June 13, 2013

Mr. Ken Peterson
PO Box 677
Ellensburg, WA 98926

Re: Groundwater Monitoring Report
Ken's Auto Wash
2012 Annual Report
7168-10

Dear Mr. Peterson:

This letter report presents the results of the May, August, and November 2012 groundwater monitoring events conducted at Ken's Auto Wash located at 1013 East University Way in Ellensburg, Washington (Figure 1).

This groundwater monitoring report was prepared on behalf of Mr. Ken Peterson of Ken's Auto Wash. Groundwater monitoring is being conducted following actions completed in conformance with an Agreed Order with the Washington State Department of Ecology (Ecology) under the Model Toxics Control Act (MTCA – RCW 70.105D.040[5]).

PROJECT BACKGROUND SUMMARY

The site is affected by a petroleum hydrocarbon release discovered during tightness testing for a gasoline underground storage tank (UST) in 1996. Corrective actions were taken at that time, and the gasoline UST was subsequently removed with all other site USTs in April 2005 (June 7, 2005, Gasoline UST Closure Report by Hart Crowser). The former UST area is identified on Figure 2. Prior to UST removal, Hart Crowser removed a hotspot of accessible petroleum-impacted soil at the location shown on Figure 2 in October and November 2000. During the hotspot removal, oxygen-release compound (ORC) was added to the excavation backfill below the seasonal high water table elevation to promote biodegradation of remaining petroleum hydrocarbons. ORC was also injected in the area of affected groundwater immediately downgradient of the UST area in February 2005 (April 6, 2005, Supplemental Strataprobe Exploration Report by Hart Crowser).

Additional project and regulatory background information is presented in Hart Crowser's November 14, 2006, Remedial Investigation and Feasibility Study Report (RI/FS). The RI/FS identified

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monitored natural attenuation with free product removal as the preferred remedial action. No free product has been identified at the site since 2004. Hart Crowser is continuing to monitor groundwater to document site conditions.

In 2011, Hart Crowser implemented a bioremediation program to accelerate natural biological attenuation of petroleum at the site. The enhanced bioremediation program introduced remediation amendments (hydrocarbon-degrading microbes, surfactants, and nutrients) to accelerate natural attenuation already occurring at the site over a series of three injection events, which occurred on January 31, May 3, and November 30, 2011. Based on groundwater monitoring data collected through February 2012, substantial petroleum destruction has occurred within the treatment zone (May 16, 2012, Bioremediation Data Report by Hart Crowser).

GROUNDWATER MONITORING

Hart Crowser completed quarterly monitoring events on May 23 and August 22, 2012, and completed the annual monitoring event on November 15, 2012. Table 1 outlines the groundwater monitoring schedule for the Ken's Auto Wash site.

Quarterly monitoring included sampling groundwater from four monitoring wells (MW-4R, MW-6, MW-13, and MW-14). Annual monitoring included sampling groundwater from eight monitoring wells (MW-2, MW-3, MW-4R, MW-5, MW-6, MW-13, MW-14, and MW-15). MW-12 was inaccessible during the May and August sampling events due to the fairgrounds regrading dirt covering the monument. The well was not located during the November 2012 sampling event after the fairgrounds parking area was regraded. Monitoring well locations are identified on Figure 2. Groundwater was collected for analysis of the following:

- Gasoline-range petroleum hydrocarbons (TPH-G) by Ecology Method NWTPH-G;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021B;
- Nitrogen as nitrate, sulfate, bromide, and chloride by EPA Method 300.0; and/or
- Total lead by EPA Method 6020 (November 2012 event only).

In addition, ferrous iron was measure in the field using a Hach color disc. Nitrate, sulfate, and ferrous iron are being monitored to evaluate biodegradation trends at the site.

After measuring the depth to groundwater, samples were collected from the wells using standard low-flow sampling techniques. Each well was purged until the field parameters of pH, temperature, and specific conductivity met the stability criteria (i.e., specific conductivity ±10 percent, pH ±0.1 pH units, and temperature ±0.1° C). Following stabilization, field testing for ferrous iron was

performed. Groundwater samples were collected for laboratory testing by directly filling pre-cleaned sample containers provided by the laboratory. The labeled sample containers were placed in coolers with ice. Samples were transferred under chain of custody protocol to Analytical Resources, Inc. (ARI) in Tukwila, Washington, for laboratory analysis.

Groundwater Measurements

Table 2 presents the measured depth to groundwater from the top of the well casing and the calculated groundwater elevations. Figure 3 illustrates the groundwater elevation and interpolated groundwater elevation contours based on measurements taken during the November 2012 sampling event. The contours indicate that the groundwater gradient continues to be toward the southwest, which is also consistent with historical observations. Typically, groundwater elevations are high in the spring and low in the fall. The November 2012 groundwater elevations were slightly higher than previous events, increasing 0.1 to 0.7 feet relative to the November 2010 and November 2011 elevations. These fluctuations are likely the result of natural annual variability in the groundwater table elevations.

Analytical Results

Analytical results are summarized in Table 3 for gasoline-range hydrocarbons (TPH-G), BTEX, dissolved oxygen, ferrous iron, and total and dissolved lead. Table 4 presents analytical data for other inorganic ions. Table 5 documents the observed thickness of free-phase product from previous monitoring events. No free product has been observed since 2004, before removal of the site USTs and ORC injection in 2005. Figures 4 and 5 illustrate the occurrence of TPH-G and benzene in groundwater, respectively. Figures 6 and 7 illustrate the long-term trends in TPH-G and benzene concentrations in groundwater, respectively. Laboratory reports are provided in Appendix A.

Data Observations

Based on the monitoring data from May, August, and November 2012, we observed the following.

- Monitoring results indicate that concentrations of TPH-G in the vicinity and downgradient of the former UST and hotspot soil excavations continue to be non-detect or show decreasing concentrations, with the exception of MW-14 (Figure 4). As of November 2012, groundwater samples from site wells contained TPH-G concentrations below the applicable MTCA groundwater cleanup level of 0.800 milligrams per liter (mg/L), except for MW-14 that is downgradient from the previous source area and UST excavation.

- Wells MW-6 and MW-14 had TPH-G concentrations in the groundwater samples. Well MW-6 showed decreasing concentrations from 1.6 mg/L (February 2012) to 0.41 mg/L (November 2012). Well MW-14 showed increasing concentrations from non-detect at 0.25 mg/L (May 2012) to 1.2 mg/L (November 2012).

- Benzene concentrations in site wells were non-detect at the specified reporting limit for May, August, and November 2012. Benzene has been non-detect since November 2010 (Figure 5).

- Ethylbenzene was detected in MW-6 in May and August 2012 events at concentrations below the MTCA cleanup level of 700 micrograms per liter (µg/L). Ethylbenzene, toluene, and xylene were detected in MW-14 at concentrations below MTCA cleanup levels and continue to be non-detect in samples in the remaining wells.

- Total lead was only analyzed during the November 2012 sampling event. Total lead was detected in four wells (MW-14, MW-2, MW-5, and MW-6) at concentrations below the MTCA cleanup level of 15 µg/L.

- Ferrous iron was detected in three wells. MW-6 had decreasing concentrations and MW-14 had increasing concentrations from May to November 2012. MW-4R had similar concentrations between May and November 2012. Dissolved oxygen was detected in the site wells at concentrations varying between 0.6 and 8.1 mg/L. Low concentrations of dissolved oxygen and elevated concentrations of ferrous iron were typically found at and downgradient of the former UST area.

- Site monitoring also continued to include analysis of nitrate, sulfate, chloride, and bromide to assess the bioremediation program. Well MW-14 has higher concentrations of nitrate and sulfate present than the other wells indicating nutrients are still available for the microbes.

The observed increase in TPH-G concentrations in well MW-14 may be due to a rebound effect and should decrease as the hydrocarbon-degrading microbes oxidize and metabolize TPH-G using electron acceptors such as dissolved oxygen, nitrate, ferrous iron, and sulfate. We anticipate continued decreasing TPH concentration trends over time.

RECOMMENDATIONS

We recommend conducting quarterly groundwater monitoring events beginning in Spring 2013 to monitor treatment progress in selected wells through Fall 2014. Annual sampling should be completed in Fall of 2013 and 2014 for all monitoring wells.

CHEMICAL DATA QUALITY REVIEW

Groundwater sampling was conducted in May, August, and November 2012. The samples were submitted to Analytical Resources, Inc. (ARI) in Tukwila, Washington, for chemical analysis. Groundwater samples were analyzed for the following:

- BTEX (EPA Method 8021B);
- Gasoline-range hydrocarbons (NWTPH-G); and
- Nitrate, sulfate, bromide, and chloride (EPA Method 300.0).

The reported results and the associated quality assurance sample results were reviewed. The following criteria were evaluated in the standard validation process:

- Holding times;
- Method blanks;
- Surrogate recoveries;
- Matrix spike and matrix spike duplicate recovery (MS/MSD);
- Laboratory control samples and laboratory control sample duplicate recovery (LCS/LCSD); and
- Laboratory duplicate, MS/MSD, and LCS/LCSD relative percent differences (RPDs).

All data are acceptable for use as reported. Details for the quarterly sampling events are described below.

May 2012

Four groundwater samples and two trip blanks were collected on May 23, 2012.

The required holding times were met for the analyses. No method blank or trip blank contamination was detected. Surrogate, MS/MSD, and LCS/LCSD recoveries were within laboratory control limits. Laboratory duplicate, MS/MSD, and LCS/LCSD RPDs were acceptable.

The trip blanks contained pea-sized bubbles. The trip blanks were prepared at the laboratory, and no sample results were qualified. The cooler was received at the laboratory with a temperature below 2° C. As the low temperatures would not affect the analyses, no results were qualified.

The data are acceptable for use as reported.

August 2012

Four groundwater samples, one field duplicate, and one trip blank were collected on August 22, 2012.

The samples were received at the laboratory above the method recommended temperature range of 2° to 4° C. The samples were received within 4 hours of sample collection, and may not have had time to equilibrate with the ice in the cooler. The sample results were not qualified.

The required holding times were met for the analyses. No method blank or trip blank contamination was detected. Surrogate, MS/MSD, and LCS/LCSD recoveries were within laboratory control limits. Laboratory duplicate, field duplicate, MS/MSD, and LCS/LCSD RPDs were acceptable.

The data are acceptable for use as reported.

November 2012

Eight groundwater samples, one field duplicate, and one trip blank were collected on November 6, 2012.

The required holding times were met for the analyses. No method blank or trip blank contamination was detected. Surrogate, MS/MSD, and LCS/LCSD recoveries were within laboratory control limits. Laboratory duplicate, field duplicate, MS/MSD, and LCS/LCSD RPDs were acceptable.

The data are acceptable for use as reported.

LIMITATIONS

Work for this project was performed, and this letter report prepared, in accordance with generally accepted professional practices for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. It is intended for the exclusive use of Ken's Auto Wash for specific application to the referenced property. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made.

Any questions regarding our work and this letter report, the presentation of the information, and the interpretation of the data are welcome and should be referred to the undersigned.

We trust that this report meets your needs.

Sincerely,

HART CROWSER, INC.

State of Washington
Hydrogeologist
2858
Licensed Geologist
ANGELA J. GOODWIN

ANGIE GOODWIN, LHG
Project Hydrogeologist

MICHAEL W. EHLEBRACHT, LG, LHG
Principal

Attachments:
Table 1 - Groundwater Monitoring Schedule
Table 2 - Groundwater Elevation Data
Table 3 - Summary of Groundwater Chemistry Data – TPH-G, BTEX, and Lead
Table 4 - Summary of Groundwater Chemistry Data – Other Compounds
Table 5 - Measured Free Product Thickness in Well MW-1/MW-14
Figure 1 - Vicinity Map
Figure 2 - Site and Well Location Plan
Figure 3 - Groundwater Elevation Contour Map, November 2012
Figure 4 - TPH-G Occurrences in Groundwater
Figure 5 - Benzene Occurrences in Groundwater
Figure 6 - Long-Term Trends in TPH-G Concentrations in Groundwater
Figure 7 - Long-Term Trends in Benzene Concentrations in Groundwater
Appendix A - Laboratory Report, Analytical Resources, Inc.

Table 1 - Groundwater Monitoring Schedule

Well	Purpose	2003	2004	2005	2006	2007	2008	2009	2010
MW-2	Bound Plume - East	Quarterly	Quarterly	Biannual	[a]	Biannual	Biannual	[a]	Annual
MW-3	Background	Quarterly	Quarterly	Biannual	[a]	Biannual	Biannual	[a]	Annual
MW-4/4R	Source Area (Upgradient Edge)	Quarterly	Quarterly	Biannual	Biannual	Biannual	Biannual	Annual	Annual
MW-5	Bound Plume - West	Quarterly	Quarterly	Biannual	Biannual	Biannual	Biannual	Annual	Annual
MW-6	Plume Extent	Quarterly	Quarterly	Biannual	[a]	Biannual	Biannual	[a]	Annual
MW-12	Bound Plume - Southwest	Quarterly	Quarterly	Biannual	Biannual	Biannual	Biannual	Annual	Annual
MW-13	Bound Plume - South	Quarterly	Quarterly	Biannual	[a]	Biannual	Biannual	[a]	Annual
MW-14	Source Area	Quarterly	Quarterly	Biannual	Biannual	Biannual	Biannual	Annual	Annual
MW-15	Bound Plume - Southeast	Quarterly	Quarterly	Biannual	[a]	Biannual	Biannual	[a]	Annual

Well	Purpose	2011	2012	2013
MW-2	Bound Plume - East	Annual [b]	Annual	Annual
MW-3	Background	Quarterly [b]	Annual	Annual
MW-4/4R	Source Area (Upgradient Edge)	Quarterly [b]	Quarterly	Quarterly
MW-5	Bound Plume - West	Annual [b]	Annual	Annual
MW-6	Plume Extent	Quarterly [b]	Quarterly	Quarterly
MW-12[c]	Bound Plume - Southwest	Annual [b]	Annual	Annual
MW-13	Bound Plume - South	Annual [b]	Quarterly	Quarterly
MW-14	Source Area	Quarterly [b]	Quarterly	Quarterly
MW-15	Bound Plume - Southeast	Annual [b]	Annual	Annual

Notes:

Biannual refers to twice yearly events targeted during spring (Q2) and fall (Q4). Annual refers to the fall (Q4) event. Biannual and annual monitoring schedules will be based on estimated seasonal high and low groundwater elevations.

Monitoring will include measurement of groundwater elevation and dissolved oxygen and collection of a groundwater sample for analysis by NWTPH-G/BTEX and total lead.

Monitoring also includes collection of groundwater samples for analysis for nitrate, nitrite, sulfate, and/or ferrous iron.

a Although not strictly required, wells MW-2, MW-3, MW-6, MW-13, and MW-15 were monitored and sampled during the fall of 2006 and 2009.

b Quarterly monitoring is part of the Bioremediation Work Plan, dated November 22, 2010.

c Well not located in May, August, and November 2012 and possibly destroyed. Well status needs to be confirmed next monitoring event.

Table 2 - Groundwater Elevation Data

Measured Depth to Groundwater in Feet

Well No.	8-Apr-96	5-Jan-98	5-Feb-98	5-Mar-98	6-Apr-98	5-May-98	5-Jun-98	6-Jul-98	5-Aug-98	4-Sep-98	5-Oct-98	5-Nov-98	29-Dec-99	21-Mar-00
MW-1	6.85	na	7.67	8.01	8.38	6.88	6.94	7.50	7.69	7.82	7.85	8.33	9.65	8.51
MW-14 (b)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	6.70	7.53	6.50	6.88	7.18	5.69	5.79	6.19	6.55	6.58	7.70	7.06	7.23	7.18
MW-3	8.08	8.42	7.65	8.01	8.17	6.71	7.50	7.42	7.51	7.66	7.80	8.28	8.41	8.29
MW-4	---	7.84	7.17	7.43	7.67	6.42	6.57	6.90	7.01	7.14	7.21	7.62	7.68	7.60
MW-4R (c)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	---	8.23	7.15	7.45	7.96	6.24	6.34	6.65	7.16	7.29	7.41	7.94	7.52	7.32
MW-6	---	9.70	8.67	9.13	9.46	8.14	8.21	8.66	8.87	9.01	9.05	9.51	8.60	8.36
MW-12	---	---	---	---	---	---	---	---	---	---	---	---	6.91	6.64
MW-13	---	---	---	---	---	---	---	---	---	---	---	---	5.42	5.33
MW-15	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Groundwater Elevation in Feet

Well No.	TOC Elev. (a)	8-Apr-96	5-Jan-98	5-Feb-98	5-Mar-98	6-Apr-98	5-May-98	5-Jun-98	6-Jul-98	5-Aug-98	4-Sep-98	5-Oct-98	5-Nov-98	29-Dec-99	21-Mar-00
MW-1	1588.38	1581.53	na	1580.71	1580.37	1580.00	1581.50	1581.44	1580.88	1580.69	1580.56	1580.53	1580.05	1578.73	1579.87
MW-14 (b)	1588.4	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2	1588.92	1582.22	1581.39	1582.42	1582.04	1581.74	1583.23	1583.13	1582.73	1582.37	1582.34	1581.22	1581.86	1581.69	1581.74
MW-3	1591.43	1583.35	1583.01	1583.78	1583.42	1583.26	1584.72	1583.93	1584.01	1583.92	1583.77	1583.63	1583.15	1583.02	1583.14
MW-4	1589.50	---	1581.66	1582.33	1582.07	1581.83	1583.08	1582.93	1582.60	1582.49	1582.36	1582.29	1581.88	1581.82	1581.90
MW-4R (c)	1588.76	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	1587.75	---	1579.52	1580.60	1580.30	1579.79	1581.51	1581.41	1581.10	1580.59	1580.46	1580.34	1579.81	1580.23	1580.43
MW-6	1587.72	---	1578.02	1579.05	1578.59	1578.26	1579.58	1579.51	1579.06	1578.85	1578.71	1578.67	1578.21	1579.12	1579.36
MW-12	1585.41	---	---	---	---	---	---	---	---	---	---	---	---	1578.50	1578.77
MW-13	1582.45	---	---	---	---	---	---	---	---	---	---	---	---	1577.03	1577.12
MW-15	1588.39	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Table 2 - Groundwater Elevation Data

Measured Depth to Groundwater in Feet

Well No.	14-Jun-00	12-Sep-00	30-Jan-01	26-Apr-01	29-Jul-01	27-Oct-01	15-Nov-02	9-May-03	30-Sep-03	11-Dec-03	31-Mar-04	2-Jun-04	30-Sep-04	14-Dec-04
MW-1	7.08	7.85	---	---	---	---	---	---	---	---	---	---	---	---
MW-14 (b)	---	---	8.55	8.35	7.01	9.02	8.90	6.23	8.05	8.58	8.32	6.28	7.79	8.45
MW-2	6.10	6.70	7.54	7.11	6.23	7.64	7.61	5.95	6.81	7.03	7.05	5.94	6.69	7.07
MW-3	7.42	7.92	8.70	7.67	7.28	8.66	8.63	6.89	8.06	8.48	8.30	6.98	7.92	8.64
MW-4	6.80	7.23	8.08	7.85	6.93	8.09	8.04	6.71	7.65	7.81	7.70	6.62	7.44	7.86
MW-4R (c)	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	6.25	6.87	na	7.98	6.29	7.97	8.05	6.19	7.55	7.83	7.59	6.14	---	9.21
MW-6	7.70	8.07	na	9.28	8.09	9.44	9.37	7.91	8.90	9.19	9.00	7.82	8.88	9.49
MW-12	6.05	6.36	na	7.30	6.38	7.13	7.52	6.50	7.25	7.38	7.18	6.40	7.31	7.81
MW-13	4.70	4.98	na	5.74	4.67	5.78	---	---	5.32	5.73	5.49	4.63	5.18	5.81
MW-15	---	---	9.23	8.83	7.59	9.30	9.08	7.38	8.55	8.67	8.85	7.31	8.33	9.20

Groundwater Elevation in Feet

Well No.	TOC Elev. (a)	14-Jun-00	12-Sep-00	30-Jan-01	26-Apr-01	29-Jul-01	27-Oct-01	15-Nov-02	9-May-03	30-Sep-03	11-Dec-03	31-Mar-04	2-Jun-04	30-Sep-04	14-Dec-04
MW-1	1588.38	1581.30	1580.53	---	---	---	---	---	---	---	---	---	---	---	---
MW-14 (b)	1588.4	---	---	1579.85	1580.05	1581.39	1579.38	1579.50	1582.17	1580.35	1579.82	1580.08	1582.12	1580.61	1579.95
MW-2	1588.92	1582.82	1582.22	1581.38	1581.81	1582.69	1581.28	1581.31	1582.97	1582.11	1581.89	1581.87	1582.98	1582.23	1581.85
MW-3	1591.43	1584.01	1583.51	1582.73	1583.76	1584.15	1582.77	1582.80	1584.54	1583.37	1582.95	1583.13	1584.45	1583.51	1582.79
MW-4	1589.50	1582.70	1582.27	1581.42	1581.65	1582.57	1581.41	1581.46	1582.79	1581.85	1581.69	1581.80	1582.88	1582.06	1581.64
MW-4R (c)	1588.76	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-5	1587.75	1581.50	1580.88	na	1579.77	1581.46	1579.78	1579.70	1581.56	1580.20	1579.92	1580.16	1581.61	---	1578.54
MW-6	1587.72	1580.02	1579.65	na	1578.44	1579.63	1578.28	1578.35	1579.81	1578.82	1578.53	1578.72	1579.90	1578.84	1578.23
MW-12	1585.41	1579.36	1579.05	na	1578.11	1579.03	1578.28	1577.89	1578.91	1578.16	1578.03	1578.23	1579.01	1578.10	1577.60
MW-13	1582.45	1577.75	1577.47	na	1576.71	1577.78	1576.67	---	---	1577.13	1576.72	1576.96	1577.82	1577.27	1576.64
MW-15	1588.39	---	---	1579.16	1579.56	1580.80	1579.09	1579.31	1581.01	1579.84	1579.72	1579.54	1581.08	1580.06	1579.19

Table 2 - Groundwater Elevation Data

Measured Depth to Groundwater in Feet

Well No.	4-Apr-05	6-Oct-05	28-Jun-06	13-Nov-06	25-May-07	8-Nov-07	4-Jun-08	21-Oct-08	14-Oct-09	15-Nov-10	2-May-11	27-Jul-11	2-Nov-11	13-Feb-12
MW-1	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-14 (b)	8.63	7.83	6.15	7.57	5.23	8.04	5.20	7.57	7.20	8.11	5.88	6.57	7.91	7.35
MW-2	7.57	7.21	nm	7.01	5.56	7.18	5.46	6.80	6.77	7.23	nm	nm	7.20	nm
MW-3	8.80	8.37	nm	8.13	6.72	8.52	6.52	8.17	8.00	8.64	6.75	7.45	8.75	8.29
MW-4	8.02	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4R (c)	---	7.78	6.01	6.23	5.45	6.92	5.39	6.60	6.51	6.94	5.84	6.00	6.88	6.71
MW-5	8.32	7.73	6.38	7.32	5.83	7.97	5.82	7.40	7.12	7.99	nm	nm	7.79	nm
MW-6	9.78	9.14	nm	8.79	7.56	9.22	7.43	8.84	8.58	9.20	7.90	8.16	9.36	9.13
MW-12	7.89	7.51	6.90	7.20	6.41	7.62	6.30	7.30	7.16	7.63	nm	nm	7.61	nm
MW-13	5.16	5.56	nm	5.91	4.46	5.68	4.43	5.40	5.11	5.60	4.85	4.88	5.64	5.45
MW-15	9.40	8.02	nm	8.49	6.98	8.96	6.90	8.57	8.22	9.04	nm	nm	9.04	nm

Groundwater Elevation in Feet

Well No.	TOC Elev. (a)	4-Apr-05	6-Oct-05	28-Jun-06	13-Nov-06	25-May-07	8-Nov-07	4-Jun-08	21-Oct-08	14-Oct-09	15-Nov-10	2-May-11	27-Jul-11	2-Nov-11	13-Feb-12
MW-1	1588.38	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-14 (b)	1588.4	1579.77	1580.57	1582.25	1580.83	1583.17	1580.36	1583.20	1580.83	1581.20	1580.29	1582.52	1581.83	1580.49	1581.05
MW-2	1588.92	1581.35	1581.71	nm	1581.91	1583.36	1581.74	1583.46	1582.12	1582.15	1581.69	nm	nm	1581.72	nm
MW-3	1591.43	1582.63	1583.06	nm	1583.30	1584.71	1582.91	1584.91	1583.26	1583.43	1582.79	1584.68	1583.98	1582.68	1583.14
MW-4	1589.50	1581.48	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4R (c)	1588.76	---	1580.98	1582.75	1582.53	1583.31	1581.84	1583.37	1582.16	1582.25	1581.82	1582.92	1582.76	1581.88	1582.05
MW-5	1587.75	1579.43	1580.02	1581.37	1580.43	1581.92	1579.78	1581.93	1580.35	1580.63	1579.76	nm	nm	1579.96	nm
MW-6	1587.72	1577.94	1578.58	nm	1578.93	1580.16	1578.50	1580.29	1578.88	1579.14	1578.52	1579.82	1579.56	1578.36	1578.59
MW-12	1585.41	1577.52	1577.90	1578.51	1578.21	1579.00	1577.79	1579.11	1578.11	1578.25	1577.78	nm	nm	1577.80	nm
MW-13	1582.45	1577.29	1576.89	nm	1576.54	1577.99	1576.77	1578.02	1577.05	1577.34	1576.85	1577.60	1577.57	1576.81	1577.00
MW-15	1588.39	1578.99	1580.37	nm	1579.90	1581.41	1579.43	1581.49	1579.82	1580.17	1579.35	nm	nm	1579.35	nm

Table 2 - Groundwater Elevation Data

Well No.	23-May-12	22-Aug-12	6-Nov-12
MW-1	---	---	---
MW-14 (b)	5.25	7.05	7.52
MW-2	5.30	6.60	6.90
MW-3	6.52	7.88	8.56
MW-4	---	---	---
MW-4R (c)	5.35	6.38	6.70
MW-5	5.82	6.78	7.30
MW-6	7.28	8.46	8.78
MW-12	nm	nm	nm
MW-13	4.31	5.12	5.49
MW-15	6.74	8.18	8.82

Well No.	TOC Elev. (a)	23-May-12	22-Aug-12	6-Nov-12
MW-1	1588.38	---	---	---
MW-14 (b)	1588.4	1583.15	1581.35	1580.88
MW-2	1588.92	1583.62	1582.32	1582.02
MW-3	1591.43	1584.91	1583.55	1582.87
MW-4	1589.50	---	---	---
MW-4R (c)	1588.76	1583.41	1582.38	1582.06
MW-5	1587.75	1581.93	1580.97	1580.45
MW-6	1587.72	1580.44	1579.26	1578.94
MW-12	1585.41	nm	nm	nm
MW-13	1582.45	1578.14	1577.33	1576.96
MW-15	1588.39	1581.65	1580.21	1579.57

Notes:
(a) TOC Elevation = top of casing elevations are surveyed relative to Mean Sea Level by Sage Environmental. MW-12 and MW-13 were surveyed relative to existing well MW-1, and existing wells MW-5 and MW-6 were re-surveyed and corrected slightly.
(b) Well MW-1 replaced as well MW-14 by Hart Crowser and resurveyed following remediation work in November 2000.
(c) Well MW-4 was replaced as well MW-4R by Hart Crowser in October 2005 and resurveyed, following removal of the well during UST removal activities in April 2005.
--- Well not installed or not available as of date indicated.
nm Indicates well was not measured.

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L TPH-Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Concentration in µg/L Total Lead	Diss. Lead
MW-1	4/8/1996	**160,000**	**2,500**	**19,000**	**3,000**	**21,000**	**65**	--
	1/5/1998	--	--	--	--	--	--	--
	4/6/1998	**100,000**	**180**	260	**940**	**9,800**	**180**	--
	7/6/1998	**93,000**	**110**	200	**760**	**8,800**	**220**	--
	10/5/1998	--	--	--	--	--	--	--
	12/29/1999	**21,600**	**87.4**	47.7	657	**3,900**	--	**21.3**
	3/21/2000	**19,800**	**94.1**	59.6	479	**2,710**	--	**16.5**
	6/14/2000	**18,800**	**94.9**	26.4	471	**2,870**	--	8
	9/12/2000	**21,400**	**111**	35.1	496	**2,930**	--	6.54
MW-14	1/30/2001	**7,450**	**19.3**	14	424	673	--	--
(Replaces MW-1)	4/26/2001	**26,100**	**37.2**	29.7	580	**2,680**	--	--
	7/29/2001	**14,200**	**10.3**	14.2	318	**1,480**	--	--
	10/27/2001	**9,970**	**46.4**	4.55	187	707	--	--
	11/15/2002	**8,380**	**11**	2.5 U	122	357	--	--
	5/9/2003	**4,520**	2.62	0.5 U	0.775	172	5.33	--
	9/30/2003	**6,230** J	**11.7** J	1.61 J	151 J	369 J	4.56	--
	12/11/2003	**5,890**	**12.6**	5.0 U	5.0 U	271	12.4	--
	3/31/2004	**6,270**	**12.6**	5 U	80.4	168.4	4.85	--
	6/2/2004	**3,790** J	2.36 J	0.5 U	26.9 J	88.1 J	4.12	--
	9/30/2004	**5,700** J	**5.52**	2.5 U	82.1	256	4.29	--
	12/14/2004	**5,500** J	4.36	0.643	66.1	178	--	--
	4/4/2005	**8,100** J	**6.89**	0.746	75.8	221	--	--
	10/6/2005	**4,070** J	**7.85**	0.5 U	43.1	62.8	3.7	--
	6/28/2006	533	0.545	0.5 U	0.593	5.34	3.41	--
	11/13/2006	496	0.933	0.5 U	6.89	5.99	3.03	--
	5/25/2007	54	0.5 U	0.5 U	0.5 U	1 U	--	--
	11/7/2007	**3,050**	**7.6**	2.58	28.1	20	2.31	--
	6/4/2008	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	10/21/2008	**2,040**	4.76	0.5 U	16.6	15.1	1.85	--
	10/14/2009	**2,030**	12.2 U	0.844 U	18.9	33.8	2 U	--
	11/15/2010	**2,500**	0.25 U	1.0 UJ	7.6	10.7	1	--
	5/2/2011	**3,100**	1.0 U	1.7	1.4	1.3	--	--
	7/27/2011	**3,700**	1.0 U	1.2	3.0	2.8	--	--
	11/2/2011	**1,200**	0.25 U	0.3 U	3.4	1.8	2.0	--
	2/13/2012	**2,200**	0.25 U	0.25 U	1.8	8.6	--	--
	5/23/2012	250 U	1.00 U	1.00 U	1.00 U	2.00 U	**--**	--
	8/22/2012	**870**	0.25 U	0.26	0.27	0.81	**--**	--
	11/6/2012	**1,200**	0.25 U	0.40	3.60	2.81	10.9	--

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L										Concentration in µg/L			
		TPH-Gasoline		Benzene		Toluene		Ethyl-benzene		Total Xylenes		Total Lead		Diss. Lead	
MW-2	4/8/1996	50	U	1	U	1	U	1	U	1	U	5	U	--	
	1/5/1998	50	U	1	U	1	U	1	U	1	U	15		5	U
	4/6/1998	50	U	1	U	1	U	1	U	1	U	5	U	--	
	7/6/1998	50	U	1	U	1	U	1	U	1	U	**21**		--	
	10/5/1998	50	U	1	U	1	U	1	U	1	U	**34**		--	
	12/29/1999	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	3/21/2000	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	6/14/2000	50	U	0.5	U	0.5	U	0.55		3.41		--		1	U
	9/12/2000	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	1/30/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	4/26/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	7/29/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	10/27/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	11/15/2002	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	5/9/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	9/30/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	2.61		--	
	12/11/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	3/31/2004	**13,000**		10	U	119		180		**2,541**	J	1	U	--	
	6/2/2004	**1,480**		2.10		0.5	U	0.5	U	11.0		1	U	--	
	9/30/2004	**1,290**	J	2.40		0.5	U	0.859		5.11		1	U	--	
	12/14/2004	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	4/4/2005	101		0.5	U	0.5	U	0.5	U	1	U	--		--	
	10/6/2005	160		0.741		0.5	U	0.5	U	1	U	1	U	--	
	6/28/2006	--		--		--		--		--		--		--	
	11/13/2006	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	5/25/2007	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	11/7/2007	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	6/4/2008	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	10/21/2008	50	U	0.5	U	0.5	U	0.5	U	1	U	**20.8**		--	
	10/14/2009	80	U	0.5	U	0.5	U	0.5	U	1	U	2	U	--	
	11/15/2010	100	U	0.25	U	0.5	U	0.25	U	0.75	U	1	U	--	
	11/2/2011	100	U	0.25	U	0.25	U	0.25	U	0.75	U	0.3		--	
	11/6/2012	100	U	0.25	U	0.25	U	0.25	U	0.75	U	0.1			

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L					Concentration in µg/L	
		TPH-Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total Lead	Diss. Lead
MW-3	4/8/1996	50 U	1 U	1 U	1 U	1 U	5 U	--
	1/5/1998	50 U	1 U	1 U	1 U	1 U	5 U	--
	4/6/1998	50 U	1 U	1 U	1 U	1 U	5 U	--
	7/6/1998	50 U	1 U	1 U	1 U	1 U	5 U	--
	10/5/1998	50 U	1 U	1 U	1 U	1 U	3.8	--
	12/29/1999	50 U	0.5 U	0.5 U	0.5 U	1 U	--	1 U
	3/21/2000	50 U	0.5 U	0.5 U	0.5 U	1 U	--	1 U
	6/14/2000	50 U	0.5 U	0.85	0.5 U	1 U	--	1 U
	9/12/2000	50 U	0.5 U	0.5 U	0.5 U	1 U	--	1 U
	1/30/2001	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	4/26/2001	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	7/29/2001	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	10/27/2001	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	11/15/2002	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	5/9/2003	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	9/30/2003	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	12/11/2003	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	3/31/2004	50 U	0.2 U	0.2 U	0.2 U	0.5 U	1 U	--
	6/2/2004	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	9/30/2004	50 UJ	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	12/14/2004	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	4/4/2005	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	10/6/2005	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	6/28/2006	--	--	--	--	--	--	--
	11/13/2006	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	5/25/2007	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	11/8/2007	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	6/4/2008	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	10/21/2008	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	10/14/2009	80 U	0.5 U	0.5 U	0.5 U	1 U	2 U	--
	11/15/2010	100 U	0.25 U	0.5 U	0.25 U	0.75 U	1 U	--
	5/2/2011	250 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--
	7/27/2011	250 U	1.0 U	1.0 U	1.0 U	2.0 U	--	--
	11/2/2011	100 U	0.25 U	0.25 U	0.25 U	0.75 U	0.1 U	--
	2/13/2012	100 U	0.25 U	0.25 U	0.25 U	0.75 U	--	--
	11/6/2012	100 U	0.25 U	0.25 U	0.25 U	0.75 U	0.1 U	--

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L										Concentration in µg/L			
		TPH-Gasoline		Benzene		Toluene		Ethyl-benzene		Total Xylenes		Total Lead		Diss. Lead	
MW-4	1/5/1998	200		1	U	27		1		3		10		5	U
	4/6/1998	400		3		14		1		6		5	U	--	
	7/6/1998	50	U	1	U	3		1	U	1	U	5	U	--	
	10/5/1998	150		1	U	7		1	U	1	U	2		--	
	12/29/1999	301		**51.4**		32.5		0.5	U	6.08		--		1	U
	3/21/2000	414		**44.8**		28.2		1.92		3.2	U	--		1	U
	6/14/2000	439		**69.7**		4.91		2.01		6.8		--		1	U
	9/12/2000	101		4.49		0.5	U	0.5	U	0.5	U	--		1	U
	1/31/2001	182		2.22		1.17	U	0.5	U	1.33	U	--		--	
	4/26/2001	673		**8.79**		4.73		4.28		28.6		--		--	
	7/29/2001	402		**24.3**		16.3		2.84		14.8		--		--	
	10/27/2001	200		**24.9**		2.62		1.15		6.57		--		--	
	11/15/2002	75.6		0.858		0.5	U	0.5	U	1	U	--		--	
	5/9/2003	61.8		0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	9/30/2003	161		0.730		0.5	U	2.59		2.59		1	U	--	
	12/11/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	3.22		--	
	3/31/2004	267		**29.0**		1.43		1	U	2.94		1	U	--	
	6/2/2004	140		**46.4**		4.2		0.5	U	1	U	1	U	--	
	9/30/2004	88.7	J	0.5	U	0.5	U	1.83		1	U	1	U	--	
	12/14/2004	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
MW-4R	4/4/2005	112		1.93		0.5	U	0.5	U	1	U	--		--	
(Replaces MW-4)	10/6/2005	744		0.929		0.5	U	9.31		3.57		19		--	
	6/28/2006	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	11/13/2006	107		0.5	U	0.5	U	0.5	U	1	U	5.82		--	
	5/25/2007	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	11/7/2007	75.2		0.5	U	0.5	U	0.5	U	1	U	0.325		--	
	6/4/2008	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	10/21/2008	50	U	0.5	U	0.5	U	0.5	U	1	U	6.98		--	
	10/14/2009	80	U	0.5	U	0.5	U	0.5	U	1	U	2	U	--	
	11/15/2010	100	U	0.25	U	0.5	U	0.25	U	0.75	U	1	U	--	
	5/2/2011	250	U	1.0	U	1.6		1.0	U	2.0	U	--		--	
	7/27/2011	980		1.0	U	250		1.0	U	2.0	U	--		--	
	11/2/2011	100	U	0.25	U	14		0.25	U	0.75	U	0.1		--	
	2/13/2012	100	U	0.25	U	0.25	U	0.25	U	0.75	U	--		--	
	5/23/2012	250	U	1.00	U	1.00	U	1.00	U	2.00	U	--		--	
	8/22/2012	100	U	0.25	U	0.25	U	0.25	U	0.75	U	--		--	
	11/6/2012	100	U	0.25	U	0.25	U	0.25	U	0.75	U	0.1	U	--	

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L TPH-Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Concentration in µg/L Total Lead	Diss. Lead
MW-5	1/5/1998	**6200**	1	57	3	160	5 U	--
	4/6/1998	**2800**	2	30	2	27	5 U	--
	7/6/1998	50 U	1 U	1 U	1 U	1 U	10	--
	10/5/1998	**4700**	2	39	16	94	7.4	--
	12/29/1999	779	2.96	0.69	9.03	27.4	--	1 U
	3/21/2000	519	0.5 U	13.9	4.95	3.6	--	1 U
	6/14/2000	708	3.45 U	1.17 U	1.08	1 U	--	1 U
	9/12/2000	50 U	0.5 U	0.5 U	0.5 U	1 U	--	1 U
	4/26/2001	**831**	**7.35**	0.516	15.3	1 U	--	--
	7/29/2001	53.8	0.5 U	0.5 U	0.5 U	1 U	--	--
	10/27/2001	552	3.29	0.5 U	1.28	1.58	--	--
	11/15/2002	108	0.5 U	0.5 U	0.5 U	0.5 U	--	--
	5/9/2003	78.7	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	9/30/2003	229	0.5 U	0.5 U	0.5 U	1.61	1 U	--
	12/11/2003	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	3/31/2004	53	0.2 U	0.2 U	0.2 U	0.5 U	1 U	--
	6/2/2004	92.8	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	12/14/2004	308	0.5 U	0.5 U	0.5 U	1 U	--	--
	4/4/2005	620	1.45	0.5 U	0.5 U	1.07	--	--
	10/6/2005	114	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	6/28/2006	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	11/13/2006	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	5/25/2007	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	11/7/2007	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	6/4/2008	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	10/22/2008	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	10/15/2009	80 U	0.5 U	0.5 U	0.5 U	1 U	2 U	--
	11/15/2010	170	0.25 U	0.5 U	0.25 U	0.75 U	1 U	--
	11/2/2011	100 U	0.25 U	0.25 U	0.25 U	0.75 U	2.1	--
	11/6/2012	100 U	0.25 U	0.25 U	0.25 U	0.75 U	0.1	

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L TPH-Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Concentration in µg/L Total Lead	Diss. Lead
MW-6	1/5/1998	**2,200**	**53**	17	9	93	5 U	--
	4/6/1998	**4,200**	**51**	16	25	110	5 U	--
	7/6/1998	**6,900**	**11**	19	1	510	11	--
	10/5/1998	**5,800**	**43**	22	48	240	12	--
	12/29/1999	**2,090**	**11.5**	2	35.1	65.1	--	1 U
	3/21/2000	**1,580**	0.75 U	14.3	28.7	61	--	1 U
	6/14/2000	**2,170**	**9.78**	1.03 U	33.1	101	--	1 U
	9/12/2000	**1,630**	**12.8**	1.2 U	27.9	75.7	--	1 U
	4/26/2001	**1,320**	**11.3**	0.906	1.41	3.37	--	--
	7/29/2001	**5,050**	**8.71**	4.99	189	536	--	--
	10/27/2001	**1,910**	**15.3**	0.786	1.67	5.49	--	--
	11/15/2002	**1,270**	**9.01**	0.5 U	0.594	1.85	--	--
	5/9/2003	**1,710**	1.79	0.5 U	1.29	21.2	1.29	--
	9/30/2003	**1,610**	**16.7**	2.50 U	2.91	7.96	1 U	--
	12/11/2003	624	**5.67**	0.50 U	0.737 J	2.19 J	1 U	--
	3/31/2004	**1,160**	0.520	0.2 U	0.350	0.5 U	1 U	--
	6/2/2004	**2,300** J	4.78 J	0.5 U	54.0 J	75.5 J	1.29	--
	9/30/2004	**1,150** J	**8.34** J	0.5 J	0.553 J	2.92 J	1 U	--
	12/14/2004	672	3.57	0.5 U	0.5 U	1.42	--	--
	4/4/2005 [b]	**1,010**	**5.91**	0.5 U	0.5 U	1.86 [c]	--	--
	10/6/2005	**1,380** J	**8.10**	0.5 U	0.632	1.94	1 U	--
	6/28/2006	--	--	--	--	--	--	--
	11/13/2006	**826**	3.3	0.5 U	0.5 U	1.89	1 U	--
	5/25/2007	**1,460**	0.5 U	0.5 U	25.6	1.22	--	--
	11/7/2007	729	3.53	0.5 U	0.5 U	1.69	1 U	--
	6/4/2008	**1,550**	1.93	0.5 U	30.8	2.78	1 U	--
	10/22/2008	**855**	3.1	0.5 U	0.933	3.37	1 U	--
	10/14/2009	501	7.59 U	0.5 U	1.18 U	1 U	2 U	--
	11/15/2010	450	0.25 U	0.49	0.25 U	0.75 U	1 U	--
	5/2/2011	490	1.0 U	1.0 U	1.0 U	2.0 U	--	--
	7/27/2011	610	1.0 U	1.0 U	1.0 U	2.0 U	--	--
	11/2/2011	590	0.25 U	0.25 U	0.25 U	0.75 U	4	--
	2/13/2012	**1,600**	0.25 U	0.25 U	0.25 U	1.5	--	--
	5/23/2012	**930**	1.00 U	1.00 U	6.50	2.00 U	**--**	--
	8/22/2012	500	0.25 U	0.25 U	0.31	0.75 U	**--**	--
	11/6/2012	410	0.25 U	0.25 U	0.25 U	0.75 U	0.4	--

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L										Concentration in µg/L			
		TPH-Gasoline		Benzene		Toluene		Ethyl-benzene		Total Xylenes		Total Lead		Diss. Lead	
MW-12	12/29/1999	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	3/21/2000	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	6/14/2000	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	9/12/2000	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	4/26/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	7/29/2001	50	U	0.5	U	0.5	U	1.74		4.83		--		--	
	10/27/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	11/15/2002	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	5/9/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	9/30/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	12/11/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	1.47		--	
	3/31/2004	50	U	0.2	U	0.2	U	0.2	U	0.5	U	1	U	--	
	6/2/2004	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	9/30/2004	50	UJ	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	12/14/2004	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	4/4/2005	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	10/12/2005	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	6/28/2006	50	U	0.5	U	0.5	U	0.5	U	1	U	2.98		--	
	11/13/2006	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	5/25/2007	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	11/8/2007	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	6/4/2008	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	10/22/2008	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	10/14/2009	80	U	0.5	U	0.5	U	0.5	U	1	U	2	U	--	
	11/15/2010	100	U	0.25	U	0.5	U	0.25	U	0.75	U	1	U	--	
	11/2/2011	100	U	0.25	U	0.25	U	0.25	U	0.75	U	0.1	U	--	

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L										Concentration in µg/L			
		TPH-Gasoline		Benzene		Toluene		Ethyl-benzene		Total Xylenes		Total Lead		Diss. Lead	
MW-13	12/29/99	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	3/21/2000	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	6/14/2000	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	9/12/2000	50	U	0.5	U	0.5	U	0.5	U	1	U	--		1	U
	4/26/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	7/29/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	10/27/2001	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	9/30/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	12/11/2003	50	U	0.5	U	0.5	U	0.5	U	1	U	1.56		--	
	3/31/2004	50	U	0.2	U	0.2	U	0.2	U	0.5	U	1	U	--	
	6/2/2004	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	9/30/2004	50	UJ	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	12/14/2004	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	4/4/2005	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	10/6/2005	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	6/28/2006	--		--		--		--		--		--		--	
	11/13/2006	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	5/25/2007	50	U	0.5	U	0.5	U	0.5	U	1	U	--		--	
	11/8/2007	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	6/4/2008	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	10/22/2008	50	U	0.5	U	0.5	U	0.5	U	1	U	1	U	--	
	10/15/2009	80	U	0.5	U	0.5	U	0.5	U	1	U	2	U	--	
	11/15/2010	100	U	0.25	U	0.5	U	0.25	U	0.75	U	1	U	--	
	11/2/2011	100	U	0.25	U	0.25	U	0.25	U	0.75	U	0.2		--	
	5/23/2012	250	U	1.00	U	1.00	U	1.00	U	2.00	U	--		--	
	8/22/2012	100	U	0.25	U	0.25	U	0.25	U	0.75	U	--		--	
	11/6/2012	100	U	0.25	U	0.25	U	0.25	U	0.75	U	0.1	U	--	

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L TPH-Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Concentration in µg/L Total Lead	Diss. Lead
MW-15	1/30/2001	161	1.53	0.5 U	0.5 U	1.18 U	--	--
	4/26/2001	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	7/29/2001	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	10/27/2001	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	11/15/2002	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	5/9/2003	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	9/30/2003	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	12/11/2003	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	3/31/2004	50 U	0.2 U	0.2 U	0.2 U	0.5 U	1 U	--
	6/2/2004	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	9/30/2004	50 UJ	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	12/14/2004	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	4/4/2005	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	10/6/2005	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	6/28/2006	--	--	--	--	--	--	--
	11/13/2006	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	5/25/2007	50 U	0.5 U	0.5 U	0.5 U	1 U	--	--
	11/7/2007	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	6/5/2008	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	10/22/2008	50 U	0.5 U	0.5 U	0.5 U	1 U	1 U	--
	10/14/2009	80 U	0.5 U	0.5 U	0.5 U	1 U	2 U	--
	11/15/2010	100 U	0.25 U	0.5 U	0.25 U	0.75 U	1 U	--
	11/2/2011	100 U	0.25 U	0.25 U	0.25 U	0.75 U	0.1 U	--
	11/6/2012	100 U	0.25 U	0.25 U	0.25 U	0.75 U	0.1 U	
MTCA Method A Groundwater Cleanup Level		800/1,000 [a]	5	1000	700	1000	15	15

Notes:
Gasoline-range TPH analyzed by EPA Method 8015 prior to 1999. After that, analyzed by NWTPH-G; BTEX Analyzed by EPA Method 8021B
BTEX analyzed by EPA Method 8260B in March 2004.
Total and Dissolved Lead analyzed by EPA Method 6010 or 6020.
-- Not analyzed.
U = Not detected at specified reporting limit.
J = Estimated concentration.
Bolded concentrations exceed MTCA Method A cleanup levels.
Access to well MW-13 obstructed in November 2002 and May 2003.
Access to well MW-5 obstructed in September 2004.
Data from 1996 and 1998 collected by Sage Environmental.

Table 3 - Summary of Groundwater Chemistry Data - TPH-G, BTEX, and Lead

Well ID	Date Sampled	Concentration in µg/L					Concentration in µg/L	
		TPH-Gasoline	Benzene	Toluene	Ethyl-benzene	Total Xylenes	Total Lead	Diss. Lead

Notes Continued:
Well MW-1 was removed during the October 2000 excavation. Wells MW-14 and MW-15 were installed in January 2001 after the excavation.
Well MW-4 was replaced as well MW-4R by Hart Crowser in October 2005, following removal of the well during UST removal activities in April 2005.
First dashed line indicates soil was excavated in November 2000.
Second dashed line indicates bioremediation amendments were injected in January 2011.
a) Cleanup level for TPH-G with/without detectable benzene
b) Values shown are the average of the results for the sample and its field duplicate.
c) The value is the result for the field duplicate. The result for the sample was ND (not detected at the detection limit of 1.0 µg/L).
Access to well MW-12 was obstructed in May and August 2012 by a large soil stockpile.
Well MW-12 was not located in November 2012 and possibly destroyed. Well status needs to be confirmed next monitoring round.

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-1/MW-14	3/21/2000	0.60	--	--	--	--	--	--	--	--	--	--
	6/14/2000	1.00	--	--	--	--	--	--	--	--	--	--
	9/12/2000	0.40	--	--	--	--	--	--	--	--	--	--
	1/30/2001	2.40	--	--	--	--	--	--	--	--	--	--
	4/26/2001	--	--	--	--	--	--	--	--	--	--	--
	7/29/2001	2.30	--	--	--	--	--	--	--	--	--	--
	10/27/2001	0.80	--	--	--	--	--	--	--	--	--	--
	11/15/2002	--	--	--	--	--	--	--	--	--	--	--
	5/9/2003	1.20	--	--	--	--	--	--	--	--	--	--
	9/30/2003	0.29	--	--	--	--	0.349	0.400 U	--	--	0.200 U	1.6
	12/11/2003	3.20	--	--	--	--	0.200 U	1.14	--	--	0.200 U	4
	3/31/2004	0.12	--	--	--	--	0.200 U	1.08	--	--	0.200 U	5.2
	6/2/2004	0.02	--	--	--	--	0.200 U	4.24	--	--	0.200 U	7.2
	9/30/2004	0.11	--	--	--	--	0.200 U	0.635	--	--	0.200 U	5.6
	12/14/2004	0.07	--	--	--	--	0.200 U	0.400 U	--	--	0.200 U	6.3
	4/4/2005	--	--	--	--	--	0.200 U	0.464	--	--	0.200 U	4.82 J
	10/6/2005	--	--	--	--	--	0.200 U	0.400 U	--	--	0.200 U	9.74
	6/28/2006	0.60	--	--	--	--	0.556	13.4	--	--	0.400 U	0.25 U
	11/13/2006	0.39	3.5-3.75	--	--	--	0.200 U	1.4	--	--	0.200 U	2.16
	5/25/2007	3.47	ND	--	--	--	3.120	12.200	--	--	0.200 U	0.25 U
	11/7/2007	4.84	5.2	--	--	--	0.010 U	0.900	--	--	0.010 U	--
	6/4/2008	6.01	ND	--	--	--	1.870	9.970	--	--	0.200 U	--
	10/21/2008	5.09	2.9	--	--	--	0.200 U	0.680	--	--	0.200 U	--
	10/14/2009	0.00	3.6	--	--	--	0.90 UJ	1.2 U	--	--	1.6 J	--
	11/15/2010	0.00	5	--	--	--	0.1 U	0.4	--	-- --	--	--
	5/2/2011	0.00	0.8	4	100	6	63.2	541	35.1	0.2	--	--
	7/27/2011	0.16	1.9	0	10	6	0.1 U	550	40.2	1.0 U	--	--
	11/2/2011	0.86	2	ND	ND	0.75	0.1 U	63.6	17.2	0.8	--	--
	2/13/2012	2.41	2	5	160	2	99.0	671	208	0.2	--	--
	5/23/2012	3.06	ND	--	--	--	120.00	211.00	1.00 U	60.30	--	--
	8/22/2012	7.31	ND	--	--	--	11.60	380.00	44.40	0.20	--	--
	11/6/2012	1.12	1.10	--	--	--	1.60	137.00	24.50	0.10 U	--	--

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-2	3/21/2000	2.60	--	--	--	--	--	--	--	--	--	--
	6/14/2000	2.80	--	--	--	--	--	--	--	--	--	--
	9/12/2000	0.80	--	--	--	--	--	--	--	--	--	--
	1/30/2001	1.50	--	--	--	--	--	--	--	--	--	--
	4/26/2001	4.50	--	--	--	--	--	--	--	--	--	--
	7/29/2001	3.30	--	--	--	--	--	--	--	--	--	--
	10/27/2001	2.00	--	--	--	--	--	--	--	--	--	--
	11/15/2002	1.50	--	--	--	--	--	--	--	--	--	--
	5/9/2003	2.30	--	--	--	--	--	--	--	--	--	--
	9/30/2003	1.51	--	--	--	--	0.489	3.38	--	--	0.200 U	1.2
	12/11/2003	3.90	--	--	--	--	1.08	3.79	--	--	0.200 U	0.0
	3/31/2004	0.82	--	--	--	--	0.912	4.60	--	--	0.200 U	0.0
	6/2/2004	1.63	--	--	--	--	0.467	3.23	--	--	0.200 U	0.0
	9/30/2004	0.52	--	--	--	--	0.443	2.93	--	--	0.200 U	0.2
	12/14/2004	6.05	--	--	--	--	0.922	3.05	--	--	0.200 U	0.0
	4/4/2005	--	--	--	--	--	0.719	3.52	--	--	0.200 U	0.25 R
	10/6/2005	--	--	--	--	--	0.219	3.75	--	--	0.200 U	0.25 U
	6/28/2006	--	--	--	--	--	--	--	--	--	--	--
	11/13/2006	0.64	ND	--	--	--	0.410	5.26	--	--	0.200 U	0.25 U
	5/25/2007	7.11	ND	--	--	--	2.740	8.57	--	--	0.200 U	0.25 U
	11/7/2007	4.95	ND	--	--	--	0.275	4.32	--	--	0.010 U	--
	6/4/2008	4.60	ND	--	--	--	1.440	6.14	--	--	0.200 U	--
	10/21/2008	--	ND	--	--	--	0.200 U	3.21	--	--	0.200 U	--
	10/14/2009	0.00	ND	--	--	--	0.90 U	6.5	--	--	1.3 J	--
	11/15/2010	0.33	ND	--	--	--	0.3	3.9	--	--	--	--
	11/2/2011	1.08	ND	--	--	--	0.6	9.1	5.8	0.1 U	--	--
	11/6/2012	1.45	ND	--	--	--	1.3	6.8	3.4	0.1 U		

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-3	3/21/2000	2.00	--	--	--	--	--	--	--	--	--	--
	6/14/2000	2.10	--	--	--	--	--	--	--	--	--	--
	9/12/2000	1.40	--	--	--	--	--	--	--	--	--	--
	1/30/2001	2.70	--	--	--	--	--	--	--	--	--	--
	4/26/2001	1.80	--	--	--	--	--	--	--	--	--	--
	7/29/2001	4.40	--	--	--	--	--	--	--	--	--	--
	10/27/2001	2.30	--	--	--	--	--	--	--	--	--	--
	11/15/2002	2.10	--	--	--	--	--	--	--	--	--	--
	5/9/2003	2.70	--	--	--	--	--	--	--	--	--	--
	9/30/2003	0.44	--	--	--	--	0.228	4.39	--	--	0.200 U	0.0
	12/11/2003	3.20	--	--	--	--	0.200 U	4.79	--	--	0.200 U	0.0
	3/31/2004	1.59	--	--	--	--	0.812	5.53	--	--	0.200 U	0.0
	6/2/2004	0.89	--	--	--	--	0.816	5.61	--	--	0.200 U	0.0
	9/30/2004	0.54	--	--	--	--	0.253	4.43	--	--	0.200 U	0.0
	12/14/2004	2.10	--	--	--	--	0.206	4.69	--	--	0.200 U	0.0
	4/4/2005	--	--	--	--	--	0.358	4.23	--	--	0.200 U	0.25 R
	10/6/2005	--	--	--	--	--	0.200 U	3.67	--	--	0.200 U	0.25 U
	6/28/2006	--	--	--	--	--	--	--	--	--	--	--
	11/13/2006	1.19	ND	--	--	--	0.370	6.1	--	--	0.200 U	0.25 U
	5/25/2007	8.13	ND	--	--	--	1.520	6.43	--	--	0.200 U	0.25 U
	11/8/2007	5.15	ND	--	--	--	0.168	4.13	--	--	0.010 U	--
	6/4/2008	5.51	ND	--	--	--	0.920	4.59	--	--	0.200 U	--
	10/21/2008	8.29	ND	--	--	--	0.250	3.84	--	--	0.200 U	--
	10/14/2009	0.81	ND	--	--	--	0.90 UJ	3.2	--	--	1.3 J	--
	11/15/2010	1.86	ND	--	--	--	0.2	4.1	--	--	--	--
	5/2/2011	0.00	ND	2	10	1	3.4	12.4	36.0	0.1 U	--	--
	7/27/2011	0.06	0.6	2	10	1.5	1.8	21.6	12.6	0.1 U	--	--
	11/2/2011	0.90	1.5	ND	ND	1	0.1 U	24.0	9.5	0.1	--	--
	2/13/2012	2.14	ND	0.25	10	0.5	6.8	8.9	12.3	0.1 U	--	--
	11/6/2012	2.18	ND	--	--	--	0.7	4.9	5.1	0.1 U		

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-4	3/21/2000	0.60	--	--	--	--	--	--	--	--	--	--
	6/14/2000	1.00	--	--	--	--	--	--	--	--	--	--
	9/12/2000	0.40	--	--	--	--	--	--	--	--	--	--
	1/30/2001	2.40	--	--	--	--	--	--	--	--	--	--
	4/26/2001	--	--	--	--	--	--	--	--	--	--	--
	7/29/2001	2.30	--	--	--	--	--	--	--	--	--	--
	10/27/2001	0.80	--	--	--	--	--	--	--	--	--	--
	11/15/2002	--	--	--	--	--	--	--	--	--	--	--
	5/9/2003	1.20	--	--	--	--	--	--	--	--	--	--
	9/30/2003	0.12	--	--	--	--	0.200 U	4.57	--	--	0.200 U	1.4
	12/11/2003	1.40	--	--	--	--	1.05	15.3	--	--	0.200 U	0.5
	3/31/2004	0.11	--	--	--	--	0.200 U	7.41	--	--	0.200 U	5.4
	6/2/2004	0.03	--	--	--	--	0.200 U	8.32	--	--	0.200 U	5.2
	9/30/2004	0.06	--	--	--	--	0.200 U	4.91	--	--	0.200 U	3.8
	12/14/2004	0.12	--	--	--	--	0.200 U	5.13	--	--	0.200 U	2.0
	4/4/2005	--	--	--	--	--	0.200 U	5.79	--	--	0.200 U	3.47 J
MW-4R	10/6/2005	--	--	--	--	--	0.200 U	8.07	--	--	0.200 U	1.39
	6/28/2006	0.60	--	--	--	--	0.200 U	16	--	--	0.400 U	0.25 U
	11/13/2006	0.24	2.9-3.0	--	--	--	0.200 U	16.2	--	--	0.200 U	0.25 U
	5/25/2007	2.63	ND	--	--	--	2.290	17.6	--	--	0.200 U	0.25 U
	11/7/2007	4.78	3.7	--	--	--	0.031	10.3	--	--	0.010 U	--
	6/4/2008	3.87	ND	--	--	--	2.030	14.1	--	--	0.200 U	--
	10/21/2008	8.98	1.4	--	--	--	0.200 U	6.52	--	--	0.200 U	--
	10/14/2009	4.83	ND	--	--	--	0.90 UJ	5.9	--	--	1.7 J	--
	11/15/2010	0.00	2.2	--	--	--	0.1 U	7.3	--	--	--	--
	5/2/2011	0.00	2.4	5	20	2	18.7	78.9	30.8	8.6	--	--
	7/27/2011	0.14	2	ND	10	4	4.2	12.4	24.7	0.9	--	--
	11/2/2011	0.76	1.9	ND	ND	5	0.2	13.1	14.3	1.0	--	--
	2/13/2012	2.95	1.3	3	120	2	74.9	174	20.2	0.5	--	--
	5/23/2012	3.64	1.40	--	--	--	5.20	37.00	0.10 U	38.10	--	--
	8/22/2012	4.91	1.80	--	--	--	0.20	11.30	9.40	0.30	--	--
	11/6/2012	1.84	1.2	--	--	--	1	42.7	21.3	0.2	--	--

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-5	3/21/2000	0.60	--	--	--	--	--	--	--	--	--	--
	6/14/2000	0.70	--	--	--	--	--	--	--	--	--	--
	9/12/2000	0.60	--	--	--	--	--	--	--	--	--	--
	4/26/2001	0.80	--	--	--	--	--	--	--	--	--	--
	7/29/2001	3.00	--	--	--	--	--	--	--	--	--	--
	10/27/2001	0.90	--	--	--	--	--	--	--	--	--	--
	11/15/2002	0.70	--	--	--	--	--	--	--	--	--	--
	5/9/2003	1.20	--	--	--	--	--	--	--	--	--	--
	9/30/2003	0.30	--	--	--	--	0.200 U	8.61	--	--	0.200 U	1.8
	12/11/2003	1.30	--	--	--	--	0.200 U	6.85	--	--	0.200 U	0.0
	3/31/2004	0.42	--	--	--	--	1.32	16.1	--	--	0.200 U	0.0
	6/2/2004	0.20	--	--	--	--	1.36	11.7	--	--	0.200 U	0.0
	12/14/2004	0.49	--	--	--	--	0.200 U	7.57	--	--	0.200 U	2.95
	4/4/2005	--	--	--	--	--	0.200 U	9.92	--	--	0.200 U	3.06 J
	10/6/2005	--	--	--	--	--	0.200 U	9.50	--	--	0.200 U	0.25 U
	6/28/2006	2.40	--	--	--	--	2.59	16	--	--	0.400 U	0.25 U
	11/13/2006	3.60	ND	--	--	--	2.99	11.7	--	--	0.200 U	0.25 U
	5/25/2007	6.60	ND	--	--	--	3.400	19.9	--	--	0.200 U	0.25 U
	11/7/2007	5.18	ND	--	--	--	0.110	7.75	--	--	0.010 U	--
	6/4/2008	5.44	ND	--	--	--	1.730	11.8	--	--	0.200 U	--
	10/22/2008	6.75	ND	--	--	--	0.220	6.35	--	--	0.200 U	--
	10/15/2009	1.13	ND	--	--	--	0.90 U	5.2	--	--	1.5 J	--
	11/15/2010	0.00	ND	--	--	--	0.1	6.6	--	-- --	-- --	--
	11/2/2011	0.87	2	--	--	--	0.4	21.7	16.7	0.1	--	--
	11/6/2012	2.06	--	--	--	--	0.3	7.2	7.9	0.1 U	--	--

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-6	3/21/2000	1.80	--	--	--	--	--	--	--	--	--	--
	6/14/2000	0.50	--	--	--	--	--	--	--	--	--	--
	9/12/2000	0.50	--	--	--	--	--	--	--	--	--	--
	4/26/2001	--	--	--	--	--	--	--	--	--	--	--
	7/29/2001	2.60	--	--	--	--	--	--	--	--	--	--
	10/27/2001	0.70	--	--	--	--	--	--	--	--	--	--
	11/15/2002	0.60	--	--	--	--	--	--	--	--	--	--
	5/9/2003	1.80	--	--	--	--	--	--	--	--	--	--
	9/30/2003	0.12	--	--	--	--	0.200 U	0.400 U	--	--	0.200 U	2.2
	12/11/2003	1.50	--	--	--	--	0.200 U	0.685	--	--	0.200 U	3.8
	3/31/2004	0.15	--	--	--	--	0.200 U	3.02	--	--	0.200 U	3.4
	6/2/2004	0.09	--	--	--	--	0.200 U	0.557	--	--	0.200 U	5.2
	9/30/2004	0.12	--	--	--	--	0.200 U	0.400 U	--	--	0.200 U	6.4
	12/14/2004	0.42	--	--	--	--	0.200 U	0.400 U	--	--	0.200 U	3.2
	4/4/2005 [a]	--	--	--	--	--	0.200 U	3.19	--	--	0.200 U	9.33 J
	10/6/2005	--	--	--	--	--	0.200 U	0.400 U	--	--	0.200 U	9.33
	4/4/2005	--	--	--	--	--	0.200 U	3.20	--	--	0.200 U	9.53
Dup	4/4/2005	--	--	--	--	--	0.200 U	3.17	--	--	0.200 U	14.4
	6/28/2006	--	--	--	--	--	2.6	18.6	--	--	0.400 U	--
	11/13/2006	0.48	0.9-1.0	--	--	--	0.200 U	1.11	--	--	0.200 U	6.95
	5/25/2007	1.11	4.2	--	--	--	0.200 U	2.67	--	--	0.200 U	0.5 U
	11/7/2007	5.18	5.4	--	--	--	0.010 U	2.24	--	--	0.010 U	--
	6/4/2008	5.76	5.2	--	--	--	0.200 U	3.68	--	--	0.200 U	--
	10/22/2008	4.15	5.4	--	--	--	0.200 U	0.40 U	--	--	0.200 U	--
	10/14/2009	0.00	6.0	--	--	--	0.90 UJ	1.2 U			1.7 J	--
	11/15/2010	0.00	3.4	--	--	--	0.1 U	1.5			--	--
	5/2/2011	0.00	1	ND	10	0.5	2.6	79.6	83.0	0.3	--	--
	7/27/2011	0.48	2	ND	5	6	2.0 U	879	97.8	2.0 U	--	--
	11/2/2011	1.01	ND	ND	ND	5	0.1	14.8	25.1	0.2	--	--
	2/13/2012	2.62	1.6	3	15	2	3.1	68.0	25.7	0.1	--	--
	5/23/2012	4.96	ND	--	--	--	0.10 U	12.90	0.10 U	41.00	--	--
	8/22/2012	7.09	2.00	--	--	--	0.10	2.40	12.40	0.10	--	--
	11/6/2012	0.69	1.8	--	--	--	0.1 U	2.2	7.5	0.1 U	--	--
Dup	11/6/2012	0.69	1.8	--	--	--	0.1 U	2.3	7.5	0.1 U	--	--

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-12	3/21/2000	5.00	--	--	--	--	--	--	--	--	--	--
	6/14/2000	4.90	--	--	--	--	--	--	--	--	--	--
	9/12/2000	0.60	--	--	--	--	--	--	--	--	--	--
	4/26/2001	4.00	--	--	--	--	--	--	--	--	--	--
	7/29/2001	3.00	--	--	--	--	--	--	--	--	--	--
	10/27/2001	5.20	--	--	--	--	--	--	--	--	--	--
	11/15/2002	2.70	--	--	--	--	--	--	--	--	--	--
	5/9/2003	6.00	--	--	--	--	--	--	--	--	--	--
	9/30/2003	1.66	--	--	--	--	0.452	5.32	--	--	0.200 U	0.8
	12/11/2003	2.70	--	--	--	--	0.200 U	2.77	--	--	0.200 U	0.0
	3/31/2004	3.91	--	--	--	--	3.88	8.45	--	--	0.200 U	0.0
	6/2/2004	5.20	--	--	--	--	3.64	11.7	--	--	0.200 U	0.0
	9/30/2004	6.00	--	--	--	--	0.573	5.66	--	--	0.200 U	0.0
	12/14/2004	1.32	--	--	--	--	0.200 U	2.95	--	--	0.200 U	0.0
	4/4/2005	--	--	--	--	--	0.200 U	3.32	--	--	0.200 U	0.25 R
	10/12/2005	--	--	--	--	--	0.200 U	3.37	--	--	0.200 U	0.25 U
	6/28/2006	0.42	--	--	--	--	2.57	11.5	--	--	0.400 U	0.25 U
	11/13/2006	2.61	ND	--	--	--	0.590	6.89	--	--	0.200 U	0.25 U
	5/25/2007	6.71	ND	--	--	--	7.140	18.4	--	--	0.200 U	0.25 U
	11/8/2007	6.33	ND	--	--	--	0.121	11.5	--	--	0.010 U	--
	6/4/2008	9.50	ND	--	--	--	6.020	16.4	--	--	0.200 U	--
	10/22/2008	8.88	ND	--	--	--	0.330	10.1	--	--	0.200 U	--
	10/14/2009	2.23	ND	--	--	--	0.90 UJ	5.2	--	--	1.4 J	--
	11/15/2010	2.73	ND	--	--	--	0.2	13.4	--	--	--	--
	11/2/2011	3.01	ND	--	--	--	0.7	60.3	493	0.3	--	--

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-13	3/21/2000	4.60	--	--	--	--	--	--	--	--	--	--
	6/14/2000	1.50	--	--	--	--	--	--	--	--	--	--
	9/12/2000	3.30	--	--	--	--	--	--	--	--	--	--
	4/26/2001	5.00	--	--	--	--	--	--	--	--	--	--
	7/29/2001	3.80	--	--	--	--	--	--	--	--	--	--
	10/27/2001	3.40	--	--	--	--	--	--	--	--	--	--
	9/30/2003	3.04	--	--	--	--	0.455	4.91	--	--	0.200 U	--
	12/11/2003	6.70	--	--	--	--	0.477	5.56	--	--	0.200 U	0.0
	3/31/2004	4.87	--	--	--	--	1.60	8.04	--	--	0.200 U	0.0
	6/2/2004	1.85	--	--	--	--	1.05	6.52	--	--	0.200 U	0.0
	9/30/2004	2.69	--	--	--	--	0.496	4.49	--	--	0.200 U	0.0
	12/14/2004	5.57	--	--	--	--	0.412	5.10	--	--	0.200 U	0.0
	4/4/2005	--	--	--	--	--	0.582	4.99	--	--	0.200 U	0.547 J
	10/6/2005	--	--	--	--	--	0.348	3.68	--	--	0.200 U	0.25 U
	6/28/2006	--	--	--	--	--	--	--	--	--	--	--
	11/13/2006	3.49	ND	--	--	--	0.940	6.18	--	--	0.200 U	0.25 U
	5/25/2007	4.14	ND	--	--	--	1.670	7.57	--	--	0.200 U	0.25 U
	11/8/2007	6.93	ND	--	--	--	0.490	4.09	--	--	0.010 U	--
	6/4/2008	6.90	ND	--	--	--	1.280	5.51	--	--	0.200 U	--
	10/22/2008	9.35	ND	--	--	--	0.440	3.56	--	--	0.200 U	--
	10/15/2009	4.61	ND	--	--	--	0.90 U	3.3	--	--	1.2 J	--
	11/15/2010	4.38	ND	--	--	--	0.4	3.7	--	--	--	--
	5/2/2011	4.87	ND	ND	5	ND	2.4	7.3	20.7	0.1 U	--	--
	7/27/2011	1.47	ND	ND	10	0.25	1.3	5.8	9.4	0.1 U	--	--
	11/2/2011	5.11	ND	0.5	ND	ND	0.4	4.7	6.3	0.1	--	--
	2/13/2012	4.58	ND	ND	ND	ND	0.9	5.6	21.7	0.1 U	--	--
	5/23/2012	7.47	ND	--	--	--	0.90	5.00	0.10 U	11.30	--	--
	8/22/2012	8.13	ND	--	--	--	0.30	4.00	5.40	0.10 U	--	--
	11/6/2012	4.97	ND	--	--	--	0.3	4.5	5.8	0.1 U	--	--

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron
MW-15	1/30/2001	1.30	--	--	--	--	--	--	--	--	--	--
	4/26/2001	--	--	--	--	--	--	--	--	--	--	--
	7/29/2001	2.60	--	--	--	--	--	--	--	--	--	--
	10/27/2001	1.40	--	--	--	--	--	--	--	--	--	--
	11/15/2002	0.80	--	--	--	--	--	--	--	--	--	--
	5/9/2003	1.50	--	--	--	--	--	--	--	--	--	--
	9/30/2003	0.56	--	--	--	--	0.282	5.02	--	--	0.200 U	2.6
	12/11/2003	2.80	--	--	--	--	0.415	8.52	--	--	0.200 U	0.0
	3/31/2004	0.88	--	--	--	--	0.200 U	8.42	--	--	0.200 U	0.0
	6/2/2004	0.40	--	--	--	--	1.67	8.32	--	--	0.200 U	0.0
	9/30/2004	0.33	--	--	--	--	0.429	4.56	--	--	0.200 U	0.0
	12/14/2004	1.40	--	--	--	--	0.200 U	6.68	--	--	0.200 U	0.0
	4/4/2005	--	--	--	--	--	0.200 U	7.45	--	--	0.200 U	0.254 J
	10/6/2005	--	--	--	--	--	0.340	4.14	--	--	0.200 U	0.25 U
	6/28/2006	--	--	--	--	--	--	--	--	--	--	--
	11/13/2006	1.06	ND	--	--	--	0.450	6.48	--	--	0.200 U	0.25 U
	5/25/2007	2.63	ND	--	--	--	3.070	10.4	--	--	0.200 U	0.25 U
	11/7/2007	5.66	ND	--	--	--	0.220	5.21	--	--	0.010 U	--
	6/5/2008	6.50	ND	--	--	--	2.010	8.02	--	--	0.200 U	--
	10/22/2008	5.61	ND	--	--	--	0.280	3.81	--	--	0.200 U	--
	10/14/2009	0.00	ND	--	--	--	0.90 UJ	3.1	--	--	1.2 J	--
	11/15/2010	0.67	ND	--	--	--	0.2	4.1	--	--	--	--
	11/2/2011	1.30	ND	--	--	--	0.4	6.0	8.7	0.1 U	--	--
	11/6/2012	2.03	ND	--	--	--	0.3	4.9	5.4	0.1 U	--	--
MTCA Method A Cleanup Level							na	na	na	na	na	na

Notes:

Nitrate, sulfate, chloride, bromide, and nitrite analyzed by EPA Method 300.0.

MTBE, EDB, and EDC analyzed by EPA Method 8260B.

-- Not analyzed.

U = Not detected above specified reporting limit.

J = Estimated concentration.

R = Rejected concentration.

ND = Analyte not detected.

Notes Continued:

Table 4 - Summary of Groundwater Chemistry Data - Other Compounds

		Field Test Results - Concentrations in mg/L					Concentration in mg/L					
Exploration	Date Sampled	Dissolved Oxygen	Ferrous Iron	Nitrite	Nitrate	Ammonia	Nitrate	Sulfate	Chloride	Bromide	Nitrite	Ferrous Iron

Bolded concentrations exceed MTCA Method A cleanup levels.

a) Values shown are the average of the results for the sample and its field duplicate.

na = No MTCA Method A or B value available.

First dashed line indicates soil was excavated in November 2000.

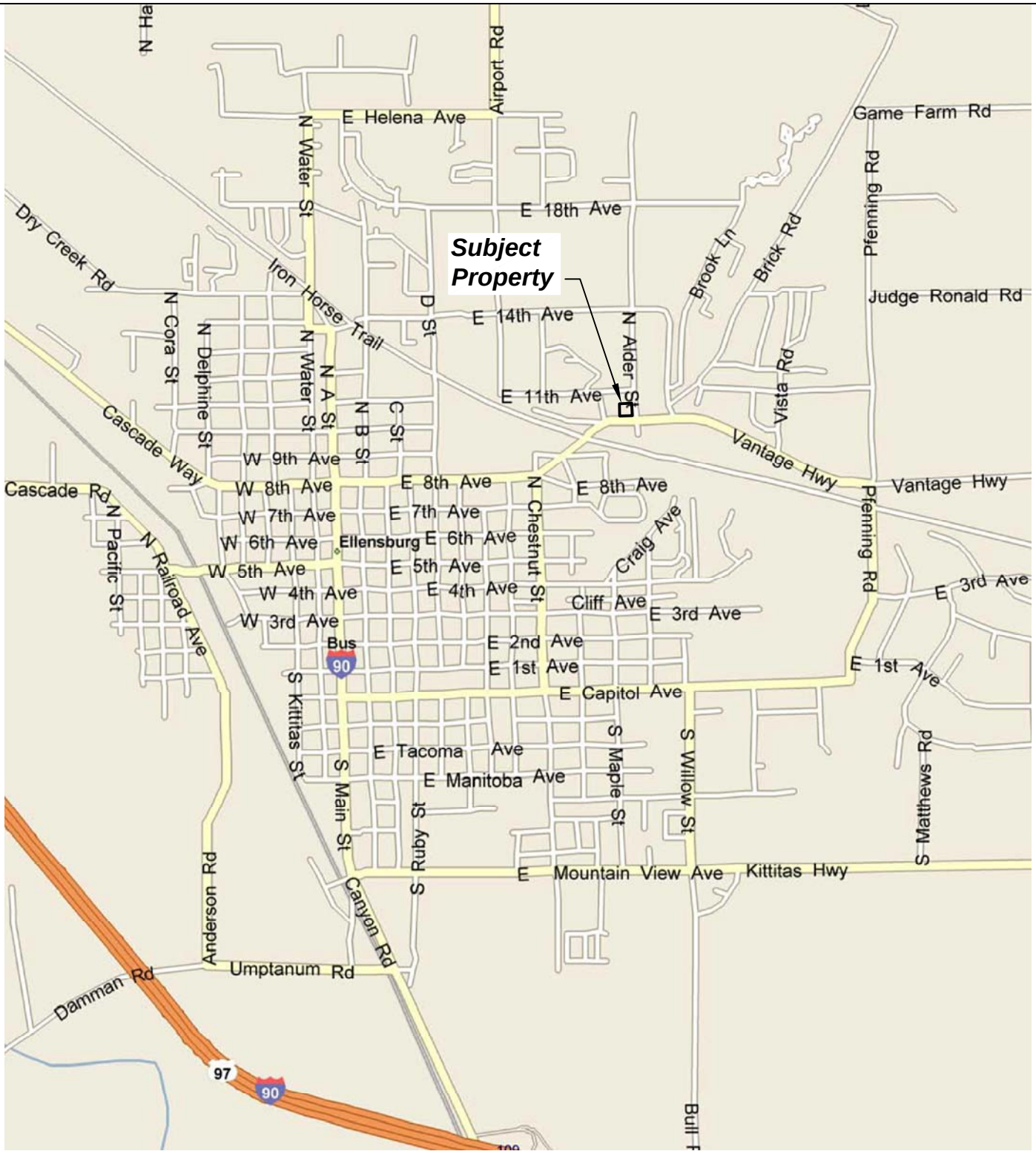
Second dashed line indicates bioremediation amendments were injected in January 2011.

Access to well MW-12 was obstructed in May and August 2012 by a large soil stockpile.

Well MW-12 was not located in November 2012 and possibly destroyed. Well status needs to be confirmed next monitoring round.

Table 5 - Measured Free Product Thickness in Well MW-1/MW-14

Date Measured	Product Thickness in Well in Inches	
4/8/1996	0	
4/6/1998	6	
10/5/1998	6	
12/29/1999	0.2	
3/21/2000	5	
6/14/2000	1	
9/12/2000	1	Hotspot Excavation
1/30/2001	0	
4/26/2001	0	
7/29/2001	0	
10/27/2001	4	
11/15/2002	3	
5/9/2003	0	
9/30/2003	0	
12/12/2003	1	
3/31/2004	1.80	
6/2/2004	0	
9/30/2004	0	
12/14/2004	0.18	UST Removal
4/4/2005	0	
10/6/2005	0	
6/28/2006	0	
5/25/2007	0	
11/7/2007	0	
6/4/2008	0	
10/21/2008	0	
10/14/2009	0	
11/15/2010	0	Bioremediation Injections
5/2/2011	0	
7/27/2011	0	
11/2/2011	0	
2/13/2012	0	
5/23/2012	0	
8/22/2012	0	
11/6/2012	0	



Note: Base map prepared from Microsoft Streets and Trips 2005.

0 2000 4000

Scale in Feet

N

Ken's Auto Wash
Ellensburg, Washington

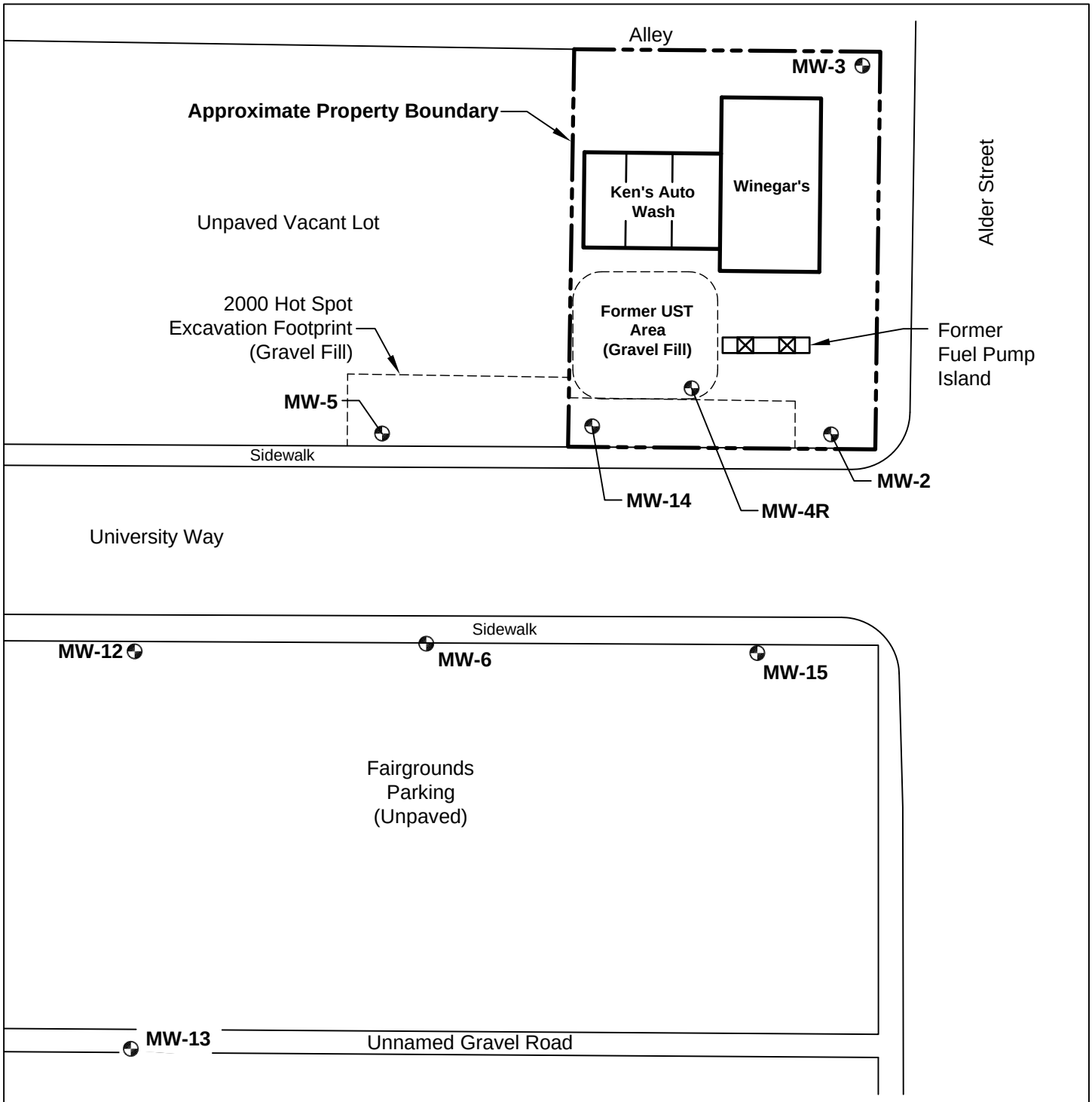
Vicinity Map

7168-10 2/13

HARTCROWSER

Figure **1**

EAL 02/5/13 716810-001.dwg



Note: Base map prepared from drawing provided by Sage Earth Sciences titled "Proposed Addtional Monitoring Well and ORC Injections Locations," dated January 1998.

0 50 100

Scale in Feet

MW-6 Hart Crowser Monitoring Well Location and Number

N

Ken's Auto Wash
Ellensburg, Washington

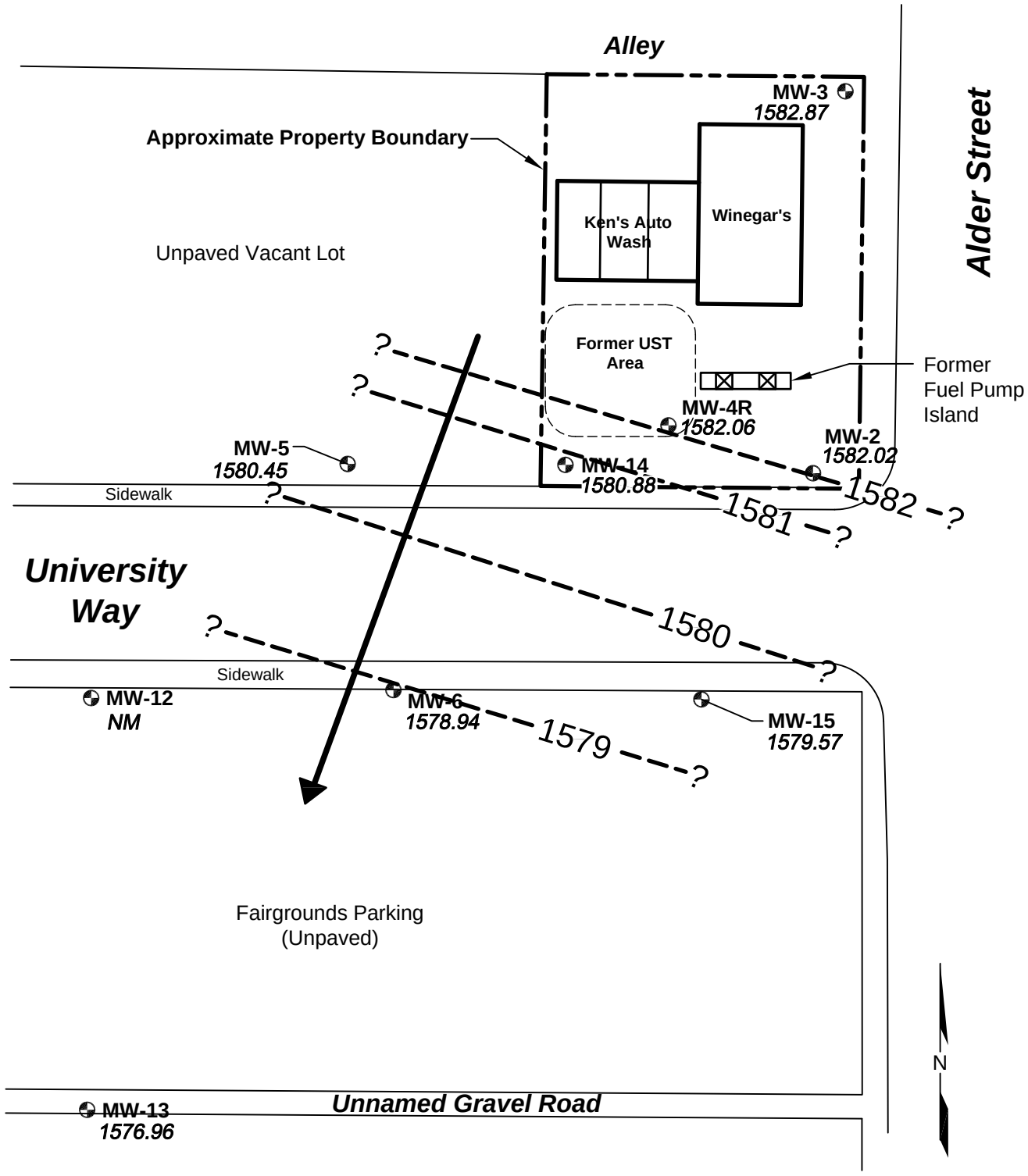
Site and Well Location Plan

7168-10 2/13

HARTCROWSER

Figure **2**

EAL 02/12/13 716810-002.dwg



Note: Elevation shown are in feet above Mean Sea Level.

0 50 100

Scale in Feet

MW-6	Monitoring Well Location and Number
1578.94	Groundwater Elevation in Feet
NM	Not Measured
1580	Groundwater Elevation Contour in Feet
	Inferred Groundwater Flow Direction

Ken's Auto Wash
Ellensburg, Washington

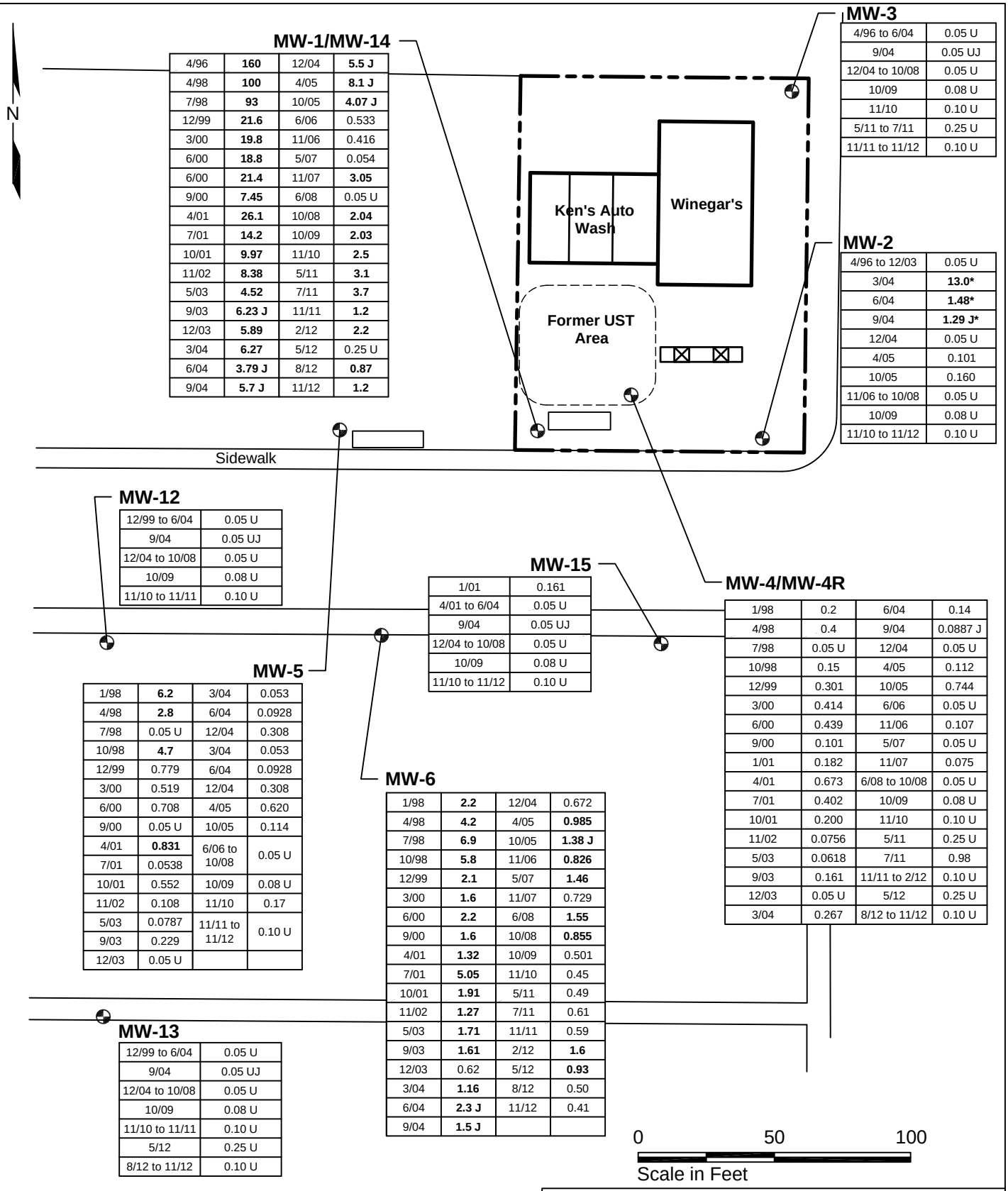
Groundwater Elevation Contour Map
November 2012

7168-10 2/13

HARTCROWSER

Figure
3

EAL 02/12/13 716810-003.dwg



MW-1/MW-14

4/96	**160**	12/04	**5.5 J**
4/98	**100**	4/05	**8.1 J**
7/98	**93**	10/05	**4.07 J**
12/99	**21.6**	6/06	0.533
3/00	**19.8**	11/06	0.416
6/00	**18.8**	5/07	0.054
6/00	**21.4**	11/07	**3.05**
9/00	**7.45**	6/08	0.05 U
4/01	**26.1**	10/08	**2.04**
7/01	**14.2**	10/09	**2.03**
10/01	**9.97**	11/10	**2.5**
11/02	**8.38**	5/11	**3.1**
5/03	**4.52**	7/11	**3.7**
9/03	**6.23 J**	11/11	**1.2**
12/03	**5.89**	2/12	**2.2**
3/04	**6.27**	5/12	0.25 U
6/04	**3.79 J**	8/12	**0.87**
9/04	**5.7 J**	11/12	**1.2**

MW-3

4/96 to 6/04	0.05 U
9/04	0.05 UJ
12/04 to 10/08	0.05 U
10/09	0.08 U
11/10	0.10 U
5/11 to 7/11	0.25 U
11/11 to 11/12	0.10 U

MW-2

4/96 to 12/03	0.05 U
3/04	**13.0***
6/04	**1.48***
9/04	**1.29 J***
12/04	0.05 U
4/05	0.101
10/05	0.160
11/06 to 10/08	0.05 U
10/09	0.08 U
11/10 to 11/12	0.10 U

MW-12

12/99 to 6/04	0.05 U
9/04	0.05 UJ
12/04 to 10/08	0.05 U
10/09	0.08 U
11/10 to 11/11	0.10 U

MW-15

1/01	0.161
4/01 to 6/04	0.05 U
9/04	0.05 UJ
12/04 to 10/08	0.05 U
10/09	0.08 U
11/10 to 11/12	0.10 U

MW-4/MW-4R

1/98	0.2	6/04	0.14
4/98	0.4	9/04	0.0887 J
7/98	0.05 U	12/04	0.05 U
10/98	0.15	4/05	0.112
12/99	0.301	10/05	0.744
3/00	0.414	6/06	0.05 U
6/00	0.439	11/06	0.107
9/00	0.101	5/07	0.05 U
1/01	0.182	11/07	0.075
4/01	0.673	6/08 to 10/08	0.05 U
7/01	0.402	10/09	0.08 U
10/01	0.200	11/10	0.10 U
11/02	0.0756	5/11	0.25 U
5/03	0.0618	7/11	0.98
9/03	0.161	11/11 to 2/12	0.10 U
12/03	0.05 U	5/12	0.25 U
3/04	0.267	8/12 to 11/12	0.10 U

MW-5

1/98	**6.2**	3/04	0.053
4/98	**2.8**	6/04	0.0928
7/98	0.05 U	12/04	0.308
10/98	**4.7**	3/04	0.053
12/99	0.779	6/04	0.0928
3/00	0.519	12/04	0.308
6/00	0.708	4/05	0.620
9/00	0.05 U	10/05	0.114
4/01	**0.831**	6/06 to 10/08	0.05 U
7/01	0.0538		
10/01	0.552	10/09	0.08 U
11/02	0.108	11/10	0.17
5/03	0.0787	11/11 to 11/12	0.10 U
9/03	0.229		
12/03	0.05 U		

MW-6

1/98	**2.2**	12/04	0.672
4/98	**4.2**	4/05	**0.985**
7/98	**6.9**	10/05	**1.38 J**
10/98	**5.8**	11/06	**0.826**
12/99	**2.1**	5/07	**1.46**
3/00	**1.6**	11/07	0.729
6/00	**2.2**	6/08	**1.55**
9/00	**1.6**	10/08	**0.855**
4/01	**1.32**	10/09	0.501
7/01	**5.05**	11/10	0.45
10/01	**1.91**	5/11	0.49
11/02	**1.27**	7/11	0.61
5/03	**1.71**	11/11	0.59
9/03	**1.61**	2/12	**1.6**
12/03	0.62	5/12	**0.93**
3/04	**1.16**	8/12	0.50
6/04	**2.3 J**	11/12	0.41
9/04	**1.5 J**		

MW-13

12/99 to 6/04	0.05 U
9/04	0.05 UJ
12/04 to 10/08	0.05 U
10/09	0.08 U
11/10 to 11/11	0.10 U
5/12	0.25 U
8/12 to 11/12	0.10 U

MW-6 Monitoring Well Location and Number

3/04	0.05 U

Month/Year of Sample Collection

Groundwater TPH-G Concentration in mg/L

Notes: Concentrations exceeding the cleanup level are shown in bold.
U = Not detected at specified detection limit
J = Estimated concentration
* = Previous inflow of minor TPH-contaminated water through MW-2 top of well casing suspected

Ken's Auto Wash
Ellensburg, Washington

TPH-G Occurrences in Groundwater

7168-10 2/13

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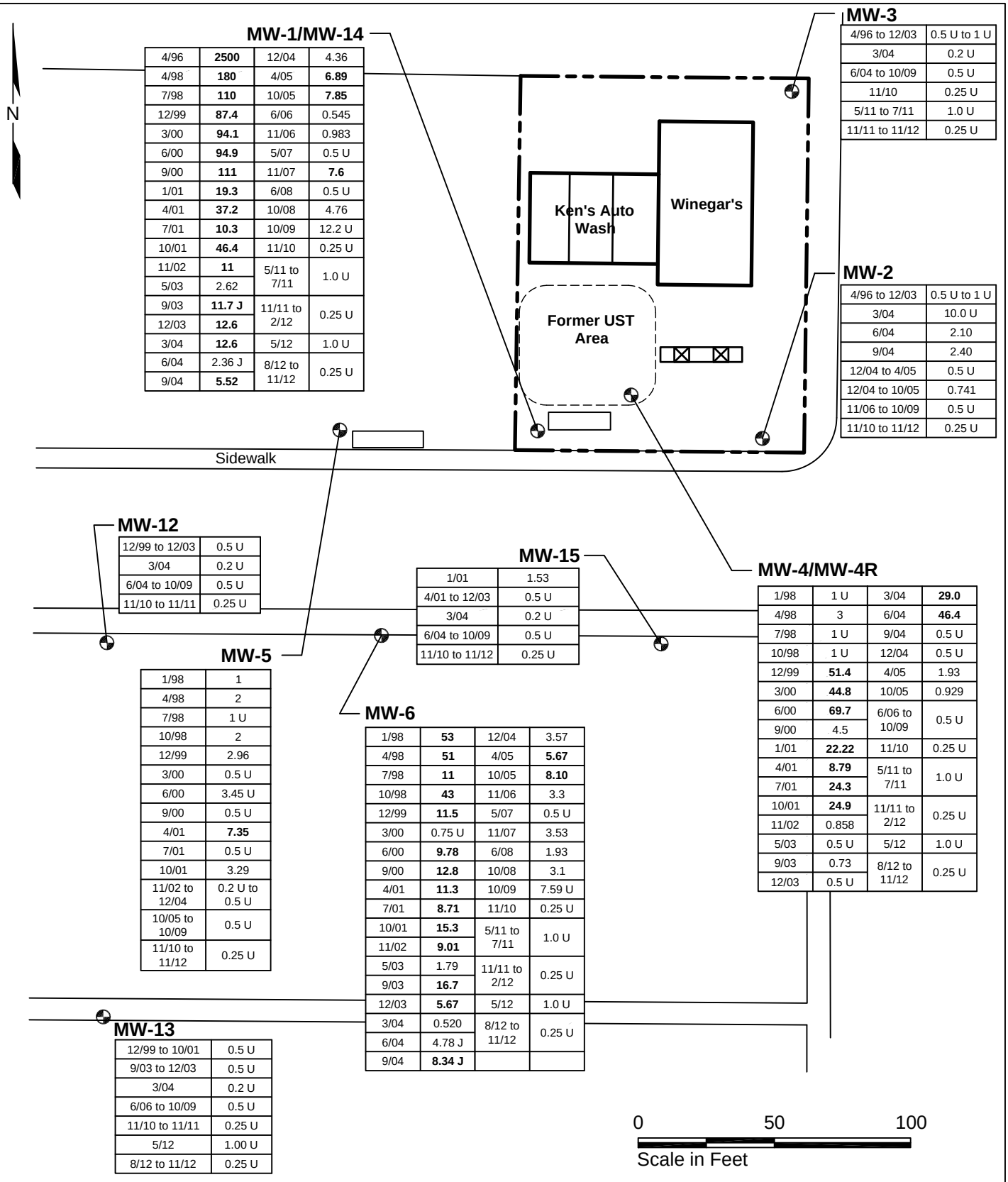
Figure **4**

EAL 02/5/13 716810-004.dwg



MW-1/MW-14

4/96	**2500**	12/04	4.36
4/98	**180**	4/05	**6.89**
7/98	**110**	10/05	**7.85**
12/99	**87.4**	6/06	0.545
3/00	**94.1**	11/06	0.983
6/00	**94.9**	5/07	0.5 U
9/00	**111**	11/07	**7.6**
1/01	**19.3**	6/08	0.5 U
4/01	**37.2**	10/08	4.76
7/01	**10.3**	10/09	12.2 U
10/01	**46.4**	11/10	0.25 U
11/02	**11**	5/11 to 7/11	1.0 U
5/03	2.62		
9/03	**11.7 J**	11/11 to 2/12	0.25 U
12/03	**12.6**		
3/04	**12.6**	5/12	1.0 U
6/04	2.36 J	8/12 to 11/12	0.25 U
9/04	**5.52**		

MW-3

4/96 to 12/03	0.5 U to 1 U
3/04	0.2 U
6/04 to 10/09	0.5 U
11/10	0.25 U
5/11 to 7/11	1.0 U
11/11 to 11/12	0.25 U

MW-2

4/96 to 12/03	0.5 U to 1 U
3/04	10.0 U
6/04	2.10
9/04	2.40
12/04 to 4/05	0.5 U
12/04 to 10/05	0.741
11/06 to 10/09	0.5 U
11/10 to 11/12	0.25 U

MW-12

12/99 to 12/03	0.5 U
3/04	0.2 U
6/04 to 10/09	0.5 U
11/10 to 11/11	0.25 U

MW-15

1/01	1.53
4/01 to 12/03	0.5 U
3/04	0.2 U
6/04 to 10/09	0.5 U
11/10 to 11/12	0.25 U

MW-4/MW-4R

1/98	1 U	3/04	**29.0**
4/98	3	6/04	**46.4**
7/98	1 U	9/04	0.5 U
10/98	1 U	12/04	0.5 U
12/99	**51.4**	4/05	1.93
3/00	**44.8**	10/05	0.929
6/00	**69.7**	6/06 to 10/09	0.5 U
9/00	4.5		
1/01	**22.22**	11/10	0.25 U
4/01	**8.79**	5/11 to 7/11	1.0 U
7/01	**24.3**		
10/01	**24.9**	11/11 to 2/12	0.25 U
11/02	0.858		
5/03	0.5 U	5/12	1.0 U
9/03	0.73	8/12 to 11/12	0.25 U
12/03	0.5 U		

MW-5

1/98	1
4/98	2
7/98	1 U
10/98	2
12/99	2.96
3/00	0.5 U
6/00	3.45 U
9/00	0.5 U
4/01	**7.35**
7/01	0.5 U
10/01	3.29
11/02 to 12/04	0.2 U to 0.5 U
10/05 to 10/09	0.5 U
11/10 to 11/12	0.25 U

MW-6

1/98	**53**	12/04	3.57
4/98	**51**	4/05	**5.67**
7/98	**11**	10/05	**8.10**
10/98	**43**	11/06	3.3
12/99	**11.5**	5/07	0.5 U
3/00	0.75 U	11/07	3.53
6/00	**9.78**	6/08	1.93
9/00	**12.8**	10/08	3.1
4/01	**11.3**	10/09	7.59 U
7/01	**8.71**	11/10	0.25 U
10/01	**15.3**	5/11 to 7/11	1.0 U
11/02	**9.01**		
5/03	1.79	11/11 to 2/12	0.25 U
9/03	**16.7**		
12/03	**5.67**	5/12	1.0 U
3/04	0.520	8/12 to 11/12	0.25 U
6/04	4.78 J		
9/04	**8.34 J**		

MW-13

12/99 to 10/01	0.5 U
9/03 to 12/03	0.5 U
3/04	0.2 U
6/06 to 10/09	0.5 U
11/10 to 11/11	0.25 U
5/12	1.00 U
8/12 to 11/12	0.25 U

MW-6 Monitoring Well Location and Number

3/04	0.5 U

Month/Year of Sample Collection

Groundwater Benzene Concentration in µg/L

Notes: Concentrations exceeding the cleanup level are shown in bold.
U = Not detected at specified detection limit.
J = Estimated concentration

Ken's Auto Wash
Ellensburg, Washington

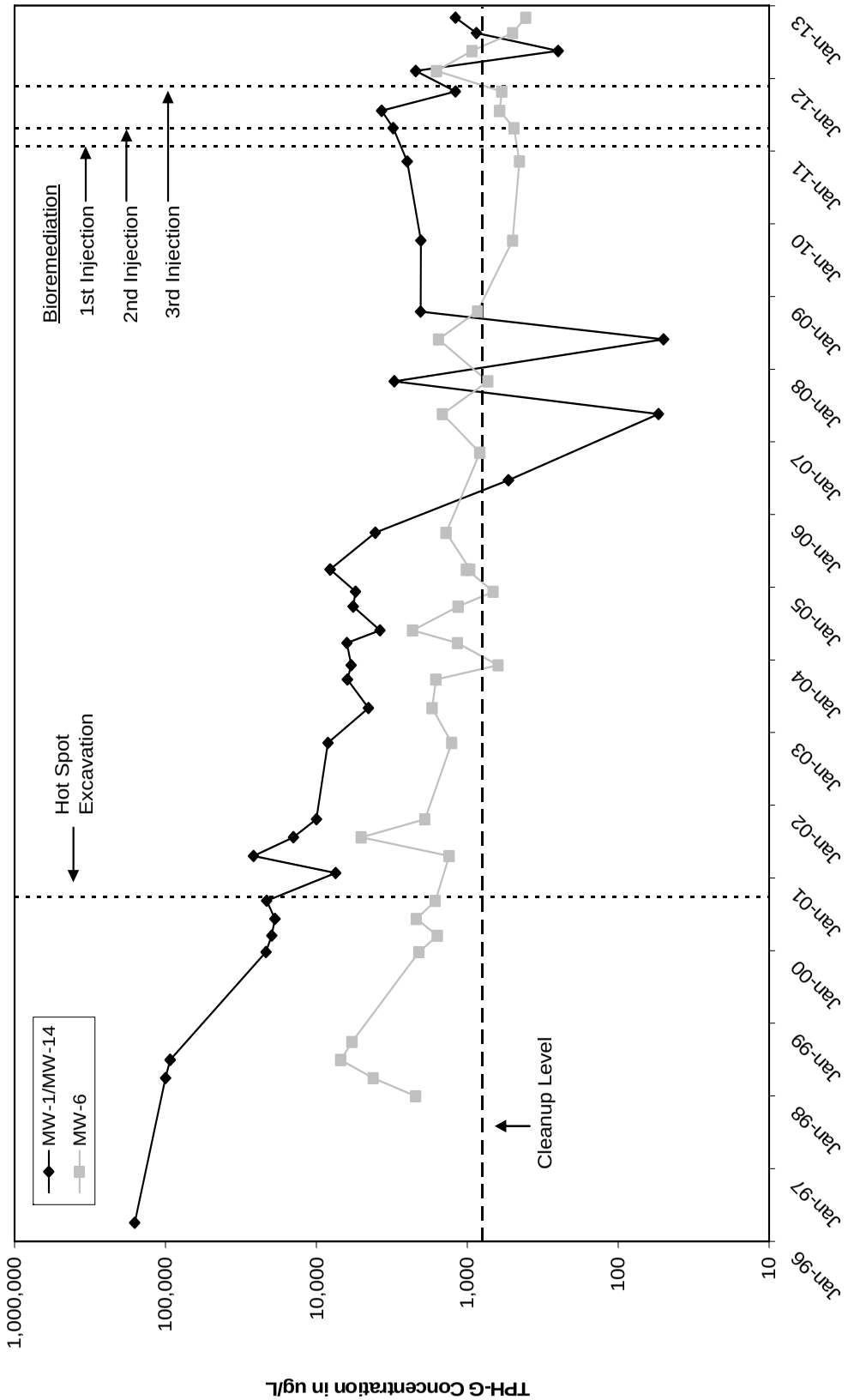
Benzene Occurrences in Groundwater

7168-10 2/13

HARTCROWSER

Figure **5**

EAL 02/5/13 716810-005.dwg



Ken's Auto Wash
Ellensburg, Washington

Long-Term Trends in TPH-G Concentrations in Groundwater

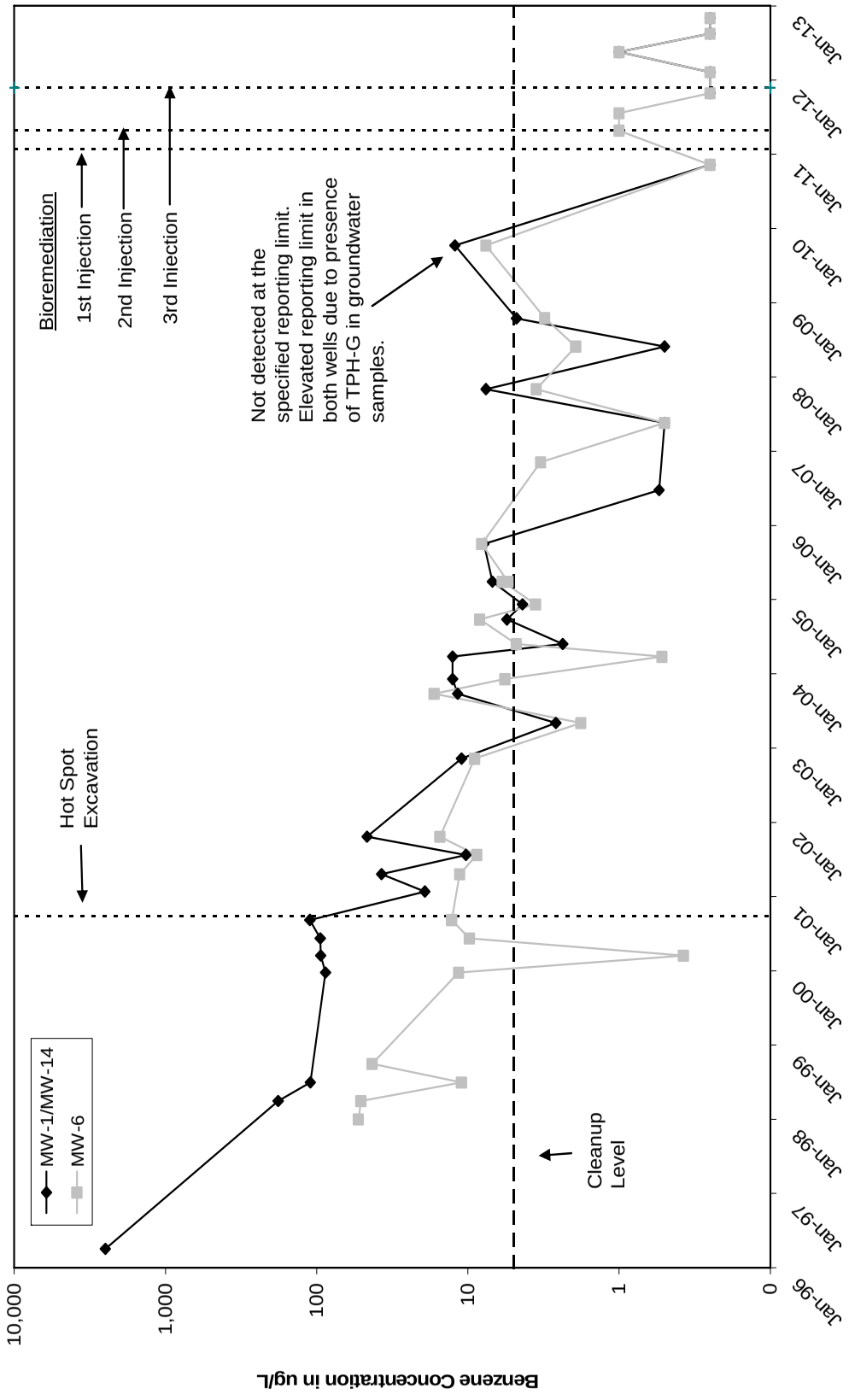
7168-10 2/13

HARTCROWSER

Figure

6

AJG 2/5/13 L:\Jobs\7168\10\2012 Annual Report\Figure 6-7.xls



Ken's Auto Wash
Ellensburg, Washington

Long-Term Trends in Benzene Concentrations in Groundwater

7168-10 2/13

HARTCROWSER

Figure 7

AJG 2/5/13 L:\Jobs\7168102012 Annual Report\Figure 6-7.xls

APPENDIX A
LABORATORY REPORT
ANALYTICAL RESOURCES, INC.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

June 4, 2012

Angie Goodwin
Hart Crowser, Inc.
1700 Westlake Avenue N. Suite 200
Seattle, WA 98109-3256

RE: Client Project: Ken's Auto, 7168-10
ARI Job No.: UV88

Dear Angie:

Please find enclosed the original Chain-of-Custody (COC) record, sample receipt documentation, and the final data for samples from the project referenced above. Analytical Resources, Inc. (ARI) received four water samples and one trip blank on May 24, 2012. The samples were received in good condition with a cooler temperature of 2.3°C. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Gx plus BTEX and Anions, as requested on the COC.

There were no anomalies associated with the analyses.

Sincerely,
ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211
Enclosures

cc: eFile UV88

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Sample Custody Record

Samples Shipped to: ARI UNEE

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 7168-10 LAB NUMBER

PROJECT NAME KEN'S AUTO

HART CROWSER CONTACT ANGIE GOODWIN

SAMPLED BY: ASK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: TPH-G/BTEX	REQUESTED ANALYSIS: ND3/SO4/Br/Cl	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	MW-4R		5/23/12	1100	WATER	X	X	3	
	MW-14		↓	1145	↓	X	X	3	
	MW-6		↓	1235	↓	X	X	3	
	MW-13		↓	1330	↓	X	X	3	
	TB		5/18/12	—	↓			2	TRIP BLANKS

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: ANDREW KAPARIS	0900	SIGNATURE: A. Jacobsen	5/24/12
PRINT NAME: HART CROWSER	TIME	PRINT NAME: ARI	TIME
COMPANY	5/24/12	COMPANY	1100
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE	TIME	SIGNATURE	TIME
PRINT NAME		PRINT NAME	
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:
FOR GAS & BENZENE, PLEASE REPORT TO THE CURVE

TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. for Other Contract Requirements

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐48 HOURS ☒STANDARD
☐72 HOURS OTHER

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: UV88
Client: Hart Crowser Inc.
Project Event: 7168-10
Project Name: Ken's Auto

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-4R	UV88A	12-9596	Water	05/23/12 11:00	05/24/12 11:00
2.	MW-14	UV88B	12-9597	Water	05/23/12 11:45	05/24/12 11:00
3.	MW-6	UV88C	12-9598	Water	05/23/12 12:35	05/24/12 11:00
4.	MW-13	UV88D	12-9599	Water	05/23/12 13:30	05/24/12 11:00
5.	Trip Blanks	UV88E	12-9600	Water	05/23/12	05/24/12 11:00

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Hart Crowser Project Name: Ken's Auto

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier Hand Delivered Other: Zen

Assigned ARI Job No: WU8Y Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	(YES)	NO
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)..... 0.1

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90411619

Cooler Accepted by: AV Date: 5/24/12 Time: 1100

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		(YES)	NO
What kind of packing material was used? ... Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam Block Paper Other: _____			
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)...	(NA)	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	(NO)
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	5-18-12	

Was Sample Split by ARI : (NA) YES Date/Time:_____ Equipment:_____ Split by:_____

Samples Logged by: JS Date: 5-24-12 Time: 1210

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

Trip blanks 2 "pb"

By: JS Date: 5-24-12

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-4R
SAMPLE

Lab Sample ID: UV88A
LIMS ID: 12-9596
Matrix: Water
Data Release Authorized:
Reported: 06/04/12

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Date Analyzed: 06/01/12 10:42
Instrument/Analyst: PID2/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

			GAS ID
Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	97.8%
Bromobenzene	91.3%

Gasoline Surrogate Recovery

Trifluorotoluene	97.8%
Bromobenzene	95.2%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-14
SAMPLE

Lab Sample ID: UV88B
LIMS ID: 12-9597
Matrix: Water
Data Release Authorized:
Reported: 06/04/12

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Date Analyzed: 06/01/12 11:11
Instrument/Analyst: PID2/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

			GAS ID
Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	97.2%
Bromobenzene	91.3%

Gasoline Surrogate Recovery

Trifluorotoluene	98.3%
Bromobenzene	95.1%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-6
SAMPLE

Lab Sample ID: UV88C
LIMS ID: 12-9598
Matrix: Water
Data Release Authorized:
Reported: 06/04/12

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Date Analyzed: 06/01/12 11:39
Instrument/Analyst: PID2/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	1.0	< 1.0 U	
108-88-3	Toluene	1.0	< 1.0 U	
100-41-4	**Ethylbenzene**	**1.0**	**6.5**	
179601-23-1	m,p-Xylene	1.0	< 1.0 U	
95-47-6	o-Xylene	1.0	< 1.0 U	
	Gasoline Range Hydrocarbons	**0.25**	**0.93**	GAS ID **GRO**

BETX Surrogate Recovery

Trifluorotoluene	99.2%
Bromobenzene	94.8%

Gasoline Surrogate Recovery

Trifluorotoluene	99.4%
Bromobenzene	96.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-13
SAMPLE

Lab Sample ID: UV88D
LIMS ID: 12-9599
Matrix: Water
Data Release Authorized:
Reported: 06/04/12

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Date Analyzed: 06/01/12 12:07
Instrument/Analyst: PID2/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

			GAS ID
Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	95.8%
Bromobenzene	91.5%

Gasoline Surrogate Recovery

Trifluorotoluene	97.3%
Bromobenzene	95.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: Trip Blanks
SAMPLE

Lab Sample ID: UV88E
LIMS ID: 12-9600
Matrix: Water
Data Release Authorized:
Reported: 06/04/12

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Date Analyzed: 06/01/12 10:14
Instrument/Analyst: PID2/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

			GAS ID
Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	95.0%
Bromobenzene	89.6%

Gasoline Surrogate Recovery

Trifluorotoluene	96.8%
Bromobenzene	92.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MB-060112
METHOD BLANK

Lab Sample ID: MB-060112
LIMS ID: 12-9596
Matrix: Water
Data Release Authorized:
Reported: 06/04/12

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed: 06/01/12 09:01
Instrument/Analyst: PID2/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	1.0	< 1.0 U
108-88-3	Toluene	1.0	< 1.0 U
100-41-4	Ethylbenzene	1.0	< 1.0 U
179601-23-1	m,p-Xylene	1.0	< 1.0 U
95-47-6	o-Xylene	1.0	< 1.0 U

			GAS ID
Gasoline Range Hydrocarbons	0.25	< 0.25 U	---

BETX Surrogate Recovery

Trifluorotoluene	90.4%
Bromobenzene	87.9%

Gasoline Surrogate Recovery

Trifluorotoluene	89.2%
Bromobenzene	90.9%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: UV88
Matrix: Water

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10

Client ID	TFT	BBZ	TOT OUT
MB-060112	90.4%	87.9%	0
LCS-060112	97.3%	93.0%	0
LCSD-060112	97.3%	92.9%	0
MW-4R	97.8%	91.3%	0
MW-14	97.2%	91.3%	0
MW-6	99.2%	94.8%	0
MW-13	95.8%	91.5%	0
Trip Blanks	95.0%	89.6%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(79-120)	(80-120)
(BBZ) = Bromobenzene	(79-120)	(80-120)

Log Number Range: 12-9596 to 12-9600

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: UV88
Matrix: Water

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10

Client ID	TFT	BBZ	TOT OUT
MB-060112	89.2%	90.9%	0
LCS-060112	97.0%	93.7%	0
LCSD-060112	96.9%	94.6%	0
MW-4R	97.8%	95.2%	0
MW-14	98.3%	95.1%	0
MW-6	99.4%	96.6%	0
MW-13	97.3%	95.7%	0
Trip Blanks	96.8%	92.6%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 12-9596 to 12-9600

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG

Sample ID: LCS-060112
LAB CONTROL SAMPLE

Lab Sample ID: LCS-060112
LIMS ID: 12-9596
Matrix: Water
Data Release Authorized:
Reported: 06/04/12

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 06/01/12 08:04
LCSD: 06/01/12 08:33
Instrument/Analyst LCS: PID2/JLW
LCSD: PID2/JLW

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	1.00	1.00	100%	0.96	1.00	96.0%	4.1%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.0%	96.9%
Bromobenzene	93.7%	94.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1

Sample ID: LCS-060112
LAB CONTROL SAMPLE

Lab Sample ID: LCS-060112
LIMS ID: 12-9596
Matrix: Water
Data Release Authorized:
Reported: 06/04/12

QC Report No: UV88-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 06/01/12 08:04
LCSD: 06/01/12 08:33
Instrument/Analyst LCS: PID2/JLW
LCSD: PID2/JLW

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	3.44	3.70	93.0%	3.41	3.70	92.2%	0.9%
Toluene	36.1	39.6	91.2%	35.8	39.6	90.4%	0.8%
Ethylbenzene	8.91	11.6	76.8%	8.79	11.6	75.8%	1.4%
m,p-Xylene	36.4	42.5	85.6%	35.6	42.5	83.8%	2.2%
o-Xylene	16.8	19.2	87.5%	16.6	19.2	86.5%	1.2%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.3%	97.3%
Bromobenzene	93.0%	92.9%

SAMPLE RESULTS-CONVENTIONALS
UV88-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/01/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Client ID: MW-4R
ARI ID: 12-9596 UV88A

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	05/24/12 052412#1	EPA 300.0	mg/L	1.0	38.1
Bromide	05/24/12 052412#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	05/24/12 052412#1	EPA 300.0	mg-N/L	0.2	5.2
Sulfate	05/24/12 052412#1	EPA 300.0	mg/L	1.0	37.0

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
UV88-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/01/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Client ID: MW-14
ARI ID: 12-9597 UV88B

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	05/24/12 052412#1	EPA 300.0	mg/L	2.0	60.3
Bromide	05/25/12 052512#1	EPA 300.0	mg/L	1.0	< 1.0 U
N-Nitrate	05/24/12 052412#1	EPA 300.0	mg-N/L	5.0	120
Sulfate	05/24/12 052412#1	EPA 300.0	mg/L	5.0	211

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
UV88-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/01/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Client ID: MW-6
ARI ID: 12-9598 UV88C

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	05/24/12 052412#1	EPA 300.0	mg/L	1.0	41.0
Bromide	05/24/12 052412#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	05/24/12 052412#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Sulfate	05/24/12 052412#1	EPA 300.0	mg/L	0.5	12.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
UV88-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/01/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Client ID: MW-13
ARI ID: 12-9599 UV88D

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	05/24/12 052412#1	EPA 300.0	mg/L	0.5	11.3
Bromide	05/24/12 052412#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	05/24/12 052412#1	EPA 300.0	mg-N/L	0.1	0.9
Sulfate	05/25/12 052512#1	EPA 300.0	mg/L	0.2	5.0

RL Analytical reporting limit
U Undetected at reported detection limit

METHOD BLANK RESULTS-CONVENTIONALS
UV88-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/01/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Chloride	EPA 300.0	05/24/12	mg/L	< 0.1 U	
Bromide	EPA 300.0	05/24/12	mg/L	< 0.1 U	
		05/25/12		< 0.1 U	
N-Nitrate	EPA 300.0	05/24/12	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	05/24/12	mg/L	< 0.1 U	
		05/25/12		< 0.1 U	

STANDARD REFERENCE RESULTS-CONVENTIONALS
UV88-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/01/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Chloride	EPA 300.0	05/24/12	mg/L	3.0	3.0	100.0%
ERA #411010						
Bromide	EPA 300.0	05/24/12	mg/L	3.1	3.0	103.3%
ERA #111109		05/25/12		3.0	3.0	100.0%
N-Nitrate	EPA 300.0	05/24/12	mg-N/L	3.0	3.0	100.0%
ERA #230511						
Sulfate	EPA 300.0	05/24/12	mg/L	3.0	3.0	100.0%
ERA #160111		05/25/12		3.0	3.0	100.0%

REPLICATE RESULTS-CONVENTIONALS
UV88-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/01/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: UV88A Client ID: MW-4R						
Chloride	EPA 300.0	05/24/12	mg/L	38.1	38.0	0.3%
Bromide	EPA 300.0	05/24/12	mg/L	< 0.1	< 0.1	NA
N-Nitrate	EPA 300.0	05/24/12	mg-N/L	5.2	5.2	0.0%
Sulfate	EPA 300.0	05/24/12	mg/L	37.0	36.9	0.3%

MS/MSD RESULTS-CONVENTIONALS
UV88-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 06/01/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 05/23/12
Date Received: 05/24/12

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: UV88A Client ID: MW-4R							
Chloride	EPA 300.0	05/24/12	mg/L	38.1	79.7	40.0	104.0%
Bromide	EPA 300.0	05/24/12	mg/L	< 0.1	1.7	2.0	85.0%
N-Nitrate	EPA 300.0	05/24/12	mg-N/L	5.2	9.2	4.0	100.0%
Sulfate	EPA 300.0	05/24/12	mg/L	37.0	80.2	40.0	108.0%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

August 29, 2012

Angie Goodwin
Hart Crowser, Inc.
1700 Westlake Avenue N. Suite 200
Seattle, WA 98109-3256

RE: Client Project: Ken's Auto, 7168-10
ARI Job No.: VG75

Dear Angie:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final data for samples from the project referenced above. Analytical Resources, Inc. (ARI) received five water samples and one trip blank on August 22, 2012. The samples were received in good condition with a cooler temperature of 11.4°C. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Gx plus BTEX and Anions, as requested on the COC.

There were no anomalies associated with the analyses.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
-For-
Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211
Enclosures

cc: eFile VG75

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Sample Custody Record

Samples Shipped to: ARI

HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 7168-10 LAB NUMBER

PROJECT NAME KEN'S AUTO

HART CROWSER CONTACT ANGIE GOODWIN

SAMPLED BY: ASK

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: TPH-D/8TEX	REQUESTED ANALYSIS: NO3/SO4/Br/Cl	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	MW-4R		8/22/12	1000	WATER	X	X	3	
	MW-6			1045		X	X	3	
	MW-KA			1115		X	X	3	
	MW-13			1145		X	X	3	
	MW-14			1230		X	X	3	
	TB		8/16/12	—				2	

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: Andrew Kaparos	8/22/12	SIGNATURE: Kyle Strecker	8.22.12
PRINT NAME: ANDREW KAPAROS	TIME	PRINT NAME: ARI	TIME
COMPANY: HART CROWSER	1500	COMPANY	1500
RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE		SIGNATURE	
PRINT NAME	TIME	PRINT NAME	TIME
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

FOR GAS + BENZENE, PLEASE REPORT TO THE CURVE.

TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. for Other Contract Requirements

TURNAROUND TIME:

☐ 24 HOURS ☐ 1 WEEK
☐48 HOURS ☒STANDARD
☐72 HOURS OTHER

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Hart Crowser Project Name: Kent auto

COC No(s): _____ NA Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: VG75 Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	1.4	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#:	90941619

Cooler Accepted by: TS Date: 6-22-12 Time: 1500

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs (Baggies) Foam (Block) Paper Other:		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	6.16.12	

Was Sample Split by ARI: (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

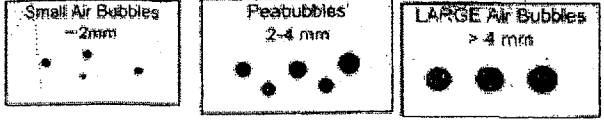
Samples Logged by: TS Date: 6-22-12 Time: 1610

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:



Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VG75
Client: Hart Crowser Inc.
Project Event: 7168-10
Project Name: Ken's Auto

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-4R	VG75A	12-15897	Water	08/22/12 10:00	08/22/12 15:00
2.	MW-6	VG75B	12-15898	Water	08/22/12 10:45	08/22/12 15:00
3.	MW-KA	VG75C	12-15899	Water	08/22/12 11:15	08/22/12 15:00
4.	MW-13	VG75D	12-15900	Water	08/22/12 11:45	08/22/12 15:00
5.	MW-14	VG75E	12-15901	Water	08/22/12 12:30	08/22/12 15:00
6.	Trip Blank	VG75F	12-15902	Water	08/22/12	08/22/12 15:00

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-4R
SAMPLE

Lab Sample ID: VG75A
LIMS ID: 12-15897
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Date Analyzed: 08/24/12 13:32
Instrument/Analyst: PID2/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U ---

BETX Surrogate Recovery

Trifluorotoluene	95.9%
Bromobenzene	90.7%

Gasoline Surrogate Recovery

Trifluorotoluene	97.7%
Bromobenzene	99.3%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-6
SAMPLE

Lab Sample ID: VG75B
LIMS ID: 12-15898
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Date Analyzed: 08/24/12 14:01
Instrument/Analyst: PID2/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	0.25	< 0.25 U	
108-88-3	**Toluene**	**0.25**	**0.31**	
100-41-4	Ethylbenzene	0.25	< 0.25 U	
179601-23-1	m,p-Xylene	0.50	< 0.50 U	
95-47-6	o-Xylene	0.25	< 0.25 U	
	Gasoline Range Hydrocarbons	**0.10**	**0.50**	GAS ID **GAS**

BETX Surrogate Recovery

Trifluorotoluene	96.3%
Bromobenzene	91.6%

Gasoline Surrogate Recovery

Trifluorotoluene	96.8%
Bromobenzene	100%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-KA
SAMPLE

Lab Sample ID: VG75C
LIMS ID: 12-15899
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Date Analyzed: 08/24/12 14:29
Instrument/Analyst: PID2/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	0.25	< 0.25 U	
108-88-3	**Toluene**	**0.25**	**0.34**	
100-41-4	Ethylbenzene	0.25	< 0.25 U	
179601-23-1	m,p-Xylene	0.50	< 0.50 U	
95-47-6	o-Xylene	0.25	< 0.25 U	
				GAS ID
	Gasoline Range Hydrocarbons	**0.10**	**0.46**	**GAS**

BETX Surrogate Recovery

Trifluorotoluene	95.0%
Bromobenzene	91.3%

Gasoline Surrogate Recovery

Trifluorotoluene	97.0%
Bromobenzene	99.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-13
SAMPLE

Lab Sample ID: VG75D
LIMS ID: 12-15900
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Date Analyzed: 08/24/12 14:58
Instrument/Analyst: PID2/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U ---

BETX Surrogate Recovery

Trifluorotoluene	93.8%
Bromobenzene	91.0%

Gasoline Surrogate Recovery

Trifluorotoluene	96.8%
Bromobenzene	99.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-14
SAMPLE

Lab Sample ID: VG75E
LIMS ID: 12-15901
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Date Analyzed: 08/24/12 15:26
Instrument/Analyst: PID2/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	0.25	< 0.25 U	
108-88-3	**Toluene**	**0.25**	**0.27**	
100-41-4	**Ethylbenzene**	**0.25**	**0.26**	
179601-23-1	**m,p-Xylene**	**0.50**	**0.51**	
95-47-6	**o-Xylene**	**0.25**	**0.30**	
	Gasoline Range Hydrocarbons	**0.10**	**0.87**	GAS ID **GAS**

BETX Surrogate Recovery

Trifluorotoluene	96.0%
Bromobenzene	94.5%

Gasoline Surrogate Recovery

Trifluorotoluene	97.6%
Bromobenzene	102%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: Trip Blank
SAMPLE

Lab Sample ID: VG75F
LIMS ID: 12-15902
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Date Analyzed: 08/24/12 13:04
Instrument/Analyst: PID2/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	0.25	< 0.25 U	
108-88-3	Toluene	0.25	< 0.25 U	
100-41-4	Ethylbenzene	0.25	< 0.25 U	
179601-23-1	m,p-Xylene	0.50	< 0.50 U	
95-47-6	o-Xylene	0.25	< 0.25 U	
				GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U	---

BETX Surrogate Recovery

Trifluorotoluene	94.4%
Bromobenzene	88.5%

Gasoline Surrogate Recovery

Trifluorotoluene	96.7%
Bromobenzene	96.1%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: VG75
Matrix: Water

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10

Client ID	TFT	BBZ	TOT OUT
MB-082412	96.9%	99.0%	0
LCS-082412	94.5%	97.1%	0
LCSD-082412	91.7%	96.5%	0
MW-4R	97.7%	99.3%	0
MW-6	96.8%	100%	0
MW-KA	97.0%	99.6%	0
MW-13	96.8%	99.7%	0
MW-14	97.6%	102%	0
Trip Blank	96.7%	96.1%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 12-15897 to 12-15902

ANALYTICAL RESOURCES INCORPORATED

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: VG75
Matrix: Water

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10

Client ID	TFT	BBZ	TOT OUT
MB-082412	95.3%	91.2%	0
LCS-082412	95.7%	92.3%	0
LCSD-082412	93.0%	91.0%	0
MW-4R	95.9%	90.7%	0
MW-6	96.3%	91.6%	0
MW-KA	95.0%	91.3%	0
MW-13	93.8%	91.0%	0
MW-14	96.0%	94.5%	0
Trip Blank	94.4%	88.5%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(79-120)	(80-120)
(BBZ) = Bromobenzene	(79-120)	(80-120)

Log Number Range: 12-15897 to 12-15902

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-082412
LAB CONTROL SAMPLE

Lab Sample ID: LCS-082412
LIMS ID: 12-15897
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 08/24/12 11:25
LCSD: 08/24/12 11:54
Instrument/Analyst LCS: PID2/PKC
LCSD: PID2/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	1.10	1.00	110%	1.11	1.00	111%	0.9%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	94.5%	91.7%
Bromobenzene	97.1%	96.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod

Sample ID: LCS-082412
LAB CONTROL SAMPLE

Lab Sample ID: LCS-082412
LIMS ID: 12-15897
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 08/24/12 11:25
LCSD: 08/24/12 11:54
Instrument/Analyst LCS: PID2/PKC
LCSD: PID2/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	3.73	3.70	101%	3.66	3.70	98.9%	1.9%
Toluene	39.5	39.6	99.7%	38.6	39.6	97.5%	2.3%
Ethylbenzene	9.63	11.6	83.0%	9.42	11.6	81.2%	2.2%
m,p-Xylene	42.0	42.5	98.8%	41.1	42.5	96.7%	2.2%
o-Xylene	18.6	19.2	96.9%	18.3	19.2	95.3%	1.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.7%	93.0%
Bromobenzene	92.3%	91.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MB-082412
METHOD BLANK

Lab Sample ID: MB-082412
LIMS ID: 12-15897
Matrix: Water
Data Release Authorized:
Reported: 08/29/12

QC Report No: VG75-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed: 08/24/12 12:22
Instrument/Analyst: PID2/PKC

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U ---

BETX Surrogate Recovery

Trifluorotoluene	95.3%
Bromobenzene	91.2%

Gasoline Surrogate Recovery

Trifluorotoluene	96.9%
Bromobenzene	99.0%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

SAMPLE RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Client ID: MW-4R
ARI ID: 12-15897 VG75A

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	08/23/12 082312#1	EPA 300.0	mg/L	0.5	9.4
Bromide	08/23/12 082312#1	EPA 300.0	mg/L	0.1	0.3
N-Nitrate	08/23/12 082312#1	EPA 300.0	mg-N/L	0.1	0.2
Sulfate	08/23/12 082312#1	EPA 300.0	mg/L	0.5	11.3

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Client ID: MW-6
ARI ID: 12-15898 VG75B

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	08/23/12 082312#1	EPA 300.0	mg/L	0.5	12.4
Bromide	08/23/12 082312#1	EPA 300.0	mg/L	0.1	0.1
N-Nitrate	08/23/12 082312#1	EPA 300.0	mg-N/L	0.1	0.1
Sulfate	08/23/12 082312#1	EPA 300.0	mg/L	0.1	2.4

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Client ID: MW-KA
ARI ID: 12-15899 VG75C

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	08/23/12 082312#1	EPA 300.0	mg/L	0.5	12.5
Bromide	08/23/12 082312#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	08/23/12 082312#1	EPA 300.0	mg-N/L	0.1	0.1
Sulfate	08/23/12 082312#1	EPA 300.0	mg/L	0.1	1.8

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Client ID: MW-13
ARI ID: 12-15900 VG75D

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	08/23/12 082312#1	EPA 300.0	mg/L	0.2	5.4
Bromide	08/23/12 082312#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	08/23/12 082312#1	EPA 300.0	mg-N/L	0.1	0.3
Sulfate	08/23/12 082312#1	EPA 300.0	mg/L	0.1	4.0

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Client ID: MW-14
ARI ID: 12-15901 VG75E

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	08/23/12 082312#1	EPA 300.0	mg/L	2.0	44.4
Bromide	08/23/12 082312#1	EPA 300.0	mg/L	0.1	0.2
N-Nitrate	08/23/12 082312#1	EPA 300.0	mg-N/L	0.5	11.6
Sulfate	08/23/12 082312#1	EPA 300.0	mg/L	10.0	380

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VG75A Client ID: MW-4R							
Chloride	EPA 300.0	08/23/12	mg/L	9.4	13.2	4.0	95.0%
Bromide	EPA 300.0	08/23/12	mg/L	0.3	2.2	2.0	95.0%
N-Nitrate	EPA 300.0	08/23/12	mg-N/L	0.2	2.1	2.0	95.0%
Sulfate	EPA 300.0	08/23/12	mg/L	11.3	14.7	4.0	85.0%

REPLICATE RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 08/22/12
Date Received: 08/22/12

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VG75A Client ID: MW-4R						
Chloride	EPA 300.0	08/23/12	mg/L	9.4	9.4	0.0%
Bromide	EPA 300.0	08/23/12	mg/L	0.3	0.3	0.0%
N-Nitrate	EPA 300.0	08/23/12	mg-N/L	0.2	0.2	0.0%

METHOD BLANK RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Chloride	EPA 300.0	08/23/12	mg/L	< 0.1 U	
Bromide	EPA 300.0	08/23/12	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	08/23/12	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	08/23/12	mg/L	< 0.1 U	

STANDARD REFERENCE RESULTS-CONVENTIONALS
VG75-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 08/24/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Chloride ERA #411010	EPA 300.0	08/23/12	mg/L	3.0	3.0	100.0%
Bromide ERA #210610	EPA 300.0	08/23/12	mg/L	3.0	3.0	100.0%
N-Nitrate ERA #230511	EPA 300.0	08/23/12	mg-N/L	2.9	3.0	96.7%
Sulfate ERA #070811	EPA 300.0	08/23/12	mg/L	3.2	3.0	106.7%

Analytical Resources, Incorporated
Analytical Chemists and Consultants

November 19, 2012

Angie Goodwin
Hart Crowser, Inc.
1700 Westlake Avenue N. Suite 200
Seattle, WA 98109-3256

RE: Client Project: Ken's Auto, 7168-10
ARI Job No.: VR28

Dear Angie:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final data for samples from the project referenced above. Analytical Resources, Inc. (ARI) received nine water samples and one trip blank on November 7, 2012. The samples were received in good condition with a cooler temperature of 1.9°C. For further details regarding sample receipt, please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Gx plus BTEX, Total metals and Anions, as requested on the COC.

There were no anomalies associated with the analyses.

Sincerely,
ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
kellyb@arilabs.com
206/695-6211
Enclosures

cc: eFile VR28

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Sample Custody Record

Samples Shipped to: ARI

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HARTCROWSER

Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, Washington 98109-6212
Office: 206.324.9530 • Fax 206.328.5581

JOB 7168-10 LAB NUMBER

PROJECT NAME KEN'S AUTO

HART CROWSER CONTACT ANGIE GOODWIN

SAMPLED BY: ASK/NWG

LAB NO.	SAMPLE ID	DESCRIPTION	DATE	TIME	MATRIX	REQUESTED ANALYSIS: TPH-G/BTEX	NO3/SO4/Br/Cl	TOTAL LEAD	NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS
	MW-4R		11/6/12	0955	WATER	X	X	X	4	
	MW-3			1035		X	X	X	4	
	MW-14			1120		X	X	X	4	
	MW-2			1150		X	X	X	4	
	MW-6			1236		X	X	X	4	
	MW-KA			1300		X	X	X	4	
	MW-15			1322		X	X	X	4	
	MW-13			1400		X	X	X	4	
	MW-5			1445		X	X	X	4	
	TB		10/31/12	—	WATER	X			1	TRIP BLANK

RELINQUISHED BY	DATE	RECEIVED BY	DATE
SIGNATURE: Andrew Kaparos	11/6/12	SIGNATURE: Suzanne Faubl	11/6/12
PRINT NAME: ANDREW KAPAROS	TIME	PRINT NAME: Suzanne Faubl	TIME
COMPANY: HART CROWSER	1530	COMPANY: HART CROWSER	1530
RELINQUISHED BY: Suzanne Faubl	DATE: 11/7/12	RECEIVED BY	DATE: 11-7-12
SIGNATURE: Suzanne Faubl	TIME	SIGNATURE: Chris Atwell	TIME
PRINT NAME: Hart Crowser	0800	PRINT NAME: ARI	1135
COMPANY		COMPANY	

SPECIAL SHIPMENT HANDLING OR STORAGE REQUIREMENTS:

TPH-G/BTEX report to the curve

TOTAL NUMBER OF CONTAINERS

SAMPLE RECEIPT INFORMATION
CUSTODY SEALS: ☐YES ☐NO ☐N/A
GOOD CONDITION ☐YES ☐NO
TEMPERATURE
SHIPMENT METHOD: ☐HAND ☐COURIER ☐OVERNIGHT

COOLER NO.: STORAGE LOCATION:

See Lab Work Order No. for Other Contract Requirements

TURNAROUND TIME:
☐ 24 HOURS ☐ 1 WEEK
☐ 48 HOURS ☒ STANDARD
☐ 72 HOURS OTHER

White and Yellow Copies to Lab Pink to Project Manager Lab to Return White Copy to Hart Crowser Gold to Sample Custodian

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: Hart Crowser

Project Name: Kens Auto

COC No(s): _____ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____

Assigned ARI Job No: VRZ8

Tracking No: _____ NA

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	(YES)	NO
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO
Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)	1.9	

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: 90877952

Cooler Accepted by: A Date: 11-7-12 Time: 1135

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	(Bubble Wrap) (Wet Ice) Gel Packs Baggies (Foam Block) Paper Other:		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)	NA	(YES)	NO
Were all VOC vials free of air bubbles?	NA	(YES)	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	NA	10/31/12	

Was Sample Split by ARI : (NA) YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by: JM Date: 11/7/12 Time: 1143

*** Notify Project Manager of discrepancies or concerns ***

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VR28
Client: Hart Crowser Inc.
Project Event: 7168-10
Project Name: Ken's Auto

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	MW-4R	VR28A	12-22154	Water	11/06/12 09:55	11/07/12 11:35
2.	MW-3	VR28B	12-22155	Water	11/06/12 10:35	11/07/12 11:35
3.	MW-14	VR28C	12-22156	Water	11/06/12 11:20	11/07/12 11:35
4.	MW-2	VR28D	12-22157	Water	11/06/12 11:50	11/07/12 11:35
5.	MW-6	VR28E	12-22158	Water	11/06/12 12:36	11/07/12 11:35
6.	MW-KA	VR28F	12-22159	Water	11/06/12 13:00	11/07/12 11:35
7.	MW-15	VR28G	12-22160	Water	11/06/12 13:22	11/07/12 11:35
8.	MW-13	VR28H	12-22161	Water	11/06/12 14:00	11/07/12 11:35
9.	MW-5	VR28I	12-22162	Water	11/06/12 14:45	11/07/12 11:35
10.	TB	VR28J	12-22163	Water	11/06/12	11/07/12 11:35

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-4R
SAMPLE

Lab Sample ID: VR28A
LIMS ID: 12-22154
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 16:02
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U ---

BETX Surrogate Recovery

Trifluorotoluene	97.7%
Bromobenzene	99.0%

Gasoline Surrogate Recovery

Trifluorotoluene	97.9%
Bromobenzene	98.1%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-3
SAMPLE

Lab Sample ID: VR28B
LIMS ID: 12-22155
Matrix: Water
Data Release Authorized:
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 16:31
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U	---

BETX Surrogate Recovery

Trifluorotoluene	98.0%
Bromobenzene	98.3%

Gasoline Surrogate Recovery

Trifluorotoluene	98.4%
Bromobenzene	98.3%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG

ANALYTICAL RESOURCES INCORPORATED

Sample ID: MW-14
SAMPLE

Lab Sample ID: VR28C
LIMS ID: 12-22156
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 17:00
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	0.25	< 0.25 U	
108-88-3	Toluene	0.25	0.40	
100-41-4	Ethylbenzene	0.25	3.6	
179601-23-1	m,p-Xylene	0.50	2.4	
95-47-6	o-Xylene	0.25	0.78	
	Gasoline Range Hydrocarbons	0.10	1.2	GAS ID GAS

BETX Surrogate Recovery	
Trifluorotoluene	97.5%
Bromobenzene	101%

Gasoline Surrogate Recovery	
Trifluorotoluene	100%
Bromobenzene	98.3%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG

Sample ID: MW-2
SAMPLE

Lab Sample ID: VR28D
LIMS ID: 12-22157
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 17:29
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
Gasoline Range Hydrocarbons	0.10	< 0.10 U	---

BETX Surrogate Recovery

Trifluorotoluene	96.4%
Bromobenzene	98.8%

Gasoline Surrogate Recovery

Trifluorotoluene	97.8%
Bromobenzene	98.1%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod **Sample ID: MW-6**
TPHG by Method NWTPHG **SAMPLE**

Lab Sample ID: VR28E
LIMS ID: 12-22158
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 17:59
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	0.25	< 0.25 U	
108-88-3	Toluene	0.25	< 0.25 U	
100-41-4	Ethylbenzene	0.25	< 0.25 U	
179601-23-1	m,p-Xylene	0.50	< 0.50 U	
95-47-6	o-Xylene	0.25	< 0.25 U	
	Gasoline Range Hydrocarbons	**0.10**	**0.41**	GAS ID **GAS**

BETX Surrogate Recovery

Trifluorotoluene	99.3%
Bromobenzene	100%

Gasoline Surrogate Recovery

Trifluorotoluene	102%
Bromobenzene	99.9%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG

Sample ID: MW-KA
SAMPLE

Lab Sample ID: VR28F
LIMS ID: 12-22159
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 18:28
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	0.25	< 0.25 U	
108-88-3	**Toluene**	**0.25**	**0.25**	
100-41-4	Ethylbenzene	0.25	< 0.25 U	
179601-23-1	m,p-Xylene	0.50	< 0.50 U	
95-47-6	o-Xylene	0.25	< 0.25 U	
	Gasoline Range Hydrocarbons	**0.10**	**0.46**	GAS ID **GAS**

BETX Surrogate Recovery

Trifluorotoluene	99.9%
Bromobenzene	98.7%

Gasoline Surrogate Recovery

Trifluorotoluene	101%
Bromobenzene	98.2%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG

Sample ID: MW-15
SAMPLE

Lab Sample ID: VR28G
LIMS ID: 12-22160
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 18:57
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result	
71-43-2	Benzene	0.25	< 0.25 U	
108-88-3	Toluene	0.25	< 0.25 U	
100-41-4	Ethylbenzene	0.25	< 0.25 U	
179601-23-1	m,p-Xylene	0.50	< 0.50 U	
95-47-6	o-Xylene	0.25	< 0.25 U	
				GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U	---

BETX Surrogate Recovery

Trifluorotoluene	96.8%
Bromobenzene	98.3%

Gasoline Surrogate Recovery

Trifluorotoluene	97.0%
Bromobenzene	98.1%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod **Sample ID: MW-13**
TPHG by Method NWTPHG **SAMPLE**

Lab Sample ID: VR28H
LIMS ID: 12-22161
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 20:24
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U ---

BETX Surrogate Recovery

Trifluorotoluene	96.1%
Bromobenzene	97.5%

Gasoline Surrogate Recovery

Trifluorotoluene	97.2%
Bromobenzene	97.0%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: MW-5
SAMPLE

Lab Sample ID: VR28I
LIMS ID: 12-22162
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 20:54
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U ---

BETX Surrogate Recovery

Trifluorotoluene	94.5%
Bromobenzene	97.9%

Gasoline Surrogate Recovery

Trifluorotoluene	96.6%
Bromobenzene	98.6%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG

Sample ID: TB
SAMPLE

Lab Sample ID: VR28J
LIMS ID: 12-22163
Matrix: Water
Data Release Authorized: WW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Date Analyzed: 11/08/12 15:33
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
Gasoline Range Hydrocarbons	0.10	< 0.10 U	---

BETX Surrogate Recovery

Trifluorotoluene	95.0%
Bromobenzene	96.4%

Gasoline Surrogate Recovery

Trifluorotoluene	95.8%
Bromobenzene	96.7%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
TPHG by Method NWTPHG

Sample ID: MB-110812
METHOD BLANK

Lab Sample ID: MB-110812
LIMS ID: 12-22154
Matrix: Water
Data Release Authorized:
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed: 11/08/12 11:31
Instrument/Analyst: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
71-43-2	Benzene	0.25	< 0.25 U
108-88-3	Toluene	0.25	< 0.25 U
100-41-4	Ethylbenzene	0.25	< 0.25 U
179601-23-1	m,p-Xylene	0.50	< 0.50 U
95-47-6	o-Xylene	0.25	< 0.25 U

			GAS ID
	Gasoline Range Hydrocarbons	0.10	< 0.10 U ---

BETX Surrogate Recovery

Trifluorotoluene	86.1%
Bromobenzene	80.3%

Gasoline Surrogate Recovery

Trifluorotoluene	87.8%
Bromobenzene	81.3%

BETX values reported in µg/L (ppb)
Gasoline values reported in mg/L (ppm)

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

ANALYTICAL RESOURCES INCORPORATED

BETX WATER SURROGATE RECOVERY SUMMARY

ARI Job: VR28
Matrix: Water

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10

Client ID	TFT	BBZ	TOT OUT
MB-110812	86.1%	80.3%	0
LCS-110812	95.5%	93.8%	0
LCSD-110812	95.7%	91.2%	0
MW-4R	97.7%	99.0%	0
MW-3	98.0%	98.3%	0
MW-14	97.5%	101%	0
MW-2	96.4%	98.8%	0
MW-6	99.3%	100%	0
MW-KA	99.9%	98.7%	0
MW-15	96.8%	98.3%	0
MW-13	96.1%	97.5%	0
MW-5	94.5%	97.9%	0
TB	95.0%	96.4%	0

		LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(5 mL PV)	(80-120)	(80-120)
(TFT) = Trifluorotoluene	(15 mL PV)	(79-120)	(80-120)
(BBZ) = Bromobenzene	(5 mL PV)	(80-120)	(77-120)
(BBZ) = Bromobenzene	(15 mL PV)	(79-120)	(80-120)

Log Number Range: 12-22154 to 12-22163

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: VR28
Matrix: Water

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10

Client ID	TFT	BBZ	TOT OUT
MB-110812	87.8%	81.3%	0
LCS-110812	97.3%	93.5%	0
LCSD-110812	97.2%	92.0%	0
MW-4R	97.9%	98.1%	0
MW-3	98.4%	98.3%	0
MW-14	100%	98.3%	0
MW-2	97.8%	98.1%	0
MW-6	102%	99.9%	0
MW-KA	101%	98.2%	0
MW-15	97.0%	98.1%	0
MW-13	97.2%	97.0%	0
MW-5	96.6%	98.6%	0
TB	95.8%	96.7%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 12-22154 to 12-22163

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
BETX by Method SW8021BMod
Page 1 of 1

Sample ID: LCS-110812
LAB CONTROL SAMPLE

Lab Sample ID: LCS-110812
LIMS ID: 12-22154
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 11/08/12 10:32
LCSD: 11/08/12 11:01
Instrument/Analyst LCS: PID1/JLW
LCSD: PID1/JLW

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	3.67	3.70	99.2%	3.62	3.70	97.8%	1.4%
Toluene	38.2	39.6	96.5%	37.1	39.6	93.7%	2.9%
Ethylbenzene	10.8	11.6	93.1%	10.5	11.6	90.5%	2.8%
m,p-Xylene	39.3	42.5	92.5%	38.0	42.5	89.4%	3.4%
o-Xylene	18.2	19.2	94.8%	17.5	19.2	91.1%	3.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

BETX Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	95.5%	95.7%
Bromobenzene	93.8%	91.2%

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG

ANALYTICAL RESOURCES INCORPORATED

Sample ID: LCS-110812
LAB CONTROL SAMPLE

Lab Sample ID: LCS-110812
LIMS ID: 12-22154
Matrix: Water
Data Release Authorized: MW
Reported: 11/14/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 11/08/12 10:32
LCSD: 11/08/12 11:01
Instrument/Analyst LCS: PID1/JLW
LCSD: PID1/JLW

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	0.98	1.00	98.0%	0.93	1.00	93.0%	5.2%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.3%	97.2%
Bromobenzene	93.5%	92.0%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-4R
SAMPLE

Lab Sample ID: VR28A
LIMS ID: 12-22154
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	7439-92-1	Lead	0.1	0.1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-4R
DUPLICATE

Lab Sample ID: VR28A
LIMS ID: 12-22154
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Lead	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-4R
MATRIX SPIKE

Lab Sample ID: VR28A
LIMS ID: 12-22154
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Lead	200.8	0.1 U	25.1	25.0	100%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-3
SAMPLE

Lab Sample ID: VR28B
LIMS ID: 12-22155
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	7439-92-1	Lead	0.1	0.1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-14
SAMPLE

Lab Sample ID: VR28C
LIMS ID: 12-22156
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	**7439-92-1**	**Lead**	0.1	**10.9**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-2
SAMPLE

Lab Sample ID: VR28D
LIMS ID: 12-22157
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	**7439-92-1**	**Lead**	0.1	**0.1**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-6
SAMPLE

Lab Sample ID: VR28E
LIMS ID: 12-22158
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	**7439-92-1**	**Lead**	0.1	**0.4**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-KA
SAMPLE

Lab Sample ID: VR28F
LIMS ID: 12-22159
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	**7439-92-1**	**Lead**	0.1	**0.4**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-15
SAMPLE

Lab Sample ID: VR28G
LIMS ID: 12-22160
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	7439-92-1	Lead	0.1	0.1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: MW-13
SAMPLE

Lab Sample ID: VR28H
LIMS ID: 12-22161
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	7439-92-1	Lead	0.1	0.1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: MW-5
SAMPLE

Lab Sample ID: VR28I
LIMS ID: 12-22162
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	**7439-92-1**	**Lead**	0.1	**0.1**	

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VR28MB
LIMS ID: 12-22155
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	µg/L	Q
200.8	11/08/12	200.8	11/14/12	7439-92-1	Lead	0.1	0.1	U

U-Analyte undetected at given RL
RL-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VR28LCS
LIMS ID: 12-22155
Matrix: Water
Data Release Authorized:
Reported: 11/19/12

QC Report No: VR28-Hart Crowser Inc.
Project: Ken's Auto
7168-10
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Lead	200.8	25.7	25.0	103%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-4R
ARI ID: 12-22154 VR28A

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/08/12 110812#1	EPA 300.0	mg/L	0.5	21.3
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	0.2
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	1.0
Sulfate	11/08/12 110812#1	EPA 300.0	mg/L	1.0	42.7

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-3
ARI ID: 12-22155 VR28B

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/08/12 110812#1	EPA 300.0	mg/L	0.2	5.1
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	0.7
Sulfate	11/08/12 110812#1	EPA 300.0	mg/L	0.2	4.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-14
ARI ID: 12-22156 VR28C

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/08/12 110812#1	EPA 300.0	mg/L	0.5	24.5
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	1.6
Sulfate	11/08/12 110812#1	EPA 300.0	mg/L	5.0	137

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-2
ARI ID: 12-22157 VR28D

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/07/12 110712#1	EPA 300.0	mg/L	0.1	3.4
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	1.3
Sulfate	11/08/12 110812#1	EPA 300.0	mg/L	0.2	6.8

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-6
ARI ID: 12-22158 VR28E

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/08/12 110812#1	EPA 300.0	mg/L	0.2	7.5
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Sulfate	11/07/12 110712#1	EPA 300.0	mg/L	0.1	2.2

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-KA
ARI ID: 12-22159 VR28F

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/08/12 110812#1	EPA 300.0	mg/L	0.2	7.5
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	< 0.1 U
Sulfate	11/07/12 110712#1	EPA 300.0	mg/L	0.1	2.3

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-15
ARI ID: 12-22160 VR28G

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/08/12 110812#1	EPA 300.0	mg/L	0.2	5.4
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	0.3
Sulfate	11/08/12 110812#1	EPA 300.0	mg/L	0.2	4.9

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-13
ARI ID: 12-22161 VR28H

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/08/12 110812#1	EPA 300.0	mg/L	0.2	5.8
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	0.3
Sulfate	11/07/12 110712#1	EPA 300.0	mg/L	0.1	4.5

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Client ID: MW-5
ARI ID: 12-22162 VR28I

Analyte	Date Batch	Method	Units	RL	Sample
Chloride	11/08/12 110812#1	EPA 300.0	mg/L	0.2	7.9
Bromide	11/07/12 110712#1	EPA 300.0	mg/L	0.1	< 0.1 U
N-Nitrate	11/07/12 110712#1	EPA 300.0	mg-N/L	0.1	0.3
Sulfate	11/08/12 110812#1	EPA 300.0	mg/L	0.2	7.2

RL Analytical reporting limit
U Undetected at reported detection limit

METHOD BLANK RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Chloride	EPA 300.0	11/07/12	mg/L	< 0.1 U	
		11/08/12		< 0.1 U	
Bromide	EPA 300.0	11/07/12	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	11/07/12	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	11/07/12	mg/L	< 0.1 U	
		11/08/12		< 0.1 U	

STANDARD REFERENCE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Chloride	EPA 300.0	11/07/12	mg/L	2.9	3.0	96.7%
ERA #411010		11/08/12		3.0	3.0	100.0%
Bromide	EPA 300.0	11/07/12	mg/L	3.0	3.0	100.0%
ERA #370911						
N-Nitrate	EPA 300.0	11/07/12	mg-N/L	3.0	3.0	100.0%
ERA #230511						
Sulfate	EPA 300.0	11/07/12	mg/L	3.0	3.0	100.0%
ERA #070811		11/08/12		3.0	3.0	100.0%

REPLICATE RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: VR28A Client ID: MW-4R						
Chloride	EPA 300.0	11/08/12	mg/L	21.3	21.3	0.0%
Bromide	EPA 300.0	11/07/12	mg/L	0.2	0.2	0.0%
N-Nitrate	EPA 300.0	11/07/12	mg-N/L	1.0	1.0	0.0%
Sulfate	EPA 300.0	11/08/12	mg/L	42.7	42.7	0.0%

MS/MSD RESULTS-CONVENTIONALS
VR28-Hart Crowser Inc.

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 11/09/12

Project: Ken's Auto
Event: 7168-10
Date Sampled: 11/06/12
Date Received: 11/07/12

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VR28A Client ID: MW-4R							
Chloride	EPA 300.0	11/08/12	mg/L	21.3	38.9	20.0	88.0%
Bromide	EPA 300.0	11/07/12	mg/L	0.2	2.1	2.0	95.0%
N-Nitrate	EPA 300.0	11/07/12	mg-N/L	1.0	3.0	2.0	100.0%
Sulfate	EPA 300.0	11/08/12	mg/L	42.7	91.5	40.0	122.0%