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File

July 18, 2006

Mr. Bart Putzig, P.E.
Regional Hazardous Waste Remediation Engineer
New York State Department of Environmental Conservation
Region 8 – Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414

Subject: **Accelerated Bioremediation Pilot Test Work Plan**
VCA Index #B8-0508-97-02
Former Taylor Instruments Site
Rochester, New York
MACTEC Project Number 3031052006/05

Dear Mr. Putzig:

On behalf of Combustion Engineering, MACTEC Engineering and Consulting, Inc., (MACTEC) is pleased to present this Accelerated Bioremediation Pilot Test Work Plan (hereinafter referred to as the Plan) for the Former Taylor Instruments Site (the Site) located at 95 Ames Street in Rochester, New York. The purpose of this Plan is to outline a proposed pilot-scale application of Hydrogen Release Compound (HRC™) Advanced, developed by Regenesis, to accelerate the biodegradation of trichloroethene (TCE) and its daughter products at the Site. Included in this Plan are: a Site description; a summary of Site groundwater conditions; our proposed pilot test activities; and our proposed system operation, performance monitoring, and report preparation schedules. The following figures (Attachment A) are included in this Plan:

- Figure 1 – Well Locations
- Figure 2 – VOCs in Overburden Monitoring Wells
- Figure 3 – Proposed HRC™ Advanced Injection Layout, South TCE Area
- Figure 4 – Proposed HRC™ Advanced Injection Layout, North TCE Area

The following tables (Attachment B) are also included in this Plan:

- Table 1 – Decline of TCE Concentrations Over Time
- Table 2 – Summary of Natural Biodegradation Results, December 2005 Sampling Event

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Site Description

The Site is located at 95 Ames Street in Rochester, New York. The approximately 14-acre Site was the location of the former Taylor Instruments facility that began operation in 1904 and which operated under a variety of owners until 1993 when Combustion Engineering, the current owner, closed the facility. The Site is currently vacant.

Summary of Site Groundwater Conditions

Remediation System Performance

The current groundwater and soil remedy consists of a Dual-Phase Vapor Extraction (DPVE) and bedrock groundwater extraction remedial system. The remedy is described fully in the Remedial Work Plan (Harding Lawson Associates, 2000). Also included in the Remedial Work Plan is a contingency remedy for overburden groundwater consisting of enhanced bioremediation using HRC™. The Remedial Work Plan was approved by NYSDEC on October 18, 2000 (NYSDEC, 2000).

The DPVE remedial system has been operating at the Site since January 2001. The DPVE system is extracting both vapor and shallow groundwater from the North and South TCE Source Areas. The extracted vapor and groundwater are conveyed through subsurface piping to a treatment building. Two bedrock wells extract deeper groundwater from beneath the Site, which is also conveyed to the treatment building where it is treated and then discharged to the Monroe County sewer system. The locations of the wells and treatment building are shown on Figure 1 (Attachment A).

The Site's remedial progress has been measured by: 1) the change in TCE concentrations in on-site monitor wells, and 2) DPVE system performance data consisting of TCE concentrations in influent groundwater and contaminant mass removal quantities. TCE has been used to track remedial progress because it is the primary contaminant of concern at the site.

Since initial startup of the remediation system in January 2001, over 56.4 million gallons of groundwater have been extracted and treated, resulting in the removal of 3,458 pounds of contaminants from the subsurface soil and groundwater.

The operation of the system was modified on May 10, 2004, from continuous operation to intermittent operation (also known as "pulsed pumping"). This modification was made based on the system's contaminant recovery rate which had reached asymptotic conditions under continuous operation. The modified operation was approved by NYSDEC via letters dated January 8, 2004 (NYSDEC 2004) and April 7, 2005 (NYSDEC 2005).

As is typical of volatile organic contaminant (VOC) extraction systems, the rate of VOC mass removal was greatest when the DPVE system was first started up, with only 9,441

gallons of water having to be pumped initially to remove 1 pound of VOC during the first quarter of operation. In contrast, during the first six months of 2006; 50,990 gallons of water had to be pumped to extract 1 pound of VOC. Similarly, looking at the TCE removal through extracted vapor and groundwater, the mass removal rate was 0.17 pounds VOC per hour during the first quarter of 2001, but has been 0.01 lbs/hr for the last three years. Clearly the DPVE system has reached asymptotic removal rates. As an alternative to continued operation of the DPVE system, accelerated bioremediation will be evaluated via the pilot test detailed in this work plan.

Groundwater Analytical Data

Seventeen overburden monitoring wells located on the Site have been sampled regularly since 2001. The locations of the wells are shown on Figure 1 (Attachment A). A comparison of analytical data from sixteen sampling events that occurred between 2001-2005 provides an evaluation of the DPVE system performance. Figure 2 (Attachment A) depicts the historical analytical results for the overburden monitoring wells on the Site. Overall decreases in TCE concentrations have been observed in all perimeter and site interior monitor wells (Table 1, Attachment B). A 74% decrease in the DPVE system influent TCE concentrations has also been observed, which would be expected since contaminant levels have declined in the North and South TCE Source Areas where extraction is occurring. Additionally, off-site monitor wells have shown no detectable levels of contamination (Haley & Aldrich of New York, 2001a and 2001b).

Considering the system performance data, along with the groundwater monitoring results, it is evident that the system has been successful in removing a significant mass of contaminants from the site subsurface. The overall TCE concentrations have declined significantly in both the on-site monitor wells and DPVE system influent. In addition, despite four pulsed pumping-related shutdowns of the system, overall contaminant levels in Site monitor wells have not demonstrated significant rebound effects, indicating that there is little that can be done operationally to enhance TCE recovery through operation of the DPVE system.

Natural Biodegradation

Natural biodegradation parameters have been periodically collected from selected Site monitor wells annually since start-up of the DPVE system in December 2000. During the December 2005 sampling event, natural biodegradation parameters were collected from nine monitor wells, including background well W-2 and perimeter wells TW-04, TW-07, TW-09, TW-17, TW-20, and W-5. Samples were also collected from OB-07 and OB-09, which are located within the TCE source areas. Data from well W-2 is provided for background values. Table 2 (Attachment B) shows a comparison between the natural biodegradation parameters in nine monitor wells and the values given in the EPA screening protocol as favorable for natural biodegradation of chlorinated solvents (EPA, 1998). Shaded values in the table show values favorable for natural biodegradation.

Table 2 shows that TCE daughter products were detected in six out of the eight perimeter and source area monitor wells. Several other parameters measured in each of these monitor wells containing TCE daughter products were indicative that natural biodegradation is occurring. While daughter products were not detected in TW-04 and TW-20, these wells have several other parameter levels favorable for natural biodegradation. Concentrations of daughter products may be present in the vicinity of these wells at concentrations less than the sample quantitation limits, or daughter products may have completely degraded to non-toxic end products, such as carbon dioxide, water, and chloride.

In summary, values for various natural biodegradation parameters and the presence of TCE daughter products indicate that natural biodegradation is occurring. Additionally, dissolved oxygen (DO), oxygen reduction potential (ORP), and nitrate levels appear particularly favorable for HRC™ Advanced to enhance aquifer conditions and accelerate bioremediation at the Site.

Bio-Trap Analytical Results

An April 7, 2005, letter from the NYSDEC (NYSDEC 2005), acknowledged that asymptotic extraction conditions have been reached and recommended evaluating supplemental remedial technologies such as enhanced bioremediation using hydrogen releasing compounds to further remediate the Site groundwater. As a first step in evaluating the application of HRC™ at the Site, Bio-Trap™ samplers were placed in monitoring wells in both the North and South TCE Source Areas. Bio-Trap™ pairs were placed in the screened intervals of monitoring wells OB-08 and W-5 in the north source area and monitoring wells OB-04 and OB-06 in the south source area (Figure 1); one sampler served as a control sample and the other sampler served as a baited sample containing an HRC™ primer. The samplers were left for 60 days, after which they were removed and submitted to Microbial Insights, Inc., for analysis of dehalococcoides (known dechlorinating microorganism), total universal bacteria, and sulfate reducers. The results from the control and baited samplers were compared to assess the effect of the HRC™ on the Site's microbial population. The results indicated that the HRC™ favorably increased the Site's microbial population. Based on the Bio-Trap™ results, it is our opinion that a pilot-scale application of HRC™ Advanced should be implemented.

Proposed Pilot Test Activities

Consistent with the contingency remedy for overburden groundwater proposed in the approved Remedial Work Plan, and based on the recommendations from the NYSDEC, and in light of the Site groundwater bioremediation conditions described above, enhanced bioremediation has been identified as a supplemental remedy for overburden groundwater in the source areas. Biological degradation will be accelerated through the addition of a source of nutrients or electron donors in the form of HRC™ Advanced. HRC™ Advanced is a specially formulated product that slowly releases lactic acid upon contact with water. This source of lactic acid is then metabolized by microbes to produce hydrogen, which is

then used in a natural process known as reductive dechlorination. Reductive dechlorination results in biological degradation of chlorinated contaminants. HRC™ Advanced has been used to degrade a range of chlorinated compounds including TCE and other VOCs present in the Site groundwater.

A pilot-scale field test is proposed to confirm the effectiveness of HRC™ Advanced treatment at the site. The pilot-scale test will involve injecting HRC™ Advanced into the Site groundwater. The test will be conducted over a six to twelve month period to evaluate technology performance and to gather data that may be used to develop a more extensive remedial design.

We propose to perform the pilot test near OB-08 in the North source area and OB-04 in the South source area of the Site. OB-08 is screened from 15.3 to 25.1 feet below land surface (bls) and OB-04 is screened from 2.5 to 17.5 feet bls. Both OB-08 and OB-04 have historically had contaminants of concern (e.g., TCE at 797 µg/L and 385 µg/L, respectively, in December 2005). Both wells also are set on bedrock, and therefore the vertical extent of contamination in the overburden groundwater unit has been defined.

Prior to injection of the HRC™ Advanced, nine injection points (i.e., borings) will be drilled near OB-04 and OB-08. The proposed conceptual designs of the injection points are grid patterns approximately 10 feet apart, upgradient of the respective wells, and are shown on Figures 3 and 4 (Attachment A). The actual locations of the injection points may be altered in the field based on Site constraints. A direct-push rig will be used to advance each of the borings to refusal, estimated to be about 24 feet bls near OB-08 and 19 feet bls near OB-04. After the desired depth is reached, HRC™ Advanced product will be injected under pressure into the subsurface groundwater zone as the rods are being raised. The HRC™ Advanced application rates are designed based on dissolved phase VOC and natural attenuation parameter concentrations taken from historical data as well as the estimated Site groundwater flow rate of 5 to 10 feet/yr (based on the aquifer hydraulic conductivity and hydraulic gradient). The HRC™ Advanced will be injected over a vertical thickness of about 15 feet in each boring. For both OB-04 and OB-08, 8 pounds of HRC™ Advanced per vertical foot, or 120 pounds per boring, will be injected. After injection is complete, each boring will be filled with grout to the surface.

System Operation

The DPVE system, which was shut down in May 2006 as part of pulsed pumping operations, is scheduled to be re-started in August 2006. However, assuming approval of this Plan, we recommend that the system remain off during the pilot study monitoring period. An extended DPVE system shutdown is recommended because the DPVE system operation creates more aerobic groundwater conditions, whereas HRC™ Advanced is most effective in a static, anaerobic environment.

A recommendation on system re-start will be made near the end of the proposed pilot test monitoring period (see below).

Monitoring

Groundwater quality will be monitored as part of the pilot-scale remediation program to evaluate the following:

- VOC concentrations; to monitor progress of enhanced bioremediation and natural attenuation; and
- Biological parameters; to ensure subsurface conditions support anaerobic biodegradation.

Baseline contamination and natural attenuation parameters will be established during the July 2006 semi-annual sampling event, prior to initiation of the pilot study. Monitoring wells OB-04 and OB-08 will be the performance monitoring points for the pilot study. These wells will be sampled for the following parameters:

Parameter	Method
VOCs	8260 (EPA)
Total Organic Carbon (TOC)	415.1 (EPA)
Metabolic Acids	NA
Nitrate	300 (EPA)
Sulfate	300 (EPA)
Carbon Dioxide	4500 (SW846)
Methane/ethane/ethene	RSK-175
pH/dissolved oxygen (DO)/oxygen reduction potential (ORP)	Horiba field flow-through cell
Total/Dissolved Iron	6010 (SW846)
Manganese	6010 (SW846)
Sulfide	376.1 (EPA)
Chloride	300 EPA
Total Dissolved Solids (TDS)	160.1 EPA

Immediately after injection of the HRC™ Advanced, OB-04 and OB-08 will be sampled and analyzed for pH, dissolved oxygen, oxygen reduction potential, and total organic carbon to assess any immediate impacts of the material on geochemical conditions in the Site groundwater.

The following wells will be sampled during the enhanced bioremediation program:

Monitoring Well	Location	Significance
OB-04	South Source Area treatment zone	Monitor effect of HRC™ Advanced within the treatment zone

Monitoring Well	Location	Significance
OB-08	North Source Area treatment zone	Monitor effect of HRC™ Advanced within the treatment zone
OB-06	South Source Area Downgradient	Monitor effect of HRC™ Advanced on downgradient aquifer conditions
OB-09	North Source Area Downgradient	Monitor effect of HRC™ Advanced on downgradient aquifer conditions
OB-05	North Source Area Upgradient	Monitor groundwater conditions entering the treatment zone
W-2	Background	Compare natural attenuation conditions within the treatment zone to background levels

A well suitable for monitoring groundwater conditions upgradient of the South Source Area treatment zone is not present, hence no upgradient monitoring of the South Source Area will be done.

The monitoring schedule will include quarterly sampling of treatment zone wells OB-04 and OB-08 and upgradient well OB-05 for VOCs for at least six months. Downgradient monitoring wells OB-06 and OB-09 will be sampled semi-annually for VOCs. Additionally, OB-04, OB-05, OB-06, OB-08, and OB-09 will be sampled for the full list of natural attenuation parameters, while background well W-2 will be sampled for a reduced list that includes nitrate, sulfate, TOC, ORP, pH, temperature, CO_2, alkalinity, and chloride. The natural attenuation parameters from OB-04 and OB-08 (treatment zone) and OB-05 (upgradient) will be collected monthly (except for metabolic acids, which will be collected quarterly) but may be collected quarterly once biodegradation and geochemical trends have been identified. The natural attenuation parameters for OB-06 and OB-09 (downgradient) and W-2 (background) will be collected semi-annually.

Six months after the initial HRC™ Advanced injection all monitoring data will be evaluated to assess the effectiveness of the HRC™ Advanced on subsurface conditions. The primary objectives of the evaluation will be to assess whether reducing conditions are supported and to make an estimation of the rate that TCE and other VOC biodegradation has been enhanced. Based on the evaluation, a decision will be made on whether to continue monitoring for another six months to measure the rate and extent of biodegradation under HRC™-enhanced conditions or to recommend additional HRC™ Advanced applications.

Report Preparation

MACTEC will provide NYSDEC with pilot test summaries in the progress reports, which are currently submitted each month. A final report will be prepared at the completion of the pilot test and will summarize results from testing as well as provide conclusions on

the effectiveness of the HRC™ Advanced and, if applicable, recommendations for further applications.

Mr. Putzig, should you have any questions or comments concerning this Accelerated Bioremediation Pilot Test Work Plan, please call either of the undersigned at (865) 531-1922.

Sincerely,

MACTEC Engineering and Consulting, Inc.

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Attachments

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References

EPA. 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water.* EPA/600/R-98/128 (September).

Harding Lawson Associates. 2000. *Remedial Work Plan, Taylor Instruments Site, Rochester, New York.* (April).

Haley & Aldrich of New York. 2001a. *Report on Offsite Groundwater Investigation Former Taylor Instrument Site, Rochester, New York.* Prepared for Apogent Technologies Corporation (formerly Sybron Laboratory Products), September.

Haley & Aldrich of New York. 2001b. *Supplemental Offsite Groundwater Sampling Former Taylor Instruments Site.* Prepared for Apogent Technologies Corporation (formerly Sybron Laboratory Products), December 11.

NYSDEC. 2000. Letter to Jean McCreary with Nixon Peabody LLP (October 18).

NYSDEC. 2004. Letter to Ricky A. Ryan with MACTEC Engineering and Consulting (January 8).

NYSDEC. 2005. Letter to Ricky A. Ryan with MACTEC Engineering and Consulting (April 7).

ATTACHMENT A

FIGURES

PREPARED BY: R. EVERENCE | DATE: 07/23/04 | CHECKED BY: J. PETYLER | DATE: 07/23/04

HAGUE STREET

WEST AVENUE

AMES STREET

RAILROAD TRACKS

N/F NEW YORK CENTRAL RAILROAD

LEGEND

- MANHOLE
- EXISTING ABANDONED SEWER LATERAL PLUG
- RAILROAD TRACKS
- CHAIN LINK FENCE
- WROUGHT IRON FENCE
- GUARD RAIL
- BEDROCK MONITORING WELL (BR)
- OVERBURDEN MONITORING WELL (OB, MW, TW, W)
- BEDROCK EXTRACTION WELL (BREW)
- DUAL-PHASE VACUUM EXTRACTION WELL (DPVE)
- VENT WELL

GROUNDWATER TREATMENT BUILDING

STORAGE SHED

BUILDING FOUNDATION

SEE FIGURE 3 FOR INSET

SEE FIGURE 4 FOR INSET

0' 20' 40' 80'

SCALE: 1"=80'

NOTE:
THE AREA IS COVERED WITH BITUMINOUS PAVEMENT INSIDE FENCED AREA.

FIGURE 1
WELL LOCATIONS
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

MACTEC

HAGUE STREET

WEST AVENUE

AMES STREET

CORRUGATED GUIDE RAIL

BRICK BUILDING

STEEL COVER

GROUNDWATER TREATMENT BUILDING

STORAGE SHED

CONC. SW

CURB

GATE POST

GV

WV

BUILDING FOUNDATION

DAVENPORT MACHINE

N/F NEW YORK CENTRAL RAILROAD TRACKS

RESIDENCE

LEGEND

- OVERBURDEN MONITORING WELL (OB, MW, TW, W)
- BEDROCK MONITORING WELL (BR)
- DCE DICHLOROETHENE
- PCE TETRACHLOROETHENE (PERCHLOROETHENE)
- TCE TRICHLOROETHENE
- J ESTIMATED VALUE
- U NON DETECT
- NS NON DETECT
- NS (DRY) NOT SAMPLED

NOTE: OCT 00/NOV 00 REPRESENTS THE BASELINE (PREREMEDIATION) SAMPLING EVENT.

0 20' 40' 80'

SCALE: 1"=80'

MONTH SAMPLED

SAMPLE LOCATION

W-1 W-2 W-3 W-4 W-5 W-6

BR-02 BR-03 BR-04 BR-05 BR-06 BR-07 BR-08 BR-09 BR-10 BR-11 BR-12 BR-13 BR-14 BR-15 BR-16 BR-17

OB-04 OB-05 OB-06 OB-07 OB-08 OB-09

TW-01 TW-04 TW-07 TW-09 TW-13 TW-17 TW-20 TW-74

MW-00

Site ID: W-1 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	NS	NS	5 U	2 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	5.0 U	NS	NS	5 U	2 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-DCE	5.0 U	NS	NS	5 U	2 U	3	10.3	9.8	8.1	5.7	9.7	14.2	4.8	3.2	7.1	1 U	1.78
trans-1,2-DCE	5.0 U	NS	NS	5 U	2 U	1 U	2 U	2 U	2 U	1 U	1.4	1 U	1 U	1 U	1.0	1 U	1 U
1,1-DCE	5.0 U	NS	NS	5 U	2 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	NS	NS	1 U	2 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: W-2 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1 U	NS	1 U	NS	1 U
TCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1 U	NS	1 U	NS	1 U
cis-1,2-DCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1 U	NS	1 U	NS	1 U
trans-1,2-DCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1 U	NS	1 U	NS	1 U
1,1-DCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1 U	NS	1 U	NS	1 U
Vinyl Chloride	1.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1 U	NS	1 U	NS	1 U

Site ID: W-4 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS
TCE	5.0 U	1.5 J	1.1 J	5 U	2 U	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,2-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,2-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	1.0 U	1.0 U	1 U	1 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Site ID: W-5 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	5 U	5 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	54 U	7.5	10 J	17	21.8	4.2	7.1	12.4	10.2	2 U	2 U	6.2	11.2	10.7	10.2	11.0	11.1	10.2
cis-1,2-DCE	5.0 U	5.0 U	25 U	1.8 J	7	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-DCE	5.0 U	5.0 U	25 U	5 U	1 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DCE	5.0 U	5.0 U	25 U	5 U	1 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	1.0 U	5 U	1 U	1 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: W-6 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	NS	NS	5 U	2 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	5.0 U	NS	NS	5 U	2 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,2-DCE	5.0 U	NS	NS	5 U	2 U	3	10.3	9.8	8.1	5.7	9.7	14.2	4.8	3.2	7.1	1 U	1.78
trans-1,2-DCE	5.0 U	NS	NS	5 U	2 U	1 U	2 U	2 U	2 U	1 U	1.4	1 U	1 U	1 U	1.0	1 U	1 U
1,1-DCE	5.0 U	NS	NS	5 U	2 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	NS	NS	1 U	2 U	1 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: OB-04 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	2500 U	5.0 U	1000 U	NS (DRY)	19.9	12.9	20 U	1.8	2 U	1 U	1 U	6	1 U	1.0	1.0	1 U	1 U
TCE	70000	150	36000	NS (DRY)	71000	65600	3600	3790	46.3	11.3	41.5	2780	23.3	364	626	367	395
cis-1,2-DCE	2900	3.2 J	21000	NS (DRY)	56000	1940	554	1950	5.5	1.3	6.7	125	3	57.2	124	141	139
trans-1,2-DCE	2500 U	5.0 U	1000 U	NS (DRY)	170	16.6	20 U	7.5	2 U	1 U	1 U	1.9	1 U	1.3	1.6	2.4	1.14
1,1-DCE	2500 U	5.0 U	1000 U	NS (DRY)	108	3.8	20 U	4.6	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	500 U	1.0 U	200 U	NS (DRY)	10.2	2 U	20 U	2	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: OB-05 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	500 U	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	1 U	2.7	3.4	NS (DRY)	2.1	NS (DRY)	1.4	1 U	2.8	1 U	1 U
TCE	25000	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	52.8	469	604	NS (DRY)	97.2	NS (DRY)	135	65.4	172	155	81.3
cis-1,2-DCE	4600	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	1 U	15	13	NS (DRY)	2.5	NS (DRY)	2.8	1.2	4.0	1.70	1.12
trans-1,2-DCE	500 U	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	1 U	1 U	1 U	NS (DRY)	1 U	NS (DRY)	1 U	1 U	1 U	1 U	1 U
1,1-DCE	500 U	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	1 U	1 U	1 U	NS (DRY)	1 U	NS (DRY)	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	350 J	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	NS (DRY)	1 U	1 U	1 U	NS (DRY)	1 U	NS (DRY)	1 U	1 U	1 U	1 U	1 U

Site ID: OB-06 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	1000 U	1300 U	500 U	1000 U	2 U	13.1	20 U	9.4	8.9	5.1	3.9	2.6	3.3	2.9	1 U	1.3	2.12
TCE	40000	29000	15000 J	27000 J	500	15700	5370	5440	8050	3480	2250	2780	1360	725	429	570	797
cis-1,2-DCE	3900 J	3900 J	2400 J	5600 J	9.3	208	20 U	110	94.2	37.3	15.3	32.1	10.8	13.1	5.8	3.3	6.25
trans-1,2-DCE	1000 U	1300 U	500 U	1000 U	2 U	8.6	20 U	3.8	5	2.2	1.2	3.1	1.5	2.5	1 U	1 U	2.17
1,1-DCE	1000 U	1300 U	500 U	1000 U	2 U	2.7	20 U	2 U	1.3	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	200 U	250 U	100 U	200 U	2 U	2 U	20 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: OB-07 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	25 U	5 U	1 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	54 U	7.5	10 J	17	21.8	4.2	7.1	12.4	10.2	2 U	2 U	6.2	11.2	10.7	10.2	11.0	11.1	10.2
cis-1,2-DCE	5.0 U	5.0 U	25 U	1.8 J	7	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-DCE	5.0 U	5.0 U	25 U	5 U	1 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DCE	5.0 U	5.0 U	25 U	5 U	1 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	1.0 U	5 U	1 U	1 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: OB-08 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	50 U	25 U	25 U	25 U	2 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	2800	540	720	5800	637	526	184	386	100	84.9	52.7	242	80	38.6	31.9	37.1	117
cis-1,2-DCE	80	25 U	12 J	240	13.7	7.8	2.8	10.1	1.5	1.5	1.1	2.8	1		1.4	1.8	4.71
trans-1,2-DCE	50 U	25 U	25 U	9 J	2 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DCE	50 U	25 U	25 U	25 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	10 U	5.0 U	5 U	5 U	2 U	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: OB-09 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	180	150	150	160	141	117	88	153	86.5	44.2	70.7	95.9	81.1	57.5	58.3	41.5	68.0
cis-1,2-DCE	14	16	17	23	20.5	12	7.4	16.6	9.2	4.6	8.2	10.3	3.7	3.1	2.5	1 U	2.32
trans-1,2-DCE	5.0 U	5.0 U	5 U	3.5 J	2.3	2 U	2 U	1.8	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	1.0 U	1 U	1 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: TW-01 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
TCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,2-DCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,2-DCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-DCE	5.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	1.0 U	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Site ID: TW-04 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	100 U	5 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	42	14	100 U	27	51.1	51	20.7	21.2	42.5	1 U	19.3	29.2	48.5	12.7	40.0	8.2	31.4
cis-1,2-DCE	79	18	100 U	38	19.4	3.7	2 U	2 U	7.1	5.5	1 U	1 U	3.1	1.1	1 U	1 U	1.7	1 U
trans-1,2-DCE	5.0 U	5.0 U	100 U	5 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DCE	5.0 U	5.0 U	100 U	5 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	1.0 U	20 U	1 U	2 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: TW-07 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	28	5.0 U	27	74	42.6	18.7	5	32.9	46	14.2	8.1	20.6	21	16.2	23.0	8.5	13.3
cis-1,2-DCE	7.2	5.0 U	3.9 J	11	7.7	2.6	2 U	5.1	8.3	2.1	1 U	3.8	2.9	1.8	5.8	7.7	5.44
trans-1,2-DCE	28	1.2 J	13	16	21.4	6.4	2 U	12.6	15.4	5.8	1.1	6.8	6	3.7	8.4	3.5	4.42
1,1-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	1.0 U	1 U	1 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: TW-09 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	5 U	2 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	230	120	200	150	110	55.4	36.5	91.5	38	2 U	29.4	77	36.8	43.1	46.2	48.2	45.0
cis-1,2-DCE	36	1.9 J	7.4	8.8	4	2	2 U	4	1 U	2 U	1 U	5.4	1.2	1 U	2.4	1.7	1.48
trans-1,2-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	1.0 U	1 U	1 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: TW-13 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	5 U	5 U	2 U	1 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS
TCE	5.0 U	5.0 U	5 U	5 U	2 U	1 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS
cis-1,2-DCE	5.0 U	5.0 U	5 U	5 U	2 U	1 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,2-DCE	5.0 U	5.0 U	5 U	5 U	2 U	1 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS
1,1-DCE	5.0 U	5.0 U	5 U	5 U	2 U	1 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl Chloride	1.0 U	1.0 U	1 U	1 U	2 U	1 U	2 U	2 U	1 U	NS	NS	NS	NS	NS	NS	NS	NS

Site ID: TW-17 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	25 U	25 U	25 U	25 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	1000	530	460	740	515	339	393	666	390	378	282	435	441	280	407	340	397
cis-1,2-DCE	7.9 J	25 U	25 U	25 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	6.9	1.0	1.35
trans-1,2-DCE	25 U	25 U	25 U	25 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DCE	25 U	25 U	25 U	25 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: TW-20 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01	SEP 01	DEC 01	MAR 02	JUN 02	SEP 02	DEC 02	MAR 03	JUN 03	SEP 03	DEC 03	JUN 04	DEC 04	JUN 05	DEC 05
PCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
TCE	5.2	12	2.9 J	5 U	3.1	2.4	2.7	2 U	11.8	2.4	1 U	5	1.4	1 U	1 U	1.5	6.32
cis-1,2-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
trans-1,2-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-DCE	5.0 U	5.0 U	5 U	5 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	1.0 U	1.0 U	1 U	1 U	2 U	2 U	2 U	2 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Site ID: OB-05 (units: ug/L)

Analyte	BASELINE	MAR 01	JUN 01
PCE	500 U	NS	NS (DRY)
TCE	25000	NS	NS (DRY)
cis-1,2-DCE	4600	NS	NS (DRY)
trans-1,2-DCE	500 U	NS	NS (DRY)
1,1-DCE	500 U	NS	NS (DRY)
Vinyl Chloride	350 J	NS	NS (DRY)

FIGURE 2

VOCs IN OVERBURDEN MONITORING WELLS

FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

MACTEC

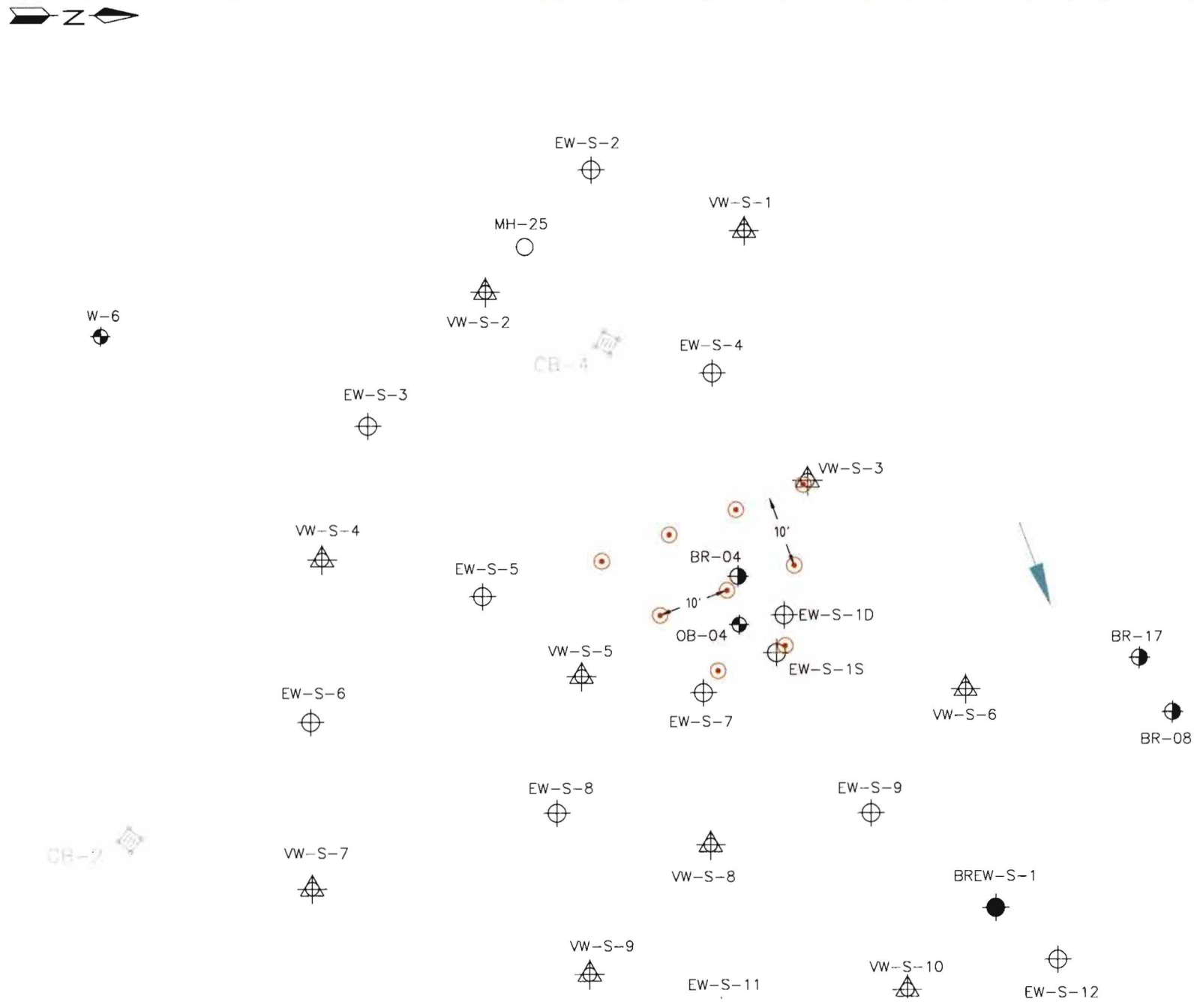

FIGURE 3
PROPOSED HRC INJECTION LAYOUT SOUTH TCE SOURCE AREA
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

MACTEC

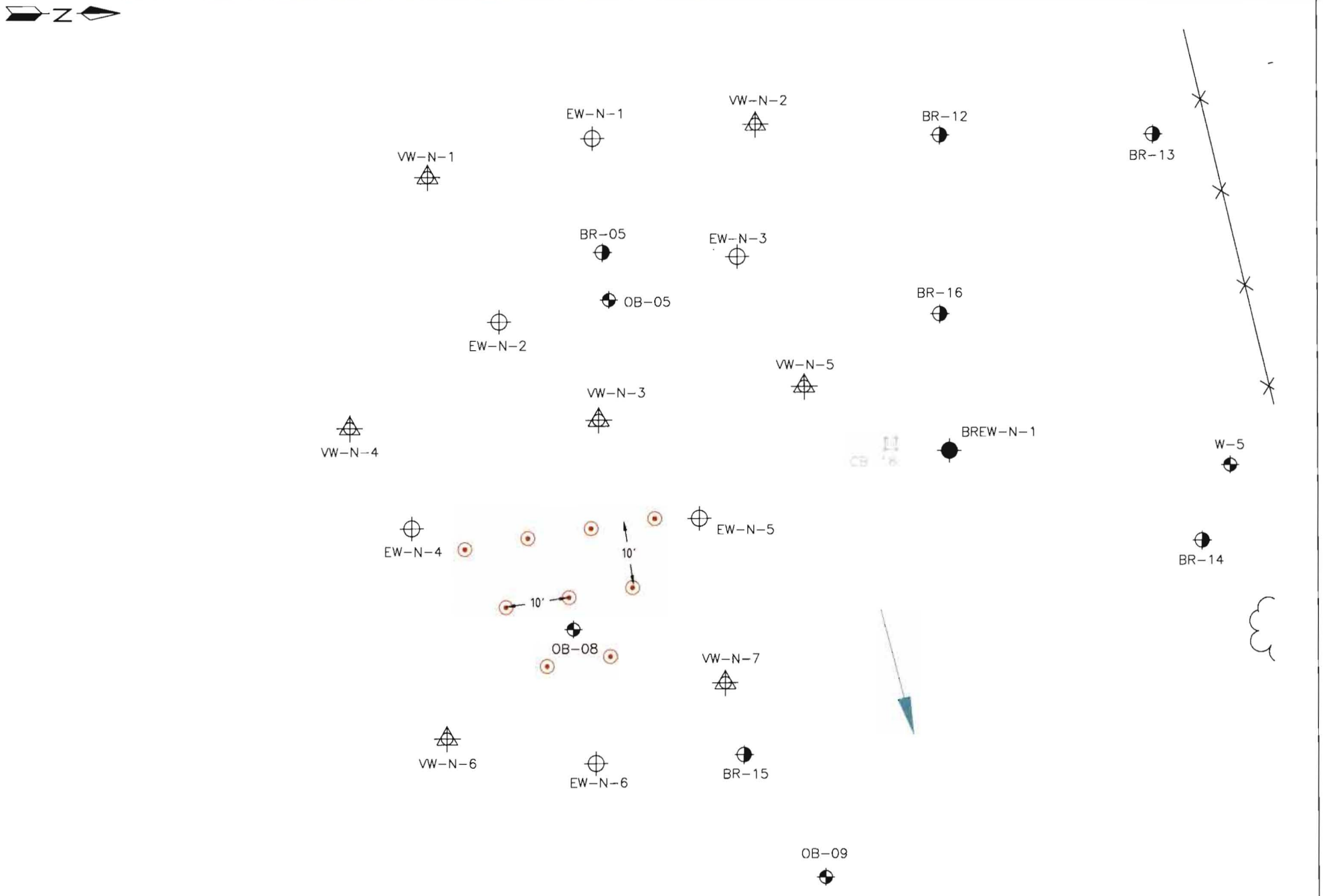

FIGURE 4
PROPOSED HRC INJECTION LAYOUT NORTH TCE SOURCE AREA
FORMER TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

MACTEC

ATTACHMENT B

TABLES

Table 1
Decline of TCE Concentrations Over Time

Former Taylor Instruments Site
Rochester, New York

Well ID[1]	Area	High (ppb) BL/ Post BL	December 2005 result	% Decline[2]
Source Area Monitor Wells				
OB-04	South	71,500	385	99
OB-06	South	5,600	117	98
OB-05	North	25,000	81.3	99
OB-08	North	40,000	797	98
BR-04	South	10,000	16.4	99
BR-09	South	13,000	1U	99
BR-10	South	8,700	474	95
BR-11	South	60,000	8.75	99
BR-17	South	6,900	5.01	99
BR-05	North	5,800	1.45	99
BR-12	North	200	1U	99
BR-15	North	6,590	760	88
BR-08 (deep)	South	1,100	11.4	99
BR-14 (deep)	North	148	1.12	99
Plume Monitor Wells				
OB-07	South	21.8	10.2	53
OB-09	North	180	69	62
Perimeter Monitor Wells				
TW-04	South	51.1	31.4	39
TW-07	South	74	13.3	82
TW-17	North	1,000	397	60
TW-20	Between	14.8	6.32	57
TW-09	Between	230	45	80
BR-02	South	7,000	114	98
BR-03	South	1,150	5.57	99
BR-01	North	551	1.12	99
BR-13	North	3,240	1U	99
BR-07	North	7.4	1U	86
W-5	North	1,435	1,100	23

[1] Upgradient wells not shown include W-4, BR-07, TW-13, MW-00, TW-69, W-2, BR-06, W-1, TW-01, TW-74, W-6, W-3, and BR-16.
[2] Percent decline determined by comparing current value (December 2005) to the highest BL/Post BL value.

Notes: U = no detections
BL = baseline
ID = identification
J = estimated
NA = not applicable
NI = not installed
NS = not sampled
ppb = parts per billion
TCE = trichloroethylene

Prepared by J. Deatherage on 1-11-06
Checked by M Vandergriff on 1-17-06

Table 2
Summary of Natural Biodegradation Results,
December 2005 Sampling Event[1]

Former Taylor Instruments Site
Rochester, New York

Parameter	Value Favorable for Natural Biodegradation	TW-04	TW-07	TW-09	TW-17	TW-20	W-5	OB-07	OB-09	W-2 (background)
DO (mg/L)	<0.5	8.65	0.26	2.48	4.08	1.56	0.10	2.21	0.33	4.96
Nitrate (mg/L)	<1	0.425	6.26	0.865	<0.100	1.32	<0.100	1.73	2.68	NA
Iron II (mg/L)	>1	0.113	0.115	<0.100	<0.100	<0.100	0.569	<0.100	<0.100	NA
Sulfate (mg/L)	<20	158	401	190	111	51.0	69.5	316	168	NA
Sulfide (mg/L)	>1	<0.100	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<1.00	NA
Methane (mg/L)	>0.5	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	<0.026	NA
ORP (mV)	<50	30	-14	-13	70	40	58	19	28	9
PH	5<pH<9	7.19	7.01	7.36	7.08	7.18	7.38	7.69	7.29	7.74
TOC (mg/L)	>20	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	1.78	<1.00	NA
Temperature (°C)	>20	12.79	13.00	14.04	12.36	12.41	12.87	13.20	14.74	12.78
CO_2 (mg/L)	Note 1	24.3	58.6	16.3	47.9	24.5	19.8	5.17	21.5	7.84
Alkalinity (mg/L)	Note 1	206	354	185	389	339	371	142	314	173
Chloride (mg/L)	Note 1	4.96	14.7	5.58	19.5	51.7	10.2	24.1	8.50	6.42
BTEX (mg/L)	>0.1	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006	<0.006
Ethene (mg/L)	>0.01	<0.026	0.029	0.028	<0.026	<0.026	0.028	0.028	0.028	NA
Ethane (mg/L)	>0.01	<0.026	0.027	<0.026	<0.026	<0.026	0.028	<0.026	<0.026	NA
Daughter Products Detected	Any detection of daughter products	No	**Yes**	**Yes**	**Yes**	No	**Yes**	**Yes**	**Yes**	NA

See notes at end of table.

(Continued)
Summary of Natural Biodegradation Results,
December 2005 Sampling Event[1]

Former Taylor Instruments Site
Rochester, New York

Reference: EPA. 1998. *Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water* EPA/600/R-98/128 (September).

[1] W-2 is the background well; other wells are perimeter wells.

Note 1: A value greater than two times the background value is considered favorable for natural biodegradation. The W-2 value is the background value.

Note: Shading indicates parameters supportive of natural biodegradation.
°C = degrees Celsius
BTEX= benzene, toluene, ethylbenzene, and xylene
CO_2 = carbon dioxide
DCE = dichloroethylene
DO = dissolved oxygen
EPA = Environmental Protection Agency (United States)
mg/L = milligrams per liter
mV = millivolt
NA = not applicable
ORP = oxygen reduction potential
TCE = trichloroethylene
TOC = total organic compound

Prepared by J. Deatherage on 1-11-06
Checked by M. Vandergriff on 1-17-06