311	6.90	10.39	7.20		
4/26/2009	3:32:00	2312	6.90	10.39	7.20		
4/26/2009	3:33:00	2313	6.90	10.41	7.20		
4/26/2009	3:34:00	2314	6.90	10.41	7.20		
4/26/2009	3:35:00	2315	6.90	10.41	7.20		
4/26/2009	3:36:00	2316	6.90	10.42	7.20	9.35	34.301
4/26/2009	3:37:00	2317	6.90	10.42	7.20		
4/26/2009	3:38:00	2318	6.90	10.42	7.20		
4/26/2009	3:39:00	2319	6.90	10.44	7.21		
4/26/2009	3:40:00	2320	6.90	10.44	7.20		
4/26/2009	3:41:00	2321	6.90	10.46	7.21		
4/26/2009	3:42:00	2322	6.90	10.46	7.20	9.51	34.303
4/26/2009	3:43:00	2323	6.90	10.47	7.20		
4/26/2009	3:44:00	2324	6.90	10.47	7.20		
4/26/2009	3:45:00	2325	6.90	10.47	7.20		
4/26/2009	3:46:00	2326	6.90	10.47	7.20		
4/26/2009	3:47:00	2327	6.90	10.47	7.21		
4/26/2009	3:48:00	2328	6.90	10.49	7.21	9.67	34.306
4/26/2009	3:49:00	2329	6.91	10.49	7.21		
4/26/2009	3:50:00	2330	6.91	10.50	7.21		
4/26/2009	3:51:00	2331	6.91	10.50	7.21		
4/26/2009	3:52:00	2332	6.90	10.50	7.21		
4/26/2009	3:53:00	2333	6.90	10.52	7.21		
4/26/2009	3:54:00	2334	6.91	10.52	7.21	9.84	34.307
4/26/2009	3:55:00	2335	6.90	10.54	7.21		
4/26/2009	3:56:00	2336	6.90	10.54	7.20		
4/26/2009	3:57:00	2337	6.90	10.54	7.21		
4/26/2009	3:58:00	2338	6.90	10.54	7.21		
4/26/2009	3:59:00	2339	6.90	10.55	7.21		
4/26/2009	4:00:00	2340	6.90	10.57	7.21	9.99	34.308
4/26/2009	4:01:00	2341	6.91	10.55	7.21		
4/26/2009	4:02:00	2342	6.91	10.57	7.21		
4/26/2009	4:03:00	2343	6.90	10.58	7.21		
4/26/2009	4:04:00	2344	6.91	10.60	7.21		
4/26/2009	4:05:00	2345	6.90	10.60	7.21		
4/26/2009	4:06:00	2346	6.90	10.60	7.21	10.12	34.308
4/26/2009	4:07:00	2347	6.90	10.60	7.21		
4/26/2009	4:08:00	2348	6.90	10.60	7.21		
4/26/2009	4:09:00	2349	6.90	10.60	7.21		
4/26/2009	4:10:00	2350	6.90	10.62	7.21		
4/26/2009	4:11:00	2351	6.90	10.62	7.21		
4/26/2009	4:12:00	2352	6.90	10.63	7.21	10.24	34.309
4/26/2009	4:13:00	2353	6.90	10.63	7.21		
4/26/2009	4:14:00	2354	6.90	10.63	7.21		
4/26/2009	4:15:00	2355	6.90	10.63	7.21		
4/26/2009	4:16:00	2356	6.90	10.63	7.21		
4/26/2009	4:17:00	2357	6.90	10.65	7.21		
4/26/2009	4:18:00	2358	6.90	10.65	7.21	10.35	34.309
4/26/2009	4:19:00	2359	6.90	10.66	7.21		
4/26/2009	4:20:00	2360	6.90	10.66	7.21		
4/26/2009	4:21:00	2361	6.90	10.66	7.21		
4/26/2009	4:22:00	2362	6.90	10.66	7.21		
4/26/2009	4:23:00	2363	6.90	10.68	7.21		
4/26/2009	4:24:00	2364	6.91	10.68	7.21	10.48	34.307
4/26/2009	4:25:00	2365	6.90	10.68	7.21		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	4:26:00	2366	6.90	10.68	7.21		
4/26/2009	4:27:00	2367	6.90	10.70	7.21		
4/26/2009	4:28:00	2368	6.90	10.70	7.21		
4/26/2009	4:29:00	2369	6.90	10.71	7.21		
4/26/2009	4:30:00	2370	6.90	10.71	7.21	10.58	34.306
4/26/2009	4:31:00	2371	6.91	10.71	7.21		
4/26/2009	4:32:00	2372	6.91	10.73	7.21		
4/26/2009	4:33:00	2373	6.91	10.73	7.23		
4/26/2009	4:34:00	2374	6.90	10.73	7.21		
4/26/2009	4:35:00	2375	6.91	10.73	7.21		
4/26/2009	4:36:00	2376	6.91	10.73	7.21	10.68	34.305
4/26/2009	4:37:00	2377	6.91	10.74	7.21		
4/26/2009	4:38:00	2378	6.90	10.76	7.21		
4/26/2009	4:39:00	2379	6.90	10.76	7.21		
4/26/2009	4:40:00	2380	6.91	10.76	7.21		
4/26/2009	4:41:00	2381	6.91	10.76	7.21		
4/26/2009	4:42:00	2382	6.91	10.76	7.23	10.77	34.306
4/26/2009	4:43:00	2383	6.91	10.78	7.21		
4/26/2009	4:44:00	2384	6.91	10.78	7.23		
4/26/2009	4:45:00	2385	6.91	10.78	7.21		
4/26/2009	4:46:00	2386	6.91	10.79	7.21		
4/26/2009	4:47:00	2387	6.91	10.79	7.21		
4/26/2009	4:48:00	2388	6.91	10.79	7.23	10.86	34.307
4/26/2009	4:49:00	2389	6.91	10.79	7.23		
4/26/2009	4:50:00	2390	6.91	10.79	7.23		
4/26/2009	4:51:00	2391	6.91	10.81	7.23		
4/26/2009	4:52:00	2392	6.91	10.82	7.21		
4/26/2009	4:53:00	2393	6.91	10.81	7.23	10.94	34.305
4/26/2009	4:54:00	2394	6.91	10.82	7.23		
4/26/2009	4:55:00	2395	6.91	10.82	7.23		
4/26/2009	4:56:00	2396	6.91	10.82	7.23		
4/26/2009	4:57:00	2397	6.91	10.82	7.23		
4/26/2009	4:58:00	2398	6.91	10.84	7.23		
4/26/2009	4:59:00	2399	6.91	10.86	7.23		
4/26/2009	5:00:00	2400	6.91	10.86	7.23	11.01	34.306
4/26/2009	5:01:00	2401	6.91	10.86	7.23		
4/26/2009	5:02:00	2402	6.91	10.86	7.23		
4/26/2009	5:03:00	2403	6.91	10.86	7.23		
4/26/2009	5:04:00	2404	6.91	10.86	7.23		
4/26/2009	5:05:00	2405	6.91	10.87	7.23		
4/26/2009	5:06:00	2406	6.91	10.87	7.23	11.07	34.305
4/26/2009	5:07:00	2407	6.91	10.87	7.25		
4/26/2009	5:08:00	2408	6.91	10.89	7.23		
4/26/2009	5:09:00	2409	6.91	10.89	7.21		
4/26/2009	5:10:00	2410	6.91	10.89	7.23		
4/26/2009	5:11:00	2411	6.91	10.89	7.23		
4/26/2009	5:12:00	2412	6.91	10.89	7.25	11.14	34.307
4/26/2009	5:13:00	2413	6.91	10.89	7.23		
4/26/2009	5:14:00	2414	6.90	10.89	7.23		
4/26/2009	5:15:00	2415	6.91	10.90	7.23		
4/26/2009	5:16:00	2416	6.91	10.90	7.25		
4/26/2009	5:17:00	2417	6.91	10.92	7.25		
4/26/2009	5:18:00	2418	6.91	10.92	7.25	11.20	34.308
4/26/2009	5:19:00	2419	6.91	10.92	7.23		
4/26/2009	5:20:00	2420	6.91	10.92	7.25		
4/26/2009	5:21:00	2421	6.91	10.92	7.25		
4/26/2009	5:22:00	2422	6.90	10.94	7.25		
4/26/2009	5:23:00	2423	6.91	10.94	7.25		
4/26/2009	5:24:00	2424	6.91	10.94	7.25	11.23	34.310
4/26/2009	5:25:00	2425	6.90	10.94	7.25		
4/26/2009	5:26:00	2426	6.91	10.94	7.25		
4/26/2009	5:27:00	2427	6.91	10.95	7.25		
4/26/2009	5:28:00	2428	6.91	10.94	7.25		
4/26/2009	5:29:00	2429	6.91	10.95	7.23		
4/26/2009	5:30:00	2430	6.90	10.95	7.25	11.26	34.316
4/26/2009	5:31:00	2431	6.91	10.95	7.23		
4/26/2009	5:32:00	2432	6.90	10.95	7.25		
4/26/2009	5:33:00	2433	6.90	10.97	7.23		
4/26/2009	5:34:00	2434	6.91	10.97	7.23		
4/26/2009	5:35:00	2435	6.90	10.97	7.23		
4/26/2009	5:36:00	2436	6.90	10.97	7.23	11.27	34.318
4/26/2009	5:37:00	2437	6.91	10.98	7.23		
4/26/2009	5:38:00	2438	6.91	10.98	7.25		
4/26/2009	5:39:00	2439	6.91	10.98	7.23		
4/26/2009	5:40:00	2440	6.91	10.98	7.23		
4/26/2009	5:41:00	2441	6.91	10.98	7.25		
4/26/2009	5:42:00	2442	6.91	10.98	7.23	11.26	34.320
4/26/2009	5:43:00	2443	6.91	10.98	7.23		
4/26/2009	5:44:00	2444	6.91	10.98	7.25		
4/26/2009	5:45:00	2445	6.91	10.98	7.25		
4/26/2009	5:46:00	2446	6.91	10.98	7.25		
4/26/2009	5:47:00	2447	6.91	10.98	7.25		
4/26/2009	5:48:00	2448	6.91	11.00	7.25	11.24	34.321
4/26/2009	5:49:00	2449	6.91	10.98	7.25		
4/26/2009	5:50:00	2450	6.91	11.00	7.25		
4/26/2009	5:51:00	2451	6.90	11.00	7.23		
4/26/2009	5:52:00	2452	6.90	11.00	7.25		
4/26/2009	5:53:00	2453	6.90	11.00	7.23		
4/26/2009	5:54:00	2454	6.90	11.00	7.23	11.20	34.321
4/26/2009	5:55:00	2455	6.90	11.02	7.25		
4/26/2009	5:56:00	2456	6.91	11.02	7.23		
4/26/2009	5:57:00	2457	6.91	11.02	7.25		
4/26/2009	5:58:00	2458	6.90	11.02	7.23		
4/26/2009	5:59:00	2459	6.91	11.02	7.25		
4/26/2009	6:00:00	2460	6.91	11.02	7.25	11.16	34.322
4/26/2009	6:01:00	2461	6.91	11.02	7.25		
4/26/2009	6:02:00	2462	6.91	11.02	7.25		
4/26/2009	6:03:00	2463	6.91	11.02	7.25		
4/26/2009	6:04:00	2464	6.91	11.02	7.23		
4/26/2009	6:05:00	2465	6.91	11.02	7.25		
4/26/2009	6:06:00	2466	6.91	11.02	7.25	11.10	34.324
4/26/2009	6:07:00	2467	6.91	11.02	7.25		
4/26/2009	6:08:00	2468	6.91	11.02	7.25		
4/26/2009	6:09:00	2469	6.91	11.02	7.23		
4/26/2009	6:10:00	2470	6.91	11.02	7.23		
4/26/2009	6:11:00	2471	6.91	11.03	7.25	11.01	34.324
4/26/2009	6:12:00	2472	6.91	11.02	7.25		
4/26/2009	6:13:00	2473	6.91	11.03	7.25		
4/26/2009	6:14:00	2474	6.91	11.02	7.25		
4/26/2009	6:15:00	2475	6.91	11.02	7.25		
4/26/2009	6:16:00	2476	6.91	11.02	7.25		
4/26/2009	6:17:00	2477	6.91	11.02	7.25		
4/26/2009	6:18:00	2478	6.91	11.03	7.25	10.93	34.326

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	6:19:00	2479	6.91	11.03	7.25		
4/26/2009	6:20:00	2480	6.91	11.02	7.25		
4/26/2009	6:21:00	2481	6.91	11.03	7.25		
4/26/2009	6:22:00	2482	6.91	11.02	7.25		
4/26/2009	6:23:00	2483	6.91	11.02	7.25		
4/26/2009	6:24:00	2484	6.91	11.02	7.25	10.82	34.329
4/26/2009	6:25:00	2485	6.91	11.02	7.25		
4/26/2009	6:26:00	2486	6.91	11.02	7.25		
4/26/2009	6:27:00	2487	6.91	11.02	7.25		
4/26/2009	6:28:00	2488	6.91	11.02	7.25		
4/26/2009	6:29:00	2489	6.91	11.02	7.25		
4/26/2009	6:30:00	2490	6.91	11.03	7.25	10.72	34.330
4/26/2009	6:31:00	2491	6.91	11.02	7.25		
4/26/2009	6:32:00	2492	6.91	11.02	7.25		
4/26/2009	6:33:00	2493	6.91	11.03	7.25		
4/26/2009	6:34:00	2494	6.91	11.02	7.25		
4/26/2009	6:35:00	2495	6.91	11.02	7.25		
4/26/2009	6:36:00	2496	6.91	11.02	7.25	10.60	34.332
4/26/2009	6:37:00	2497	6.91	11.02	7.25		
4/26/2009	6:38:00	2498	6.91	11.02	7.25		
4/26/2009	6:39:00	2499	6.91	11.02	7.25		
4/26/2009	6:40:00	2500	6.91	11.02	7.25		
4/26/2009	6:41:00	2501	6.91	11.02	7.25		
4/26/2009	6:42:00	2502	6.91	11.02	7.25	10.47	34.336
4/26/2009	6:43:00	2503	6.91	11.02	7.25		
4/26/2009	6:44:00	2504	6.91	11.02	7.26		
4/26/2009	6:45:00	2505	6.91	11.00	7.26		
4/26/2009	6:46:00	2506	6.91	11.00	7.25		
4/26/2009	6:47:00	2507	6.91	11.00	7.25		
4/26/2009	6:48:00	2508	6.91	11.00	7.25	10.32	34.338
4/26/2009	6:49:00	2509	6.91	11.00	7.26		
4/26/2009	6:50:00	2510	6.91	10.98	7.26		
4/26/2009	6:51:00	2511	6.91	11.00	7.25		
4/26/2009	6:52:00	2512	6.91	11.00	7.26		
4/26/2009	6:53:00	2513	6.91	10.98	7.25		
4/26/2009	6:54:00	2514	6.91	10.98	7.25	10.16	34.342
4/26/2009	6:55:00	2515	6.91	10.98	7.26		
4/26/2009	6:56:00	2516	6.91	10.98	7.26		
4/26/2009	6:57:00	2517	6.91	10.98	7.26		
4/26/2009	6:58:00	2518	6.91	10.98	7.26		
4/26/2009	6:59:00	2519	6.91	10.98	7.26		
4/26/2009	7:00:00	2520	6.91	10.98	7.25	10.00	34.344
4/26/2009	7:01:00	2521	6.91	10.98	7.25		
4/26/2009	7:02:00	2522	6.91	10.97	7.26		
4/26/2009	7:03:00	2523	6.91	10.97	7.26		
4/26/2009	7:04:00	2524	6.91	10.95	7.26		
4/26/2009	7:05:00	2525	6.91	10.97	7.26		
4/26/2009	7:06:00	2526	6.91	10.97	7.25	9.84	34.345
4/26/2009	7:07:00	2527	6.91	10.95	7.26		
4/26/2009	7:08:00	2528	6.91	10.95	7.26		
4/26/2009	7:09:00	2529	6.91	10.94	7.26		
4/26/2009	7:10:00	2530	6.91	10.95	7.26		
4/26/2009	7:11:00	2531	6.91	10.95	7.26		
4/26/2009	7:12:00	2532	6.91	10.94	7.26	9.66	34.343
4/26/2009	7:13:00	2533	6.91	10.94	7.25		
4/26/2009	7:14:00	2534	6.91	10.92	7.26		
4/26/2009	7:15:00	2535	6.91	10.92	7.26		
4/26/2009	7:16:00	2536	6.91	10.92	7.26		
4/26/2009	7:17:00	2537	6.91	10.92	7.26		
4/26/2009	7:18:00	2538	6.91	10.92	7.28	9.46	34.341
4/26/2009	7:19:00	2539	6.91	10.92	7.25		
4/26/2009	7:20:00	2540	6.91	10.92	7.26		
4/26/2009	7:21:00	2541	6.91	10.90	7.26		
4/26/2009	7:22:00	2542	6.91	10.90	7.26		
4/26/2009	7:23:00	2543	6.91	10.90	7.26		
4/26/2009	7:24:00	2544	6.91	10.89	7.26	9.26	34.341
4/26/2009	7:25:00	2545	6.91	10.89	7.26		
4/26/2009	7:26:00	2546	6.91	10.89	7.26		
4/26/2009	7:27:00	2547	6.91	10.89	7.26		
4/26/2009	7:28:00	2548	6.91	10.87	7.28		
4/26/2009	7:29:00	2549	6.91	10.87	7.26		
4/26/2009	7:30:00	2550	6.91	10.87	7.28	9.03	34.340
4/26/2009	7:31:00	2551	6.91	10.87	7.26		
4/26/2009	7:32:00	2552	6.91	10.86	7.26		
4/26/2009	7:33:00	2553	6.91	10.86	7.26		
4/26/2009	7:34:00	2554	6.91	10.86	7.28		
4/26/2009	7:35:00	2555	6.91	10.86	7.26		
4/26/2009	7:36:00	2556	6.91	10.84	7.28	8.79	34.342
4/26/2009	7:37:00	2557	6.91	10.86	7.26		
4/26/2009	7:38:00	2558	6.91	10.84	7.26		
4/26/2009	7:39:00	2559	6.91	10.84	7.26		
4/26/2009	7:40:00	2560	6.91	10.82	7.26		
4/26/2009	7:41:00	2561	6.91	10.81	7.26		
4/26/2009	7:42:00	2562	6.91	10.81	7.28	8.54	34.343
4/26/2009	7:43:00	2563	6.91	10.82	7.28		
4/26/2009	7:44:00	2564	6.91	10.81	7.26		
4/26/2009	7:45:00	2565	6.91	10.79	7.28		
4/26/2009	7:46:00	2566	6.91	10.79	7.28		
4/26/2009	7:47:00	2567	6.91	10.79	7.26		
4/26/2009	7:48:00	2568	6.91	10.79	7.28	8.29	34.344
4/26/2009	7:49:00	2569	6.91	10.78	7.28		
4/26/2009	7:50:00	2570	6.91	10.76	7.28		
4/26/2009	7:51:00	2571	6.91	10.76	7.28		
4/26/2009	7:52:00	2572	6.91	10.76	7.28		
4/26/2009	7:53:00	2573	6.91	10.74	7.28		
4/26/2009	7:54:00	2574	6.91	10.74	7.28	8.05	34.345
4/26/2009	7:55:00	2575	6.91	10.73	7.28		
4/26/2009	7:56:00	2576	6.91	10.73	7.28		
4/26/2009	7:57:00	2577	6.91	10.73	7.28		
4/26/2009	7:58:00	2578	6.91	10.73	7.28		
4/26/2009	7:59:00	2579	6.91	10.71	7.28		
4/26/2009	8:00:00	2580	6.91	10.70	7.28	7.79	34.345
4/26/2009	8:01:00	2581	6.91	10.71	7.28		
4/26/2009	8:02:00	2582	6.91	10.70	7.28		
4/26/2009	8:03:00	2583	6.91	10.68	7.28		
4/26/2009	8:04:00	2584	6.91	10.68	7.28		
4/26/2009	8:05:00	2585	6.91	10.68	7.28		
4/26/2009	8:06:00	2586	6.91	10.66	7.28	7.50	34.344
4/26/2009	8:07:00	2587	6.91	10.66	7.28		
4/26/2009	8:08:00	2588	6.91	10.66	7.28		
4/26/2009	8:09:00	2589	6.91	10.65	7.28		
4/26/2009	8:10:00	2590	6.91	10.63	7.28		
4/26/2009	8:11:00	2591	6.91	10.63	7.28		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	8:12:00	2592	6.91	10.62	7.28	7.21	34.340
4/26/2009	8:13:00	2593	6.91	10.60	7.28		
4/26/2009	8:14:00	2594	6.91	10.60	7.28		
4/26/2009	8:15:00	2595	6.91	10.60	7.28		
4/26/2009	8:16:00	2596	6.91	10.60	7.28		
4/26/2009	8:17:00	2597	6.91	10.60	7.28		
4/26/2009	8:18:00	2598	6.91	10.57	7.28	6.92	34.339
4/26/2009	8:19:00	2599	6.91	10.57	7.28		
4/26/2009	8:20:00	2600	6.91	10.55	7.28		
4/26/2009	8:21:00	2601	6.91	10.55	7.26		
4/26/2009	8:22:00	2602	6.91	10.54	7.28		
4/26/2009	8:23:00	2603	6.91	10.54	7.28		
4/26/2009	8:24:00	2604	6.91	10.52	7.28	6.59	34.338
4/26/2009	8:25:00	2605	6.91	10.50	7.28		
4/26/2009	8:26:00	2606	6.91	10.50	7.28		
4/26/2009	8:27:00	2607	6.91	10.50	7.28		
4/26/2009	8:28:00	2608	6.91	10.49	7.28		
4/26/2009	8:29:00	2609	6.91	10.47	7.28		
4/26/2009	8:30:00	2610	6.91	10.47	7.28	6.28	34.340
4/26/2009	8:31:00	2611	6.91	10.46	7.26		
4/26/2009	8:32:00	2612	6.91	10.44	7.28		
4/26/2009	8:33:00	2613	6.91	10.44	7.28		
4/26/2009	8:34:00	2614	6.91	10.42	7.28		
4/26/2009	8:35:00	2615	6.91	10.42	7.28		
4/26/2009	8:36:00	2616	6.91	10.41	7.28	5.97	34.339
4/26/2009	8:37:00	2617	6.91	10.41	7.28		
4/26/2009	8:38:00	2618	6.91	10.41	7.28		
4/26/2009	8:39:00	2619	6.91	10.39	7.28		
4/26/2009	8:40:00	2620	6.91	10.38	7.28		
4/26/2009	8:41:00	2621	6.91	10.38	7.28		
4/26/2009	8:42:00	2622	6.91	10.36	7.28	5.64	34.338
4/26/2009	8:43:00	2623	6.91	10.34	7.28		
4/26/2009	8:44:00	2624	6.91	10.34	7.26		
4/26/2009	8:45:00	2625	6.91	10.34	7.28		
4/26/2009	8:46:00	2626	6.91	10.33	7.28		
4/26/2009	8:47:00	2627	6.91	10.31	7.28		
4/26/2009	8:48:00	2628	6.91	10.30	7.28	5.29	34.338
4/26/2009	8:49:00	2629	6.91	10.28	7.28		
4/26/2009	8:50:00	2630	6.91	10.28	7.28		
4/26/2009	8:51:00	2631	6.91	10.26	7.28		
4/26/2009	8:52:00	2632	6.91	10.25	7.28		
4/26/2009	8:53:00	2633	6.91	10.25	7.28		
4/26/2009	8:54:00	2634	6.91	10.23	7.28	4.95	34.338
4/26/2009	8:55:00	2635	6.91	10.23	7.28		
4/26/2009	8:56:00	2636	6.91	10.22	7.28		
4/26/2009	8:57:00	2637	6.91	10.20	7.28		
4/26/2009	8:58:00	2638	6.91	10.20	7.28		
4/26/2009	8:59:00	2639	6.91	10.18	7.28		
4/26/2009	9:00:00	2640	6.91	10.18	7.28	4.60	34.339
4/26/2009	9:01:00	2641	6.91	10.15	7.28		
4/26/2009	9:02:00	2642	6.91	10.15	7.28		
4/26/2009	9:03:00	2643	6.91	10.14	7.28		
4/26/2009	9:04:00	2644	6.91	10.14	7.28		
4/26/2009	9:05:00	2645	6.91	10.12	7.28	4.26	34.341
4/26/2009	9:06:00	2646	6.91	10.10	7.28		
4/26/2009	9:07:00	2647	6.91	10.09	7.28		
4/26/2009	9:08:00	2648	6.91	10.09	7.28		
4/26/2009	9:09:00	2649	6.91	10.09	7.28		
4/26/2009	9:10:00	2650	6.91	10.07	7.28		
4/26/2009	9:11:00	2651	6.91	10.06	7.28		
4/26/2009	9:12:00	2652	6.91	10.02	7.28	3.91	34.344
4/26/2009	9:13:00	2653	6.91	10.02	7.26		
4/26/2009	9:14:00	2654	6.91	10.02	7.26		
4/26/2009	9:15:00	2655	6.91	10.01	7.28		
4/26/2009	9:16:00	2656	6.91	10.01	7.28		
4/26/2009	9:17:00	2657	6.91	9.99	7.26		
4/26/2009	9:18:00	2658	6.91	9.98	7.26	3.59	34.344
4/26/2009	9:19:00	2659	6.91	9.98	7.26		
4/26/2009	9:20:00	2660	6.91	9.94	7.26		
4/26/2009	9:21:00	2661	6.91	9.94	7.28		
4/26/2009	9:22:00	2662	6.91	9.93	7.26		
4/26/2009	9:23:00	2663	6.91	9.93	7.26		
4/26/2009	9:24:00	2664	6.91	9.91	7.26	3.25	34.344
4/26/2009	9:25:00	2665	6.91	9.90	7.28		
4/26/2009	9:26:00	2666	6.91	9.88	7.26		
4/26/2009	9:27:00	2667	6.91	9.88	7.28		
4/26/2009	9:28:00	2668	6.91	9.86	7.28		
4/26/2009	9:29:00	2669	6.91	9.85	7.26		
4/26/2009	9:30:00	2670	6.91	9.83	7.28	2.92	34.345
4/26/2009	9:31:00	2671	6.91	9.83	7.28		
4/26/2009	9:32:00	2672	6.91	9.83	7.26		
4/26/2009	9:33:00	2673	6.91	9.80	7.26		
4/26/2009	9:34:00	2674	6.91	9.80	7.28		
4/26/2009	9:35:00	2675	6.91	9.78	7.28		
4/26/2009	9:36:00	2676	6.91	9.77	7.26	2.57	34.345
4/26/2009	9:37:00	2677	6.91	9.77	7.26		
4/26/2009	9:38:00	2678	6.91	9.75	7.26		
4/26/2009	9:39:00	2679	6.91	9.74	7.26		
4/26/2009	9:40:00	2680	6.91	9.72	7.26		
4/26/2009	9:41:00	2681	6.91	9.70	7.26		
4/26/2009	9:42:00	2682	6.91	9.70	7.26	2.25	34.342
4/26/2009	9:43:00	2683	6.91	9.70	7.26		
4/26/2009	9:44:00	2684	6.91	9.67	7.26		
4/26/2009	9:45:00	2685	6.91	9.67	7.26		
4/26/2009	9:46:00	2686	6.91	9.66	7.26		
4/26/2009	9:47:00	2687	6.91	9.64	7.26		
4/26/2009	9:48:00	2688	6.91	9.64	7.26	1.92	34.339
4/26/2009	9:49:00	2689	6.91	9.62	7.26		
4/26/2009	9:50:00	2690	6.91	9.61	7.26		
4/26/2009	9:51:00	2691	6.91	9.61	7.26		
4/26/2009	9:52:00	2692	6.91	9.59	7.26		
4/26/2009	9:53:00	2693	6.91	9.58	7.26		
4/26/2009	9:54:00	2694	6.91	9.58	7.28	1.62	34.335
4/26/2009	9:55:00	2695	6.91	9.58	7.26		
4/26/2009	9:56:00	2696	6.91	9.54	7.26		
4/26/2009	9:57:00	2697	6.91	9.53	7.26		
4/26/2009	9:58:00	2698	6.91	9.51	7.26		
4/26/2009	9:59:00	2699	6.91	9.51	7.26		
4/26/2009	10:00:00	2700	6.91	9.50	7.26	1.32	34.330
4/26/2009	10:01:00	2701	6.91	9.50	7.28		
4/26/2009	10:02:00	2702	6.91	9.48	7.26		
4/26/2009	10:03:00	2703	6.91	9.46	7.28		
4/26/2009	10:04:00	2704	6.91	9.45	7.26		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	10:05:00	2705	6.91	9.45	7.26		
4/26/2009	10:06:00	2706	6.91	9.43	7.26	1.01	34.328
4/26/2009	10:07:00	2707	6.91	9.42	7.26		
4/26/2009	10:08:00	2708	6.91	9.40	7.28		
4/26/2009	10:09:00	2709	6.91	9.40	7.26		
4/26/2009	10:10:00	2710	6.91	9.38	7.26		
4/26/2009	10:11:00	2711	6.91	9.38	7.26		
4/26/2009	10:12:00	2712	6.91	9.37	7.26	0.73	34.325
4/26/2009	10:13:00	2713	6.91	9.37	7.26		
4/26/2009	10:14:00	2714	6.91	9.35	7.28		
4/26/2009	10:15:00	2715	6.91	9.34	7.26		
4/26/2009	10:16:00	2716	6.91	9.32	7.28		
4/26/2009	10:17:00	2717	6.91	9.32	7.28		
4/26/2009	10:18:00	2718	6.91	9.32	7.26	0.44	34.321
4/26/2009	10:19:00	2719	6.91	9.30	7.26		
4/26/2009	10:20:00	2720	6.91	9.27	7.26		
4/26/2009	10:21:00	2721	6.91	9.27	7.26		
4/26/2009	10:22:00	2722	6.91	9.26	7.26		
4/26/2009	10:23:00	2723	6.91	9.26	7.26		
4/26/2009	10:24:00	2724	6.91	9.26	7.28	0.18	34.319
4/26/2009	10:25:00	2725	6.91	9.22	7.26		
4/26/2009	10:26:00	2726	6.91	9.22	7.26		
4/26/2009	10:27:00	2727	6.91	9.21	7.26		
4/26/2009	10:28:00	2728	6.91	9.19	7.28		
4/26/2009	10:29:00	2729	6.91	9.19	7.26		
4/26/2009	10:30:00	2730	6.91	9.18	7.28	-0.08	34.318
4/26/2009	10:31:00	2731	6.91	9.18	7.28		
4/26/2009	10:32:00	2732	6.91	9.16	7.26		
4/26/2009	10:33:00	2733	6.91	9.14	7.26		
4/26/2009	10:34:00	2734	6.91	9.13	7.26		
4/26/2009	10:35:00	2735	6.91	9.13	7.26		
4/26/2009	10:36:00	2736	6.91	9.11	7.26	-0.33	34.317
4/26/2009	10:37:00	2737	6.91	9.11	7.26		
4/26/2009	10:38:00	2738	6.91	9.11	7.26		
4/26/2009	10:39:00	2739	6.91	9.08	7.26		
4/26/2009	10:40:00	2740	6.91	9.08	7.26		
4/26/2009	10:41:00	2741	6.91	9.06	7.26		
4/26/2009	10:42:00	2742	6.91	9.06	7.26	-0.57	34.316
4/26/2009	10:43:00	2743	6.91	9.06	7.26		
4/26/2009	10:44:00	2744	6.91	9.03	7.26		
4/26/2009	10:45:00	2745	6.91	9.03	7.26		
4/26/2009	10:46:00	2746	6.91	9.02	7.26		
4/26/2009	10:47:00	2747	6.91	9.02	7.26		
4/26/2009	10:48:00	2748	6.91	9.00	7.25	-0.83	34.315
4/26/2009	10:49:00	2749	6.91	8.98	7.26		
4/26/2009	10:50:00	2750	6.91	8.97	7.25		
4/26/2009	10:51:00	2751	6.91	8.97	7.26		
4/26/2009	10:52:00	2752	6.91	8.95	7.26		
4/26/2009	10:53:00	2753	6.91	8.94	7.26		
4/26/2009	10:54:00	2754	6.91	8.94	7.26	-1.08	34.312
4/26/2009	10:55:00	2755	6.91	8.92	7.25		
4/26/2009	10:56:00	2756	6.91	8.92	7.25		
4/26/2009	10:57:00	2757	6.91	8.90	7.25		
4/26/2009	10:58:00	2758	6.91	8.90	7.25		
4/26/2009	10:59:00	2759	6.91	8.89	7.26		
4/26/2009	11:00:00	2760	6.91	8.87	7.26	-1.29	34.308
4/26/2009	11:01:00	2761	6.91	8.87	7.26		
4/26/2009	11:02:00	2762	6.91	8.86	7.25		
4/26/2009	11:03:00	2763	6.91	8.86	7.25		
4/26/2009	11:04:00	2764	6.91	8.84	7.25		
4/26/2009	11:05:00	2765	6.91	8.82	7.25		
4/26/2009	11:06:00	2766	6.91	8.82	7.25	-1.52	34.306
4/26/2009	11:07:00	2767	6.91	8.82	7.25		
4/26/2009	11:08:00	2768	6.91	8.81	7.25		
4/26/2009	11:09:00	2769	6.91	8.81	7.25		
4/26/2009	11:10:00	2770	6.91	8.81	7.25		
4/26/2009	11:11:00	2771	6.91	8.78	7.25		
4/26/2009	11:12:00	2772	6.91	8.78	7.25	-1.71	34.306
4/26/2009	11:13:00	2773	6.91	8.76	7.25		
4/26/2009	11:14:00	2774	6.91	8.76	7.25		
4/26/2009	11:15:00	2775	6.91	8.74	7.25		
4/26/2009	11:16:00	2776	6.91	8.74	7.25		
4/26/2009	11:17:00	2777	6.91	8.73	7.25		
4/26/2009	11:18:00	2778	6.91	8.71	7.25	-1.90	34.304
4/26/2009	11:19:00	2779	6.91	8.71	7.25		
4/26/2009	11:20:00	2780	6.91	8.71	7.25		
4/26/2009	11:21:00	2781	6.91	8.70	7.25		
4/26/2009	11:22:00	2782	6.91	8.68	7.25		
4/26/2009	11:23:00	2783	6.91	8.68	7.25		
4/26/2009	11:24:00	2784	6.91	8.68	7.25	-2.09	34.301
4/26/2009	11:25:00	2785	6.91	8.66	7.25		
4/26/2009	11:26:00	2786	6.91	8.65	7.23		
4/26/2009	11:27:00	2787	6.91	8.65	7.23		
4/26/2009	11:28:00	2788	6.91	8.63	7.25		
4/26/2009	11:29:00	2789	6.91	8.63	7.25		
4/26/2009	11:30:00	2790	6.91	8.62	7.23	-2.26	34.298
4/26/2009	11:31:00	2791	6.91	8.62	7.25		
4/26/2009	11:32:00	2792	6.91	8.62	7.23		
4/26/2009	11:33:00	2793	6.91	8.60	7.25		
4/26/2009	11:34:00	2794	6.91	8.60	7.25		
4/26/2009	11:35:00	2795	6.91	8.58	7.25		
4/26/2009	11:36:00	2796	6.91	8.58	7.25	-2.43	34.295
4/26/2009	11:37:00	2797	6.91	8.58	7.25		
4/26/2009	11:38:00	2798	6.91	8.57	7.23		
4/26/2009	11:39:00	2799	6.91	8.57	7.25		
4/26/2009	11:40:00	2800	6.91	8.55	7.25		
4/26/2009	11:41:00	2801	6.91	8.55	7.23		
4/26/2009	11:42:00	2802	6.91	8.55	7.23	-2.55	34.291
4/26/2009	11:43:00	2803	6.91	8.55	7.25		
4/26/2009	11:44:00	2804	6.91	8.55	7.23		
4/26/2009	11:45:00	2805	6.91	8.52	7.23		
4/26/2009	11:46:00	2806	6.91	8.52	7.23		
4/26/2009	11:47:00	2807	6.91	8.50	7.23		
4/26/2009	11:48:00	2808	6.91	8.50	7.23	-2.69	34.288
4/26/2009	11:49:00	2809	6.91	8.49	7.23		
4/26/2009	11:50:00	2810	6.91	8.49	7.25		
4/26/2009	11:51:00	2811	6.91	8.49	7.23		
4/26/2009	11:52:00	2812	6.91	8.49	7.23		
4/26/2009	11:53:00	2813	6.91	8.46	7.23		
4/26/2009	11:54:00	2814	6.91	8.46	7.23	-2.82	34.286
4/26/2009	11:55:00	2815	6.91	8.46	7.23		
4/26/2009	11:56:00	2816	6.91	8.46	7.23		
4/26/2009	11:57:00	2817	6.91	8.44	7.23		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	11:58:00	2818	6.91	8.44	7.23		
4/26/2009	11:59:00	2819	6.91	8.42	7.23		
4/26/2009	12:00:00	2820	6.91	8.42	7.21	-2.90	34.283
4/26/2009	12:01:00	2821	6.91	8.42	7.23		
4/26/2009	12:02:00	2822	6.91	8.42	7.23		
4/26/2009	12:03:00	2823	6.91	8.41	7.23		
4/26/2009	12:04:00	2824	6.91	8.39	7.23		
4/26/2009	12:05:00	2825	6.91	8.39	7.21		
4/26/2009	12:06:00	2826	6.91	8.39	7.21	-2.99	34.280
4/26/2009	12:07:00	2827	6.91	8.38	7.23		
4/26/2009	12:08:00	2828	6.91	8.38	7.23		
4/26/2009	12:09:00	2829	6.91	8.38	7.23		
4/26/2009	12:10:00	2830	6.91	8.36	7.23		
4/26/2009	12:11:00	2831	6.91	8.36	7.23		
4/26/2009	12:12:00	2832	6.91	8.36	7.21	-3.04	34.279
4/26/2009	12:13:00	2833	6.91	8.36	7.23		
4/26/2009	12:14:00	2834	6.91	8.36	7.23		
4/26/2009	12:15:00	2835	6.91	8.34	7.21		
4/26/2009	12:16:00	2836	6.91	8.33	7.23		
4/26/2009	12:17:00	2837	6.91	8.33	7.23		
4/26/2009	12:18:00	2838	6.91	8.33	7.21	-3.10	34.277
4/26/2009	12:19:00	2839	6.91	8.33	7.21		
4/26/2009	12:20:00	2840	6.91	8.33	7.21		
4/26/2009	12:21:00	2841	6.91	8.31	7.21		
4/26/2009	12:22:00	2842	6.91	8.31	7.21		
4/26/2009	12:23:00	2843	6.91	8.30	7.21		
4/26/2009	12:24:00	2844	6.91	8.30	7.21	-3.12	34.274
4/26/2009	12:25:00	2845	6.91	8.30	7.21		
4/26/2009	12:26:00	2846	6.91	8.30	7.21		
4/26/2009	12:27:00	2847	6.91	8.30	7.21		
4/26/2009	12:28:00	2848	6.91	8.30	7.21		
4/26/2009	12:29:00	2849	6.91	8.28	7.21		
4/26/2009	12:30:00	2850	6.91	8.26	7.21	-3.10	34.271
4/26/2009	12:31:00	2851	6.91	8.26	7.21		
4/26/2009	12:32:00	2852	6.91	8.26	7.21		
4/26/2009	12:33:00	2853	6.91	8.26	7.21		
4/26/2009	12:34:00	2854	6.91	8.26	7.21		
4/26/2009	12:35:00	2855	6.91	8.26	7.21		
4/26/2009	12:36:00	2856	6.91	8.25	7.21	-3.15	34.266
4/26/2009	12:37:00	2857	6.91	8.25	7.21		
4/26/2009	12:38:00	2858	6.91	8.23	7.20		
4/26/2009	12:39:00	2859	6.91	8.23	7.20		
4/26/2009	12:40:00	2860	6.91	8.23	7.20		
4/26/2009	12:41:00	2861	6.91	8.23	7.20		
4/26/2009	12:42:00	2862	6.91	8.23	7.20	-3.12	34.264
4/26/2009	12:43:00	2863	6.91	8.23	7.20		
4/26/2009	12:44:00	2864	6.91	8.22	7.20		
4/26/2009	12:45:00	2865	6.91	8.22	7.20		
4/26/2009	12:46:00	2866	6.91	8.20	7.20		
4/26/2009	12:47:00	2867	6.91	8.22	7.20		
4/26/2009	12:48:00	2868	6.91	8.20	7.21	-3.01	34.264
4/26/2009	12:49:00	2869	6.91	8.20	7.20		
4/26/2009	12:50:00	2870	6.91	8.20	7.20		
4/26/2009	12:51:00	2871	6.91	8.20	7.20		
4/26/2009	12:52:00	2872	6.91	8.18	7.21		
4/26/2009	12:53:00	2873	6.91	8.18	7.20		
4/26/2009	12:54:00	2874	6.91	8.18	7.20	-2.92	34.263
4/26/2009	12:55:00	2875	6.91	8.18	7.20		
4/26/2009	12:56:00	2876	6.91	8.17	7.18		
4/26/2009	12:57:00	2877	6.91	8.17	7.20		
4/26/2009	12:58:00	2878	6.91	8.17	7.18		
4/26/2009	12:59:00	2879	6.91	8.17	7.18		
4/26/2009	13:00:00	2880	6.91	8.17	7.18	-2.82	34.262
4/26/2009	13:01:00	2881	6.91	8.17	7.20		
4/26/2009	13:02:00	2882	6.91	8.17	7.20		
4/26/2009	13:03:00	2883	6.91	8.17	7.18		
4/26/2009	13:04:00	2884	6.91	8.17	7.18		
4/26/2009	13:05:00	2885	6.91	8.17	7.20		
4/26/2009	13:06:00	2886	6.91	8.17	7.18	-2.73	34.260
4/26/2009	13:07:00	2887	6.91	8.15	7.18		
4/26/2009	13:08:00	2888	6.91	8.15	7.20		
4/26/2009	13:09:00	2889	6.91	8.15	7.18		
4/26/2009	13:10:00	2890	6.91	8.15	7.18		
4/26/2009	13:11:00	2891	6.91	8.14	7.18		
4/26/2009	13:12:00	2892	6.91	8.14	7.18	-2.61	34.258
4/26/2009	13:13:00	2893	6.91	8.15	7.20		
4/26/2009	13:14:00	2894	6.91	8.14	7.18		
4/26/2009	13:15:00	2895	6.91	8.15	7.18		
4/26/2009	13:16:00	2896	6.91	8.14	7.18		
4/26/2009	13:17:00	2897	6.91	8.14	7.18		
4/26/2009	13:18:00	2898	6.91	8.14	7.18	-2.47	34.255
4/26/2009	13:19:00	2899	6.91	8.14	7.20		
4/26/2009	13:20:00	2900	6.91	8.12	7.18		
4/26/2009	13:21:00	2901	6.91	8.14	7.18		
4/26/2009	13:22:00	2902	6.91	8.14	7.18		
4/26/2009	13:23:00	2903	6.91	8.14	7.18		
4/26/2009	13:24:00	2904	6.91	8.14	7.18	-2.33	34.253
4/26/2009	13:25:00	2905	6.91	8.14	7.18		
4/26/2009	13:26:00	2906	6.91	8.12	7.18		
4/26/2009	13:27:00	2907	6.91	8.12	7.18		
4/26/2009	13:28:00	2908	6.90	8.12	7.18		
4/26/2009	13:29:00	2909	6.91	8.14	7.18		
4/26/2009	13:30:00	2910	6.91	8.12	7.18	-2.17	34.251
4/26/2009	13:31:00	2911	6.91	8.14	7.18		
4/26/2009	13:32:00	2912	6.91	8.12	7.18		
4/26/2009	13:33:00	2913	6.90	8.12	7.18		
4/26/2009	13:34:00	2914	6.91	8.12	7.18		
4/26/2009	13:35:00	2915	6.91	8.12	7.18		
4/26/2009	13:36:00	2916	6.91	8.14	7.18	-2.00	34.250
4/26/2009	13:37:00	2917	6.91	8.12	7.18		
4/26/2009	13:38:00	2918	6.91	8.12	7.18		
4/26/2009	13:39:00	2919	6.91	8.12	7.18		
4/26/2009	13:40:00	2920	6.91	8.14	7.18		
4/26/2009	13:41:00	2921	6.91	8.12	7.18		
4/26/2009	13:42:00	2922	6.91	8.14	7.18	-1.84	34.245
4/26/2009	13:43:00	2923	6.91	8.12	7.18		
4/26/2009	13:44:00	2924	6.91	8.12	7.17		
4/26/2009	13:45:00	2925	6.91	8.14	7.17		
4/26/2009	13:46:00	2926	6.91	8.12	7.17		
4/26/2009	13:47:00	2927	6.91	8.12	7.18		
4/26/2009	13:48:00	2928	6.91	8.14	7.18	-1.64	34.244
4/26/2009	13:49:00	2929	6.91	8.14	7.18		
4/26/2009	13:50:00	2930	6.91	8.12	7.17		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	13:51:00	2931	6.91	8.14	7.18		
4/26/2009	13:52:00	2932	6.91	8.14	7.17		
4/26/2009	13:53:00	2933	6.91	8.14	7.17		
4/26/2009	13:54:00	2934	6.91	8.14	7.18	-1.45	34.242
4/26/2009	13:55:00	2935	6.91	8.14	7.18		
4/26/2009	13:56:00	2936	6.91	8.14	7.17		
4/26/2009	13:57:00	2937	6.91	8.14	7.17		
4/26/2009	13:58:00	2938	6.91	8.14	7.17		
4/26/2009	13:59:00	2939	6.91	8.14	7.18		
4/26/2009	14:00:00	2940	6.91	8.14	7.17	-1.23	34.240
4/26/2009	14:01:00	2941	6.91	8.14	7.17		
4/26/2009	14:02:00	2942	6.91	8.14	7.17		
4/26/2009	14:03:00	2943	6.91	8.15	7.17		
4/26/2009	14:04:00	2944	6.91	8.15	7.17		
4/26/2009	14:05:00	2945	6.91	8.17	7.17		
4/26/2009	14:06:00	2946	6.91	8.15	7.18	-1.00	34.237
4/26/2009	14:07:00	2947	6.91	8.15	7.18		
4/26/2009	14:08:00	2948	6.91	8.17	7.17		
4/26/2009	14:09:00	2949	6.91	8.17	7.17		
4/26/2009	14:10:00	2950	6.91	8.15	7.18		
4/26/2009	14:11:00	2951	6.90	8.17	7.17		
4/26/2009	14:12:00	2952	6.91	8.17	7.17	-0.78	34.233
4/26/2009	14:13:00	2953	6.91	8.17	7.17		
4/26/2009	14:14:00	2954	6.91	8.17	7.17		
4/26/2009	14:15:00	2955	6.91	8.17	7.17		
4/26/2009	14:16:00	2956	6.91	8.17	7.17		
4/26/2009	14:17:00	2957	6.91	8.18	7.15		
4/26/2009	14:18:00	2958	6.91	8.18	7.17	-0.56	34.232
4/26/2009	14:19:00	2959	6.91	8.18	7.17		
4/26/2009	14:20:00	2960	6.91	8.18	7.15		
4/26/2009	14:21:00	2961	6.91	8.20	7.15		
4/26/2009	14:22:00	2962	6.91	8.18	7.15		
4/26/2009	14:23:00	2963	6.91	8.20	7.15		
4/26/2009	14:24:00	2964	6.91	8.20	7.15	-0.31	34.230
4/26/2009	14:25:00	2965	6.91	8.22	7.15		
4/26/2009	14:26:00	2966	6.91	8.22	7.15		
4/26/2009	14:27:00	2967	6.91	8.22	7.15		
4/26/2009	14:28:00	2968	6.91	8.22	7.15		
4/26/2009	14:29:00	2969	6.91	8.22	7.15		
4/26/2009	14:30:00	2970	6.91	8.22	7.15	-0.04	34.229
4/26/2009	14:31:00	2971	6.91	8.23	7.15		
4/26/2009	14:32:00	2972	6.91	8.23	7.15		
4/26/2009	14:33:00	2973	6.91	8.23	7.15		
4/26/2009	14:34:00	2974	6.91	8.23	7.15		
4/26/2009	14:35:00	2975	6.91	8.25	7.15		
4/26/2009	14:36:00	2976	6.91	8.25	7.15	0.26	34.228
4/26/2009	14:37:00	2977	6.91	8.26	7.15		
4/26/2009	14:38:00	2978	6.91	8.26	7.15		
4/26/2009	14:39:00	2979	6.91	8.26	7.15		
4/26/2009	14:40:00	2980	6.91	8.26	7.15		
4/26/2009	14:41:00	2981	6.90	8.26	7.15		
4/26/2009	14:42:00	2982	6.90	8.30	7.15	0.56	34.226
4/26/2009	14:43:00	2983	6.91	8.30	7.15		
4/26/2009	14:44:00	2984	6.91	8.30	7.15		
4/26/2009	14:45:00	2985	6.91	8.30	7.15		
4/26/2009	14:46:00	2986	6.90	8.30	7.15		
4/26/2009	14:47:00	2987	6.91	8.30	7.15		
4/26/2009	14:48:00	2988	6.91	8.31	7.15	0.85	34.224
4/26/2009	14:49:00	2989	6.91	8.31	7.15		
4/26/2009	14:50:00	2990	6.91	8.31	7.15		
4/26/2009	14:51:00	2991	6.91	8.33	7.15		
4/26/2009	14:52:00	2992	6.91	8.33	7.15		
4/26/2009	14:53:00	2993	6.91	8.34	7.15		
4/26/2009	14:54:00	2994	6.91	8.33	7.15	1.13	34.222
4/26/2009	14:55:00	2995	6.91	8.34	7.13		
4/26/2009	14:56:00	2996	6.91	8.36	7.15		
4/26/2009	14:57:00	2997	6.90	8.36	7.15		
4/26/2009	14:58:00	2998	6.90	8.36	7.15		
4/26/2009	14:59:00	2999	6.91	8.36	7.15		
4/26/2009	15:00:00	3000	6.90	8.38	7.15	1.44	34.220
4/26/2009	15:01:00	3001	6.91	8.39	7.15		
4/26/2009	15:02:00	3002	6.91	8.39	7.15		
4/26/2009	15:03:00	3003	6.90	8.39	7.13		
4/26/2009	15:04:00	3004	6.90	8.41	7.13		
4/26/2009	15:05:00	3005	6.90	8.42	7.15		
4/26/2009	15:06:00	3006	6.90	8.42	7.15	1.75	34.217
4/26/2009	15:07:00	3007	6.90	8.42	7.13		
4/26/2009	15:08:00	3008	6.90	8.42	7.13		
4/26/2009	15:09:00	3009	6.90	8.44	7.15		
4/26/2009	15:10:00	3010	6.90	8.44	7.13		
4/26/2009	15:11:00	3011	6.91	8.46	7.13		
4/26/2009	15:12:00	3012	6.90	8.47	7.13	2.07	34.214
4/26/2009	15:13:00	3013	6.91	8.46	7.13		
4/26/2009	15:14:00	3014	6.91	8.47	7.13		
4/26/2009	15:15:00	3015	6.91	8.49	7.13		
4/26/2009	15:16:00	3016	6.91	8.49	7.15		
4/26/2009	15:17:00	3017	6.91	8.49	7.13		
4/26/2009	15:18:00	3018	6.90	8.50	7.12	2.41	34.210
4/26/2009	15:19:00	3019	6.90	8.50	7.12		
4/26/2009	15:20:00	3020	6.90	8.50	7.12		
4/26/2009	15:21:00	3021	6.91	8.52	7.13		
4/26/2009	15:22:00	3022	6.90	8.55	7.13		
4/26/2009	15:23:00	3023	6.91	8.55	7.13		
4/26/2009	15:24:00	3024	6.90	8.55	7.13	2.75	34.208
4/26/2009	15:25:00	3025	6.90	8.55	7.13		
4/26/2009	15:26:00	3026	6.91	8.57	7.13		
4/26/2009	15:27:00	3027	6.90	8.58	7.12		
4/26/2009	15:28:00	3028	6.90	8.58	7.13		
4/26/2009	15:29:00	3029	6.91	8.58	7.13		
4/26/2009	15:30:00	3030	6.90	8.60	7.13	3.09	34.205
4/26/2009	15:31:00	3031	6.90	8.60	7.13		
4/26/2009	15:32:00	3032	6.91	8.62	7.13		
4/26/2009	15:33:00	3033	6.91	8.62	7.13		
4/26/2009	15:34:00	3034	6.91	8.63	7.13		
4/26/2009	15:35:00	3035	6.90	8.65	7.12		
4/26/2009	15:36:00	3036	6.91	8.65	7.13	3.42	34.200
4/26/2009	15:37:00	3037	6.90	8.66	7.13		
4/26/2009	15:38:00	3038	6.91	8.66	7.13		
4/26/2009	15:39:00	3039	6.91	8.68	7.13		
4/26/2009	15:40:00	3040	6.90	8.68	7.13		
4/26/2009	15:41:00	3041	6.90	8.70	7.12		
4/26/2009	15:42:00	3042	6.90	8.70	7.13	3.73	34.197
4/26/2009	15:43:00	3043	6.90	8.71	7.12		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	15:44:00	3044	6.90	8.71	7.13		
4/26/2009	15:45:00	3045	6.90	8.73	7.13		
4/26/2009	15:46:00	3046	6.90	8.74	7.13		
4/26/2009	15:47:00	3047	6.90	8.74	7.13		
4/26/2009	15:48:00	3048	6.90	8.74	7.12	4.04	34.193
4/26/2009	15:49:00	3049	6.90	8.76	7.12		
4/26/2009	15:50:00	3050	6.90	8.78	7.12		
4/26/2009	15:51:00	3051	6.90	8.78	7.12		
4/26/2009	15:52:00	3052	6.90	8.79	7.12		
4/26/2009	15:53:00	3053	6.90	8.79	7.12		
4/26/2009	15:54:00	3054	6.90	8.81	7.12	4.37	34.189
4/26/2009	15:55:00	3055	6.91	8.81	7.12		
4/26/2009	15:56:00	3056	6.90	8.82	7.12		
4/26/2009	15:57:00	3057	6.90	8.84	7.12		
4/26/2009	15:58:00	3058	6.90	8.84	7.12		
4/26/2009	15:59:00	3059	6.90	8.84	7.12		
4/26/2009	16:00:00	3060	6.90	8.87	7.12	4.71	34.189
4/26/2009	16:01:00	3061	6.90	8.87	7.12		
4/26/2009	16:02:00	3062	6.90	8.87	7.12		
4/26/2009	16:03:00	3063	6.90	8.89	7.13		
4/26/2009	16:04:00	3064	6.90	8.89	7.12		
4/26/2009	16:05:00	3065	6.90	8.90	7.12		
4/26/2009	16:06:00	3066	6.90	8.90	7.12	5.05	34.187
4/26/2009	16:07:00	3067	6.90	8.92	7.12		
4/26/2009	16:08:00	3068	6.90	8.94	7.12		
4/26/2009	16:09:00	3069	6.90	8.94	7.12		
4/26/2009	16:10:00	3070	6.90	8.95	7.12		
4/26/2009	16:11:00	3071	6.90	8.95	7.12		
4/26/2009	16:12:00	3072	6.90	8.97	7.12	5.37	34.185
4/26/2009	16:13:00	3073	6.90	8.97	7.12		
4/26/2009	16:14:00	3074	6.90	8.98	7.12		
4/26/2009	16:15:00	3075	6.90	9.00	7.12		
4/26/2009	16:16:00	3076	6.90	9.00	7.12		
4/26/2009	16:17:00	3077	6.90	9.02	7.12		
4/26/2009	16:18:00	3078	6.90	9.02	7.12	5.67	34.178
4/26/2009	16:19:00	3079	6.90	9.03	7.12		
4/26/2009	16:20:00	3080	6.90	9.06	7.12		
4/26/2009	16:21:00	3081	6.90	9.06	7.12		
4/26/2009	16:22:00	3082	6.90	9.06	7.12		
4/26/2009	16:23:00	3083	6.90	9.06	7.12		
4/26/2009	16:24:00	3084	6.90	9.08	7.12	5.97	34.174
4/26/2009	16:25:00	3085	6.90	9.10	7.12		
4/26/2009	16:26:00	3086	6.90	9.10	7.12		
4/26/2009	16:27:00	3087	6.90	9.11	7.12		
4/26/2009	16:28:00	3088	6.90	9.13	7.12		
4/26/2009	16:29:00	3089	6.90	9.13	7.12		
4/26/2009	16:30:00	3090	6.90	9.14	7.12	6.28	34.175
4/26/2009	16:31:00	3091	6.90	9.14	7.12		
4/26/2009	16:32:00	3092	6.90	9.16	7.12		
4/26/2009	16:33:00	3093	6.90	9.16	7.12		
4/26/2009	16:34:00	3094	6.90	9.18	7.12		
4/26/2009	16:35:00	3095	6.90	9.19	7.12		
4/26/2009	16:36:00	3096	6.90	9.19	7.12	6.58	34.172
4/26/2009	16:37:00	3097	6.90	9.21	7.12		
4/26/2009	16:38:00	3098	6.90	9.22	7.12		
4/26/2009	16:39:00	3099	6.90	9.22	7.12		
4/26/2009	16:40:00	3100	6.90	9.24	7.12		
4/26/2009	16:41:00	3101	6.90	9.24	7.12		
4/26/2009	16:42:00	3102	6.90	9.26	7.12	6.85	34.168
4/26/2009	16:43:00	3103	6.90	9.26	7.12		
4/26/2009	16:44:00	3104	6.90	9.27	7.10		
4/26/2009	16:45:00	3105	6.90	9.27	7.12		
4/26/2009	16:46:00	3106	6.90	9.27	7.10		
4/26/2009	16:47:00	3107	6.90	9.29	7.10		
4/26/2009	16:48:00	3108	6.90	9.32	7.08	7.08	34.164
4/26/2009	16:49:00	3109	6.90	9.32	7.12		
4/26/2009	16:50:00	3110	6.90	9.32	7.10		
4/26/2009	16:51:00	3111	6.90	9.34	7.08		
4/26/2009	16:52:00	3112	6.90	9.34	7.08		
4/26/2009	16:53:00	3113	6.90	9.35	7.08		
4/26/2009	16:54:00	3114	6.90	9.35	7.08	7.37	34.165
4/26/2009	16:55:00	3115	6.90	9.37	7.08		
4/26/2009	16:56:00	3116	6.90	9.38	7.08		
4/26/2009	16:57:00	3117	6.90	9.38	7.08		
4/26/2009	16:58:00	3118	6.90	9.38	7.08		
4/26/2009	16:59:00	3119	6.90	9.42	7.08		
4/26/2009	17:00:00	3120	6.90	9.42	7.12	7.62	34.162
4/26/2009	17:01:00	3121	6.90	9.42	7.10		
4/26/2009	17:02:00	3122	6.90	9.45	7.08		
4/26/2009	17:03:00	3123	6.90	9.45	7.10		
4/26/2009	17:04:00	3124	6.90	9.45	7.08		
4/26/2009	17:05:00	3125	6.90	9.46	7.08		
4/26/2009	17:06:00	3126	6.90	9.48	7.10	7.88	34.154
4/26/2009	17:07:00	3127	6.90	9.48	7.10		
4/26/2009	17:08:00	3128	6.90	9.50	7.08		
4/26/2009	17:09:00	3129	6.90	9.50	7.08		
4/26/2009	17:10:00	3130	6.90	9.51	7.08		
4/26/2009	17:11:00	3131	6.90	9.51	7.08		
4/26/2009	17:12:00	3132	6.90	9.53	7.08	8.14	34.154
4/26/2009	17:13:00	3133	6.90	9.53	7.08		
4/26/2009	17:14:00	3134	6.90	9.54	7.08		
4/26/2009	17:15:00	3135	6.90	9.58	7.07		
4/26/2009	17:16:00	3136	6.90	9.58	7.08		
4/26/2009	17:17:00	3137	6.90	9.58	7.08		
4/26/2009	17:18:00	3138	6.90	9.58	7.08	8.39	34.153
4/26/2009	17:19:00	3139	6.90	9.59	7.08		
4/26/2009	17:20:00	3140	6.90	9.61	7.08		
4/26/2009	17:21:00	3141	6.90	9.61	7.08		
4/26/2009	17:22:00	3142	6.90	9.61	7.08		
4/26/2009	17:23:00	3143	6.90	9.62	7.07		
4/26/2009	17:24:00	3144	6.90	9.62	7.07	8.62	34.149
4/26/2009	17:25:00	3145	6.90	9.64	7.08		
4/26/2009	17:26:00	3146	6.90	9.64	7.07		
4/26/2009	17:27:00	3147	6.90	9.66	7.08		
4/26/2009	17:28:00	3148	6.90	9.67	7.07		
4/26/2009	17:29:00	3149	6.90	9.67	7.07		
4/26/2009	17:30:00	3150	6.90	9.69	7.07	8.84	34.145
4/26/2009	17:31:00	3151	6.90	9.69	7.07		
4/26/2009	17:32:00	3152	6.90	9.70	7.08		
4/26/2009	17:33:00	3153	6.90	9.70	7.07		
4/26/2009	17:34:00	3154	6.90	9.72	7.07		
4/26/2009	17:35:00	3155	6.90	9.74	7.07		
4/26/2009	17:36:00	3156	6.90	9.74	7.07	9.04	34.143

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	17:37:00	3157	6.90	9.74	7.07		
4/26/2009	17:38:00	3158	6.90	9.75	7.07		
4/26/2009	17:39:00	3159	6.90	9.75	7.07		
4/26/2009	17:40:00	3160	6.90	9.77	7.07		
4/26/2009	17:41:00	3161	6.90	9.77	7.07		
4/26/2009	17:42:00	3162	6.90	9.78	7.07	9.22	34.139
4/26/2009	17:43:00	3163	6.90	9.78	7.07		
4/26/2009	17:44:00	3164	6.90	9.80	7.08		
4/26/2009	17:45:00	3165	6.90	9.82	7.05		
4/26/2009	17:46:00	3166	6.90	9.82	7.07		
4/26/2009	17:47:00	3167	6.90	9.83	7.07		
4/26/2009	17:48:00	3168	6.90	9.83	7.07	9.42	34.136
4/26/2009	17:49:00	3169	6.90	9.83	7.07		
4/26/2009	17:50:00	3170	6.90	9.83	7.07		
4/26/2009	17:51:00	3171	6.90	9.85	7.07		
4/26/2009	17:52:00	3172	6.90	9.86	7.07		
4/26/2009	17:53:00	3173	6.90	9.86	7.05		
4/26/2009	17:54:00	3174	6.90	9.88	7.07	9.62	34.131
4/26/2009	17:55:00	3175	6.90	9.90	7.05		
4/26/2009	17:56:00	3176	6.90	9.90	7.07		
4/26/2009	17:57:00	3177	6.90	9.91	7.07		
4/26/2009	17:58:00	3178	6.90	9.93	7.05		
4/26/2009	17:59:00	3179	6.90	9.91	7.05		
4/26/2009	18:00:00	3180	6.90	9.93	7.07	9.79	34.129
4/26/2009	18:01:00	3181	6.90	9.93	7.05		
4/26/2009	18:02:00	3182	6.90	9.94	7.05		
4/26/2009	18:03:00	3183	6.90	9.96	7.05		
4/26/2009	18:04:00	3184	6.90	9.96	7.05		
4/26/2009	18:05:00	3185	6.90	9.96	7.05		
4/26/2009	18:06:00	3186	6.90	9.98	7.05	9.94	34.128
4/26/2009	18:07:00	3187	6.90	9.98	7.05		
4/26/2009	18:08:00	3188	6.90	9.99	7.05		
4/26/2009	18:09:00	3189	6.90	9.99	7.05		
4/26/2009	18:10:00	3190	6.90	9.99	7.05		
4/26/2009	18:11:00	3191	6.90	10.01	7.05		
4/26/2009	18:12:00	3192	6.90	10.02	7.05	10.08	34.126
4/26/2009	18:13:00	3193	6.90	10.02	7.05		
4/26/2009	18:14:00	3194	6.90	10.02	7.05		
4/26/2009	18:15:00	3195	6.90	10.04	7.05		
4/26/2009	18:16:00	3196	6.90	10.02	7.05		
4/26/2009	18:17:00	3197	6.90	10.06	7.05		
4/26/2009	18:18:00	3198	6.90	10.06	7.05	10.22	34.124
4/26/2009	18:19:00	3199	6.90	10.06	7.05		
4/26/2009	18:20:00	3200	6.90	10.09	7.05		
4/26/2009	18:21:00	3201	6.90	10.09	7.05		
4/26/2009	18:22:00	3202	6.90	10.09	7.05		
4/26/2009	18:23:00	3203	6.90	10.09	7.05		
4/26/2009	18:24:00	3204	6.90	10.10	7.05	10.36	34.124
4/26/2009	18:25:00	3205	6.90	10.10	7.05		
4/26/2009	18:26:00	3206	6.90	10.10	7.05		
4/26/2009	18:27:00	3207	6.90	10.12	7.05		
4/26/2009	18:28:00	3208	6.90	10.12	7.05		
4/26/2009	18:29:00	3209	6.90	10.14	7.05		
4/26/2009	18:30:00	3210	6.90	10.14	7.05	10.49	34.123
4/26/2009	18:31:00	3211	6.90	10.14	7.05		
4/26/2009	18:32:00	3212	6.90	10.15	7.05		
4/26/2009	18:33:00	3213	6.90	10.15	7.05		
4/26/2009	18:34:00	3214	6.90	10.17	7.05		
4/26/2009	18:35:00	3215	6.90	10.17	7.05		
4/26/2009	18:36:00	3216	6.90	10.18	7.05	10.62	34.123
4/26/2009	18:37:00	3217	6.90	10.18	7.05		
4/26/2009	18:38:00	3218	6.90	10.20	7.05		
4/26/2009	18:39:00	3219	6.90	10.20	7.05		
4/26/2009	18:40:00	3220	6.90	10.22	7.05		
4/26/2009	18:41:00	3221	6.90	10.22	7.05		
4/26/2009	18:42:00	3222	6.90	10.22	7.05	10.74	34.122
4/26/2009	18:43:00	3223	6.90	10.22	7.05		
4/26/2009	18:44:00	3224	6.90	10.22	7.05		
4/26/2009	18:45:00	3225	6.90	10.23	7.05		
4/26/2009	18:46:00	3226	6.90	10.25	7.05		
4/26/2009	18:47:00	3227	6.90	10.23	7.05		
4/26/2009	18:48:00	3228	6.90	10.25	7.05	10.84	34.122
4/26/2009	18:49:00	3229	6.90	10.25	7.05		
4/26/2009	18:50:00	3230	6.90	10.26	7.05		
4/26/2009	18:51:00	3231	6.90	10.26	7.03		
4/26/2009	18:52:00	3232	6.90	10.28	7.03		
4/26/2009	18:53:00	3233	6.90	10.28	7.05		
4/26/2009	18:54:00	3234	6.90	10.28	7.03	10.94	34.121
4/26/2009	18:55:00	3235	6.90	10.28	7.05		
4/26/2009	18:56:00	3236	6.90	10.30	7.03		
4/26/2009	18:57:00	3237	6.90	10.30	7.03		
4/26/2009	18:58:00	3238	6.90	10.31	7.05		
4/26/2009	18:59:00	3239	6.90	10.31	7.05		
4/26/2009	19:00:00	3240	6.90	10.31	7.05	11.02	34.121
4/26/2009	19:01:00	3241	6.90	10.33	7.03		
4/26/2009	19:02:00	3242	6.90	10.31	7.05		
4/26/2009	19:03:00	3243	6.90	10.34	7.03		
4/26/2009	19:04:00	3244	6.90	10.34	7.05		
4/26/2009	19:05:00	3245	6.90	10.34	7.03		
4/26/2009	19:06:00	3246	6.90	10.34	7.03	11.06	34.122
4/26/2009	19:07:00	3247	6.90	10.34	7.05		
4/26/2009	19:08:00	3248	6.90	10.36	7.05		
4/26/2009	19:09:00	3249	6.90	10.38	7.05		
4/26/2009	19:10:00	3250	6.90	10.38	7.03		
4/26/2009	19:11:00	3251	6.90	10.38	7.05		
4/26/2009	19:12:00	3252	6.90	10.38	7.03	11.13	34.125
4/26/2009	19:13:00	3253	6.90	10.39	7.03		
4/26/2009	19:14:00	3254	6.90	10.38	7.03		
4/26/2009	19:15:00	3255	6.90	10.39	7.03		
4/26/2009	19:16:00	3256	6.90	10.41	7.05		
4/26/2009	19:17:00	3257	6.90	10.41	7.05		
4/26/2009	19:18:00	3258	6.90	10.41	7.03	11.18	34.124
4/26/2009	19:19:00	3259	6.90	10.41	7.03		
4/26/2009	19:20:00	3260	6.90	10.41	7.03		
4/26/2009	19:21:00	3261	6.90	10.42	7.03		
4/26/2009	19:22:00	3262	6.90	10.42	7.05		
4/26/2009	19:23:00	3263	6.90	10.42	7.03		
4/26/2009	19:24:00	3264	6.90	10.44	7.05	11.22	34.124
4/26/2009	19:25:00	3265	6.90	10.44	7.03		
4/26/2009	19:26:00	3266	6.90	10.44	7.05		
4/26/2009	19:27:00	3267	6.90	10.46	7.03		
4/26/2009	19:28:00	3268	6.90	10.46	7.05		
4/26/2009	19:29:00	3269	6.90	10.46	7.03		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	19:30:00	3270	6.90	10.47	7.05	11.28	34.125
4/26/2009	19:31:00	3271	6.90	10.47	7.03		
4/26/2009	19:32:00	3272	6.90	10.47	7.03		
4/26/2009	19:33:00	3273	6.90	10.47	7.03		
4/26/2009	19:34:00	3274	6.90	10.49	7.03		
4/26/2009	19:35:00	3275	6.90	10.47	7.03		
4/26/2009	19:36:00	3276	6.90	10.49	7.05	11.31	34.125
4/26/2009	19:37:00	3277	6.90	10.49	7.05		
4/26/2009	19:38:00	3278	6.90	10.49	7.05		
4/26/2009	19:39:00	3279	6.90	10.50	7.05		
4/26/2009	19:40:00	3280	6.90	10.49	7.03		
4/26/2009	19:41:00	3281	6.90	10.50	7.03		
4/26/2009	19:42:00	3282	6.90	10.50	7.03	11.33	34.125
4/26/2009	19:43:00	3283	6.90	10.50	7.02		
4/26/2009	19:44:00	3284	6.90	10.52	7.03		
4/26/2009	19:45:00	3285	6.90	10.52	7.03		
4/26/2009	19:46:00	3286	6.90	10.54	7.03		
4/26/2009	19:47:00	3287	6.90	10.54	7.03		
4/26/2009	19:48:00	3288	6.90	10.54	7.05	11.34	34.124
4/26/2009	19:49:00	3289	6.90	10.54	7.03		
4/26/2009	19:50:00	3290	6.90	10.54	7.05		
4/26/2009	19:51:00	3291	6.90	10.54	7.03		
4/26/2009	19:52:00	3292	6.90	10.54	7.03		
4/26/2009	19:53:00	3293	6.90	10.54	7.05		
4/26/2009	19:54:00	3294	6.90	10.54	7.03	11.35	34.124
4/26/2009	19:55:00	3295	6.90	10.55	7.03		
4/26/2009	19:56:00	3296	6.90	10.55	7.03		
4/26/2009	19:57:00	3297	6.90	10.55	7.03		
4/26/2009	19:58:00	3298	6.90	10.55	7.03		
4/26/2009	19:59:00	3299	6.90	10.57	7.03		
4/26/2009	20:00:00	3300	6.90	10.57	7.05	11.34	34.123
4/26/2009	20:01:00	3301	6.90	10.57	7.05		
4/26/2009	20:02:00	3302	6.90	10.57	7.03		
4/26/2009	20:03:00	3303	6.90	10.58	7.03		
4/26/2009	20:04:00	3304	6.90	10.58	7.05		
4/26/2009	20:05:00	3305	6.90	10.60	7.03		
4/26/2009	20:06:00	3306	6.90	10.60	7.05	11.33	34.124
4/26/2009	20:07:00	3307	6.90	10.60	7.05		
4/26/2009	20:08:00	3308	6.90	10.60	7.05		
4/26/2009	20:09:00	3309	6.90	10.60	7.05		
4/26/2009	20:10:00	3310	6.90	10.60	7.05		
4/26/2009	20:11:00	3311	6.90	10.60	7.05		
4/26/2009	20:12:00	3312	6.90	10.60	7.05	11.32	34.124
4/26/2009	20:13:00	3313	6.90	10.60	7.05		
4/26/2009	20:14:00	3314	6.90	10.60	7.05		
4/26/2009	20:15:00	3315	6.90	10.60	7.05		
4/26/2009	20:16:00	3316	6.90	10.60	7.05		
4/26/2009	20:17:00	3317	6.90	10.60	7.05		
4/26/2009	20:18:00	3318	6.90	10.62	7.05	11.28	34.124
4/26/2009	20:19:00	3319	6.90	10.62	7.05		
4/26/2009	20:20:00	3320	6.90	10.62	7.05		
4/26/2009	20:21:00	3321	6.90	10.62	7.05		
4/26/2009	20:22:00	3322	6.90	10.62	7.05		
4/26/2009	20:23:00	3323	6.90	10.62	7.05	11.22	34.124
4/26/2009	20:24:00	3324	6.90	10.62	7.05		
4/26/2009	20:25:00	3325	6.90	10.62	7.05		
4/26/2009	20:26:00	3326	6.90	10.63	7.05		
4/26/2009	20:27:00	3327	6.90	10.63	7.05		
4/26/2009	20:28:00	3328	6.90	10.63	7.05		
4/26/2009	20:29:00	3329	6.90	10.63	7.05		
4/26/2009	20:30:00	3330	6.90	10.63	7.05	11.15	34.124
4/26/2009	20:31:00	3331	6.90	10.63	7.05		
4/26/2009	20:32:00	3332	6.90	10.63	7.05		
4/26/2009	20:33:00	3333	6.90	10.63	7.05		
4/26/2009	20:34:00	3334	6.90	10.63	7.05		
4/26/2009	20:35:00	3335	6.90	10.63	7.05		
4/26/2009	20:36:00	3336	6.90	10.63	7.05	11.09	34.124
4/26/2009	20:37:00	3337	6.90	10.63	7.05		
4/26/2009	20:38:00	3338	6.90	10.63	7.05		
4/26/2009	20:39:00	3339	6.90	10.65	7.05		
4/26/2009	20:40:00	3340	6.90	10.63	7.05		
4/26/2009	20:41:00	3341	6.90	10.63	7.05		
4/26/2009	20:42:00	3342	6.90	10.65	7.05	11.02	34.124
4/26/2009	20:43:00	3343	6.90	10.63	7.05		
4/26/2009	20:44:00	3344	6.90	10.65	7.05		
4/26/2009	20:45:00	3345	6.90	10.63	7.05		
4/26/2009	20:46:00	3346	6.90	10.65	7.05		
4/26/2009	20:47:00	3347	6.90	10.74	7.05		
4/26/2009	20:48:00	3348	6.90	10.63	7.05	10.97	34.121
4/26/2009	20:49:00	3349	6.90	10.65	7.05		
4/26/2009	20:50:00	3350	6.90	10.63	7.05		
4/26/2009	20:51:00	3351	6.90	10.63	7.05		
4/26/2009	20:52:00	3352	6.90	10.65	7.07		
4/26/2009	20:53:00	3353	6.90	10.65	7.05		
4/26/2009	20:54:00	3354	6.90	10.63	7.05	10.90	34.121
4/26/2009	20:55:00	3355	6.90	10.65	7.05		
4/26/2009	20:56:00	3356	6.90	10.65	7.05		
4/26/2009	20:57:00	3357	6.90	10.65	7.05		
4/26/2009	20:58:00	3358	6.90	10.65	7.05		
4/26/2009	20:59:00	3359	6.90	10.65	7.05		
4/26/2009	21:00:00	3360	6.90	10.65	7.05	10.81	34.123
4/26/2009	21:01:00	3361	6.90	10.65	7.05		
4/26/2009	21:02:00	3362	6.90	10.65	7.05		
4/26/2009	21:03:00	3363	6.90	10.65	7.05		
4/26/2009	21:04:00	3364	6.90	10.65	7.05		
4/26/2009	21:05:00	3365	6.90	10.66	7.05		
4/26/2009	21:06:00	3366	6.90	10.66	7.05	10.74	34.121
4/26/2009	21:07:00	3367	6.90	10.66	7.05		
4/26/2009	21:08:00	3368	6.90	10.66	7.05		
4/26/2009	21:09:00	3369	6.90	10.65	7.05		
4/26/2009	21:10:00	3370	6.90	10.65	7.07		
4/26/2009	21:11:00	3371	6.90	10.66	7.05		
4/26/2009	21:12:00	3372	6.90	10.65	7.05	10.65	34.121
4/26/2009	21:13:00	3373	6.90	10.66	7.05		
4/26/2009	21:14:00	3374	6.90	10.65	7.05		
4/26/2009	21:15:00	3375	6.90	10.65	7.05		
4/26/2009	21:16:00	3376	6.90	10.65	7.07		
4/26/2009	21:17:00	3377	6.90	10.65	7.05		
4/26/2009	21:18:00	3378	6.90	10.66	7.05	10.54	34.117
4/26/2009	21:19:00	3379	6.90	10.65	7.07		
4/26/2009	21:20:00	3380	6.90	10.63	7.05		
4/26/2009	21:21:00	3381	6.90	10.63	7.05		
4/26/2009	21:22:00	3382	6.90	10.63	7.05		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	21:23:00	3383	6.90	10.65	7.05		
4/26/2009	21:24:00	3384	6.90	10.63	7.05	10.45	34.117
4/26/2009	21:25:00	3385	6.90	10.65	7.05		
4/26/2009	21:26:00	3386	6.90	10.65	7.07		
4/26/2009	21:27:00	3387	6.90	10.65	7.05		
4/26/2009	21:28:00	3388	6.90	10.63	7.07		
4/26/2009	21:29:00	3389	6.90	10.63	7.05		
4/26/2009	21:30:00	3390	6.90	10.63	7.05	10.35	34.114
4/26/2009	21:31:00	3391	6.90	10.63	7.05		
4/26/2009	21:32:00	3392	6.90	10.63	7.05		
4/26/2009	21:33:00	3393	6.90	10.63	7.05		
4/26/2009	21:34:00	3394	6.90	10.63	7.05		
4/26/2009	21:35:00	3395	6.90	10.63	7.07		
4/26/2009	21:36:00	3396	6.90	10.63	7.05	10.25	34.111
4/26/2009	21:37:00	3397	6.90	10.63	7.05		
4/26/2009	21:38:00	3398	6.90	10.63	7.05		
4/26/2009	21:39:00	3399	6.90	10.63	7.05		
4/26/2009	21:40:00	3400	6.90	10.63	7.05		
4/26/2009	21:41:00	3401	6.90	10.63	7.05		
4/26/2009	21:42:00	3402	6.90	10.62	7.05	10.14	34.111
4/26/2009	21:43:00	3403	6.90	10.62	7.05		
4/26/2009	21:44:00	3404	6.90	10.62	7.05		
4/26/2009	21:45:00	3405	6.90	10.62	7.05		
4/26/2009	21:46:00	3406	6.90	10.62	7.05		
4/26/2009	21:47:00	3407	6.90	10.62	7.07		
4/26/2009	21:48:00	3408	6.90	10.62	7.05	10.04	34.111
4/26/2009	21:49:00	3409	6.90	10.60	7.07		
4/26/2009	21:50:00	3410	6.90	10.60	7.05		
4/26/2009	21:51:00	3411	6.90	10.60	7.05		
4/26/2009	21:52:00	3412	6.90	10.60	7.05		
4/26/2009	21:53:00	3413	6.90	10.62	7.05		
4/26/2009	21:54:00	3414	6.90	10.60	7.05	9.92	34.111
4/26/2009	21:55:00	3415	6.90	10.60	7.05		
4/26/2009	21:56:00	3416	6.90	10.60	7.05		
4/26/2009	21:57:00	3417	6.90	10.60	7.05		
4/26/2009	21:58:00	3418	6.90	10.60	7.05		
4/26/2009	21:59:00	3419	6.90	10.60	7.05		
4/26/2009	22:00:00	3420	6.91	10.60	7.07	9.77	34.111
4/26/2009	22:01:00	3421	6.91	10.60	7.05		
4/26/2009	22:02:00	3422	6.90	10.60	7.05		
4/26/2009	22:03:00	3423	6.90	10.60	7.07		
4/26/2009	22:04:00	3424	6.90	10.60	7.07		
4/26/2009	22:05:00	3425	6.90	10.58	7.07		
4/26/2009	22:06:00	3426	6.90	10.60	7.05	9.63	34.111
4/26/2009	22:07:00	3427	6.90	10.58	7.05		
4/26/2009	22:08:00	3428	6.90	10.57	7.07		
4/26/2009	22:09:00	3429	6.90	10.57	7.05		
4/26/2009	22:10:00	3430	6.90	10.57	7.05		
4/26/2009	22:11:00	3431	6.90	10.57	7.05		
4/26/2009	22:12:00	3432	6.90	10.57	7.07	9.49	34.107
4/26/2009	22:13:00	3433	6.90	10.57	7.07		
4/26/2009	22:14:00	3434	6.90	10.55	7.05		
4/26/2009	22:15:00	3435	6.90	10.55	7.07		
4/26/2009	22:16:00	3436	6.90	10.55	7.05		
4/26/2009	22:17:00	3437	6.90	10.54	7.05		
4/26/2009	22:18:00	3438	6.90	10.54	7.05	9.34	34.104
4/26/2009	22:19:00	3439	6.90	10.54	7.05		
4/26/2009	22:20:00	3440	6.90	10.54	7.05		
4/26/2009	22:21:00	3441	6.90	10.54	7.07		
4/26/2009	22:22:00	3442	6.90	10.54	7.07		
4/26/2009	22:23:00	3443	6.90	10.54	7.05		
4/26/2009	22:24:00	3444	6.90	10.54	7.05	9.20	34.104
4/26/2009	22:25:00	3445	6.90	10.54	7.05		
4/26/2009	22:26:00	3446	6.90	10.52	7.05		
4/26/2009	22:27:00	3447	6.90	10.52	7.05		
4/26/2009	22:28:00	3448	6.90	10.50	7.05		
4/26/2009	22:29:00	3449	6.90	10.50	7.05		
4/26/2009	22:30:00	3450	6.90	10.52	7.05	9.06	34.104
4/26/2009	22:31:00	3451	6.90	10.50	7.05		
4/26/2009	22:32:00	3452	6.90	10.50	7.05		
4/26/2009	22:33:00	3453	6.90	10.50	7.05		
4/26/2009	22:34:00	3454	6.90	10.50	7.05		
4/26/2009	22:35:00	3455	6.90	10.49	7.05		
4/26/2009	22:36:00	3456	6.90	10.49	7.05	8.92	34.101
4/26/2009	22:37:00	3457	6.90	10.49	7.05		
4/26/2009	22:38:00	3458	6.90	10.47	7.05		
4/26/2009	22:39:00	3459	6.90	10.47	7.05		
4/26/2009	22:40:00	3460	6.90	10.47	7.05		
4/26/2009	22:41:00	3461	6.90	10.47	7.05		
4/26/2009	22:42:00	3462	6.90	10.47	7.05	8.77	34.097
4/26/2009	22:43:00	3463	6.90	10.47	7.03		
4/26/2009	22:44:00	3464	6.90	10.46	7.05		
4/26/2009	22:45:00	3465	6.90	10.46	7.05		
4/26/2009	22:46:00	3466	6.90	10.46	7.05		
4/26/2009	22:47:00	3467	6.90	10.46	7.05		
4/26/2009	22:48:00	3468	6.90	10.46	7.05	8.61	34.097
4/26/2009	22:49:00	3469	6.90	10.44	7.05		
4/26/2009	22:50:00	3470	6.90	10.44	7.05		
4/26/2009	22:51:00	3471	6.90	10.44	7.05		
4/26/2009	22:52:00	3472	6.90	10.42	7.05		
4/26/2009	22:53:00	3473	6.90	10.42	7.05		
4/26/2009	22:54:00	3474	6.90	10.42	7.05	8.46	34.097
4/26/2009	22:55:00	3475	6.90	10.42	7.05		
4/26/2009	22:56:00	3476	6.90	10.42	7.05		
4/26/2009	22:57:00	3477	6.90	10.41	7.05		
4/26/2009	22:58:00	3478	6.90	10.41	7.05		
4/26/2009	22:59:00	3479	6.90	10.41	7.05		
4/26/2009	23:00:00	3480	6.90	10.41	7.05	8.31	34.097
4/26/2009	23:01:00	3481	6.90	10.39	7.05		
4/26/2009	23:02:00	3482	6.90	10.39	7.05		
4/26/2009	23:03:00	3483	6.91	10.39	7.05		
4/26/2009	23:04:00	3484	6.90	10.39	7.05		
4/26/2009	23:05:00	3485	6.90	10.38	7.05		
4/26/2009	23:06:00	3486	6.90	10.38	7.05	8.17	34.097
4/26/2009	23:07:00	3487	6.90	10.38	7.05		
4/26/2009	23:08:00	3488	6.90	10.38	7.05		
4/26/2009	23:09:00	3489	6.90	10.38	7.05		
4/26/2009	23:10:00	3490	6.90	10.36	7.05		
4/26/2009	23:11:00	3491	6.90	10.36	7.05		
4/26/2009	23:12:00	3492	6.90	10.36	7.05	8.02	34.097
4/26/2009	23:13:00	3493	6.90	10.34	7.05		
4/26/2009	23:14:00	3494	6.90	10.34	7.05		
4/26/2009	23:15:00	3495	6.90	10.34	7.05		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/26/2009	23:16:00	3496	6.90	10.34	7.05		
4/26/2009	23:17:00	3497	6.90	10.34	7.03		
4/26/2009	23:18:00	3498	6.90	10.34	7.05	7.88	34.097
4/26/2009	23:19:00	3499	6.90	10.33	7.05		
4/26/2009	23:20:00	3500	6.90	10.31	7.05		
4/26/2009	23:21:00	3501	6.90	10.31	7.05		
4/26/2009	23:22:00	3502	6.90	10.31	7.05		
4/26/2009	23:23:00	3503	6.90	10.31	7.05		
4/26/2009	23:24:00	3504	6.90	10.30	7.05	7.76	34.094
4/26/2009	23:25:00	3505	6.90	10.30	7.05		
4/26/2009	23:26:00	3506	6.90	10.30	7.05		
4/26/2009	23:27:00	3507	6.90	10.30	7.03		
4/26/2009	23:28:00	3508	6.90	10.30	7.05		
4/26/2009	23:29:00	3509	6.90	10.28	7.05		
4/26/2009	23:30:00	3510	6.90	10.28	7.05	7.62	34.094
4/26/2009	23:31:00	3511	6.90	10.28	7.05		
4/26/2009	23:32:00	3512	6.90	10.28	7.05		
4/26/2009	23:33:00	3513	6.90	10.26	7.03		
4/26/2009	23:34:00	3514	6.90	10.26	7.05		
4/26/2009	23:35:00	3515	6.90	10.26	7.05		
4/26/2009	23:36:00	3516	6.90	10.25	7.03	7.50	34.091
4/26/2009	23:37:00	3517	6.90	10.25	7.05		
4/26/2009	23:38:00	3518	6.90	10.25	7.05		
4/26/2009	23:39:00	3519	6.90	10.23	7.03		
4/26/2009	23:40:00	3520	6.90	10.23	7.02		
4/26/2009	23:41:00	3521	6.90	10.23	7.03		
4/26/2009	23:42:00	3522	6.90	10.23	7.03	7.39	34.091
4/26/2009	23:43:00	3523	6.90	10.23	7.03		
4/26/2009	23:44:00	3524	6.90	10.22	7.03		
4/26/2009	23:45:00	3525	6.90	10.22	7.03		
4/26/2009	23:46:00	3526	6.90	10.22	7.03		
4/26/2009	23:47:00	3527	6.90	10.22	7.03		
4/26/2009	23:48:00	3528	6.90	10.22	7.03	7.24	34.092
4/26/2009	23:49:00	3529	6.90	10.20	7.03		
4/26/2009	23:50:00	3530	6.90	10.20	7.03		
4/26/2009	23:51:00	3531	6.90	10.20	7.03		
4/26/2009	23:52:00	3532	6.90	10.18	7.03		
4/26/2009	23:53:00	3533	6.90	10.18	7.03		
4/26/2009	23:54:00	3534	6.90	10.18	7.03	7.13	34.089
4/26/2009	23:55:00	3535	6.90	10.17	7.03		
4/26/2009	23:56:00	3536	6.90	10.17	7.03		
4/26/2009	23:57:00	3537	6.90	10.17	7.03		
4/26/2009	23:58:00	3538	6.90	10.17	7.03		
4/26/2009	23:59:00	3539	6.90	10.17	7.02		
4/27/2009	0:00:00	3540	6.90	10.15	7.03	7.03	34.087
4/27/2009	0:01:00	3541	6.90	10.15	7.02		
4/27/2009	0:02:00	3542	6.90	10.15	7.02		
4/27/2009	0:03:00	3543	6.90	10.14	7.02		
4/27/2009	0:04:00	3544	6.90	10.14	7.03		
4/27/2009	0:05:00	3545	6.90	10.14	7.03		
4/27/2009	0:06:00	3546	6.90	10.12	7.02	6.94	34.087
4/27/2009	0:07:00	3547	6.90	10.12	7.03		
4/27/2009	0:08:00	3548	6.90	10.12	7.03		
4/27/2009	0:09:00	3549	6.90	10.12	7.03		
4/27/2009	0:10:00	3550	6.90	10.12	7.02		
4/27/2009	0:11:00	3551	6.90	10.10	7.03		
4/27/2009	0:12:00	3552	6.90	10.10	7.03	6.85	34.084
4/27/2009	0:13:00	3553	6.90	10.10	7.03		
4/27/2009	0:14:00	3554	6.90	10.10	7.03		
4/27/2009	0:15:00	3555	6.90	10.10	7.02		
4/27/2009	0:16:00	3556	6.90	10.10	7.02		
4/27/2009	0:17:00	3557	6.90	10.09	7.02		
4/27/2009	0:18:00	3558	6.90	10.09	7.03	6.78	34.084
4/27/2009	0:19:00	3559	6.90	10.09	7.03		
4/27/2009	0:20:00	3560	6.90	10.09	7.02		
4/27/2009	0:21:00	3561	6.90	10.09	7.02		
4/27/2009	0:22:00	3562	6.90	10.09	7.03		
4/27/2009	0:23:00	3563	6.90	10.09	7.02		
4/27/2009	0:24:00	3564	6.90	10.09	7.02	6.72	34.081
4/27/2009	0:25:00	3565	6.90	10.07	7.03		
4/27/2009	0:26:00	3566	6.90	10.07	7.02		
4/27/2009	0:27:00	3567	6.90	10.09	7.02		
4/27/2009	0:28:00	3568	6.90	10.06	7.02		
4/27/2009	0:29:00	3569	6.90	10.06	7.02		
4/27/2009	0:30:00	3570	6.90	10.06	7.02	6.66	34.081
4/27/2009	0:31:00	3571	6.90	10.06	7.03		
4/27/2009	0:32:00	3572	6.90	10.04	7.02		
4/27/2009	0:33:00	3573	6.90	10.04	7.03		
4/27/2009	0:34:00	3574	6.90	10.04	7.02		
4/27/2009	0:35:00	3575	6.90	10.04	7.02		
4/27/2009	0:36:00	3576	6.90	10.04	7.02	6.61	34.081
4/27/2009	0:37:00	3577	6.90	10.02	7.03		
4/27/2009	0:38:00	3578	6.90	10.02	7.03		
4/27/2009	0:39:00	3579	6.90	10.02	7.03		
4/27/2009	0:40:00	3580	6.90	10.02	7.03		
4/27/2009	0:41:00	3581	6.90	10.02	7.02		
4/27/2009	0:42:00	3582	6.90	10.02	7.02	6.59	34.077
4/27/2009	0:43:00	3583	6.90	10.02	7.02		
4/27/2009	0:44:00	3584	6.90	10.01	7.03		
4/27/2009	0:45:00	3585	6.90	10.02	7.02		
4/27/2009	0:46:00	3586	6.90	10.01	7.03		
4/27/2009	0:47:00	3587	6.90	10.01	7.02		
4/27/2009	0:48:00	3588	6.90	10.01	7.02	6.57	34.077
4/27/2009	0:49:00	3589	6.90	9.99	7.02		
4/27/2009	0:50:00	3590	6.90	9.99	7.03		
4/27/2009	0:51:00	3591	6.90	9.99	7.02		
4/27/2009	0:52:00	3592	6.90	9.99	7.02		
4/27/2009	0:53:00	3593	6.90	9.99	7.02		
4/27/2009	0:54:00	3594	6.90	9.99	7.02	6.56	34.074
4/27/2009	0:55:00	3595	6.90	9.99	7.02		
4/27/2009	0:56:00	3596	6.90	9.99	7.02		
4/27/2009	0:57:00	3597	6.90	9.99	7.02		
4/27/2009	0:58:00	3598	6.90	9.98	7.02		
4/27/2009	0:59:00	3599	6.90	9.98	7.02		
4/27/2009	1:00:00	3600	6.90	9.98	7.02	6.55	34.071
4/27/2009	1:01:00	3601	6.90	9.99	7.02		
4/27/2009	1:02:00	3602	6.90	9.99	7.02		
4/27/2009	1:03:00	3603	6.90	9.98	7.02		
4/27/2009	1:04:00	3604	6.90	9.98	7.02		
4/27/2009	1:05:00	3605	6.90	9.98	7.02		
4/27/2009	1:06:00	3606	6.90	9.98	7.02	6.55	34.071
4/27/2009	1:07:00	3607	6.90	9.96	7.02		
4/27/2009	1:08:00	3608	6.90	9.98	7.02		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/27/2009	1:09:00	3609	6.90	9.98	7.02		
4/27/2009	1:10:00	3610	6.90	9.96	7.02		
4/27/2009	1:11:00	3611	6.90	9.96	7.02		
4/27/2009	1:12:00	3612	6.90	9.96	7.02	6.55	34.067
4/27/2009	1:13:00	3613	6.90	9.96	7.02		
4/27/2009	1:14:00	3614	6.90	9.96	7.02		
4/27/2009	1:15:00	3615	6.90	9.96	7.02		
4/27/2009	1:16:00	3616	6.90	9.96	7.02		
4/27/2009	1:17:00	3617	6.90	9.96	7.00		
4/27/2009	1:18:00	3618	6.90	9.96	7.02	6.55	34.064
4/27/2009	1:19:00	3619	6.90	9.96	7.02		
4/27/2009	1:20:00	3620	6.90	9.96	7.02		
4/27/2009	1:21:00	3621	6.90	9.96	7.02		
4/27/2009	1:22:00	3622	6.90	9.96	7.02		
4/27/2009	1:23:00	3623	6.90	9.96	7.02		
4/27/2009	1:24:00	3624	6.90	9.96	7.02	6.57	34.064
4/27/2009	1:25:00	3625	6.90	9.94	7.02		
4/27/2009	1:26:00	3626	6.90	9.94	7.02		
4/27/2009	1:27:00	3627	6.90	9.96	7.02		
4/27/2009	1:28:00	3628	6.90	9.96	7.02		
4/27/2009	1:29:00	3629	6.90	9.94	7.00		
4/27/2009	1:30:00	3630	6.90	9.94	7.02	6.60	34.061
4/27/2009	1:31:00	3631	6.90	9.94	7.02		
4/27/2009	1:32:00	3632	6.90	9.94	7.00		
4/27/2009	1:33:00	3633	6.90	9.96	7.02		
4/27/2009	1:34:00	3634	6.90	9.94	7.02		
4/27/2009	1:35:00	3635	6.90	9.94	7.00		
4/27/2009	1:36:00	3636	6.90	9.94	7.00	6.64	34.061
4/27/2009	1:37:00	3637	6.90	9.94	7.02		
4/27/2009	1:38:00	3638	6.90	9.93	7.02		
4/27/2009	1:39:00	3639	6.90	9.94	7.02		
4/27/2009	1:40:00	3640	6.90	9.94	7.02		
4/27/2009	1:41:00	3641	6.90	9.94	7.00		
4/27/2009	1:42:00	3642	6.90	9.94	7.00	6.69	34.057
4/27/2009	1:43:00	3643	6.90	9.94	7.00		
4/27/2009	1:44:00	3644	6.90	9.94	7.00		
4/27/2009	1:45:00	3645	6.90	9.94	7.00		
4/27/2009	1:46:00	3646	6.90	9.94	7.02		
4/27/2009	1:47:00	3647	6.90	9.94	7.02		
4/27/2009	1:48:00	3648	6.90	9.94	7.02	6.74	34.057
4/27/2009	1:49:00	3649	6.90	9.96	7.02		
4/27/2009	1:50:00	3650	6.90	9.94	7.02		
4/27/2009	1:51:00	3651	6.90	9.94	7.00		
4/27/2009	1:52:00	3652	6.90	9.94	7.00		
4/27/2009	1:53:00	3653	6.90	9.96	7.00		
4/27/2009	1:54:00	3654	6.90	9.94	7.02	6.80	34.057
4/27/2009	1:55:00	3655	6.90	9.96	7.00		
4/27/2009	1:56:00	3656	6.90	9.96	7.00		
4/27/2009	1:57:00	3657	6.90	9.96	7.02		
4/27/2009	1:58:00	3658	6.90	9.96	7.00		
4/27/2009	1:59:00	3659	6.90	9.96	7.00		
4/27/2009	2:00:00	3660	6.90	9.96	7.00	6.87	34.054
4/27/2009	2:01:00	3661	6.90	9.96	7.00		
4/27/2009	2:02:00	3662	6.90	9.94	7.00		
4/27/2009	2:03:00	3663	6.90	9.96	7.00		
4/27/2009	2:04:00	3664	6.90	9.96	7.00		
4/27/2009	2:05:00	3665	6.90	9.96	7.00		
4/27/2009	2:06:00	3666	6.90	9.96	7.00	6.96	34.054
4/27/2009	2:07:00	3667	6.90	9.96	7.00		
4/27/2009	2:08:00	3668	6.90	9.96	6.98		
4/27/2009	2:09:00	3669	6.90	9.96	7.00		
4/27/2009	2:10:00	3670	6.90	9.96	6.98		
4/27/2009	2:11:00	3671	6.90	9.96	7.00		
4/27/2009	2:12:00	3672	6.90	9.96	7.00	7.05	34.050
4/27/2009	2:13:00	3673	6.90	9.96	7.00		
4/27/2009	2:14:00	3674	6.90	9.96	6.98		
4/27/2009	2:15:00	3675	6.90	9.96	7.00		
4/27/2009	2:16:00	3676	6.90	9.96	7.00		
4/27/2009	2:17:00	3677	6.90	9.96	7.00		
4/27/2009	2:18:00	3678	6.90	9.96	6.98	7.15	34.054
4/27/2009	2:19:00	3679	6.90	9.96	6.98		
4/27/2009	2:20:00	3680	6.90	9.98	6.98		
4/27/2009	2:21:00	3681	6.90	9.98	7.00		
4/27/2009	2:22:00	3682	6.90	9.98	6.98		
4/27/2009	2:23:00	3683	6.90	9.98	6.98		
4/27/2009	2:24:00	3684	6.90	9.98	6.98	7.28	34.050
4/27/2009	2:25:00	3685	6.90	9.99	6.98		
4/27/2009	2:26:00	3686	6.90	9.98	7.00		
4/27/2009	2:27:00	3687	6.90	9.99	7.00		
4/27/2009	2:28:00	3688	6.90	9.99	6.98		
4/27/2009	2:29:00	3689	6.90	9.99	6.98		
4/27/2009	2:30:00	3690	6.90	9.99	6.98	7.40	34.050
4/27/2009	2:31:00	3691	6.90	10.01	7.00		
4/27/2009	2:32:00	3692	6.90	10.01	7.00		
4/27/2009	2:33:00	3693	6.90	10.01	7.00		
4/27/2009	2:34:00	3694	6.90	10.01	6.98		
4/27/2009	2:35:00	3695	6.90	10.01	6.98		
4/27/2009	2:36:00	3696	6.90	10.02	7.00	7.51	34.050
4/27/2009	2:37:00	3697	6.90	10.02	7.00		
4/27/2009	2:38:00	3698	6.90	10.02	6.98		
4/27/2009	2:39:00	3699	6.90	10.02	6.98		
4/27/2009	2:40:00	3700	6.90	10.02	6.98		
4/27/2009	2:41:00	3701	6.90	10.02	6.98		
4/27/2009	2:42:00	3702	6.90	10.02	6.98	7.63	34.050
4/27/2009	2:43:00	3703	6.90	10.02	6.98		
4/27/2009	2:44:00	3704	6.90	10.02	6.98		
4/27/2009	2:45:00	3705	6.90	10.04	6.98		
4/27/2009	2:46:00	3706	6.90	10.04	6.98		
4/27/2009	2:47:00	3707	6.90	10.04	6.98		
4/27/2009	2:48:00	3708	6.90	10.04	6.98	7.75	34.050
4/27/2009	2:49:00	3709	6.90	10.04	6.98		
4/27/2009	2:50:00	3710	6.90	10.04	6.98		
4/27/2009	2:51:00	3711	6.90	10.06	6.98		
4/27/2009	2:52:00	3712	6.90	10.06	6.98		
4/27/2009	2:53:00	3713	6.90	10.06	7.00		
4/27/2009	2:54:00	3714	6.90	10.06	6.98	7.87	34.050
4/27/2009	2:55:00	3715	6.90	10.06	6.98		
4/27/2009	2:56:00	3716	6.90	10.07	6.98		
4/27/2009	2:57:00	3717	6.90	10.09	6.98		
4/27/2009	2:58:00	3718	6.90	10.09	6.98		
4/27/2009	2:59:00	3719	6.90	10.09	6.98		
4/27/2009	3:00:00	3720	6.90	10.09	6.98	8.00	34.050
4/27/2009	3:01:00	3721	6.90	10.09	6.98		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/27/2009	3:02:00	3722	6.90	10.09	6.98		
4/27/2009	3:03:00	3723	6.90	10.09	6.98		
4/27/2009	3:04:00	3724	6.90	10.09	6.98		
4/27/2009	3:05:00	3725	6.90	10.09	6.98		
4/27/2009	3:06:00	3726	6.90	10.10	6.98	8.13	34.051
4/27/2009	3:07:00	3727	6.90	10.10	6.98		
4/27/2009	3:08:00	3728	6.90	10.10	6.98		
4/27/2009	3:09:00	3729	6.90	10.10	6.98		
4/27/2009	3:10:00	3730	6.90	10.10	6.98		
4/27/2009	3:11:00	3731	6.90	10.12	6.98		
4/27/2009	3:12:00	3732	6.90	10.12	6.98	8.26	34.050
4/27/2009	3:13:00	3733	6.90	10.12	6.98		
4/27/2009	3:14:00	3734	6.90	10.12	6.98		
4/27/2009	3:15:00	3735	6.90	10.12	6.98		
4/27/2009	3:16:00	3736	6.90	10.14	6.98		
4/27/2009	3:17:00	3737	6.90	10.14	6.98		
4/27/2009	3:18:00	3738	6.90	10.15	6.98	8.40	34.050
4/27/2009	3:19:00	3739	6.90	10.15	6.98		
4/27/2009	3:20:00	3740	6.90	10.15	6.98		
4/27/2009	3:21:00	3741	6.90	10.15	6.98		
4/27/2009	3:22:00	3742	6.90	10.15	6.98		
4/27/2009	3:23:00	3743	6.90	10.15	6.98		
4/27/2009	3:24:00	3744	6.90	10.17	6.98	8.55	34.047
4/27/2009	3:25:00	3745	6.90	10.17	6.98		
4/27/2009	3:26:00	3746	6.90	10.17	6.98		
4/27/2009	3:27:00	3747	6.90	10.18	6.98		
4/27/2009	3:28:00	3748	6.90	10.18	6.98		
4/27/2009	3:29:00	3749	6.90	10.18	6.98		
4/27/2009	3:30:00	3750	6.90	10.18	6.98	8.69	34.047
4/27/2009	3:31:00	3751	6.90	10.20	6.98		
4/27/2009	3:32:00	3752	6.90	10.20	6.98		
4/27/2009	3:33:00	3753	6.90	10.22	6.98		
4/27/2009	3:34:00	3754	6.90	10.22	6.98		
4/27/2009	3:35:00	3755	6.90	10.22	6.98		
4/27/2009	3:36:00	3756	6.90	10.22	6.98	8.83	34.047
4/27/2009	3:37:00	3757	6.90	10.22	6.98		
4/27/2009	3:38:00	3758	6.90	10.22	6.98		
4/27/2009	3:39:00	3759	6.90	10.22	6.98		
4/27/2009	3:40:00	3760	6.90	10.23	6.98		
4/27/2009	3:41:00	3761	6.90	10.23	6.98		
4/27/2009	3:42:00	3762	6.90	10.23	6.98	8.97	34.044
4/27/2009	3:43:00	3763	6.90	10.25	6.97		
4/27/2009	3:44:00	3764	6.90	10.25	6.98		
4/27/2009	3:45:00	3765	6.90	10.25	6.98		
4/27/2009	3:46:00	3766	6.90	10.25	6.98		
4/27/2009	3:47:00	3767	6.90	10.25	6.98		
4/27/2009	3:48:00	3768	6.90	10.26	6.98	9.11	34.047
4/27/2009	3:49:00	3769	6.90	10.28	6.98		
4/27/2009	3:50:00	3770	6.90	10.28	6.98		
4/27/2009	3:51:00	3771	6.90	10.28	6.98		
4/27/2009	3:52:00	3772	6.90	10.28	6.98		
4/27/2009	3:53:00	3773	6.90	10.28	6.98		
4/27/2009	3:54:00	3774	6.90	10.28	6.98	9.26	34.047
4/27/2009	3:55:00	3775	6.90	10.30	6.98		
4/27/2009	3:56:00	3776	6.90	10.30	6.98		
4/27/2009	3:57:00	3777	6.90	10.31	6.98		
4/27/2009	3:58:00	3778	6.90	10.31	6.98		
4/27/2009	3:59:00	3779	6.90	10.31	6.98		
4/27/2009	4:00:00	3780	6.90	10.31	6.98	9.39	34.047
4/27/2009	4:01:00	3781	6.90	10.33	6.98		
4/27/2009	4:02:00	3782	6.90	10.33	6.98		
4/27/2009	4:03:00	3783	6.90	10.34	6.98		
4/27/2009	4:04:00	3784	6.90	10.34	6.98		
4/27/2009	4:05:00	3785	6.90	10.34	6.98		
4/27/2009	4:06:00	3786	6.90	10.34	6.98	9.53	34.047
4/27/2009	4:07:00	3787	6.90	10.34	6.98		
4/27/2009	4:08:00	3788	6.90	10.34	6.98		
4/27/2009	4:09:00	3789	6.90	10.34	6.98		
4/27/2009	4:10:00	3790	6.90	10.36	6.98		
4/27/2009	4:11:00	3791	6.90	10.36	6.98		
4/27/2009	4:12:00	3792	6.90	10.38	6.98	9.68	34.047
4/27/2009	4:13:00	3793	6.90	10.38	6.98		
4/27/2009	4:14:00	3794	6.90	10.38	6.98		
4/27/2009	4:15:00	3795	6.90	10.38	6.98		
4/27/2009	4:16:00	3796	6.90	10.39	6.98		
4/27/2009	4:17:00	3797	6.90	10.39	6.98		
4/27/2009	4:18:00	3798	6.90	10.41	6.98	9.82	34.047
4/27/2009	4:19:00	3799	6.90	10.41	6.98		
4/27/2009	4:20:00	3800	6.90	10.41	6.98		
4/27/2009	4:21:00	3801	6.90	10.41	6.98		
4/27/2009	4:22:00	3802	6.90	10.41	6.98		
4/27/2009	4:23:00	3803	6.90	10.42	6.98		
4/27/2009	4:24:00	3804	6.90	10.42	6.98	9.96	34.047
4/27/2009	4:25:00	3805	6.90	10.44	6.98		
4/27/2009	4:26:00	3806	6.90	10.44	6.98		
4/27/2009	4:27:00	3807	6.90	10.44	6.98		
4/27/2009	4:28:00	3808	6.90	10.44	6.98		
4/27/2009	4:29:00	3809	6.90	10.46	6.97		
4/27/2009	4:30:00	3810	6.90	10.47	6.98	10.09	34.047
4/27/2009	4:31:00	3811	6.90	10.47	6.98		
4/27/2009	4:32:00	3812	6.90	10.47	6.98		
4/27/2009	4:33:00	3813	6.90	10.47	6.98		
4/27/2009	4:34:00	3814	6.90	10.47	6.98		
4/27/2009	4:35:00	3815	6.90	10.47	6.98		
4/27/2009	4:36:00	3816	6.90	10.47	6.98	10.21	34.044
4/27/2009	4:37:00	3817	6.90	10.47	6.97		
4/27/2009	4:38:00	3818	6.90	10.49	6.98		
4/27/2009	4:39:00	3819	6.90	10.50	6.98		
4/27/2009	4:40:00	3820	6.90	10.50	6.98		
4/27/2009	4:41:00	3821	6.90	10.50	6.98		
4/27/2009	4:42:00	3822	6.90	10.50	6.98	10.33	34.047
4/27/2009	4:43:00	3823	6.90	10.50	6.98		
4/27/2009	4:44:00	3824	6.90	10.52	6.98		
4/27/2009	4:45:00	3825	6.90	10.52	6.98		
4/27/2009	4:46:00	3826	6.90	10.54	6.98		
4/27/2009	4:47:00	3827	6.90	10.54	6.98		
4/27/2009	4:48:00	3828	6.90	10.54	6.98	10.47	34.044
4/27/2009	4:49:00	3829	6.90	10.54	6.98		
4/27/2009	4:50:00	3830	6.90	10.54	6.98		
4/27/2009	4:51:00	3831	6.90	10.55	6.98		
4/27/2009	4:52:00	3832	6.90	10.55	6.98		
4/27/2009	4:53:00	3833	6.90	10.55	6.98		
4/27/2009	4:54:00	3834	6.90	10.57	6.98	10.59	34.047

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/27/2009	4:55:00	3835	6.90	10.57	6.98		
4/27/2009	4:56:00	3836	6.90	10.57	6.98		
4/27/2009	4:57:00	3837	6.91	10.58	6.98		
4/27/2009	4:58:00	3838	6.90	10.60	6.98		
4/27/2009	4:59:00	3839	6.91	10.60	6.98		
4/27/2009	5:00:00	3840	6.91	10.60	6.98	10.71	34.047
4/27/2009	5:01:00	3841	6.90	10.60	6.98		
4/27/2009	5:02:00	3842	6.90	10.60	6.98		
4/27/2009	5:03:00	3843	6.90	10.60	6.98		
4/27/2009	5:04:00	3844	6.90	10.62	6.98		
4/27/2009	5:05:00	3845	6.90	10.62	6.98		
4/27/2009	5:06:00	3846	6.90	10.62	6.98	10.82	34.044
4/27/2009	5:07:00	3847	6.90	10.62	6.98		
4/27/2009	5:08:00	3848	6.90	10.63	6.98		
4/27/2009	5:09:00	3849	6.90	10.63	6.98		
4/27/2009	5:10:00	3850	6.91	10.63	6.98		
4/27/2009	5:11:00	3851	6.90	10.63	6.98		
4/27/2009	5:12:00	3852	6.91	10.65	6.98	10.93	34.044
4/27/2009	5:13:00	3853	6.90	10.66	6.98		
4/27/2009	5:14:00	3854	6.90	10.65	6.98		
4/27/2009	5:15:00	3855	6.90	10.66	6.98		
4/27/2009	5:16:00	3856	6.90	10.66	6.98		
4/27/2009	5:17:00	3857	6.90	10.66	6.98		
4/27/2009	5:18:00	3858	6.90	10.66	6.98	11.03	34.044
4/27/2009	5:19:00	3859	6.90	10.68	6.98		
4/27/2009	5:20:00	3860	6.90	10.68	6.98		
4/27/2009	5:21:00	3861	6.91	10.68	6.98		
4/27/2009	5:22:00	3862	6.90	10.70	6.98		
4/27/2009	5:23:00	3863	6.90	10.70	6.98		
4/27/2009	5:24:00	3864	6.90	10.70	6.98	11.12	34.044
4/27/2009	5:25:00	3865	6.90	10.70	6.98		
4/27/2009	5:26:00	3866	6.90	10.71	6.98		
4/27/2009	5:27:00	3867	6.90	10.70	6.98		
4/27/2009	5:28:00	3868	6.90	10.71	6.98		
4/27/2009	5:29:00	3869	6.90	10.73	6.98		
4/27/2009	5:30:00	3870	6.90	10.73	6.98	11.19	34.044
4/27/2009	5:31:00	3871	6.90	10.73	6.98		
4/27/2009	5:32:00	3872	6.90	10.73	6.98		
4/27/2009	5:33:00	3873	6.90	10.73	6.98		
4/27/2009	5:34:00	3874	6.91	10.73	7.00		
4/27/2009	5:35:00	3875	6.90	10.74	6.98		
4/27/2009	5:36:00	3876	6.90	10.74	6.98	11.26	34.044
4/27/2009	5:37:00	3877	6.90	10.74	6.98		
4/27/2009	5:38:00	3878	6.90	10.76	6.98		
4/27/2009	5:39:00	3879	6.90	10.76	6.98		
4/27/2009	5:40:00	3880	6.90	10.76	6.98		
4/27/2009	5:41:00	3881	6.90	10.76	6.98		
4/27/2009	5:42:00	3882	6.90	10.76	6.98	11.33	34.047
4/27/2009	5:43:00	3883	6.90	10.78	6.98		
4/27/2009	5:44:00	3884	6.90	10.78	6.98		
4/27/2009	5:45:00	3885	6.91	10.78	6.98		
4/27/2009	5:46:00	3886	6.90	10.79	6.98		
4/27/2009	5:47:00	3887	6.90	10.79	6.98		
4/27/2009	5:48:00	3888	6.91	10.79	6.98	11.39	34.045
4/27/2009	5:49:00	3889	6.90	10.79	6.98		
4/27/2009	5:50:00	3890	6.90	10.79	6.98		
4/27/2009	5:51:00	3891	6.90	10.79	6.98		
4/27/2009	5:52:00	3892	6.90	10.81	6.98		
4/27/2009	5:53:00	3893	6.90	10.81	6.98		
4/27/2009	5:54:00	3894	6.91	10.81	6.98	11.45	34.045
4/27/2009	5:55:00	3895	6.91	10.81	6.98		
4/27/2009	5:56:00	3896	6.91	10.82	6.98		
4/27/2009	5:57:00	3897	6.91	10.82	6.98		
4/27/2009	5:58:00	3898	6.91	10.82	7.00		
4/27/2009	5:59:00	3899	6.91	10.82	6.98		
4/27/2009	6:00:00	3900	6.91	10.82	6.98	11.49	34.044
4/27/2009	6:01:00	3901	6.91	10.84	6.98		
4/27/2009	6:02:00	3902	6.91	10.86	6.98		
4/27/2009	6:03:00	3903	6.91	10.82	6.98		
4/27/2009	6:04:00	3904	6.91	10.86	6.98		
4/27/2009	6:05:00	3905	6.91	10.84	6.98		
4/27/2009	6:06:00	3906	6.90	10.86	7.00	11.51	34.045
4/27/2009	6:07:00	3907	6.91	10.86	6.98		
4/27/2009	6:08:00	3908	6.91	10.86	7.00		
4/27/2009	6:09:00	3909	6.90	10.86	6.98		
4/27/2009	6:10:00	3910	6.91	10.86	6.98		
4/27/2009	6:11:00	3911	6.90	10.86	7.00		
4/27/2009	6:12:00	3912	6.90	10.86	6.98	11.53	34.044
4/27/2009	6:13:00	3913	6.91	10.86	7.00		
4/27/2009	6:14:00	3914	6.91	10.87	6.98		
4/27/2009	6:15:00	3915	6.91	10.86	6.98		
4/27/2009	6:16:00	3916	6.90	10.87	7.00		
4/27/2009	6:17:00	3917	6.90	10.87	6.98		
4/27/2009	6:18:00	3918	6.90	10.87	7.00	11.53	34.043
4/27/2009	6:19:00	3919	6.91	10.87	6.98		
4/27/2009	6:20:00	3920	6.90	10.87	6.98		
4/27/2009	6:21:00	3921	6.90	10.89	6.98		
4/27/2009	6:22:00	3922	6.90	10.89	6.98		
4/27/2009	6:23:00	3923	6.91	10.89	6.98	11.52	34.044
4/27/2009	6:24:00	3924	6.91	10.89	6.98		
4/27/2009	6:25:00	3925	6.91	10.89	6.98		
4/27/2009	6:26:00	3926	6.91	10.89	6.98		
4/27/2009	6:27:00	3927	6.91	10.89	6.98		
4/27/2009	6:28:00	3928	6.91	10.89	7.00		
4/27/2009	6:29:00	3929	6.91	10.90	6.98		
4/27/2009	6:30:00	3930	6.91	10.90	6.98	11.50	34.042
4/27/2009	6:31:00	3931	6.91	10.90	6.98		
4/27/2009	6:32:00	3932	6.91	10.90	6.98		
4/27/2009	6:33:00	3933	6.91	10.90	7.00		
4/27/2009	6:34:00	3934	6.91	10.90	7.00		
4/27/2009	6:35:00	3935	6.91	10.89	6.98		
4/27/2009	6:36:00	3936	6.90	10.90	7.00	11.47	34.041
4/27/2009	6:37:00	3937	6.91	10.92	6.98		
4/27/2009	6:38:00	3938	6.90	10.90	7.00		
4/27/2009	6:39:00	3939	6.91	10.92	6.98		
4/27/2009	6:40:00	3940	6.91	10.92	6.98		
4/27/2009	6:41:00	3941	6.91	10.92	7.00		
4/27/2009	6:42:00	3942	6.91	10.92	7.00	11.42	34.042
4/27/2009	6:43:00	3943	6.90	10.90	6.98		
4/27/2009	6:44:00	3944	6.91	10.90	7.00		
4/27/2009	6:45:00	3945	6.91	10.90	6.98		
4/27/2009	6:46:00	3946	6.91	10.92	7.00		
4/27/2009	6:47:00	3947	6.91	10.92	7.00		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/27/2009	6:48:00	3948	6.91	10.92	7.00	11.36	34.041
4/27/2009	6:49:00	3949	6.91	10.92	7.00		
4/27/2009	6:50:00	3950	6.91	10.92	6.98		
4/27/2009	6:51:00	3951	6.91	10.92	7.00		
4/27/2009	6:52:00	3952	6.91	10.92	7.00		
4/27/2009	6:53:00	3953	6.91	10.92	7.00		
4/27/2009	6:54:00	3954	6.91	10.92	7.00	11.28	34.040
4/27/2009	6:55:00	3955	6.90	10.92	6.98		
4/27/2009	6:56:00	3956	6.91	10.92	7.00		
4/27/2009	6:57:00	3957	6.91	10.92	6.98		
4/27/2009	6:58:00	3958	6.91	10.92	6.98		
4/27/2009	6:59:00	3959	6.91	10.92	7.00		
4/27/2009	7:00:00	3960	6.91	10.92	7.00	11.19	34.039
4/27/2009	7:01:00	3961	6.91	10.92	6.98		
4/27/2009	7:02:00	3962	6.91	10.92	7.00		
4/27/2009	7:03:00	3963	6.91	10.92	7.00		
4/27/2009	7:04:00	3964	6.91	10.92	7.00		
4/27/2009	7:05:00	3965	6.91	10.92	7.00		
4/27/2009	7:06:00	3966	6.91	10.92	7.00	11.10	34.038
4/27/2009	7:07:00	3967	6.91	10.92	7.00		
4/27/2009	7:08:00	3968	6.91	10.92	7.00		
4/27/2009	7:09:00	3969	6.91	10.92	7.00		
4/27/2009	7:10:00	3970	6.91	10.92	7.00		
4/27/2009	7:11:00	3971	6.91	10.92	7.00		
4/27/2009	7:12:00	3972	6.91	10.90	7.00	10.98	34.037
4/27/2009	7:13:00	3973	6.91	10.92	7.00		
4/27/2009	7:14:00	3974	6.91	10.92	7.00		
4/27/2009	7:15:00	3975	6.91	10.92	7.00		
4/27/2009	7:16:00	3976	6.91	10.90	7.00		
4/27/2009	7:17:00	3977	6.91	10.90	7.00		
4/27/2009	7:18:00	3978	6.91	10.89	7.00	10.86	34.036
4/27/2009	7:19:00	3979	6.91	10.90	7.02		
4/27/2009	7:20:00	3980	6.91	10.89	6.98		
4/27/2009	7:21:00	3981	6.91	10.89	7.00		
4/27/2009	7:22:00	3982	6.91	10.89	7.00		
4/27/2009	7:23:00	3983	6.91	10.90	7.00		
4/27/2009	7:24:00	3984	6.91	10.89	6.98	10.71	34.036
4/27/2009	7:25:00	3985	6.91	10.89	7.00		
4/27/2009	7:26:00	3986	6.91	10.89	7.00		
4/27/2009	7:27:00	3987	6.90	10.89	7.00		
4/27/2009	7:28:00	3988	6.91	10.89	7.00		
4/27/2009	7:29:00	3989	6.90	10.89	7.00		
4/27/2009	7:30:00	3990	6.91	10.87	7.00	10.56	34.035
4/27/2009	7:31:00	3991	6.91	10.87	7.00		
4/27/2009	7:32:00	3992	6.91	10.87	7.00		
4/27/2009	7:33:00	3993	6.91	10.87	7.00		
4/27/2009	7:34:00	3994	6.91	10.87	7.00		
4/27/2009	7:35:00	3995	6.91	10.87	7.00		
4/27/2009	7:36:00	3996	6.91	10.86	7.00	10.42	34.031
4/27/2009	7:37:00	3997	6.91	10.86	7.00		
4/27/2009	7:38:00	3998	6.91	10.86	6.98		
4/27/2009	7:39:00	3999	6.91	10.86	7.00		
4/27/2009	7:40:00	4000	6.91	10.86	6.98		
4/27/2009	7:41:00	4001	6.91	10.86	7.02		
4/27/2009	7:42:00	4002	6.91	10.86	7.00	10.26	34.028
4/27/2009	7:43:00	4003	6.91	10.86	7.00		
4/27/2009	7:44:00	4004	6.91	10.86	7.00		
4/27/2009	7:45:00	4005	6.91	10.86	7.00		
4/27/2009	7:46:00	4006	6.91	10.86	7.00		
4/27/2009	7:47:00	4007	6.91	10.84	7.00		
4/27/2009	7:48:00	4008	6.91	10.82	7.00	10.09	34.027
4/27/2009	7:49:00	4009	6.91	10.82	7.00		
4/27/2009	7:50:00	4010	6.91	10.82	7.00		
4/27/2009	7:51:00	4011	6.91	10.82	6.98		
4/27/2009	7:52:00	4012	6.91	10.82	7.00		
4/27/2009	7:53:00	4013	6.91	10.82	7.00		
4/27/2009	7:54:00	4014	6.91	10.82	7.00	9.91	34.024
4/27/2009	7:55:00	4015	6.91	10.81	7.00		
4/27/2009	7:56:00	4016	6.91	10.81	7.00		
4/27/2009	7:57:00	4017	6.91	10.79	6.98		
4/27/2009	7:58:00	4018	6.91	10.79	6.98		
4/27/2009	7:59:00	4019	6.91	10.79	7.00		
4/27/2009	8:00:00	4020	6.91	10.79	6.98	9.70	34.022
4/27/2009	8:01:00	4021	6.91	10.79	7.00		
4/27/2009	8:02:00	4022	6.91	10.78	7.00		
4/27/2009	8:03:00	4023	6.91	10.78	7.00		
4/27/2009	8:04:00	4024	6.91	10.78	7.00		
4/27/2009	8:05:00	4025	6.91	10.76	7.00	9.49	34.020
4/27/2009	8:06:00	4026	6.91	10.76	7.00		
4/27/2009	8:07:00	4027	6.91	10.76	7.00		
4/27/2009	8:08:00	4028	6.91	10.76	7.00		
4/27/2009	8:09:00	4029	6.91	10.76	6.98		
4/27/2009	8:10:00	4030	6.91	10.76	7.00		
4/27/2009	8:11:00	4031	6.91	10.74	6.98		
4/27/2009	8:12:00	4032	6.91	10.74	6.98	9.28	34.018
4/27/2009	8:13:00	4033	6.91	10.73	6.98		
4/27/2009	8:14:00	4034	6.91	10.73	7.00		
4/27/2009	8:15:00	4035	6.91	10.73	6.98		
4/27/2009	8:16:00	4036	6.91	10.73	6.98		
4/27/2009	8:17:00	4037	6.90	10.71	7.00		
4/27/2009	8:18:00	4038	6.91	10.71	7.00	9.05	34.017
4/27/2009	8:19:00	4039	6.91	10.70	7.00		
4/27/2009	8:20:00	4040	6.91	10.70	7.00		
4/27/2009	8:21:00	4041	6.91	10.70	7.00		
4/27/2009	8:22:00	4042	6.91	10.68	7.00		
4/27/2009	8:23:00	4043	6.91	10.68	7.00		
4/27/2009	8:24:00	4044	6.91	10.68	7.00	8.81	34.013
4/27/2009	8:25:00	4045	6.91	10.66	7.00		
4/27/2009	8:26:00	4046	6.91	10.66	6.98		
4/27/2009	8:27:00	4047	6.91	10.66	6.98		
4/27/2009	8:28:00	4048	6.91	10.66	7.00		
4/27/2009	8:29:00	4049	6.91	10.65	6.98		
4/27/2009	8:30:00	4050	6.91	10.63	6.98	8.55	34.010
4/27/2009	8:31:00	4051	6.91	10.63	7.00		
4/27/2009	8:32:00	4052	6.91	10.62	6.98		
4/27/2009	8:33:00	4053	6.91	10.62	6.98		
4/27/2009	8:34:00	4054	6.91	10.62	6.98		
4/27/2009	8:35:00	4055	6.91	10.60	6.98		
4/27/2009	8:36:00	4056	6.90	10.60	6.98	8.28	34.008
4/27/2009	8:37:00	4057	6.91	10.60	7.00		
4/27/2009	8:38:00	4058	6.91	10.60	7.00		
4/27/2009	8:39:00	4059	6.91	10.58	6.98		
4/27/2009	8:40:00	4060	6.91	10.57	6.98		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/27/2009	8:41:00	4061	6.91	10.57	6.98		
4/27/2009	8:42:00	4062	6.91	10.55	6.98	8.01	34.006
4/27/2009	8:43:00	4063	6.91	10.55	6.98		
4/27/2009	8:44:00	4064	6.91	10.55	6.98		
4/27/2009	8:45:00	4065	6.91	10.54	6.98		
4/27/2009	8:46:00	4065	6.91	10.54	6.98		
4/27/2009	8:47:00	4067	6.91	10.52	6.98		
4/27/2009	8:48:00	4068	6.91	10.50	6.98	7.73	34.003
4/27/2009	8:49:00	4069	6.91	10.50	6.98		
4/27/2009	8:50:00	4070	6.91	10.50	6.98		
4/27/2009	8:51:00	4071	6.91	10.50	6.98		
4/27/2009	8:52:00	4072	6.91	10.49	6.98		
4/27/2009	8:53:00	4073	6.91	10.47	6.98		
4/27/2009	8:54:00	4074	6.90	10.47	6.98	7.41	34.003
4/27/2009	8:55:00	4075	6.91	10.46	6.98		
4/27/2009	8:56:00	4076	6.91	10.44	6.98		
4/27/2009	8:57:00	4077	6.91	10.44	6.98		
4/27/2009	8:58:00	4078	6.91	10.44	6.98		
4/27/2009	8:59:00	4079	6.91	10.42	6.98		
4/27/2009	9:00:00	4080	6.91	10.42	6.98	7.11	34.001
4/27/2009	9:01:00	4081	6.91	10.41	6.98		
4/27/2009	9:02:00	4082	6.91	10.39	6.98		
4/27/2009	9:03:00	4083	6.90	10.39	6.98		
4/27/2009	9:04:00	4084	6.91	10.38	6.98		
4/27/2009	9:05:00	4085	6.91	10.36	6.98		
4/27/2009	9:06:00	4086	6.91	10.36	6.98	6.77	33.999
4/27/2009	9:07:00	4087	6.91	10.36	6.98		
4/27/2009	9:08:00	4088	6.91	10.34	6.98		
4/27/2009	9:09:00	4089	6.91	10.34	6.98		
4/27/2009	9:10:00	4090	6.90	10.31	6.98		
4/27/2009	9:11:00	4091	6.91	10.31	6.98		
4/27/2009	9:12:00	4092	6.91	10.31	6.98	6.43	33.997
4/27/2009	9:13:00	4093	6.90	10.30	6.98		
4/27/2009	9:14:00	4094	6.91	10.28	6.98		
4/27/2009	9:15:00	4095	6.91	10.28	6.98		
4/27/2009	9:16:00	4096	6.91	10.26	6.98		
4/27/2009	9:17:00	4097	6.91	10.25	6.98		
4/27/2009	9:18:00	4098	6.90	10.25	6.98	6.11	33.996
4/27/2009	9:19:00	4099	6.91	10.23	6.98		
4/27/2009	9:20:00	4100	6.90	10.22	6.98		
4/27/2009	9:21:00	4101	6.91	10.22	6.98		
4/27/2009	9:22:00	4102	6.90	10.20	6.98		
4/27/2009	9:23:00	4103	6.90	10.18	6.98		
4/27/2009	9:24:00	4104	6.90	10.18	6.97	5.76	33.994
4/27/2009	9:25:00	4105	6.90	10.17	6.98		
4/27/2009	9:26:00	4106	6.90	10.17	6.97		
4/27/2009	9:27:00	4107	6.90	10.15	6.97		
4/27/2009	9:28:00	4108	6.91	10.14	6.97		
4/27/2009	9:29:00	4109	6.91	10.14	6.97		
4/27/2009	9:30:00	4110	6.90	10.10	6.97	5.43	33.993
4/27/2009	9:31:00	4111	6.91	10.10	6.97		
4/27/2009	9:32:00	4112	6.90	10.10	6.97		
4/27/2009	9:33:00	4113	6.91	10.09	6.95		
4/27/2009	9:34:00	4114	6.90	10.09	6.97		
4/27/2009	9:35:00	4115	6.90	10.07	6.97		
4/27/2009	9:36:00	4115	6.91	10.06	6.97	5.10	33.993
4/27/2009	9:37:00	4117	6.90	10.06	6.97		
4/27/2009	9:38:00	4118	6.91	10.04	6.98		
4/27/2009	9:39:00	4119	6.91	10.02	6.97		
4/27/2009	9:40:00	4120	6.90	10.01	6.97		
4/27/2009	9:41:00	4121	6.90	10.01	6.95		
4/27/2009	9:42:00	4122	6.90	9.98	6.97	4.76	33.991
4/27/2009	9:43:00	4123	6.90	9.98	6.95		
4/27/2009	9:44:00	4124	6.90	9.96	6.95		
4/27/2009	9:45:00	4125	6.90	9.96	6.95		
4/27/2009	9:46:00	4126	6.91	9.94	6.97		
4/27/2009	9:47:00	4127	6.91	9.93	6.95		
4/27/2009	9:48:00	4128	6.91	9.93	6.95	4.42	33.992
4/27/2009	9:49:00	4129	6.91	9.91	6.97		
4/27/2009	9:50:00	4130	6.91	9.90	6.95		
4/27/2009	9:51:00	4131	6.91	9.90	6.95		
4/27/2009	9:52:00	4132	6.90	9.90	6.95		
4/27/2009	9:53:00	4133	6.91	9.86	6.95		
4/27/2009	9:54:00	4134	6.90	9.86	6.95	4.09	33.990
4/27/2009	9:55:00	4135	6.90	9.83	6.95		
4/27/2009	9:56:00	4136	6.90	9.83	6.95		
4/27/2009	9:57:00	4137	6.91	9.83	6.95		
4/27/2009	9:58:00	4138	6.90	9.82	6.95		
4/27/2009	9:59:00	4139	6.90	9.80	6.95		
4/27/2009	10:00:00	4140	6.90	9.78	6.95	3.75	33.989
4/27/2009	10:01:00	4141	6.91	9.78	6.97		
4/27/2009	10:02:00	4142	6.90	9.77	6.95		
4/27/2009	10:03:00	4143	6.90	9.75	6.95		
4/27/2009	10:04:00	4144	6.91	9.74	6.95		
4/27/2009	10:05:00	4145	6.90	9.74	6.95		
4/27/2009	10:06:00	4146	6.90	9.72	6.95	3.41	33.988
4/27/2009	10:07:00	4147	6.90	9.70	6.95		
4/27/2009	10:08:00	4148	6.90	9.70	6.95		
4/27/2009	10:09:00	4149	6.90	9.69	6.95		
4/27/2009	10:10:00	4150	6.90	9.67	6.95		
4/27/2009	10:11:00	4151	6.91	9.66	6.95		
4/27/2009	10:12:00	4152	6.90	9.64	6.95	3.06	33.986
4/27/2009	10:13:00	4153	6.90	9.64	6.95		
4/27/2009	10:14:00	4154	6.90	9.62	6.95		
4/27/2009	10:15:00	4155	6.90	9.62	6.95		
4/27/2009	10:16:00	4156	6.90	9.59	6.95		
4/27/2009	10:17:00	4157	6.91	9.59	6.95		
4/27/2009	10:18:00	4158	6.91	9.58	6.95	2.74	33.984
4/27/2009	10:19:00	4159	6.90	9.58	6.95		
4/27/2009	10:20:00	4160	6.91	9.56	6.95		
4/27/2009	10:21:00	4161	6.90	9.54	6.95		
4/27/2009	10:22:00	4162	6.90	9.53	6.95		
4/27/2009	10:23:00	4163	6.91	9.51	6.95		
4/27/2009	10:24:00	4164	6.90	9.51	6.95	2.40	33.981
4/27/2009	10:25:00	4165	6.91	9.50	6.93		
4/27/2009	10:26:00	4165	6.91	9.48	6.95		
4/27/2009	10:27:00	4167	6.90	9.48	6.93		
4/27/2009	10:28:00	4168	6.91	9.45	6.93		
4/27/2009	10:29:00	4169	6.90	9.45	6.95		
4/27/2009	10:30:00	4170	6.90	9.45	6.93	2.06	33.980
4/27/2009	10:31:00	4171	6.91	9.42	6.93		
4/27/2009	10:32:00	4172	6.90	9.42	6.95		
4/27/2009	10:33:00	4173	6.90	9.40	6.95		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/27/2009	10:34:00	4174	6.91	9.38	6.95		
4/27/2009	10:35:00	4175	6.91	9.38	6.95		
4/27/2009	10:36:00	4176	6.91	9.37	6.95	1.73	33.980
4/27/2009	10:37:00	4177	6.90	9.35	6.95		
4/27/2009	10:38:00	4178	6.90	9.34	6.93		
4/27/2009	10:39:00	4179	6.91	9.32	6.95		
4/27/2009	10:40:00	4180	6.90	9.32	6.95		
4/27/2009	10:41:00	4181	6.91	9.32	6.93		
4/27/2009	10:42:00	4182	6.90	9.30	6.95	1.43	33.978
4/27/2009	10:43:00	4183	6.91	9.29	6.95		
4/27/2009	10:44:00	4184	6.91	9.27	6.93		
4/27/2009	10:45:00	4185	6.90	9.26	6.95		
4/27/2009	10:46:00	4186	6.91	9.26	6.95		
4/27/2009	10:47:00	4187	6.91	9.24	6.95		
4/27/2009	10:48:00	4188	6.91	9.22	6.95	1.13	33.977
4/27/2009	10:49:00	4189	6.91	9.21	6.93		
4/27/2009	10:50:00	4190	6.91	9.21	6.95		
4/27/2009	10:51:00	4191	6.91	9.19	6.93		
4/27/2009	10:52:00	4192	6.91	9.18	6.93		
4/27/2009	10:53:00	4193	6.90	9.16	6.93		
4/27/2009	10:54:00	4194	6.90	9.16	6.93	0.82	33.976
4/27/2009	10:55:00	4195	6.91	9.14	6.93		
4/27/2009	10:56:00	4196	6.91	9.13	6.93		
4/27/2009	10:57:00	4197	6.91	9.13	6.93		
4/27/2009	10:58:00	4198	6.90	9.10	6.93		
4/27/2009	10:59:00	4199	6.90	9.10	6.95		
4/27/2009	11:00:00	4200	6.90	9.10	6.93	0.52	33.974
4/27/2009	11:01:00	4201	6.91	9.08	6.93		
4/27/2009	11:02:00	4202	6.91	9.06	6.95		
4/27/2009	11:03:00	4203	6.91	9.06	6.93		
4/27/2009	11:04:00	4204	6.90	9.03	6.93		
4/27/2009	11:05:00	4205	6.91	9.03	6.95		
4/27/2009	11:06:00	4206	6.90	9.03	6.93	0.26	33.972
4/27/2009	11:07:00	4207	6.91	9.02	6.93		
4/27/2009	11:08:00	4208	6.91	9.00	6.93		
4/27/2009	11:09:00	4209	6.90	9.00	6.93		
4/27/2009	11:10:00	4210	6.91	8.98	6.93		
4/27/2009	11:11:00	4211	6.90	8.97	6.93		
4/27/2009	11:12:00	4212	6.91	8.97	6.93	-0.01	33.969
4/27/2009	11:13:00	4213	6.90	8.95	6.93		
4/27/2009	11:14:00	4214	6.91	8.94	6.93		
4/27/2009	11:15:00	4215	6.91	8.94	6.93		
4/27/2009	11:16:00	4216	6.91	8.92	6.93		
4/27/2009	11:17:00	4217	6.90	8.90	6.93		
4/27/2009	11:18:00	4218	6.91	8.89	6.93	-0.29	33.967
4/27/2009	11:19:00	4219	6.91	8.89	6.93		
4/27/2009	11:20:00	4220	6.91	8.87	6.92		
4/27/2009	11:21:00	4221	6.90	8.86	6.92		
4/27/2009	11:22:00	4222	6.91	8.86	6.93		
4/27/2009	11:23:00	4223	6.91	8.84	6.92		
4/27/2009	11:24:00	4224	6.91	8.84	6.93	-0.53	33.965
4/27/2009	11:25:00	4225	6.90	8.82	6.92		
4/27/2009	11:26:00	4226	6.90	8.81	6.93		
4/27/2009	11:27:00	4227	6.91	8.81	6.92		
4/27/2009	11:28:00	4228	6.90	8.81	6.93		
4/27/2009	11:29:00	4229	6.91	8.79	6.92		
4/27/2009	11:30:00	4230	6.91	8.78	6.92	-0.77	33.963
4/27/2009	11:31:00	4231	6.91	8.76	6.93		
4/27/2009	11:32:00	4232	6.91	8.76	6.92		
4/27/2009	11:33:00	4233	6.91	8.74	6.92		
4/27/2009	11:34:00	4234	6.90	8.81	6.92		
4/27/2009	11:35:00	4235	6.91	8.73	6.92		
4/27/2009	11:36:00	4236	6.91	8.71	6.92	-1.05	33.961
4/27/2009	11:37:00	4237	6.91	8.70	6.92		
4/27/2009	11:38:00	4238	6.91	8.70	6.92		
4/27/2009	11:39:00	4239	6.90	8.68	6.92		
4/27/2009	11:40:00	4240	6.90	8.68	6.92		
4/27/2009	11:41:00	4241	6.90	8.66	6.92		
4/27/2009	11:42:00	4242	6.91	8.65	6.92	-1.28	33.958
4/27/2009	11:43:00	4243	6.90	8.65	6.92		
4/27/2009	11:44:00	4244	6.90	8.65	6.92		
4/27/2009	11:45:00	4245	6.90	8.63	6.92		
4/27/2009	11:46:00	4246	6.91	8.62	6.92		
4/27/2009	11:47:00	4247	6.91	8.62	6.92		
4/27/2009	11:48:00	4248	6.91	8.62	6.92	-1.48	33.957
4/27/2009	11:49:00	4249	6.91	8.60	6.92		
4/27/2009	11:50:00	4250	6.91	8.58	6.92		
4/27/2009	11:51:00	4251	6.91	8.58	6.93		
4/27/2009	11:52:00	4252	6.91	8.57	6.92		
4/27/2009	11:53:00	4253	6.91	8.55	6.92		
4/27/2009	11:54:00	4254	6.91	8.55	6.92	-1.68	33.954
4/27/2009	11:55:00	4255	6.90	8.55	6.92		
4/27/2009	11:56:00	4256	6.90	8.55	6.92		
4/27/2009	11:57:00	4257	6.90	8.54	6.92		
4/27/2009	11:58:00	4258	6.91	8.52	6.92		
4/27/2009	11:59:00	4259	6.91	8.50	6.92		
4/27/2009	12:00:00	4260	6.90	8.50	6.92	-1.88	33.954
4/27/2009	12:01:00	4261	6.91	8.49	6.92		
4/27/2009	12:02:00	4262	6.91	8.49	6.92		
4/27/2009	12:03:00	4263	6.90	8.47	6.92		
4/27/2009	12:04:00	4264	6.91	8.46	6.92		
4/27/2009	12:05:00	4265	6.90	8.46	6.92		
4/27/2009	12:06:00	4266	6.90	8.44	6.92	-2.06	33.953
4/27/2009	12:07:00	4267	6.91	8.44	6.92		
4/27/2009	12:08:00	4268	6.90	8.42	6.92		
4/27/2009	12:09:00	4269	6.90	8.42	6.92		
4/27/2009	12:10:00	4270	6.91	8.42	6.92		
4/27/2009	12:11:00	4271	6.90	8.41	6.92		
4/27/2009	12:12:00	4272	6.91	8.39	6.92	-2.21	33.952
4/27/2009	12:13:00	4273	6.91	8.39	6.90		
4/27/2009	12:14:00	4274	6.90	8.38	6.92		
4/27/2009	12:15:00	4275	6.90	8.38	6.90		
4/27/2009	12:16:00	4276	6.90	8.36	6.90		
4/27/2009	12:17:00	4277	6.90	8.36	6.90		
4/27/2009	12:18:00	4278	6.91	8.34	6.92	-2.42	33.948
4/27/2009	12:19:00	4279	6.90	8.36	6.90		
4/27/2009	12:20:00	4280	6.90	8.33	6.92		
4/27/2009	12:21:00	4281	6.90	8.33	6.90		
4/27/2009	12:22:00	4282	6.90	8.33	6.92		
4/27/2009	12:23:00	4283	6.90	8.31	6.92		
4/27/2009	12:24:00	4284	6.90	8.31	6.92	-2.56	33.946
4/27/2009	12:25:00	4285	6.91	8.30	6.90		
4/27/2009	12:26:00	4286	6.91	8.30	6.92		

Date	Time	Elapsed Time (min)	Groundwater Elevation <sup>1</sup>			Tide <sup>2,3</sup>	Barometric Pressure <sup>3</sup>
			MW-1	MW-12	MW-14		
4/27/2009	12:27:00	4287	6.91	8.30	6.90		
4/27/2009	12:28:00	4288	6.91	8.28	6.90		
4/27/2009	12:29:00	4289	6.91	8.28	6.90		
4/27/2009	12:30:00	4290	6.90	8.26	6.90	-2.69	33.944
4/27/2009	12:31:00	4291	6.90	8.26	6.92		
4/27/2009	12:32:00	4292	6.90	8.26	6.90		
4/27/2009	12:33:00	4293	6.90	8.25	6.90		
4/27/2009	12:34:00	4294	6.90	8.23	6.90		
4/27/2009	12:35:00	4295	6.90	8.25	6.90		
4/27/2009	12:36:00	4296	6.90	8.23	6.90	-2.81	33.942
4/27/2009	12:37:00	4297	6.90	8.22	6.90		
4/27/2009	12:38:00	4298	6.90	8.22	6.92		
4/27/2009	12:39:00	4299	6.90	8.20	6.90		
4/27/2009	12:40:00	4300	6.90	8.22	6.92		
4/27/2009	12:41:00	4301	6.90	8.20	6.90		
4/27/2009	12:42:00	4302	6.90	8.20	6.90	-2.87	33.941
4/27/2009	12:43:00	4303	6.90	8.18	6.90		
4/27/2009	12:44:00	4304	6.90	8.17	6.90		
4/27/2009	12:45:00	4305	6.90	8.17	6.88		
4/27/2009	12:46:00	4306	6.90	8.17	6.90		
4/27/2009	12:47:00	4307	6.90	8.17	6.90		
4/27/2009	12:48:00	4308	6.90	8.17	6.90	-2.96	33.940
4/27/2009	12:49:00	4309	6.90	8.17	6.88		
4/27/2009	12:50:00	4310	6.90	8.14	6.90		
4/27/2009	12:51:00	4311	6.90	8.14	6.88		
4/27/2009	12:52:00	4312	6.90	8.14	6.90		
4/27/2009	12:53:00	4313	6.90	8.14	6.90		
4/27/2009	12:54:00	4314	6.90	8.12	6.90	-3.01	33.938
4/27/2009	12:55:00	4315	6.90	8.12	6.90		
4/27/2009	12:56:00	4316	6.90	8.12	6.90		
4/27/2009	12:57:00	4317	6.90	8.10	6.88		
4/27/2009	12:58:00	4318	6.90	8.10	6.90		
4/27/2009	12:59:00	4319	6.90	8.10	6.90		
4/27/2009	13:00:00	4320	6.90	8.10	6.88	-3.07	33.937
4/27/2009	13:01:00	4321	6.90	8.09	6.88		
4/27/2009	13:02:00	4322	6.90	8.07	6.88		
4/27/2009	13:03:00	4323	6.90	8.07	6.87		
4/27/2009	13:04:00	4324	6.90	8.07	6.88		
4/27/2009	13:05:00	4325	6.90	8.07	6.88		
4/27/2009	13:06:00	4326	6.90	8.06	6.88	-3.10	33.937
4/27/2009	13:07:00	4327	6.90	8.06	6.88		
4/27/2009	13:08:00	4328	6.90	8.06	6.88		
4/27/2009	13:09:00	4329	6.90	8.07	6.90		
4/27/2009	13:10:00	4330	6.90	8.06	6.88		
4/27/2009	13:11:00	4331	6.90	8.04	6.88		
4/27/2009	13:12:00	4332	6.90	8.04	6.88	-3.10	33.936
4/27/2009	13:13:00	4333	6.90	8.04	6.88		
4/27/2009	13:14:00	4334	6.90	8.04	6.88		
4/27/2009	13:15:00	4335	6.90	8.04	6.88		
4/27/2009	13:16:00	4336	6.90	8.02	6.88		
4/27/2009	13:17:00	4337	6.90	8.02	6.88		
4/27/2009	13:18:00	4338	6.90	8.01	6.88	-3.09	33.935
4/27/2009	13:19:00	4339	6.90	8.01	6.88		
4/27/2009	13:20:00	4340	6.90	8.01	6.88		
4/27/2009	13:21:00	4341	6.90	7.99	6.88		
4/27/2009	13:22:00	4342	6.90	7.99	6.88		
4/27/2009	13:23:00	4343	6.90	7.98	6.88		
4/27/2009	13:24:00	4344	6.90	7.99	6.88	-3.04	33.934
4/27/2009	13:25:00	4345	6.90	7.99	6.88		
4/27/2009	13:26:00	4346	6.90	7.99	6.88		
4/27/2009	13:27:00	4347	6.90	7.99	6.88		
4/27/2009	13:28:00	4348	6.90	7.98	6.87		
4/27/2009	13:29:00	4349	6.90	7.98	6.88		
4/27/2009	13:30:00	4350	6.90	7.98	6.88	-2.97	33.932
4/27/2009	13:31:00	4351	6.90	7.98	6.88		
4/27/2009	13:32:00	4352	6.90	7.96	6.88		
4/27/2009	13:33:00	4353	6.90	7.96	6.87		
4/27/2009	13:34:00	4354	6.90	7.94	6.88		
4/27/2009	13:35:00	4355	6.90	7.94	6.88		
4/27/2009	13:36:00	4356	6.90	7.96	6.88	-2.90	33.930
4/27/2009	13:37:00	4357	6.90	7.96	6.88		
4/27/2009	13:38:00	4358	6.90	7.94	6.87		
4/27/2009	13:39:00	4359	6.90	7.94	6.88		
4/27/2009	13:40:00	4360	6.90	7.94	6.88		
4/27/2009	13:41:00	4361	6.90	7.94	6.88		
4/27/2009	13:42:00	4362	6.90	7.94	6.88	-2.78	33.928
4/27/2009	13:43:00	4363	6.90	7.94	6.88		
4/27/2009	13:44:00	4364	6.90	7.93	6.88		
4/27/2009	13:45:00	4365	6.90	7.94	6.88		
4/27/2009	13:46:00	4366	6.90	7.93	6.87		
4/27/2009	13:47:00	4367	6.90	7.93	6.87		
4/27/2009	13:48:00	4368	6.90	7.93	6.88	-2.68	33.928
4/27/2009	13:49:00	4369	6.90	7.93	6.87		
4/27/2009	13:50:00	4370	6.90	7.91	6.87		
4/27/2009	13:51:00	4371	6.90	7.91	6.87		
4/27/2009	13:52:00	4372	6.90	7.91	6.88		
4/27/2009	13:53:00	4373	6.90	7.91	6.87		
4/27/2009	13:54:00	4374	6.90	7.91	6.87	-2.57	33.926
4/27/2009	13:55:00	4375	6.90	7.91	6.88		
4/27/2009	13:56:00	4376	6.90	7.91	6.87		
4/27/2009	13:57:00	4377	6.90	7.91	6.87		
4/27/2009	13:58:00	4378	6.90	7.91	6.87		
4/27/2009	13:59:00	4379	6.90	7.91	6.87		
4/27/2009	14:00:00	4380	6.90	7.91	6.87	-2.44	33.924
4/27/2009	14:01:00	4381	6.90	7.91	6.87		
4/27/2009	14:02:00	4382	6.90	7.91	6.87		
4/27/2009	14:03:00	4383	6.90	7.91	6.87		
4/27/2009	14:04:00	4384	6.90	7.91	6.88		
4/27/2009	14:05:00	4385	6.90	7.91	6.87		
4/27/2009	14:06:00	4386	6.90	7.90	6.88	-2.28	33.922
4/27/2009	14:07:00	4387	6.90	7.91	6.87		
4/27/2009	14:08:00	4388	6.90	7.91	6.87		
4/27/2009	14:09:00	4389	6.90	7.91	6.87		
4/27/2009	14:10:00	4390	6.90	7.53	6.87		
4/27/2009	14:11:00	4391	6.90	7.53	6.87		
4/27/2009	14:12:00	4392	6.90	7.54	6.87	-2.14	33.921
4/27/2009	14:13:00	4393	6.90	7.61	6.87		

**APPENDIX D**  
**GORE SOIL VAPOR SURVEY REPORT**  
**REMEDIAL INVESTIGATION REPORT**

**Former Sound Mattress and Felt Property**  
**1940 East 11<sup>th</sup> Street**  
**Tacoma, Washington**

**Pacific Crest PN: 110-001**



# GORE™ Surveys

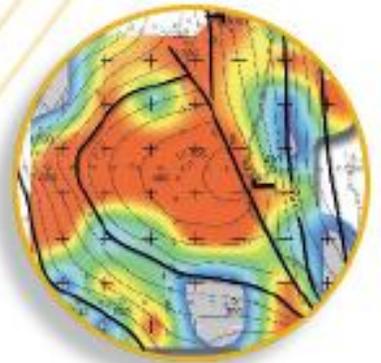
Final Report

Project: Sound Mattress & Felt Co.  
Gore Order Number: 20093060  
Date Prepared: October 1, 2009  
Prepared for: Pacific Crest Environmental  
1531 Bendigo Blvd. North  
PO Box 952  
North Bend, WA 98045

Written/Submitted by  
Hilary G. Trethewey  
Project Manager

Written/Submitted by  
Jay W. Hodny, Ph.D  
Product Specialist

Analytical Data Reviewed by  
Dayna M. Cobb  
Chemist



W.L. Gore & Associates, Inc.  
Survey Products Group

GORE(TM) SURVEYS ANALYTICAL RESULTS  
PACIFIC CREST ENVIRONMENTAL, NORTH BEND, WA  
GORE CHLORINATED VOCs PLUS VINYL CHLORIDE (A10 + VC)  
FORMER SOUND MATTRESS AND FELT COMPANY, TACOMA, WA  
SITE FAQ- PRODUCTION ORDER #20093060

DATE ANALYZED	SAMPLE NAME	VC, ug	CIBENZ, ug	ct12DCE, ug	t12DCE, ug	c12DCE, ug	11DCA, ug	111TCA, ug	12DCA, ug	TCE, ug
	MDL=	0.23	0.01		0.03	0.01	0.01	0.01	0.01	0.01
09/08/09	604229	nd	nd	nd	nd	nd	nd	nd	nd	0.71
09/09/09	604230	nd	nd	nd	nd	nd	nd	0.06	nd	16.52
09/09/09	604231	nd	nd	0.22	0.15	0.07	nd	nd	nd	82.32
09/09/09	604232	nd	nd	nd	nd	nd	nd	0.03	nd	35.28
09/09/09	604233	nd	nd	nd	nd	nd	nd	0.03	nd	13.53
09/08/09	604234	nd	nd	nd	nd	nd	nd	nd	nd	22.15
09/08/09	604235	nd	nd	nd	nd	nd	nd	nd	nd	3.48
09/09/09	604236	nd	nd	0.29	0.11	0.18	nd	nd	nd	16.62
09/08/09	604237	nd	nd	3.62	1.09	2.53	nd	nd	nd	33.74
09/09/09	604238	nd	nd	0.22	0.06	0.16	nd	nd	nd	38.09
09/09/09	604239	nd	nd	0.05	bdl	0.05	nd	nd	nd	10.27
09/09/09	604240	nd	nd	0.13	0.13	nd	nd	nd	nd	9.85
09/09/09	604241	nd	nd	0.47	0.42	0.06	nd	nd	nd	63.69
09/09/09	604242	nd	nd	nd	nd	nd	nd	nd	nd	5.88
09/09/09	604243	nd	nd	nd	nd	nd	nd	nd	nd	9.53
09/09/09	604250	nd	nd	0.35	0.31	0.04	nd	nd	nd	117.64
09/08/09	604251	nd	nd	16.62	2.12	14.50	nd	nd	nd	106.46
09/08/09	604252	nd	nd	2.33	0.30	2.02	nd	nd	nd	43.20
09/09/09	604253	nd	nd	1.31	0.76	0.55	nd	nd	nd	60.09
09/09/09	604254	nd	nd	nd	nd	nd	nd	nd	nd	10.34
09/08/09	604255	nd	nd	5.87	0.73	5.14	nd	nd	nd	92.93
09/09/09	604256	nd	nd	36.68	10.19	26.49	nd	nd	nd	132.50
09/08/09	604257	nd	nd	3.74	2.59	1.14	nd	nd	nd	26.91
09/09/09	604258	nd	nd	nd	nd	nd	nd	nd	nd	7.00
09/09/09	604259	nd	nd	18.35	1.57	16.78	nd	nd	nd	86.11
09/09/09	604260	nd	nd	52.40	3.24	49.16	nd	nd	nd	91.22
09/09/09	604261	nd	nd	122.91	9.60	113.32	nd	nd	nd	135.14
09/08/09	604262	nd	nd	19.56	7.41	12.16	nd	nd	nd	118.73
09/09/09	604263	nd	nd	0.12	0.07	0.05	nd	nd	nd	31.74
09/09/09	604264	nd	nd	24.32	4.32	20.00	nd	nd	nd	121.24
09/09/09	604265	nd	nd	61.12	3.41	57.71	nd	nd	nd	88.39

No mdl is available for summed combinations of analytes. In summed columns (eg., BTEX), the reported values should be considered ESTIMATED if any of the individual compounds were reported as bdl.

GORE(TM) SURVEYS ANALYTICAL RESULTS  
 PACIFIC CREST ENVIRONMENTAL, NORTH BEND, WA  
 GORE CHLORINATED VOCs PLUS VINYL CHLORIDE (A10 + VC)  
 FORMER SOUND MATTRESS AND FELT COMPANY, TACOMA, WA  
 SITE FAQ- PRODUCTION ORDER #20093060

DATE ANALYZED	SAMPLE NAME	VC, ug	CIBENZ, ug	ct12DCE, ug	t12DCE, ug	c12DCE, ug	11DCA, ug	111TCA, ug	12DCA, ug	TCE, ug
	MDL=	0.23	0.01		0.03	0.01	0.01	0.01	0.01	0.01
09/09/09	604266	nd	nd	1.81	0.41	1.40	nd	nd	nd	36.89
09/09/09	604267	nd	nd	1.56	0.31	1.25	nd	nd	nd	40.75
09/10/09	604268	nd	nd	nd	nd	nd	nd	nd	nd	nd
09/10/09	604269	nd	nd	nd	nd	nd	nd	nd	nd	nd
09/10/09	604270	nd	nd	nd	nd	nd	nd	nd	nd	nd
09/08/09	method blank	nd	nd	nd	nd	nd	nd	nd	nd	nd
09/09/09	method blank	nd	nd	nd	nd	nd	nd	nd	nd	nd
09/10/09	method blank	nd	nd	nd	nd	nd	nd	nd	nd	nd
	Maximum	0.00	0.00	122.91	10.19	113.32	0.00	0.06	0.00	135.14
	Standard Dev.	0.00	0.00	25.22	2.71	23.17	0.00	0.01	0.00	43.33
	Mean	0.00	0.00	11.33	1.49	9.84	0.00	0.00	0.00	51.79

No mdl is available for summed combinations of analytes. In summed columns (eg., BTEX), the reported values should be considered ESTIMATED if any of the individual compounds were reported as bdl.

GORE(TM) SURVEYS ANALYTICAL RESULTS  
PACIFIC CREST ENVIRONMENTAL, NORTH BEND, WA  
GORE CHLORINATED VOCs PLUS VINYL CHLORIDE (A10 + VC)  
FORMER SOUND MATTRESS AND FELT COMPANY, TACOMA, WA  
SITE FAQ- PRODUCTION ORDER #20093060

SAMPLE NAME	PCE, ug	14DCB, ug	11DCE, ug	CHCl3, ug	CCl4, ug	112TCA, ug	1112TetCA, ug	1122TetCA, ug	13DCB, ug	12DCB, ug
MDL=	0.01	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01
604229	7.12	nd	nd	nd	nd	nd	nd	nd	nd	nd
604230	80.30	nd	nd	nd	nd	nd	nd	nd	nd	nd
604231	132.62	nd	nd	0.03	nd	nd	nd	nd	nd	nd
604232	106.47	nd	nd	nd	nd	nd	nd	nd	nd	nd
604233	83.91	nd	nd	nd	nd	nd	nd	nd	nd	nd
604234	227.26	nd	nd	nd	nd	nd	nd	nd	nd	nd
604235	121.21	nd	nd	nd	nd	nd	nd	nd	nd	nd
604236	227.09	nd	nd	nd	nd	nd	0.02	nd	nd	nd
604237	291.18	nd	nd	0.06	nd	nd	0.03	nd	nd	nd
604238	279.81	nd	nd	nd	nd	0.01	0.07	nd	nd	nd
604239	219.24	nd	nd	0.05	nd	nd	0.05	nd	nd	nd
604240	218.06	nd	nd	nd	nd	nd	0.02	nd	nd	nd
604241	254.64	nd	nd	nd	nd	nd	0.04	nd	nd	nd
604242	160.82	nd	nd	nd	nd	nd	0.01	nd	nd	nd
604243	133.70	nd	nd	0.05	nd	nd	0.01	nd	nd	nd
604250	297.71	nd	nd	0.01	nd	nd	0.07	nd	nd	nd
604251	282.28	nd	nd	0.05	nd	nd	0.10	nd	nd	nd
604252	229.68	nd	nd	nd	nd	nd	0.06	nd	nd	nd
604253	208.43	nd	nd	0.12	nd	nd	0.11	nd	nd	nd
604254	186.00	nd	nd	nd	nd	nd	nd	nd	nd	nd
604255	285.47	nd	nd	nd	nd	nd	0.07	nd	nd	nd
604256	271.02	nd	nd	0.11	nd	nd	0.04	nd	nd	nd
604257	108.45	nd	nd	2.23	nd	nd	nd	nd	nd	nd
604258	165.55	nd	nd	nd	nd	nd	0.01	nd	nd	nd
604259	233.91	nd	nd	nd	nd	nd	0.06	nd	nd	nd
604260	196.09	nd	nd	0.06	nd	nd	0.04	nd	nd	nd
604261	220.76	nd	nd	0.10	nd	nd	nd	nd	nd	nd
604262	146.79	nd	nd	0.47	nd	nd	nd	nd	nd	nd
604263	68.34	nd	nd	nd	nd	nd	nd	nd	nd	nd
604264	168.67	nd	nd	0.06	nd	nd	nd	nd	nd	nd
604265	170.09	nd	nd	0.04	nd	nd	nd	nd	nd	nd

No mdl is available for summed combinations of analytes. In summed columns (eg., BTEX), the reported values should be considered ESTIMATED if any of the individual compounds were reported as bdl.

GORE(TM) SURVEYS ANALYTICAL RESULTS  
 PACIFIC CREST ENVIRONMENTAL, NORTH BEND, WA  
 GORE CHLORINATED VOCs PLUS VINYL CHLORIDE (A10 + VC)  
 FORMER SOUND MATTRESS AND FELT COMPANY, TACOMA, WA  
 SITE FAQ- PRODUCTION ORDER #20093060

SAMPLE NAME	PCE, ug	14DCB, ug	11DCE, ug	CHCl3, ug	CCl4, ug	112TCA, ug	1112TetCA, ug	1122TetCA, ug	13DCB, ug	12DCB, ug
MDL=	0.01	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01
604266	150.31	nd	nd	0.03	nd	nd	0.02	nd	nd	nd
604267	139.97	nd	nd	nd	nd	nd	nd	nd	nd	nd
604268	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
604269	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd
604270	0.02	nd	nd	nd	nd	nd	nd	nd	nd	nd
method blank	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
method blank	0.03	nd	nd	nd	nd	nd	nd	nd	nd	nd
method blank	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Maximum	297.71	0.00	0.00	2.23	0.00	0.01	0.11	0.00	0.00	0.00
Standard Dev.	73.09	0.00	0.00	0.39	0.00	0.00	0.03	0.00	0.00	0.00
Mean	184.03	0.00	0.00	0.11	0.00	0.00	0.02	0.00	0.00	0.00

No mdl is available for summed combinations of analytes. In summed columns (eg., BTEX), the reported values should be considered ESTIMATED if any of the individual compounds were reported as bdl.

# GORE™ Surveys - Final Report

**REPORT DATE:** 10/01/2009

**AUTHOR:** HGT

## SITE INFORMATION

**Site Reference:** Sound Matress & Felt Co., Tacoma, WA

**Gore Production Order Number:** 20093060

**Gore Site Code:** FAQ

## FIELD PROCEDURES

**# Modules shipped:** 38

**Installation Date(s):** 8/12-13/2009

**# Modules Installed:** 34

**Field work performed by:** Pacific Crest Environmental

**Retrieval date(s):** 8/28/2009

**# Modules Retrieved:** 34

**# Modules Lost in Field:** 1

**# Modules Not Returned:** 1

**Exposure Time:** 15-16 [days]

**# Trip Blanks Returned:** 3

**# Unused Modules Returned:** 0

**Date/Time Received by Gore:** 9/1/2009 9:30 PM      **By:** DY

**Chain of Custody Form attached:** Yes

**Chain of Custody discrepancies:** None

### Comments:

Modules 604268-604270 were identified as trip blanks.

Module 604244 was noted as “broken” and is considered lost from the field.

Module 604271 was not returned.

# GORE™ Surveys - Final Report

## ANALYTICAL PROCEDURES

W.L. Gore & Associates' Screening Module Laboratory operates under the guidelines of its Quality Assurance Manual, Operating Procedures and Methods. The quality assurance program is consistent with Good Laboratory Practices (GLP) and ISO Guide 25, "General Requirements for the Competence of Calibration and Testing Laboratories", third edition, 1990.

Instrumentation consists of state of the art gas chromatographs equipped with mass selective detectors, coupled with automated thermal desorption units. Sample preparation simply involves cutting the tip off the bottom of the sample module and transferring one or more exposed sorbent containers (sorbents, each containing engineered adsorbents) to a thermal desorption tube for analysis. Sorbents remain clean and protected from dirt, soil, and ground water by the insertion/retrieval cord, and require no further sample preparation.

### **Analytical Method Quality Assurance:**

The analytical method employed is a modified EPA method 8260/8270. Before each run sequence, two instrument blanks, a sorber containing 5µg BFB (Bromofluorobenzene), and a method blank are analyzed. The BFB mass spectra must meet the criteria set forth in the method before samples can be analyzed. A method blank and a sorber containing BFB are also analyzed after every 30 samples and/or trip blanks. Standards containing the selected target compounds at five calibration levels are analyzed at the beginning of each run. The criterion for each target compound is less than 25% RSD (relative standard deviation). If this criterion is not met for any target compound, the analyst has the option of generating second- or third-order standard curves, as appropriate. A second-source reference standard, at a level of 10µg per target compound, is analyzed after every ten samples and/or trip blanks, and at the end of the run sequence. Positive identification of target compounds is determined by 1) the presence of the target ion and at least two secondary ions; 2) retention time versus reference standard; and, 3) the analyst's judgment.

**NOTE: All data have been archived. Any replicate sorbents not used in the initial analysis will be discarded fifteen (15) days from the date of analysis.**

**Laboratory analysis:** thermal desorption, gas chromatography, mass selective detection

**Instrument ID:** # 11 **Chemist:** DC/FN

**Compounds/mixtures requested:** A10+VC

**Deviations from Standard Method:** None

**Comments:** Soil vapor analytes and abbreviations are tabulated in the Data Table Key (page 6).

# GORE™ Surveys - Final Report

## DATA TABULATION

# **CONTOUR MAPS ENCLOSED:** Three (3) B-sized color contour maps

**LIST OF MAPS ENCLOSED:**

- Tetrachloroethene (PCE)
- Trichloroethene (TCE)
- cis- & trans-1,2-dichloroethene (ct12DCE)

**NOTE:** All data values presented in Appendix A represent masses of compound(s) desorbed from the GORE™ Modules received and analyzed by W.L. Gore & Associates, Inc., as identified in the Chain of Custody (Appendix A). The measurement traceability and instrument performance are reproducible and accurate for the measurement process documented. Semi-quantitation of the compound mass is based on a five-level standard calibration.

**General Comments:**

- This survey reports soil gas mass levels present in the vapor phase. Vapors are subject to a variety of attenuation factors during migration away from the source concentration to the module. Thus, mass levels reported from the module will often be less than concentrations reported in soil and groundwater matrix data. In most instances, the soil gas masses reported on the modules compare favorably with concentrations reported in the soil or groundwater (e.g., where soil gas levels are reported at greater levels relative to other sampled locations on the site, matrix data should reveal the same pattern, and vice versa). However, due to a variety of factors, a perfect comparison between matrix data and soil gas levels can rarely be achieved.
- Soil gas signals reported by this method cannot be identified specifically to soil adsorbed, groundwater, and/or free-product contamination. The soil gas signal reported from each module can evolve from all of these sources. Differentiation between soil and groundwater contamination can only be achieved with prior knowledge of the site history (i.e., the site is known to have groundwater contamination only).
- QA/QC trip blank modules were provided to document potential exposures that were not part of the soil gas signal of interest (i.e., impact during module shipment, installation and retrieval, and storage). The trip blanks are identically manufactured and packaged soil gas modules to those modules placed in the subsurface. However, the trip blanks remain unopened during all phases of the soil gas survey. Levels reported on the trip blanks may indicate potential impact to modules other than the contaminant source of interest.

## GORE™ Surveys - Final Report

- Unresolved peak envelopes (UPEs) are represented as a series of compound peaks clustered together around a central gas chromatograph elution time in the total ion chromatogram. Typically, UPEs are indicative of complex fluid mixtures that are present in the subsurface. UPEs observed early in the chromatogram are considered to indicate the presence of more volatile fluids, while UPEs observed later in the chromatogram may indicate the presence of less volatile fluids. Multiple UPEs may indicate the presence of multiple complex fluids.
- Stacked total ion chromatograms (TICs) are included in Appendix A. The six-digit serial number of each module is incorporated into the TIC identification (e.g.: 123456S.D represents module #123456).

### Project Specific Comments:

- The minimum (gray) contour level, for each mapped analyte or group of analytes, was set at the maximum blank level observed or the method detection limit, whichever was greater. When target compounds are summed together (i.e., ct12DCE), the contour minimum is arbitrarily set at 0.02 µg or the maximum blank level, whichever is greater. The maximum contour level was set at the maximum value observed.
- Background levels of PCE were detected on the trip blanks and/or the method blanks. Thus, target analyte levels reported for the field-installed modules that exceed trip and method blank levels, and the analyte method detection limit, are more likely to have originated from on-site sources.
- The mapped spatial patterns indicated the presence of mapped compounds throughout the majority of the survey area. Highest levels were detected in the central and north-western section of the survey area.
- If the objective of the soil gas survey was to delineate the nature and extent of the contamination, then additional soil gas sampling is recommended in those areas where the color contours appear to extend into unsampled areas. Subsequent sampling events can be combined with the data from this event and mapped together to provide greater coverage.

# GORE™ Surveys - Final Report

## KEY TO DATA TABLE

### UNITS

µg	micrograms (per sorber), reported for compounds
MDL	method detection limit
bdl	below detection limit
nd	non-detect

### ANALYTES

TPH	total petroleum hydrocarbons
11DCE	1,1-dichloroethene
CIBENZ	chlorobenzene
ct12DCE	cis- & trans-1,2-dichloroethene
t12DCE	trans-1,2-dichloroethene
c12DCE	cis-1,2-dichloroethene
11DCA	1,1-dichloroethane
111TCA	1,1,1-trichloroethane
12DCA	1,2-dichloroethane
TCE	trichloroethene
PCE	tetrachloroethene
14DCB	1,4-dichlorobenzene
CHCl <sub>3</sub>	chloroform
CCl <sub>4</sub>	carbon tetrachloride
112TCA	1,1,2-trichloroethane
1112TetCA	1,1,1,2-tetrachloroethane
1122TetCA	1,1,2,2-tetrachloroethane
13DCB	1,3-dichlorobenzene
12DCB	1,2-dichlorobenzene
VC	vinyl chloride

### BLANKS

TBn	unexposed trip blanks, travels with the exposed modules
method blank	QA/QC module, documents analytical conditions during analysis

## **APPENDIX A:**

1. CHAIN OF CUSTODY AND INSTALLATION AND RETRIEVAL LOG
2. DATA TABLE
3. STACKED TOTAL ION CHROMATOGRAMS
4. COLOR CONTOUR MAPS

# GORE-SORBER® Screening Survey Chain of Custody

For W.L. Gore & Associates use only  
Production Order # 20093060



**W. L. Gore & Associates, Inc., Survey Products Group**

100 Chesapeake Boulevard • Elkton, Maryland 21921 • Tel: (410) 392-7600 • Fax: (410) 506-4780

**Instructions: Customer must complete ALL shaded cells**

Customer Name: <u>PACIFIC CREST ENVIRONMENTAL</u>		Site Name: <u>SOUND MATRESS &amp; FEL</u>	
Address: <u>1531 BENDIGO BOULEVARD NORTH</u> <u>PO BOX 952</u> <u>NORTH BEND WA 98045 U.S.A.</u>		Site Address: <u>TACOMA WA</u>	
Phone: <u>(425) 88-4990</u>		Project Manager: <u>ANNICA NORD</u>	
FAX: _____		Customer Project No.: <u>12238427</u>	
		Customer P.O. #: <u>110-001</u> Quote #: <u>2000161</u>	
Serial # of Modules Shipped		# of Modules for Installation <u>35</u>	# of Trip Blanks <u>3</u>
# 604229 - # 604244	# - #	Total Modules Shipped: <u>38</u>	Pieces
# 604250 - # 604271	# - #	Total Modules Received: <u>38</u>	Pieces
# - #	# - #	Total Modules Installed: <u>33</u>	Pieces
# - #	# - #	Serial # of Trip Blanks (Client Decides) #	
# - #	# - #	# <u>604268</u>	#
# - #	# - #	# <u>604269</u>	#
# - #	# - #	# <u>604270</u>	#
# - #	# - #	#	#
# - #	# - #	#	#
# - #	# - #	#	#
Prepared By: <u>Charlene Yellowdy</u>		#	#
Verified By: <u>Monty Biske</u>		#	#
Installation Performed By:		Installation Method(s) (circle those that apply):	
Name (please print): <u>Annica Nord / Monty Biske</u>		Slide Hammer <input type="checkbox"/> Hammer Drill <input checked="" type="checkbox"/> Auger <input type="checkbox"/>	
Company/Affiliation: <u>Pacific Crest</u>		Other: _____	
Installation Start Date and Time: <u>8/12/2009 10:20 AM</u>		<input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	
Installation Complete Date and Time: <u>8/13/2009 12:08 AM</u>		<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	
Retrieval Performed By:		Total Modules Retrieved: <u>33</u> Pieces	
Name (please print): <u>Annica Nord</u>		Total Modules Lost in Field: <u>1</u> Pieces	
Company/Affiliation: <u>Pacific Crest</u>		Total Unused Modules Returned: <u>1</u> (not counting trip blanks) Pieces	
Retrieval Start Date and Time: <u>8/28/09 11:17 AM</u>		<input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	
Retrieval Complete Date and Time: <u>8/28/09 12:41 AM</u>		<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	
Relinquished By: <u>Charlene Yellowdy</u>	Date: <u>8-10-09</u>	Time: _____	Received By: <u>Ann Nord</u>
Affiliation: <u>W.L. Gore &amp; Associates, Inc.</u>			Affiliation: <u>Pacific Crest</u>
Relinquished By: <u>Ann Nord</u>	Date: <u>8/28/09</u>	Time: _____	Received By: _____
Affiliation: <u>Pacific Crest</u>			Affiliation: _____
Relinquished By: _____	Date: _____	Time: _____	Received By: <u>Charlene Yellowdy</u>
Affiliation: _____			Affiliation: <u>W.L. Gore &amp; Associates, Inc.</u>
			Date: <u>9-01-09</u> Time: <u>9:30</u>

**GORE-SORBER® Screening Survey**  
**Installation and Retrieval Log**

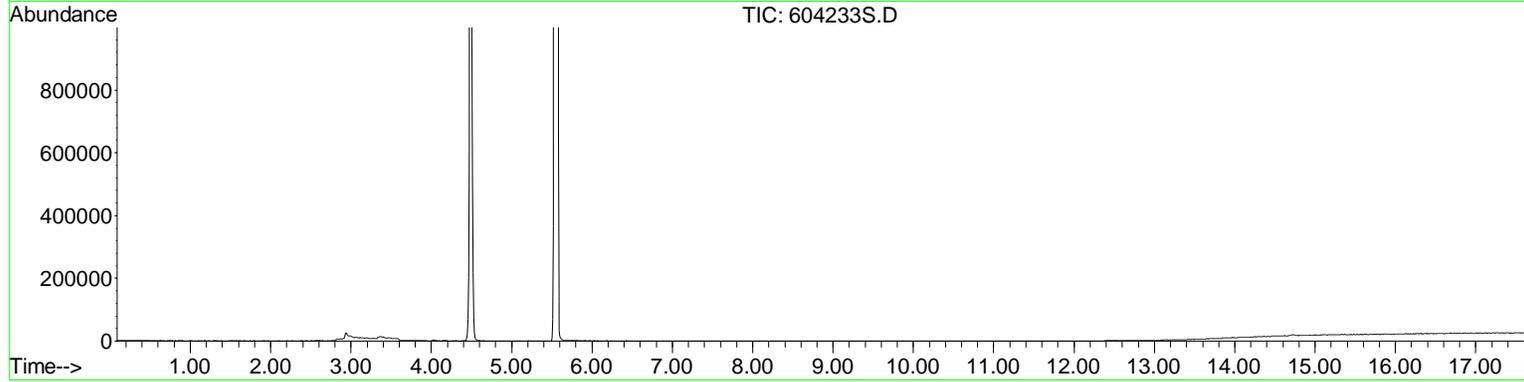
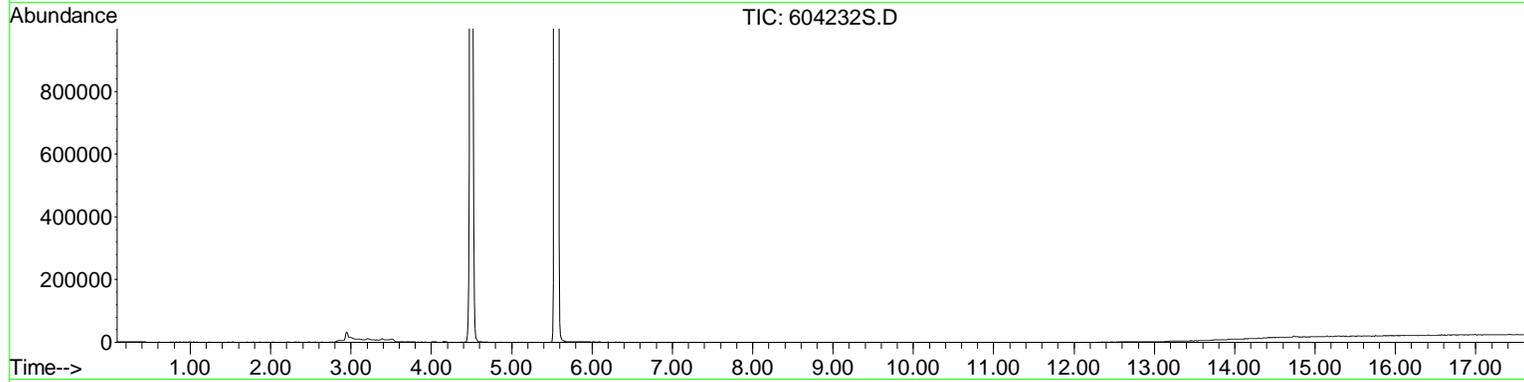
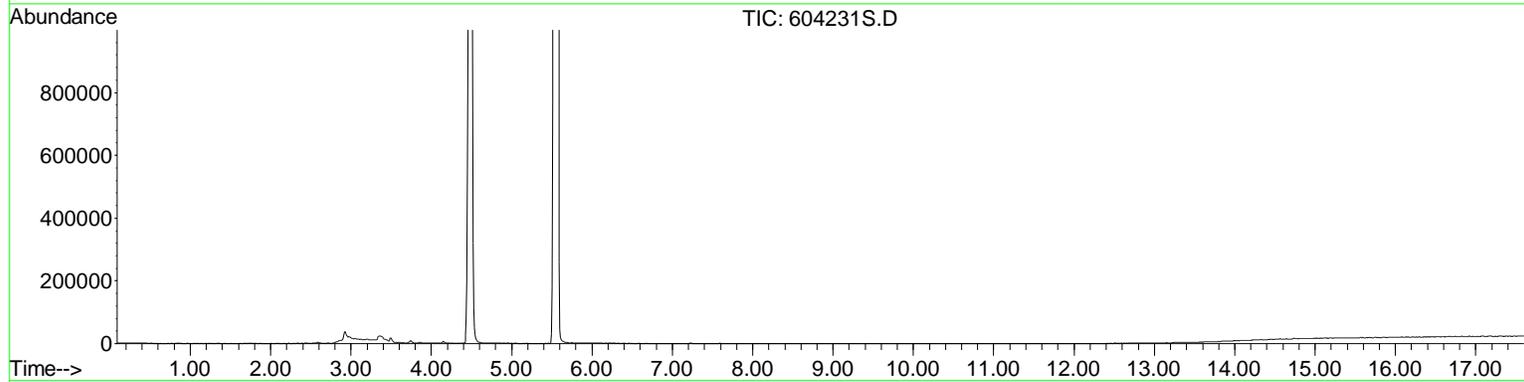
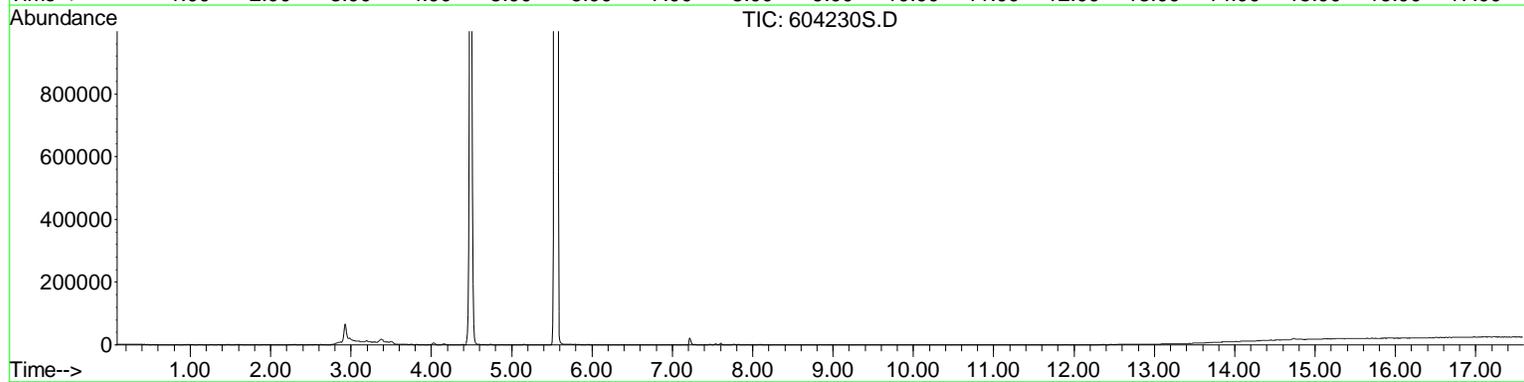
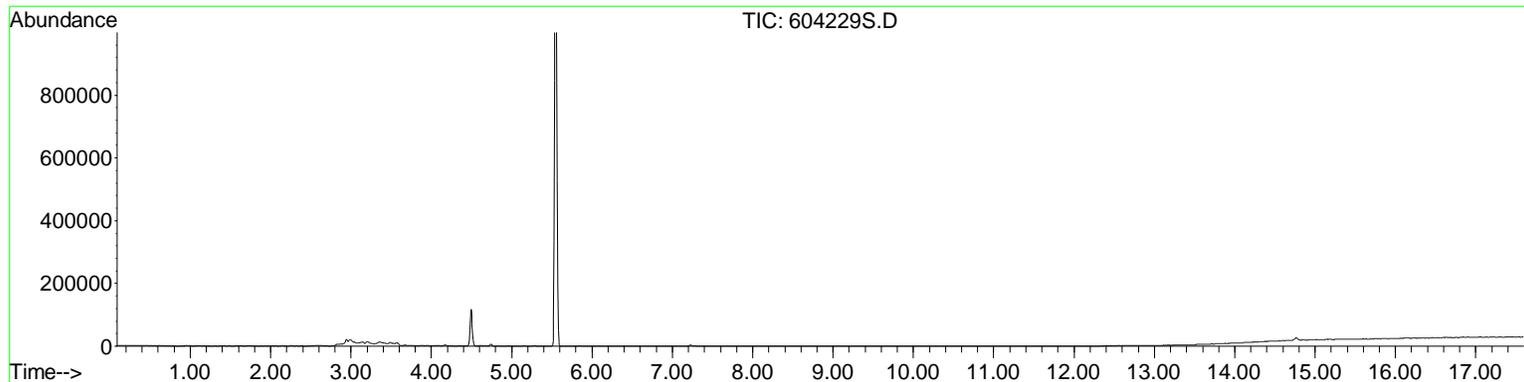
**SITE NAME & LOCATION**

*SO FORMS SOUND MATRESS and Felt Co.*  
*1940 E 11th St. Tacoma, WA*

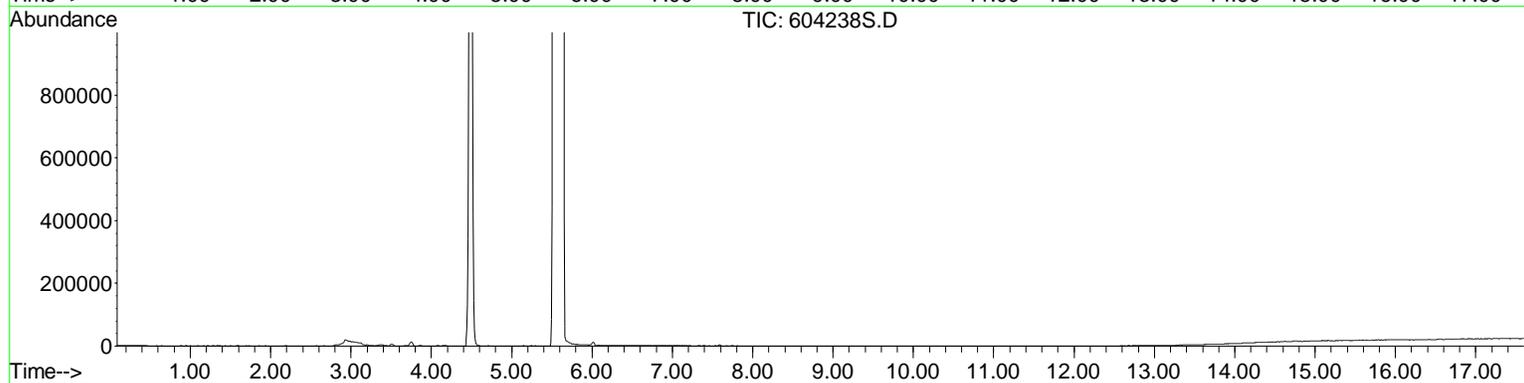
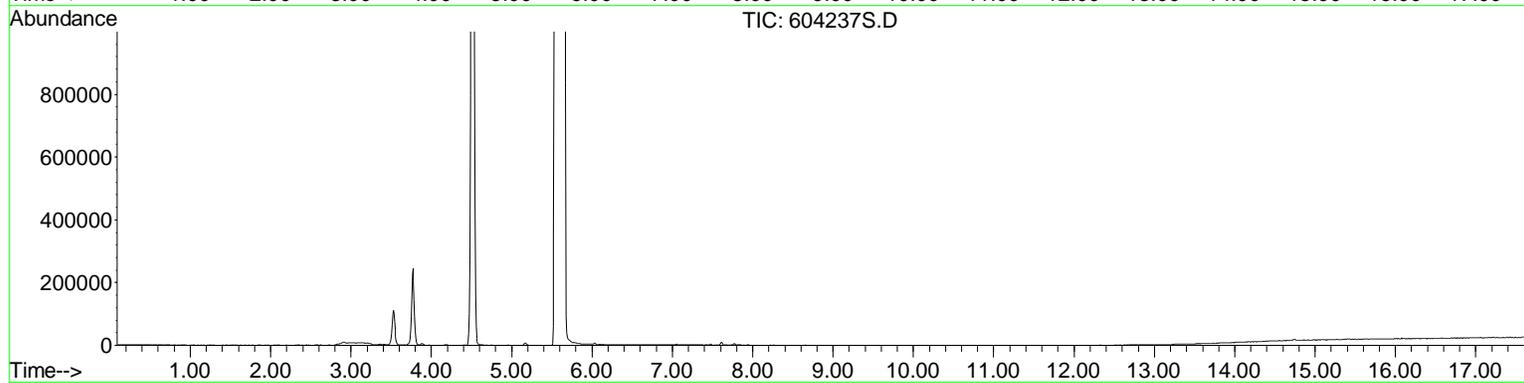
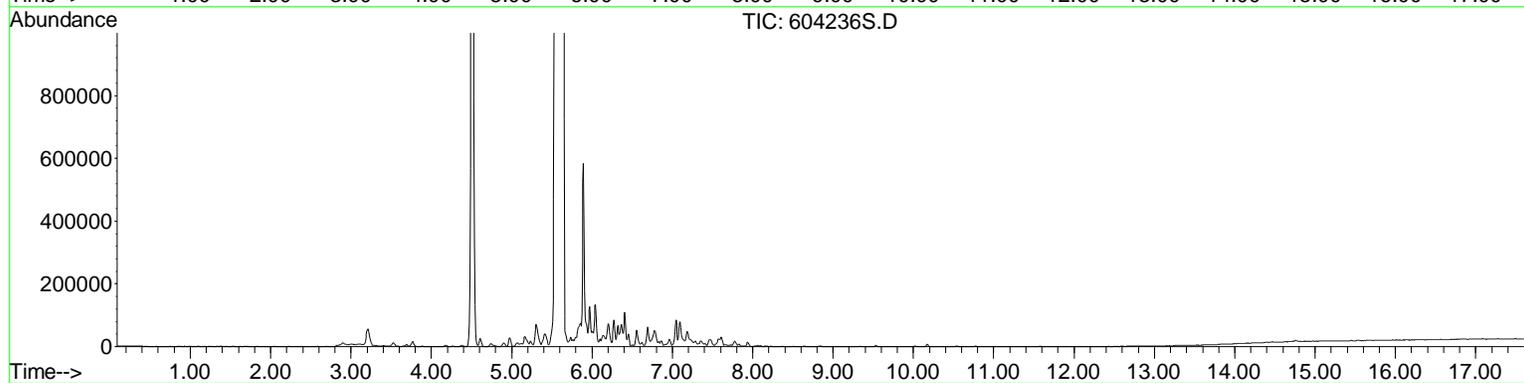
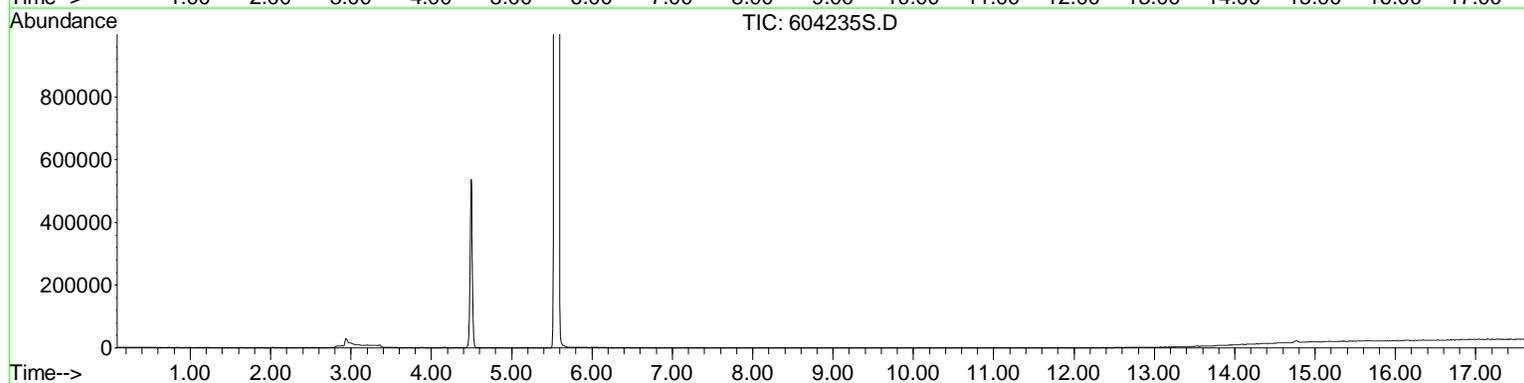
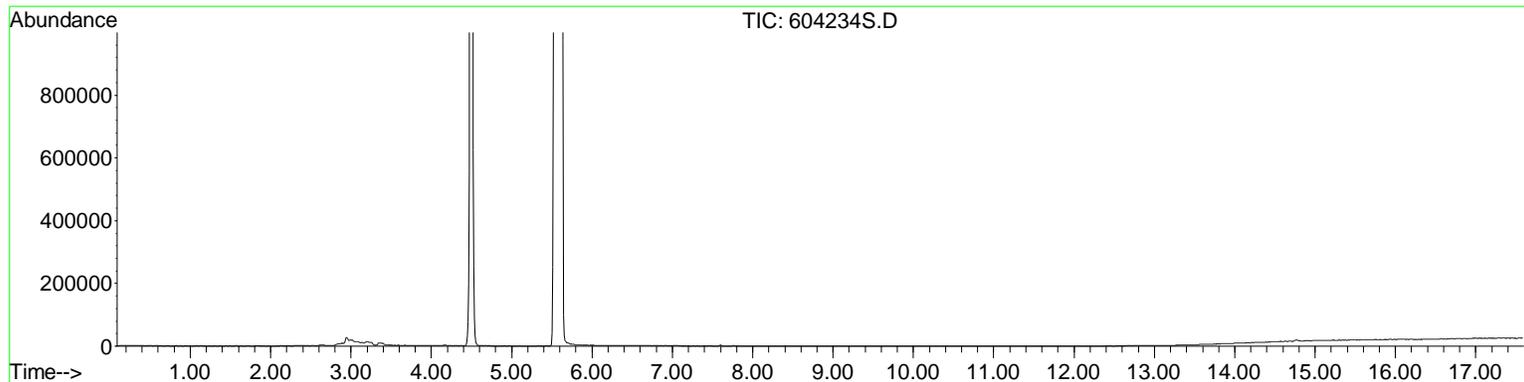
Page 1. of 1.

LINE #	MODULE #	INSTALLATION DATE/TIME	RETRIEVAL DATE/TIME	EVIDENCE OF LIQUID HYDROCARBONS (LPH) or HYDROCARBON ODOR (Check as appropriate)			MODULE IN WATER (check one)		COMMENTS
				LPH	ODOR	NONE	YES	NO	
1.	604229	8/12/09-1020	8/28/09-1159					X	
2.	604230	1152	1151					X	
3.	604231	1207	1154					X	
4.	604232	1214	1156					X	
5.	604233	1223	1149					X	
6.	604234	1230	1147					X	
7.	604235	1239	1144					X	
8.	604236	1249	1129					X	
9.	604237	1257	1133					X	
10.	604238	1308	1128					X	
11.	604239	1413	1126					X	
12.	604240	1427	1124					X	
13.	604241	1437	1122					X	
14.	604242	1455	1120					X	
15.	604243	↓ 1503	↓ 1117					X	
16.	604244	broken							
17.	604250	8/12/09 1520	8/28/09 1118					X	
18.	604251	↓ 1543	1139					X	
19.	604252	↓ 1551	1136					X	
20.	604253	8/13/09-944	1141					X	
21.	604254	952	1208					X	
22.	604255	1002	1208					X	
23.	604256	1013	1208					X	
24.	604257	1020	1211					X	
25.	604258	1037	1227					X	
26.	604259	1047	1225					X	
27.	604260	1059	1222					X	
28.	604261	1107	1220					X	
29.	604262	1112	1216					X	
30.	604263	1123	1214					X	
31.	604264	1132	1233					X	
32.	604265	1140	1235					X	
33.	604266	1153	1229					X	
34.	604267	↓ 1208	↓ 1241					X	
35.	604268								
36.	604269								
37.	604270								
38.	604271								
39.									
40.									
41.									
42.									

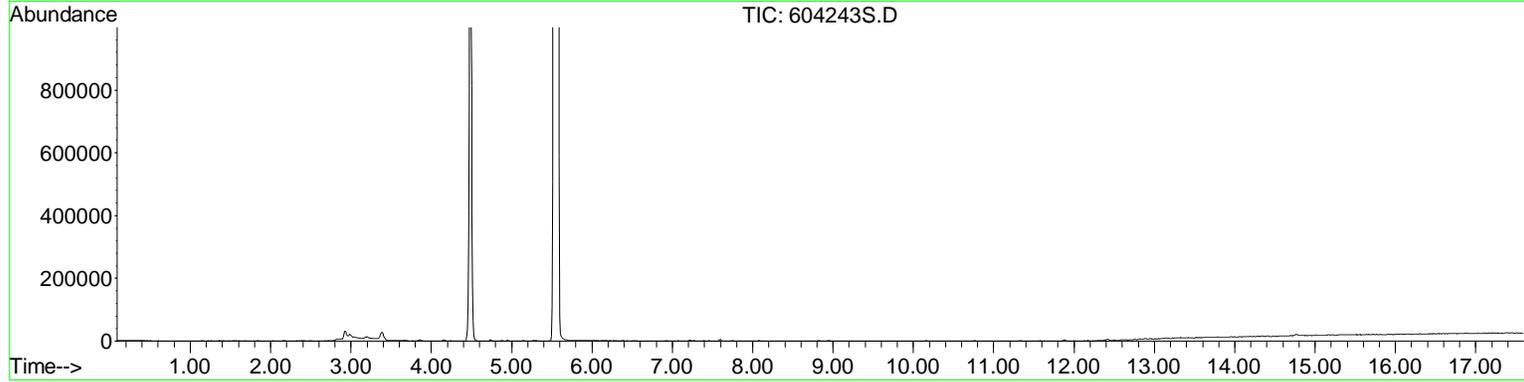
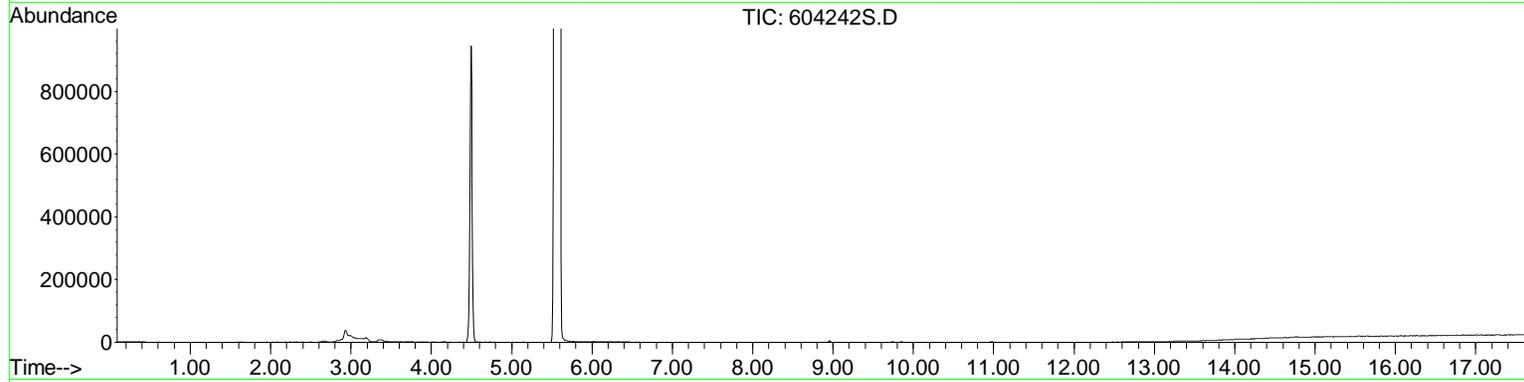
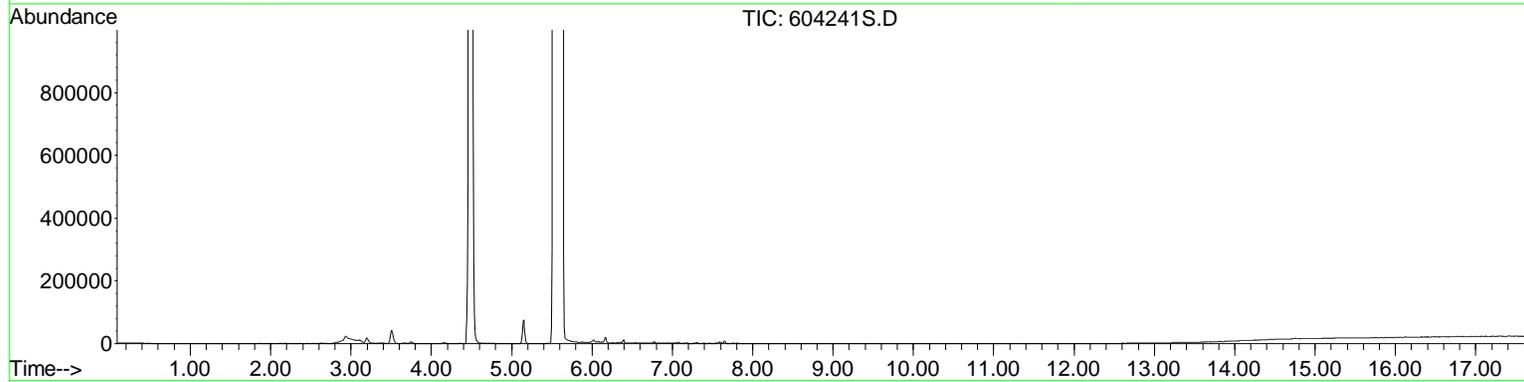
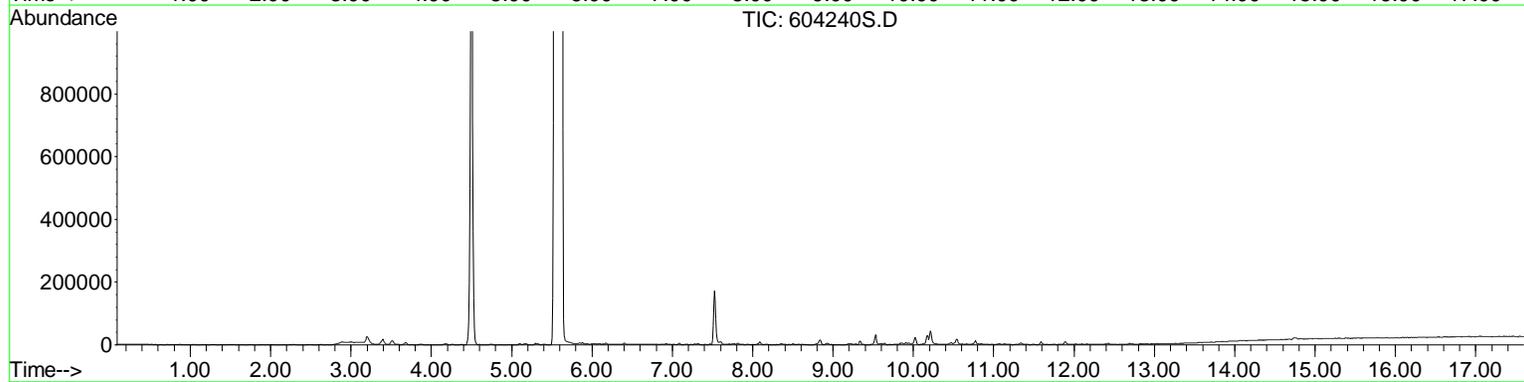
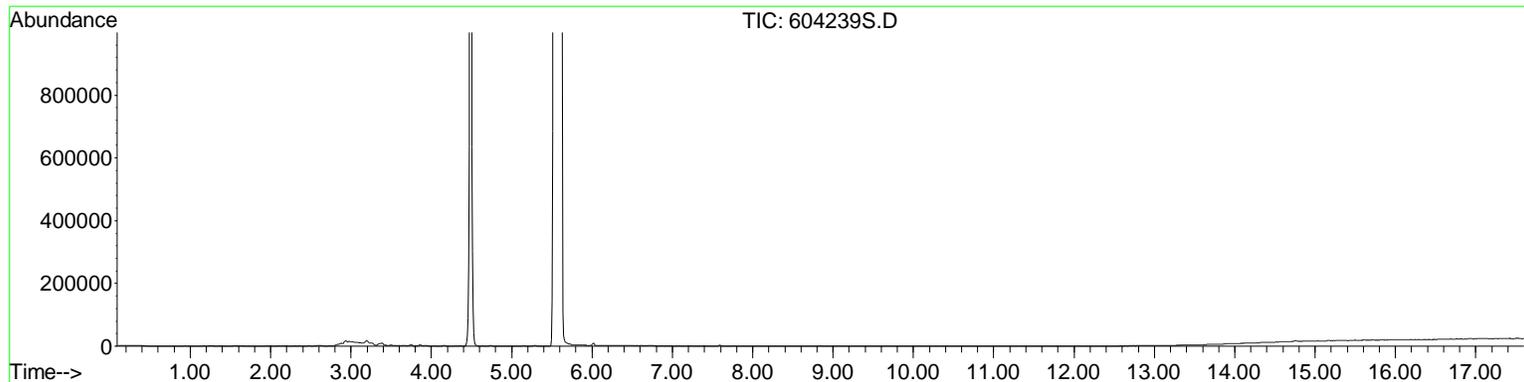
TIC-SITE CODE FAQ-PRODUCTION ORDER #20093060  
In Numerical Order



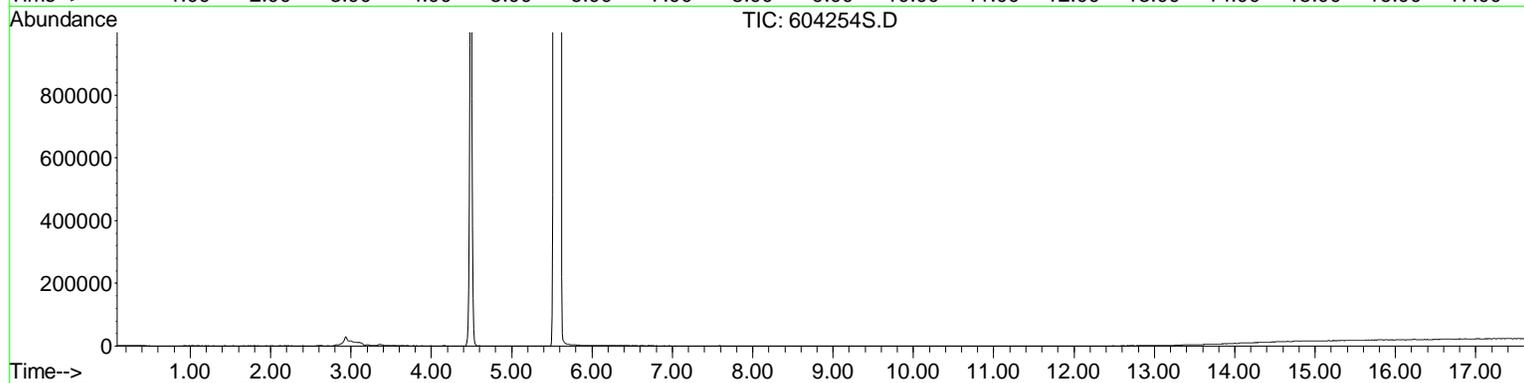
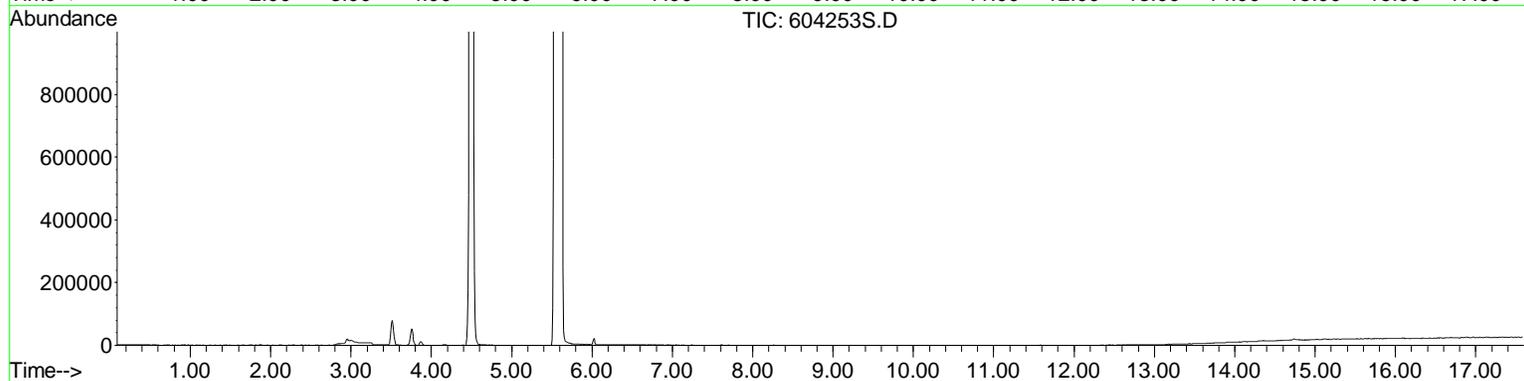
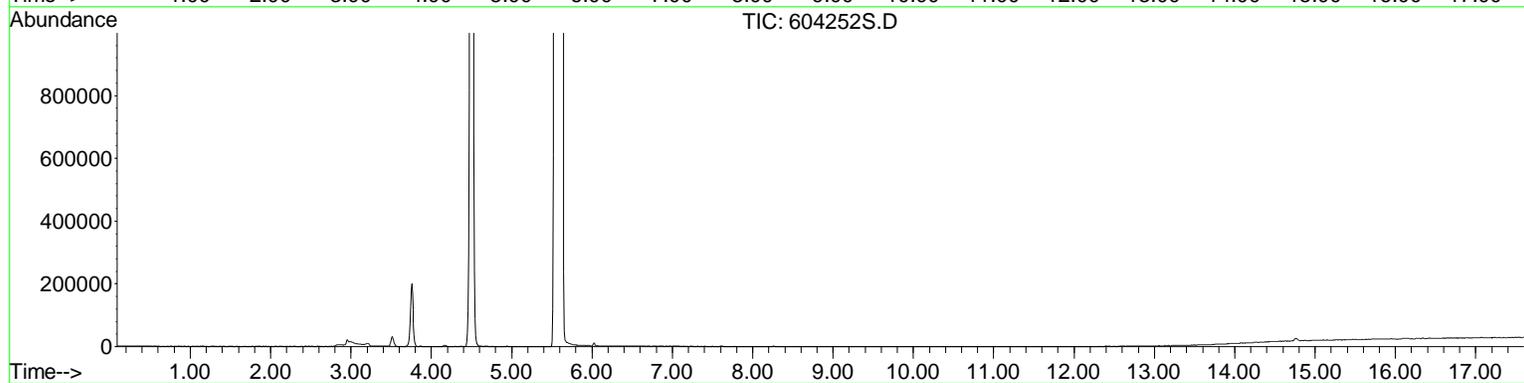
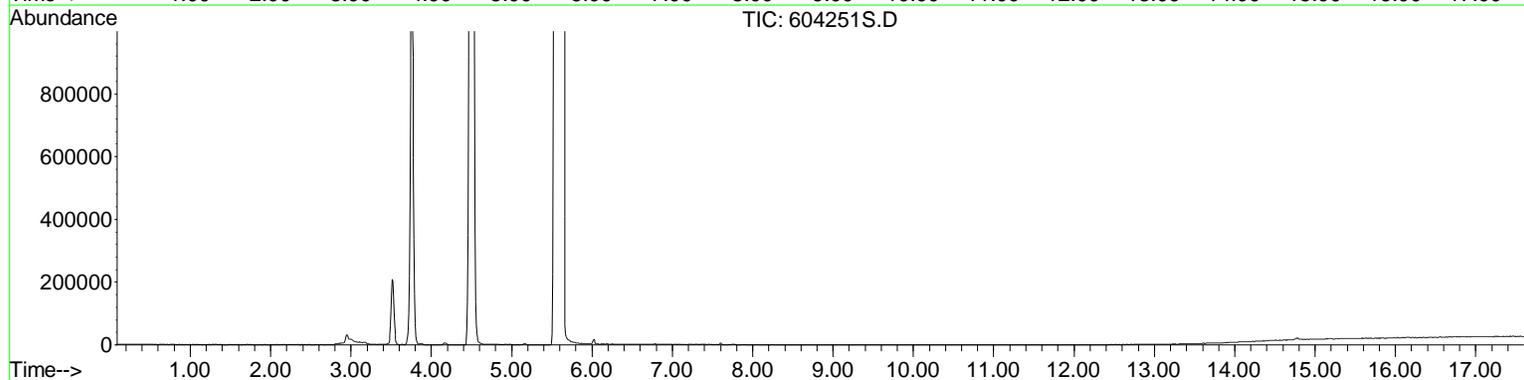
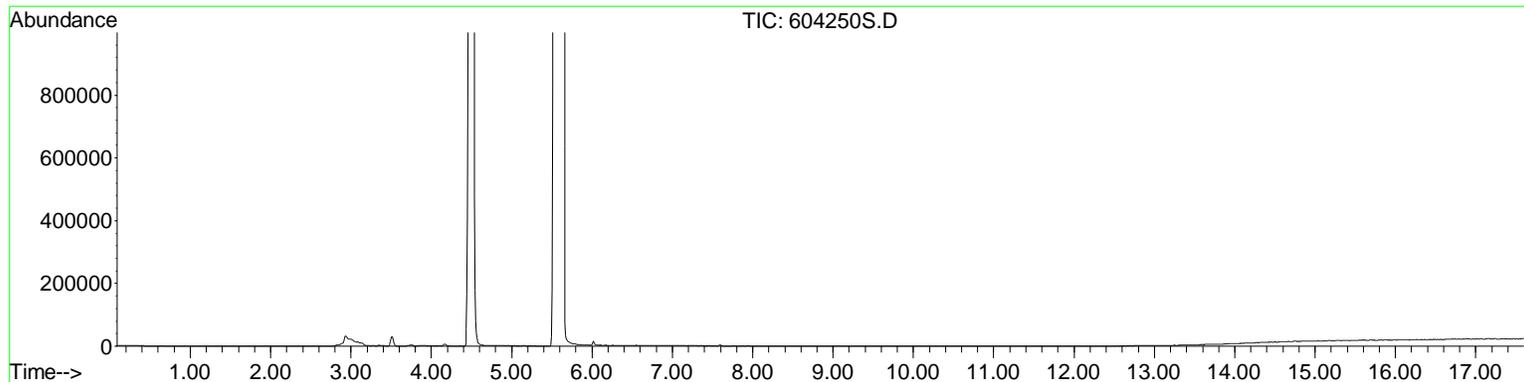
TIC-SITE CODE FAQ-PRODUCTION ORDER #20093060  
In Numerical Order



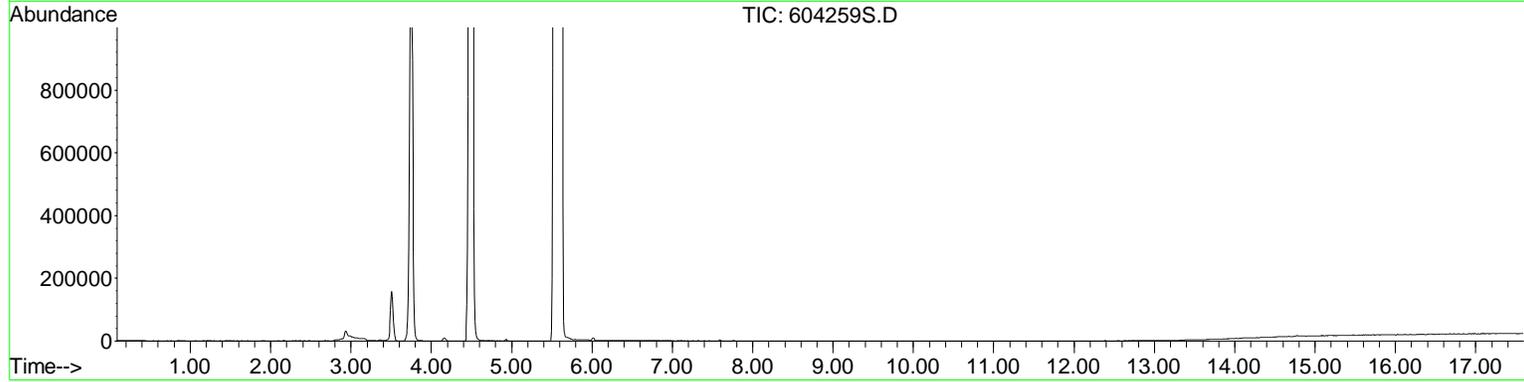
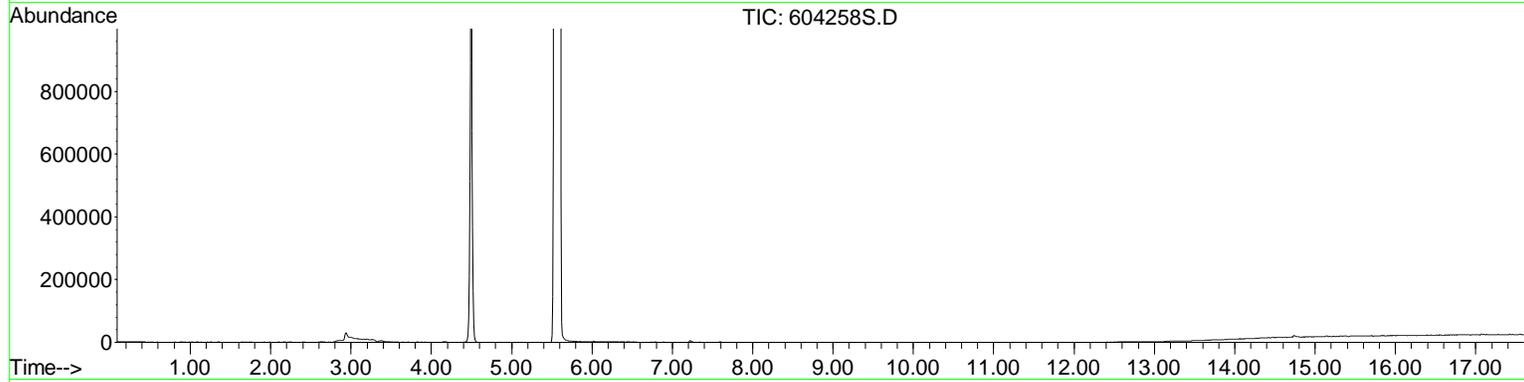
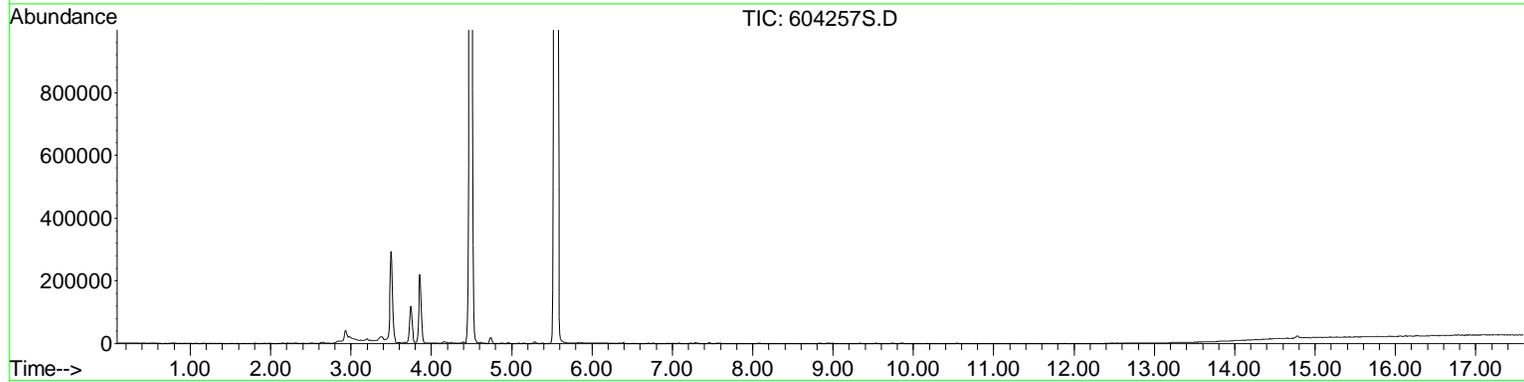
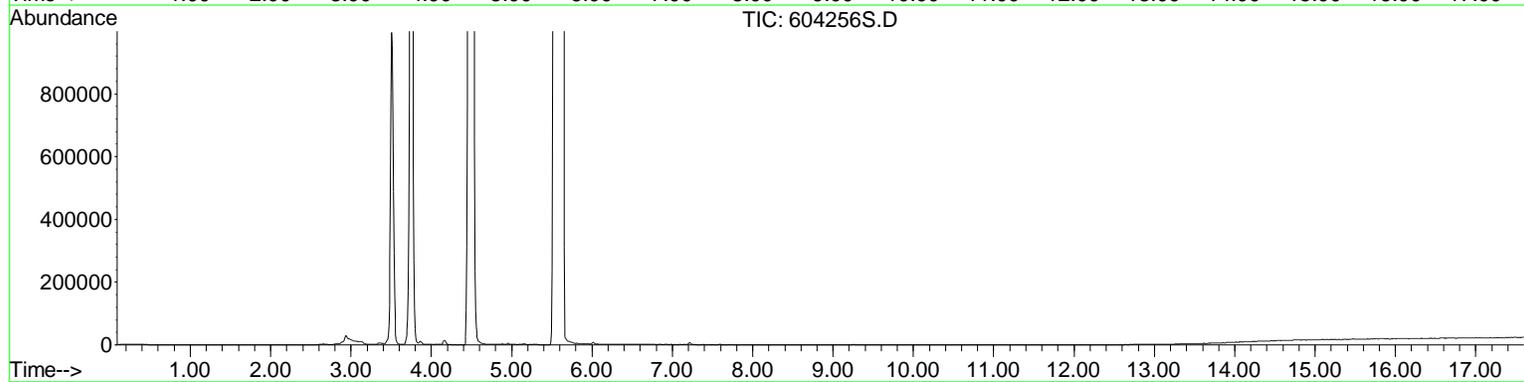
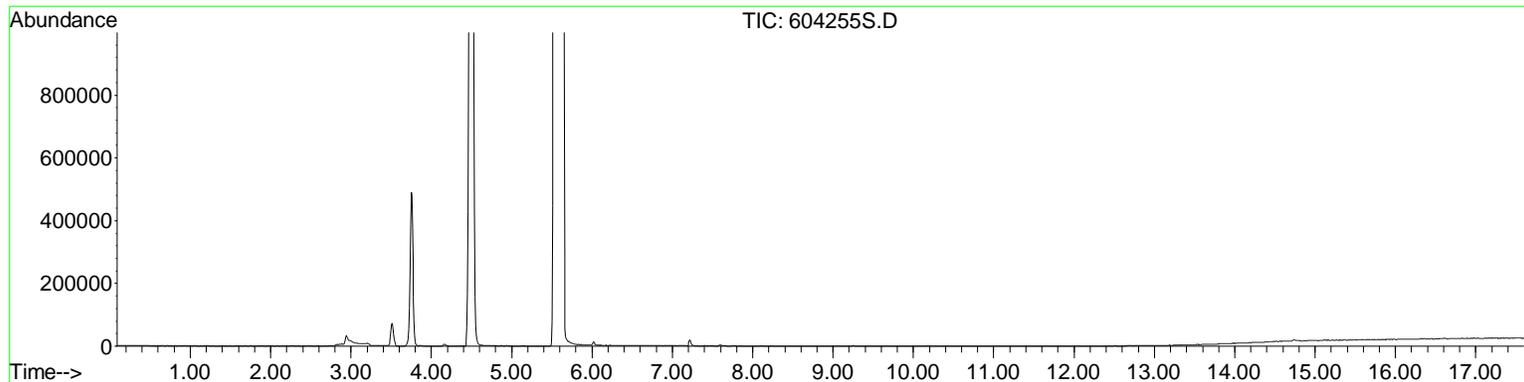
TIC-SITE CODE FAQ-PRODUCTION ORDER #20093060  
In Numerical Order



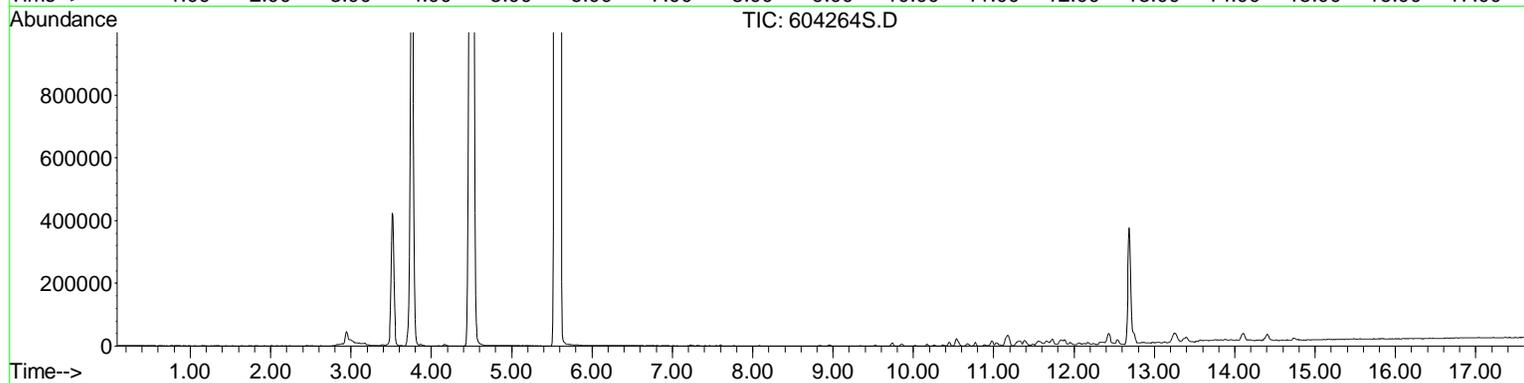
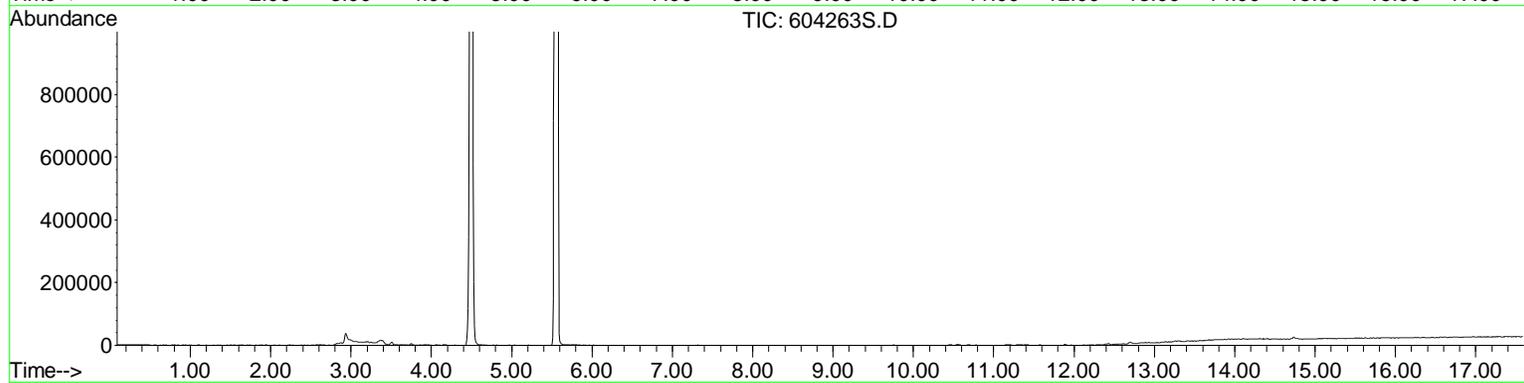
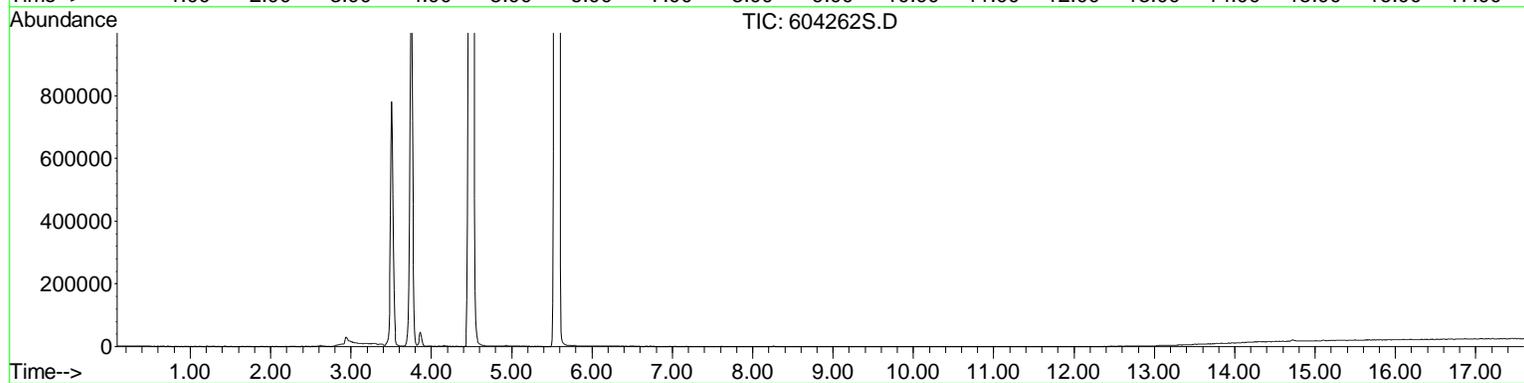
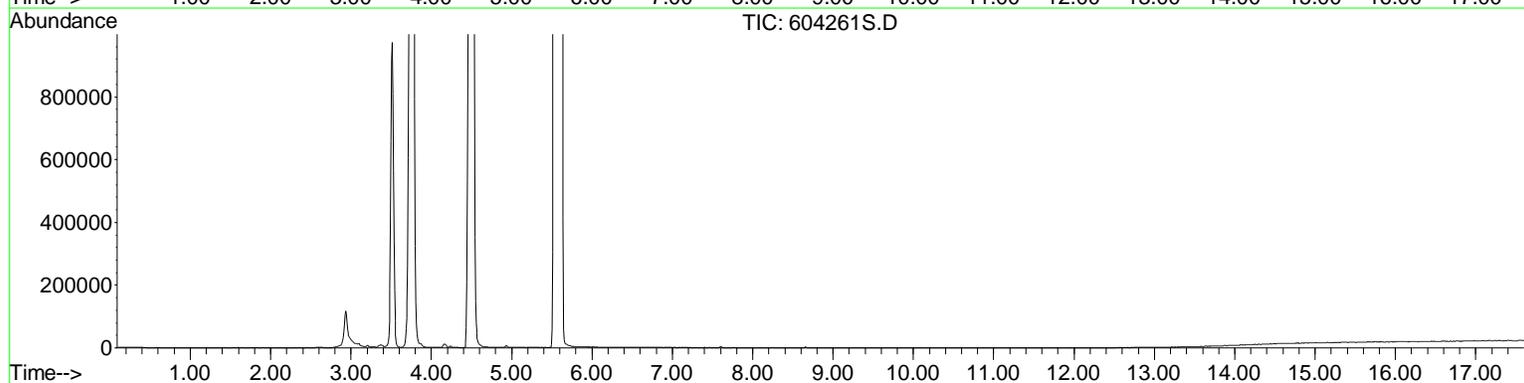
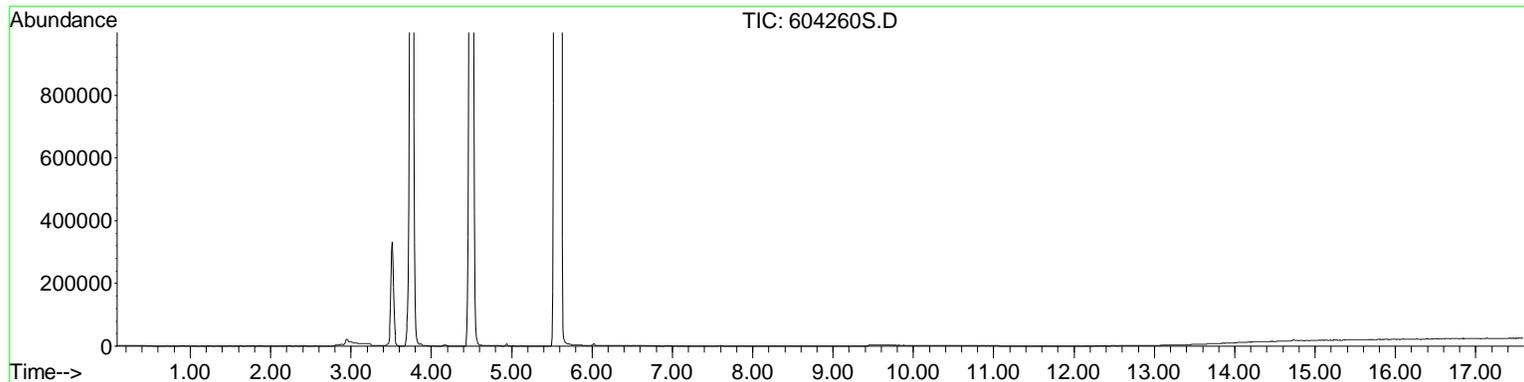
TIC-SITE CODE FAQ-PRODUCTION ORDER #20093060  
In Numerical Order



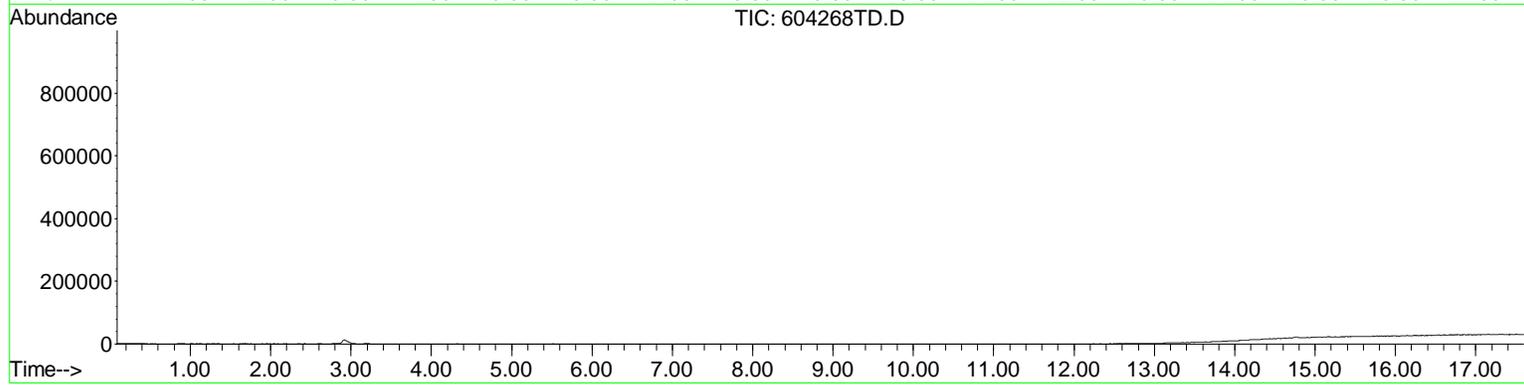
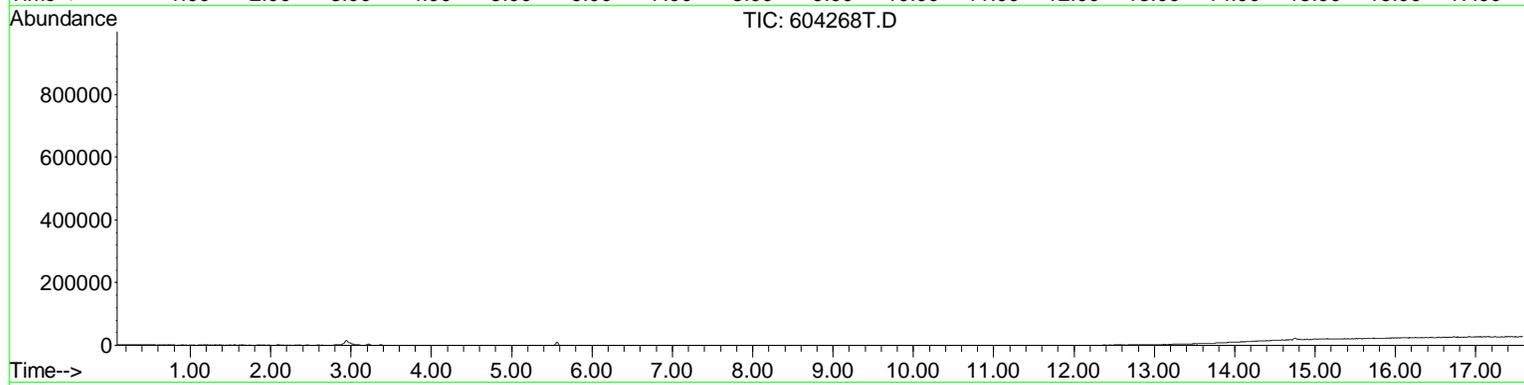
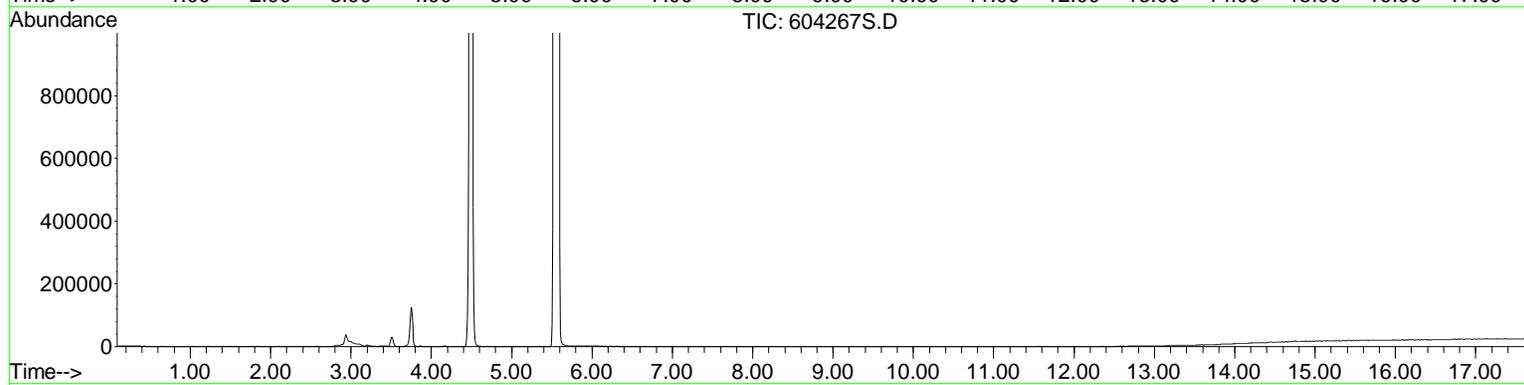
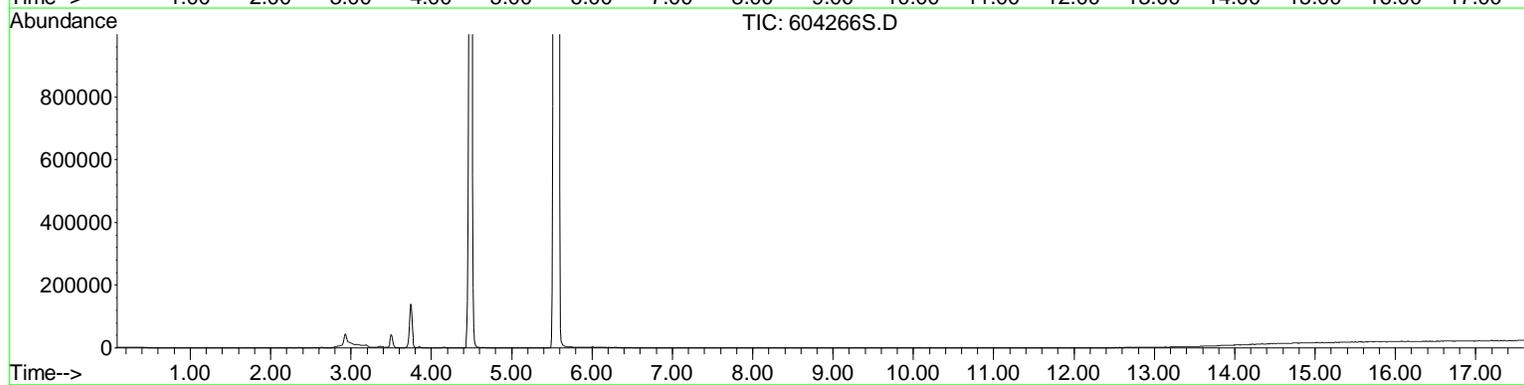
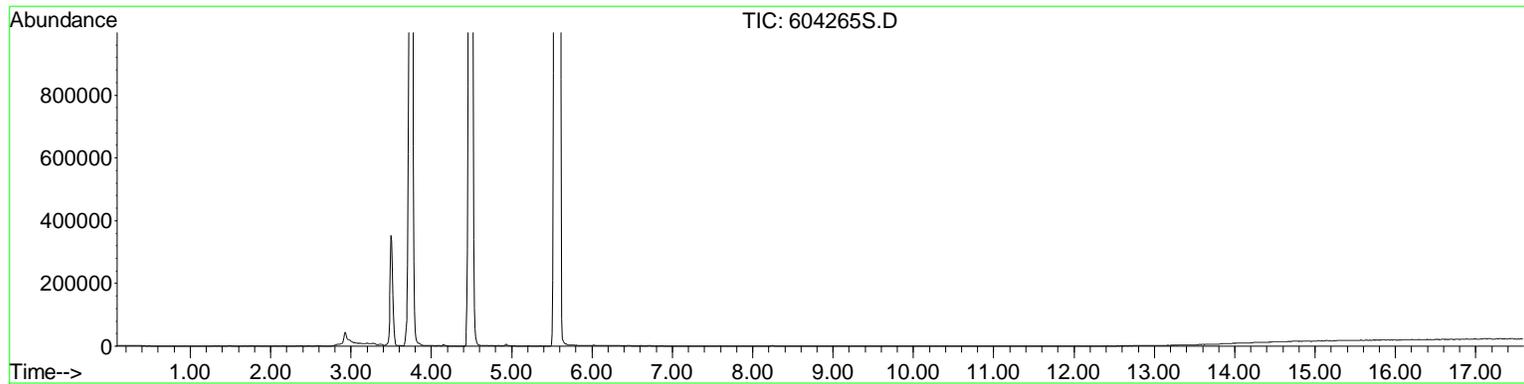
TIC-SITE CODE FAQ-PRODUCTION ORDER #20093060  
In Numerical Order



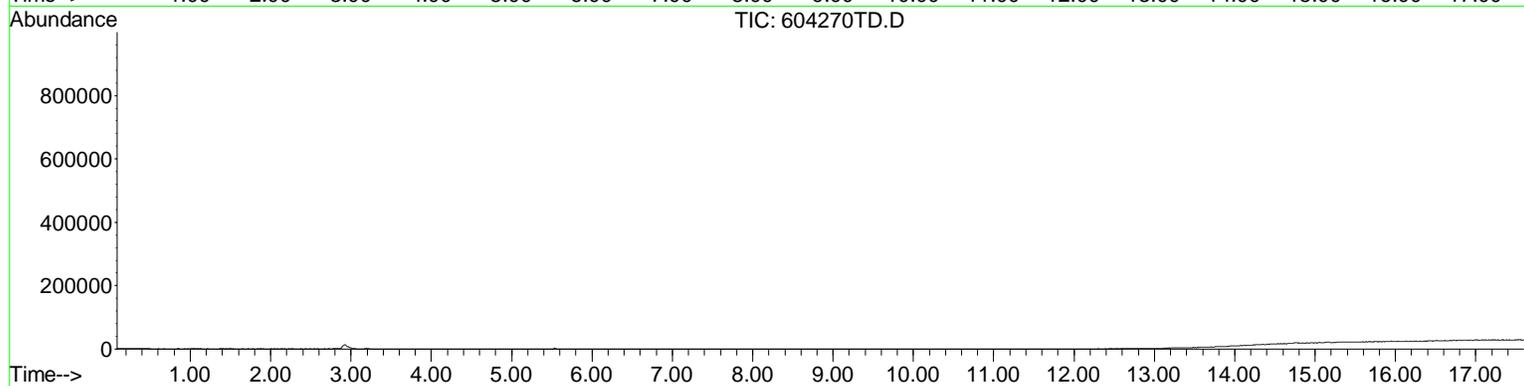
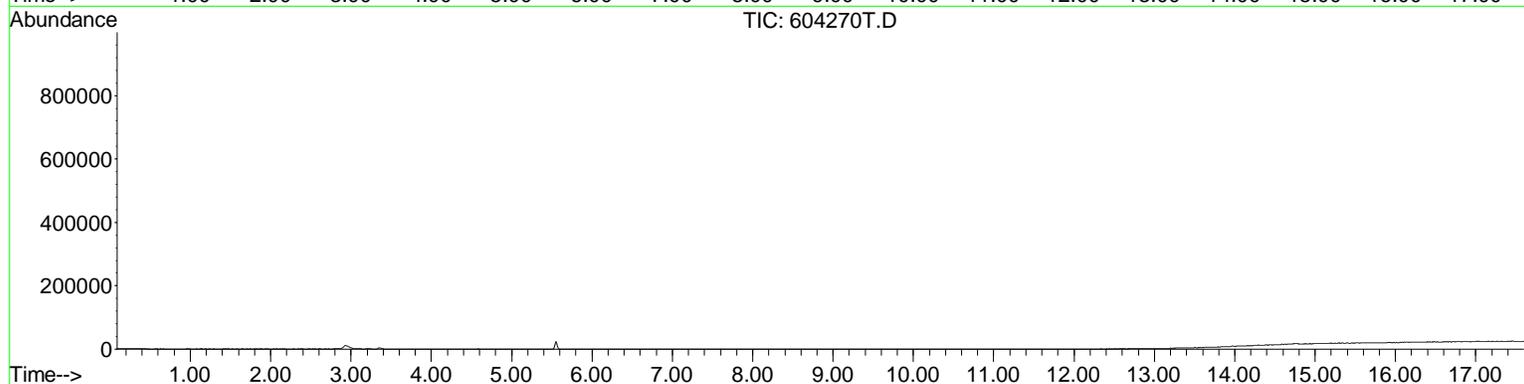
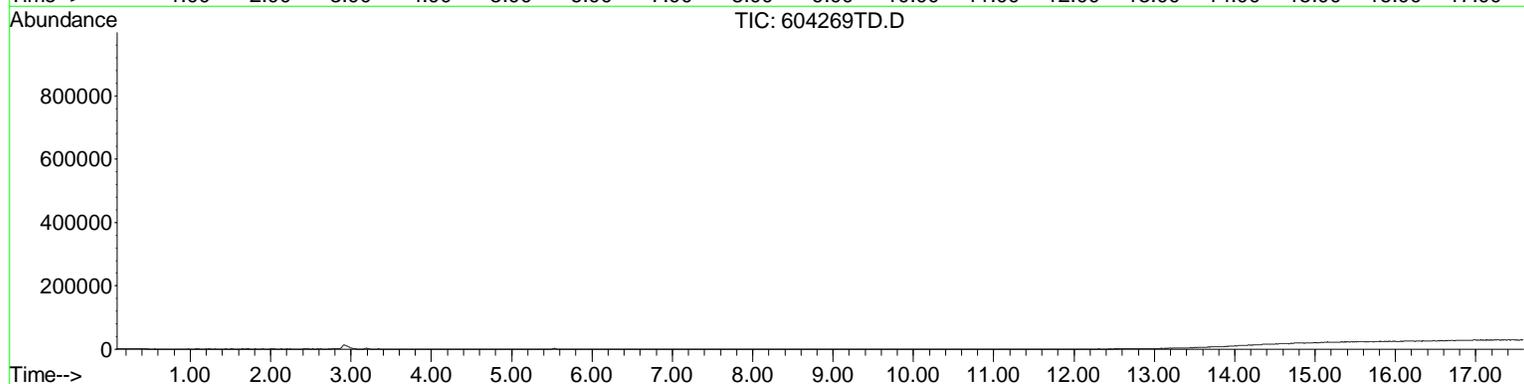
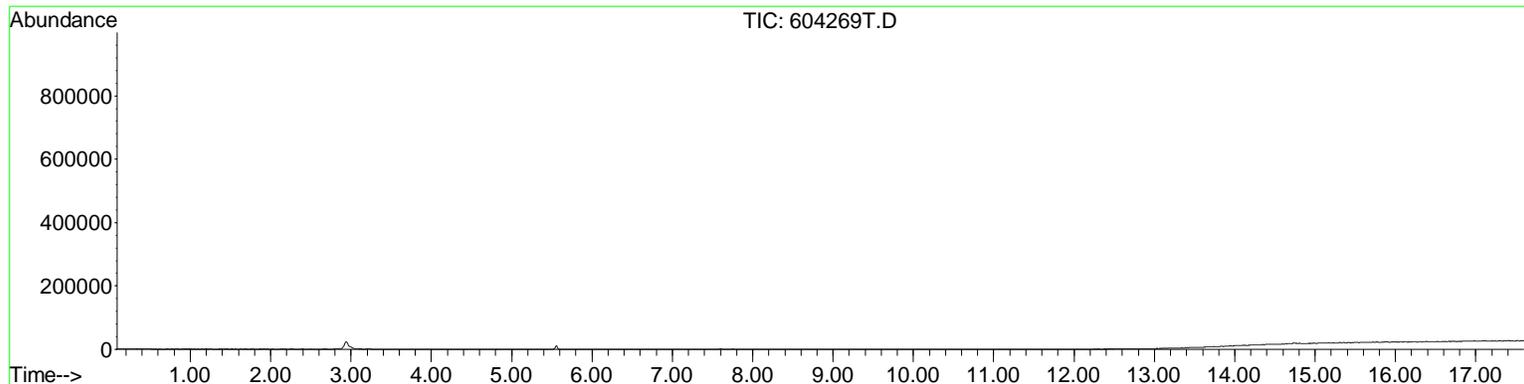
TIC-SITE CODE FAQ-PRODUCTION ORDER #20093060  
In Numerical Order

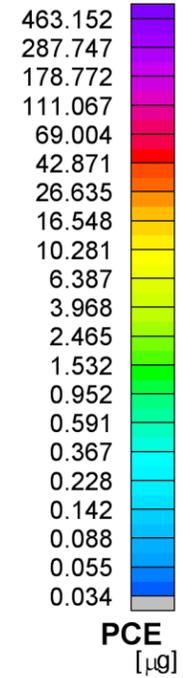
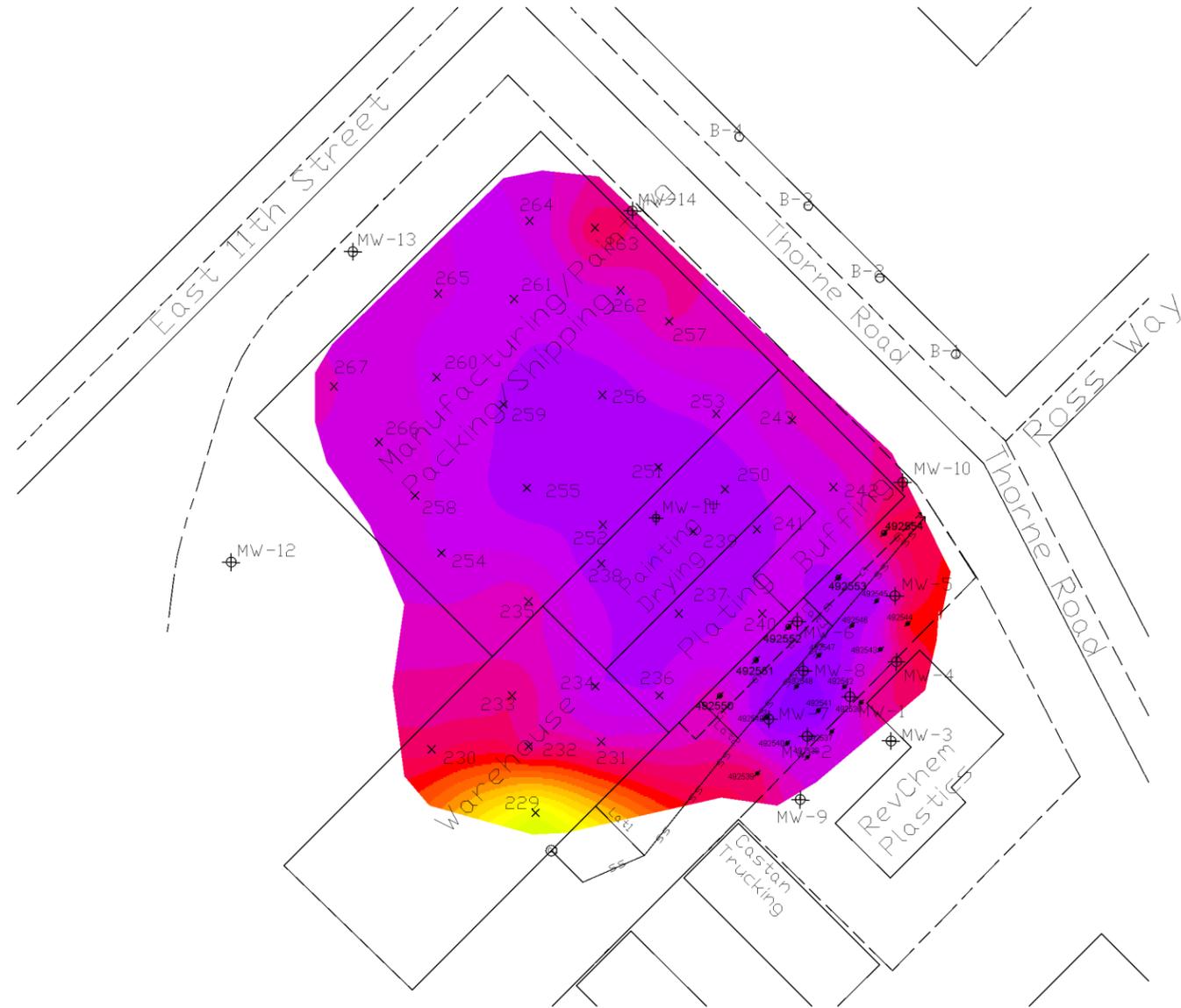
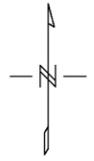


TIC-SITE CODE FAQ-PRODUCTION ORDER #20093060  
In Numerical Order



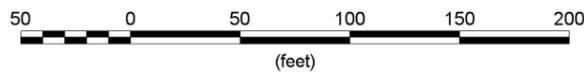
TIC-SITE CODE FAQ-PRODUCTION ORDER #20093060  
In Numerical Order





× 254	Soil Vapor Survey Module Location Sept. 2009	—	Road
492549	Soil Vapor Survey Module Location	—	Building Exterior
⊕ MW-9	Groundwater Monitoring Well	—	Gas Line
B-4	Soil Boring	- -	Property Boundary
⊙	Sewer Cleanout	Plating	Pre-1965 Operations
-SS	Sanitary Sewer		

Scale 1:1000



GORE and designs are trademarks of W.L. GORE & Associates

THIS DRAWING AND ANY OF ITS ATTACHMENTS HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT IDENTIFIED HEREIN AND MUST NOT BE USED, REPRODUCED OR MODIFIED IN ANY WAY WITHOUT THE PRIOR WRITTEN CONSENT OF W.L. GORE & ASSOCIATES. UNAUTHORIZED USE IS STRICTLY PROHIBITED PURSUANT TO COPYRIGHT, TRADEMARK AND OTHER APPLICABLE LAWS.

GORE™ Surveys for Environmental Site Assessment

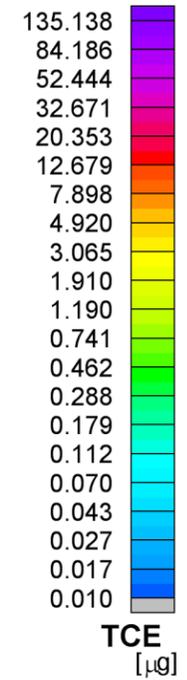
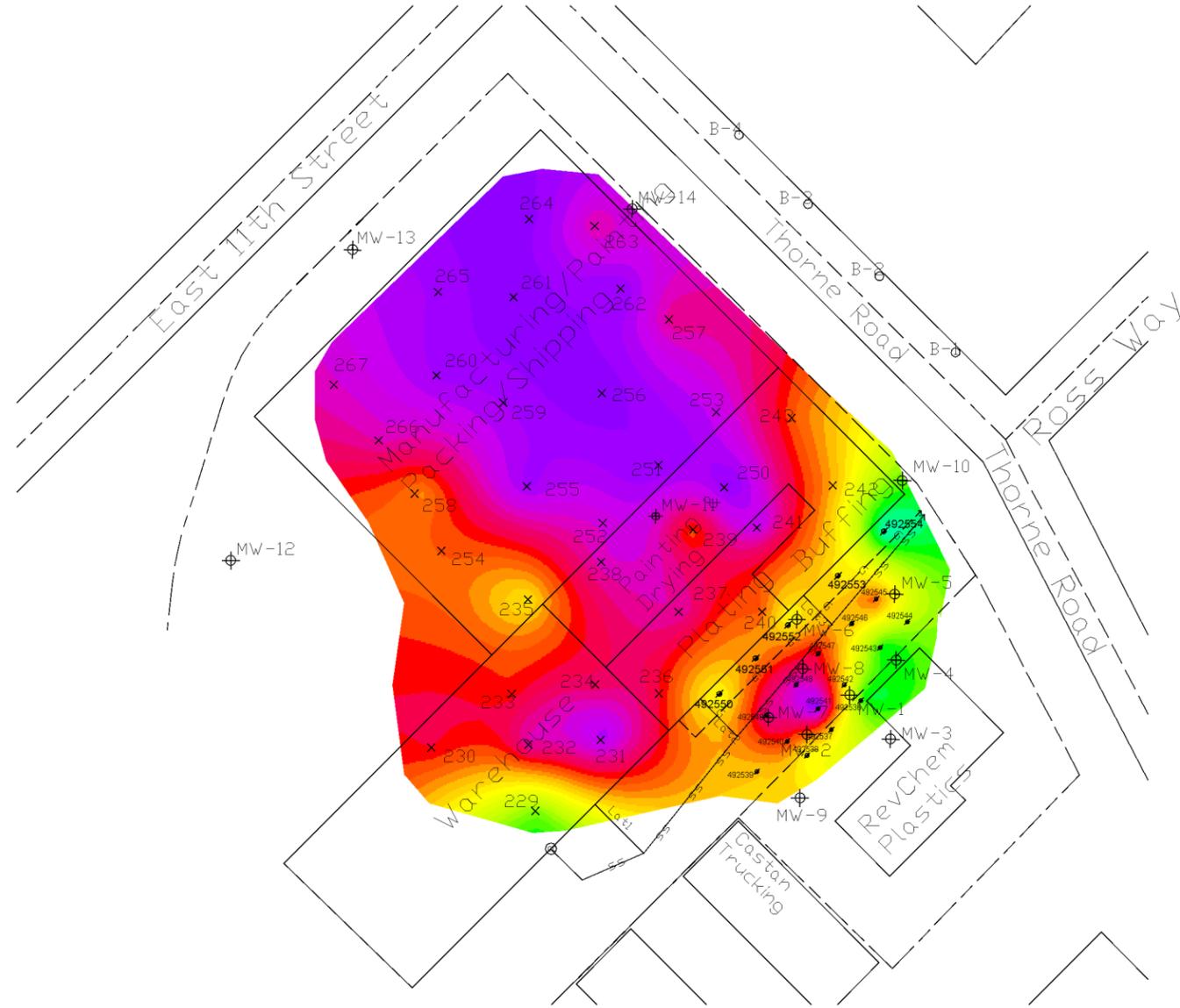
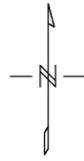


W.L. GORE & ASSOCIATES, INC.

100 CHESAPEAKE BOULEVARD  
ELKTON, MD, USA 21921  
USA  
(410) 392-7600

Pacific Crest Environmental  
Former Sound Mattress and Felt Co.  
Tetrachloroethene

DATE DRAWN: 2009 Sept 22	DRAWN BY: HGT	ORIG. CAD: Site Plan_SV locs.dwg	SITE CODE: FAQ
REV. DATE:	REV. #:	PROJECT NUMBER: 20093060	



× 254	Soil Vapor Survey Module Location Sept. 2009	—	Road
492549	Soil Vapor Survey Module Location	—	Building Exterior
⊕ MW-9	Groundwater Monitoring Well	—G—	Gas Line
B-4	Soil Boring	- - -	Property Boundary
@	Sewer Cleanout	Plating	Pre-1965 Operations
-SS-	Sanitary Sewer		

Scale 1:1000



GORE and designs are trademarks of W.L. GORE & Associates

THIS DRAWING AND ANY OF ITS ATTACHMENTS HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT IDENTIFIED HEREIN AND MUST NOT BE USED, REPRODUCED OR MODIFIED IN ANY WAY WITHOUT THE PRIOR WRITTEN CONSENT OF W.L. GORE & ASSOCIATES. UNAUTHORIZED USE IS STRICTLY PROHIBITED PURSUANT TO COPYRIGHT, TRADEMARK AND OTHER APPLICABLE LAWS.

GORE™ Surveys for Environmental Site Assessment

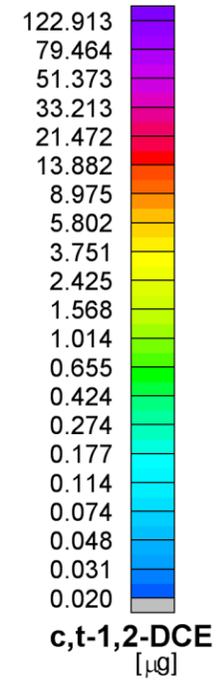
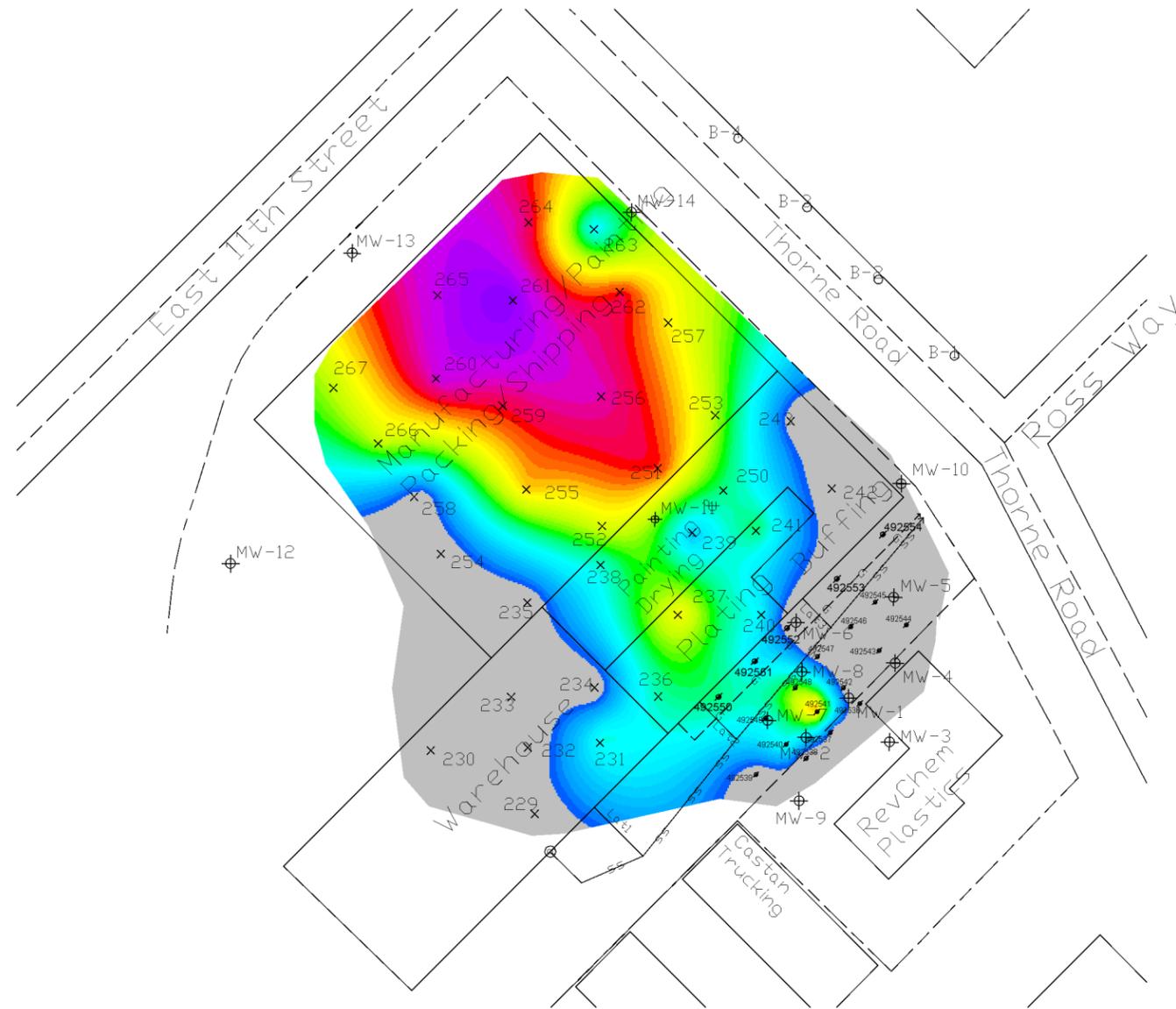
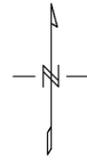


W.L. GORE & ASSOCIATES, INC.

100 CHESAPEAKE BOULEVARD  
ELKTON, MD, USA 21921  
USA  
(410) 392-7600

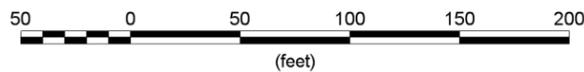
Pacific Crest Environmental  
Former Sound Mattress and Felt Co.  
Trichloroethene

DATE DRAWN: 2009 Sept 22	DRAWN BY: HGT	ORIG. CAD: Site Plan_SV locs.dwg	SITE CODE: FAQ
REV. DATE:	REV. #:	PROJECT NUMBER: 20093060	



× 254	Soil Vapor Survey Module Location Sept. 2009	—	Road
492549	Soil Vapor Survey Module Location	—	Building Exterior
⊕ MW-9	Groundwater Monitoring Well	—G—	Gas Line
B-4	Soil Boring	- - -	Property Boundary
@	Sewer Cleanout	Plating	Pre-1965 Operations
-SS-	Sanitary Sewer		

Scale 1:1000



GORE and designs are trademarks of W.L. GORE & Associates  
 THIS DRAWING AND ANY OF ITS ATTACHMENTS HAVE BEEN PRODUCED FOR THE SOLE USE OF THE RECIPIENT IDENTIFIED HEREIN AND MUST NOT BE USED, REPRODUCED OR MODIFIED IN ANY WAY WITHOUT THE PRIOR WRITTEN CONSENT OF W.L. GORE & ASSOCIATES. UNAUTHORIZED USE IS STRICTLY PROHIBITED PURSUANT TO COPYRIGHT, TRADEMARK AND OTHER APPLICABLE LAWS.

GORE™ Surveys for Environmental Site Assessment



W.L. GORE & ASSOCIATES, INC.

100 CHESAPEAKE BOULEVARD  
 ELKTON, MD, USA 21921  
 USA  
 (410) 392-7600

Pacific Crest Environmental  
 Former Sound Mattress and Felt Co.  
 cis- & trans-1,2-Dichloroethene

DATE DRAWN: 2009 Sept 22	DRAWN BY: HGT	ORIG. CAD: Site Plan_SV locs.dwg	SITE CODE: FAQ
REV. DATE:	REV. #:	PROJECT NUMBER: 20093060	

**W. L. GORE & ASSOCIATES, INC.**  
100 Chesapeake Blvd. • P.O. Box 10  
Elkton, MD 21922-0010  
Phone: 410.392.7600 • 800.432.7998  
Fax: 410.506.4780

[gore.com/surveys](http://gore.com/surveys)

**SALES OFFICES:**  
Europe: +49.89.4612.2198  
San Francisco: 415.648.0438  
Email: [environmental@wlgore.com](mailto:environmental@wlgore.com)



**APPENDIX E  
INDOOR AIR SAMPLING REPORT**

**REMEDIAL INVESTIGATION REPORT**

**Former Sound Mattress and Felt Property  
1940 East 11<sup>th</sup> Street  
Tacoma, Washington**

**Pacific Crest PN: 110-001**

Stephen Frost, MSPH, CIH  
Occupational Health and Safety Consultant  
155 Aloha St., Suite 303  
Seattle, WA 98109  
Office: (206) 284-8857 / Cell: (206) 214-8990

July 16, 2009

Mr. Scott Hooton  
P.O. Box 1837  
Tacoma, WA 98401-1837

RECEIVED  
JUL 21 2009  
ENVIRONMENTAL DEPT.

**SUBJ:** Results of Organic Vapor Sampling at Brown & Haley Candy Distribution Facility, Tacoma, WA.

### Introduction

On 6-17-09, organic vapor air samples were collected at two locations within the Brown & Haley Candy Distribution Facility located at 1940 East 11<sup>th</sup> Street, Tacoma, WA. This sampling survey was initiated by concerns that certain chlorinated solvents contained within a shallow aquifer that underlies the site may be migrating as vapors through the site soils and contaminating the air inside of the building. A prior environmental assessment of the site conducted by Pacific Crest Environmental identified trichloroethene (TCE), tetrachloroethene (PCE), dichloroethene (DCE), and vinyl chloride, as the primary contaminants of concern. They further recommended that continuous, 24 hr. air samples be collected in the warehouse and main office area of the building using EPA approved sampling methods to determine if measurable concentrations of these solvent vapors could be detected. In the absence of apparent solvent sources within the building, positive sampling results would support a soil-vapor migration hypothesis.

Because the Brown & Haley facility is also an occupational work environment, the aforementioned air sampling was duplicated using National Institute of Occupational Safety and Health (NIOSH) approved sampling methods. These sampling methodologies, as well, as the results of the air sampling survey are discussed below.

### Methodology

Two, continuous, 24 hour air samples were collected inside the distribution facility using 6 liter Summa canisters as per USEPA Method TO-15 SIM. One sample was located on a five foot high bookshelf in the main hallway servicing the office area in the northwest corner of the building (see Fig. 1). Another sample was located in the southeast corner of the warehouse on a six foot high stack of pallets near a series of groundwater wells that were installed to monitor the contaminated aquifer underlying the property. One other Summa canister was placed on a picnic bench located outside on the southwest side of the warehouse to establish normal background levels for the contaminants of concern at the site.

Sampling began at approximately 8 am on 6-17-09 and continued until 8 am the next day. The Summa canisters were then sealed and sent to Air Toxics Laboratories in Folsom,

CA for analysis. The results of their analysis are discussed below with their original analytical report included in Attachment 1.

Duplicate air samples using NIOSH Method 1003 were also collected side-by-side with the Summa canisters to provide air monitoring data that are comparable to occupational exposure standards, such as, OSHA Permissible Exposure Limits. This sampling methodology involved the use of low flow air sampling pumps to draw a continuous sample of air through 150 mg charcoal tubes to adsorb the contaminants from the air over an eight hour period (normal work shift). At the end of the sampling period, the tubes were sealed and sent to Galson Laboratories – an AIHA Accredited Laboratory - for analysis. Their sampling report is included in Attachment 2.

It should be noted that occupational exposure monitoring normally involves having potentially exposed workers wear the actual charcoal tube sampling device mentioned above for their 8 Hr. work shift. Although the sampling done in this case involved stationary, or area sampling, the data is generally representative of actual exposures that would occur for those employees working at the sample locations for their entire shift.

### Results

Table 1 summarizes the results of the charcoal tube sampling that was conducted in the warehouse and main office area as per NIOSH approved methods. These results are generally comparable to OSHA Permissible Exposure Limits as they were collected over a representative, 8 hour work shift and therefore approximate the exposures that would have been incurred by employees working in the sampled areas.

The data clearly shows that all sample results were below the limit of detection for the analytical method used to analyze the samples. They were also orders of magnitude below the permissible exposure limit for each contaminant of concern. Furthermore, no significant differences in airborne concentrations were noted between the sample collected outside and those collected indoors.

Table 1: 8 Hr. Time Weight Average Charcoal Tube Sample Results

Sample #	Location	Contaminant	TWA <sub>8</sub> Conc. (ppm) <sup>1</sup>	PEL-TWA <sub>8</sub> (ppm) <sup>2</sup>
BH6170904	Outside on picnic bench on southwest side of building.	Vinyl Chloride	< 0.008	1.0
		1,2-Dichloroethene	< 0.078	200
		Trichloroethene	< 0.03	100
		Tetrachloroethene	< 0.02	100
BH6170905	On bookshelf in hallway at northwest corner of main office area.	Vinyl Chloride	< 0.008	1.0
		1,2-Dichloroethene	< 0.077	200
		Trichloroethene	< 0.03	100
		Tetrachloroethene	< 0.02	100
BH6170906	On stack of pallets at southeast corner of warehouse.	Vinyl Chloride	< 0.008	1.0
		1,2-Dichloroethene	< 0.075	200
		Trichloroethene	< 0.03	100
		Tetrachloroethene	< 0.02	100

<sup>1</sup> TWA<sub>8</sub> Conc. – Measured eight hour time-weighted-average concentration expressed in parts per million.

<sup>2</sup> PEL-TWA<sub>8</sub> – OSHA Permissible Exposure Limit – eight hour time-weighted-average conc. expressed in parts per million.

(<) Denotes the minimum detectable concentration, expressed in parts per million, for the contaminant of concern.

Table 2 summarizes the results of the Summa canister air sampling that was conducted over a 24 hour period in accordance with EPA sampling method TO-15 SIM. It should be noted that the Summa sampling protocol is significantly different than the charcoal tube sampling method discussed above and, as such, the results of these two methods are not directly comparable. With the EPA method, Summa sampling is conducted over a 24 hour period, detection limits are much lower than the charcoal tube method, results are expressed in parts per billion (ppb), and the purpose of the sampling is to assess the possible migration of contaminant vapors into the building - not evaluate their exposure risks to workers.

And to this end, the data show that none of the contaminants of concern were found at measurable concentrations outside of the building while trichloroethene and tetrachloroethene were detected in the office and warehouse areas at concentrations that ranged from 0.10 to 3.7 ppb. cis-1,2-Dichloroethene was also detected in the office area at a concentration of 0.039 ppb.

Table 2: 24 Hr. Summa Canister Sample Results as per EPA Method TO-15

Sample #	Location	Contaminant	24 Hr. Aver. Conc. (ppb)
BH6170901	Outside on picnic bench on southwest side of building.	Vinyl Chloride	< 0.020
		cis-1,2-Dichloroethene	< 0.039
		trans-1,2-Dichloroethene	< 0.20
		Trichloroethene	< 0.039
		Tetrachloroethene	< 0.039
BH6170902	On bookshelf in hallway at northwest corner of main office area.	Vinyl Chloride	< 0.017
		cis-1,2-Dichloroethene	0.039
		trans-1,2-Dichloroethene	< 0.17
		Trichloroethene	0.10
		Tetrachloroethene	0.92
BH6170903	On stack of pallets at southeast corner of warehouse.	Vinyl Chloride	< 0.018
		cis-1,2-Dichloroethene	< 0.035
		trans-1,2-Dichloroethene	< 0.18
		Trichloroethene	0.22
		Tetrachloroethene	3.7

<sup>1</sup> 24 Hr, Aver. Conc. – Measured 24 hour average concentration expressed in parts per billion.

(<) Denotes the minimum detectable concentration, expressed in parts per billion, for the contaminant of concern.

EPA Method TO-15 includes analyses for 13 other substances in addition to those listed above (see lab report found in Attachment 1). However, it is beyond the scope of this study to discuss the results of those additional substances as they were not identified as contaminants of concern by the lead environmental assessor or evaluate the non-occupational exposure risks to the building occupants for any of the contaminants sampled.

### Conclusion

There were no apparent sources of solvent contamination in the areas sampled. The fact that three of the five contaminants of concern (cis-DCE, TCE, and PCE) known to be associated with the underlying aquifer were detected inside the Brown & Haley facility suggests that solvent vapors could possibly be migrating through the site soils and entering the building. This notion is supported by the fact that none of the target solvents

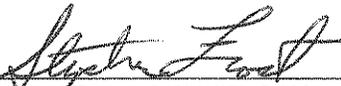
were detected outside of the building and that TCE and PCE vapor concentrations measured directly above the monitoring well field inside the warehouse were much higher than those vapor concentrations found further away in the building's office area.

It should be stressed, however, that this notion is by no means certain. Only three samples were collected in this study at widely separated and distinct locations. Furthermore, measured vapor concentrations were very low (ppb range) and subject to local variations in temperature, airflow, surrounding work activities, and building construction. These sampling results are therefore preliminary and indicate the need for further testing to more completely evaluate the issue.

The data also show that although solvent vapors were detected inside the building, their concentrations were well below Permissible Exposure Limits and, as such, do not pose an occupational exposure risk to site workers. This conclusion assumes that the building occupants are healthy adult workers who spend an average of 8 hrs/day, 40 hrs/week at their jobs in accordance with the definition of permissible exposure limits.

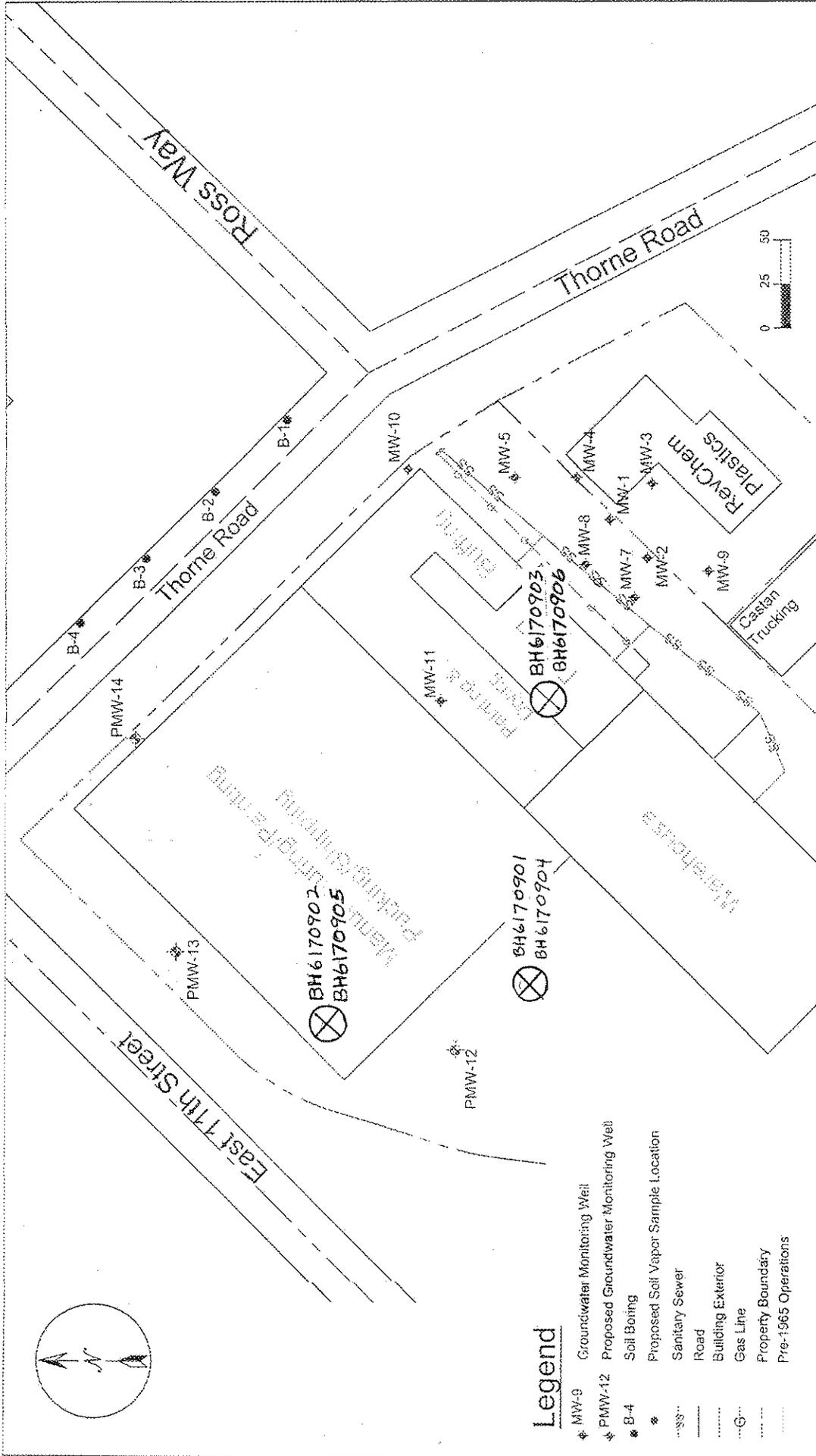
In summary, additional environmental monitoring is recommended to further evaluate the possible migration of solvent vapors into the Brown & Haley Distribution Facility from the site soils underlying the building. Additional occupational exposure monitoring, however, is not indicated as vapor concentrations measured inside the building were well below legal exposure limits.

Respectfully Submitted By:

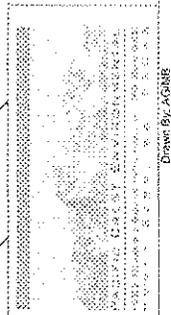
  
\_\_\_\_\_  
Stephen Frost, MSPH, CIH

**FIGURE 1**

Air Sampling Locations



**Figure 1**  
**Site Plan with Proposed Monitoring Wells and**  
**AIR Sampling Locations**  
 Sound Mattress and Felt Company Property/Shaub-Elison Property  
 1340 East 11th Street/132 Thorne Road Tacoma, Washington  
 Date: 9/04/29 Project Number: 1167001  
 Checked by: EC  
 Drawn by: AGAB



**Legend**

- ◆ MW-9 Groundwater Monitoring Well
- ◆ PMW-12 Proposed Groundwater Monitoring Well
- ◆ B-4 Soil Boring
- ◆ Proposed Soil Vapor Sample Location
- SS--- Sanitary Sewer
- R--- Road
- G--- Building Exterior
- G--- Gas Line
- P--- Property Boundary
- Pre-1965 Operations

## **ATTACHMENT 1**

Analytical Results from Air Toxics Laboratories



Client Sample ID: SAMPLE#BH6170901(OUTSIDE AT SW-SIDE of BLDG)

Lab ID#: 0906550-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	z063019sim	Date of Collection:	6/17/09 8:36:00 AM
Dil. Factor:	1.96	Date of Analysis:	7/1/09 05:40 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.020	Not Detected	0.050	Not Detected
1,1-Dichloroethene	0.020	Not Detected	0.078	Not Detected
1,1-Dichloroethane	0.039	Not Detected	0.16	Not Detected
cis-1,2-Dichloroethene	0.039	Not Detected	0.16	Not Detected
1,1,1-Trichloroethane	0.039	Not Detected	0.21	Not Detected
Benzene	0.098	0.14	0.31	0.44
1,2-Dichloroethane	0.039	Not Detected	0.16	Not Detected
Trichloroethene	0.039	Not Detected	0.21	Not Detected
Toluene	0.039	0.30	0.15	1.1
1,1,2-Trichloroethane	0.039	Not Detected	0.21	Not Detected
Tetrachloroethene	0.039	Not Detected	0.26	Not Detected
Ethyl Benzene	0.039	0.040	0.17	0.17
m,p-Xylene	0.078	0.10	0.34	0.45
o-Xylene	0.039	0.047	0.17	0.20
1,1,2,2-Tetrachloroethane	0.039	Not Detected	0.27	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.71	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	91	70-130



Client Sample ID: SAMPLE#BH6170902(NW CORNER of OFFICE)

Lab ID#: 0906550-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	z063020sim	Date of Collection:	6/17/09 7:55:00 AM
Dil. Factor:	1.68	Date of Analysis:	7/1/09 06:16 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.017	Not Detected	0.043	Not Detected
1,1-Dichloroethene	0.017	Not Detected	0.067	Not Detected
1,1-Dichloroethane	0.034	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.034	0.039	0.13	0.16
1,1,1-Trichloroethane	0.034	0.70	0.18	3.8
Benzene	0.084	0.16	0.27	0.51
1,2-Dichloroethane	0.034	Not Detected	0.14	Not Detected
Trichloroethene	0.034	0.10	0.18	0.56
Toluene	0.034	0.71	0.13	2.7
1,1,2-Trichloroethane	0.034	Not Detected	0.18	Not Detected
Tetrachloroethene	0.034	0.92	0.23	6.2
Ethyl Benzene	0.034	0.097	0.14	0.42
m,p-Xylene	0.067	0.28	0.29	1.2
o-Xylene	0.034	0.11	0.14	0.47
1,1,2,2-Tetrachloroethane	0.034	Not Detected	0.23	Not Detected
trans-1,2-Dichloroethene	0.17	Not Detected	0.67	Not Detected
Methyl tert-butyl ether	0.17	Not Detected	0.60	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	103	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	90	70-130



Client Sample ID: SAMPLE#BH6170903(SE CORNER of WAREHOUSE)

Lab ID#: 0906550-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	z063021sim	Date of Collection:	6/17/09 8:15:00 AM
Dil. Factor:	1.75	Date of Analysis:	7/1/09 06:57 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	1.9	0.19	10
Benzene	0.088	0.43	0.28	1.4
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.22	0.19	1.2
Toluene	0.035	3.1	0.13	12
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	3.7	0.24	25
Ethyl Benzene	0.035	0.30	0.15	1.3
m,p-Xylene	0.070	0.97	0.30	4.2
o-Xylene	0.035	0.33	0.15	1.4
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	88	70-130

## **ATTACHMENT 2**

Analytical Results from Galson Laboratories

LABORATORY ANALYSIS REPORT



6601 Kirkville Road  
 East Syracuse, NY 13057  
 (315) 432-5227  
 FAX: (315) 437-0571  
 www.galsonlabs.com

Client : Stephen Frost & Associates  
 Site : Brown & Haley Warehouse  
 Project No. : Brown & Haley  
 Date Sampled : 17-JUN-09  
 Date Received : 25-JUN-09  
 Date Analyzed : 27-JUN-09 - 30-JUN-09  
 Report ID : 614619  
 Account No.: 17625  
 Login No. : L195446

Client ID : BH6170904      Lab ID : L195446-1      Air Volume : 32.9 Liter  
 Date Sampled : 06/17/09      Date Analyzed : 06/30/09

Parameter	LOQ ug	Front ug	Back ug	Total ug	Conc mg/m3	ppm
1,2-Dichloroethylene	10.	<10	<10	<10	<0.31	<0.078
Tetrachloroethylene	5	<5	<5	<5	<0.2	<0.02
Trichloroethylene	5	<5	<5	<5	<0.2	<0.03
Vinyl Chloride	0.7	<0.7	<0.7	<0.7	<0.02	<0.008

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media : 226-01

Submitted by: edv  
 Approved by : nkp  
 Date : 02-JUL-09    NYS DOH # : 11626  
 QC by: Tony D'Amico

< -Less Than                    mg -Milligrams                    m3 -Cubic Meters                    kg -Kilograms  
 > -Greater Than                ug -Micrograms                    l -Liters                            NS -Not Specified  
 NA -Not Applicable            ND -Not Detected                ppm -Parts per Million            LOQ-Limit of Quantitation

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.



East Syracuse, NY 13057  
(315) 432-5227

FAX: (315) 437-0571

www.galsonlabs.com

Client : Stephen Frost & Associates

Site : Brown & Haley Warehouse

Project No. : Brown & Haley

Date Sampled : 17-JUN-09

Account No.: 17625

Date Received : 25-JUN-09

Login No. : L195446

Date Analyzed : 27-JUN-09 - 30-JUN-09

Report ID : 614619

Client ID : BH6170905

Lab ID : L195446-2

Air Volume : 33.6 Liter

Date Sampled : 06/17/09

Date Analyzed : 06/30/09

Parameter	LOQ ug	Front ug	Back ug	Total ug	Conc mg/m3	ppm
1,2-Dichloroethylene	10.	<10	<10	<10	<0.30	<0.077
Tetrachloroethylene	5	<5	<5	<5	<0.2	<0.02
Trichloroethylene	5	<5	<5	<5	<0.2	<0.03
Vinyl Chloride	0.7	<0.7	<0.7	<0.7	<0.02	<0.008

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media : 226-01

Submitted by: edv

Approved by : nkp

Date : 02-JUL-09 NYS DOH # : 11626

QC by: Tony D'Amico

< -Less Than                    mg -Milligrams                    m3 -Cubic Meters                    kg -Kilograms  
> -Greater Than                  ug -Micrograms                    l -Liters                                NS -Not Specified  
NA -Not Applicable                ND -Not Detected                    ppm -Parts per Million                LOQ-Limit of Quantitation

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.



East Syracuse, NY 13057  
 (315) 432-5227  
 FAX: (315) 437-0571  
 www.galsonlabs.com

Client : Stephen Frost & Associates  
 Site : Brown & Haley Warehouse  
 Project No. : Brown & Haley  
 Date Sampled : 17-JUN-09  
 Date Received : 25-JUN-09  
 Date Analyzed : 27-JUN-09 - 30-JUN-09  
 Report ID : 614619  
 Account No.: 17625  
 Login No. : L195446

Client ID : BH6170906      Lab ID : L195446-3      Air Volume : 34.3 Liter  
 Date Sampled : 06/17/09      Date Analyzed : 06/30/09

Parameter	LOQ ug	Front ug	Back ug	Total ug	Conc mg/m3	ppm
1,2-Dichloroethylene	10.	<10	<10	<10	<0.30	<0.075
Tetrachloroethylene	5	<5	<5	<5	<0.2	<0.02
Trichloroethylene	5	<5	<5	<5	<0.2	<0.03
Vinyl Chloride	0.7	<0.7	<0.7	<0.7	<0.02	<0.008

COMMENTS: Please see attached lab footnote report for any applicable footnotes.

Collection Media : 226-01

Submitted by: edv  
 Approved by : nkp  
 Date : 02-JUL-09 NYS DOH # : 11626  
 QC by: Tony D'Amico

< -Less Than      mg -Milligrams      m3 -Cubic Meters      kg -Kilograms  
 > -Greater Than      ug -Micrograms      l -Liters      NS -Not Specified  
 NA -Not Applicable      ND -Not Detected      ppm -Parts per Million      LOQ-Limit of Quantitation

Field sampling was not performed by Galson. Galson presents results based on sampling data provided by clients.

7/9/2009

Mr. Scott Hooton  
Port of Tacoma  
1 Sitcum Way

Tacoma WA 98421

Project Name: BROWN & HALEY

Project #:

Workorder #: 0906550

Dear Mr. Scott Hooton

The following report includes the data for the above referenced project for sample(s) received on 6/23/2009 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 SIM are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Kelly Buettner  
Project Manager

**LABORATORY NARRATIVE  
Modified TO-15 SIM  
Port of Tacoma  
Workorder# 0906550**

Three 6 Liter Summa Canister (SIM Certified) samples were received on June 23, 2009. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

<i>Requirement</i>	<i>TO-15</i>	<i>ATL Modifications</i>
ICAL %RSD acceptance criteria	<=30% RSD with 2 compounds allowed out to < 40% RSD	Project specific; default criteria is <=30% RSD with 10% of compounds allowed out to < 40% RSD
Daily Calibration	+/- 30% Difference	Project specific; default criteria is <= 30% Difference with 10% of compounds allowed out up to <=40%.; flag and narrate outliers
Blank and standards	Zero air	Nitrogen
Method Detection Limit	Follow 40CFR Pt.136 App. B	The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases

**Receiving Notes**

The Chain of Custody (COC) information for samples SAMPLE#BH6170901(OUTSIDE AT SW-SIDE of BLDG), SAMPLE#BH6170902(NW CORNER of OFFICE) and SAMPLE#BH6170903(SE CORNER of WAREHOUSE) did not match the entries on the sample tags with regard to sample identification. Therefore the information on the COC was used to process and report the samples.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.



**Summary of Detected Compounds  
MODIFIED EPA METHOD TO-15 GC/MS SIM**

Client Sample ID: SAMPLE#BH6170901(OUTSIDE AT SW-SIDE of BLDG)

Lab ID#: 0906550-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	0.098	0.14	0.31	0.44
Toluene	0.039	0.30	0.15	1.1
Ethyl Benzene	0.039	0.040	0.17	0.17
m,p-Xylene	0.078	0.10	0.34	0.45
o-Xylene	0.039	0.047	0.17	0.20

Client Sample ID: SAMPLE#BH6170902(NW CORNER of OFFICE)

Lab ID#: 0906550-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
cis-1,2-Dichloroethene	0.034	0.039	0.13	0.16
1,1,1-Trichloroethane	0.034	0.70	0.18	3.8
Benzene	0.084	0.16	0.27	0.51
Trichloroethene	0.034	0.10	0.18	0.56
Toluene	0.034	0.71	0.13	2.7
Tetrachloroethene	0.034	0.92	0.23	6.2
Ethyl Benzene	0.034	0.097	0.14	0.42
m,p-Xylene	0.067	0.28	0.29	1.2
o-Xylene	0.034	0.11	0.14	0.47

Client Sample ID: SAMPLE#BH6170903(SE CORNER of WAREHOUSE)

Lab ID#: 0906550-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
1,1,1-Trichloroethane	0.035	1.9	0.19	10
Benzene	0.088	0.43	0.28	1.4
Trichloroethene	0.035	0.22	0.19	1.2
Toluene	0.035	3.1	0.13	12
Tetrachloroethene	0.035	3.7	0.24	25
Ethyl Benzene	0.035	0.30	0.15	1.3
m,p-Xylene	0.070	0.97	0.30	4.2
o-Xylene	0.035	0.33	0.15	1.4

Client Sample ID: SAMPLE#BH6170903(SE CORNER of WAREHOUSE) Lab Duplicate

Lab ID#: 0906550-03AA



Client Sample ID: SAMPLE#BH6170901(OUTSIDE AT SW-SIDE of BLDG)

Lab ID#: 0906550-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	z063019sim	Date of Collection:	6/17/09 8:36:00 AM
Dil. Factor:	1.96	Date of Analysis:	7/1/09 05:40 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.020	Not Detected	0.050	Not Detected
1,1-Dichloroethene	0.020	Not Detected	0.078	Not Detected
1,1-Dichloroethane	0.039	Not Detected	0.16	Not Detected
cis-1,2-Dichloroethene	0.039	Not Detected	0.16	Not Detected
1,1,1-Trichloroethane	0.039	Not Detected	0.21	Not Detected
Benzene	0.098	0.14	0.31	0.44
1,2-Dichloroethane	0.039	Not Detected	0.16	Not Detected
Trichloroethene	0.039	Not Detected	0.21	Not Detected
Toluene	0.039	0.30	0.15	1.1
1,1,2-Trichloroethane	0.039	Not Detected	0.21	Not Detected
Tetrachloroethene	0.039	Not Detected	0.26	Not Detected
Ethyl Benzene	0.039	0.040	0.17	0.17
m,p-Xylene	0.078	0.10	0.34	0.45
o-Xylene	0.039	0.047	0.17	0.20
1,1,2,2-Tetrachloroethane	0.039	Not Detected	0.27	Not Detected
trans-1,2-Dichloroethene	0.20	Not Detected	0.78	Not Detected
Methyl tert-butyl ether	0.20	Not Detected	0.71	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	91	70-130



Client Sample ID: SAMPLE#BH6170903(SE CORNER of WAREHOUSE)

Lab ID#: 0906550-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	z063021sim	Date of Collection:	6/17/09 8:15:00 AM
Dil. Factor:	1.75	Date of Analysis:	7/1/09 06:57 AM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.018	Not Detected	0.045	Not Detected
1,1-Dichloroethene	0.018	Not Detected	0.069	Not Detected
1,1-Dichloroethane	0.035	Not Detected	0.14	Not Detected
cis-1,2-Dichloroethene	0.035	Not Detected	0.14	Not Detected
1,1,1-Trichloroethane	0.035	1.9	0.19	10
Benzene	0.088	0.43	0.28	1.4
1,2-Dichloroethane	0.035	Not Detected	0.14	Not Detected
Trichloroethene	0.035	0.22	0.19	1.2
Toluene	0.035	3.1	0.13	12
1,1,2-Trichloroethane	0.035	Not Detected	0.19	Not Detected
Tetrachloroethene	0.035	3.7	0.24	25
Ethyl Benzene	0.035	0.30	0.15	1.3
m,p-Xylene	0.070	0.97	0.30	4.2
o-Xylene	0.035	0.33	0.15	1.4
1,1,2,2-Tetrachloroethane	0.035	Not Detected	0.24	Not Detected
trans-1,2-Dichloroethene	0.18	Not Detected	0.69	Not Detected
Methyl tert-butyl ether	0.18	Not Detected	0.63	Not Detected

Container Type: 6 Liter Summa Canister (SIM Certified)

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	105	70-130
Toluene-d8	104	70-130
4-Bromofluorobenzene	88	70-130



Client Sample ID: Lab Blank

Lab ID#: 0906550-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

File Name:	z063008sim	Date of Collection:	NA
Dil. Factor:	1.00	Date of Analysis:	6/30/09 05:03 PM

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Vinyl Chloride	0.010	Not Detected	0.026	Not Detected
1,1-Dichloroethene	0.010	Not Detected	0.040	Not Detected
1,1-Dichloroethane	0.020	Not Detected	0.081	Not Detected
cis-1,2-Dichloroethene	0.020	Not Detected	0.079	Not Detected
1,1,1-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Benzene	0.050	Not Detected	0.16	Not Detected
1,2-Dichloroethane	0.020	Not Detected	0.081	Not Detected
Trichloroethene	0.020	Not Detected	0.11	Not Detected
Toluene	0.020	Not Detected	0.075	Not Detected
1,1,2-Trichloroethane	0.020	Not Detected	0.11	Not Detected
Tetrachloroethene	0.020	Not Detected	0.14	Not Detected
Ethyl Benzene	0.020	Not Detected	0.087	Not Detected
m,p-Xylene	0.040	Not Detected	0.17	Not Detected
o-Xylene	0.020	Not Detected	0.087	Not Detected
1,1,2,2-Tetrachloroethane	0.020	Not Detected	0.14	Not Detected
trans-1,2-Dichloroethene	0.10	Not Detected	0.40	Not Detected
Methyl tert-butyl ether	0.10	Not Detected	0.36	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	104	70-130
Toluene-d8	101	70-130
4-Bromofluorobenzene	93	70-130



Client Sample ID: LCS

Lab ID#: 0906550-06A

**MODIFIED EPA METHOD TO-15 GC/MS SIM**

<b>File Name:</b>	<b>z063005sim</b>	<b>Date of Collection:</b> NA
<b>Dil. Factor:</b>	<b>1.00</b>	<b>Date of Analysis:</b> 6/30/09 01:43 PM

Compound	%Recovery
Vinyl Chloride	124
1,1-Dichloroethene	128
1,1-Dichloroethane	122
cis-1,2-Dichloroethene	124
1,1,1-Trichloroethane	115
Benzene	113
1,2-Dichloroethane	129
Trichloroethene	106
Toluene	127
1,1,2-Trichloroethane	125
Tetrachloroethene	116
Ethyl Benzene	126
m,p-Xylene	130
o-Xylene	129
1,1,2,2-Tetrachloroethane	117
trans-1,2-Dichloroethene	122
Methyl tert-butyl ether	124

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
1,2-Dichloroethane-d4	102	70-130
Toluene-d8	110	70-130
4-Bromofluorobenzene	92	70-130

**APPENDIX F  
CLEANUP LEVEL CALCULATION WORKSHEETS  
AND EXCESS RISK CALCULATION**

**REMEDIAL INVESTIGATION REPORT**

**Former Sound Mattress and Felt Property  
1940 East 11<sup>th</sup> Street  
Tacoma, Washington**

**Pacific Crest PN: 110-001**

**Appendix F - Table 1**  
**Site Excess Cancer Risk Worksheet - Groundwater and Air**  
**Former Sound Mattress and Felt Company Property**  
**Tacoma, Washington**  
**Pacific Crest PN: 110-001**

**Groundwater**

Contaminant of Concern	Method A Cleanup Level (ug/L)	Method B Cleanup Level (ug/L)	Method C Cleanup Level (ug/L)	Cleanup Level Adjusted for Site Excess Cancer Risk (ug/L)	Excess Cancer Risk Values
Tetrachloroethene	5	0.4	9.7	7.76	8.00E-06
Trichloroethene	5	6.7	165.5	16.55	1.00E-06
Vinyl Chloride	0.2	3.7	90	9	1.00E-06

**Total Site Excess Cancer Risk      1.00E-05**

**Air**

Contaminant of Concern	Method A Cleanup Level (ug/L)	Method B Cleanup Level (ug/m <sup>3</sup> )	Method C Cleanup Level (ug/m <sup>3</sup> )	Cleanup Level Adjusted for Site Excess Cancer Risk (ug/m <sup>3</sup> )	Excess Cancer Risk Values
Tetrachloroethene	--	0.42	14.6	6.57	4.50E-06
Trichloroethene	--	0.1	3.45	1.55	4.50E-06
Vinyl Chloride	--	0.28	9.9	0.99	1.00E-06

**Total Site Excess Cancer Risk      1.00E-05**

**MTCA Cleanup Level Calculations - Carcinogen**

Site Name            Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern:    COC := "PCE"

Unit Conversion  
Factor                     $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method B Surface Water Cleanup Level Calculation**Default ValuesCancer Risk (WAC 173-340-730 -  
Equation 730-2)                     $\text{RISK} := \frac{1}{1000000}$ Averaging Time (WAC  
173-340-730 Equation 730-2)                     $\text{AT} := 75 \cdot \text{yr}$ Chemical Specific ValuesBioconcentration Factor  
(WAC 1730340-708(9))                     $\text{BCF} := 31 \cdot \frac{\text{liter}}{\text{kg}}$ Carcinogenic Potency Factor (WAC  
173-340-708(8) and CLARC  
database)                     $\text{CPF} := 0.54 \cdot \frac{\text{kg} \cdot \text{day}}{\text{mg}}$ Area Specific Toxicology ValuesAverage Body Weight - MTCA                     $\text{ABW} := 70 \cdot \text{kg}$ Fish Consumption Rate - MTCA                     $\text{FCR} := 54 \cdot \frac{\text{gm}}{\text{day}}$ Fish Diet Fraction - MTCA                     $\text{FDF} := 0.5$ Exposure Duration                     $\text{ED} := 30 \cdot \text{yr}$ MTCA Cleanup Level EquationMTCA Method B Surface Water  
Cleanup Level for Carcinogen  
Equation 730-2                     $\text{CUL}_{\text{sw}} := \frac{\text{RISK} \cdot \text{ABW} \cdot \text{AT}}{\text{CPF} \cdot \text{BCF} \cdot \text{FCR} \cdot \text{FDF} \cdot \text{ED}}$ 

$$\text{CUL}_{\text{sw}} = 0.4 \cdot \frac{\mu\text{g}}{\text{liter}}$$

MTCA Method B - value to  
achieve 1/100,000 cancer risk for  
site - See Appedix F - Table 1.

$$\text{CUL}_{\text{sw}} := 3.2 \cdot \frac{\mu\text{g}}{\text{liter}}$$

**MTCA Cleanup Level Calculations**

Site Name Site = "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC = "PCE"

**MTCA Method B Soil Cleanup Level Calculation - Protective of Surface Water**Default Values

Dilution Factor (WAC 173-340-747 - Equation 747-1) DF := 20 Unsaturated soil

Soil Organic Carbon-Water partitioning coefficient (WAC 173-340-747(4)(c))

$$K_{oc} := 270 \cdot \frac{\text{mL}}{\text{gm}}$$

$$f_{oc} := .007$$

Distribution Coefficient (WAC 173-340-747(c)(ii) for Metals use Kd values from Table 747-3)

$$K_d := K_{oc} \cdot f_{oc} \quad K_d = 1.89 \cdot \frac{\text{liter}}{\text{kg}}$$

Water filled soil porosity (WAC 173-340-747 Equation 747-1)

$$\theta_w := .3$$

Air filled soil porosity (WAC 173-340-747 Equation 747-1)

$$\theta_a := 0.13$$

Henry's Law Constant (WAC 173-340-747(d) - Table 747-4 or for Metals use Hcc value of 0)

$$H_{cc} := 0.75$$

Dry soil bulk density (WAC 173-340-747 Equation 747-1)

$$\rho_b := 1.5 \cdot \frac{\text{kg}}{\text{liter}}$$

MTCA Cleanup Level Equation

MTCA Method B Soil Cleanup Level for Carcinogen Protective of Groundwater (3-phase partition model) Equation 747-1

$$CUL_{soil} := CUL_{sw} \cdot DF \cdot \left[ K_d + \frac{(\theta_w + \theta_a \cdot H_{cc})}{\rho_b} \right]$$

$$CUL_{soil} = 0.138 \cdot \frac{\text{mg}}{\text{kg}}$$

**Adjustment for Natural Background and PQL considerations**

Site Name Site = "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC = "PCE"

**Final MTCA Method B Modified Cleanup Levels**

Site Name Site = "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC = "PCE"

CUL for Soil  $CUL_{soil} = 0.138 \cdot \frac{mg}{kg}$ CUL for Groundwater  $CUL_{sw} = 3.2 \cdot \frac{\mu g}{liter}$ **References**

1. *Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340*
2. *CLARC Database*

**MTCA Cleanup Level Calculations - Carcinogen**

Site Name            Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern:    COC := "TCE"

Unit Conversion  
Factor                     $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method B Surface Water Cleanup Level Calculation**Default ValuesCancer Risk (WAC 173-340-730 -  
Equation 730-2)                     $\text{RISK} := \frac{1}{1000000}$ Averaging Time (WAC  
173-340-730 Equation 730-2)                     $\text{AT} := 75 \cdot \text{yr}$ Chemical Specific ValuesBioconcentration Factor  
(WAC 1730340-708(9))                     $\text{BCF} := 11 \cdot \frac{\text{liter}}{\text{kg}}$ Carcinogenic Potency Factor (WAC  
173-340-708(8) and CLARC  
database)                     $\text{CPF} := 0.089 \cdot \frac{\text{kg} \cdot \text{day}}{\text{mg}}$ Area Specific Toxicology ValuesAverage Body Weight - MTCA                     $\text{ABW} := 70 \cdot \text{kg}$ Fish Consumption Rate - MTCA                     $\text{FCR} := 54 \cdot \frac{\text{gm}}{\text{day}}$ Fish Diet Fraction - MTCA                     $\text{FDF} := 0.5$ Exposure Duration                     $\text{ED} := 30 \cdot \text{yr}$ MTCA Cleanup Level EquationMTCA Method B Surface Water  
Cleanup Level for Carcinogen  
Equation 730-2                     $\text{CUL}_{\text{sw}} := \frac{\text{RISK} \cdot \text{ABW} \cdot \text{AT}}{\text{CPF} \cdot \text{BCF} \cdot \text{FCR} \cdot \text{FDF} \cdot \text{ED}}$ 

$$\text{CUL}_{\text{sw}} = 6.621 \cdot \frac{\mu\text{g}}{\text{liter}}$$

**MTCA Cleanup Level Calculations**

Site Name Site = "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC = "TCE"

**MTCA Method B Soil Cleanup Level Calculation - Protective of Surface Water**Default Values

Dilution Factor (WAC 173-340-747 - Equation 747-1) DF := 20 Unsaturated soil

Soil Organic Carbon-Water partitioning coefficient (WAC 173-340-747(4)(c))

$$K_{oc} := 94 \cdot \frac{\text{mL}}{\text{gm}}$$

$$f_{oc} := .007$$

Distribution Coefficient (WAC 173-340-747(c)(ii) for Metals use Kd values from Table 747-3)

$$K_d := K_{oc} \cdot f_{oc} \quad K_d = 0.658 \cdot \frac{\text{liter}}{\text{kg}}$$

Water filled soil porosity (WAC 173-340-747 Equation 747-1)

$$\theta_w := .3$$

Air filled soil porosity (WAC 173-340-747 Equation 747-1)

$$\theta_a := 0.13$$

Henry's Law Constant (WAC 173-340-747(d) - Table 747-4 or for Metals use Hcc value of 0)

$$H_{cc} := 0.422$$

Dry soil bulk density (WAC 173-340-747 Equation 747-1)

$$\rho_b := 1.5 \cdot \frac{\text{kg}}{\text{liter}}$$

MTCA Cleanup Level Equation

MTCA Method B Soil Cleanup Level for Carcinogen Protective of Groundwater (3-phase partition model) Equation 747-1

$$CUL_{soil} := CUL_{sw} \cdot DF \cdot \left[ K_d + \frac{(\theta_w + \theta_a \cdot H_{cc})}{\rho_b} \right]$$

$$CUL_{soil} = 0.118 \cdot \frac{\text{mg}}{\text{kg}}$$

### Adjustment for Natural Background and PQL considerations

Site Name Site = "Former Sound Mattress & Felt"

Chemical of Concern: COC = "TCE"

#### Applicable Values

Background (Ecology Natural Background Value - Puget Sound)

$$NB := 0 \cdot \frac{\text{mg}}{\text{kg}}$$

Cleanup level for soil shall not exceed natural background value (WAC-173-340-745(6)(c))

$$CUL_{\text{soil}} := \text{if}(NB > CUL_{\text{soil}}, NB, CUL_{\text{soil}})$$

$$CUL_{\text{soil}} = 0.118 \cdot \frac{\text{mg}}{\text{kg}}$$

Cleanup level for groundwater must be adjusted to reflect change in soil cleanup level (WAC 173-340-730 (5)(c))

$$CUL_{\text{sw}} := \frac{CUL_{\text{soil}}}{DF \cdot \left[ K_d + \frac{(\theta_w + \theta_a \cdot H_{cc})}{\rho_b} \right]}$$

$$CUL_{\text{sw}} = 6.62 \cdot \frac{\mu\text{g}}{\text{liter}}$$

### Final MTCA Method B Modified Cleanup Levels

Site Name Site = "Former Sound Mattress & Felt"

Chemical of Concern: COC = "TCE"

CUL for Soil  $CUL_{\text{soil}} = 0.118 \cdot \frac{\text{mg}}{\text{kg}}$

CUL for Groundwater  $CUL_{\text{sw}} = 6.62 \cdot \frac{\mu\text{g}}{\text{liter}}$

### References

1. Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340
2. CLARC Database

**MTCA Cleanup Level Calculations - Non-Carcinogen**

Site Name            Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern:    COC := "cis-1,2-DCE"

Unit Conversion  
Factor                     $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method B Surface Water Cleanup Level Calculation**Default ValuesHazard Quotient (WAC 173-340-730 -  
Equation 730-1)                    HQ := 1Averaging Time (WAC  
173-340-730 Equation 730-1)                    AT := 30·yrExposure Duration (WAC  
173-340-730 Equation 730-1)                    ED := 30·yrChemical Specific ValuesBioconcentration Factor  
(WAC 173-340-708(9))                     $\text{BCF} := 5 \cdot \frac{\text{liter}}{\text{kg}}$                     <http://toxnet.nlm.nih.gov>Reference Dose (WAC  
173-340-708(7) and CLARC  
database)                     $\text{RfD} := .01 \cdot \frac{\text{mg}}{\text{kg} \cdot \text{day}}$ Area Specific Toxicology ValuesAverage Body Weight - WAC  
173-340-730 Equation 730-1                    ABW := 70·kgFish Consumption Rate - WAC  
173-340-730 Equation 730-1                     $\text{FCR} := 54 \cdot \frac{\text{gm}}{\text{day}}$ Fish Diet Fraction - WAC  
173-340-730 Equation 730-1                    FDF := 0.5MTCA Cleanup Level EquationMTCA Method B Surface Water  
Cleanup Level for Non-Carcinogen  
Equation 730-1                     $\text{CUL}_{\text{sw}} := \frac{\text{RfD} \cdot \text{ABW} \cdot \text{AT} \cdot \text{HQ}}{\text{BCF} \cdot \text{FCR} \cdot \text{FDF} \cdot \text{ED}}$ 

$$\text{CUL}_{\text{sw}} = 5.2 \cdot \frac{\text{mg}}{\text{liter}}$$

**MTCA Cleanup Level Calculations**

Site Name Site = "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC = "cis-1,2-DCE"

**MTCA Method B Soil Cleanup Level Calculation - Protective of Surface Water**Default Values

Dilution Factor (WAC 173-340-747 - Equation 747-1) DF := 20 Unsaturated soil

Soil Organic Carbon-Water partitioning coefficient (WAC 173-340-747(4)(c))  $K_{oc} := 36 \cdot \frac{\text{mL}}{\text{gm}}$ Fraction of organic carbon (WAC 173-340-747 Equation 747-2)  $f_{oc} := .001$ Distribution Coefficient (WAC 173-340-747(c)(i) Equation 747-2)  $K_d := K_{oc} \cdot f_{oc}$   $K_d = 0.036 \cdot \frac{\text{liter}}{\text{kg}}$ Water filled soil porosity (WAC 173-340-747 Equation 747-1)  $\theta_w := .3$ Air filled soil porosity (WAC 173-340-747 Equation 747-1)  $\theta_a := 0.13$ Henry's Law Constant (WAC 173-340-747(d))  $H_{cc} := .17$ Dry soil bulk density (WAC 173-340-747 Equation 747-1)  $\rho_b := 1.5 \cdot \frac{\text{kg}}{\text{liter}}$ MTCA Cleanup Level Equation

MTCA Method B Soil Cleanup Level for Non-Carcinogen Protective of Groundwater (3-phase partition model) Equation 747-1

$$CUL_{soil} := CUL_{sw} \cdot DF \cdot \left[ K_d + \frac{(\theta_w + \theta_a \cdot H_{cc})}{\rho_b} \right]$$

$$CUL_{soil} = 26 \cdot \frac{\text{mg}}{\text{kg}}$$

**Adjustment for Natural Background and PQL considerations**

Site Name                      Site = "Former Sound Mattress & Felt"

Chemical of Concern:    COC = "cis-1,2-DCE"

**Final MTCA Method B Modified Cleanup Levels**

Site Name                      Site = "Former Sound Mattress & Felt"

Chemical of Concern:    COC = "cis-1,2-DCE"

CUL for Soil                       $CUL_{soil} = 26 \cdot \frac{mg}{kg}$

CUL for Groundwater         $CUL_{sw} = 5.2 \cdot \frac{mg}{liter}$

**References**

1. *Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340*
2. *CLARC Database*
3. *Bioconcentration Factor - cis-1,2-DCE Factsheet - <http://toxnet.nlm.nih.gov>*

**MTCA Cleanup Level Calculations - Non-Carcinogen**

Site Name            Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern:    COC := "t-DCE"

Unit Conversion  
Factor                     $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method B Surface Water Cleanup Level Calculation**Default ValuesHazard Quotient (WAC 173-340-730 -  
Equation 730-1)                    HQ := 1Averaging Time (WAC  
173-340-730 Equation 730-1)                    AT := 30·yrExposure Duration (WAC  
173-340-730 Equation 730-1)                    ED := 30·yrChemical Specific ValuesBioconcentration Factor  
(WAC 173-340-708(9))                     $\text{BCF} := 1.6 \cdot \frac{\text{liter}}{\text{kg}}$ Reference Dose (WAC  
173-340-708(7) and CLARC  
database)                     $\text{RfD} := .02 \cdot \frac{\text{mg}}{\text{kg} \cdot \text{day}}$ Area Specific Toxicology ValuesAverage Body Weight - WAC  
173-340-730 Equation 730-1                    ABW := 70·kgFish Consumption Rate - WAC  
173-340-730 Equation 730-1                     $\text{FCR} := 54 \cdot \frac{\text{gm}}{\text{day}}$ Fish Diet Fraction - WAC  
173-340-730 Equation 730-1                    FDF := 0.5MTCA Cleanup Level EquationMTCA Method B Surface Water  
Cleanup Level for Non-Carcinogen  
Equation 730-1                     $\text{CUL}_{\text{sw}} := \frac{\text{RfD} \cdot \text{ABW} \cdot \text{AT} \cdot \text{HQ}}{\text{BCF} \cdot \text{FCR} \cdot \text{FDF} \cdot \text{ED}}$ 

$$\text{CUL}_{\text{sw}} = 32.4 \cdot \frac{\text{mg}}{\text{liter}}$$

**MTCA Cleanup Level Calculations**

Site Name Site = "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC = "t-DCE"

**MTCA Method B Soil Cleanup Level Calculation - Protective of Surface Water**Default Values

Dilution Factor (WAC 173-340-747 - Equation 747-1) DF := 20 Unsaturated soil

Soil Organic Carbon-Water partitioning coefficient (WAC 173-340-747(4)(c))  $K_{oc} := 38 \cdot \frac{\text{mL}}{\text{gm}}$ Fraction of organic carbon (WAC 173-340-747 Equation 747-2)  $f_{oc} := .001$ Distribution Coefficient (WAC 173-340-747(c)(i) Equation 747-2)  $K_d := K_{oc} \cdot f_{oc}$   $K_d = 0.038 \cdot \frac{\text{liter}}{\text{kg}}$ Water filled soil porosity (WAC 173-340-747 Equation 747-1)  $\theta_w := .3$ Air filled soil porosity (WAC 173-340-747 Equation 747-1)  $\theta_a := 0.13$ Henry's Law Constant (WAC 173-340-747(d))  $H_{cc} := .39$ Dry soil bulk density (WAC 173-340-747 Equation 747-1)  $\rho_b := 1.5 \cdot \frac{\text{kg}}{\text{liter}}$ MTCA Cleanup Level EquationMTCA Method B Soil Cleanup Level for Non-Carcinogen Protective of Groundwater (3-phase partition model) Equation 747-1 
$$CUL_{soil} := CUL_{sw} \cdot DF \cdot \left[ K_d + \frac{(\theta_w + \theta_a \cdot H_{cc})}{\rho_b} \right]$$

$$CUL_{soil} = 176.2 \cdot \frac{\text{mg}}{\text{kg}}$$

**Adjustment for Natural Background and PQL considerations**

Site Name                      Site = "Former Sound Mattress & Felt"

Chemical of Concern:    COC = "t-DCE"

**Final MTCA Method B Modified Cleanup Levels**

Site Name                      Site = "Former Sound Mattress & Felt"

Chemical of Concern:    COC = "t-DCE"

CUL for Soil                       $CUL_{soil} = 176 \cdot \frac{mg}{kg}$

CUL for Groundwater         $CUL_{sw} = 32.4 \cdot \frac{mg}{liter}$

**References**

1. *Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340*
2. *CLARC Database*

**MTCA Cleanup Level Calculations - Carcinogen**

Site Name            Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern:    COC := "Vinyl Chloride"

Unit Conversion  
Factor                     $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method B Surface Water Cleanup Level Calculation**Default ValuesCancer Risk (WAC 173-340-730 -  
Equation 730-2)                     $\text{RISK} := \frac{1}{1000000}$ Averaging Time (WAC  
173-340-730 Equation 730-2)                     $\text{AT} := 75 \cdot \text{yr}$ Chemical Specific ValuesBioconcentration Factor  
(WAC 1730340-708(9))                     $\text{BCF} := 1.2 \cdot \frac{\text{liter}}{\text{kg}}$ Carcinogenic Potency Factor (WAC  
173-340-708(8) and CLARC  
database)                     $\text{CPF} := 1.5 \cdot \frac{\text{kg} \cdot \text{day}}{\text{mg}}$ Area Specific Toxicology ValuesAverage Body Weight - MTCA                     $\text{ABW} := 70 \cdot \text{kg}$ Fish Consumption Rate - MTCA                     $\text{FCR} := 54 \cdot \frac{\text{gm}}{\text{day}}$ Fish Diet Fraction - MTCA                     $\text{FDF} := 0.5$ Exposure Duration                     $\text{ED} := 30 \cdot \text{yr}$ MTCA Cleanup Level EquationMTCA Method B Surface Water  
Cleanup Level for Carcinogen  
Equation 730-2                     $\text{CUL}_{\text{sw}} := \frac{\text{RISK} \cdot \text{ABW} \cdot \text{AT}}{\text{CPF} \cdot \text{BCF} \cdot \text{FCR} \cdot \text{FDF} \cdot \text{ED}}$ 

$$\text{CUL}_{\text{sw}} = 3.6 \cdot \frac{\mu\text{g}}{\text{liter}}$$

**MTCA Cleanup Level Calculations**

Site Name Site = "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC = "Vinyl Chloride"

**MTCA Method B Soil Cleanup Level Calculation - Protective of Surface Water**Default Values

Dilution Factor (WAC 173-340-747 - Equation 747-1)	DF := 20	Unsaturated soil
Soil Organic Carbon-Water partitioning coefficient (WAC 173-340-747(4)(c))	$K_{oc} := 19 \cdot \frac{\text{mL}}{\text{gm}}$	
Fraction of organic carbon (WAC 173-340-747 Equation 747-2)	$f_{oc} := .001$	default value
Distribution Coefficient (WAC 173-340-747(c)(ii) for Metals use Kd values from Table 747-3)	$K_d := K_{oc} \cdot f_{oc}$	$K_d = 0.019 \cdot \frac{\text{liter}}{\text{kg}}$
Water filled soil porosity (WAC 173-340-747 Equation 747-1)	$\theta_w := .3$	
Air filled soil porosity (WAC 173-340-747 Equation 747-1)	$\theta_a := 0.13$	
Henry's Law Constant (WAC 173-340-747(d) - Table 747-4 or for Metals use Hcc value of 0)	$H_{cc} := 1.1$	
Dry soil bulk density (WAC 173-340-747 Equation 747-1)	$\rho_b := 1.5 \cdot \frac{\text{kg}}{\text{liter}}$	

MTCA Cleanup Level Equation

MTCA Method B Soil Cleanup Level for Carcinogen Protective of Groundwater (3-phase partition model) Equation 747-1

$$CUL_{soil} := CUL_{sw} \cdot DF \cdot \left[ K_d + \frac{(\theta_w + \theta_a \cdot H_{cc})}{\rho_b} \right]$$

$$CUL_{soil} = 0.023 \cdot \frac{\text{mg}}{\text{kg}}$$

### Adjustment for Natural Background and PQL considerations

Site Name Site = "Former Sound Mattress & Felt"

Chemical of Concern: COC = "Vinyl Chloride"

#### Applicable Values

Background (Ecology Natural Background Value - Puget Sound)  $NB := 0 \cdot \frac{\text{mg}}{\text{kg}}$

Cleanup level for soil shall not exceed natural background value (WAC-173-340-745(6)(c))

$$\text{CUL}_{\text{soil}} := \text{if}(NB > \text{CUL}_{\text{soil}}, NB, \text{CUL}_{\text{soil}})$$

$$\text{CUL}_{\text{soil}} = 0.023 \cdot \frac{\text{mg}}{\text{kg}}$$

Cleanup level for groundwater must be adjusted to reflect change in soil cleanup level (WAC 173-340-730 (5)(c))

$$\text{CUL}_{\text{sw}} := \frac{\text{CUL}_{\text{soil}}}{\text{DF} \cdot \left[ K_d + \frac{(\theta_w + \theta_a \cdot H_{cc})}{\rho_b} \right]}$$

$$\text{CUL}_{\text{sw}} = 3.6 \cdot \frac{\mu\text{g}}{\text{liter}}$$

### Final MTCA Method B Modified Cleanup Levels

Site Name Site = "Former Sound Mattress & Felt"

Chemical of Concern: COC = "Vinyl Chloride"

CUL for Soil  $\text{CUL}_{\text{soil}} = 0.023 \cdot \frac{\text{mg}}{\text{kg}}$

CUL for Groundwater  $\text{CUL}_{\text{sw}} = 3.6 \cdot \frac{\mu\text{g}}{\text{liter}}$

### References

1. Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Washington Administrative Code (WAC) 173-340
2. CLARC Database

**MTCA Cleanup Level Calculations - Carcinogen**

Site Name            Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern:    COC := "PCE"

Unit Conversion  
Factor                     $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method C Air Cleanup Level Calculation**Default ValuesCancer Risk (WAC 173-340-730 -  
Equation 730-2)                     $\text{RISK} := \frac{1}{100000}$ Averaging Time (WAC  
173-340-730 Equation 730-2)                     $\text{AT} := 75 \cdot \text{yr}$ Chemical Specific ValuesCarcinogenic Potency Factor (WAC  
173-340-708(8) and CLARC  
database)                     $\text{CPF} := 0.021 \cdot \frac{\text{kg} \cdot \text{day}}{\text{mg}}$ Area Specific Toxicology ValuesBreathing Rate (WAC  
173-340-750)                     $\text{BR} := 20 \cdot \frac{\text{m}^3}{\text{day}}$                      $\text{BR} = 0.833 \cdot \frac{\text{m}^3}{\text{hr}}$ Average Body Weight - MTCA                     $\text{ABW} := 70 \cdot \text{kg}$ Inhalation absorption fraction  
(WAC 173-340-750)                     $\text{ABS} := 1$ Exposure duration (WAC  
173-340-750)                     $\text{ED} := 10 \cdot \frac{\text{hr}}{\text{day}} \cdot 250 \cdot \frac{\text{day}}{\text{yr}} \cdot 30 \cdot \text{yr}$ Exposure Frequency (WAC  
173-340-750)                     $\text{EF} := 1$ MTCA Cleanup Level EquationMTCA Method C Air Cleanup  
Level for Carcinogen Equation  
750-2

$$\text{CUL}_{\text{air}} := \frac{\text{RISK} \cdot \text{ABW} \cdot \text{AT}}{\text{CPF} \cdot \text{BR} \cdot \text{ABS} \cdot \text{ED} \cdot \text{EF}}$$

$$\text{CUL}_{\text{air}} = 14.61 \cdot \frac{\mu\text{g}}{\text{m}^3}$$

**MTCA Cleanup Level Calculations - Carcinogen**

Site Name            Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern:    COC := "TCE"

Unit Conversion  
Factor                     $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method C Air Cleanup Level Calculation**Default ValuesCancer Risk (WAC 173-340-730 -  
Equation 730-2)                     $\text{RISK} := \frac{1}{100000}$ Averaging Time (WAC  
173-340-730 Equation 730-2)                     $\text{AT} := 75 \cdot \text{yr}$ Chemical Specific ValuesCarcinogenic Potency Factor (WAC  
173-340-708(8) and CLARC  
database)                     $\text{CPF} := 0.089 \cdot \frac{\text{kg} \cdot \text{day}}{\text{mg}}$ Area Specific Toxicology ValuesBreathing Rate (WAC  
173-340-750)                     $\text{BR} := 20 \cdot \frac{\text{m}^3}{\text{day}}$                      $\text{BR} = 0.833 \cdot \frac{\text{m}^3}{\text{hr}}$ Average Body Weight - MTCA                     $\text{ABW} := 70 \cdot \text{kg}$ Inhalation absorption fraction  
(WAC 173-340-750)                     $\text{ABS} := 1$ Exposure duration (WAC  
173-340-750)                     $\text{ED} := 10 \cdot \frac{\text{hr}}{\text{day}} \cdot 250 \cdot \frac{\text{day}}{\text{yr}} \cdot 30 \cdot \text{yr}$ Exposure Frequency (WAC  
173-340-750)                     $\text{EF} := 1$ MTCA Cleanup Level EquationMTCA Method C Air Cleanup  
Level for Carcinogen Equation  
750-2                     $\text{CUL}_{\text{air}} := \frac{\text{RISK} \cdot \text{ABW} \cdot \text{AT}}{\text{CPF} \cdot \text{BR} \cdot \text{ABS} \cdot \text{ED} \cdot \text{EF}}$ 

$$\text{CUL}_{\text{air}} = 3.45 \cdot \frac{\mu\text{g}}{\text{m}^3}$$

**MTCA Cleanup Level Calculations - Non-Carcinogen**

Site Name Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC := "c-DCE"

Unit Conversion  
Factor  $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method C Air Cleanup Level Calculation**Default ValuesHazard Quotient (WAC  
173-340-750) HQ := 1Averaging Time (WAC  
173-340-730 Equation 730-2) AT := 6·yrChemical Specific ValuesInhalation Reference Dose (WAC  
173-340-708(7) and CLARC  
database)  $\text{RfD} := 0.01 \cdot \frac{\text{mg}}{\text{kg} \cdot \text{day}}$ Area Specific Toxicology ValuesBreathing Rate (WAC  
173-340-750)  $\text{BR} := 20 \cdot \frac{\text{m}^3}{\text{day}}$   $\text{BR} = 0.833 \cdot \frac{\text{m}^3}{\text{hr}}$ Average Body Weight - MTCA  
ABW := 70·kgInhalation absorption fraction  
(WAC 173-340-750) ABS := 1Exposure duration (WAC  
173-340-750)  $\text{ED} := 10 \cdot \frac{\text{hr}}{\text{day}} \cdot 250 \cdot \frac{\text{day}}{\text{yr}} \cdot 6 \cdot \text{yr}$ Exposure Frequency (WAC  
173-340-750) EF := 1MTCA Cleanup Level EquationMTCA Method C Air Cleanup  
Level for Non-Carcinogen Equation  
750-1  $\text{CUL}_{\text{air}} := \frac{\text{RfD} \cdot \text{ABW} \cdot \text{AT} \cdot \text{HQ}}{\text{BR} \cdot \text{ABS} \cdot \text{ED} \cdot \text{EF}}$ 

$$\text{CUL}_{\text{air}} = 122.72 \cdot \frac{\mu\text{g}}{\text{m}^3}$$

**MTCA Cleanup Level Calculations - Non-Carcinogen**

Site Name Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC := "t-DCE"

Unit Conversion  
Factor  $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method C Air Cleanup Level Calculation**Default ValuesHazard Quotient (WAC  
173-340-750) HQ := 1Averaging Time (WAC  
173-340-730 Equation 730-2) AT := 6·yrChemical Specific ValuesInhalation Reference Dose (WAC  
173-340-708(7) and CLARC  
database)  $\text{RfD} := 0.02 \cdot \frac{\text{mg}}{\text{kg} \cdot \text{day}}$ Area Specific Toxicology ValuesBreathing Rate (WAC  
173-340-750)  $\text{BR} := 20 \cdot \frac{\text{m}^3}{\text{day}}$   $\text{BR} = 0.833 \cdot \frac{\text{m}^3}{\text{hr}}$ Average Body Weight - MTCA  
ABW := 70·kgInhalation absorption fraction  
(WAC 173-340-750) ABS := 1Exposure duration (WAC  
173-340-750)  $\text{ED} := 10 \cdot \frac{\text{hr}}{\text{day}} \cdot 250 \cdot \frac{\text{day}}{\text{yr}} \cdot 6 \cdot \text{yr}$ Exposure Frequency (WAC  
173-340-750) EF := 1MTCA Cleanup Level EquationMTCA Method C Air Cleanup  
Level for Non-Carcinogen Equation  
750-1  $\text{CUL}_{\text{air}} := \frac{\text{RfD} \cdot \text{ABW} \cdot \text{AT} \cdot \text{HQ}}{\text{BR} \cdot \text{ABS} \cdot \text{ED} \cdot \text{EF}}$ 

$$\text{CUL}_{\text{air}} = 245.44 \cdot \frac{\mu\text{g}}{\text{m}^3}$$

**MTCA Cleanup Level Calculations - Carcinogen**

Site Name Site := "Former Sound Mattress &amp; Felt"

Chemical of Concern: COC := "VC"

Unit Conversion  
Factor  $\mu\text{g} := \frac{1}{1000} \cdot \text{mg}$ **MTCA Method C Air Cleanup Level Calculation**Default ValuesCancer Risk (WAC 173-340-730 -  
Equation 730-2)  $\text{RISK} := \frac{1}{100000}$ Averaging Time (WAC  
173-340-730 Equation 730-2)  $\text{AT} := 75 \cdot \text{yr}$ Chemical Specific ValuesCarcinogenic Potency Factor (WAC  
173-340-708(8) and CLARC  
database)  $\text{CPF} := 0.031 \cdot \frac{\text{kg} \cdot \text{day}}{\text{mg}}$ Area Specific Toxicology ValuesBreathing Rate (WAC  
173-340-750)  $\text{BR} := 20 \cdot \frac{\text{m}^3}{\text{day}}$   $\text{BR} = 0.833 \cdot \frac{\text{m}^3}{\text{hr}}$ Average Body Weight - MTCA  $\text{ABW} := 70 \cdot \text{kg}$ Inhalation absorption fraction  
(WAC 173-340-750)  $\text{ABS} := 1$ Exposure duration (WAC  
173-340-750)  $\text{ED} := 10 \cdot \frac{\text{hr}}{\text{day}} \cdot 250 \cdot \frac{\text{day}}{\text{yr}} \cdot 30 \cdot \text{yr}$ Exposure Frequency (WAC  
173-340-750)  $\text{EF} := 1$ MTCA Cleanup Level EquationMTCA Method C Air Cleanup  
Level for Carcinogen Equation  
750-2  $\text{CUL}_{\text{air}} := \frac{\text{RISK} \cdot \text{ABW} \cdot \text{AT}}{\text{CPF} \cdot \text{BR} \cdot \text{ABS} \cdot \text{ED} \cdot \text{EF}}$ 

$$\text{CUL}_{\text{air}} = 9.9 \cdot \frac{\mu\text{g}}{\text{m}^3}$$