MWH

BUILDING A BETTER WORLD

July 27, 2011

Ms. Lisa Lloyd
USEPA - Region VIII
1595 Wynkoop Street
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Mr. Tony Howes
Utah Department of Environmental Quality
168 North 1950 West
Salt Lake City, UT 84116

SUBJECT: Wasatch Chemical Site
Progress Report No. 95

Dear Lisa and Tony:

This semiannual report was prepared by MWH to summarize environmental remediation activities at the Wasatch Chemical Site in Salt Lake City, Utah from January through June 2011. This progress report includes the following:

- Summary of activities undertaken during the reporting period
- Summary of monitoring results
- Progress towards completion
- Current and historical trends
- Natural attenuation assessment
- Deliverables submitted during the reporting period
- Recommendations
- Actions scheduled to be completed within the next six months.

SUMMARY OF ACTIONS TAKEN

Groundwater Extraction and Treatment System Activities

Treatment System Operation. The groundwater extraction and treatment system was not operated during the reporting period. Operation of the groundwater extraction and treatment system was discontinued in January 2003 in accordance with the United States Environmental Protection Agency's approval letter dated January 9, 2003.

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Monitoring Activities. Monitoring to assess natural attenuation of contaminants at the Wasatch Chemical Site began in January 2003 as described in the *Monitored Natural Attenuation Work Plan* (MWH, 2002). The monitoring program was designed to monitor natural attenuation of contaminants in the groundwater and to assess potential groundwater contaminant migration. Both hydrogeologic and constituent concentration data are used to accomplish the following:

- Indicate a point of compliance at which action levels are being met
- Monitor natural attenuation based on indicator chemicals and degradation products
- Evaluate any contaminant migration.

SUMMARY OF RESULTS

Groundwater Level Monitoring Results. Groundwater elevation contours drawn from data collected on April 11, 2011 are illustrated in Figure 1. Groundwater elevations continue to indicate an overall groundwater flow direction west of northwest. Groundwater levels across the site increased by approximately 1.6 feet on average since October 2010 in response to typical seasonal fluctuations. April 2011 groundwater levels are approximately 0.8 feet higher than those measured in April 2010 largely due to an increase in precipitation for April 2011 (The National Weather Service records indicate 2.48 inches of precipitation for April 2010 and 4.06 inches for April 2011). The average depth to groundwater across the site for April 2011 was approximately 2 feet below measuring points.

Groundwater Sampling Results. Groundwater samples were collected from 15 monitoring locations from April 11 - 14, 2011. The samples were analyzed for volatile organic compounds (VOCs), pesticides, and geochemical parameters pertinent to the assessment of biotransformation of chlorinated solvents. April 2011 sampling results are presented in Table 1, and detailed sampling and data validation information are included in Appendix A.

April 2011 results for tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethene (1,1-DCE), vinyl chloride (VC), and pentachlorophenol (PCP) are presented on site maps shown in Figures 2 through 6. Isoconcentration contours outline areas where concentrations were detected above maximum contaminant levels (MCLs). Overall, the April 2011 data and resulting contaminant plume areas are similar to those for April of 2010 (presented in Progress Report No. 93).

As illustrated in Figure 2, PCE was not detected above the MCL of 5 µg/l during the April 2011 sampling round. However, trace PCE concentrations (below the laboratory reporting limit) were detected at two sampling points located in the southern area of the Site (EX-02 and EX-07), and two detections with concentrations below the MCL were observed in ES-01 and EX-11.

TCE was detected above its MCL of 5 µg/l in four monitoring wells (EX-02, ES-01, EX-11, and EX-04) in April 2011. However, TCE was detected at concentrations below the MCL in five additional monitoring wells as illustrated in Figure 3. The maximum TCE concentration detected in April 2011 was 120 µg/l (at EX-02). The footprint of the TCE plume remains centered around EX-02 in the southern portion of the site and around EX-04 in the northern portion of the site.

1,1-DCE concentrations above its MCL continue to be detected in two areas, one to the north, near wells EX-04 and EX-05, and the other around wells EX-02 and EX-11 in the south area. Concentrations of 1,1-DCE detected in the northern area are comparable to those detected over the past six years (in wells EX-04, EX-05, EX-09 and MW-20) and the plume footprint in the northern portion of the Site has not changed appreciably over recent monitoring rounds. The 1,1-DCE footprint has varied in size seasonally in the southern area of the site, though the April 2011 footprint is similar to the 2010 footprint. The maximum 1,1-DCE concentration detected in April 2011 was 15 µg/l in EX-11.

The April 2011 VC plume is illustrated in Figure 5, and is very similar to those drawn for October and April 2010. The maximum VC concentration continues to be detected in EX-11, where VC was detected at 230 µg/l in April 2011. Concentrations in the southeastern portion of the plume have fluctuated within historical ranges (i.e., in ES-01 and EX-07).

The PCP plume is limited to the southeastern area of the site where PCP was detected at three of the locations sampled in April 2011 (EX-02, EX-08, and ES-01). The maximum PCP concentration for April 2011 was 8.6 µg/l at ES-01. Historically, PCP has not been detected at concentrations above reporting limits for monitoring points located north of EX-02.

Geochemical parameters including pH, oxidation-reduction potential (ORP), dissolved oxygen, nitrate, nitrite, ferrous iron, sulfate, and sulfide were collected to determine whether conditions in the aquifer are conducive to biotransformation processes. April 2011 results for these parameters are listed in Table 1. Overall, geochemical parameters throughout the site indicate mostly favorable conditions for anaerobic reductive dechlorination. Dissolved oxygen (DO) results are within the anaerobic range (< 0.5 mg/l), indicating conditions conducive to biodegradation, at all monitoring locations where indicator chemicals were detected above MCLs, except at ES-01 and EX-04 where DO concentrations were 1.3 and 1.6 mg/l respectively. Nitrate and ferrous iron results indicate favorable conditions (less than 1 mg/l for nitrate, and greater than 1 mg/l for ferrous iron) in all wells with detections above the MCL on site with the exception of MW-20 (0.7 mg/l iron), EX-08 (0.0 mg/l iron and 2.3 mg/l nitrate), and ES-01 (0.0 mg/l iron). ORP values measured in the field for the April 2011 sampling round are consistent with historical results and theoretically compatible with measured dissolved oxygen and ferrous iron concentrations except for data at ES-01 and EX-04.

PROGRESS TOWARDS COMPLETION

Performance standards for groundwater at the Wasatch Chemical Site are outlined in the Consent Decree (U.S. District Court, 1991) and state that indicator chemical concentrations are to be reduced to MCLs, or proposed alternative performance standards. Additionally, concentrations are to be reduced by at least 50 percent of baseline concentrations established at the beginning of the remedial action (March 1995). Indicator chemicals identified in the Record of Decision (ROD) (USEPA, 1991) include PCE, TCE, 1,1-DCE, PCP, and 2,4-dichlorophenoxyacetic acid (2,4-D).

The 50 percent reduction requirement has consistently been met for all monitoring locations and indicator chemicals established in the Record of Decision (ROD) except for TCE in EX-02 which was detected just above the 50 percent reduction value of 110 µg/l with a detection of 120 µg/l in April 2011. TCE concentrations in EX-02 have historically fluctuated both above and below the 50 percent reduction value (refer to Exhibit B2-2 in Appendix B). However, the TCE baseline concentration for EX-02 (220 µg/l, March 1995) is relatively low compared to concentrations detected at this monitoring location during the initial years of monitoring.

Concentrations of 2,4-D previously reached the performance standard across the site, and since 2004 2,4-D is no longer monitored. Concentrations of the remaining indicator chemicals across the site are currently either below MCLs or may be approaching an asymptote above the MCL (see "Current Trends" section below for further discussion).

As outlined in the Consent Decree, "best efforts" to attain MCLs have been made to "maximize the performance of the Remedial Action to attain the performance standards". At the Wasatch Chemical Site, "best efforts" have included implementation of three different groundwater remediation technologies:

- Groundwater extraction and treatment (including operation of extraction wells and trenches and modified system operations such as pulse pumping)
- Enhanced biodegradation
- Monitored natural attenuation (MNA).

Although groundwater quality at the Site has improved dramatically since groundwater extraction and treatment began in 1995 (greater than 99 percent of contaminant mass is estimated to have been removed by 2011), pump-and-treat technology became less and less effective with time as mass removal leveled off prior to 2003 and not all groundwater contaminants met action levels.

MNA was implemented at the site beginning in 2003 to assess whether natural biodegradation processes could successfully decrease remaining contaminant mass in the groundwater. Data collected since the groundwater extraction and treatment system was shut down in 2003 indicate natural attenuation of chlorinated solvents has occurred and continues to occur at the Wasatch Chemical Site.

In an effort to accelerate the degradation of chlorinated hydrocarbons at the Wasatch Chemical Site, biodegradation enhancing products were injected near monitoring points within the core of the plume in 2004 and 2006, and monitoring was conducted to assess whether biodegradation was impacted as a result. Results from these pilot tests indicate substantial mass reductions in portions of the aquifer with higher permeability soils (such as gravel fill in the two extraction trenches), but very limited impact in the prevalent native silts and clays.

Because the effectiveness of groundwater extraction and treatment diminished significantly over time, a *Draft Focused Feasibility Study* (FFS) to evaluate alternative groundwater remediation technologies to remediate the remaining contaminants in groundwater at the Site was submitted in February 2010. Amongst the alternatives considered, MNA along with maintenance of the environmental covenant will provide adequate long-term effectiveness, reduction in toxicity and mobility, is easily implemented at the Site and would be cost effective.

CURRENT AND HISTORICAL TRENDS

Current Trends. To assess current VOC and PCP trends for wells with contaminants detected above MCLs, regression analyses were conducted using the eight most recent data points. A tabulated summary of current trends is presented in Table B1-1 and data plots for constituents currently above the MCL are presented in Exhibits B1-1 through B1-7 in Appendix B.

Regression analyses for the following monitoring locations and contaminants suggest an asymptote may have been reached (the slope of the regression line is not statistically different from zero) above the MCL over the past eight monitoring rounds:

- ES-01: TCE, PCP, and VC
- EX-02: TCE, 1,1-DCE, PCP, and VC
- EX-04: TCE and 1,1-DCE
- EX-05: 1,1-DCE and VC
- EX-08: PCP
- EX-11: TCE, 1,1-DCE, and VC
- MW-20: VC

Though not designated in the 1991 Record of Decision as an indicator chemical, VC was added to the sampling analyte list in 2003 to aid in the monitoring of natural attenuation. Because VC is a daughter product of reductive dechlorination processes of PCE and TCE, variable concentrations are expected. Regression analyses performed on VC data for wells with VC concentrations currently above the MCL of 2 µg/l indicate no statistically significant trends over the past eight monitoring rounds except for at EX-04, where concentrations have ranged between 0.7 and 2.9 µg/l and an increasing trend was indicated.

Historical Trends. Tables and graphs of all historical data for the current monitoring network are included in Section B2 of Appendix B. Decreases in concentrations over time are significant as illustrated in Exhibits B2-1 through B2-15. Since 1995, contaminant concentrations have decreased by up to three and four orders of magnitude for the VOC indicator chemicals (PCE, TCE, 1,1-DCE). For example, TCE concentrations have decreased by more than four orders of magnitude in EX-05 and by three orders of magnitude in EX-09, EX-11, and MW-20. Also, concentrations of PCE have decreased by four orders of magnitude in ES-01 and EX-11 and by two orders of magnitude in EX-05, EX-07, and MW-20.

NATURAL ATTENUATION ASSESSMENT

Because biodegradation processes are typically the dominant destructive processes for the contaminants present in groundwater at the Wasatch Chemical Site, they are the focus of this assessment. The effectiveness of biotransformation processes can be evaluated in a number of ways including the decrease of contaminant concentrations over time, suitable geochemical conditions for reductive dechlorination, and the occurrence of degradation daughter products.

Geochemical conditions conducive to anaerobic microbial growth and reductive dechlorination of TCE and PCE are presented in Table 1 as biodegradation indicators. Values shown in bold indicate conditions conducive to reductive dechlorination. As discussed in the Groundwater Sampling Results section of this report, dissolved oxygen, ORP, and nitrate were low and ferrous iron was elevated in areas of contamination, indicating favorable conditions for reductive dechlorination at the site.

Overall, data collected since operation of the groundwater extraction and treatment system was discontinued in 2003 indicate that natural attenuation of chlorinated solvents has occurred and continues to occur at the Wasatch Chemical Site. The reduction of PCE and TCE concentrations over time, along with the presence of daughter products of reductive dechlorination processes (i.e., dichloroethene isomers and VC) are evidence of these biotransformation processes.

DELIVERABLES COMPLETED

- The *Wasatch Chemical Site Progress Report No. 94* was submitted by Questar on January 20, 2011
- An interim update of portions of the *Draft Focused Feasibility Study* was submitted on April 28, 2011 at the request of USEPA

RECOMMENDATIONS

Change Remedy to Monitored Natural Attenuation. Although initially the groundwater extraction and treatment system removed significant contaminant mass, performance data indicate pump-and-treat technology became increasingly less effective over time at the Site. The limited effectiveness of

the groundwater extraction and treatment remedy suggests a change in remediation strategy at the Site is due.

Based on results and analyses in the Draft Focused Feasibility Study (FFS) submitted in February 2010 (MWH, 2010), a favorable alternative for remediation of the remaining contaminated groundwater at the Wasatch Chemical Site is MNA along with institutional controls as described in the environmental covenant. This recommendation is supported by the site-specific groundwater flow and contaminant transport computer model (MWH, 2009) that predicts remediation goals would be met within a reasonable time frame (approximately 44 years) for a natural attenuation scenario. MNA will provide adequate long-term effectiveness, reduction in toxicity and mobility, can be easily implemented at the Site, and will not result in short-term risks to human health or the environment with a stable plume and institutional controls in place. Amending the ROD and Consent Decree is recommended to change the remedy to MNA.

Reduce Monitoring Network for PCP Analyses. The current monitoring network for PCP consists of eight monitoring wells. However, historical data indicate the extent of the PCP plume has been restricted to a relatively small area in the southern portion of the site. Based on monitoring data collected to date, it is recommended that the monitoring network for PCP be reduced to the following five wells: ES-01, EX-02, EX-07, EX-08, and EX-11. Additional data from the three wells proposed for deletion from the monitoring network (EX-04, EX-05, and EX-09) are not needed to assess the extent of PCP at the site. Historically, PCP concentrations have not been detected above the MCL in wells EX-05 and EX-09, and have been detected only a few times (all below the MCL) at EX-04 and EX-11 since 1995.

PLANNED PROJECT ACTIVITIES FOR NEXT SIX-MONTH PERIOD

Groundwater contaminant concentrations and water levels will continue to be monitored semiannually throughout 2011, the ninth year following groundwater extraction and treatment system shut down. Monitoring activities for 2012 include semiannual groundwater monitoring and sampling events in accordance with the *Monitored Natural Attenuation Work Plan* (MWH, 2002). The next monitoring event is scheduled for October 2011.

A *Natural Attenuation Evaluation Memo* will be produced and submitted to assess natural attenuation as a remedy for groundwater remediation at the Site. Once the memo is reviewed and accepted by regulatory agencies, the FFS will be finalized. These two documents will aid in determining future actions at the site. In addition, a Long-Term Groundwater Monitoring Plan will be prepared once future actions at the site are decided.

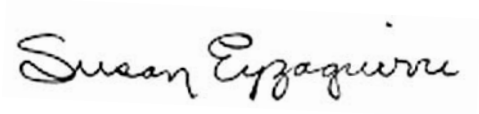
A *Monitoring Well Installation Work Plan* will be submitted for installation of additional monitoring wells recently requested by USEPA and UDEQ. Additional wells will provide deep monitoring points plus an additional shallow aquifer monitoring point on the west side of the plume to more fully characterize the groundwater contamination at the Site.

Progress reports will continue to be submitted semiannually. The second semiannual progress report for 2011 is scheduled to be submitted in January 2012.

If you have any questions or concerns, please do not hesitate to call us at (801) 617-3200.

Sincerely,

MWH



Susan Eyzaguirre, P.E., P.G.
Project Manager

cc: K. Heimsath
H. Pos
J. Olds

REFERENCES

MWH, 2002. *Monitored Natural Attenuation Work Plan*, Wasatch Chemical Site Addendum to the Final Extraction and Treatment System Performance Standards, Milestones, and Shutdown Procedures. November 14, 2002.

MWH, 2009. *Groundwater Flow and Contaminant Transport Modeling Report*, Wasatch Chemical Site. October 2009.

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U.S. District Court, 1991. *Remedial Design / Remedial Action Consent Decree for Civil Actions No. 86-C-0023G and 91-C-11945*. United States District Court for the District of Utah Central Division. Signed by Entrada Industries and the State of Utah on September 30, 1991.

USEPA, 1991. *Record of Decision*, Wasatch Chemical Site, Salt Lake City, Utah. March 29, 1991.

TABLE 1

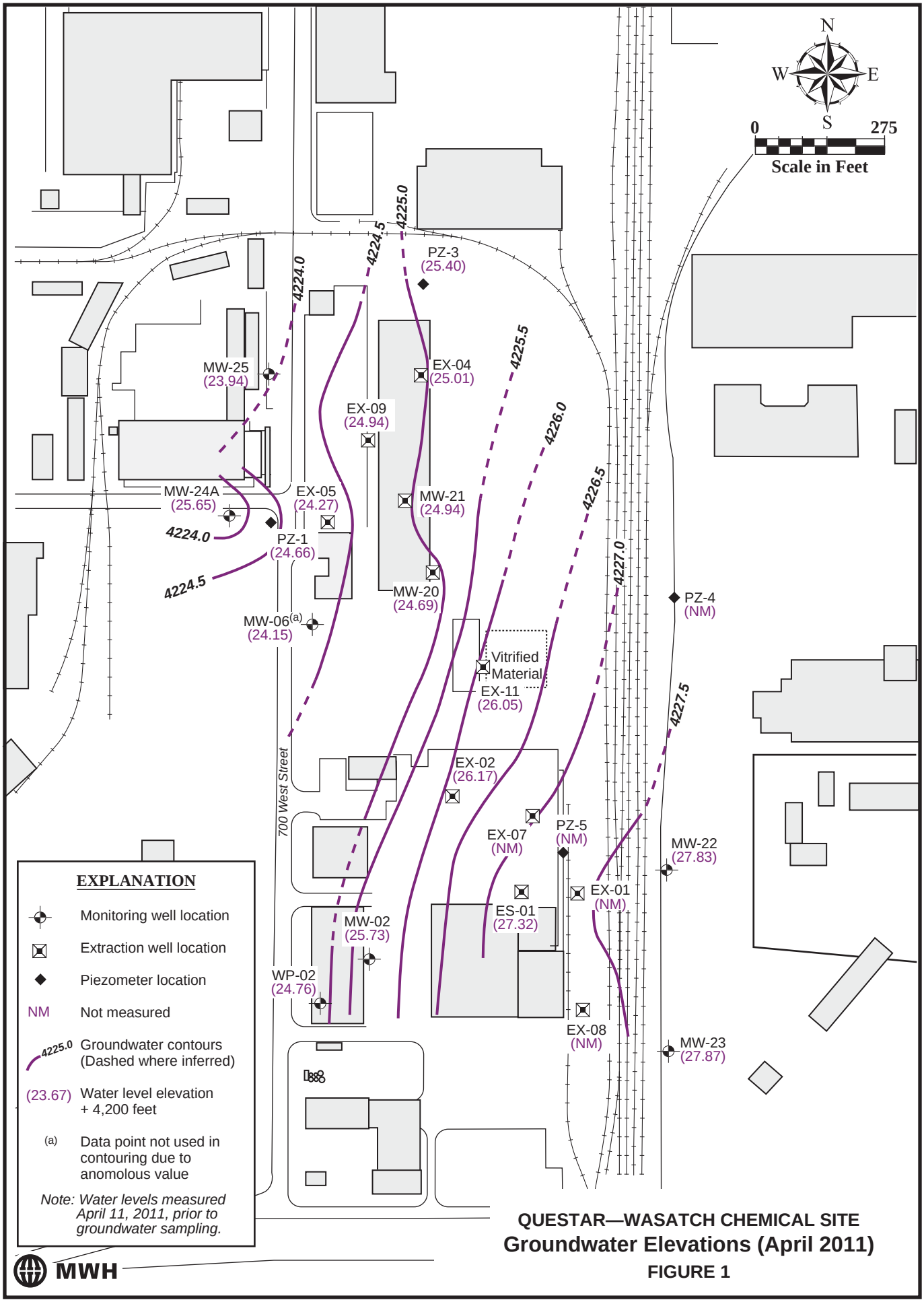
GROUNDWATER SAMPLING RESULTS
APRIL 2011
WASATCH CHEMICAL SITE, SALT LAKE CITY, UTAH

		Performance Monitoring Wells											*Contingency Monitoring Wells*			*Natural Attenuation Assessment*	
	Sample Identification	**ES-01**	**EX-02**	**EX-04**	**EX-05**	**EX-07**	**EX-08**	**EX-09**	**EX-11**	**MW-06**	**MW-20**	**MW-23**	**PZ-1**	**MW-24A**	**MW-25**	**PZ-3[b]**	**Biodegradation**	
	Date Collected	**4/11/2011**	**4/13/2011**	**4/14/2011**	**4/13/2011**	**4/14/2011**	**4/12/2011**	**4/14/2011**	**4/11/2011**	**4/13/2011**	**4/14/2011**	**4/13/2011**	**4/13/2011**	**4/13/2011**	**4/12/2011**	**4/12/2011**	**Indicator**	**Purpose and/or Interpretation**
Volatile Organic Compounds (µg/l)	**Analytical Method**																
Tetrachloroethene (PCE)	SW8260B	4.7	0.4 T	<1	<1	0.5 T	<1	<1	1.7	<1	<1	<1	<1	<1	<1	<1	Not Applicable	Original indicator chemical; MCL is 5 µg/l.
Trichloroethene (TCE)	SW8260B	**19**	**120 D**	**29**	**0.4 T**	**2.4**	**0.3 T**	**0.2 T**	**26**	<1	**3.4**	<1	<1	<1	<1	<1	detection	Original indicator chemical; degradation product of PCE; MCL is 5 µg/l.
1,1-Dichloroethene (1,1-DCE)	SW8260B	2.6	**8.6**	**12**	**9**	**0.2 T**	<1	**1.2**	**15**	**3.5**	**2**	<1	<1	<1	<1	<1	detection	Original indicator chemical; degradation product of trichloroethene; MCL is 7 µg/l.
cis-1,2-Dichloroethene (cis-1,2-DCE)	SW8260B	**48**	**84**	**180 D**	**140 D**	**4**	<1	**17**	**740 D**	**21**	**26**	<1	<1	<1	<1	<1	detection	Degradation product of trichloroethene; MCL is 70 µg/l.
trans-1,2-Dichloroethene (trans-1,2-DCE)	SW8260B	**0.6 T**	**11**	**20**	**150 D**	**0.5 T**	<1	**5.6**	**81**	**3.2**	**21**	<1	<1	<1	<1	<1	detection	Degradation product of trichloroethene; MCL is 100 µg/l.
Vinyl chloride (VC)	SW8260B	**18**	**210 D**	**2.3**	**17**	**1.4**	<1	<1	**230 D**	**1.5**	**8.1**	<1	<1	<1	<1	<1	detection	Degradation product of dichloroethenes; MCL is 2 µg/l.
Pesticides (µg/l)																		
Pentachlorophenol (PCP)	SW8151A	8.6	3.5 D	<0.5	<0.5	<0.5	1.2	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	Not Applicable	Original indicator chemical; MCL is 1 µg/l.
Geochemical parameters																		
pH (standard units)	field measurement	**8.1**	**6.6**	**7.2**	**7.2**	**7.8**	**7.0**	**7.2**	**7.1**	**7.1**	**7.3**	**7.0**	**7.3**	**7.4**	**7.2**	**6.9**	5 to 9[a]	Optimal range for reductive pathway.
Oxidation-reduction Potential (mV)	field measurement	**-199**	**-21**	**-82**	**-116**	**-80**	**29**	**-11**	**-317**	**-135**	**-176**	**-95**	**-198**	**-3**	**-155**	**-55**	<50[a]	Reductive pathway possible.
Dissolved Oxygen (mg/l)	field measurement	1.3	**0.4**	1.6	**0.1**	0.8	**0.2**	3.2	**0.1**	**0.2**	**0.2**	**0.1**	**0.0**	**0.1**	**0.1**	0.8	<0.5[a]	Reductive pathway possible.
Nitrate (mg/l)	E300.0	**0.6**	**<0.5 D**	**<0.2 D**	**<0.5 D**	**0.1**	2.3 D	**0.5**	**<0.1**	**0.2 TD**	**0.5**	**<0.5 D**	NA	**<0.1**	**<0.1**	**<0.2 D**	<1[a]	Reductive pathway possible.
Nitrite (mg/l)	E300.0	<0.1	<0.5 D	<0.2 D	<0.5 D	<0.1	<0.5 D	<0.1	<0.1	<0.5 D	<0.1	<1D	NA	<0.1	<0.1	<0.2 D	>1	Evidence of nitrate reduction.
Iron II (mg/l)	Hach 8146	0.0	**2.7**	**1.1**	**1.6**	0.6	0	0.9	**5.5**	0.9	0.7	**3.6**	**1.7**	0.0	**4.9**	**4.4**	>1[a]	Reductive pathway possible.
Sulfate (mg/l)	E300.0	140 D	1490 D	1540 D	1820 D	68.5 D	714 D	1000 D	1430 D	775 D	1190 D	461 D	NA	67 D	522 D	2090 D	<20[a]	At higher concentrations may compete with reductive pathway.
Sulfide, total (mg/l)	E376.2	0.8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.1 T	0.1 T	<0.2	0.1 T	NA	<0.2	<0.2	<0.2	>1[a]	Evidence of sulfate reduction.

[a] From *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Groundwater* , USEPA, 1998.

[b] Replacement monitoring point for MW-26A which was destroyed during construction activities on the SteelCo property in October 2004. Data for piezometer PZ-3, located approximately 100 ft south of the location of former monitoring well MW-26A, is reported in place of data for MW-26A.

MCL	maximum contaminant level (regulatory limit)
mg/l	milligrams per liter
mV	millivolts
µg/l	micrograms per liter
Bold	Values in bold suggest biodegradation is possible
NA	Not analyzed
D	Sample dilution required for analysis; reported values reflect the dilution.
J-	Data are estimated; potentially biased low
T	Analyte was positively identified but the reported concentration is estimated; reported concentration is less than the reporting limit, but greater than the method detection limit.
UJ	Possible false negative.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275
Scale in Feet
4225.0
4224.5
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4225.5
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4227.0
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PZ-3
(25.40)
MW-25
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EX-04
(25.01)
EX-09
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MW-20
(24.69)
MW-06[a]
(24.15)
PZ-4
(NM)
Vitrified
Material
EX-11
(26.05)
EX-02
(26.17)
700 West Street
EX-07
(NM)
PZ-5
(NM)
MW-22
(27.83)
EX-01
(NM)
ES-01
(27.32)
MW-02
(25.73)
WP-02
(24.76)
EX-08
(NM)
MW-23
(27.87)
EXPLANATION
Monitoring well location
Extraction well location
Piezometer location
NM Not measured
4225.0 Groundwater contours (Dashed where inferred)
(23.67) Water level elevation + 4,200 feet
(a) Data point not used in contouring due to anomolous value
Note: Water levels measured April 11, 2011, prior to groundwater sampling.
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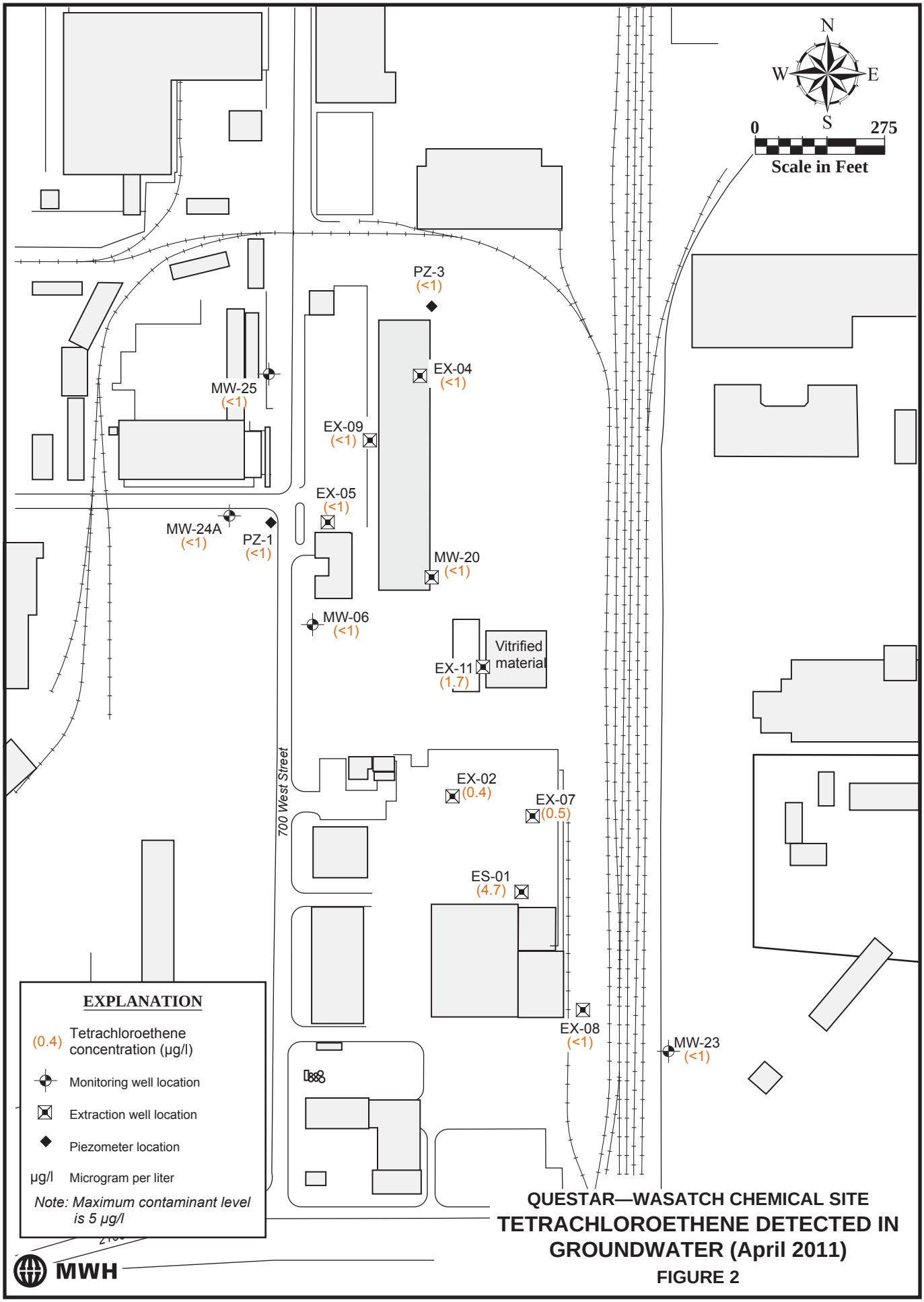
QUESTAR—WASATCH CHEMICAL SITE
Groundwater Elevations (April 2011)
FIGURE 1
FILE: I:\Questar\Wasatch Chemical\April 2011 Progress Report\F_01_GW_Apr11.ai 06/01/11 SLC



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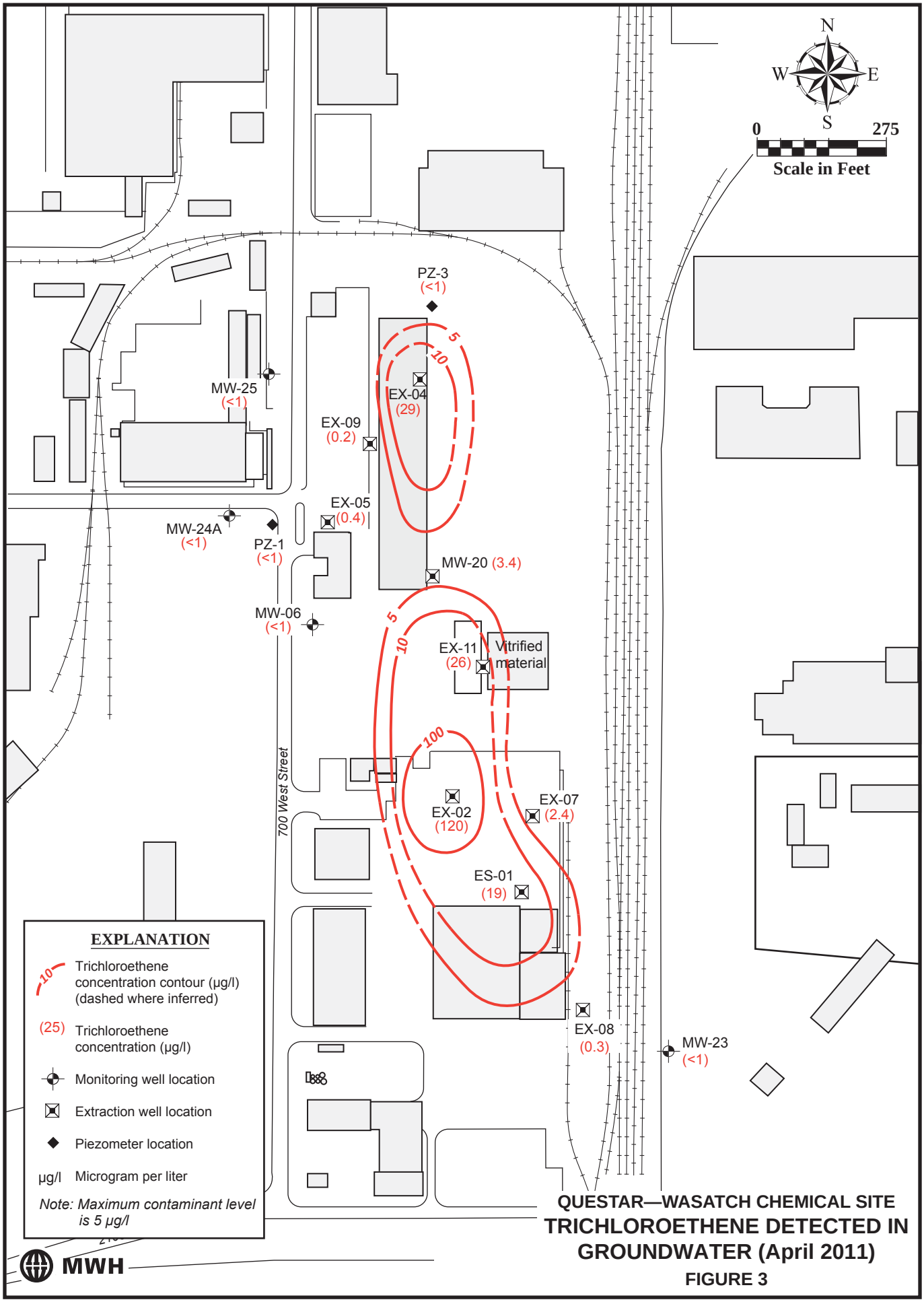
QUESTAR—WASATCH CHEMICAL SITE

TETRACHLOROETHENE DETECTED IN GROUNDWATER (April 2011)

FIGURE 2



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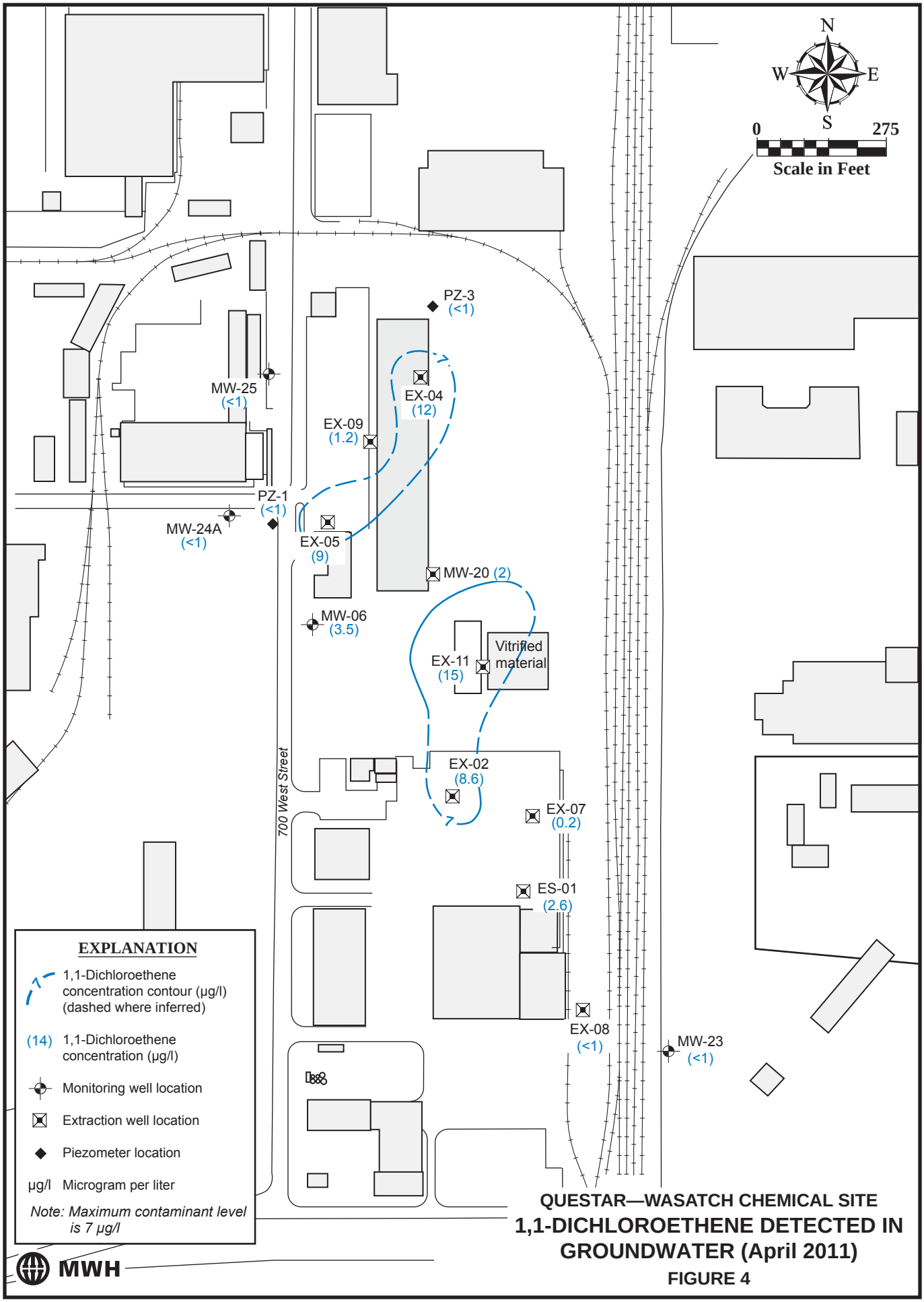
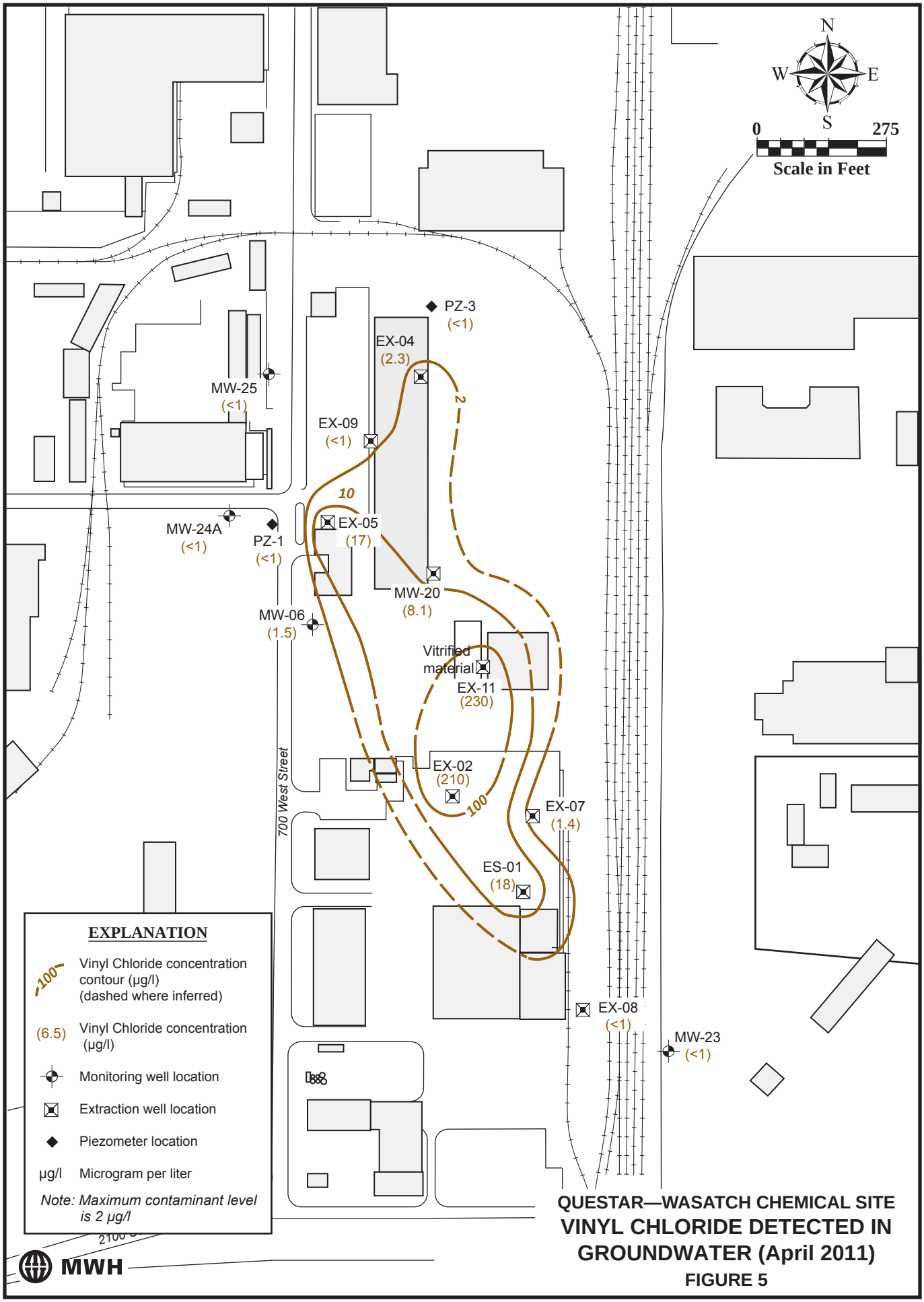
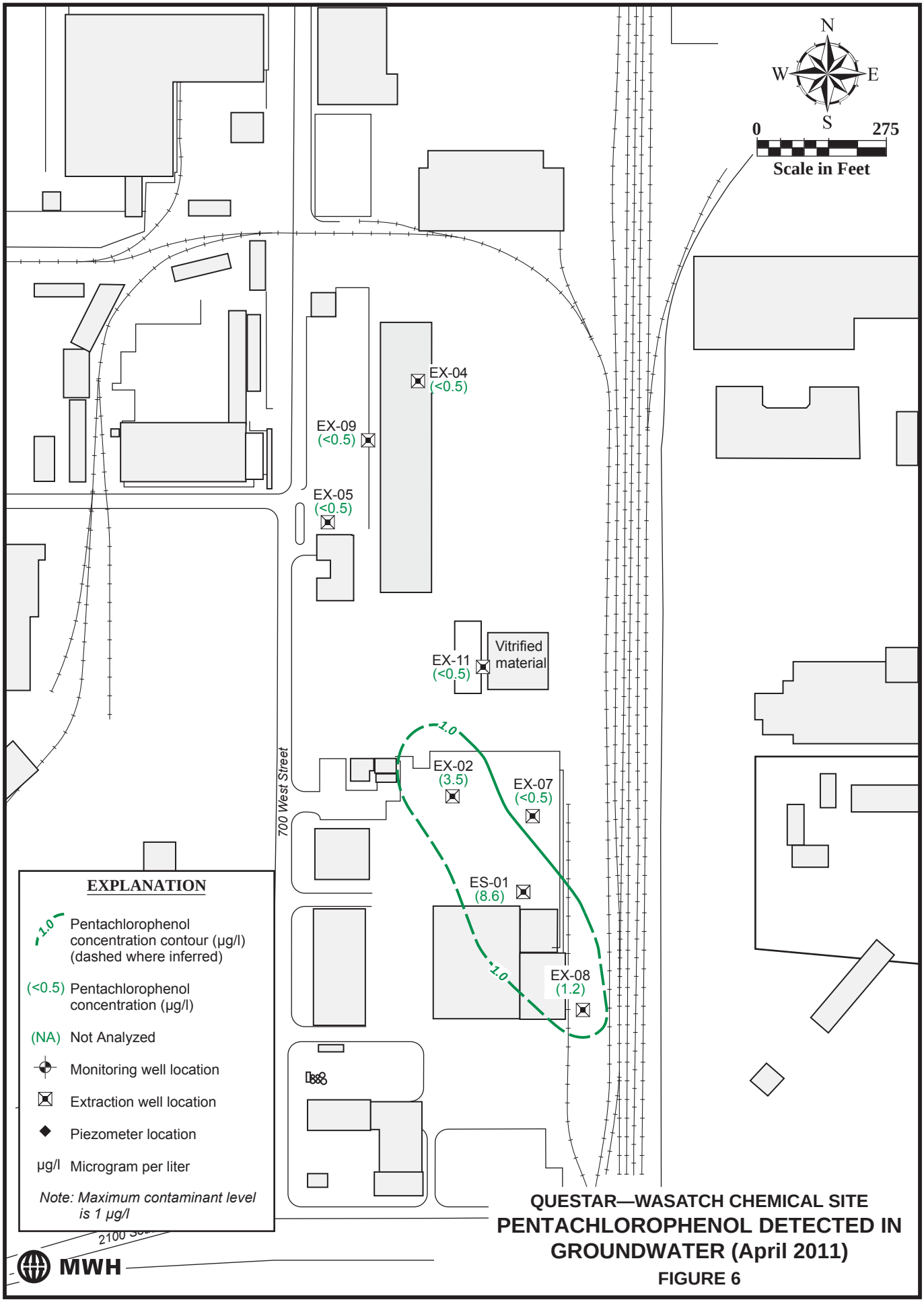
QUESTAR—WASATCH CHEMICAL SITE

TRICHLOROETHENE DETECTED IN GROUNDWATER (April 2011)

FIGURE 3


N
W
E
S
0
275
Scale in Feet
PZ-3
(<1)
MW-25
(<1)
EX-04
(12)
EX-09
(1.2)
PZ-1
(<1)
MW-24A
(<1)
EX-05
(9)
MW-20 (2)
MW-06
(3.5)
EX-11
(15)
Vitrified
material
EX-02
(8.6)
700 West Street
EX-07
(0.2)
ES-01
(2.6)
EX-08
(<1)
MW-23
(<1)
EXPLANATION
1,1-Dichloroethene concentration contour (µg/l) (dashed where inferred)
(14) 1,1-Dichloroethene concentration (µg/l)
Monitoring well location
Extraction well location
Piezometer location
µg/l Microgram per liter
Note: Maximum contaminant level is 7 µg/l
MWH
QUESTAR—WASATCH CHEMICAL SITE
1,1-DICHLOROETHENE DETECTED IN GROUNDWATER (April 2011)
FIGURE 4
FILE: I:\Questar\Wasatch Chemical\April 2011 Progress Report\F_04_1-1Dichl_Apr11.ai 06/14/11 SLC


N
W
E
S
0
275
Scale in Feet
PZ-3
(<1)
EX-04
(2.3)
MW-25
(<1)
EX-09
(<1)
2
10
MW-24A
(<1)
PZ-1
(<1)
EX-05
(17)
MW-20
(8.1)
MW-06
(1.5)
Vitrified material
EX-11
(230)
700 West Street
EX-02
(210)
100
EX-07
(1.4)
ES-01
(18)
EX-08
(<1)
MW-23
(<1)
EXPLANATION
100
Vinyl Chloride concentration contour (µg/l) (dashed where inferred)
(6.5)
Vinyl Chloride concentration (µg/l)
Monitoring well location
Extraction well location
Piezometer location
µg/l
Microgram per liter
Note: Maximum contaminant level is 2 µg/l
2100
MWH
QUESTAR—WASATCH CHEMICAL SITE
VINYL CHLORIDE DETECTED IN GROUNDWATER (April 2011)
FIGURE 5
FILE: I:\Questar\Wasatch Chemical\April 2011 Progress Report\F_05_Vinyl_Chlor_Apr11.ai 06/14/11 SLC



FILE: I:\Questar\Wasatch Chemical\April 2011 Progress Report\F_06_PentachI_Apr11.ai 06/01/11 SLC

MWH

QUESTAR—WASATCH CHEMICAL SITE

PENTACHLOROPHENOL DETECTED IN GROUNDWATER (April 2011)

FIGURE 6

APPENDIX A

DATA VERIFICATION

APPENDIX A

DATA VERIFICATION

Introduction. Groundwater samples were collected for the sixty-fifth monitoring round (Q-65) on April 25, 26, and 27, 2010. Table A-1 lists the samples collected during Q-65. A summary of the analytical data is presented in Table A-2. The following paragraphs summarize the results of the data validation for Q-65.

Sampling Procedures. All groundwater samples were collected as scheduled and in accordance with the *Final Groundwater Monitoring Plan* (GWMP) (MWH, 1996).

Analytical Procedures and Detection Limits. All samples were analyzed in accordance with the methodology, detection limits, and quality control (QC) criteria specified in Appendix B of the GWMP. EMAX Laboratories, Inc. (EMAX) of Torrance, California provided analytical services for Q-65.

A field duplicate (FD) sample was collected from extraction well EX-04 for Q-65. A summary of the results is presented in Table A-4. Matrix spike (MS) and/or matrix spike duplicate (MSD) analyses were performed on groundwater sample EX-11-65.

The following occurred during sample analysis resulting in flagged or qualified data; however, there was no impact to data usability.

- Dilution was required during analysis due to the high concentrations of sulfate and/or volatile organic compounds (VOCs) in the samples. The affected sample results are flagged with a "D" to indicate sample dilution.

Data Verification Process. The data from Q-65 were validated based on the criteria specified in Appendix B of the GWMP. The results of the data verification are summarized in the following tables:

- Table A-1, Summary of Groundwater Samples
- Table A-2, Groundwater Data Summary
- Table A-3, Holding Time Summary
- Table A-4, Field Duplicate Data Summary

All holding times, reporting limits, accuracy, precision, and representativeness criteria as specified in Appendix B of the GWMP were met.

Conclusions. Based on the results of the data verification, the Q-65 data are considered precise, accurate, and representative as qualified. Sampling completeness for this project is 100 percent and analytical completeness for this sampling round is 100 percent, which meets the completeness goal of 85 percent for this project.

TABLE A-1

SUMMARY OF GROUNDWATER SAMPLES
Q-65, APRIL 2011
WASATCH CHEMICAL SITE, SALT LAKE CITY, UTAH
(Page 1 of 1)

Location Identification	Field Sample Identification	Date Collected	Sample Matrix	SamplinGrab Technique	Sample Type	VOC SW-846 8260B	PCP SW-846 8151A	Anions E300	Sulfide E376.2
ES-01	ES-01-65	04/11/11	WG	Grab	N	X	X	X	X
EX-11	EX-11-65	04/11/11	WG	Grab	LR	X	X	NS	NS
					MS	X	X	X	X
					N	X	X	X	X
					SD	X	X	X	X
FIELDQC	TB-4-11-11	04/11/11	WQ	N/A	TB	NS	NS	NS	X
EX-08	EX-08-65	04/12/11	WG	Grab	N	X	X	X	X
FIELDQC	TB-4-12-11	04/12/11	WQ	N/A	TB	NS	NS	NS	X
MW-25	MW-25-65	04/12/11	WG	Grab	N	X	X	NS	X
PZ-3	PZ-3-65	04/12/11	WG	Grab	N	X	X	NS	X
EX-02	EX-02-65	04/13/11	WG	Grab	N	X	X	X	X
EX-05	EX-05-65	04/13/11	WG	Grab	N	X	X	X	X
FIELDQC	EB-4-13-11	04/13/11	WQ	N/A	EB	X	X	NS	X
FIELDQC	TB-4-13-11	04/13/11	WQ	N/A	TB	NS	NS	NS	X
MW-06	MW-06-65	04/13/11	WG	Grab	N	X	X	NS	X
MW-23	MW-23-65	04/13/11	WG	Grab	N	X	X	NS	X
MW-24A	MW-24A-65	04/13/11	WG	Grab	N	X	X	NS	X
PZ-1	PZ-1-65	04/13/11	WG	Grab	N	NS	NS	NS	X
EX-04	EX-04-65	04/14/11	WG	Grab	N	X	X	X	X
EX-04	EX-204-65	04/14/11	WG	Grab	FD	X	X	X	X
EX-07	EX-07-65	04/14/11	WG	Grab	N	X	X	X	X
EX-09	EX-09-65	04/14/11	WG	Grab	N	X	X	X	X
FIELDQC	EX-207-65	04/14/11	WQ	N/A	AB	X	X	X	X
					LR	NS	X	NS	NS
					MS	NS	X	NS	NS
FIELDQC	TB-4-14-11	04/14/11	WQ	N/A	TB	NS	NS	NS	X
MW-20	MW-20-65	04/14/11	WG	Grab	N	X	X	NS	X

AB	Ambient field blank
EB	Equipment rinseate blank
FD	Field Duplicate
LR	Laboratory replicate
MS	Matrix spike
N	Compliance sample
N/A	Not applicable
NS	Not scheduled
PCP	Pentachlorophenol
SD	Matrix spike duplicate
TB	Trip blank
VOC	Volatile organic compounds
WG	Groundwater
WQ	Reagent Grade water or distilled water
X	Scheduled

TABLE A-2

SAMPLED DATA SUMMARY
Q-65, APRIL2011
WASTACH CHEMICAL, SALT LAKE CITY, UTAH

Location Identification	ES-01	EX-02	EX-04	EX-04 Dup	EX-05	EX-07	EX-08	EX-09
Field Sample Identification	ES-01-65	EX-02-65	EX-04-65	EX-204-65	EX-05-65	EX-07-65	EX-08-65	EX-09-65
Date Collected	4/11/2011	4/13/2011	4/14/2011	4/14/2011	4/13/2011	4/14/2011	4/12/2011	4/14/2011
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Analyte/Methods (Units)								
Water Quality Parameters (mg/l)								
Nitrate/E300	**0.649**	<0.5 D	<0.2 D	<0.2 D	<0.5 D	**0.12**	**2.28 D**	**0.501**
Nitrite/E300	<0.1	<0.5 D	<0.2 D	<0.2 D	<0.5 D	<0.1	<0.5 D	<0.1
Sulfate/E300	**140 D**	**1490 D**	**1540 D**	**1560 D**	**1820 D**	**68.5 D**	**714 D**	**1000 D**
Sulfide/E376.2	**0.791**	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Herbicides/SW8151A (µg/l)								
Pentachlorophenol	**8.6 D**	**3.5 D**	<0.5	<0.5	<0.5	<0.5	**1.2**	<0.5
Volatile Organic Compounds/SW8260B (µg/l)								
1,1-Dichloroethene	**2.6**	**8.6**	**12**	**12**	**9**	**0.25 T**	<1	**1.2**
cis-1,2-Dichloroethene	**48**	**84**	**180 D**	**180 D**	**140 D**	**4**	<1	**17**
Tetrachloroethene (PCE)	**4.7**	**0.35 T**	<1	<1	<1	**0.54 T**	<1	<1
trans-1,2-Dichloroethene	**0.64 T**	**11**	**20**	**19**	**150 D**	**0.51 T**	<1	**5.6**
Trichloroethene (TCE)	**19**	**120 D**	**29**	**30**	**0.37 T**	**2.4**	**0.28 T**	**0.21 T**
Vinyl chloride	**18**	**210 D**	**2.3**	**2.3**	**17**	**1.4**	<1	<1

µg/l micrograms per liter.
mg/l milligrams per liter.
Bold Bolded result indicates positively identified compound.
NA Not analyzed.
D Sample dilution required for analysis; reported values reflect the dilution.
T Analyte was positively identified but the reported concentration is estimated; reported concentration is less than the reporting limit, but greater than the method detection limit.

TABLE A-2

SAMPLED DATA SUMMARY
Q-65, APRIL2011
WASTACH CHEMICAL, SALT LAKE CITY, UTAH
(Page 2 of 2)

Location Identification	EX-11	MW-06	MW-20	MW-23	MW-24A	MW-25	PZ-1	PZ-3
Field Sample Identification	EX-11-65	MW-06-65	MW-20-65	MW-23-65	MW-24A-65	MW-25-65	PZ-1-65	PZ-3-65
Date Collected	4/11/2011	4/13/2011	4/14/2011	4/13/2011	4/13/2011	4/12/2011	4/13/2011	4/12/2011
Matrix	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Analyte/Methods (Units)								
Water Quality Parameters (mg/l)								
Nitrate/E300	<0.1	**0.208 TD**	**0.532**	<0.5 D	<0.1	<0.1	NA	<0.2 D
Nitrite/E300	<0.1	<0.5 D	<0.1	<1 D	<0.1	<0.1	NA	<0.2 D
Sulfate/E300	**1430 D**	**775 D**	**1190 D**	**461 D**	**66.9 D**	**522 D**	NA	**2090 D**
Sulfide/E376.2	**0.11 T**	**0.129 T**	<0.2	**0.105 T**	<0.2	<0.2	NA	<0.2
Herbicides/SW8151A (µg/l)								
Pentachlorophenol	<0.5	NA	NA	NA	NA	NA	NA	NA
Volatile Organic Compounds/SW8260B (µg/l)								
1,1-Dichloroethene	**15**	**3.5**	**2**	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene	**740 D**	**21**	**26**	<1	<1	<1	<1	<1
Tetrachloroethene (PCE)	**1.7**	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethene	**81**	**3.2**	**21**	<1	<1	<1	<1	<1
Trichloroethene (TCE)	**26**	<1	**3.4**	<1	<1	<1	<1	<1
Vinyl chloride	**230 D**	**1.5**	**8.1**	<1	<1	<1	<1	<1

µg/l micrograms per liter.
mg/l milligrams per liter.
Bold Bolded result indicates positively identified compound.
NA Not analyzed.
D Sample dilution required for analysis; reported values reflect the dilution.
T Analyte was positively identified but the reported concentration is estimated; reported concentration is less than the reporting limit, but greater than the method detection limit.

TABLE A-3

HOLDING TIME SUMMARY
Q-65, APRIL 2011
WASATCH CHEMICAL SITE, SALT LAKE CITY, UTAH

Location Identification	Field Identification	Sample Date	Sample Time	Analysis Code	Preparation Date	Preparation Holding Time (Days)	Method Holding Time (Days)	Analysis Date	Analysis Time	Analysis Holding Time (Days)	Method Holding Time (Days)
ES-01	ES-01-65	04/11/11	1600	E300/NO2,3	N/A	N/A	N/A	04/12/11	1755	25.9 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/13/11	0216	2	28
				E376.2	N/A	N/A	N/A	04/12/11	1744	1	7
				SW8151A	04/15/11	4	7	04/19/11	1840	4	40
				SW8260B	04/18/11	N/A	N/A	04/18/11	1556	7	14
EX-02	EX-02-65	04/13/11	1515	E300/NO2,3	N/A	N/A	N/A	04/14/11	1430	23.3 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/14/11	2203	1	28
				E376.2	N/A	N/A	N/A	04/19/11	1631	6	7
				SW8151A	04/15/11	2	7	04/19/11	1901	4	40
				SW8260B	04/15/11	N/A	N/A	04/15/11	2125	2	14
				SW8260B	04/18/11	N/A	N/A	04/18/11	1750	5	14
EX-04	EX-04-65	04/14/11	0905	E300/NO2,3	N/A	N/A	N/A	04/15/11	2337	38.5 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/26/11	2134	12	28
				E376.2	N/A	N/A	N/A	04/19/11	1632	5	7
				SW8151A	04/19/11	5	7	04/19/11	2252	0	40
				SW8260B	04/21/11	N/A	N/A	04/21/11	0128	7	14
				SW8260B	04/21/11	N/A	N/A	04/21/11	1211	7	14
EX-04	EX-204-65	04/14/11	0905	E300/NO2,3	N/A	N/A	N/A	04/15/11	2321	38.3 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/26/11	2118	12	28
				E376.2	N/A	N/A	N/A	04/19/11	1631	5	7
				SW8151A	04/19/11	5	7	04/19/11	2231	0	40
				SW8260B	04/21/11	N/A	N/A	04/21/11	0050	7	14
				SW8260B	04/21/11	N/A	N/A	04/21/11	1135	7	14
EX-05	EX-05-65	04/13/11	1605	E300/NO2,3	N/A	N/A	N/A	04/14/11	1447	22.7 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/14/11	2219	1	28
				E376.2	N/A	N/A	N/A	04/19/11	1631	6	7
				SW8151A	04/15/11	2	7	04/19/11	1615	4	40
				SW8260B	04/18/11	N/A	N/A	04/18/11	1325	5	14
				SW8260B	04/18/11	N/A	N/A	04/18/11	1827	5	14
EX-07	EX-07-65	04/14/11	1025	E300/NO2,3	N/A	N/A	N/A	04/15/11	2354	37.5 Hours	48 Hours

TABLE A-3

HOLDING TIME SUMMARY
Q-65, APRIL 2011
WASATCH CHEMICAL SITE, SALT LAKE CITY, UTAH

Location Identification	Field Identification	Sample Date	Sample Time	Analysis Code	Preparation Date	Preparation Holding Time (Days)	Method Holding Time (Days)	Analysis Date	Analysis Time	Analysis Holding Time (Days)	Method Holding Time (Days)
EX-07	EX-07-65	04/14/11	1025	E300/SO4	N/A	N/A	N/A	04/16/11	0058	2	28
				E376.2	N/A	N/A	N/A	04/19/11	1632	5	7
				SW8151A	04/19/11	5	7	04/19/11	2313	0	40
				SW8260B	04/21/11	N/A	N/A	04/21/11	1018	7	14
EX-08	EX-08-65	04/12/11	1000	E300/NO3	N/A	N/A	N/A	04/13/11	1227	26.5 Hours	48 Hours
				E300.NO2	N/A	N/A	N/A	04/13/11	1316	27.3 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/13/11	1806	1	28
				E376.2	N/A	N/A	N/A	04/19/11	1629	7	7
				SW8151A	04/15/11	3	7	04/19/11	1543	4	40
				SW8260B	04/13/11	N/A	N/A	04/13/11	1544	1	14
EX-09	EX-09-65	04/14/11	1110	E300/NO2,3	N/A	N/A	N/A	04/15/11	1653	29.7 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/26/11	2150	12	28
				E376.2	N/A	N/A	N/A	04/19/11	1633	5	7
				SW8151A	04/19/11	5	7	04/19/11	2355	0	40
				SW8260B	04/21/11	N/A	N/A	04/21/11	1057	7	14
EX-11	EX-11-65	04/11/11	1345	E300/NO2,3	N/A	N/A	N/A	04/12/11	1546	26 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/12/11	2005	1	28
				E376.2	N/A	N/A	N/A	04/12/11	1743	1	7
				SW8151A	04/15/11	4	7	04/19/11	1439	4	40
				SW8260B	04/18/11	N/A	N/A	04/18/11	1524	7	14
				SW8260B	04/18/11	N/A	N/A	04/18/11	1628	7	14
FIELDQC	EB-4-13-11	04/13/11	1020	E300/ALL	N/A	N/A	N/A	04/14/11	1133	25.2 Hours	48 Hours
				E376.2	N/A	N/A	N/A	04/19/11	1630	6	7
				SW8260B	04/15/11	N/A	N/A	04/15/11	1849	2	14
FIELDQC	EX-207-65	04/14/11	1025	E300/ALL	N/A	N/A	N/A	04/16/11	0010	37.7 Hours	48 Hours
				E376.2	N/A	N/A	N/A	04/19/11	1632	5	7
				SW8151A	04/19/11	5	7	04/19/11	2334	0	40
				SW8260B	04/21/11	N/A	N/A	04/21/11	0243	7	14
FIELDQC	TB-4-11-11	04/11/11	1200	SW8260B	04/18/11	N/A	N/A	04/18/11	2040	7	14
FIELDQC	TB-4-12-11	04/12/11	0900	SW8260B	04/13/11	N/A	N/A	04/13/11	1254	1	14

TABLE A-3

HOLDING TIME SUMMARY
Q-65, APRIL 2011
WASATCH CHEMICAL SITE, SALT LAKE CITY, UTAH

Location Identification	Field Identification	Sample Date	Sample Time	Analysis Code	Preparation Date	Preparation Holding Time (Days)	Method Holding Time (Days)	Analysis Date	Analysis Time	Analysis Holding Time (Days)	Method Holding Time (Days)
FIELDQC	TB-4-13-11	04/13/11	0900	SW8260B	04/15/11	N/A	N/A	04/15/11	1731	2	14
FIELDQC	TB-4-14-11	04/14/11	0815	SW8260B	04/21/11	N/A	N/A	04/21/11	0014	7	14
MW-06	MW-06-65	04/13/11	1325	E300/NO2,3	N/A	N/A	N/A	04/14/11	1414	24.8 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/14/11	2147	1	28
				E376.2	N/A	N/A	N/A	04/19/11	1630	6	7
				SW8260B	04/15/11	N/A	N/A	04/15/11	2046	2	14
MW-20	MW-20-65	04/14/11	1245	E300/NO2,3	N/A	N/A	N/A	04/15/11	1710	28.4 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/26/11	1957	12	28
				E376.2	N/A	N/A	N/A	04/19/11	1633	5	7
				SW8260B	04/21/11	N/A	N/A	04/21/11	0400	7	14
MW-23	MW-23-65	04/13/11	0920	E300/NO3	N/A	N/A	N/A	04/14/11	1237	27.3 Hours	48 Hours
				E300.NO2	N/A	N/A	N/A	04/14/11	1503	29.7 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/14/11	2114	1	28
				E376.2	N/A	N/A	N/A	04/19/11	1629	6	7
				SW8260B	04/15/11	N/A	N/A	04/15/11	1811	2	14
MW-24A	MW-24A-65	04/13/11	1220	E300/NO2,3	N/A	N/A	N/A	04/14/11	1358	25.6 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/14/11	2130	1	28
				E376.2	N/A	N/A	N/A	04/19/11	1630	6	7
				SW8260B	04/15/11	N/A	N/A	04/15/11	2009	2	14
MW-25	MW-25-65	04/12/11	1200	E300/NO2,3	N/A	N/A	N/A	04/13/11	1243	24.7 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/13/11	1822	1	28
				E376.2	N/A	N/A	N/A	04/19/11	1629	7	7
				SW8260B	04/13/11	N/A	N/A	04/13/11	1619	1	14
PZ-1	PZ-1-65	04/13/11	1105	SW8260B	04/15/11	N/A	N/A	04/15/11	1929	2	14
PZ-3	PZ-3-65	04/12/11	1400	E300/NO2,3	N/A	N/A	N/A	04/13/11	1259	23 Hours	48 Hours
				E300/SO4	N/A	N/A	N/A	04/13/11	1839	1	28
				E376.2	N/A	N/A	N/A	04/19/11	1629	7	7
				SW8260B	04/13/11	N/A	N/A	04/13/11	1653	1	14

N/A Not applicable
NO2 Nitrite analysis only
NO2,3 Nitrite and nitrate analysis only
NO3 Nitrate analysis only
SO4 Sulfate analysis only

TABLE A-4

SAMPLE DATA SUMMARY
Q-65, APRIL 2011
WASTACH CHEMICAL, SALT LAKE CITY, UTAH
(Page 1 of 1)

Location Identification	EX-04	EX-04	
Field Sample Identification	EX-04-65	EX-204-65	
Sample Type	Parent	Field Duplicate	
Date Collected	4/14/2011	4/14/2011	
Matrix	Groundwater	Groundwater	
Analyte/Methods (Units)			**RPD**
Water Quality Parameters (mg/l)			
Nitrate/E300	<0.2 D	<0.2 D	NC
Nitrite/E300	<0.2 D	<0.2 D	NC
Sulfate/E300	**1540 D**	**1560 D**	1.3
Sulfide/E376.2	<0.2	<0.2	NC
Herbicides/SW8151A (µg/l)			
Pentachlorophenol	<0.5	<0.5	NC
Volatile Organic Compounds/SW8260B (µg/l)			
1,1-Dichloroethene	**12**	**12**	0.0
cis-1,2-Dichloroethene	**180 D**	**180 D**	0.0
Tetrachloroethene (PCE)	<1	<1	NC
trans-1,2-Dichloroethene	**20**	**19**	5.1
Trichloroethene (TCE)	**29**	**30**	3.4
Vinyl chloride	**2.3**	**2.3**	0.0

µg/l micrograms per liter.
mg/l milligrams per liter.
Bold Bolded result indicates positively identified compound.
NC Not calculated.
D Sample dilution required for analysis; reported values reflect the dilution.

APPENDIX B

DATA TRENDS

APPENDIX B

WASATCH CHEMICAL SITE

SECTION B1: CURRENT TRENDS

List of Tables

List of Exhibits

SECTION B2: COMPREHENSIVE DATA AND HISTORICAL TRENDS

List of Exhibits

TABLE B1-1

EVALUATION OF CONTAMINANT CONCENTRATION TRENDS FOR THE EIGHT MOST RECENT DATA POINTS
WASATCH CHEMICAL SITE
(Page 1 of 3)

Well ID	Chemical Constituent	Current Trend[a]	April 2011 Concentration Relative to MCL	Reduced by at least 50% of Initial Baseline?	Comments
ES-01	PCE	NA (below MCL)	below	yes	PCE concentrations are below the MCL for five of the eight most recent sampling rounds.
	TCE	**asymptotic**	**above**	yes	Data range between .4 and 150 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	1,1-DCE	NA (below MCL)	below	yes	1,1-DCE concentrations are below the MCL for seven of the eight most recent sampling rounds.
	PCP	**asymptotic**	**above**	yes	Data range between <0.05 and 42 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	VC[b]	**asymptotic**	**above**	NA	Data range between .4 and 85 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
EX-02	PCE	NA (below MCL)	below	yes	All data points over the past eight monitoring rounds have been below the MCL.
	TCE	**asymptotic**	**above**	no	Data range between 99 and 200 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	1,1-DCE	**asymptotic**	**above**	yes	Data range between 7.9 and 13 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	PCP	**asymptotic**	**above**	yes	Data range between 1 and 11 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	VC[b]	**asymptotic**	**above**	NA	VC concentrations have ranged between 110 and 220 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
EX-04	PCE	NA (below MCL)	below	NA	PCE was not detected over the past eight monitoring rounds.
	TCE	**asymptotic**	**above**	yes	TCE concentrations have ranged from 29 to 85 µg/l over the past 8 monitoring events. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	1,1-DCE	**asymptotic**	**above**	yes	1,1-DCE concentrations have ranged between 11 and 17 µg/l over the past 8 sampling rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	PCP	NA (below MCL)	below	NA	PCP was not detected over the past eight sampling rounds.
	VC[b]	**increasing**	**above**	NA	VC concentrations remained at or below the laboratory reporting limits for the first three of the last eight sampling rounds. VC concentrations in 2009 and 2010 ranged from 1.6 to 2.9 µg/l.
EX-05	PCE	NA (below MCL)	below	yes	PCE was not detected over the eight most recent sampling rounds.
	TCE	NA (below MCL)	below	yes	TCE concentrations have been below the MCL and are near or below the reporting limit for the past eight monitoring rounds.
	1,1-DCE	**asymptotic**	**above**	yes	Data have ranged between 5.8 and 17 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the
	PCP	NA (below MCL)	below	NA	PCP was not detected over the eight most recent sampling rounds.
	VC[b]	**asymptotic**	**above**	NA	Data range between 9.3 and 44 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
EX-07	PCE	NA (below MCL)	below	yes	All of the eight most recent data points are below the laboratory reporting limit.
	TCE	NA (below MCL)	below	yes	TCE concentrations range between 1.2 and 5 µg/l over the past eight monitoring rounds. Concentrations for the last four monitoring rounds are all below the MCL.
	1,1-DCE	NA (below MCL)	below	yes	All eight most recent data points are below the MCL, and seven of the eight are below the reporting limit.
	PCP	NA (below MCL)	below	yes	All eight most recent data points are below the MCL, though three of the eight are reported as trace concentrations detected below the reporting limit.
	VC[b]	NA (below MCL)	below	NA	VC concentrations have ranged between 1.4 and 29 µg/l over the past 8 monitoring rounds.

TABLE B1-1

EVALUATION OF CONTAMINANT CONCENTRATION TRENDS FOR THE EIGHT MOST RECENT DATA POINTS
WASATCH CHEMICAL SITE

Well ID	Chemical Constituent	Current Trend[a]	April 2011 Concentration Relative to MCL	Reduced by at least 50% of Initial Baseline?	Comments
EX-08	PCE	NA (below MCL)	below	NA	All eight most recent data points are below laboratory reporting limits, though two are trace concentrations.
	TCE	NA (below MCL)	below	NA	All eight most recent data points are below the MCL, and the seven most recent are reported as trace concentrations below the reporting limit.
	1,1-DCE	NA (below MCL)	below	NA	1,1-DCE was not detected in seven of the eight most recent sampling rounds; one trace concentration of 0.9 µg/l (below the reporting limit) was detected in April 2009.
	PCP	**asymptotic**	**above**	yes	Data range between 1.0 and 3.4 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	VC[b]	NA (below MCL)	below	NA	VC was detected below the MCL over the past eight monitoring rounds except for April 2009 (11 µg/l).
EX-09	PCE	NA (below MCL)	below	NA	PCE was not detected over the eight most recent sampling rounds.
	TCE	NA (below MCL)	below	yes	All eight most recent data points are below laboratory reporting limits, though seven of the eight were detected at trace concentrations below the reporting limit.
	1,1-DCE	NA (below MCL)	below	yes	All eight most recent data points are below the MCL.
	PCP	NA (below MCL)	below	NA	PCP was not detected over the eight most recent sampling rounds.
	VC[b]	NA (below MCL)	below	NA	VC was not detected for seven of the eight most recent sampling rounds, and detected at a trace concentration (below the reporting limit) for one round.
EX-11	PCE	NA (below MCL)	below	yes	Six of the eight most recent data points are below the laboratory reporting limit, and two are slightly above at 1.2 and 1.7 µg/l.
	TCE	**asymptotic**	**above**	yes	TCE concentrations ranged between 2.3 and 83 µg/l over the past eight monitoring rounds. Four of the eight most recent data points have been below the MCL. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	1,1-DCE	**asymptotic**	**above**	yes	1,1-DCE concentrations range between 0.7 and 23 µg/l over the past eight monitoring rounds. Four of the eight most recent data points have been below the MCL. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
	PCP	NA (below MCL)	below	NA	PCP was not detected over the eight most recent sampling rounds.
	VC[b]	**asymptotic**	**above**	NA	VC concentrations range between 230 and 920 µg/l over the past eight monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
MW-06	PCE	NA (below MCL)	below	NA	All eight data points are below the laboratory reporting limit.
	TCE	NA (below MCL)	below	NA	Two of the eight most recent data points are reported at trace concentrations, and six are below the laboratory detection limit.
	1,1-DCE	NA (below MCL)	below	NA	Three of the eight most recent data points are reported at trace concentrations, with one result at 3.5 µg/l, and four are below the laboratory detection limit.
	VC[b]	NA (below MCL)	below	NA	Two of the eight most recent data points are reported at trace concentrations, with one result at 1.5 µg/l, and five are below the laboratory detection limit.
MW-20	PCE	NA (below MCL)	below	yes	One of the eight most recent data points is reported as a trace concentration, and all eight are below the laboratory reporting limit.
	TCE	NA (below MCL)	below	yes	Seven of the eight most recent data points are below the MCL. One is just above the MCL at 5.5 µg/l.
	1,1-DCE	NA (below MCL)	below	yes	All eight of the most recent data points are below the MCL, and two are reported at trace concentrations (below the reporting limit).
	VC[b]	**asymptotic**	**above**	NA	VC concentrations have ranged between 0.7 and 8.1 µg/l over the past 8 monitoring rounds. A regression analysis for the eight most recent data points indicates the slope of the regression line is not statistically different from zero (no significant change in concentration), therefore an asymptote may have been reached.
MW-23	PCE	NA (below MCL)	below	NA	Upgradient well.
	TCE	NA (below MCL)	below	NA	Upgradient well.
	1,1-DCE	NA (below MCL)	below	NA	Upgradient well.
	VC[b]	NA (below MCL)	below	NA	Upgradient well.
MW-24A	PCE	NA (below MCL)	below	NA	Downgradient well.
	TCE	NA (below MCL)	below	NA	Downgradient well.
	1,1-DCE	NA (below MCL)	below	NA	Downgradient well.
	VC[b]	NA (below MCL)	below	NA	Downgradient well.

TABLE B1-1

EVALUATION OF CONTAMINANT CONCENTRATION TRENDS FOR THE EIGHT MOST RECENT DATA POINTS
WASATCH CHEMICAL SITE
(Page 3 of 3)

Well ID	Chemical Constituent	Current Trend[a]	April 2011 Concentration Relative to MCL	Reduced by at least 50% of Initial Baseline?	Comments
MW-25	PCE	NA (below MCL)	below	NA	Downgradient well.
	TCE	NA (below MCL)	below	NA	Downgradient well.
	1,1-DCE	NA (below MCL)	below	NA	Downgradient well.
	VC[b]	NA (below MCL)	below	NA	Downgradient well.
PZ-3	PCE	NA (below MCL)	below	NA	Downgradient well.
	TCE	NA (below MCL)	below	NA	Downgradient well.
	1,1-DCE	NA (below MCL)	below	NA	Downgradient well.
	VC[b]	NA (below MCL)	below	NA	Downgradient well.

[a] To assess current trends, linear regression analyses were conducted using the eight most recent data points.
For data points where a constituent was not detected, the laboratory reporting limit was used.

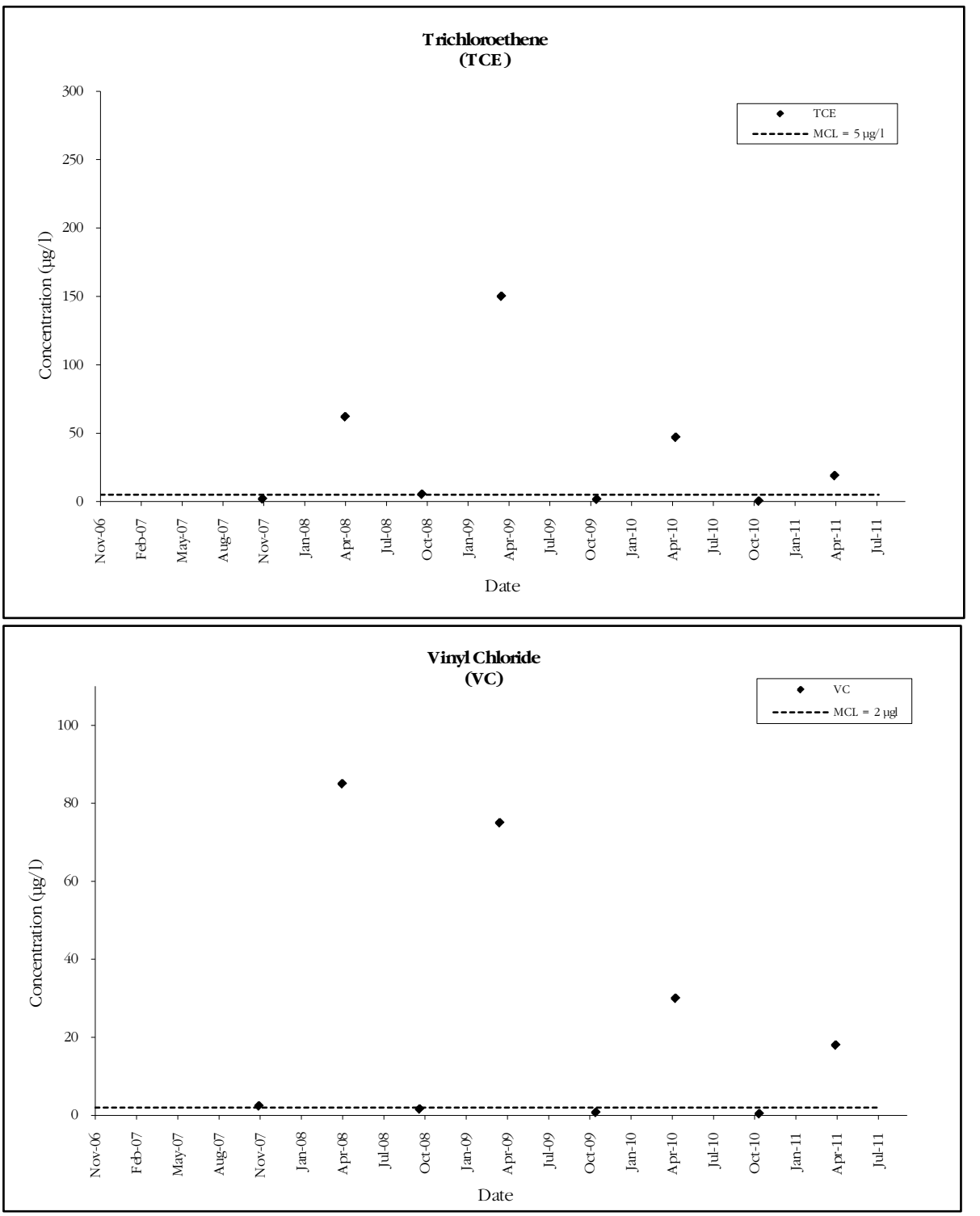
[b] VC was added as an analyte in January 2003 to aid in monitoring of natural attenuation at the site, and is not included in the Record of Decision as an indicator chemical.

µg/l	micrograms per liter	PCP	pentachlorophenol
MCL	maximum contaminant level	TCE	trichloroethene
NA	not applicable	VC	vinyl chloride
PCE	tetrachloroethene	1,1-DCE	1,1-dichloroethene

Section B1

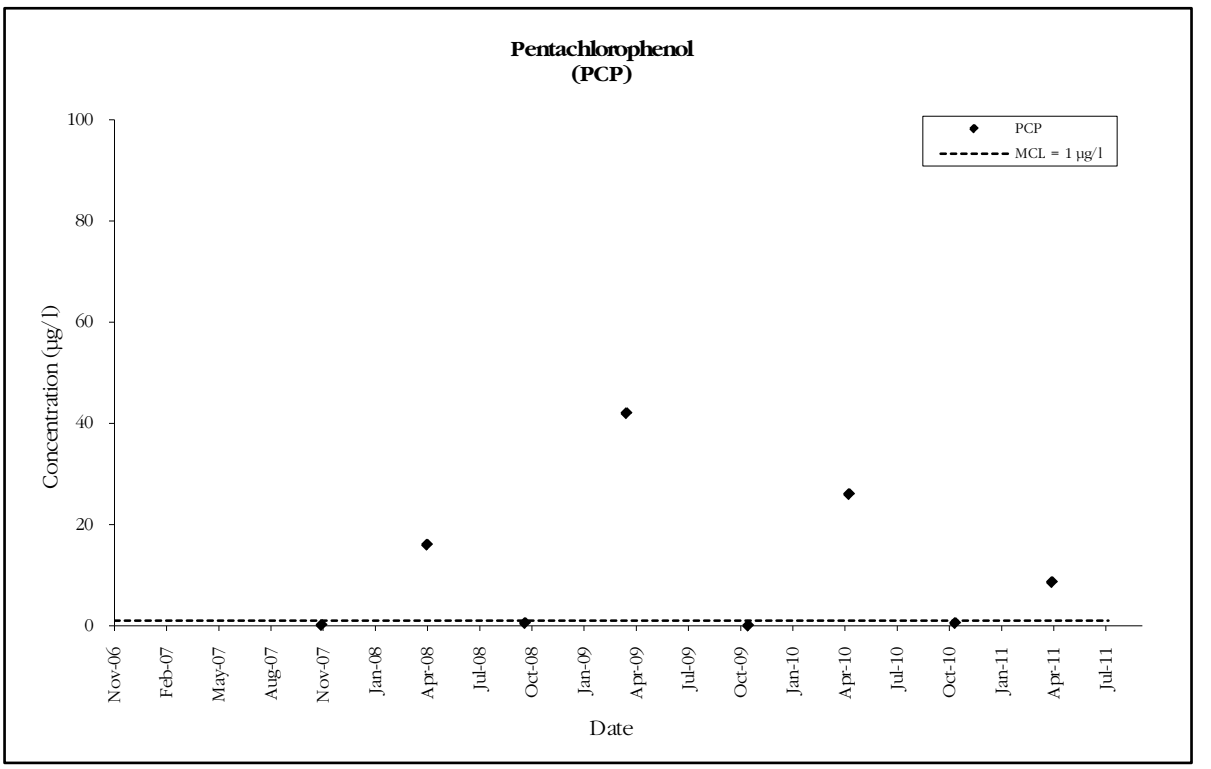
Current Trends

EXHIBIT B1-1
WASATCH CHEMICAL SITE
TIME SERIES PLOTS [(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL ES-01



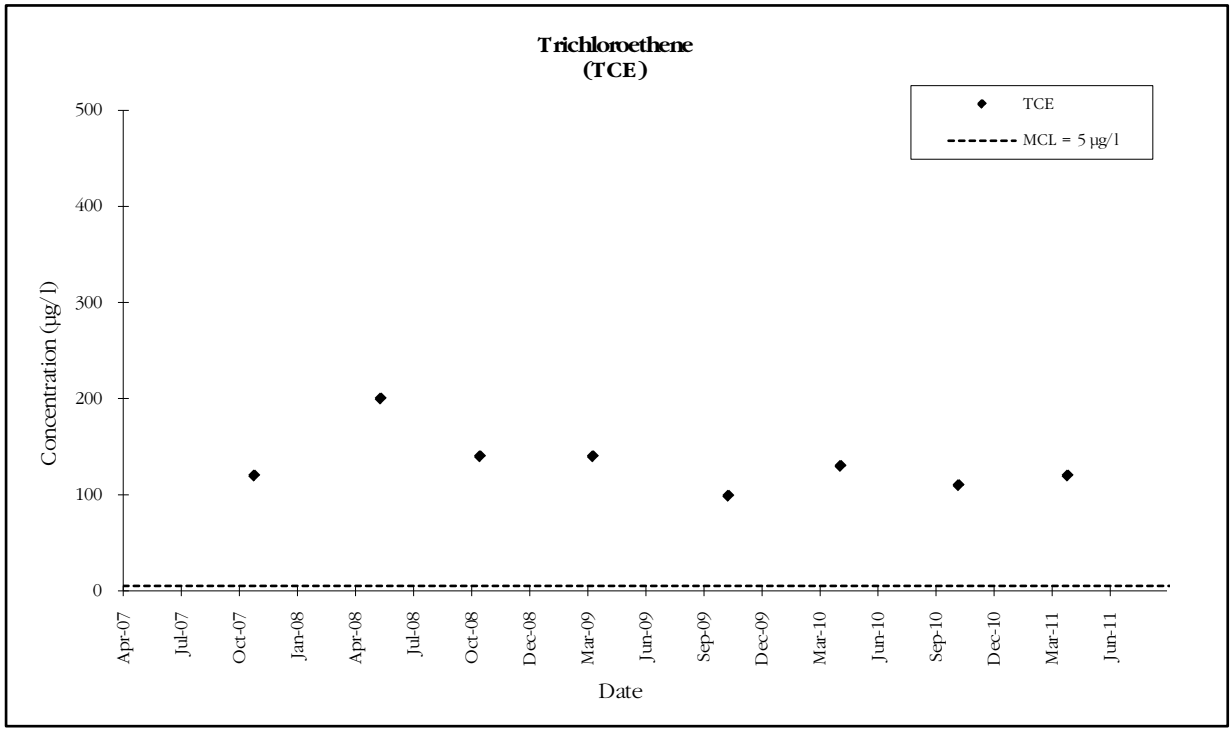
[(a)] Data for the eight most recent sampling rounds are shown.

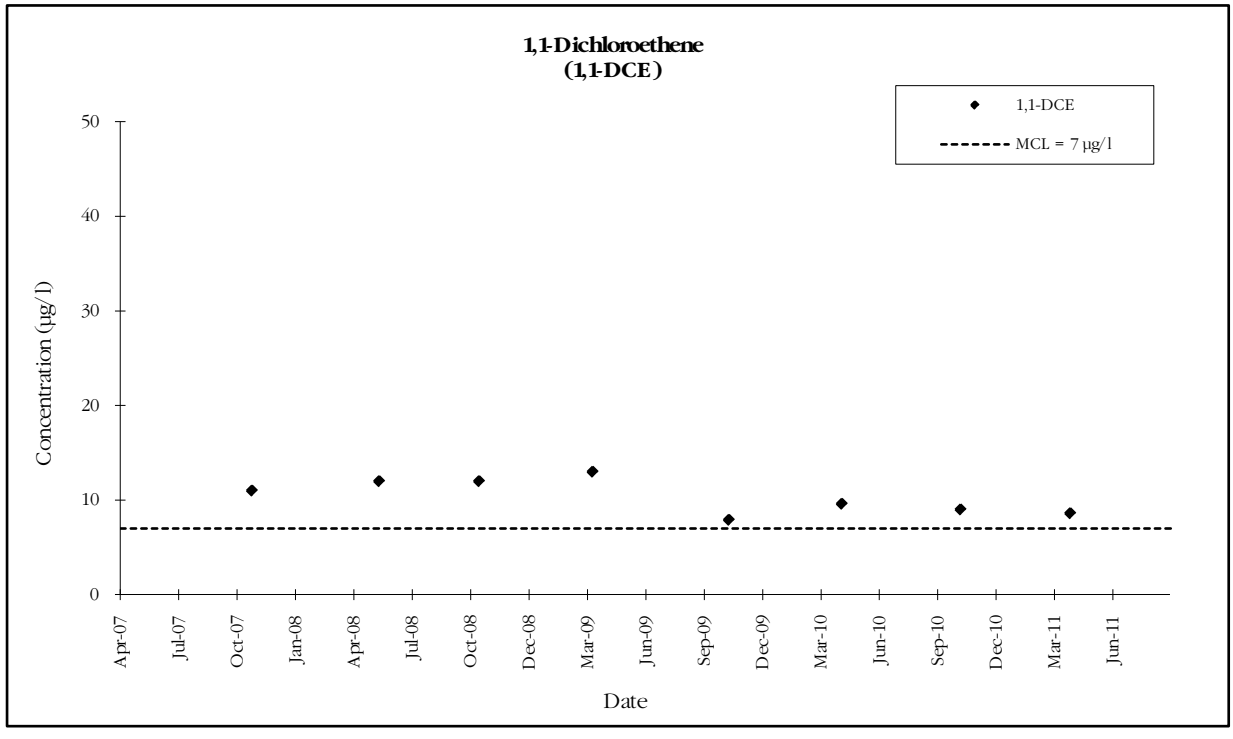
EXHIBIT B1-1
WASATCH CHEMICAL SITE
TIME SERIES PLOTS [(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL ES-01



[(a)] Data for the eight most recent sampling rounds are shown.

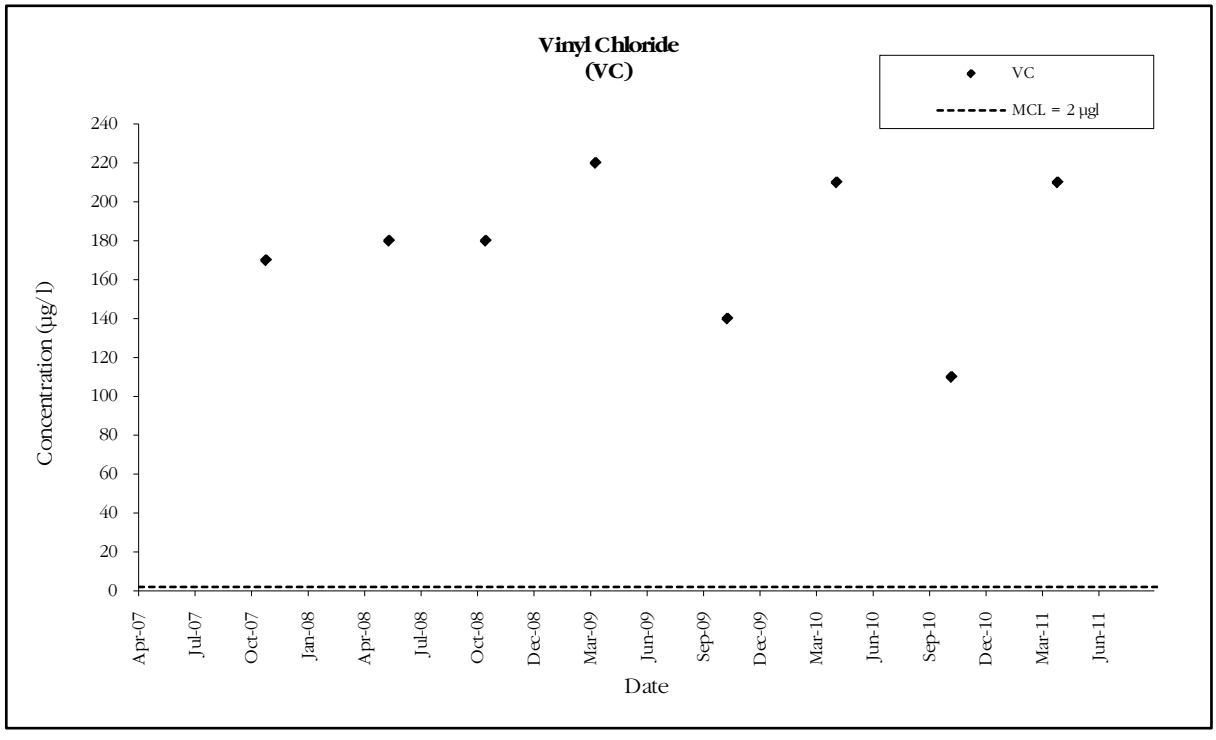
EXHIBIT B1-2
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL EX-02
(Page 1 of 2)

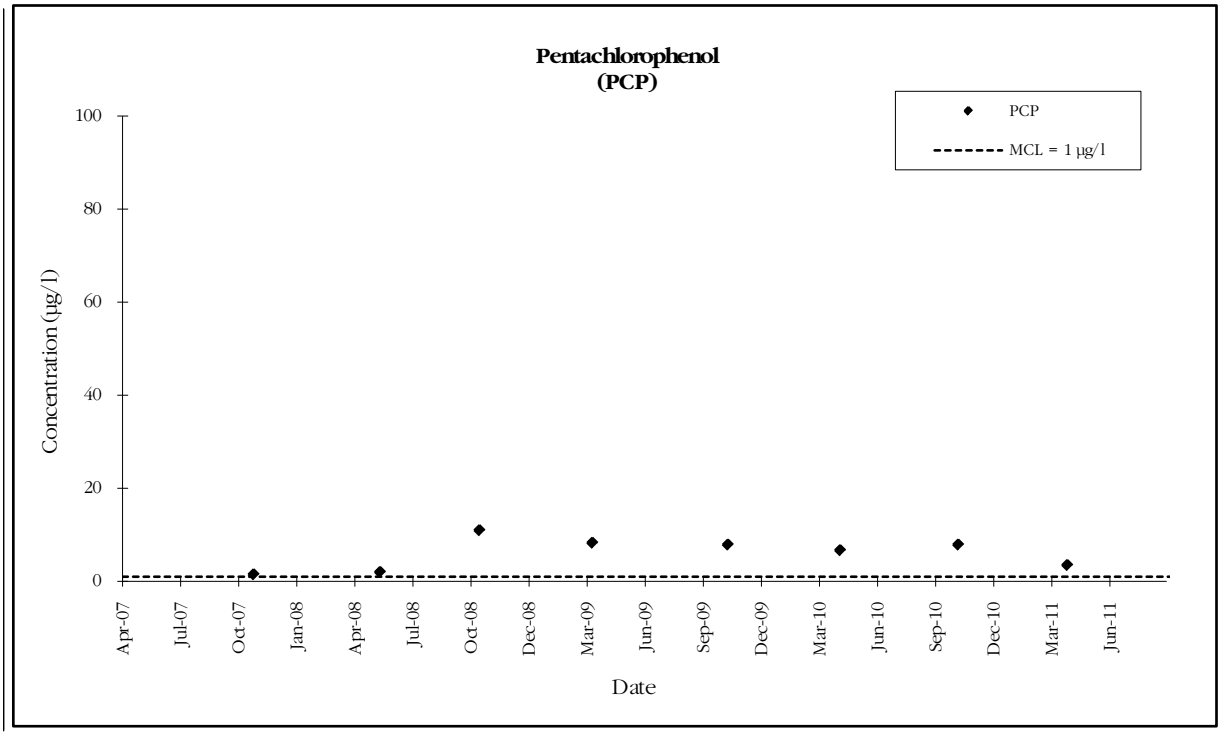




[(a)] Data for the eight most recent sampling rounds are shown.

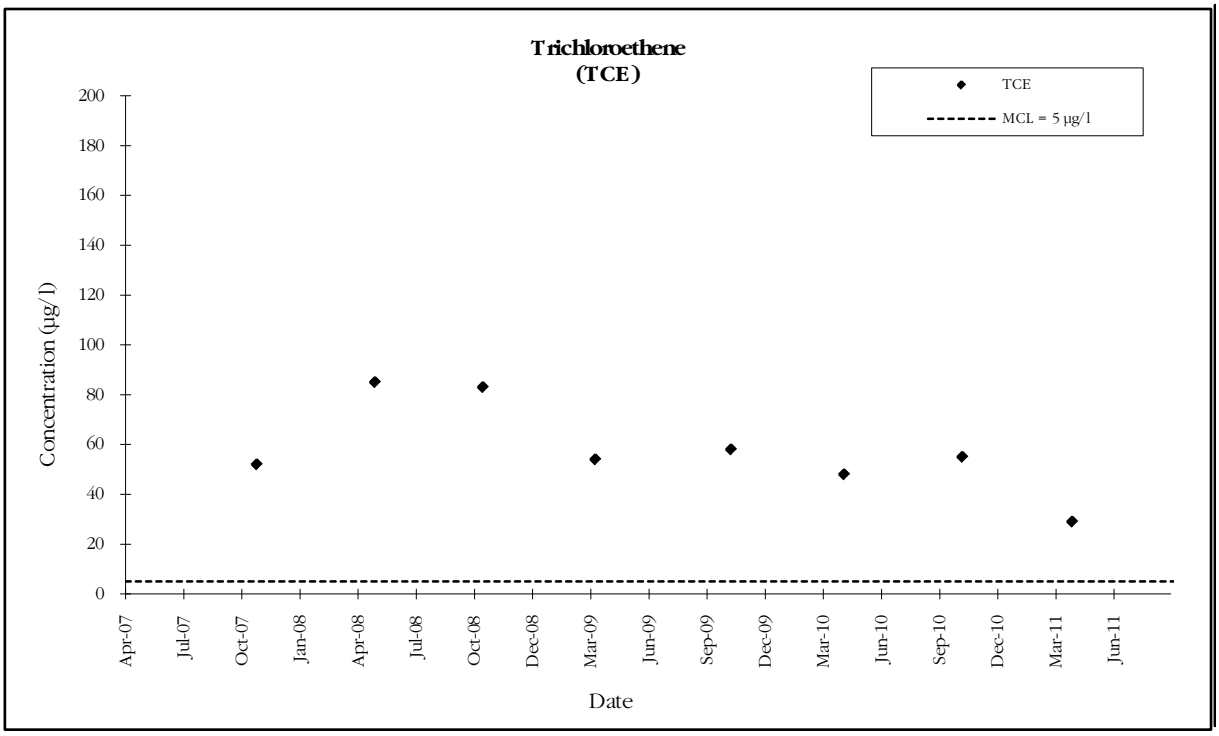
EXHIBIT B1-2
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL EX-02
(Page 2 of 2)

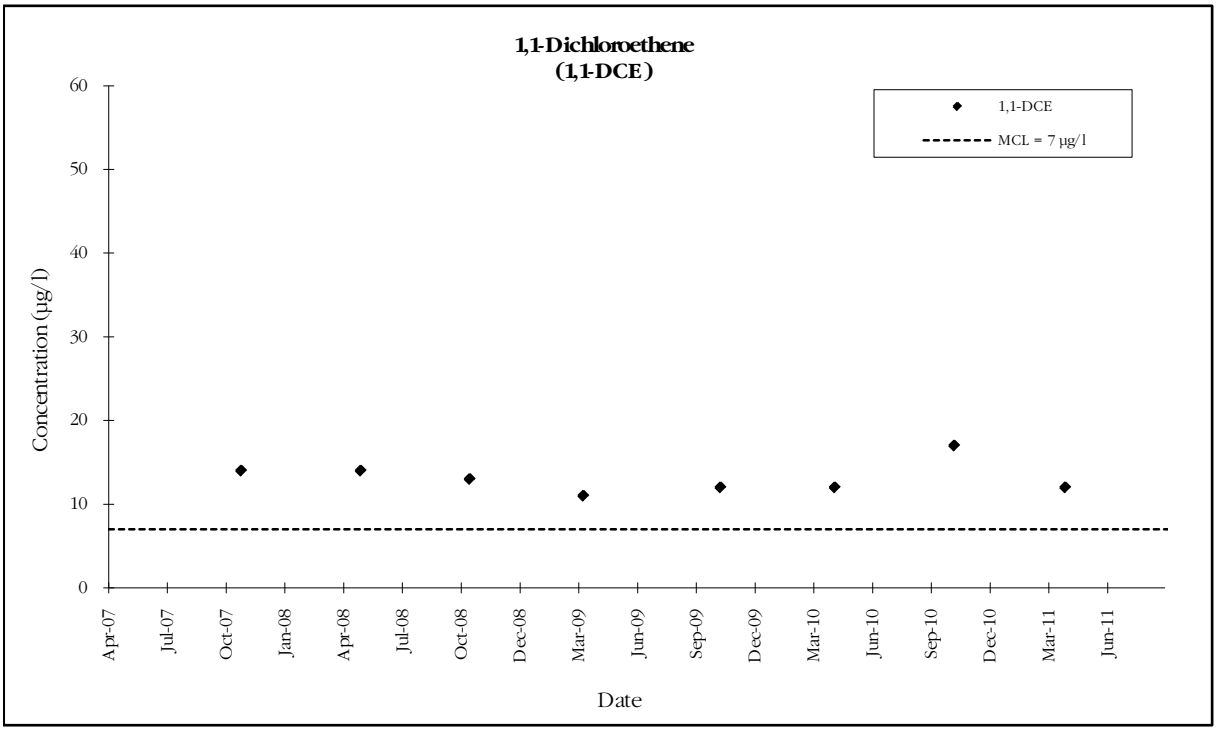




[(a)] Data for the eight most recent sampling rounds are shown.

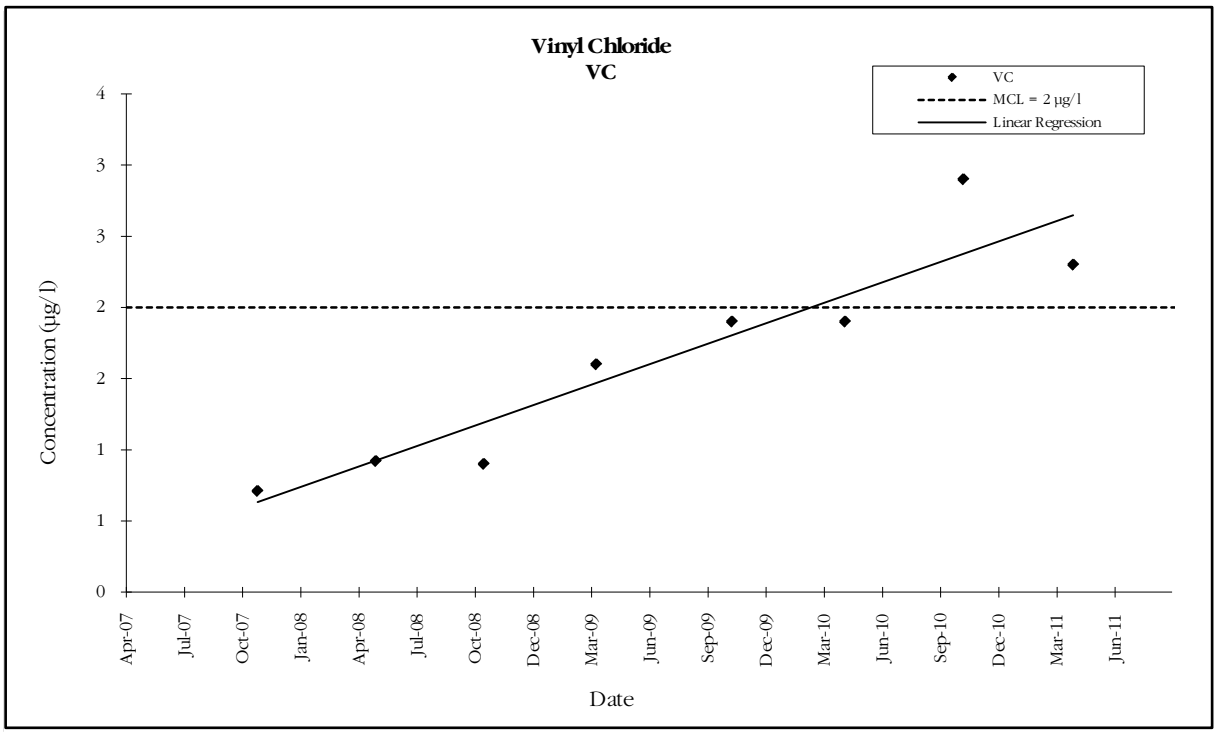
EXHIBIT B1-3
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL EX-04
(Page 1 of 2)





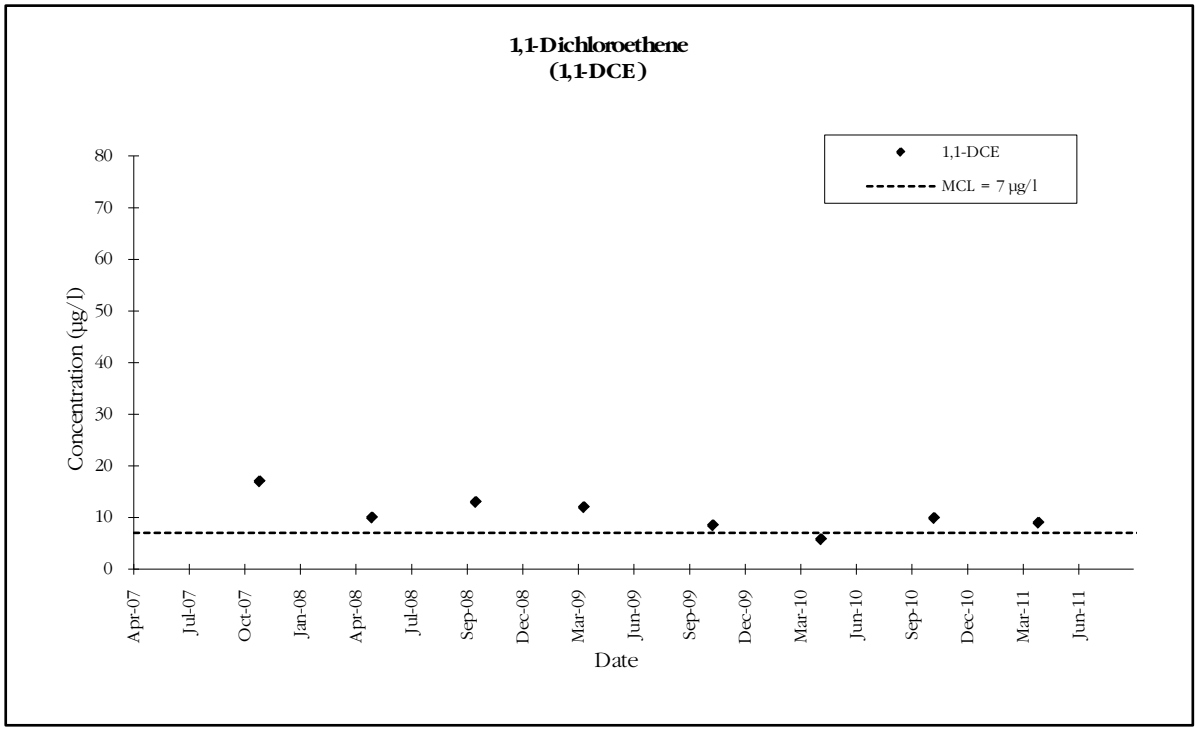
[(a)] Data for the eight most recent sampling rounds are shown.

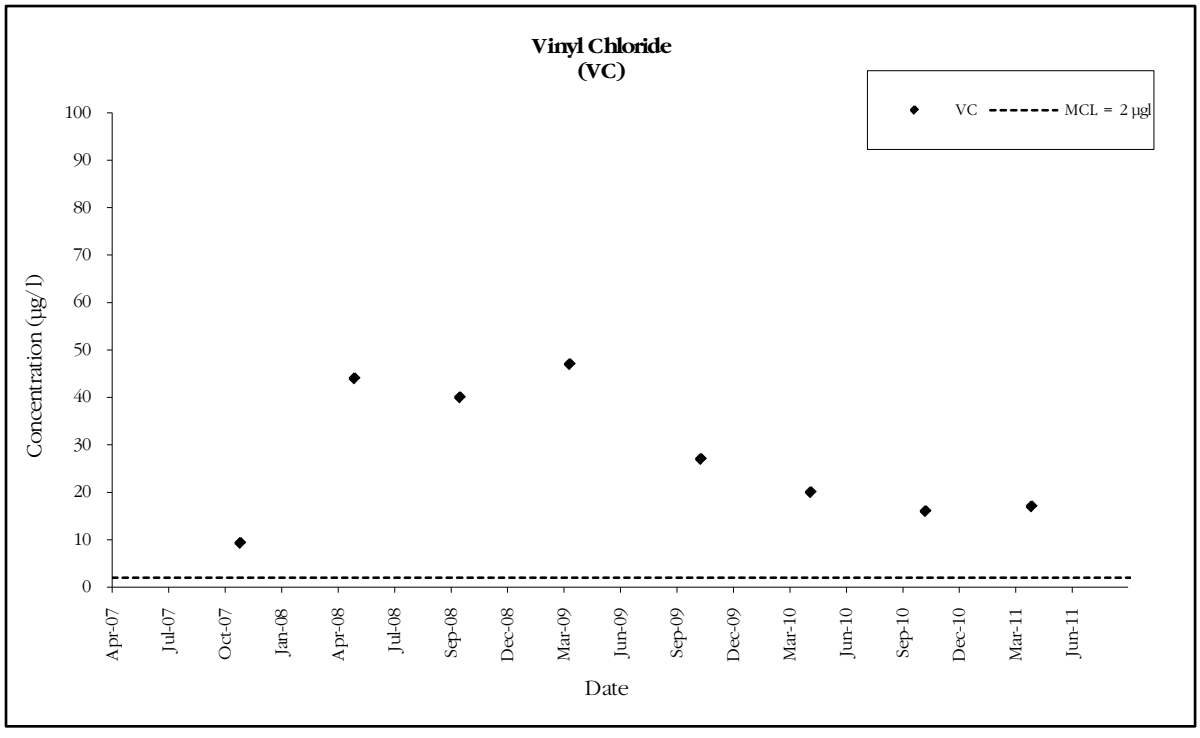
EXHIBIT B1-3
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL EX-04
(Page 2 of 2)



[(a)] Data for the eight most recent sampling rounds are shown.

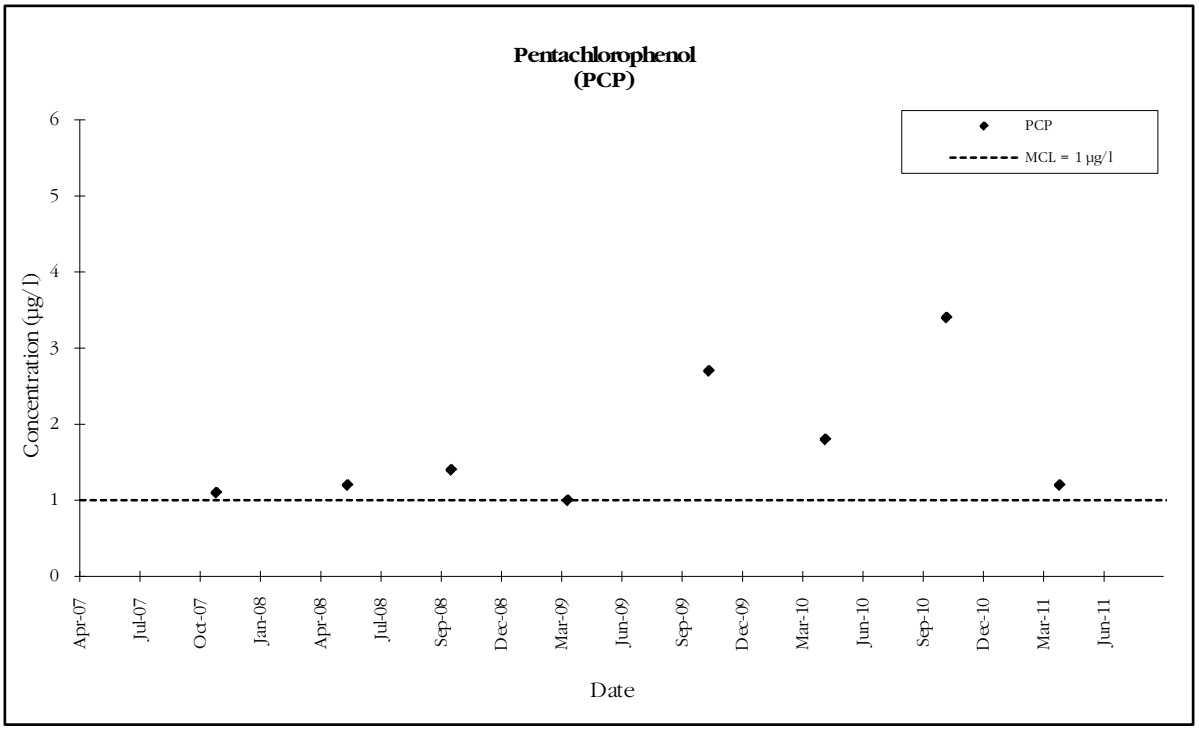
EXHIBIT B1-4
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL EX-05





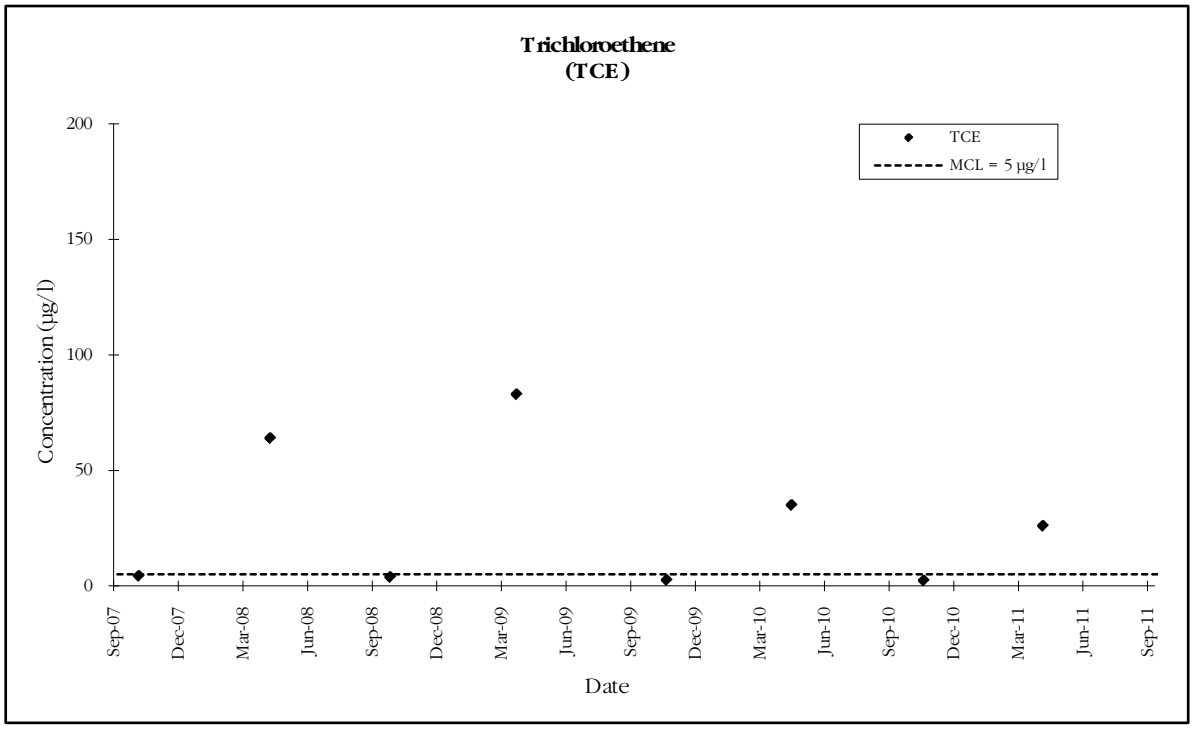
[(a)] Data for the eight most recent sampling rounds are shown.

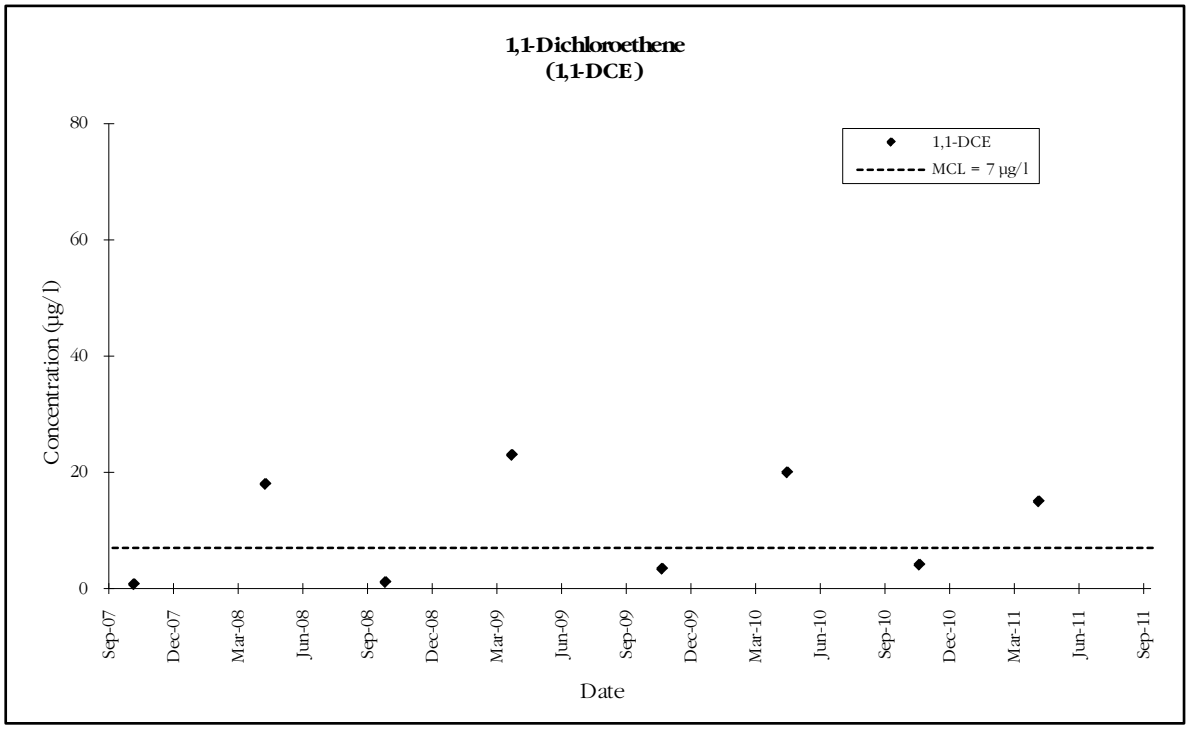
EXHIBIT B1-5
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL EX-08



[(a)] Data for the eight most recent sampling rounds are shown.

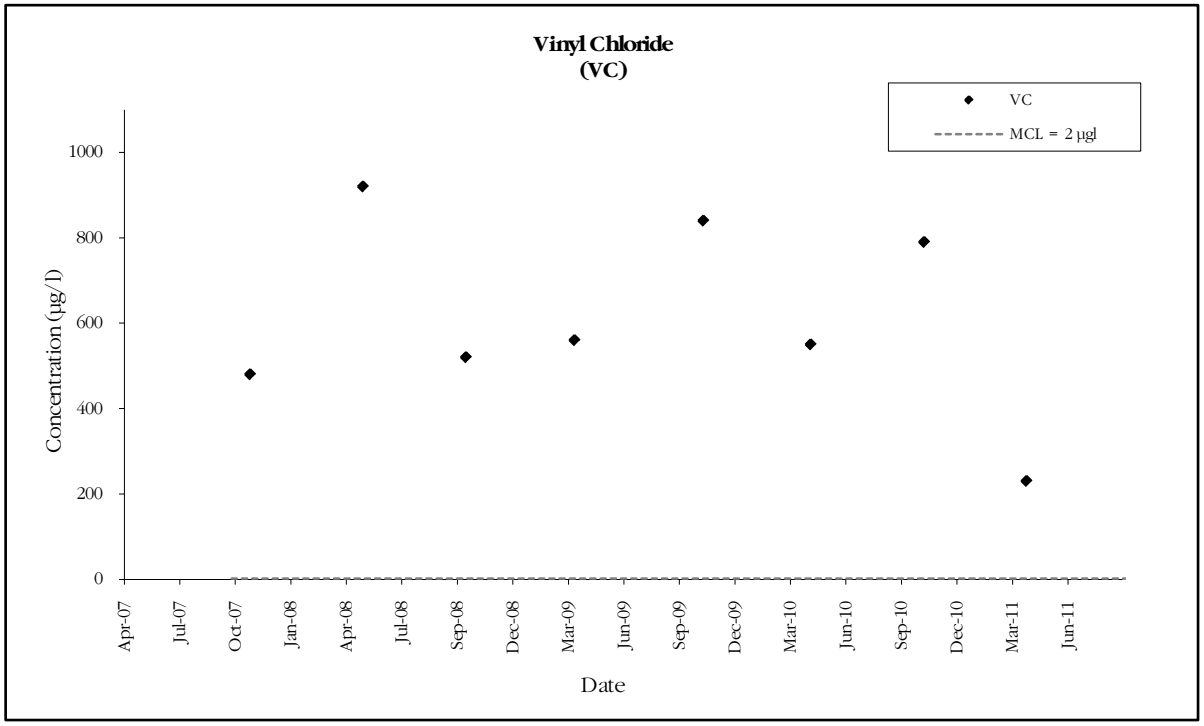
EXHIBIT B1-6
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL EX-11
(Page 1 of 2)





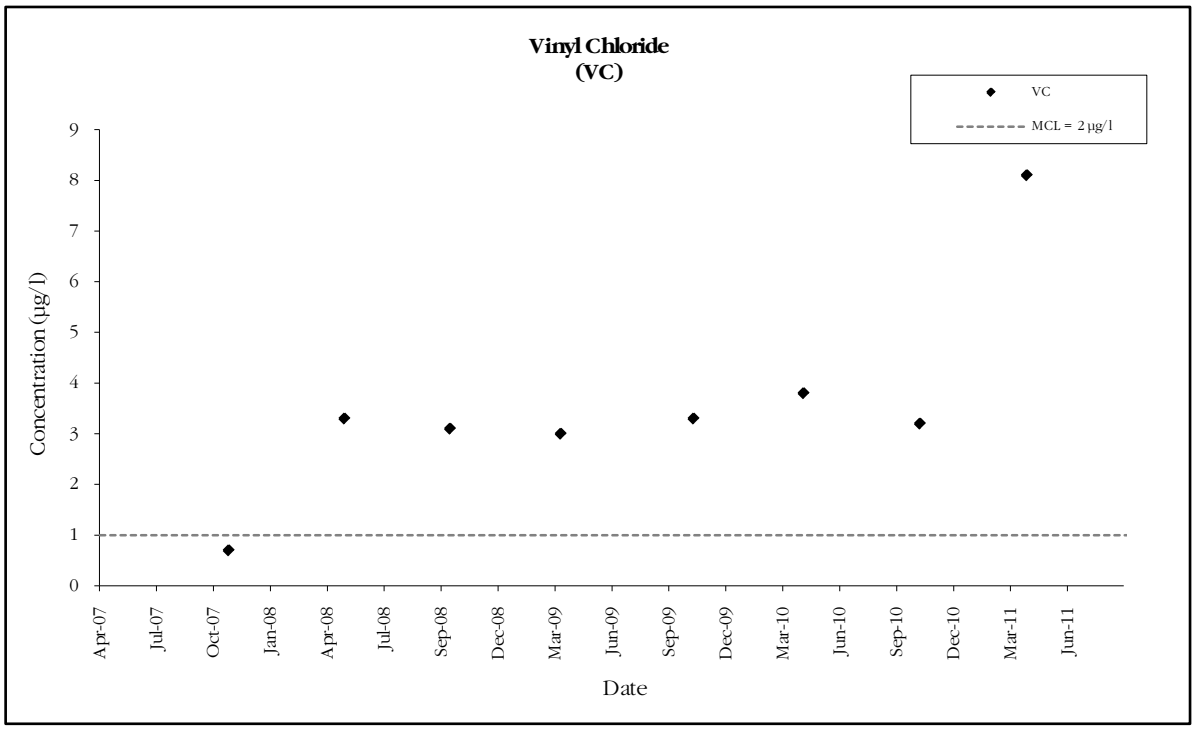
[(a)] Data for the eight most recent sampling rounds are shown.

EXHIBIT B1-6
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL EX-11
(Page 2 of 2)



[(a)] Data for the eight most recent sampling rounds are shown.

EXHIBIT B1-7
WASATCH CHEMICAL SITE
TIME SERIES PLOTS[(a)] FOR INDICATOR CHEMICALS ABOVE MCLs
EXTRACTION WELL MW-20



[(a)] Data for the eight most recent sampling rounds are shown.

Section B2

Comprehensive Data and Historical Trends

EXHIBIT B2-1
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL ES-01

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP (µg/l)**
11/6/1997	2200	890	270	--	260	4700
2/12/1998	850 B	310 B	53	--	33	870 JG
5/19/1998	1300	620	140	--	38	1100
8/12/1998	2000	770	100	--	65	980
11/17/1998	2000	690	87	--	48	1000
2/24/1999	1600	750	82	--	30	670 J
5/26/1999	1200	660	< 500 G	--	55	640 Q
8/25/1999	1200	410	33 T	--	35	240
11/17/1999	1000	590	36 T	--	15.8 J	380
2/22/2000	730	270	18 T	--	11	79
5/23/2000	690	570	28 J	--	14.2	210
8/23/2000 (a)	670 D	460 D	36 D	--	25 J	120 D
5/23/2001	450 D	410 D	30 D	--	13 D	360 D
11/19/2001	603 D	555 D	33 D	--	10 D	130
5/15/2002	907	524	33	--	7.9	100
11/20/2002	280 D	100 D	< 50 D	--	8.6	43 T
2/25/2003	30	59	3.5	64	1.6	18.6
5/6/2003	130	100	3 J	31	1.7	1.3
8/12/2003	5.7	14	2.2	505 D	< 0.5	0.3 TJ
11/5/2003	4 TD	6 TD	< 10 D	51 D	< 2.4	0.07 TJ
5/14/2004	80 DJ	106 D	9.7	80 D	--	21 D
11/3/2004	18	19	0.7 T	6.1	--	3.2
5/10/2005	< 50 D	35 TD	< 50 D	70 D	--	5.1 J
10/31/2005	< 25 D	< 25 D	< 25 D	< 25 D	--	< 0.5
5/16/2006	3.6	24	5.7	60 D	--	8 D
11/6/2006	2	4.5	0.6 T	10	--	< 0.5
4/9/2007	23	39	1.9	11	--	1.5
10/29/2007	1.4	2	< 1	2.4	--	0.1 T
4/28/2008	13	62 D	6.1	85 D	--	16 D
10/14/2008	1.2	2.4	< 1	1.6	--	< 0.5
4/7/2009	70 D	150 D	10 J	75 D	--	42 TDJ
11/3/2009	0.4	1.7 D	< 1	0.7 D	--	0.5 D
4/26/2010	14	47	6.7	30 J	--	26 D
10/26/2010	0.2 T	0.4 T	< 1	0.4 T	--	< 0.5
4/11/2011	4.7	19	2.6	18	--	8.6

Trench depth: 21 feet below ground surface

Screened interval: 5-20 feet below ground surface

Data qualifiers are defined in the laboratory reports.

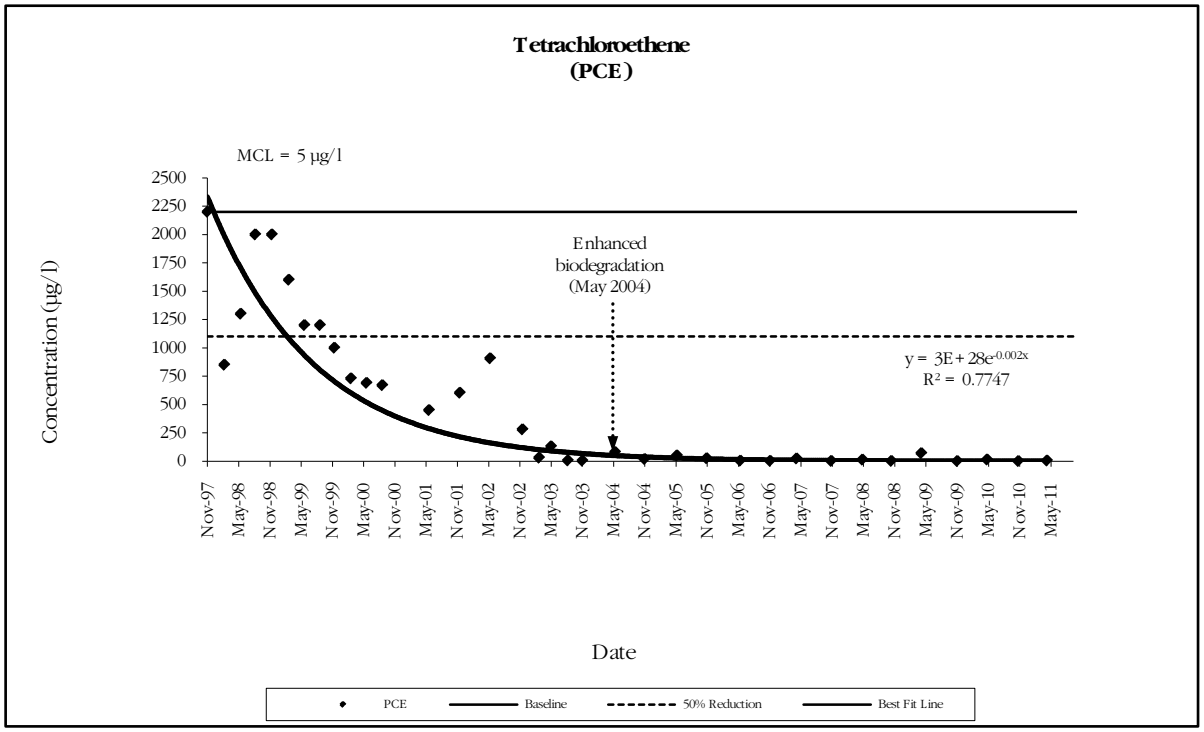
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

(b) The analysis for 2,4-Dichlorophenoxyacetic Acid (2-4 D) was discontinued in May 2004.

Note: Biodegradation enhancing products were injected in the vicinity of this well in May 2004.

EXHIBIT B2-1
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL ES-01
(Page 2 of 4)



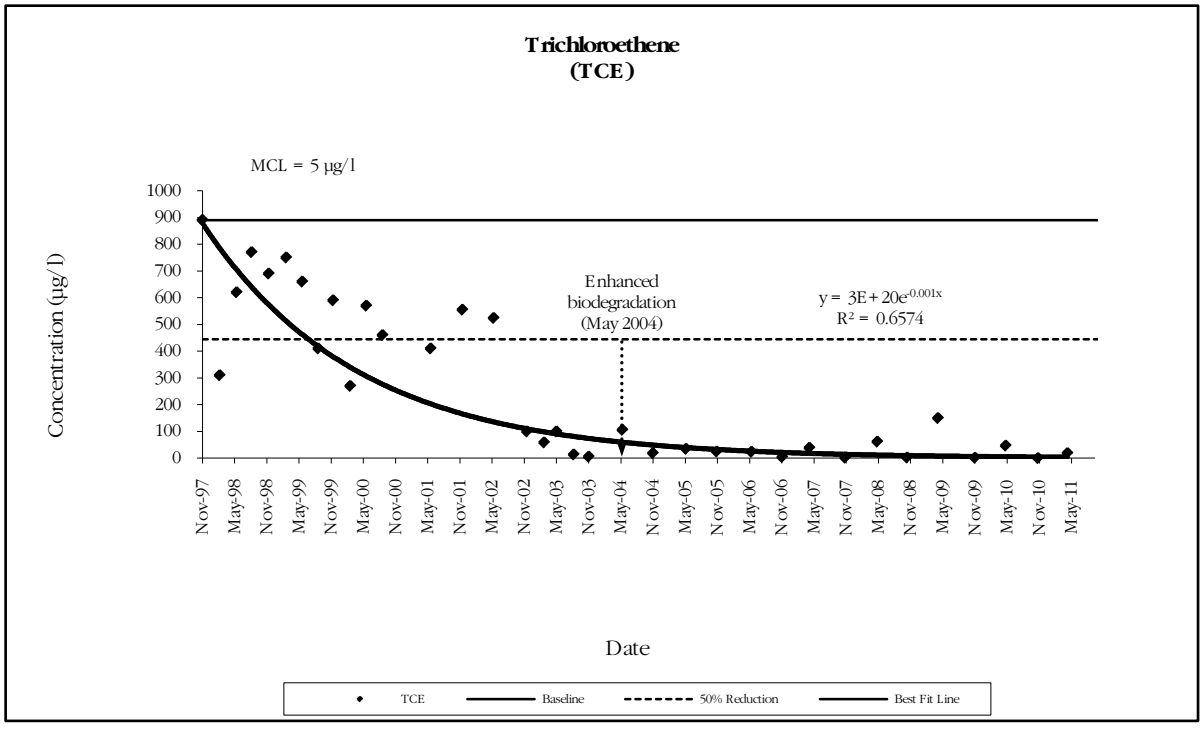
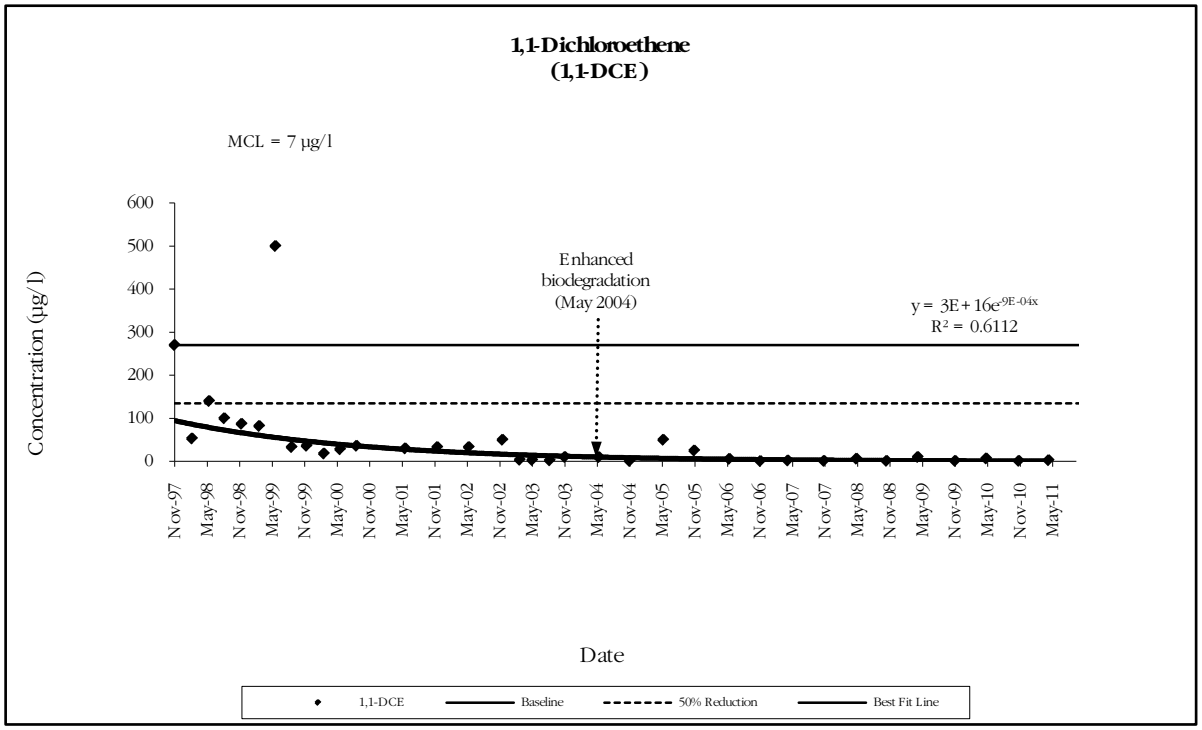


EXHIBIT B2-1
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL ES-01
(Page 3 of 4)



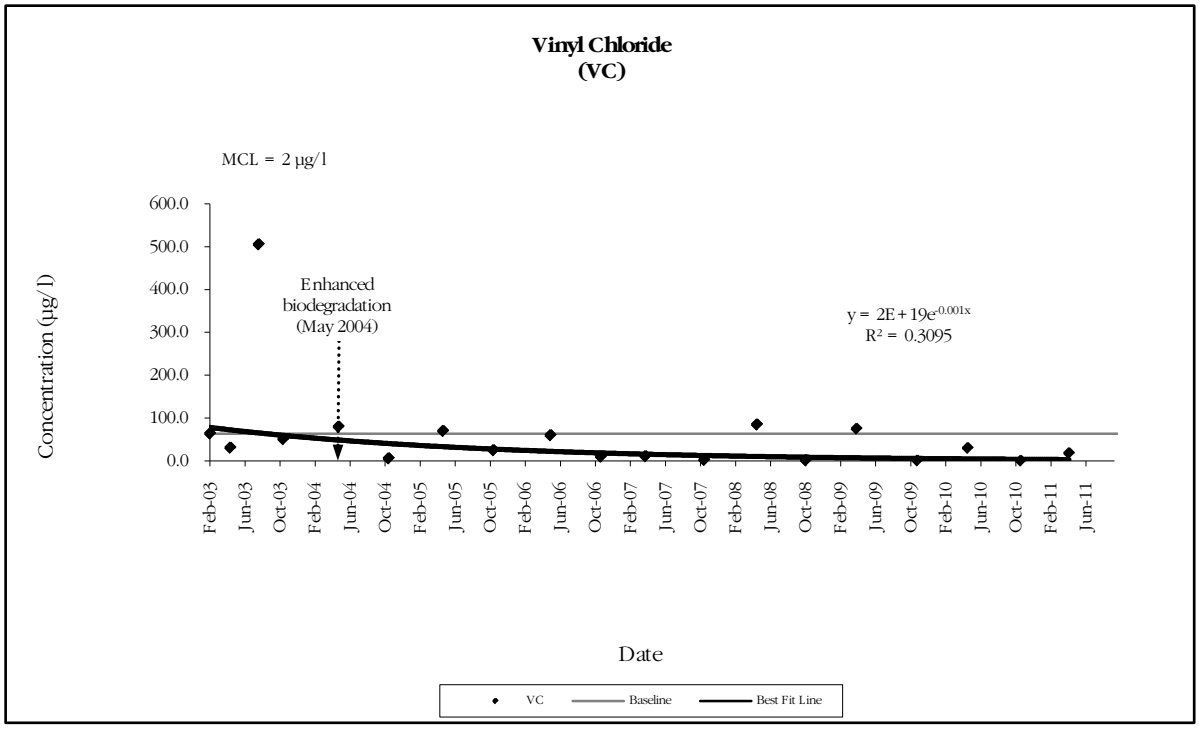


EXHIBIT B2-1
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL ES-01
(Page 4 of 4)

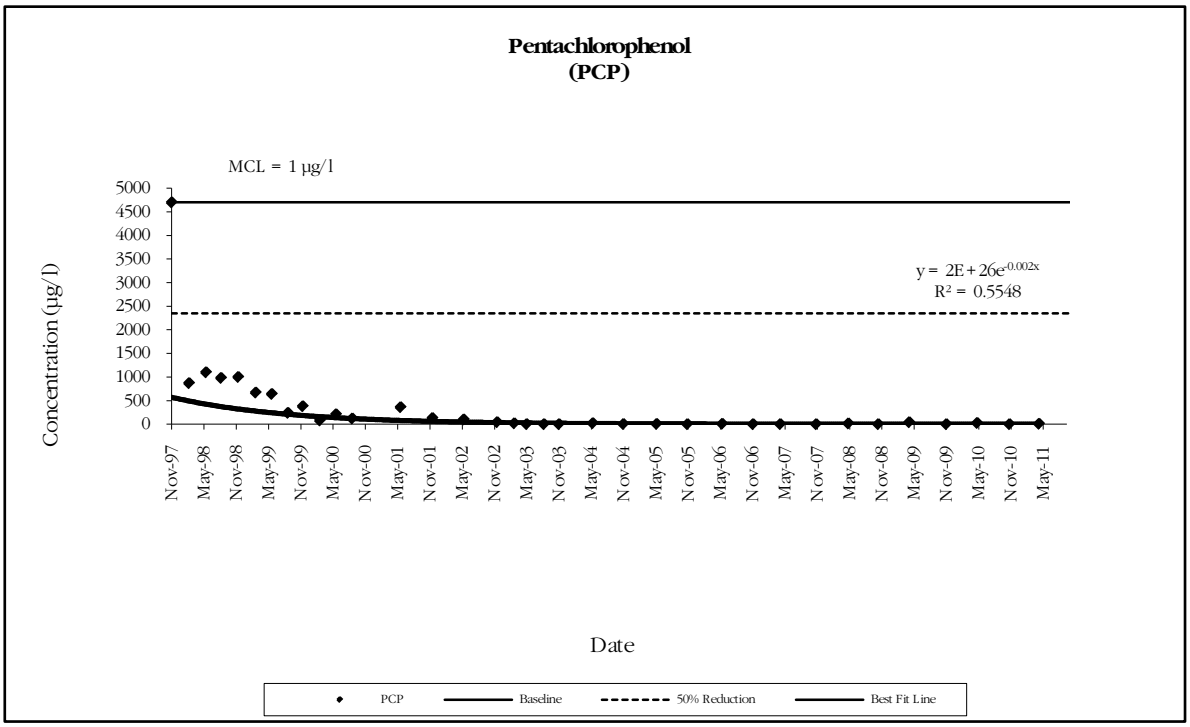


EXHIBIT B2-2
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-02

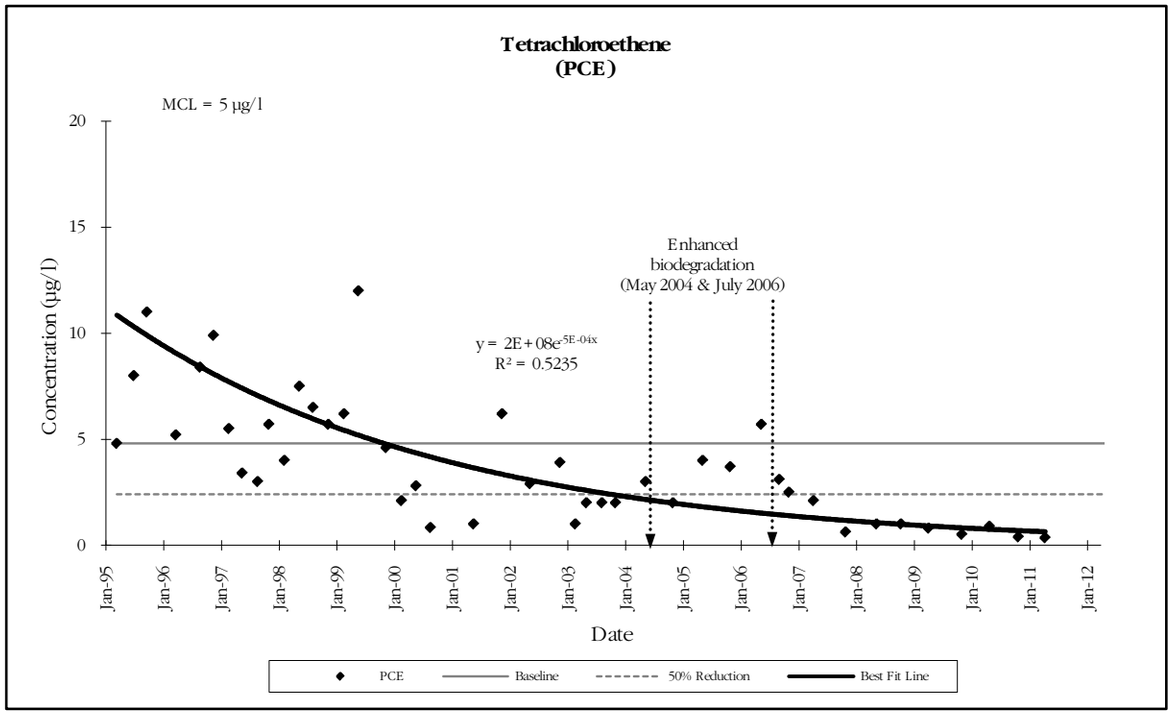
	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP (µg/l)**
3/20/1995	4.8	220	27	--	3.73	139 J
7/6/1995	8	360	35	--	< 2 J	< 400 J
9/27/1995	11	1000	140	--	< 2	< 20
12/27/1995	240 J	22 J	7.8 J	--	< 2	32
3/28/1996	5.2	170	8.7	--	< 2	2.5
8/28/1996	8.4	530	43	--	< 10	3.6 J
11/21/1996	9.9 T	420	25	--	3.1 J	7 J
2/26/1997	5.5	290	14	--	3.2	5.1
5/21/1997	3.4 T	200	11	--	< 2.5	4.5
8/27/1997	3	130	7.7	--	< 2.5	3.8 B
11/6/1997	5.7	260	15	--	< 2.5	9.4
2/12/1998	4.0 B	150 B	8.2	--	0.77 J	3.2
5/18/1998	7.5	300	21	--	< 1.5	3.8
8/12/1998	6.5	350	23	--	2.9 J	4.3 J
11/17/1998	5.7	330	26	--	< 2.5	4.3
2/24/1999	6.2	260	15	--	3.9	6.1
5/26/1999	< 12	190	12 Q	--	< 4.0	9.2 Q
8/25/1999	< 25 G	440	14 T	--	1.94	12.1
11/17/1999	4.6 T	130	8.1	--	< 0.2	9.48 J
2/22/2000	2.1 T	89	5.2	--	1.01	10.1
5/24/2000	2.8 J	54	3.1 J	--	1.36	5.1
8/23/2000 (a)	0.83 D	0.34 D	0.58 D	--	< 0.5	8.59 J
5/23/2001	1	61	4.2	--	< 0.5	3.3
11/19/2001	6.2 D	99 D	11 D	--	< 0.5	0.8
5/15/2002	2.9	114	11	--	< 0.5	2.1
11/20/2002	3.9	83 D	8.2	--	< 0.48	0.4 T
2/25/2003	1	127	12	74	< 0.48	1.1
5/6/2003	2 J	145	12	78	< 0.5	1.1
8/12/2003	2	136 D	10	48	< 0.5	1.8
11/6/2003	2	197 D	16	74 D	< 2.4	1.1
5/14/2004	3	390 D	32	201 D	--	0.7 B
11/3/2004	2 D	181 D	14 D	80 D	--	2 J
5/10/2005	4 TD	251 D	20 D	110 D	--	< 0.5 UJ
10/31/2005	3.7	201 D	15	87 D	--	1.1 J
5/16/2006	5.7	200 D	14	65 D	--	2.4 D
9/6/2006	3.1	170 D	14	82 D	--	--
11/6/2006	2.5	190 D	14	95 D	--	0.4 T
4/10/2007	2.1	130 D	14	120 D	--	3 D
10/30/2007	0.6 T	120 D	11	170 D	--	1.5
4/30/2008	--	--	--	--	--	1
5/13/2008	1	200 D	12	180 D	--	2
10/14/2008	1	140 D	12	180 D	--	11 D
4/7/2009	0.8 T	140 D	13	220 D	--	8 D
11/3/2009	0.5 T	99 D	7.9	140 D	--	7.9 D
4/26/2010	0.9 T	130 D	9.6	210 D	--	6.7 D
10/26/2010	0.4 T	110 D	9	110 D	--	7.9 D
4/13/2011	0.40 T	120 D	8.6	210 D	--	3.5 D

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

Note: Biodegradation enhancing products were injected in the vicinity of this well in May 2004 and July 2006.

EXHIBIT B2-2
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-02
(Page 2 of 4)



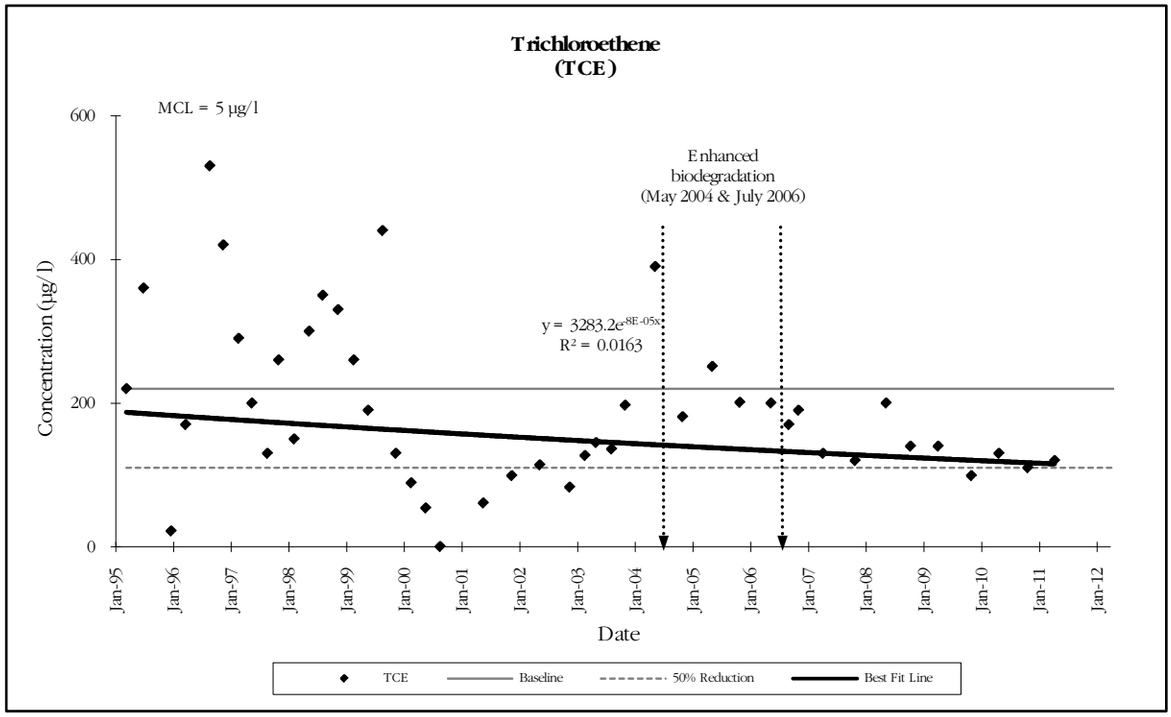
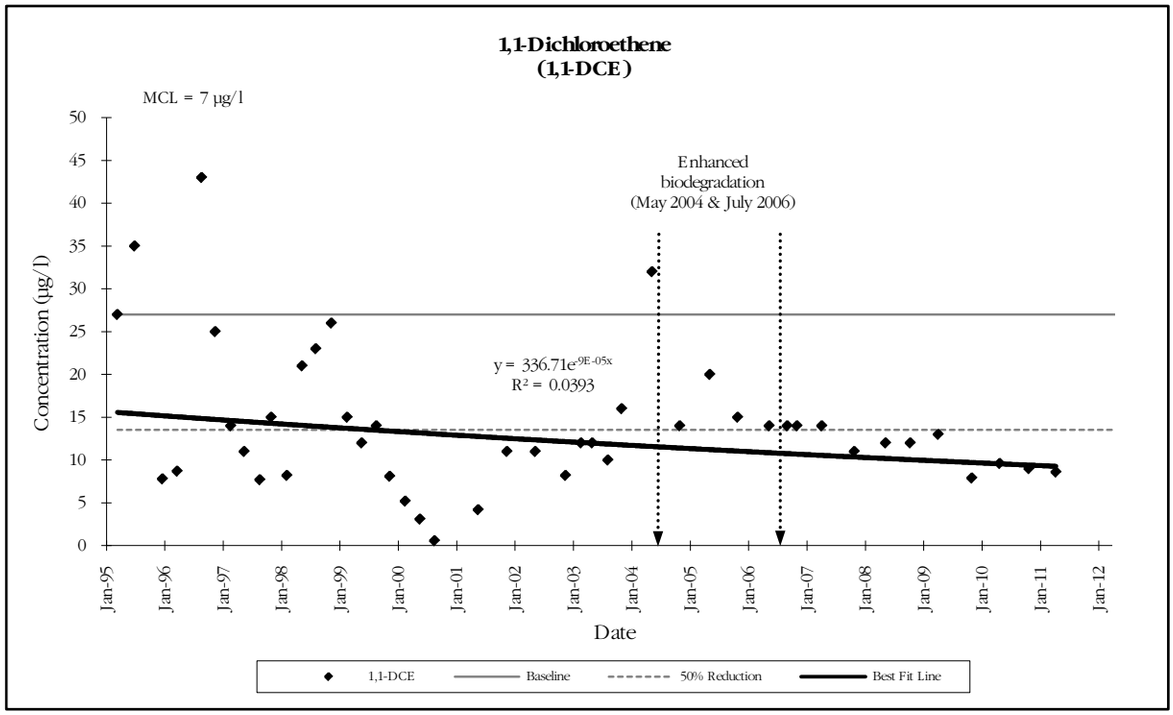


EXHIBIT B2-2
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-02
(Page 3 of 4)



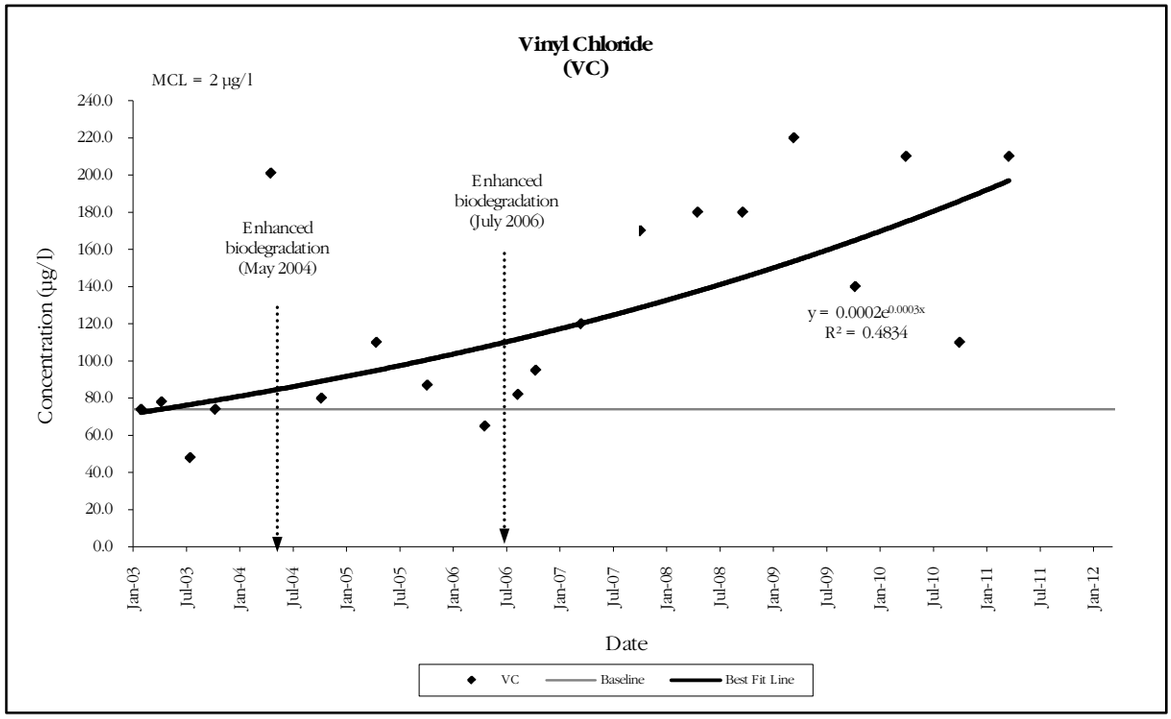


EXHIBIT B2-2
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-02
(Page 4 of 4)

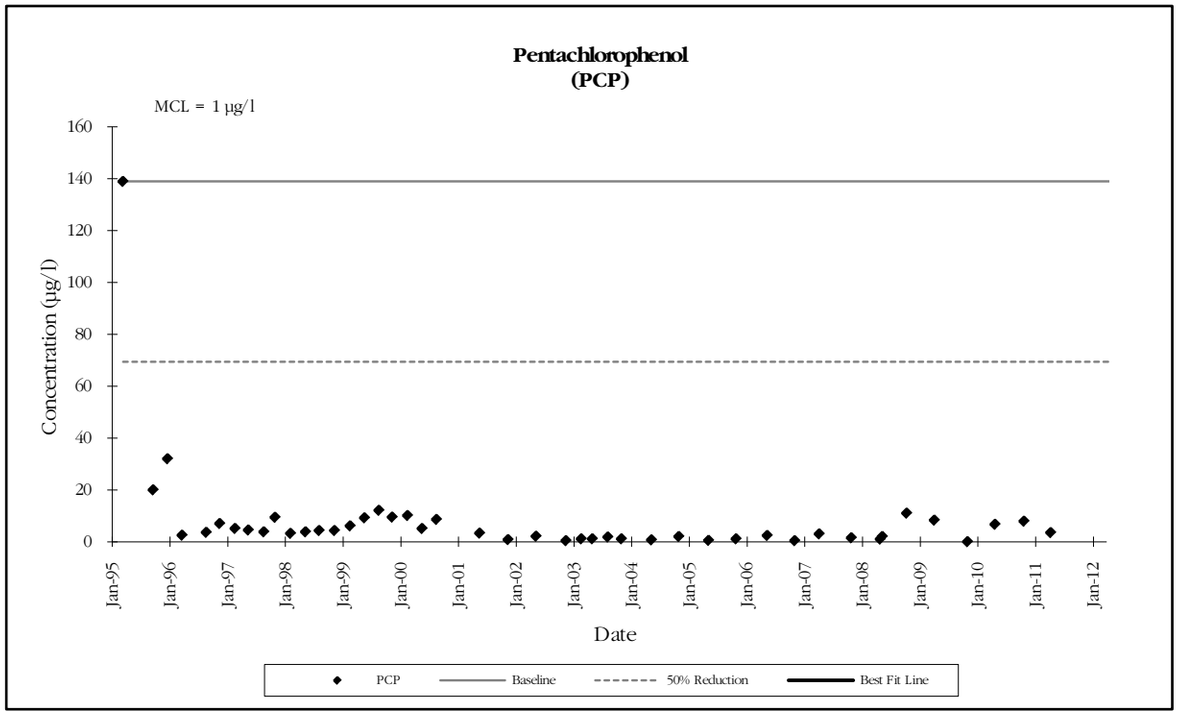


EXHIBIT B2-3
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-04

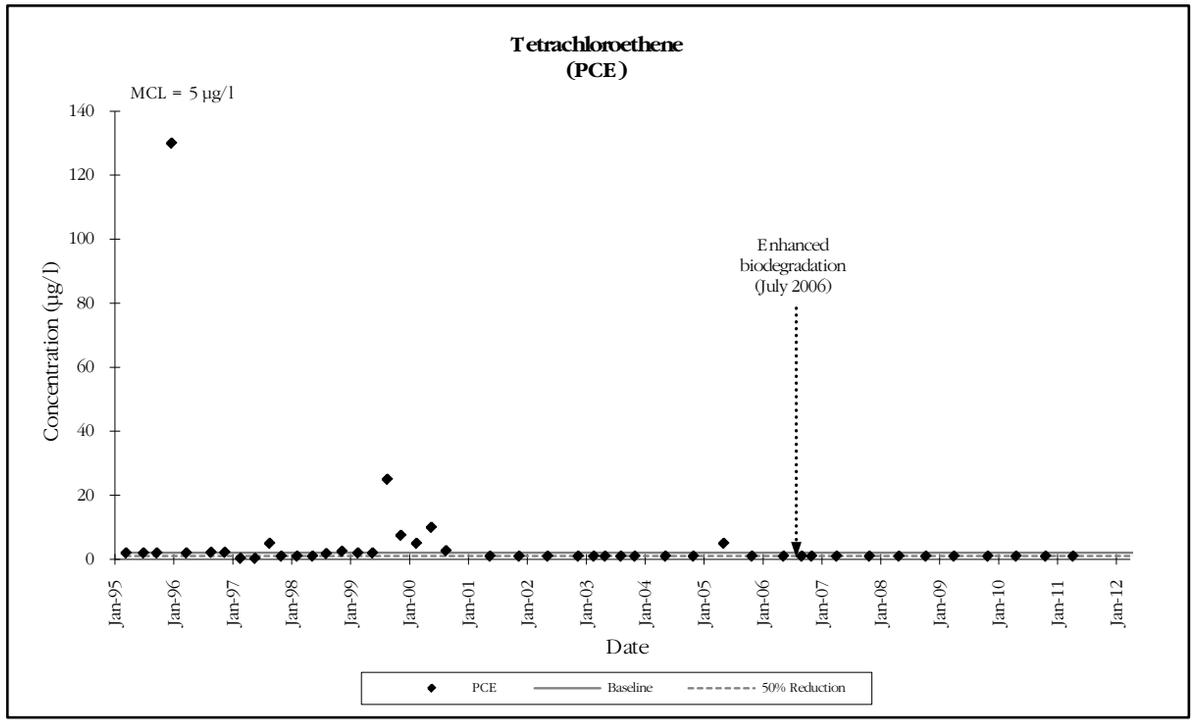
	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP (µg/l)**
3/20/1995	< 2 J	680	130	--	< 2	< 0.2 J
7/6/1995	< 2	180	21	--	< 2 J	< 0.2 J
9/27/1995	< 2	190	48	--	< 2	< 0.2
12/27/1995	130	390	49	--	2.1	8.4
3/28/1996	< 2	360	23	--	< 2	< 0.2
8/28/1996	2.2	330	38	--	1.2 T	0.063 TJ
11/21/1996	< 2.2 T	290	21	--	< 0.25	< 1 UJ
2/26/1997	0.33 T	54	3.2	--	< 0.25	< 1
5/27/1997	0.31 T	91	6.1	--	< 0.25	< 1
8/26/1997	< 5	280	17	--	< 0.25	< 1
11/6/1997	0.99	140	9.0	--	< 0.25	< 1
2/12/1998	< 1	51	4.0	--	< 0.25	< 1
5/19/1998	< 1	75	4.8	--	0.03 J	< 1
8/12/1998	1.8 J	190	11	--	< 0.25	< 1
11/17/1998	< 2.5	170	14	--	< 0.25	< 0.5
2/24/1999	< 2	140	8.5	--	< 0.25	< 0.5
5/26/1999	< 2	110	5.5 Q	--	< 4	< 0.5
8/25/1999	< 25 G	120	7.6 T	--	< 0.2	< 0.1
11/17/1999	7.5	200	11	--	< 0.2	0.5
2/22/2000	< 5	110	8.8	--	< 0.2	< 0.1
5/24/2000	< 10	96	5.4 J	--	< 0.2	< 0.1
8/23/2000 (a)	2.7 D	150 D	13 D	--	0.63 J	< 0.5 UJ
5/23/2001	< 1	59	8.4	--	< 0.5	0.4 T
11/19/2001	< 1	35	9	--	< 0.5	< 0.5
5/15/2002	< 1	76	10	--	< 0.5	0.09 J
11/20/2002	< 1	50	12	--	< 0.48	< 0.48
2/25/2003	< 1	59	9.9	< 1	< 0.48	< 0.48
5/6/2003	< 1	61 J	8.2	< 1	< 0.5	< 0.5
8/12/2003	< 1	56	8.8	2	< 0.5	< 0.5
11/6/2003	< 1	74 D	10	< 1	< 2.4	< 0.48
5/14/2004	< 1	88 D	15	< 1	--	< 0.48 UB
11/3/2004	< 1	55	8.3	< 1	--	< 0.48
5/10/2005	< 5 D	81 D	10 D	< 5 D	--	< 0.5
11/1/2005	< 1	118 D	13	0.4 T	--	< 0.5
5/16/2006	< 1	81 D	9.8	0.3 T	--	0.3 T
9/6/2006	< 1	130 D	18	0.8 T	--	--
11/6/2006	< 1	180 D	20	0.7 T	--	< 0.5
4/10/2007	< 1	110 D	16	1 J	--	< 0.5
10/30/2007	< 1	52 D	14	0.7 T	--	< 0.5
4/30/2008	< 1	85 D	14	0.9 T	--	< 0.5
10/14/2008	< 1	83 D	13	0.9 T	--	< 0.5
4/6/2009	< 1	54 D	11	1.6	--	< 0.5
11/2/2009	< 1	58 D	12	1.9	--	< 0.5
4/26/2010	< 1	48	12	1.9	--	< 0.5
10/26/2010	< 1	55	17	2.9	--	< 0.5
4/14/2011	< 1	29	12	2.3	--	< 0.5

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

Note: Biodegradation enhancing products were injected in the vicinity of this well in July 2006.

EXHIBIT B2-3
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-04
(Page 2 of 3)



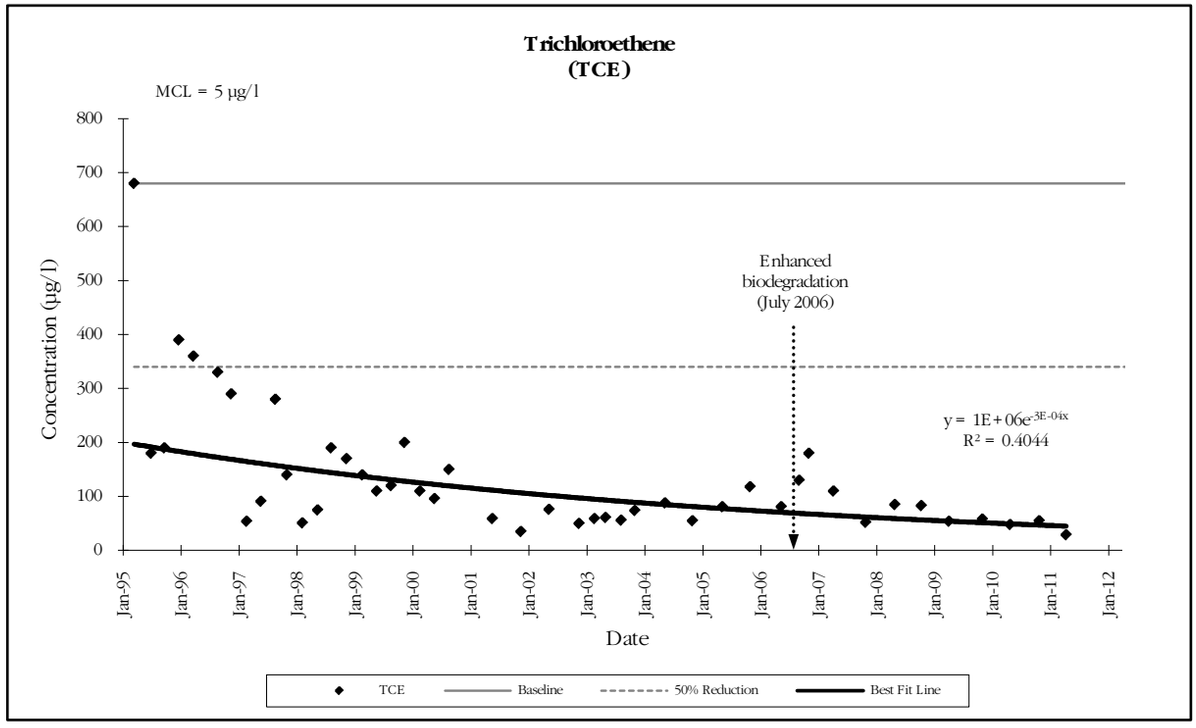
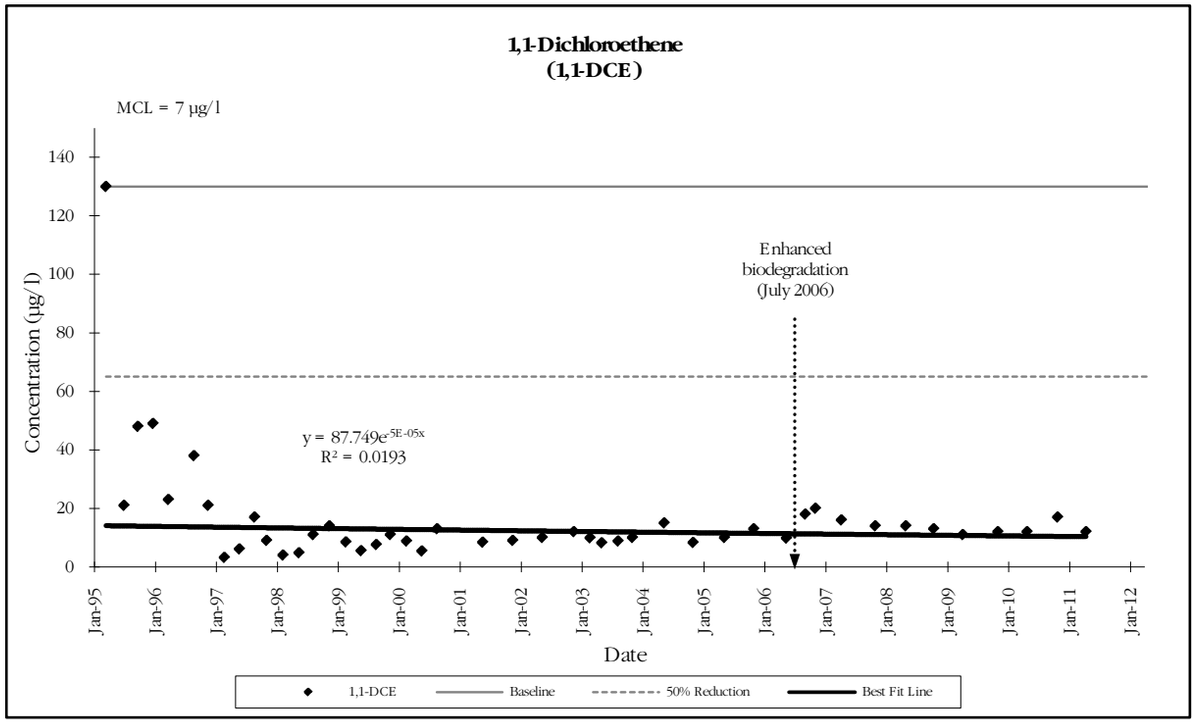


EXHIBIT B2-3
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-04
(Page 3 of 3)



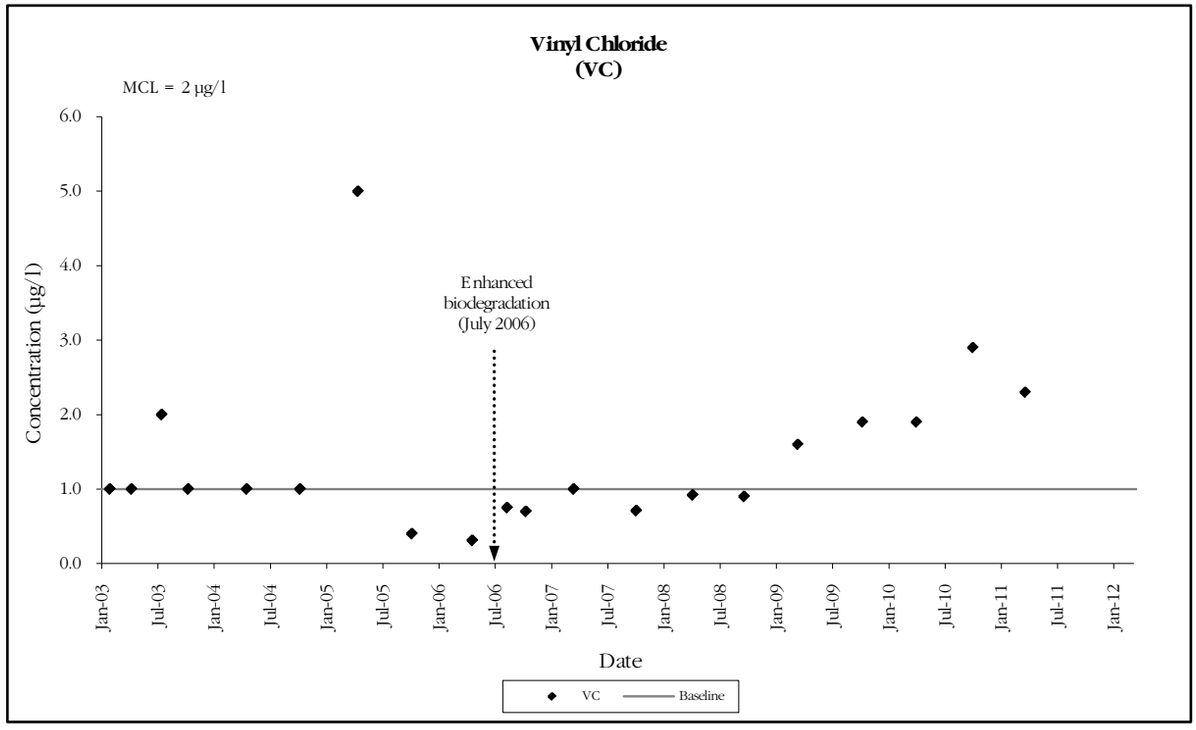


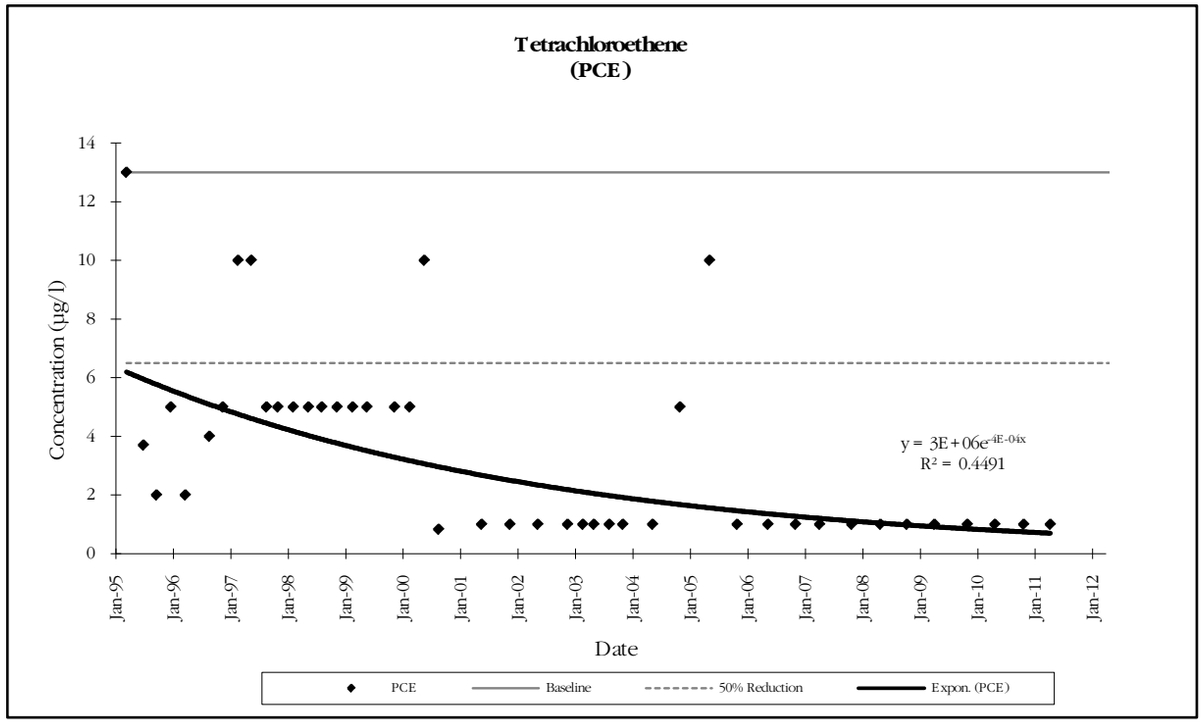
EXHIBIT B2-4
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-05

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP (µg/l)**
3/20/1995	13	5500	450	--	< 20	< 2
7/6/1995	3.7	1900	110	--	< 2.0 J	< 0.2 J
9/27/1995	< 2	1900	320	--	< 2	< 0.2
12/27/1995	< 5	1000	62	--	< 2	< 0.2
3/28/1996	< 2	1100	55	--	< 2	< 0.2
8/28/1996	< 4	180	9.5	--	< 10	< 0.2
11/21/1996	< 5	200	10	--	< 0.25	< 1 UJ
2/26/1997	< 10	520	23	--	< 0.25	< 1
5/21/1997	< 10	850	43	--	< 0.25	< 1
8/26/1997	< 5	250	13	--	< 0.25	< 1
11/6/1997	< 5	260	11	--	< 0.25	< 1
2/12/1998	< 5	430 B	27	--	< 0.25	< 1
5/19/1998	< 5	280	16	--	< 0.25	< 1
8/12/1998	< 5	250	12	--	< 0.25	< 1
11/17/1998	< 5	360	20	--	< 0.25	< 0.5
2/24/1999	< 5	330	14	--	< 0.25	< 0.5
5/26/1999	< 5	220 E	9.6 Q	--	< 4	< 0.5
8/25/1999	< 25 G	140	6.8 T	--	1.04	< 0.1
11/17/1999	< 5	130	6.4	--	< 0.2	< 0.1
2/22/2000	< 5	130	6.3	--	< 0.2	< 0.1
5/24/2000	< 10	98	4 J	--	< 0.2	0.43
8/23/2000 (a)	< 0.83 D	77 D	4.7 D	--	1.34 J	< 0.5 UJ
5/23/2001	< 1	58	3	--	< 0.5	0.5
11/19/2001	< 1	26	2	--	< 0.5	< 0.5
5/15/2002	< 1	74	5	--	< 0.5	0.04 J
11/20/2002	< 1	2	1	--	< 0.48	< 0.48
2/25/2003	< 1	0.9 J	1	< 1	< 0.48	0.1 J
5/6/2003	< 1	31	4.1	0.4 J	< 0.5	0.7
8/12/2003	< 1	53	7.5	2.1	< 0.5	< 0.5
11/6/2003	< 1	20	8.7	0.7 T	< 2.4	< 0.48
5/13/2004	< 1	140 D	23	2.6	--	< 0.48
11/3/2004	< 5 D	20 D	11 D	3 TD	--	< 0.48
5/10/2005	< 10 D	34 D	10 D	< 10 D	--	< 0.5
11/1/2005	< 1	2	13	0.9 T	--	< 0.5
5/16/2006	< 1	6	12	0.7 T	--	< 0.5
11/7/2006	< 1	0.6 T	19	1.1	--	< 0.5
4/9/2007	< 1	0.8 T	20	2	--	< 0.5
10/30/2007	< 1	0.5 T	17	9.3	--	< 0.5
4/29/2008	< 1	0.4 T	10	44 D	--	< 0.5
10/14/2008	< 1	0.4	13	40	--	< 0.5
4/7/2009	< 1	0.4 T	12	47	--	< 0.5
11/2/2009	< 1	0.4 T	8.5	27	--	< 0.5
4/26/2010	< 1	0.4 T	5.8	20	--	< 0.5
10/26/2010	< 1	0.5 T	9.9	16	--	< 0.5
4/13/2011	< 1	0.4 T	9	17	--	< 0.5

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

EXHIBIT B2-4
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-05
(Page 2 of 3)



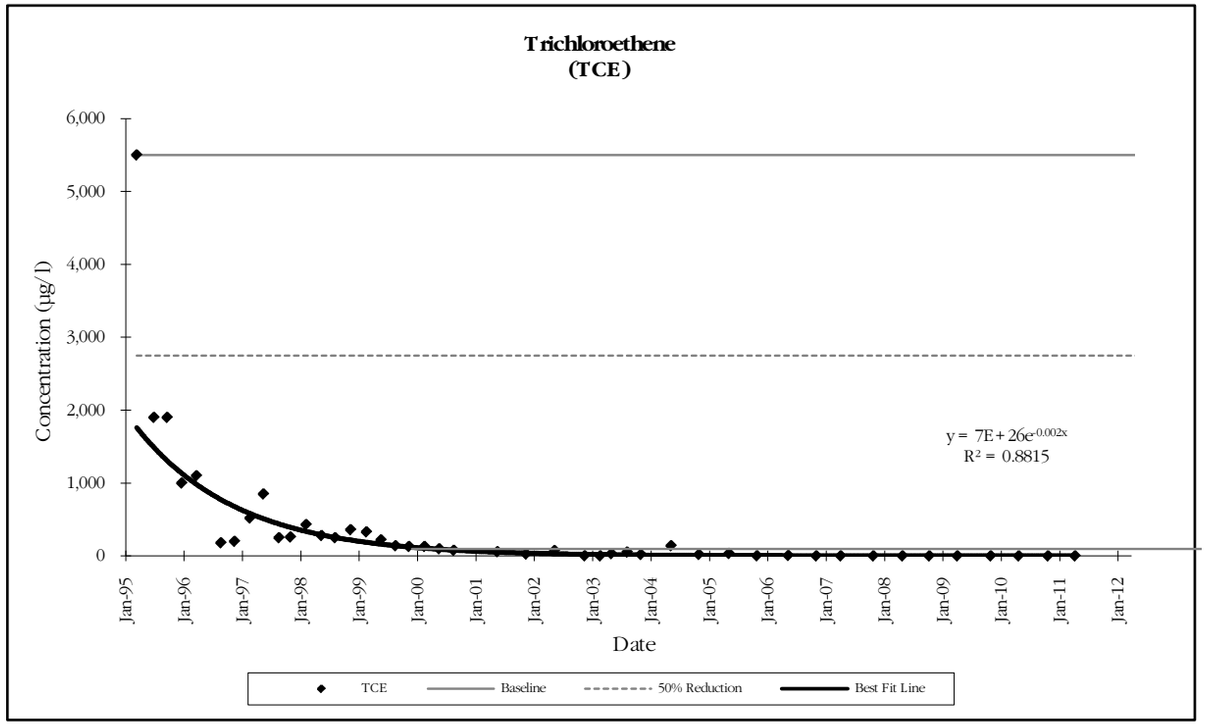
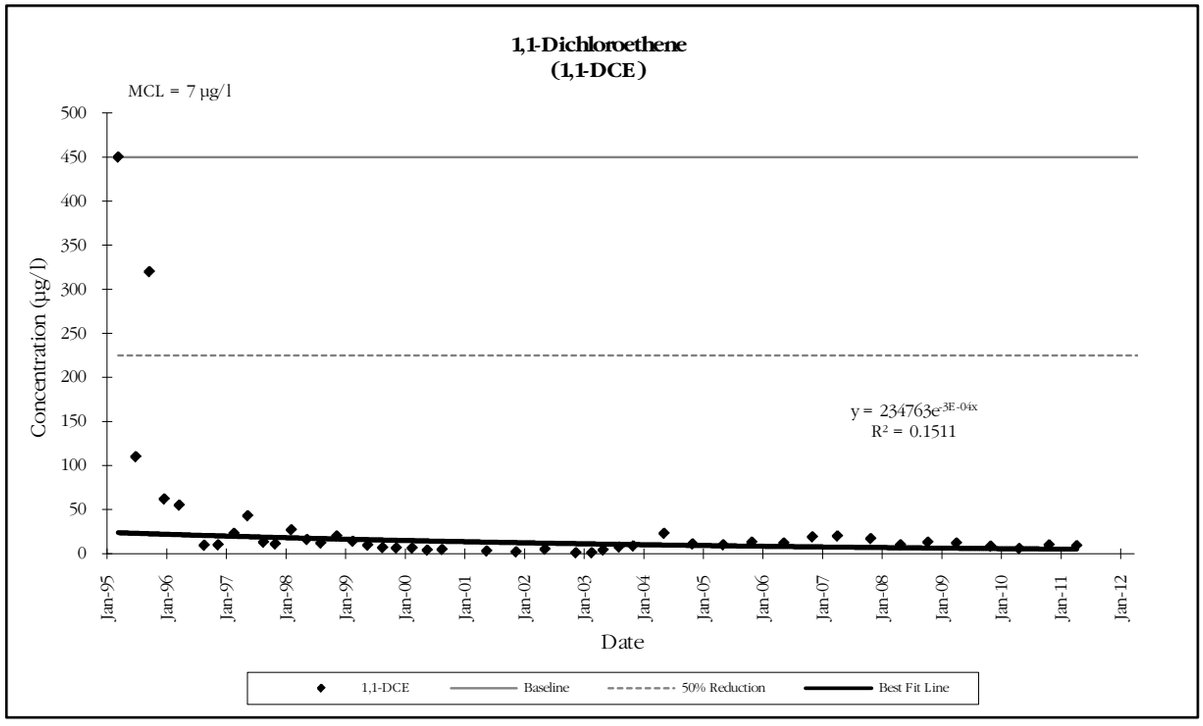


EXHIBIT B2-4
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-05
(Page 3 of 3)



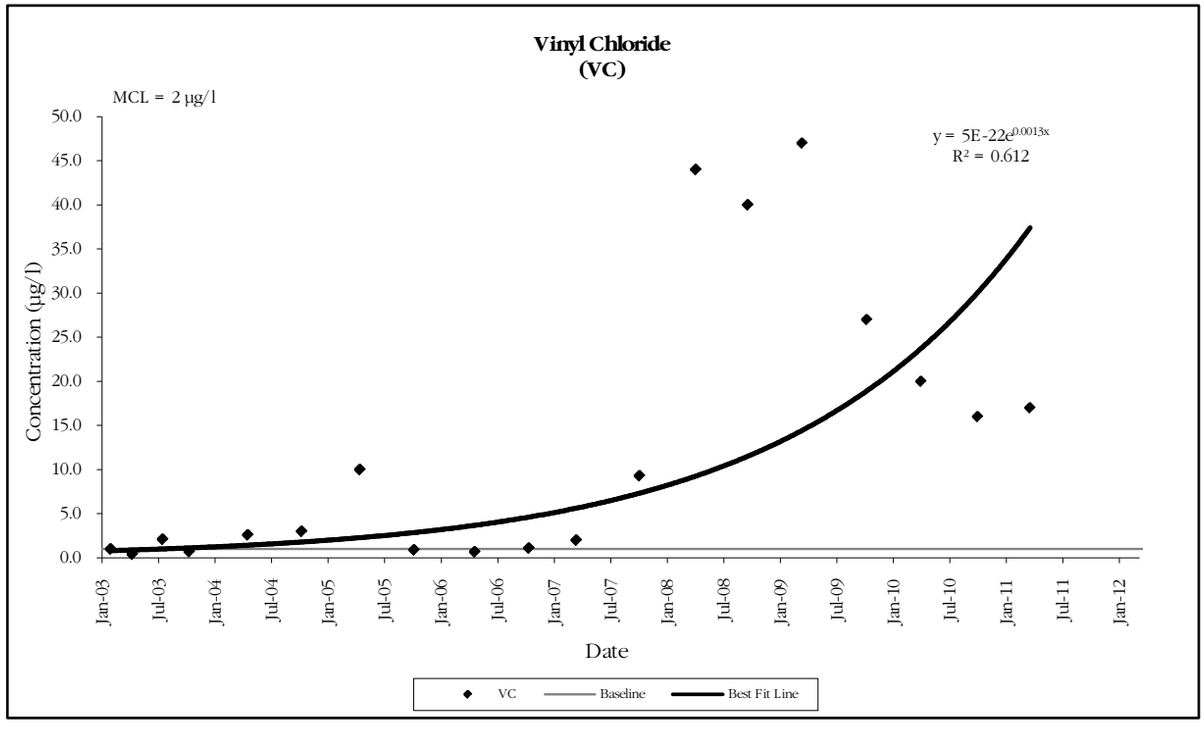


EXHIBIT B2-5
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-07

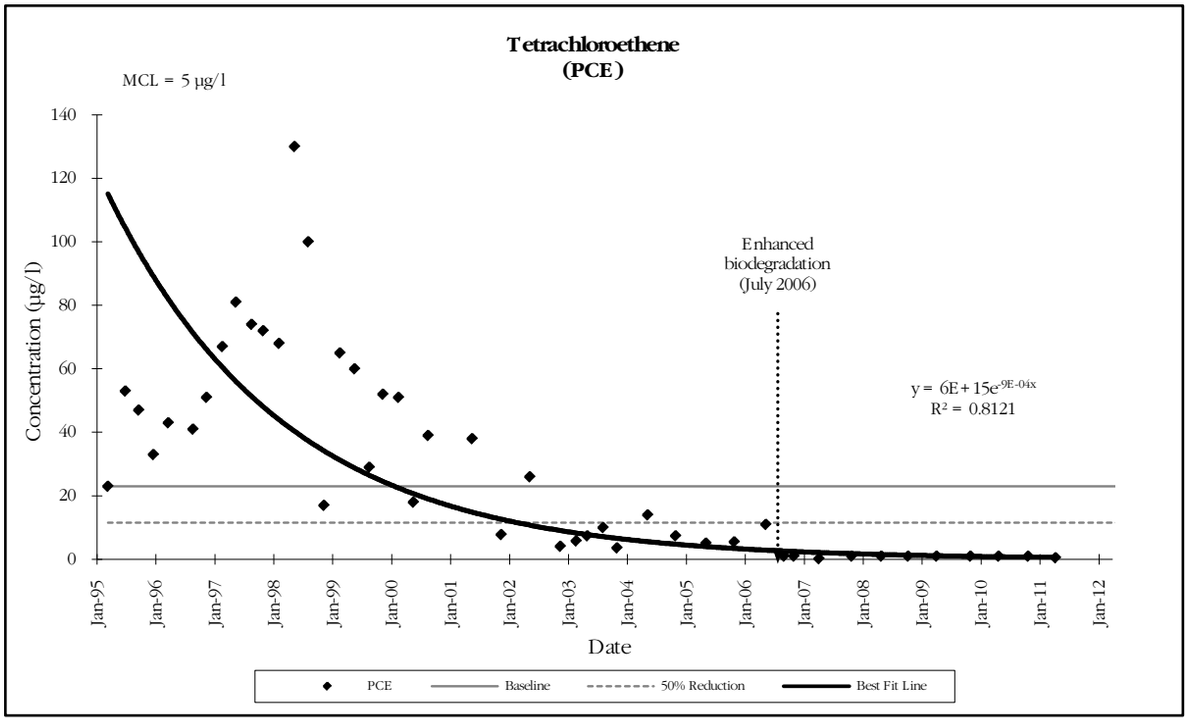
	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP (µg/l)**
3/20/1995	23	210	86	--	150	0.671 J
7/6/1995	53	160	21	--	< 20 J	< 40 J
9/27/1995	47	150	71	--	< 2	< 20
12/27/1995	33	140	28	--	< 2	< 0.2
3/28/1996	43	170	21	--	240	< 20
8/28/1996	41	360	24	--	< 10	38 J
11/20/1996	51	420	23	--	< 2.5	19 J
2/26/1997	67	490	19	--	< 2.5	46
5/21/1997	81	850	21	--	< 2.5	37 J
8/26/1997	74	460	16	--	1.7 J	40 B
11/6/1997	72	490	16	--	< 2.5	34 E
2/12/1998	68 B	460 B	19	--	3.6	27 E
5/19/1998	130	680	15	--	2.8	25 E
8/12/1998	100	650	21	--	< 5.5	22 E
11/17/1998	17	58	1.4	--	< 0.3	5.1
2/24/1999	65	190	4.2 J	--	< 2.5	7
5/26/1999	60	160	< 5 Q	--	< 5	16 Q
8/25/1999	29	210	10 T	--	1.53	4.78
11/17/1999	52	210	9.4 T	--	< 0.2 J	28.8 J
2/22/2000	51	110	2.9 J	--	0.13 J	16.7
5/24/2000	18	71	2.6 J	--	< 0.2	4.92
8/23/2000 (a)	39 D	96 D	5.5 D	--	< 0.5	0.77
5/23/2001	38 D	141 D	7 D	--	< 0.5	5.4 D
11/19/2001	7.8	59	3.9	--	< 0.5	2.4
5/15/2002	26	96	4.1	--	< 0.5	8.4
11/20/2002	4.1	46	3.7	--	< 0.48	2
2/26/2003	5.8	36	2.1	17	0.1 J	3.2
5/6/2003	7.4	24	< 1	1	< 0.5	1.4
8/12/2003	10	65 D	4.8	32	< 0.5	2.4
11/6/2003	3.6	21	2	10	< 2.4	1.3
5/14/2004	14	42	< 1	3.1	--	0.4 TB
11/3/2004	7.4	19	< 1	1	--	0.6
5/10/2005	5.1	11	< 1	0.5 T	--	< 0.5
11/1/2005	5.5	30	2.4	18	--	0.9
5/16/2006	11	22	0.5 T	2.1	--	1.2
9/6/2006	< 1	5.4	2.2	16 J+	--	--
11/6/2006	< 1	7.9	2.2	17	--	0.3 T
4/10/2007	0.2 T	7.1	0.7 T	6.9	--	0.3 T
10/30/2007	< 1	2.1	0.4 T	4.2	--	0.1 T
4/30/2008	< 1	5	0.8 T	8.9	--	0.2 T
10/13/2008	< 1	5	1.6	29.0	--	< 0.5
4/7/2009	< 1	3	0.8 T	10.0	--	0.1 T
11/3/2009	< 1	1.2	0.3 T	3.6	--	< 0.5
4/26/2010	< 1	2	< 1	1.4	--	< 0.5
10/26/2010	< 1	1.5	0.3 T	4.1	--	< 0.5
4/14/2011	0.5 T	2.4	0.2 T	1.4	--	< 0.5

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

Note: Biodegradation enhancing products were injected in the vicinity of this well in July 2006.

EXHIBIT B2-5
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-07
(Page 2 of 4)



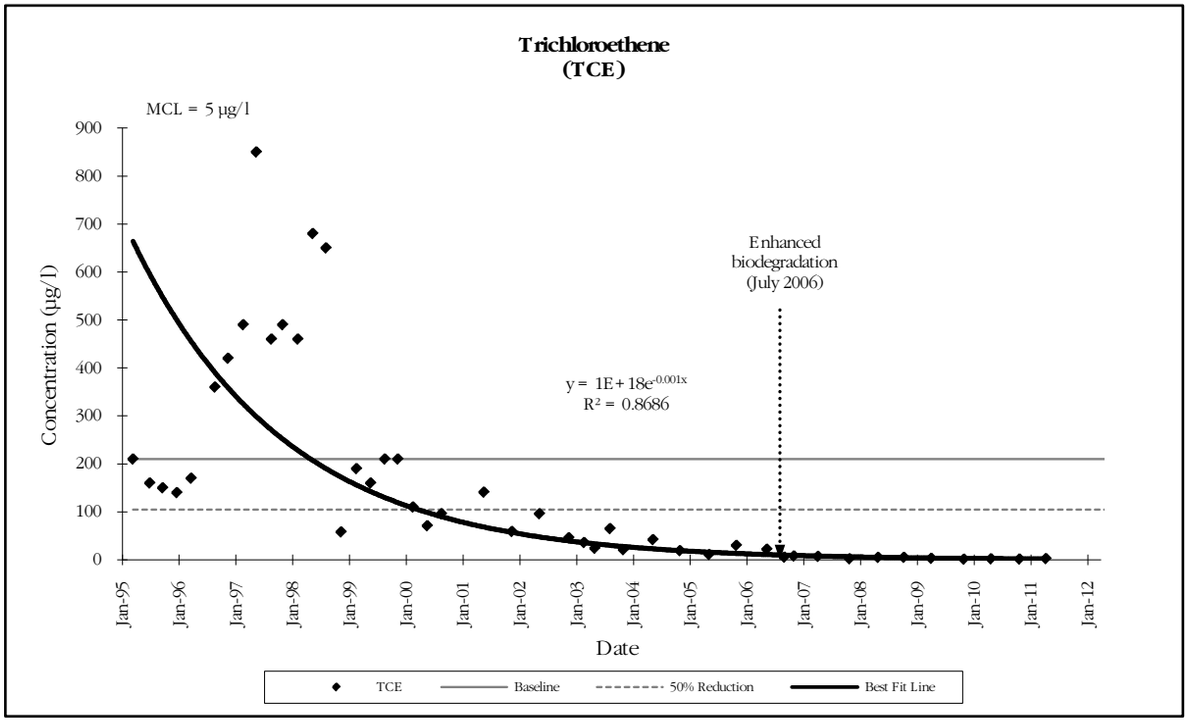
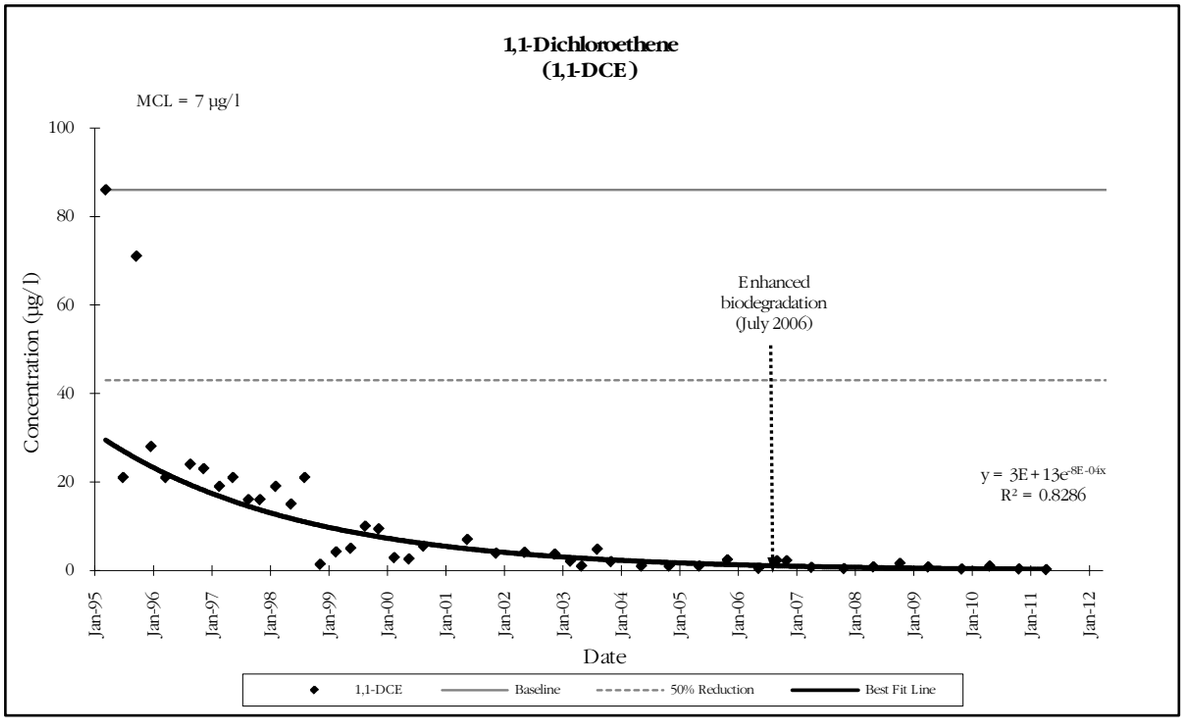


EXHIBIT B2-5
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-07
(Page 3 of 4)



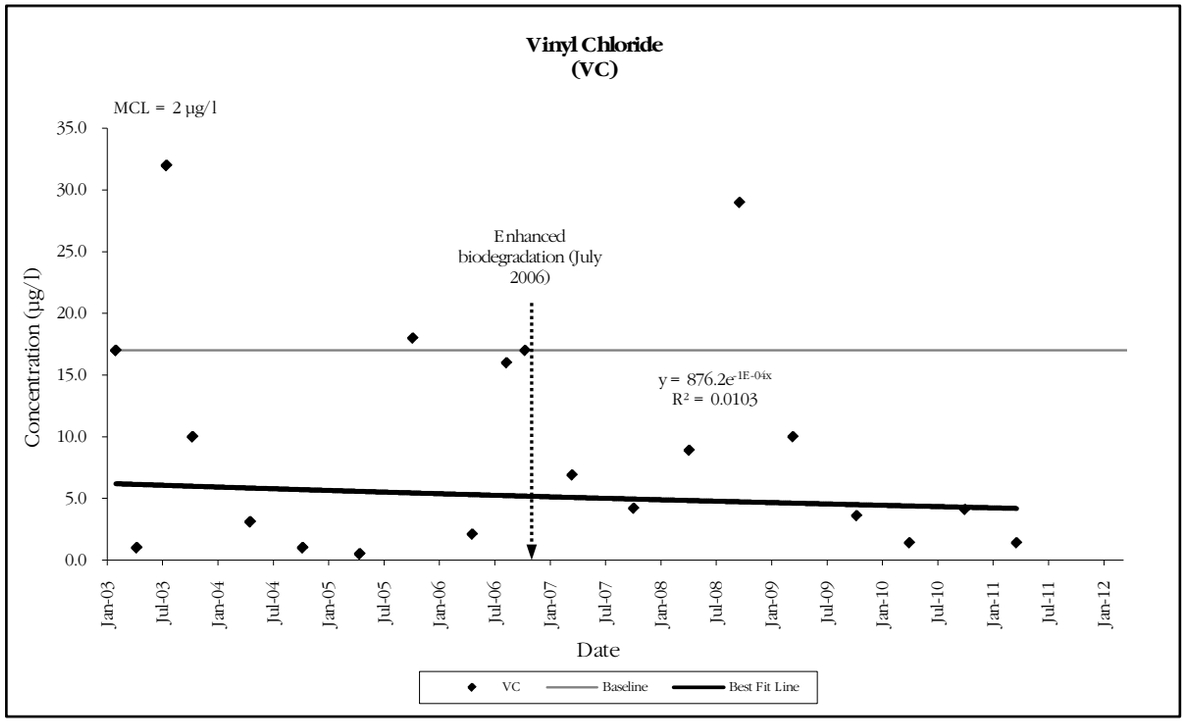


EXHIBIT B2-5
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-07
(Page 4 of 4)

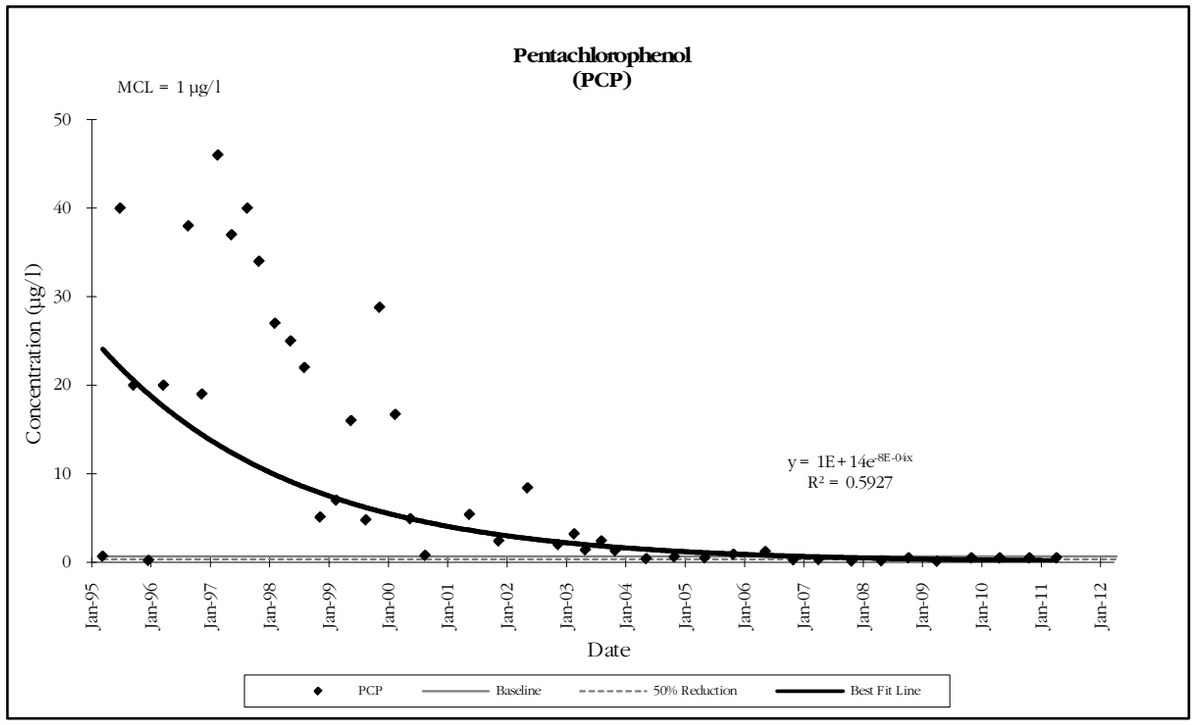


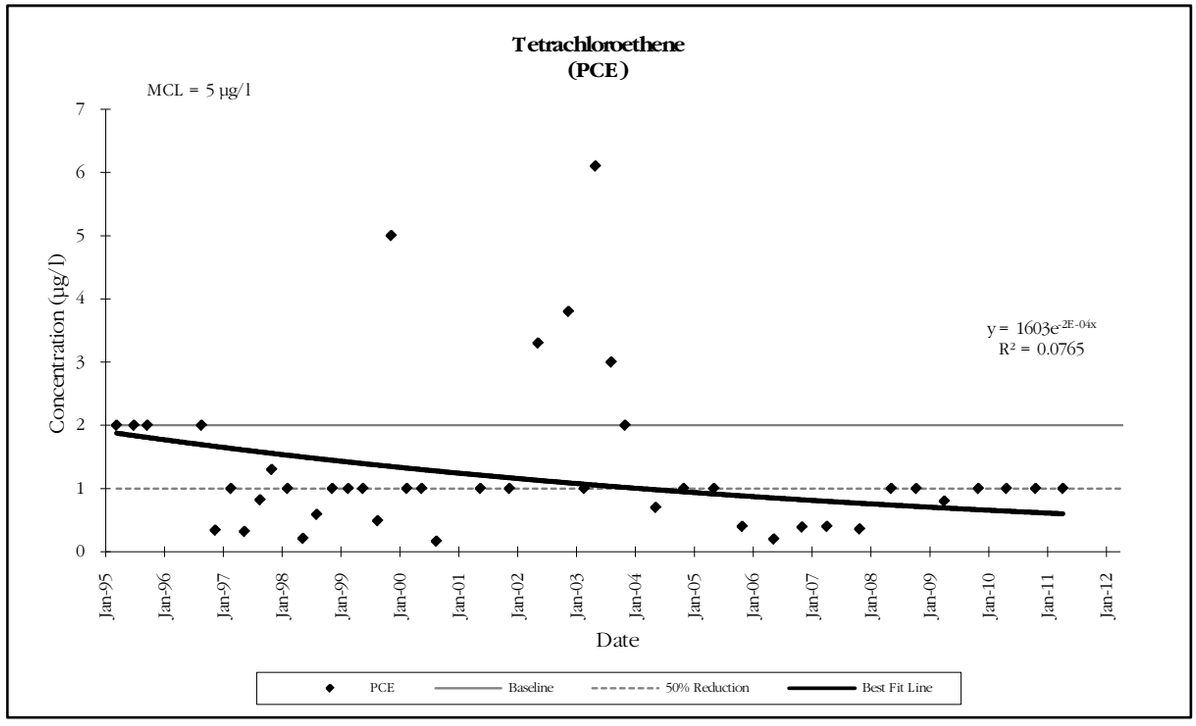
EXHIBIT B2-6
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-08

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP (µg/l)**
3/20/1995	< 2	< 2	< 2	--	< 10	18.5 J
7/6/1995	< 2	< 2	< 2	--	< 20 J	< 40 J
9/27/1995	< 2	< 2	< 2	--	< 2	30
12/27/1995	210	420	22	--	980	29
3/28/1996	24	23	< 2	--	< 2	22
8/28/1996	< 2	< 2	< 2	--	< 10	20 J
11/21/1996	0.34 T	3.9	0.88 T	--	< 0.25 UJ	14
2/26/1997	< 1	0.94 T	0.15 T	--	< 0.25	8.3
5/21/1997	0.32 T	1.2	0.42 T	--	< 0.25	10 J
8/26/1997	0.82 T	2	0.45 T	--	< 0.25	11 B
11/6/1997	1.3	1.4	0.34	--	< 0.25	11
2/12/1998	< 1	0.39JB	< 1	--	< 0.25	3
5/19/1998	0.21 J	0.34 J	< 1	--	< 0.25	2.8
8/12/1998	0.59 J	0.20 J	< 1	--	< 0.25	3.5
11/17/1998	< 1	0.48 J	< 1	--	< 0.25	3.4
2/24/1999	< 1	< 1	< 1	--	< 0.25	2.8
5/26/1999	< 1	< 1	< 1	--	< 4	3
8/25/1999	0.49 T	< 1	< 1	--	< 0.2	2.7
11/17/1999	< 5	0.53 T	< 5	--	< 0.2	3.1
2/22/2000	< 1	< 1	< 1	--	< 0.2	1.85
5/24/2000	< 1	0.31 J	< 1	--	< 0.2	2.77
8/23/2000 (a)	< 0.17	0.45	< 0.12	--	2.28 J	0.28 J
5/23/2001	< 1	0.5 T	< 1	--	< 0.5	0.6
11/19/2001	< 1	0.7 T	< 1	--	< 0.5	0.2 T
5/15/2002	3.3	16	0.7 J	--	< 0.5	0.4 J
11/20/2002	3.8	20	< 1	--	< 0.48	0.3 T
2/26/2003	1	2.8	< 1	< 1	0.2 J	0.3 J
5/6/2003	6.1	25	0.4 J	6.5	< 0.5	0.2 TJ
8/12/2003	3	9.5	< 1	3.6	< 0.5	0.2 TJ
11/6/2003	2	4.2	< 1	0.8 T	< 2.4	0.5 T
5/14/2004	0.7 T	2	< 1	< 1	--	0.2 TUB
11/3/2004	< 1	1	< 1	< 1	--	0.4 T
5/10/2005	< 1	0.5 T	< 1	< 1	--	< 0.5
11/1/2005	0.4 T	1	< 1	< 1	--	< 0.5
5/16/2006	0.2 T	0.5 T	< 1	< 1	--	0.7
11/7/2006	0.4 T	1.5	< 1	0.5 T	--	0.9
4/10/2007	0.4 T	1.3	< 1	0.5 T	--	0.8
10/30/2007	0.4 T	1.6	< 1	1.9	--	1.1
5/13/2008	< 1	0.2 T	< 1	< 1	--	1.2
10/15/2008	< 1	0.2 T	< 1	< 1	--	1.4
4/7/2009	0.8 T	4.7 T	0.9 T	11	--	1.0
11/4/2009	< 1	0.4 T	< 1	0.4 T	--	2.7 D
4/27/2010	< 1	0.3 T	< 1	< 1	--	1.8
10/25/2010	< 1	0.4 T	< 1	< 1	--	3.4 D
4/12/2011	< 1	0.3 T	< 1	< 1	--	1.2

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

EXHIBIT B2-6
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-08
(Page 2 of 4)



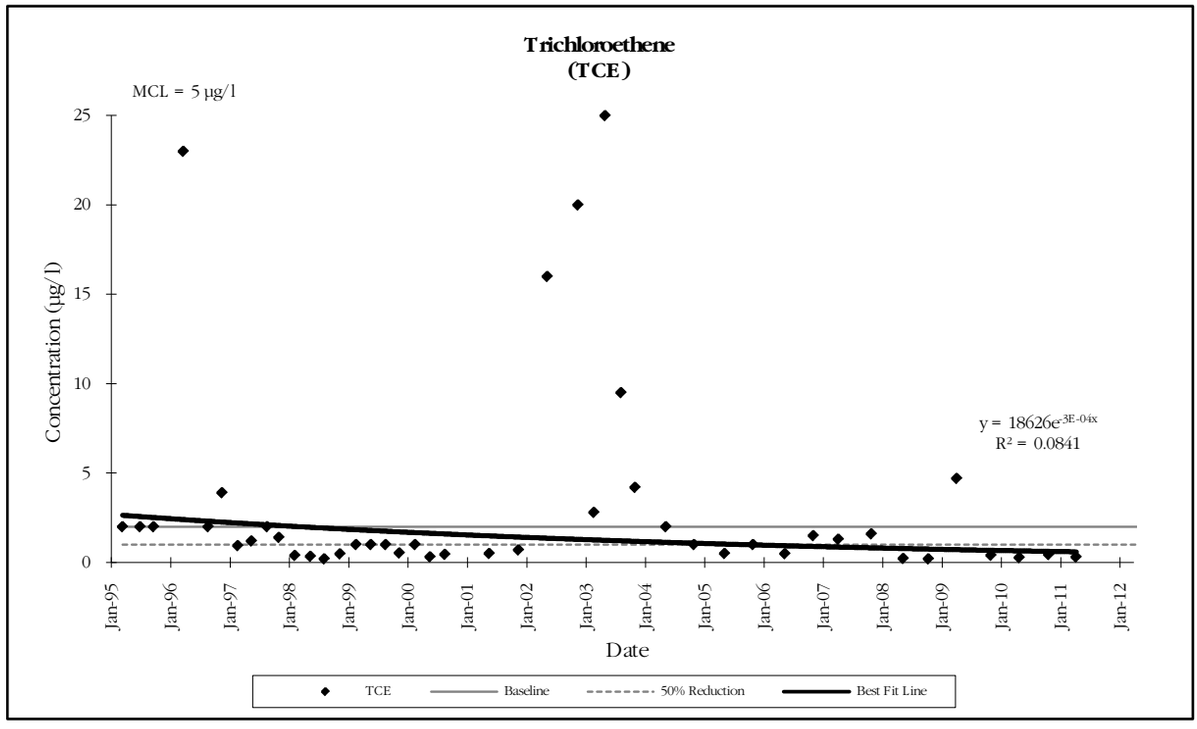
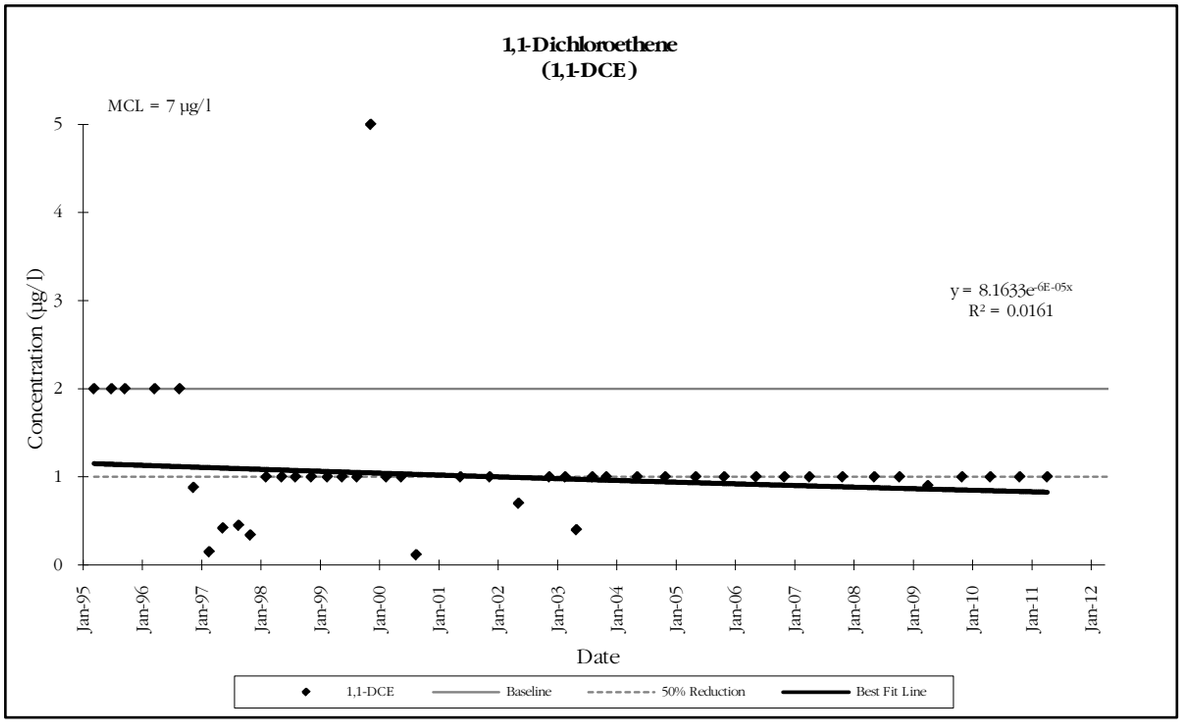


EXHIBIT B2-6
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-08
(Page 3 of 4)



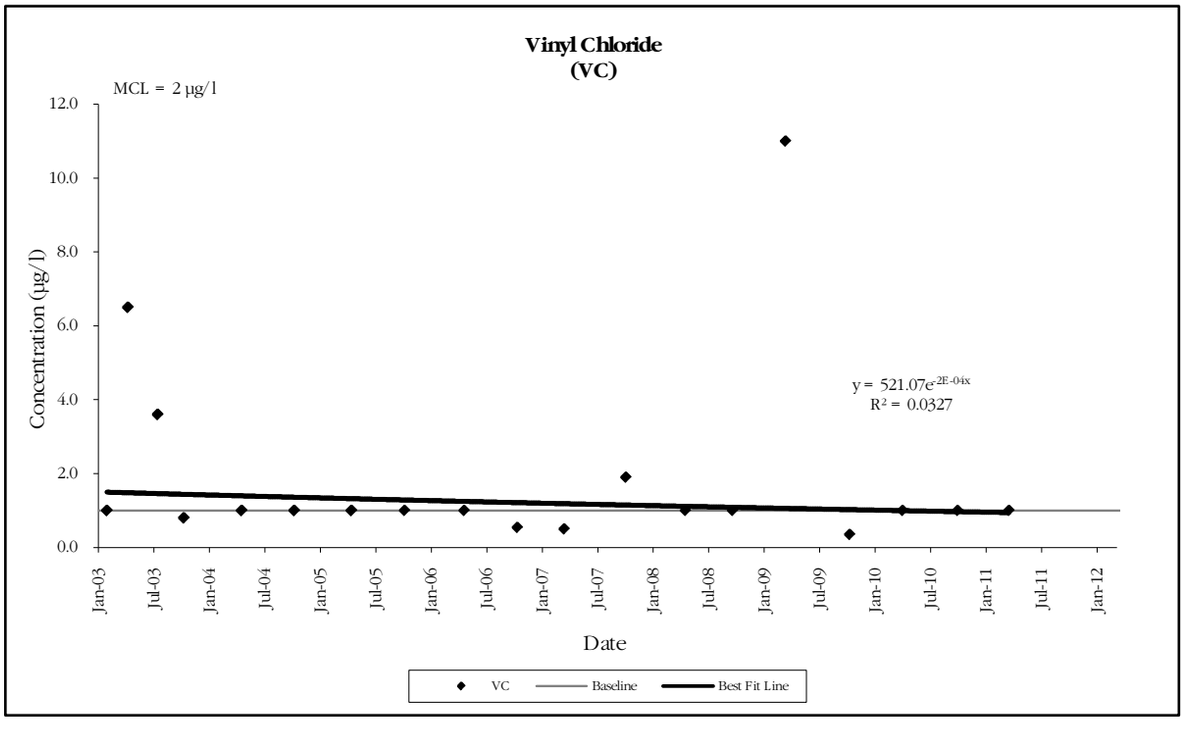


EXHIBIT B2-6
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-08
(Page 4 of 4)

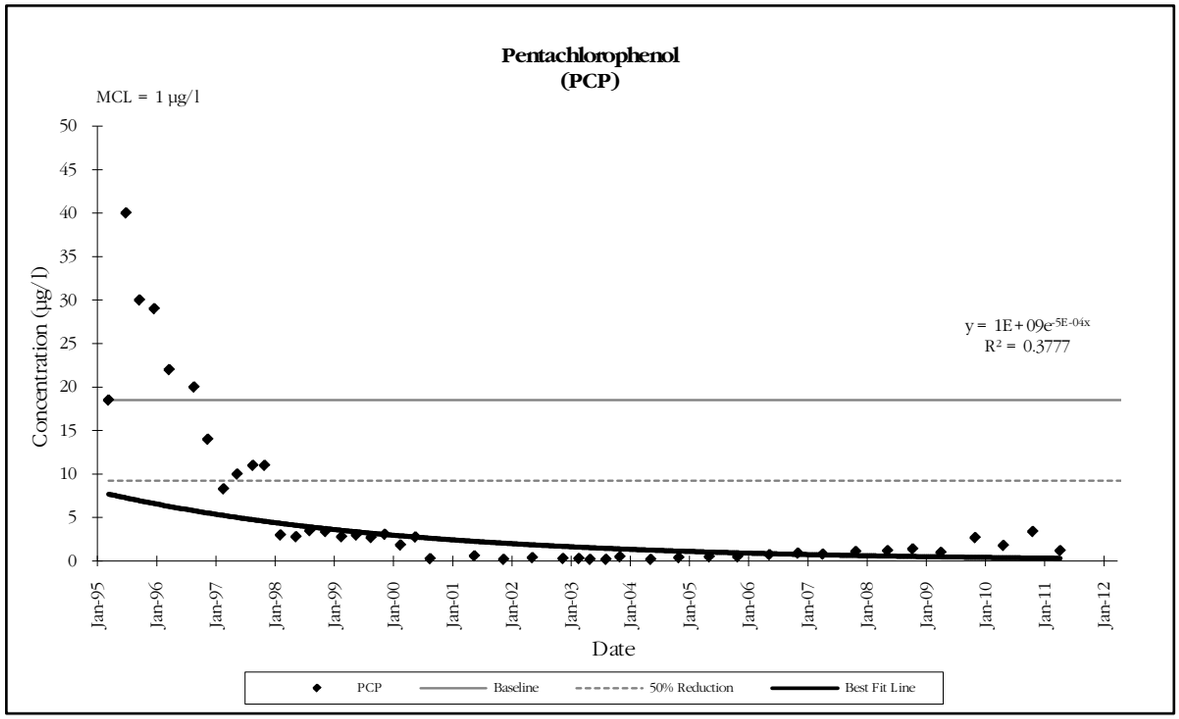


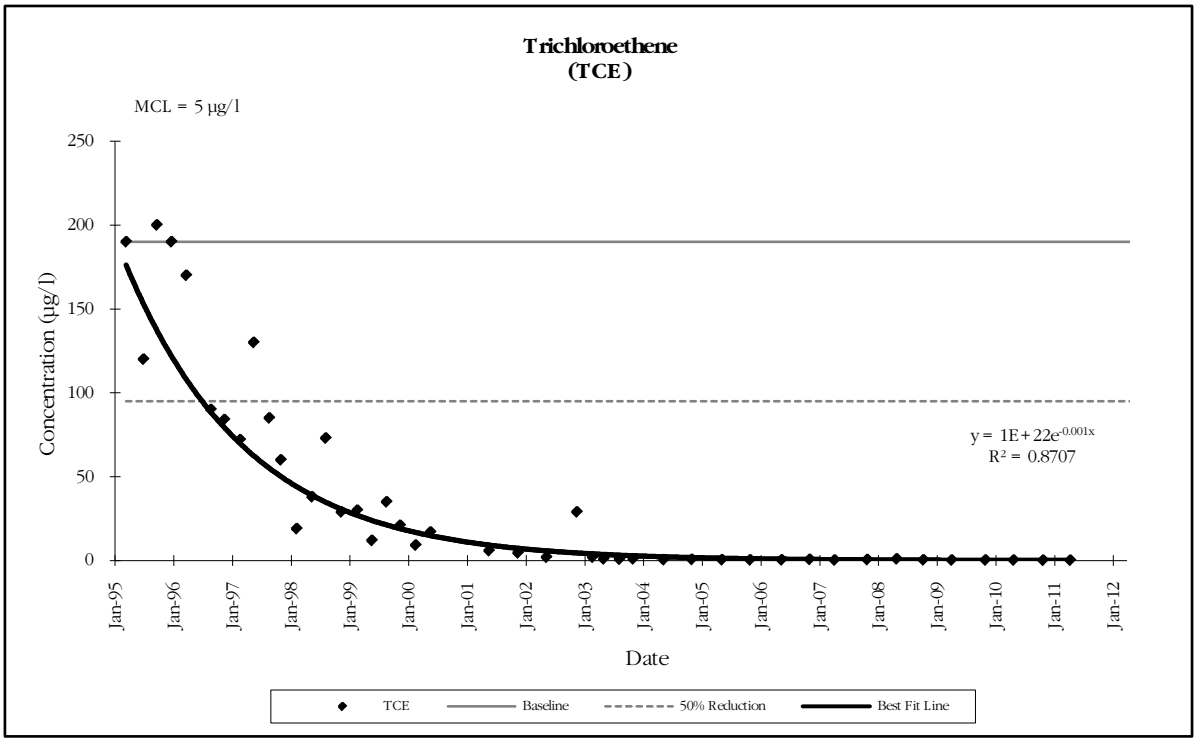
EXHIBIT B2-7
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-09
(Page 1 of 2)

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP (µg/l)**
3/20/1995	< 2	190	25	--	< 2	< 0.2 J
7/6/1995	< 2	120	6.7	--	< 2 J	< 0.2 J
9/27/1995	< 2	200	35	--	< 2	< 0.2
12/27/1995	< 2	190	17	--	< 2	< 0.2
3/28/1996	< 2	170	9.1	--	< 2	< 0.2
8/28/1996	< 2	90	6.7	--	< 10	< 0.2
11/20/1996	< 1	84	6.5	--	< 0.25	< 1
2/26/1997	< 1	72	4.3	--	< 0.25	< 1
5/21/1997	< 2	130	8	--	< 0.25	< 1
8/26/1997	< 1	85	5.7	--	< 0.25	< 1
11/6/1997	0.58 J	60	4.1	--	< 0.25	< 1
2/12/1998	< 1	19 B	1.9	--	< 0.25	< 1
5/19/1998	< 1	38	3.5	--	< 0.25	< 1
8/12/1998	< 1	73	5	--	< 0.25	< 1
11/17/1998	< 1	29	2.8	--	< 0.25	< 0.5
2/24/1999	< 1	30	2.3 J	--	< 0.25	< 0.5
5/26/1999	< 1	12	1.1	--	< 4	< 0.5
8/25/1999	< 1	35	2.7	--	< 0.2	< 0.1
11/17/1999	< 5	21	1.9 T	--	< 0.2	< 0.1
2/22/2000	< 1	9.2	1.4	--	< 0.2	< 0.1
5/24/2000	< 1	17	1.7	--	< 0.2	< 0.1
8/23/2000 (a)	25 D	310 D	19 D	--	0.43 J	< 0.5 UJ
5/23/2001	< 1	5.9	0.8 T	--	< 0.5	< 0.5
11/19/2001	< 1	4.6	1.0 T	--	< 0.5	< 0.5
5/15/2002	< 1	2	< 1	--	< 0.5	< 0.5
11/20/2002	< 1	29	1	--	< 0.48	< 0.48
2/26/2003	< 1	2	0.8 J	< 1	< 0.48	< 0.48
5/6/2003	< 1	1	1	< 1	< 0.5	< 0.5
8/12/2003	< 1	0.8 T	1	< 1	< 0.5	< 0.5
11/5/2003	< 1	1	2.4	< 1	< 2.4	< 0.48
5/13/2004	< 1	0.5 T	< 1	< 1	--	0.1 T
11/4/2004	< 1	0.7 T	0.7 T	< 1	--	< 0.48
5/10/2005	< 1	0.5 T	< 1	< 1	--	< 0.5
11/1/2005	< 1	0.4 T	0.6 T	< 1	--	< 0.5
5/16/2006	< 1	0.4 T	0.3 T	< 1	--	< 0.5
11/6/2006	< 1	0.7 T	1.3	< 1	--	< 0.5
4/10/2007	< 1	0.3 T	1.7	0.2 T	--	< 0.5
10/30/2007	< 1	0.6 T	1.8	1.2 T	--	< 0.5
4/30/2008	< 1	< 1	0.6 T	< 1	--	< 0.5
10/13/2008	< 1	0.4 T	1.8	< 1	--	< 0.5
4/7/2009	< 1	0.3 T	2.0	< 1	--	< 0.5
11/3/2009	< 1	0.3 T	1.6	< 1	--	< 0.5
4/27/2010	< 1	0.3 T	2.8	< 1	--	< 0.5
10/27/2010	< 1	0.2 T	1.7	< 1	--	< 0.5
4/14/2011	< 1	0.2 T	1.2	< 1	--	< 0.5

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

EXHIBIT B2-7
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-09
(Page 2 of 2)



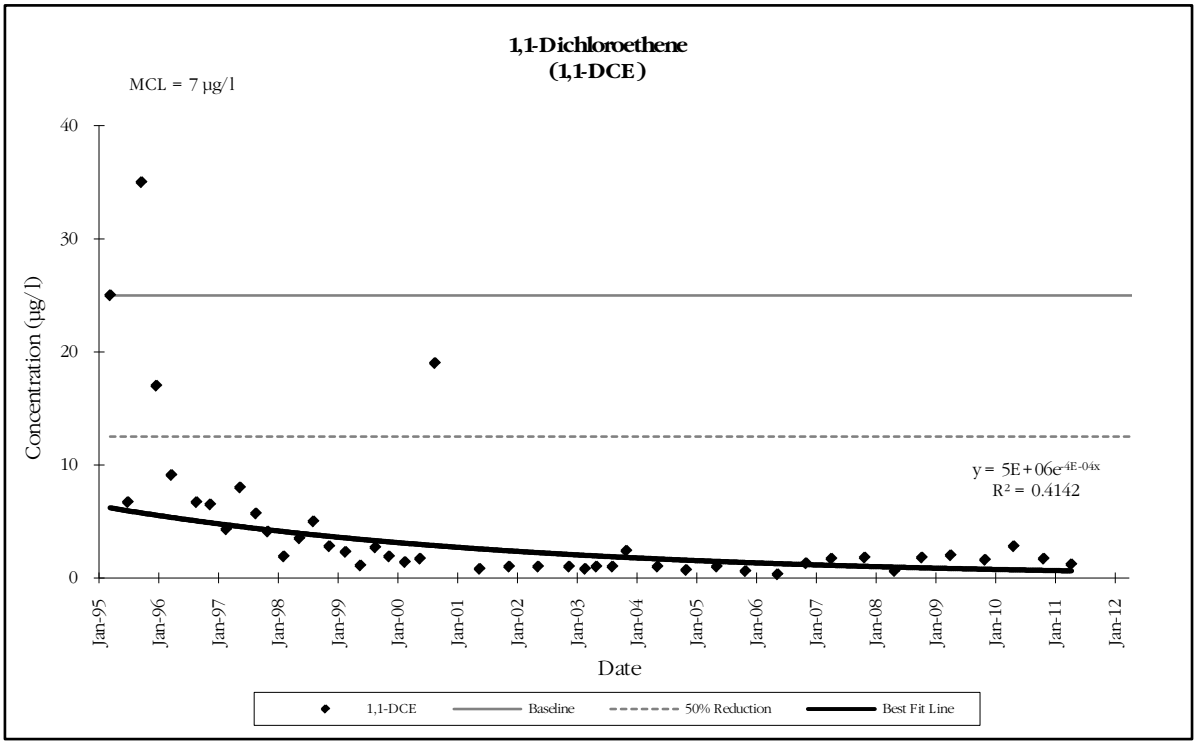


EXHIBIT B2-8
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-11
(Page 1 of 3)

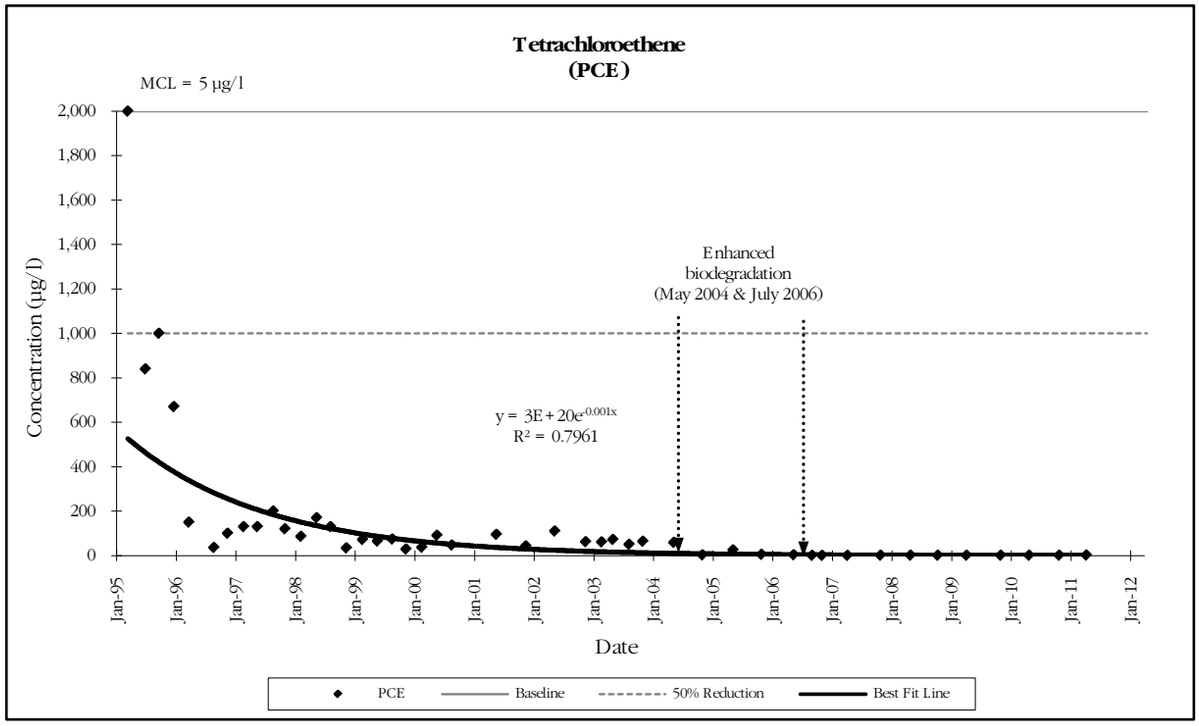
	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP (µg/l)**
3/20/1995	2000	5900	380	--	3.89 J	2 J
7/6/1995	840	3200	< 200	--	< 20 J	< 0.2 J
9/27/1995	1000	1600	210	--	< 2	< 0.2
12/27/1995	670	920	63	--	< 2	< 0.2
3/28/1996	150	380	28	--	< 2	< 0.2
8/28/1996	36	390	36	--	< 10	< 0.2
11/20/1996	100	560	34	--	< 0.6 UJ	< 1
2/26/1997	130	470	25	--	< 0.25	< 1
5/21/1997	130	300	33	--	< 0.25	< 1
8/26/1997	200	560	39	--	< 2.5	< 1
11/6/1997	120	560	33	--	< 2.5	< 1
2/12/1998	86 B	330 B	26	--	< 0.25	< 1
5/19/1998	170	420	34	--	< 0.25	< 1
8/12/1998	130	420	35	--	< 0.55	< 1
11/17/1998	34	400	31	--	< 2.5	< 0.6
2/24/1999	72	530	30	--	< 2.5	< 0.5
5/26/1999	65	280 E	15 Q	--	< 4	< 0.5
8/25/1999	74	420	23	--	5.7	0.63
11/17/1999	29 T	480	26 T	--	< 0.2	< 0.1
2/22/2000	37	400	24	--	< 0.2	< 0.1
5/24/2000	91	480	22 J	--	< 0.2	< 0.1
8/23/2000 (a)	47 D	420 D	21 D	--	4.66	0.45
5/23/2001	95 D	382 D	27 D	--	< 0.5	0.1 T
11/19/2001	43 D	392 D	29 D	--	< 0.5	< 0.5
5/15/2002	110	402	27	--	< 0.5	< 0.5
11/20/2002	62 DJ	347 D	31 DJ	--	< 0.48	< 0.48 UJ
2/26/2003	61	339	24	170	< 0.48	< 0.48
5/6/2003	72 D	424 D	24 D	247 D	< 0.5	< 0.5
8/13/2003	50	374 D	35	271 D	< 0.5	< 0.5 J
11/5/2003	64 D	362 D	35 D	394 D	< 2.4	< 0.48
5/13/2004	59 J	460 D	51 J	658 D	--	0.1 TJ
11/4/2004	2.7	120 D	12	617 DJ	--	< 0.48 UJ
5/10/2005	< 25 D	120 D	19 TD	500 D	--	< 0.5 UJ
10/31/2005	< 5 D	82 D	15 TD	580 D	--	< 0.5 UJ
5/16/2006	3.2	210 DJ	20	380 DJ	--	< 0.5
9/6/2006	0.6 T	23	1 T	310 D	--	--
11/6/2006	0.4 T	13	1.2	160 D	--	< 0.5
4/10/2007	0.3 T	15	3.6	300 D	--	< 0.5
10/30/2007	< 1	4.3	0.7 T	480 D	--	< 0.5
4/30/2008	1.2	64 D	18	920 D	--	< 0.5
10/14/2008	< 1	3.8	1.1	520 D	--	< 0.5
4/8/2009	< 1	83 D	23	560 D	--	< 0.5
11/3/2009	< 1	2.5	3.4	840 D	--	< 0.5
4/26/2010	< 1	35	20	550 D	--	< 0.5
10/27/2010	< 1	2.3	4.1	790 DJ-	--	< 0.5
4/11/2011	1.7	26	15	230 D	--	< 0.5

Well depth: Trench -- Not analyzed.
Data qualifiers are defined in the laboratory reports.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

Note: Biodegradation enhancing products were injected in the vicinity of this well in May 2004 and July 2006.

EXHIBIT B2-8
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-11
(Page 2 of 3)



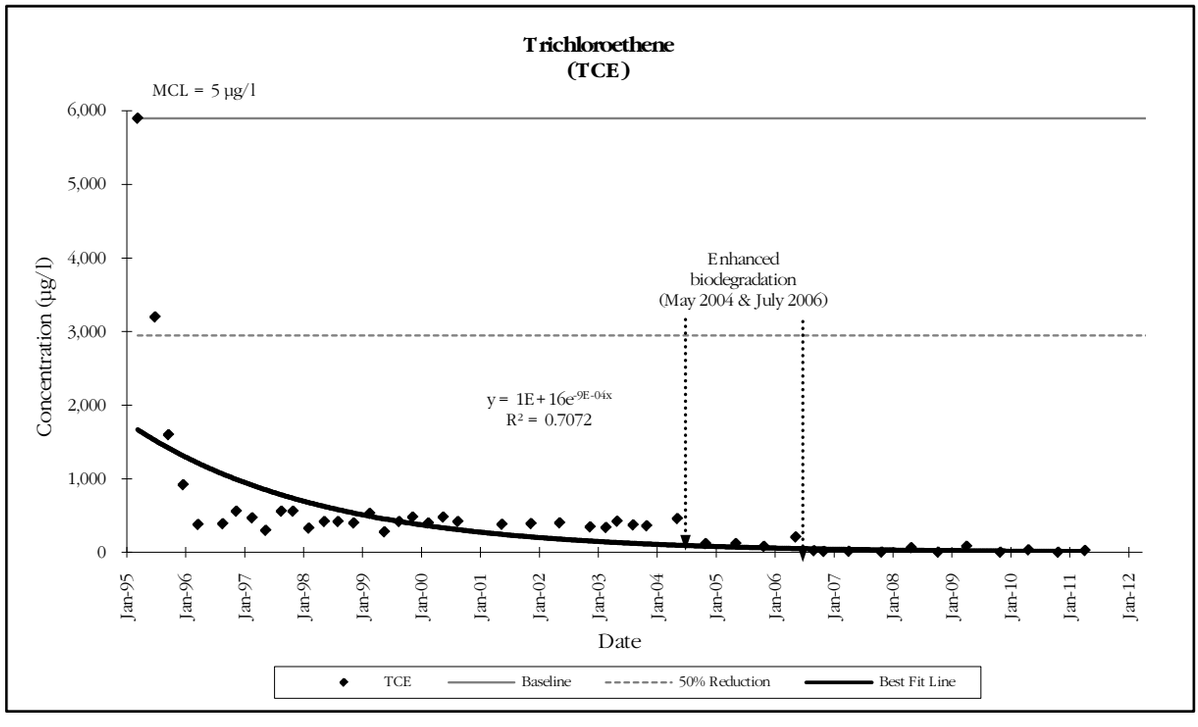
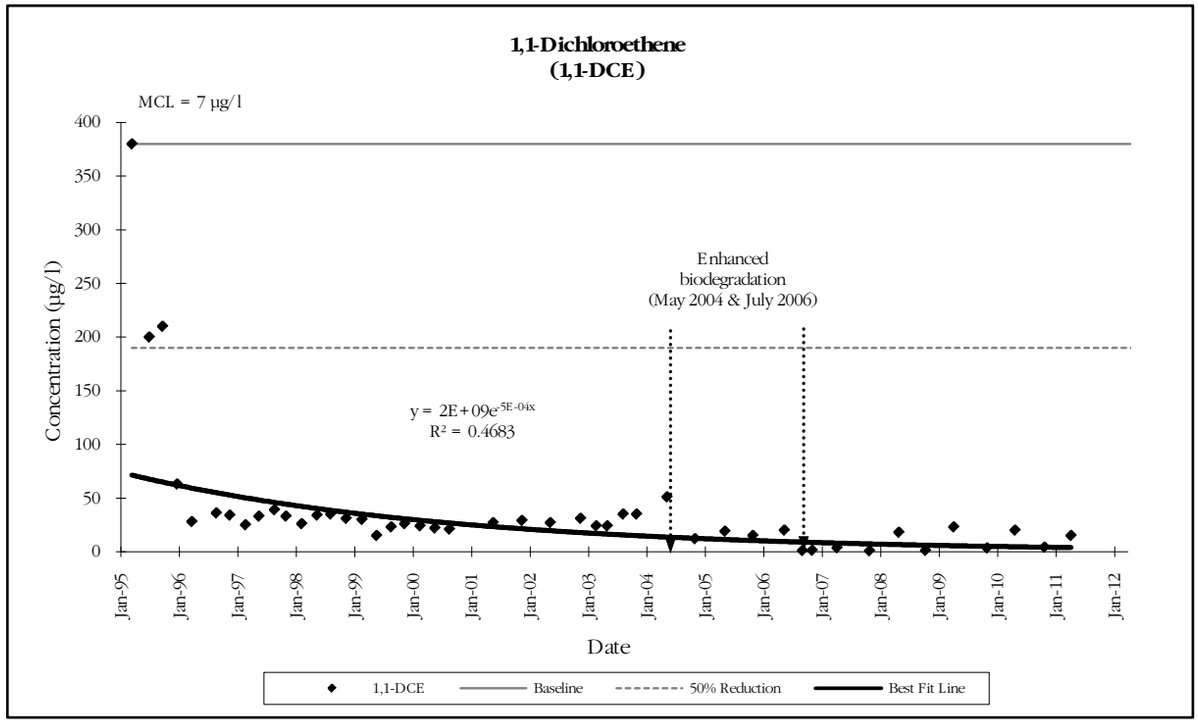


EXHIBIT B2-8
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL EX-11
(Page 3 of 3)



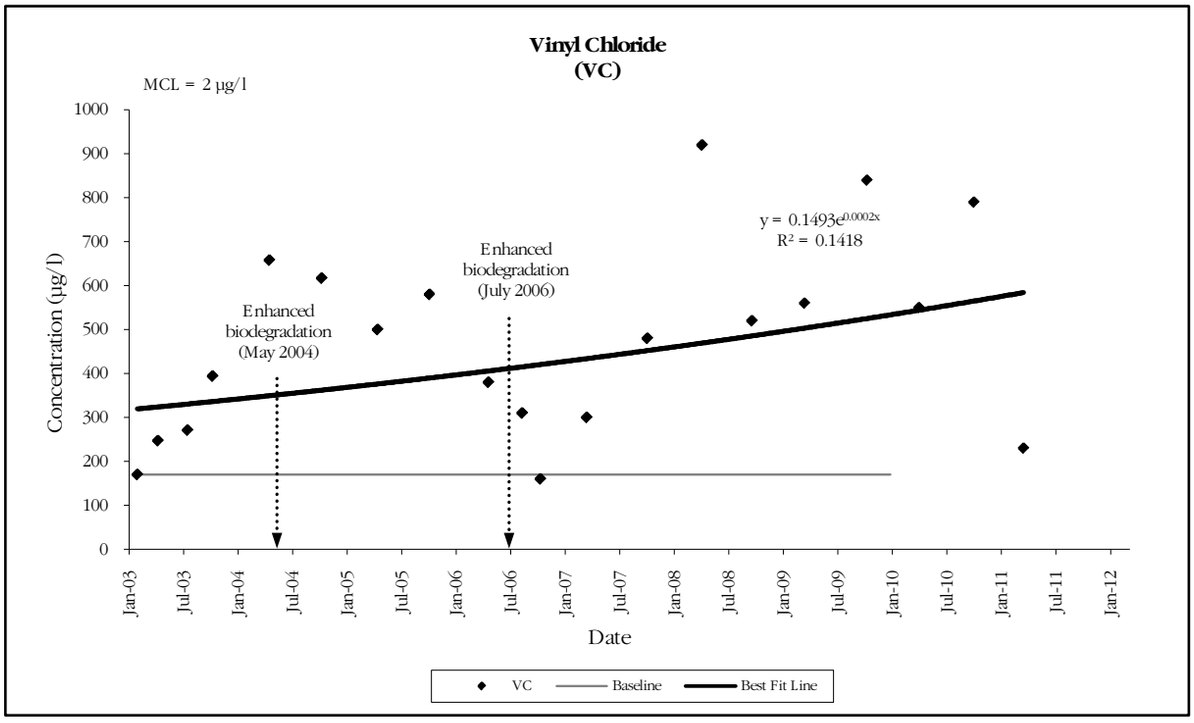


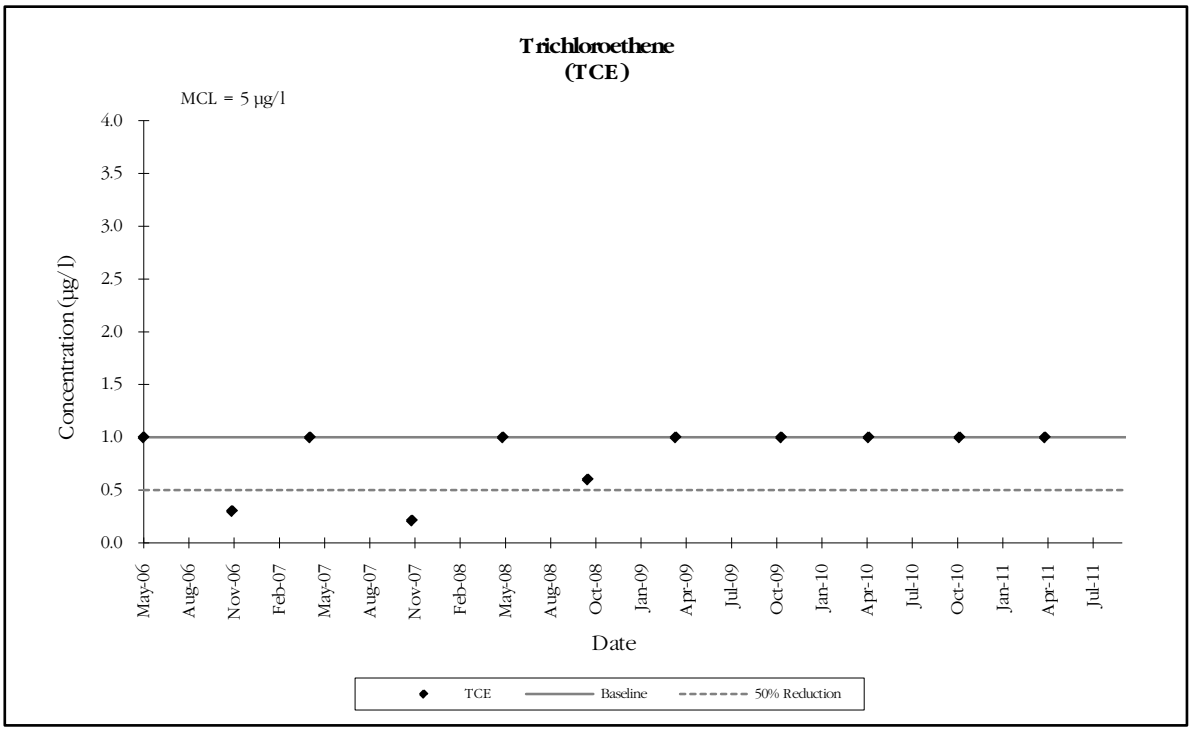
EXHIBIT B2-9
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
MONITORING WELL MW-06

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(a)] (µg/l)**	**PCP [(a)] (µg/l)**
5/15/2006	< 1	< 1	< 1	< 1	--	--
11/7/2006	< 1	0.3 T	< 1	< 1	--	--
4/11/2007	< 1	< 1	< 1	< 1	--	--
10/31/2007	< 1	0.2 T	< 1	< 1	--	--
4/29/2008	< 1	< 1	< 1	< 1	--	--
10/15/2008	< 1	0.6 T	< 1	< 1	--	--
4/8/2009	< 1	< 1	0.4 T	0.2 T	--	--
11/4/2009	< 1	< 1	< 1	< 1	--	--
4/27/2010	< 1	< 1	0.9 T	< 1	--	--
10/25/2010	< 1	< 1	0.7 T	0.3 T	--	--
4/13/2011	< 1	< 1	3.5	1.5	--	--

Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) The analyses for 2,4-Dichlorophenoxyacetic Acid (2-4 D) and Pentachlorophenol (PCP) were discontinued in February 2003, so this well was not tested for these parameters.

EXHIBIT B2-9
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
MONITORING WELL MW-06
(Page 2 of 3)



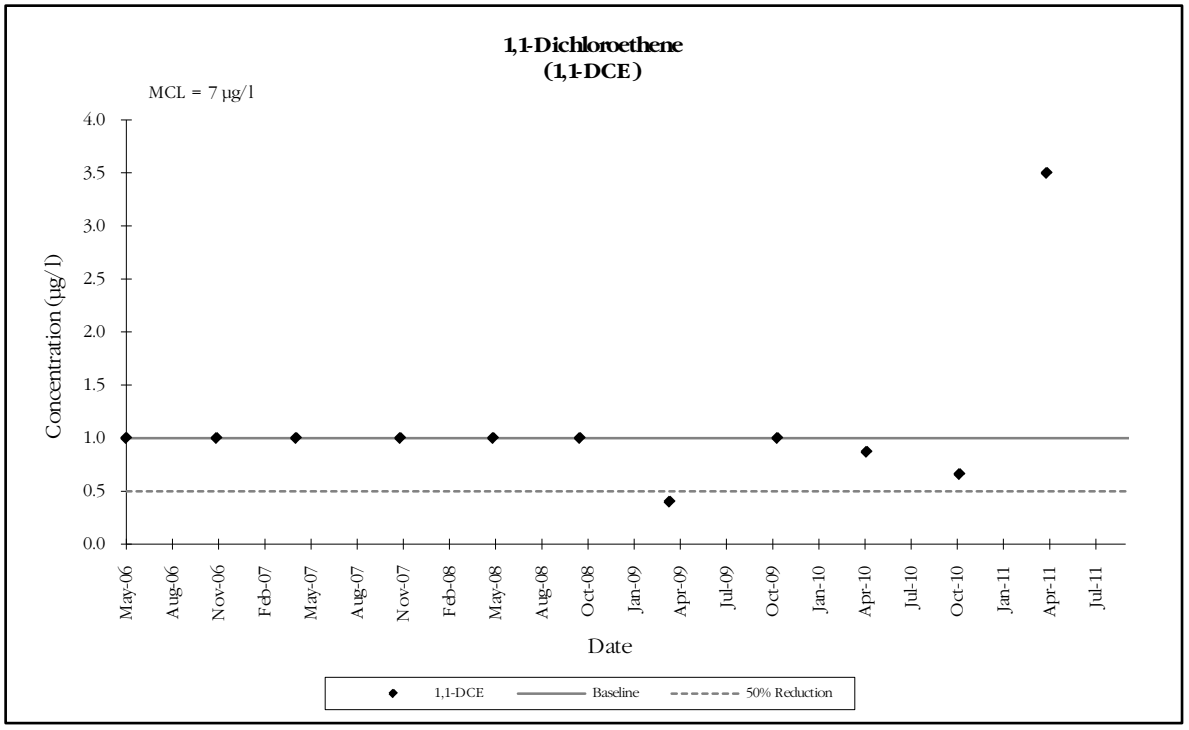


EXHIBIT B2-9
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
MONITORING WELL MW-06
(Page 3 of 3)

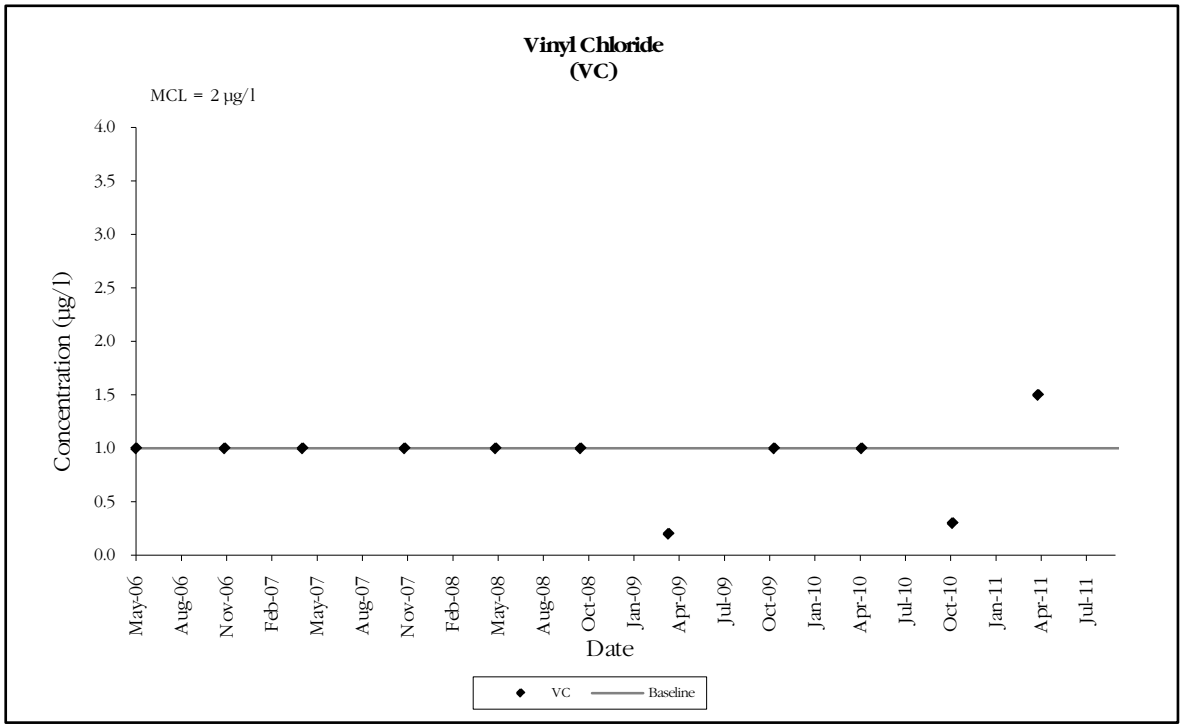


EXHIBIT B2-10
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL MW-20

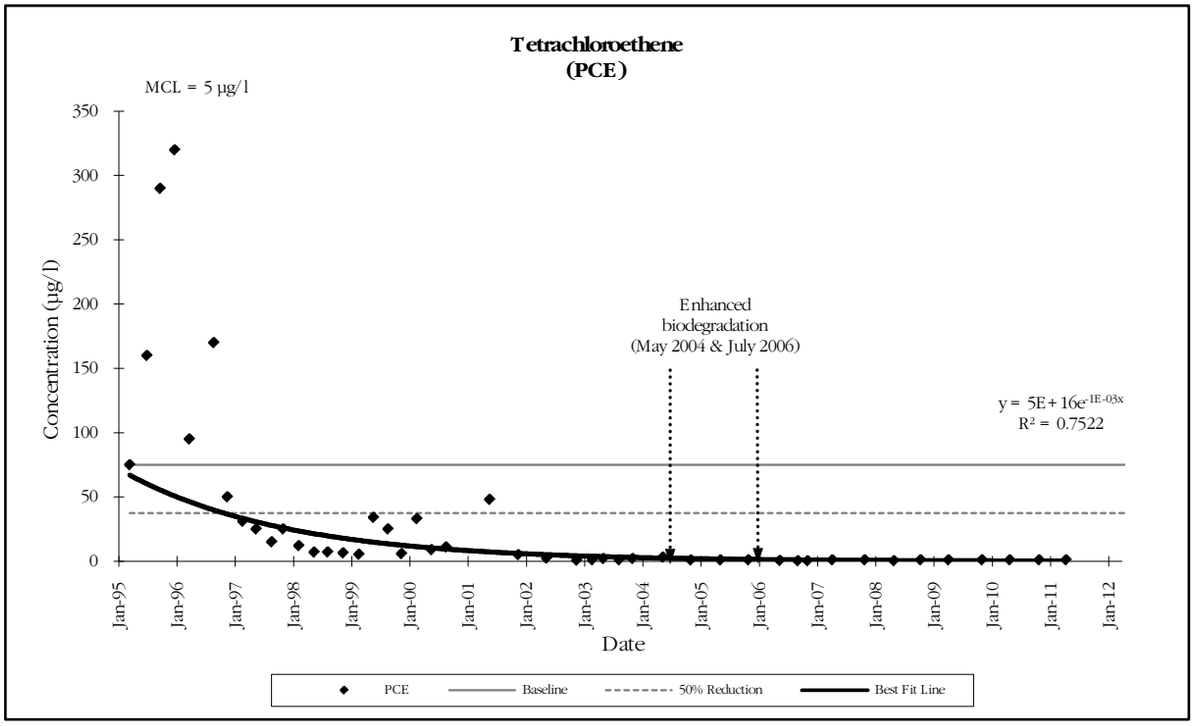
	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [b] (µg/l)**	**PCP [b] (µg/l)**
3/20/1995	75 J	3600 J	350 J	--	< 2	< 0.2 J
7/6/1995	160	3600	150	--	< 2	< 0.2 J
9/27/1995	290	5500	580	--	< 2	< 0.2
12/27/1995	320	3400	87	--	< 2	< 0.2
3/28/1996	95	1700	45	--	< 2	< 0.2
8/28/1996	170	2600	97	--	2.6 T	< 0.2
11/21/1996	< 50	2700	100	--	< 1.5	< 1
2/26/1997	31	1400	49	--	< 0.25	< 1
5/21/1997	25	1000	40	--	< 0.25	< 1
8/26/1997	15 T	1500	61	--	< 2.5	< 1
11/6/1997	< 25	1400	50	--	< 0.25	< 1
2/12/1998	< 12	630 B	35	--	< 0.25	< 1
5/19/1998	7 J	830	35	--	< 0.25	< 1
8/12/1998	7.1 J	810	36	--	< 0.25	< 1
11/17/1998	6.4 J	510	25	--	< 0.25	< 0.5
2/24/1999	5.3	460	25	--	< 0.25	< 0.5
5/26/1999	34	190	10 Q	--	< 4	< 0.5
8/25/1999	< 25 G	220	15 T	--	1.41	< 0.1
11/18/1999	5.8 T	340	20 T	--	< 0.2 J	< 0.1 J
2/22/2000	33	400	24	--	< 0.2	< 0.1
5/24/2000	8.9 J	180	13	--	< 0.2	< 0.1
8/23/2000 (a)	11 D	250 D	16 D	--	0.09	< 0.5
5/23/2001	48 D	316 D	20 D	--	< 0.5	< 0.5
11/19/2001	5 D	230 D	25 D	--	< 0.5	0.2 T
5/15/2002	2.3	205 D	15	--	< 0.5	< 0.5
11/20/2002	0.7 T	166 D	17	--	< 0.48	< 0.48
2/26/2003	1	142	10	0.4 J	--	--
5/6/2003	2	119 D	12	0.5 J	--	--
8/13/2003	1	113 D	20	0.7 T	--	--
11/5/2003	2	149 D	24	< 5 D	--	--
5/13/2004	3.1	87 D	21	0.9 T	--	--
11/4/2004	0.9 T	22	5.8	4.7	--	--
5/9/2005	0.9 T	10	3.1	7.4	--	--
10/31/2005	< 1	2.4	0.8 T	7.6	--	--
5/16/2006	0.5 T	6.5	1	5.4	--	--
9/6/2006	0.3 T	5.4	0.6 T	3.1	--	--
11/6/2006	0.3 T	5.7	0.6 T	3.6	--	--
4/10/2007	< 1	2.9	0.8 T	1.1	--	--
10/30/2007	< 1	1.4	0.6 T	0.7 T	--	--
4/30/2008	0.3 T	4.9	3.4	3.3	--	< 0.5
10/14/2008	< 1	2.6	2	3.1	--	--
4/7/2009	< 1	5.5	3	3.0	--	0.1 T
11/3/2009	< 1	1.2	1.5	3.3	--	< 0.5
4/26/2010	< 1	2.3	2.3	3.8	--	< 0.5
10/27/2010	< 1	1	0.8 T	3.2	--	--
4/14/2011	< 1	3.4	2	8.1	--	--

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

Note: Biodegradation enhancing products were injected in the vicinity of this well in May 2004 and July 2006.

EXHIBIT B2-10
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL MW-20
(Page 2 of 3)



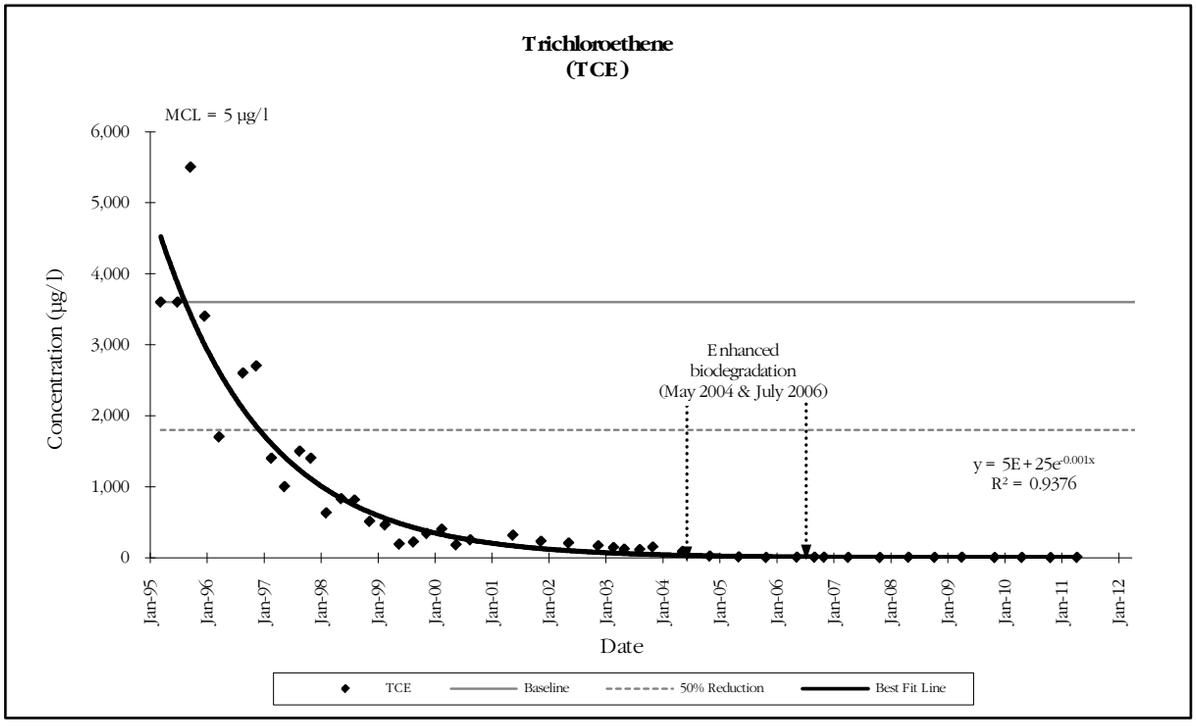
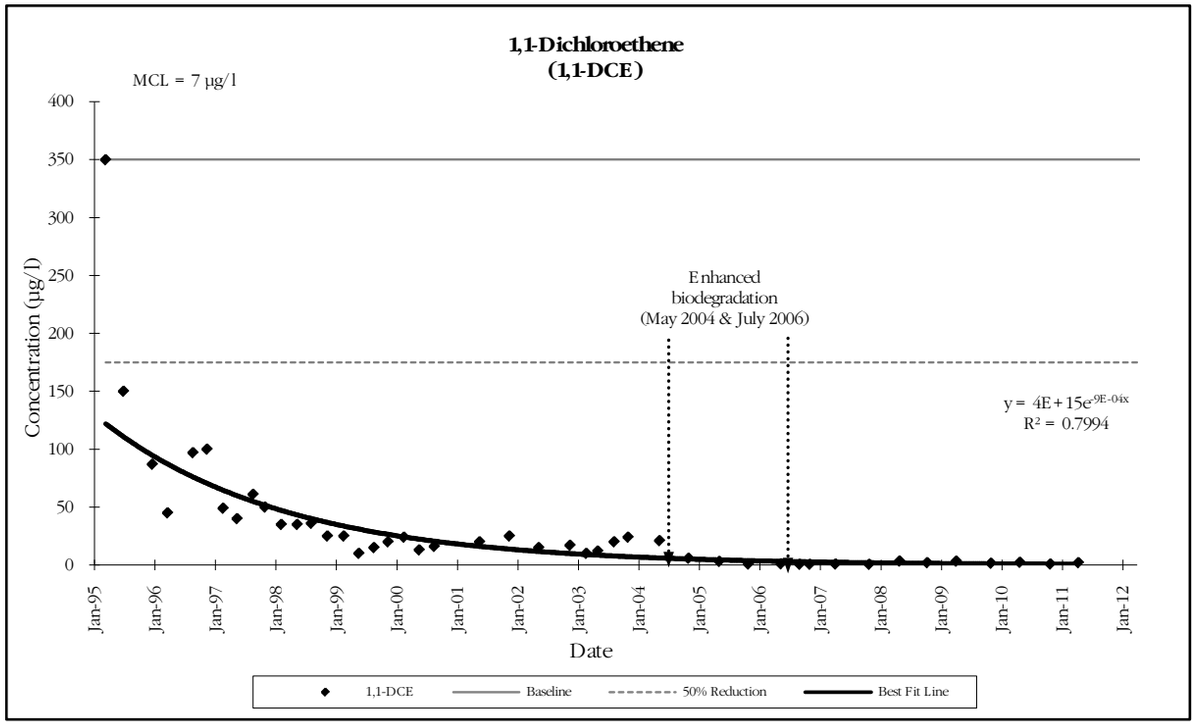


EXHIBIT B2-10
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
EXTRACTION WELL MW-20
(Page 3 of 3)



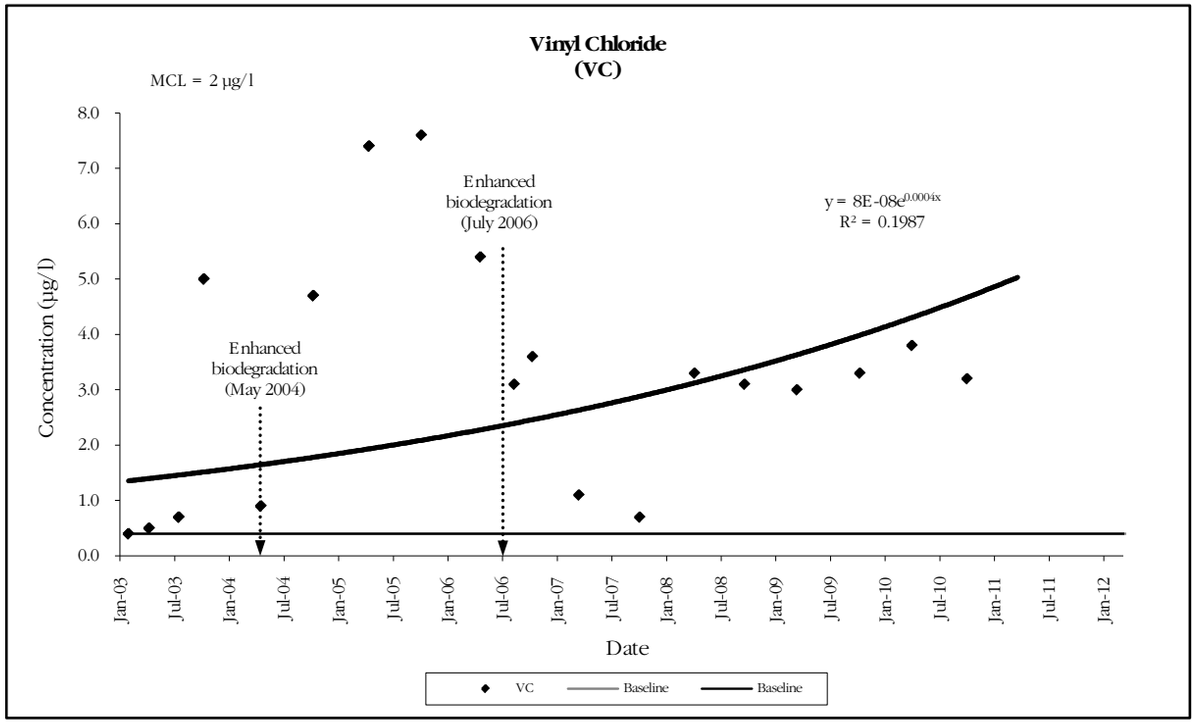


EXHIBIT B2-11
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
MONITORING WELL MW-23

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP [(b)] (µg/l)**
3/20/1995	< 2	< 2	< 2	--	< 10	< 1
7/6/1995	< 2	< 2	< 2	--	< 2	< 0.2
9/27/1995	< 2	< 2	< 2	--	< 2	< 0.2
12/27/1995	< 2	< 2	< 2	--	< 2	< 0.2
3/28/1996	< 2	< 2	< 2	--	< 2	< 0.2
8/28/1996	< 2	< 2	< 2	--	< 10	< 0.2
11/21/1996	< 1	< 1	< 1	--	< 0.25 UJ	< 1
2/25/1997	< 1	< 1	< 1	--	< 0.25	< 1
5/20/1997	< 1	< 1	< 1	--	< 0.25	< 1
8/2/1997	< 1	0.1 T	< 1	--	< 0.25	< 1
11/5/1997	< 1	< 1	< 1	--	< 0.25	< 1
2/12/1998	< 1	< 1	< 1	--	< 0.25 J	< 1
5/18/1998	< 1	< 1	< 1	--	< 0.25	< 1
8/11/1998	< 1	< 1	< 1	--	< 0.25	< 1
11/16/1998	< 1	< 1	< 1	--	0.9	< 0.5
2/23/1999	< 1	< 1	< 1	--	0.57	< 0.5
5/25/1999	< 1	< 1	< 1	--	< 4	< 0.5
8/25/1999	< 1	< 1	< 1	--	5.0	< 0.1
11/18/1999	< 5	< 5	< 5	--	< 0.2 J	< 0.1 J
2/23/2000	< 1	< 1	< 1	--	< 0.2	< 0.1
5/23/2000	< 1	< 1	< 1	--	0.74	< 0.1
8/23/2000 (a)	< 0.2	< 0.1	< 0.1	--	0.07	< 0.5
5/24/2001	< 1	< 1	< 1	--	< 0.5	< 0.5
5/14/2002	< 1	< 1	< 1	--	< 0.5	< 0.5
2/27/2003	< 1	< 1	< 1	< 1	--	--
5/5/2003	< 1	< 1	< 1	< 1	--	--
8/13/2003	< 1	< 1	< 1	< 1	--	--
11/6/2003	< 1	< 1	< 1	< 1	--	--
5/13/2004	< 1	< 1	< 1	< 1	--	--
11/4/2004	< 1	< 1	< 1	< 1	--	--
5/9/2005	< 1	< 1	< 1	< 1	--	--
11/2/2005	< 1	< 1	< 1	< 1	--	--
5/15/2006	< 1	< 1	< 1	< 1	--	--
11/7/2006	< 1	< 1	< 1	< 1	--	--
4/11/2007	< 1	< 1	< 1	< 1	--	--
10/31/2007	< 1	< 1	< 1	< 1	--	--
4/29/2008	< 1	< 1	< 1	< 1	--	--
10/15/2008	< 1	< 1	< 1	< 1	--	--
4/8/2009	< 1	< 1	< 1	< 1	--	--
11/4/2009	< 1	< 1	< 1	< 1	--	--
4/27/2010	< 1	< 1	< 1	< 1	--	--
10/26/2010	< 1	< 1	< 1	< 1	--	--
4/13/2011	< 1	< 1	< 1	< 1	--	--

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

EXHIBIT B2-12
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
MONITORING WELL MW-24A

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP [(b)] (µg/l)**
3/20/1995	< 2	< 2	< 2	--	< 10	< 1
7/6/1995	< 2	< 2	< 2	--	< 2	< 0.2
9/27/1995	< 2	< 2	< 2	--	< 2	< 0.2
12/27/1995	< 2	< 2	< 2	--	< 2	0.2
3/28/1996	< 2	< 2	< 2	--	< 2	< 0.2
8/28/1996	< 2	< 2	< 2	--	< 10	< 0.2
11/21/1996	< 1	< 1	< 1	--	< 0.25	< 1.0 UJ
2/26/1997	< 1	< 1	< 1	--	< 0.25	< 1
5/20/1997	< 1	< 1	< 1	--	< 0.25	< 1
8/25/1997	< 1	< 1	< 1	--	< 0.25	< 1
11/5/1997	< 1	< 1	< 1	--	< 0.25	< 1
2/12/1998	< 1	< 1	< 1	--	< 0.25	< 1
5/18/1998	< 1	< 1	< 1	--	< 0.25	< 1
8/11/1998	< 1	< 1	< 1	--	< 0.25	< 1
11/16/1998	< 1	< 1	< 1	--	< 0.25	< 0.5
2/23/1999	< 1	< 1	< 1	--	< 0.25	< 0.5
5/25/1999	< 1	< 1	< 1	--	< 4.0	< 0.5
8/25/1999	< 1	< 1	< 1	--	< 0.2	< 0.1
11/18/1999	< 5	< 5	< 5	--	< 0.2 J	< 0.2 J
2/23/2000	< 1	< 1	< 1	--	< 0.2	< 0.1
5/23/2000	< 1	< 1	< 1	--	< 0.2	< 0.1
8/23/2001 (a)	< 0.2	< 0.1	< 0.1	--	< 0.5	< 0.5
5/24/2001	< 1	0.3 T	< 1	--	< 0.5	< 0.5
5/14/2002	< 1	< 1	< 1	--	< 0.5	< 0.5
2/27/2003	< 1	< 1	< 1	< 1	--	--
5/5/2003	< 1	< 1	< 1	< 1	--	--
8/13/2003	< 1	< 1	< 1	< 1	--	--
11/6/2003	< 1	< 1	< 1	< 1	--	--
5/13/2004	< 1	< 1	< 1	< 1	--	--
11/4/2004	< 1	< 1	< 1	< 1	--	--
5/9/2005	< 1	< 1	< 1	< 1	--	--
11/2/2005	< 1	< 1	< 1	< 1	--	--
5/15/2006	< 1	< 1	< 1	< 1	--	--
11/7/2006	< 1	< 1	< 1	< 1	--	--
4/11/2007	< 1	< 1	< 1	< 1	--	--
10/31/2007	< 1	< 1	< 1	< 1	--	--
4/29/2008	< 1	< 1	< 1	< 1	--	--
10/15/2008	< 1	< 1	< 1	< 1	--	--
4/8/2009	< 1	< 1	< 1	< 1	--	--
11/4/2009	< 1	< 1	< 1	< 1	--	--
4/28/2010	< 1	< 1	< 1	< 1	--	--
10/25/2010	< 1	< 1	< 1	< 1	--	--
4/13/2011	< 1	< 1	< 1	< 1	--	--

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

EXHIBIT B2-13
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
MONITORING WELL MW-25

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(b)] (µg/l)**	**PCP [(b)] (µg/l)**
3/20/1995	< 2	< 2	< 2	--	< 10	< 1
7/6/1995	< 2	< 2	< 2	--	< 2	< 0.2
9/27/1995	< 2	< 2	< 2	--	< 2	< 0.2
12/27/1995	< 2	< 2	< 2	--	< 2	< 0.2
3/28/1996	< 2	< 2	< 2	--	< 2	< 2.2
8/27/1996	< 2	< 2	< 2	--	< 10	< 0.2
11/21/1996	< 1	< 1	< 1	--	< 0.25	< 1 UJ
2/26/1997	< 1	< 1	< 1	--	< 0.25	< 1
5/20/1997	< 1	< 1	< 1	--	< 0.25	< 1
8/26/1997	< 1	< 1	< 1	--	< 0.25	< 1
11/6/1997	< 1	< 1	< 1	--	< 0.25	< 1
2/12/1998	< 1	< 1	< 1	--	< 0.25	< 1
5/18/1998	< 1	< 1	< 1	--	< 0.25	< 1
8/11/1998	< 1	< 1	< 1	--	< 0.25	< 1
11/16/1998	< 1	< 1	< 1	--	< 0.25	< 0.5
2/23/1999	< 1	< 1	< 1	--	< 0.25	< 0.5
5/25/1999	< 1	< 1	< 1	--	< 4	< 0.5
8/25/1999	< 1	< 1	< 1	--	1.7	< 0.1
11/18/1999	< 5	< 5	< 5	--	< 0.2	< 0.1
2/23/2000	< 1	< 1	< 1	--	< 0.2	< 0.1
5/23/2000	< 1	< 1	< 1	--	< 0.2	< 0.1
8/23/2001 (a)	< 0.2	< 0.1	< 0.1	--	5.85 J	< 0.5 UJ
5/24/2001	< 1	< 1	< 1	--	< 0.5	< 0.5
5/14/2002	< 1	< 1	< 1	--	< 0.5	0.03 J
2/22/2003	< 1	< 1	< 1	< 1	--	--
5/5/2003	< 1	< 1	< 1	< 1	--	--
8/13/2003	< 1	< 1	< 1	< 1	--	--
11/6/2003	< 1	< 1	< 1	< 1	--	--
5/14/2004	< 1	< 1	< 1	< 1	--	--
11/4/2004	< 1	< 1	< 1	< 1	--	--
5/9/2005	< 1	< 1	< 1	< 1	--	--
11/2/2005	< 1	< 1	< 1	< 1	--	--
5/15/2006	< 1	< 1	< 1	< 1	--	--
11/7/2006	< 1	< 1	< 1	< 1	--	--
4/11/2007	< 1	< 1	< 1	< 1	--	--
10/31/2007	< 1	< 1	< 1	< 1	--	--
4/29/2008	< 1	< 1	< 1	< 1	--	--
10/15/2008	< 1	< 1	< 1	< 1	--	--
4/8/2009	< 1	< 1	< 1	< 1	--	--
11/4/2009	< 1	< 1	< 1	< 1	--	--
4/28/2010	< 1	< 1	< 1	< 1	--	--
10/25/2010	< 1	< 1	< 1	< 1	--	--
4/12/2011	< 1	< 1	< 1	< 1	--	--

Well depth: 20 feet below ground surface
Screened interval: 5-20 feet below ground surface
Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

(a) For this round samples were collected on two separate dates. For clarity all data have been plotted using the first sample date (8/23). See Progress Report No. 74 for details.

EXHIBIT B2-14
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
PIEZOMETER PZ-01

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(a)] (µg/l)**	**PCP [(a)] (µg/l)**
8/13/2003	< 1	< 1	< 1	< 1	--	--
11/6/2003	< 1	< 1	< 1	< 1	--	--
11/4/2004	< 1	< 1	< 1	< 1	--	--
5/14/2004	< 1	< 1	< 1	< 1	--	--
5/9/2005	< 1	< 1	< 1	< 1	--	--
11/2/2005	< 1	< 1	< 1	< 1	--	--
5/15/2006	< 1	< 1	< 1	< 1	--	--
11/7/2006	< 1	< 1	< 1	< 1	--	--
4/11/2007	< 1	< 1	< 1	< 1	--	--
10/31/2007	< 1	< 1	< 1	< 1	--	--
4/29/2008	< 1	< 1	< 1	< 1	--	--
10/15/2008	< 1	< 1	< 1	< 1	--	--
4/8/2009	< 1	< 1	< 1	< 1	--	--
11/4/2009	< 1	< 1	< 1	< 1	--	--
4/28/2010	< 1	< 1	< 1	< 1	--	--
10/25/2010	< 1	< 1	< 1	< 1	--	--
4/13/2011	< 1	< 1	< 1	< 1	--	--

Data qualifiers are defined in the laboratory reports.
-- Not analyzed.

EXHIBIT B2-15
WASATCH CHEMICAL SITE
HISTORICAL DATA TRENDS
PIEZOMETER PZ-03

	LABORATORY PARAMETERS					
Sample Date	**PCE (µg/l)**	**TCE (µg/l)**	**1,1-DCE (µg/l)**	**VC (µg/l)**	**2,4-D [(a)] (µg/l)**	**PCP [(a)] (µg/l)**
5/9/2005	< 1	< 1	< 1	< 1	--	--
11/2/2005	< 1	< 1	< 1	< 1	--	--
5/15/2006	< 1	< 1	< 1	< 1	--	--
11/7/2006	< 1	< 1	< 1	< 1	--	--
4/11/2007	< 1	< 1	< 1	< 1	--	--
10/31/2007	< 1	< 1	< 1	< 1	--	--
4/29/2008	< 1	< 1	< 1	< 1	--	--
10/15/2008	< 1	< 1	< 1	< 1	--	--
4/8/2009	< 1	< 1	< 1	< 1	--	--
11/4/2009	< 1	< 1	< 1	< 1	--	--
4/28/2010	< 1	< 1	< 1	< 1	--	--
10/25/2010	< 1	< 1	< 1	< 1	--	--
4/12/2011	< 1	< 1	< 1	< 1	--	--

Data qualifiers are defined in the laboratory reports.

-- Not analyzed.

(a) The analyses for 2,4-Dichlorophenoxyacetic Acid (2-4 D) and Pentachlorophenol (PCP) were discontinued in February 2003, so this well was not tested for these parameters.