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Technical Memorandum

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Date: June 6, 2007

To: Ed Waddles, MTD Products Inc.

cc: David Herrington
RMT Project Team

From: Britney Barnes

Project No.: 00-71360.22, Task 2

Subject: Summary of *In situ* Groundwater Chemical Oxidation Pilot Study – Former Vapor Degreasing Room of Columbia Manufacturing Facility, Westfield, Massachusetts

The purpose of this memorandum is to document and communicate the results of the second sodium persulfate injection pilot study conducted at the Columbia Manufacturing facility (site) in Westfield, Massachusetts. The first pilot study was conducted during July and August 2006 in the northern portion of the site between Building 1 and Cycle Street. In addition to evaluating the effectiveness of persulfate oxidation technology in reducing the concentration of organic chemicals in groundwater, the first pilot study was specifically designed to assess potential health and safety concerns associated with excessive heat or vapor generated by oxidation reactions. As described in RMT's October 12, 2006 Technical Memorandum, the observed concentration of chlorinated volatile organic compounds (CVOCs) in groundwater were reduced by more than 90 percent within the treatment zone. There was also no evidence of excessive heat or organic vapor generation that would restrict application of caustic-catalyzed sodium persulfate injections within the manufacturing buildings.

Based on the positive results of the first pilot study, a second pilot study was conducted during October and November 2006 within the footprint of the former vapor degreasing room, which had previously been identified as the source area for the north-end CVOC plume. This pilot study was designed to evaluate the effectiveness of caustic-catalyzed sodium persulfate injection as an *in situ* treatment technology for reducing the concentration of CVOCs in the unsaturated (vadose zone) soils, as well as the groundwater beneath and downgradient of the former vapor degreasing room. Consistent with the outcome of the first pilot study, the overall results of this study were also extremely positive. The observed concentration of CVOCs in groundwater was similarly reduced by more than 90 percent within the treatment zone and there was qualitative evidence suggesting that residual VOC concentrations within the unsaturated soil had also been significantly reduced. Previously, RMT field personnel continuously reported strong organic odors in this area of the facility. Following treatment, these odors were no longer detected. The long-term effectiveness of the caustic-catalyzed sodium persulfate

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treatment in reducing residual source within the unsaturated soil will be evaluated on an ongoing basis during subsequent groundwater sampling events.

The discussion that follows provides a summary of the second pilot study including the injection system layout and installation, the monitoring network used to evaluate performance, the caustic-catalyzed sodium persulfate solution delivery system, and the performance monitoring results obtained during the pilot study. Specific activities conducted during the pilot study are listed in Table 1 (see Attachment 1).

Introduction

The sodium persulfate injection system was installed in the former vapor degreasing room, which had been previously characterized as the source area for CVOCs identified in the northern portion of the site. As shown on Figure 1 (Attachment 2), the pilot test was conducted within the footprint of the former vapor degreasing room to aggressively treat the residual source materials above and below the water table. Soil and groundwater beneath the former vapor degreasing room had been previously characterized by the presence of elevated concentrations (>3 mg/L) of dissolved CVOCs, as well as free-phase, light non-aqueous phase liquids (LNAPL) that were presumably derived from cutting oils and hydraulic fluids.

Injection System and Monitoring Network

RMT mobilized to the site in November 2005 and October 2006, first to install the infrastructure for the pilot system and then to conduct the pilot study. Caustic-catalyzed sodium persulfate was injected through a total of 25 polyvinyl chloride (PVC) injection points. The injection points were nested to address shallow, intermediate, and deep intervals. The intent was to introduce sodium persulfate into the unsaturated soil, as well as two saturated intervals. Test injections were conducted to determine if the caustic-catalyzed sodium persulfate solution was robust enough to address the residual source concentrations within the former degreasing room soil and groundwater.

To facilitate shallow distribution of the sodium persulfate within the unsaturated soil, 1-inch diameter injection points were installed to a depth of approximately 18-inches below ground surface (bgs). To facilitate vertical distribution of the sodium persulfate into the capillary fringe and saturated zone, 1-inch diameter injection points were installed to depths of approximately 10 feet and 15 feet bgs, respectively. These intermediate and deep injection points were constructed with a 5-foot screen at the target depth.

To evaluate the effectiveness of the pilot test activities, 11 existing monitoring wells (located both upgradient and downgradient of the former vapor degreasing area) were selected and sampled for laboratory analysis. The locations of these monitoring wells are shown on Figure 1 (Attachment 2).

Oxidant Delivery System and Injection Activities

The sodium persulfate oxidant solution and sodium hydroxide catalyst were delivered to the site in liquid form and combined at the site to produce a mixture of 20 percent (by weight) solution sodium persulfate and 5 percent (by weight) solution sodium hydroxide. The caustic-catalyzed sodium persulfate solution, once blended, was transferred to a 400-gallon portable polyethylene tank mounted

onto a trailer for transport to the former vapor degreasing room. The solution was then pumped directly into the injection points. Control of each injection point was achieved with flow control valves and connections at each injection point.

Sodium persulfate injections were conducted in the former vapor degreasing room over a four week timeframe – October 16 through November 10, 2006. During this time, a total of 15,600 gallons of caustic-catalyzed sodium persulfate was pumped into the subsurface of the former vapor degreasing room.

Baseline Sampling Activities

Before sodium persulfate was injected into the soil and groundwater, baseline groundwater samples were collected. Baseline groundwater samples were collected between October 9 and October 10, 2006. Groundwater samples were collected from a total of 11 wells and analyzed for the compounds summarized in Table 2 (see Attachment 1). Baseline groundwater analytical results are summarized on Table 3 (see Attachment 1). A CVOC plume interpretation is depicted on Figure 1 (see Attachment 2). Baseline sampling results were augmented with the data obtained from the most recent sampling event (August 2006) collected from wells located in the dilute portion of the plume to provide a more comprehensive interpretation of the groundwater conditions prior to introducing caustic-catalyzed sodium persulfate into the former vapor degreasing room. The distribution of CVOCs observed during the baseline sampling event is consistent with previous observations provided by RMT.

Post-Injection Performance Monitoring Results

Post-injection performance groundwater samples were collected between December 13 and December 14, 2006. An isoconcentration map, prepared using the post-injection CVOC concentrations is provided as Figure 2 (see Attachment 2). Groundwater samples were also collected from a total of 17 wells located in the dilute portion of the plume downgradient of the former vapor degreasing area. Data from these wells were used to refine the interpretation of CVOC distribution. Data from these wells were also used to confirm that oxidation of the constituents of interest was occurring and introduction of the caustic- catalyzed sodium persulfate was not simply redistributing the constituents along the flow path. Pre- and post-injection performance groundwater sampling results, broken down by compound, are presented on Figure 3 through Figure 8 (see Attachment 2). The following items represent significant findings based on RMT's evaluation of the data:

- Concentrations of CVOCs observed in samples collected from PMP-03 (located directly within the pilot study treatment area), as well as concentrations of CVOCs observed in samples collected from MP-19, 20, and 21 (located directly downgradient of the pilot test area), declined significantly following the injection of sodium persulfate. The change in concentrations from baseline to the post injection sampling is presented on Figures 3 through 6 (see Attachment 2). The spatial distribution of the total CVOCs is shown in Figure 1 and Figure 2 (see Attachment 2).
- Concentrations of total petroleum hydrocarbons (TPH) (both diesel range and gasoline range) also declined significantly in the samples collected from these source area and downgradient wells

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following injection of sodium persulfate. The change in concentrations of these constituents from baseline to the post injection sampling is presented in Figure 7 and Figure 8 (see Attachment 2).

- With the exception of samples collected from well MW-13S (located just upgradient of the pilot test area), concentrations of CVOCs in the performance wells located further downgradient of the pilot test area also declined dramatically. Concentrations of TPH in these wells also either declined or remained relatively unchanged.
- The low levels of CVOCs observed in the monitoring wells that were sampled outside of the pilot test area confirmed that oxidation of the organics had occurred and no redistribution of mass had taken place.
- Increases in specific conductivity and sulfate, as well as the observed decreases in CVOC and TPH concentrations in the monitoring wells are all evidence that oxidation of the constituents of interest has taken place.

Based on RMT's evaluation of the groundwater quality data, caustic-catalyzed sodium persulfate injection has proven to be an effective treatment technology for reducing organics concentrations in the groundwater of this site. Ongoing evaluation of the effectiveness of the sodium persulfate in reducing residual source level organics concentrations within the unsaturated soil will be conducted during the upcoming groundwater sampling event. RMT will be specifically looking for any rebound effects in the groundwater of the source area and immediate downgradient areas.

Based on the positive outcome of the sodium persulfate injection pilot studies and the observed reduction of organics concentrations in groundwater by as much as 90 percent, RMT believes that this technology is appropriate for wider application at the site. RMT is currently in the process of conducting another focused pilot study using sodium persulfate oxidants in the area of the southern VOC plume. The primary objective of this pilot study is to evaluate the effectiveness of applying this oxidation technology to aggressively and efficiently reduce source level concentrations of CVOCs (>60 mg/L), that are composed primarily of tetrachloroethene. The results of this study will be documented in a subsequent technical memorandum.

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Attachment 1
Tables

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Table 1
Summary of Pilot Study Activities and Implementation Schedule –
Former Vapor Degreasing Room
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products Inc.

EVENT	DATE
Installation of injection vertical injection wells	November 2005
Baseline groundwater sampling	October 9 – October 10, 2006
Active oxidant injections	October 16 – November 10, 2006
Performance groundwater sampling	December 13 – December 14, 2006

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Table 2
Summary of Pilot Test Monitoring Program
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products Inc.

WELL NAME	ANALYTICAL CONSTITUENTS OF INTEREST	FIELD PARAMETERS
Pilot Test Area Performance Monitoring Points: MP-18, MP-19, MP-20, MP-21, MP-22, MP-23, MP-24,MW-13S, MW-18A PMP-03, PMP-04 **Other Monitoring Points:** MP-03, MP-04, MP-06, MP-09, MP-14, MP-16, MP-25S, MP-25D, MP-26S, MP-26D, MP-28S, MP-28D, MP-30, MW-20C, MW-24S, PMP-01, PMP-02	**VOCs** tetrachloroethene, trichloroethene, *cis*-1,2-dichloroethene, and vinyl chloride **Total Petroleum Hydrocarbons** DRO GRO **Inorganics** sulfate chloride	Temperature, pH, and Specific Conductivity

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Table 3
Summary of Constituents of Interested - Vapor Degreasing Area
October - December 2006
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products Inc.

PARAMETER[1]	LOCATION/SAMPLE DATE					
	MP-18		MP-19		MP-20	
	10/09/06	12/14/06	10/09/06	12/14/06	10/09/06	12/14/06
Volatile Organics						
cis-1,2-Dichloroethene	**0.141**	**0.0744**	**0.541**	**0.0298**	**0.341**	**0.0159**
Tetrachloroethene	**0.125**	**0.0246**	**1.32**	**0.143**	**0.62**	**0.0205**
Trichloroethene	**0.0618**	**0.0156**	**1.56**	**0.0524**	**0.976**	**0.0243**
Vinyl chloride	**0.05**	**0.0973**	**0.0888**	<0.01	**0.0467**	<0.01
Petroleum Hydrocarbons						
Diesel range organics	**3.3**	**3.5**	**1.5**	<0.2	**1.1**	<0.3
Gasoline range organics	**0.7**	**0.5**	**0.8**	<0.4	**0.5**	**0.1**
Wet Chemistry						
Chloride	**50.9**	<200 R01	**30.9**	<100 R01	**49.5**	<200 R01
Sulfate	**172**	**428**	**54.3**	**2090**	**156**	**21400**
Field Indicators						
Conductance, specific (uS/cm)	743	877	294	9445	572	34160
Dissolved Oxygen	1.76	8.21	1.06	11.58	2.73	10.97
ORP (mV)	-72	204.1	6.7	334.7	16.1	151.4
pH (Standard Units)	5.99	5.82	5.71	4.09	5.82	2.56
Temperature (°C)	17.2	15.66	17.72	17.08	18.26	17.94
Turbidity (NTU)	NA	70	NA	100	NA	30

PARAMETER[1]	LOCATION/SAMPLE DATE					
	MP-21		MP-22		MP-23	
	10/09/06	12/14/06	10/10/06	12/14/06	10/10/06	12/14/06
Volatile Organics						
cis-1,2-Dichloroethene	**1**	<0.05	**0.0873**	**0.0891**	**0.222**	**0.228**
Tetrachloroethene	**0.114**	<0.05	**0.0127**	**0.0074**	**0.0638**	**0.126**
Trichloroethene	**3.22**	<0.05	**0.141**	**0.099**	**0.187**	**0.196**
Vinyl chloride	<0.05	<0.05	**0.0099**	**0.0247**	**0.104**	**0.0846**
Petroleum Hydrocarbons						
Diesel range organics	**3.3**	**0.4**	**1.7**	**1.5**	**1.9**	**1.6**
Gasoline range organics	**0.6**	**0.2**	**0.7 D-35**	**0.6**	**0.5 D-35**	<0.4
Wet Chemistry						
Chloride	**120**	<200 R01	**64.3**	<100 R01	**31.2**	<200 R01
Sulfate	**281**	**24900**	**4.2**	<100	**45.7**	<200
Field Indicators						
Conductance, specific (uS/cm)	827	38380	395	417	382	411
Dissolved Oxygen	3.65	10.39	1.75	2.16	3.6	3.6
ORP (mV)	138	304.7	-48.5	83.2	-13.6	79.8
pH (Standard Units)	4.27	2.73	6.06	6.01	6.1	6.14
Temperature (°C)	18.4	17.89	17.68	14.89	17.54	16.48
Turbidity (NTU)	NA	120	NA	NA	NA	NA

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Table 3
Summary of Constituents of Interested - Vapor Degreasing Area
October - December 2006
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products Inc.

PARAMETER[1]	LOCATION/SAMPLE DATE					
	MP-24		MW-13S		MW-18A	
	10/10/06	12/14/06	10/10/06	12/13/06	10/10/06	12/13/06
Volatile Organics						
cis-1,2-Dichloroethene	**0.142**	**0.12**	**0.0959**	**0.509**	**0.226**	**0.0686**
Tetrachloroethene	**0.421**	**0.266**	**0.846**	**3.38**	<0.001	<0.01
Trichloroethene	**4.21**	**2.08**	**0.119**	**0.336**	**0.0132**	**0.0121**
Vinyl chloride	<0.05	<0.05	**0.165**	**0.0766**	**0.0357**	**0.0115**
Petroleum Hydrocarbons						
Diesel range organics	**1**	**2.5**	**1.2**	**2.8**	**3.4**	**1.8**
Gasoline range organics	**1.4 D-35**	**0.9**	**0.4 D-35**	**1.2**	**0.2 D-35**	<0.4
Wet Chemistry						
Chloride	**27.1**	<100 R01	**26.4**	<50.0 R01	**70.8**	**128**
Sulfate	**399**	**690**	**21.9**	**122**	**1650**	**2370**
Field Indicators						
Conductance, specific (uS/cm)	813	1099	363	433	2722	3012
Dissolved Oxygen	1.57	4.76	1.92	3.86	1.64	5.27
ORP (mV)	121.2	285.4	-51.8	267.3	-64.4	-68.7
pH (Standard Units)	4.19	3.93	6.3	5.71	5.94	5.97
Temperature (°C)	17.9	16.77	17.27	14.94	18.76	15.92
Turbidity (NTU)	NA	45	NA	450	NA	240

PARAMETER[1]	LOCATION/SAMPLE DATE			
	PMP-03		PMP-04	
	10/10/06	12/13/06	10/09/06	12/14/06
Volatile Organics				
cis-1,2-Dichloroethene	**2.32**	**0.154**	**0.0844**	**0.0677**
Tetrachloroethene	**0.033**	<0.02	**0.0046**	**0.0042**
Trichloroethene	**0.144**	<0.02	**0.027**	**0.037**
Vinyl chloride	**1.13**	**0.0958**	**0.0014**	**0.0013**
Petroleum Hydrocarbons				
Diesel range organics	**2.5**	**1.3**	**2.5**	**2.4**
Gasoline range organics	**0.9 D-35**	**0.1**	**0.2**	**0.2**
Wet Chemistry				
Chloride	**64.2**	**102**	**10.5**	<100 R01
Sulfate	**81.7**	**14500**	**1050**	**1100**
Field Indicators				
Conductance, specific (uS/cm)	461	4579	1434	1446
Dissolved Oxygen	2.81	4.22	2.98	6.74
ORP (mV)	-39.9	199.6	36.6	311.3
pH (Standard Units)	6.32	3.21	5.52	5.19
Temperature (°C)	18.21	19.23	19.97	18.01
Turbidity (NTU)	NA	15	NA	130

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Table 3
Summary of Constituents of Interested - Vapor Degreasing Area
October - December 2006
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products Inc.
Qualifiers

(1) Analytical results are reported in milligrams per liter (mg/L) unless otherwise noted.

D-35 Sample does not display a fuel pattern. Sample contains several discreet peaks.

R01 The Reporting Limit for this analyte has been raised to account for matrix interference.

< - Concentration less than the Quantitation Limit.

NA - Not analyzed.

Bolding indicates sample detection.

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Attachment 2
Figures

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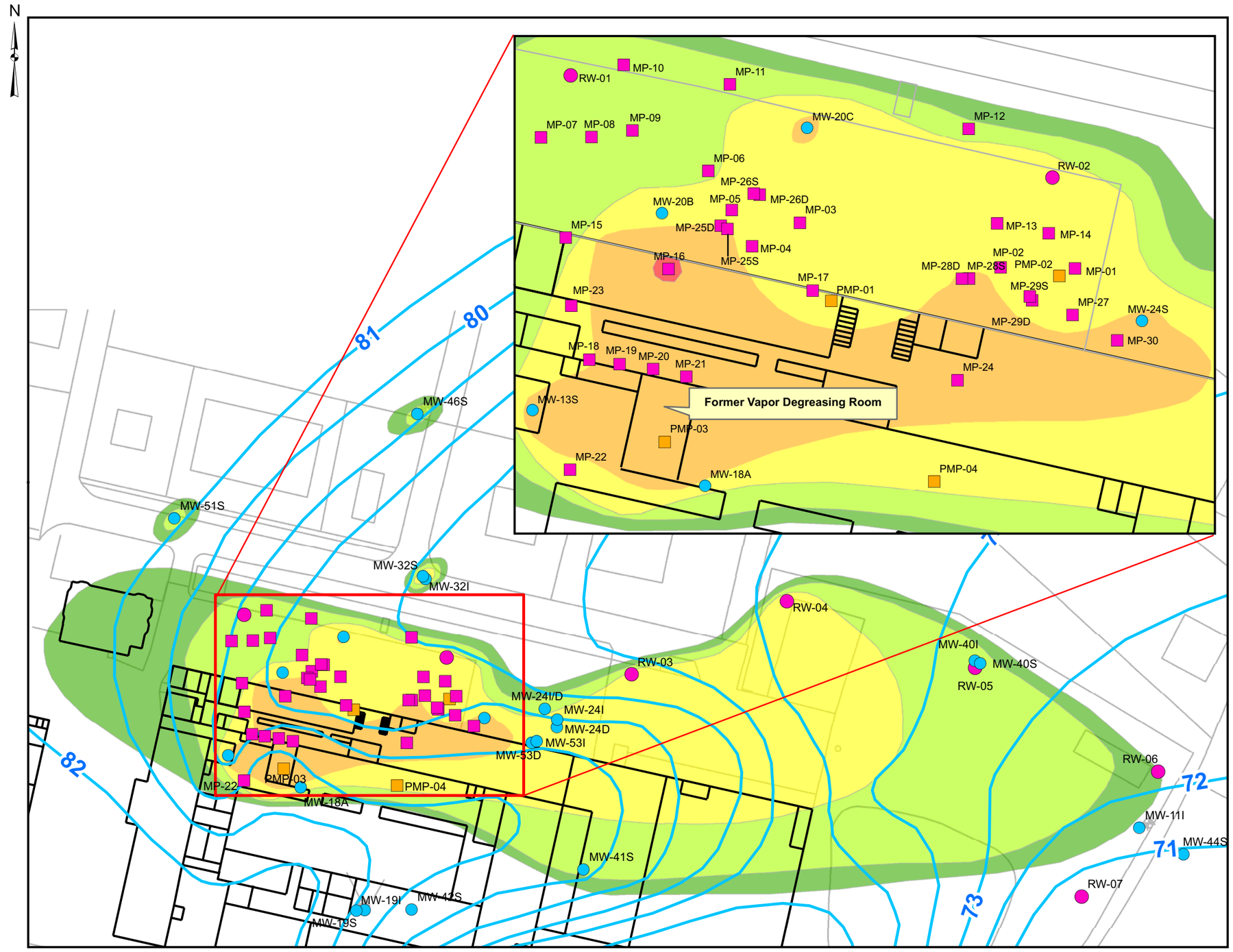

LEGEND

- Monitoring Point
- Performance Monitoring Point
- Monitoring Well
- Recovery Well
- Water Table - August 2006

Dissolved Chlorinated Ethene Concentration (mg/L)
(PCE, TCE, cis-1,2-DCE, Vinyl Chloride)

- 0.005 - 0.01
- 0.01 - 0.1
- 0.1 - 1
- 1 - 10
- 10- 30

NOTES

Extent of VOC plume (outside of injection area) based on August 2006 data.

NO.	BY	DATE	REVISION	APP'D.
3.				
2.				
1.				

MTD PRODUCTS, INC.
WESTFIELD, MASSACHUSETTS

DISSOLVED SOLVENTS IN GROUNDWATER
FORMER VAPOR DEGREASING ROOM
OCTOBER 2006

DRAWN BY: TLH	SCALE AS NOTED	PROJECT NO.: 00-71360.21
CHECKED BY: BCB		FILE NO.:
APPROVED BY: MAM	DATE PRINTED:	FIGURE NO.: 1
DATE: MARCH 2007		

RMT
Patewood Plaza One, Suite 100
30 Patewood Drive
Greenville, SC 29615
(864) 281-0030

0 100 Feet

Map Document: (P:\Hydro\71360\ArcGIS9\NEndVaporDegreasingBaselineOct06.mxd)
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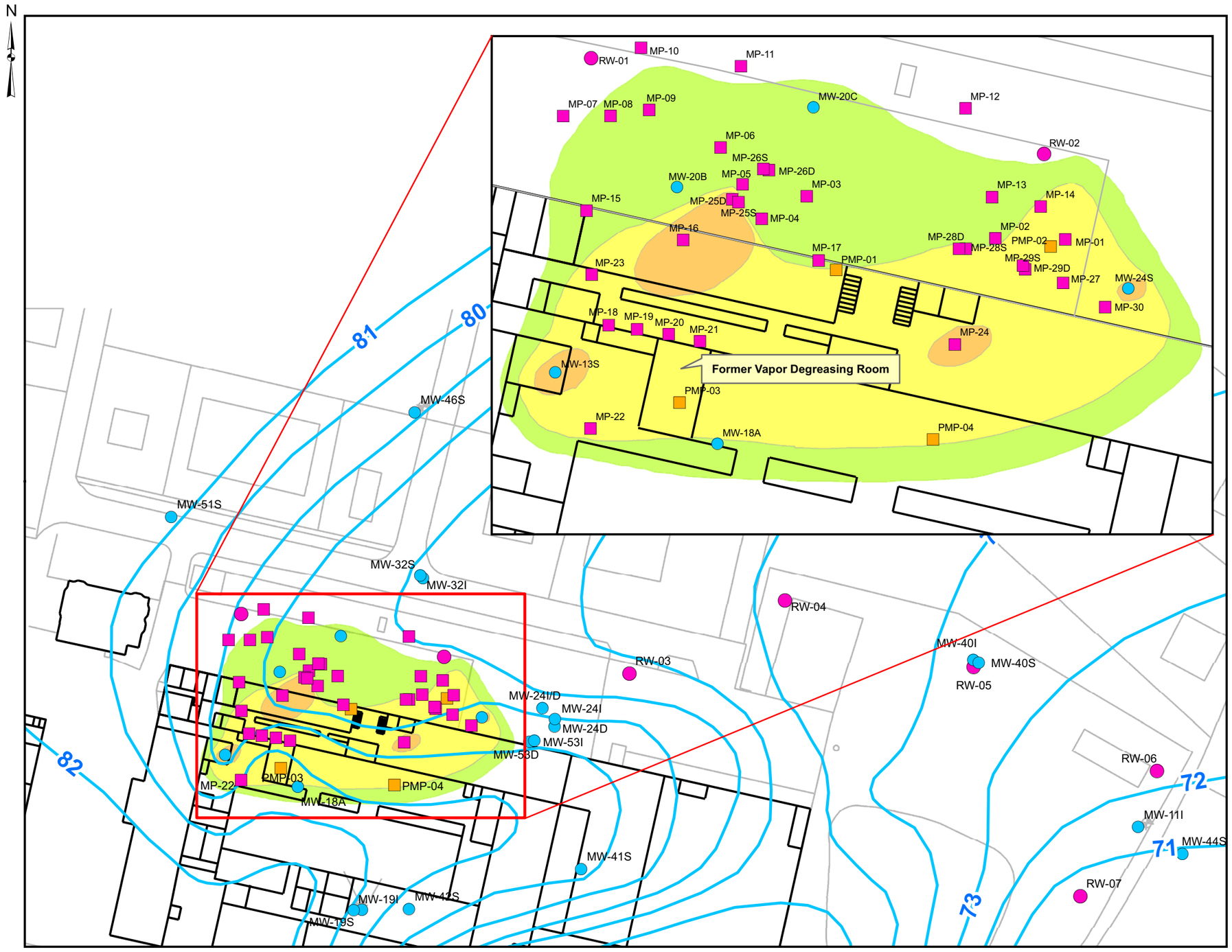

LEGEND

- Monitoring Point
- Performance Monitoring Point
- Monitoring Well
- Recovery Well
- Water Table - August 2006

Dissolved Chlorinated Ethene Concentration (mg/L)
(PCE, TCE, cis-1,2-DCE, Vinyl Chloride)

- 0.01 - 0.1
- 0.1 - 1
- 1 - 10

0 100 Feet

Map Document: (P:\Hydro\71360\ArcGIS9\NEndVaporDegreasingPerformanceDec06.mxd)
3/2/2007 -- 3:30:39 PM

NO.	BY	DATE	REVISION	APP'D.
3.				
2.				
1.				

MTD PRODUCTS, INC.
WESTFIELD, MASSACHUSETTS

DISSOLVED SOLVENTS IN GROUNDWATER
FORMER VAPOR DEGREASING ROOM
DECEMBER 2006

DRAWN BY: TLH	SCALE AS NOTED	PROJECT NO.: 00-71360.21
CHECKED BY: BCB		FILE NO.:
APPROVED BY: MAM	DATE PRINTED:	FIGURE NO.: 2
DATE: MARCH 2007		

RMT
Patewood Plaza One, Suite 100
30 Patewood Drive
Greenville, SC 29615
(864) 281-0030

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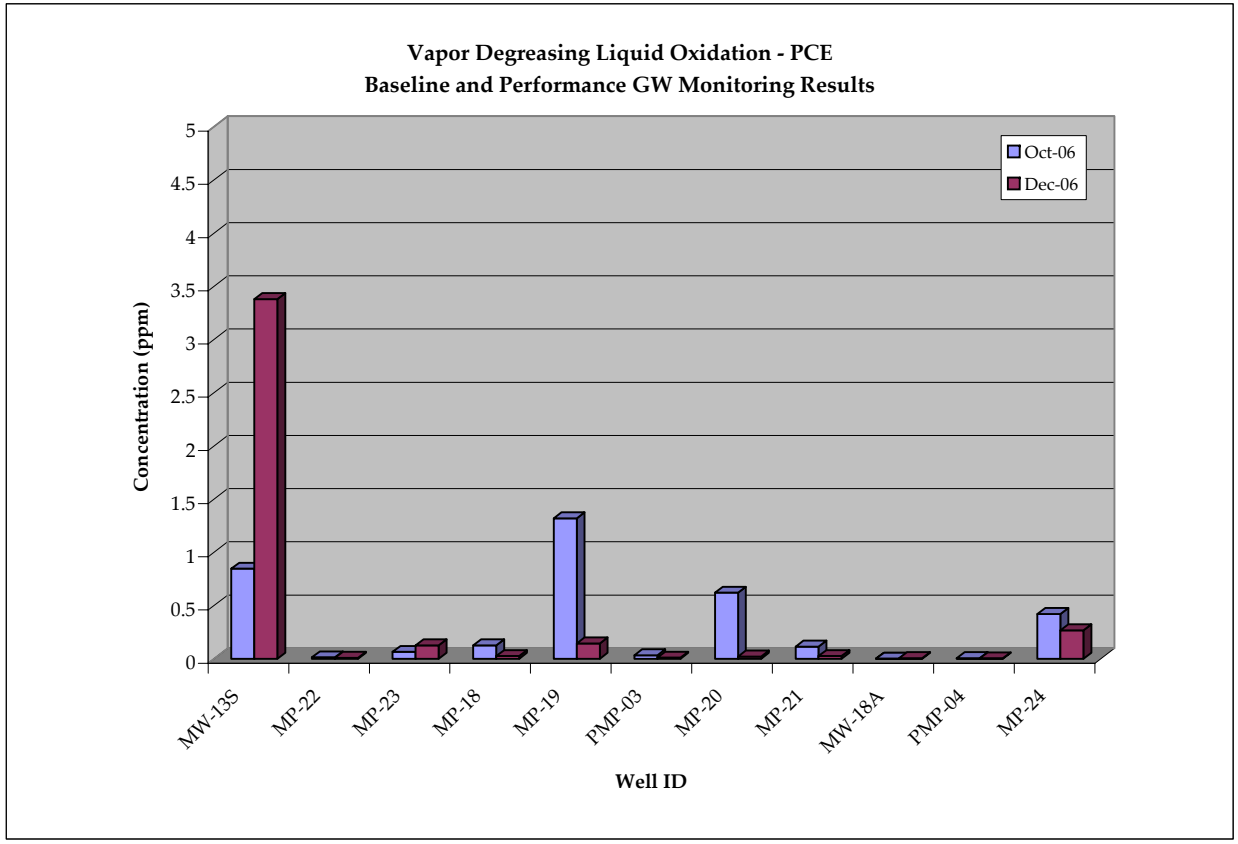
Figure 3
Tetrachloroethene
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products, Inc.



Well ID	Tetrachloroethene	
	Oct-06 Baseline	Dec-06 Performance
MW-13S	**0.846**	**3.38**
MP-22	**0.0127**	**0.0074**
MP-23	**0.0638**	**0.126**
MP-18	**0.125**	**0.0246**
MP-19	**1.32**	**0.143**
PMP-03	**0.033**	< 0.01
MP-20	**0.62**	**0.0205**
MP-21	**0.114**	< 0.025
MW-18A	< 0.0005	< 0.005
PMP-04	**0.0046**	**0.0042**
MP-24	**0.421**	**0.266**

< - Concentration less than the Quantitation Limit.
Bolding indicates sample detection.

Note: Non Detects (<) are graphed
at one half the detection limit (as shown on table)

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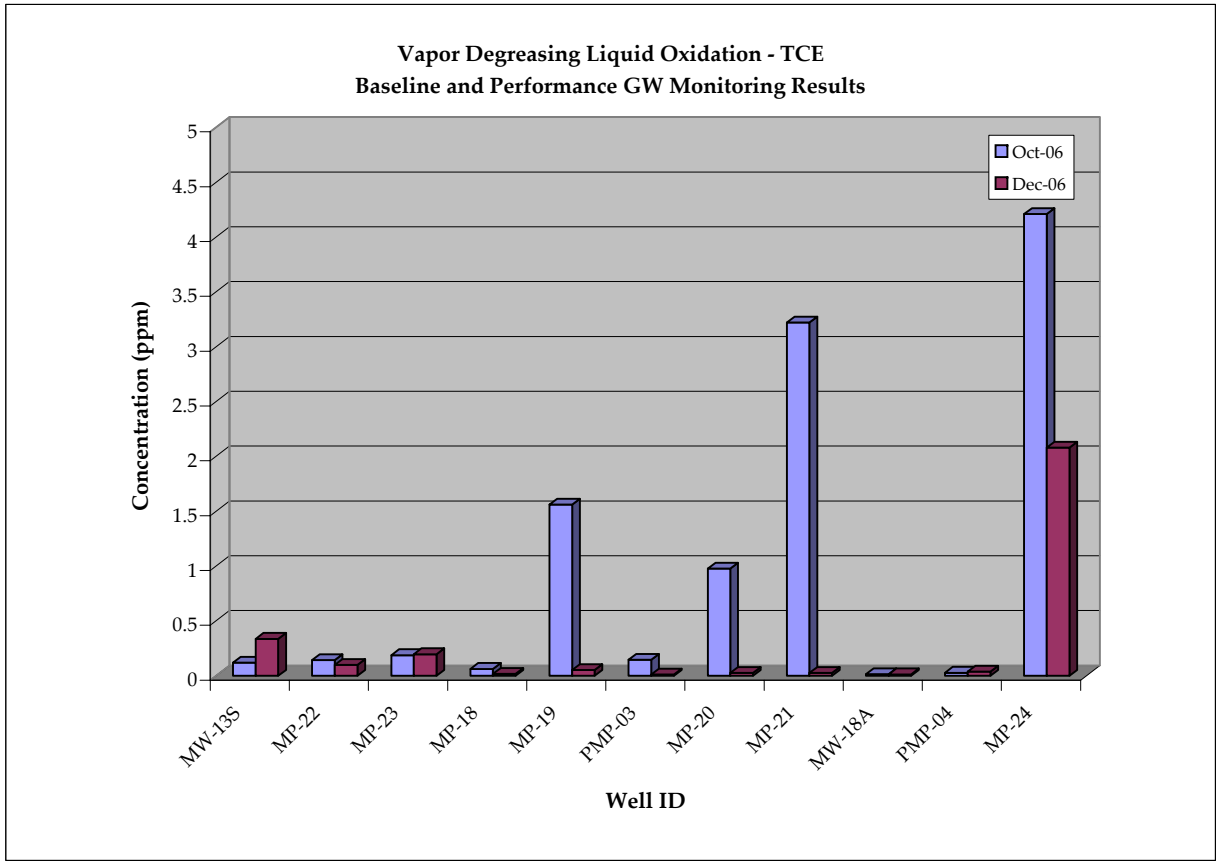
Figure 4
Trichloroethene
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products, Inc.



Well ID	Trichloroethene	
	Oct-06 Baseline	Dec-06 Performance
MW-13S	**0.119**	**0.336**
MP-22	**0.141**	**0.099**
MP-23	**0.187**	**0.196**
MP-18	**0.0618**	**0.0156**
MP-19	**1.56**	**0.0524**
PMP-03	**0.144**	< 0.01
MP-20	**0.976**	**0.0243**
MP-21	**3.22**	< 0.025
MW-18A	**0.0132**	**0.0121**
PMP-04	**0.027**	**0.037**
MP-24	**4.21**	**2.08**

< - Concentration less than the Quantitation Limit.
Bolding indicates sample detection.

Note: Non Detects (<) are graphed
at one half the detection limit (as shown on table)

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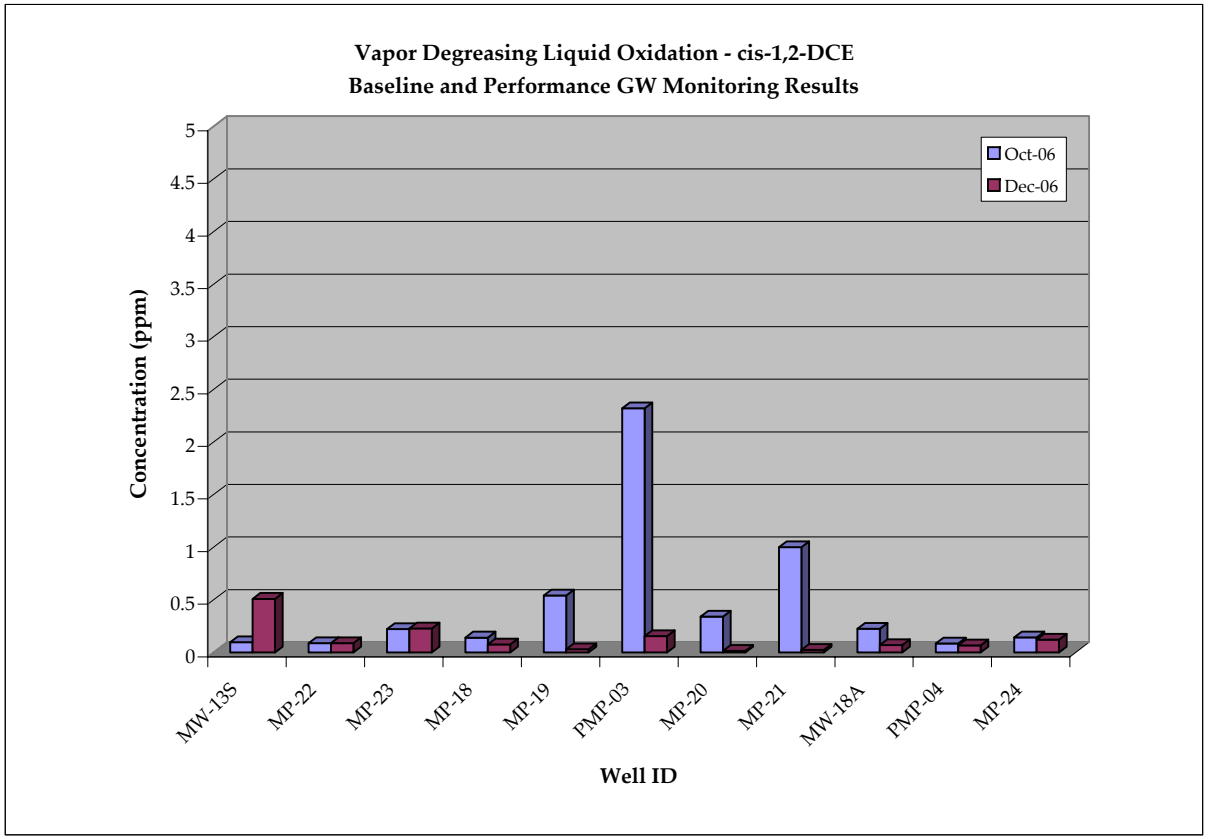
Figure 5
Cis-1,2-Dichloroethene
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products, Inc.



Well ID	cis-1,2-Dichloroethene	
	Oct-06 Baseline	Dec-06 Performance
MW-13S	**0.0959**	**0.509**
MP-22	**0.0873**	**0.0891**
MP-23	**0.222**	**0.228**
MP-18	**0.141**	**0.0744**
MP-19	**0.541**	**0.0298**
PMP-03	**2.32**	**0.154**
MP-20	**0.341**	**0.0159**
MP-21	**1.00**	< 0.025
MW-18A	**0.226**	**0.0686**
PMP-04	**0.0844**	**0.0677**
MP-24	**0.142**	**0.12**

< - Concentration less than the Quantitation Limit.
Bolding indicates sample detection.

Note: Non Detects (<) are graphed
at one half the detection limit (as shown on table)

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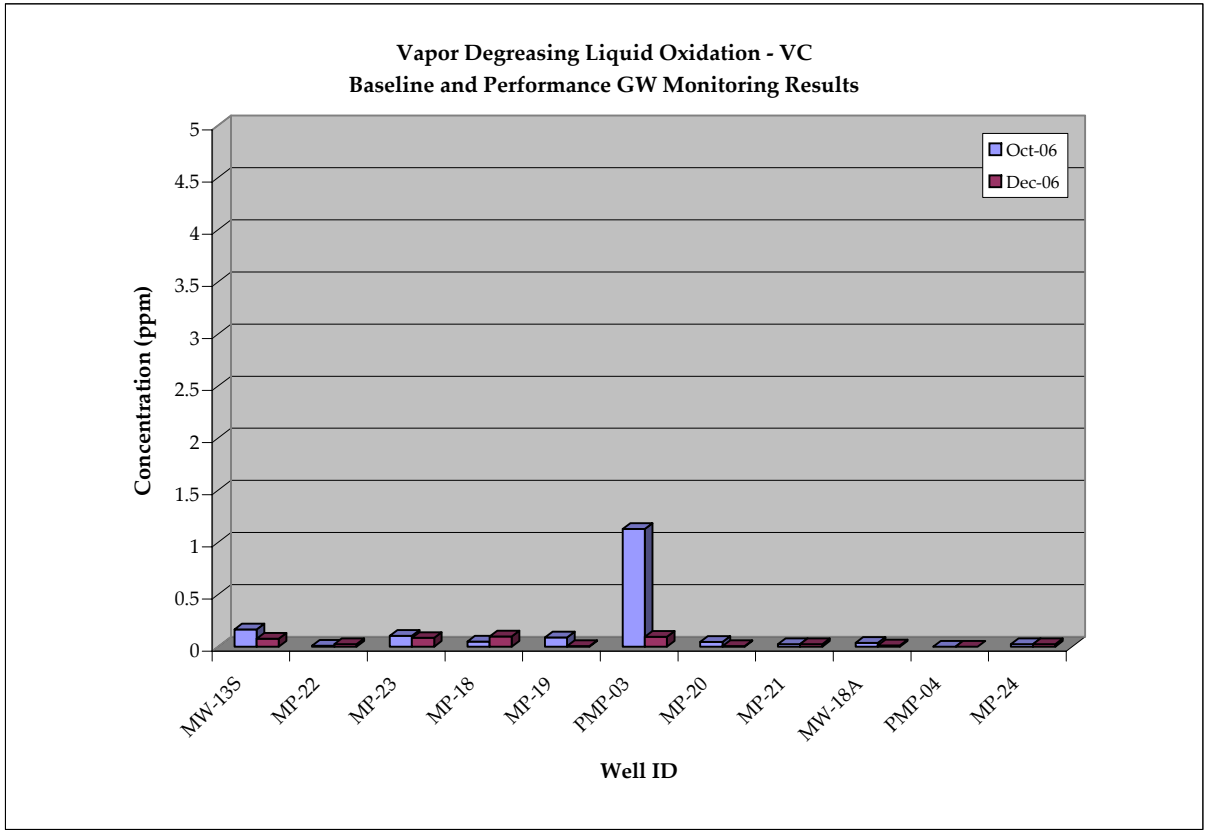
Figure 6
Vinyl Chloride
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products, Inc.



Well ID	Vinyl chloride	
	Oct-06 Baseline	Dec-06 Performance
MW-13S	**0.165**	**0.0766**
MP-22	**0.0099**	**0.0247**
MP-23	**0.104**	**0.0846**
MP-18	**0.05**	**0.0973**
MP-19	**0.0888**	< 0.005
PMP-03	**1.13**	**0.0958**
MP-20	**0.0467**	< 0.005
MP-21	< 0.025	< 0.025
MW-18A	**0.0357**	**0.0115**
PMP-04	**0.0014**	**0.0013**
MP-24	< 0.025	< 0.025

< - Concentration less than the Quantitation Limit.
Bolding indicates sample detection.

Note: Non Detects (<) are graphed
at one half the detection limit (as shown on table)

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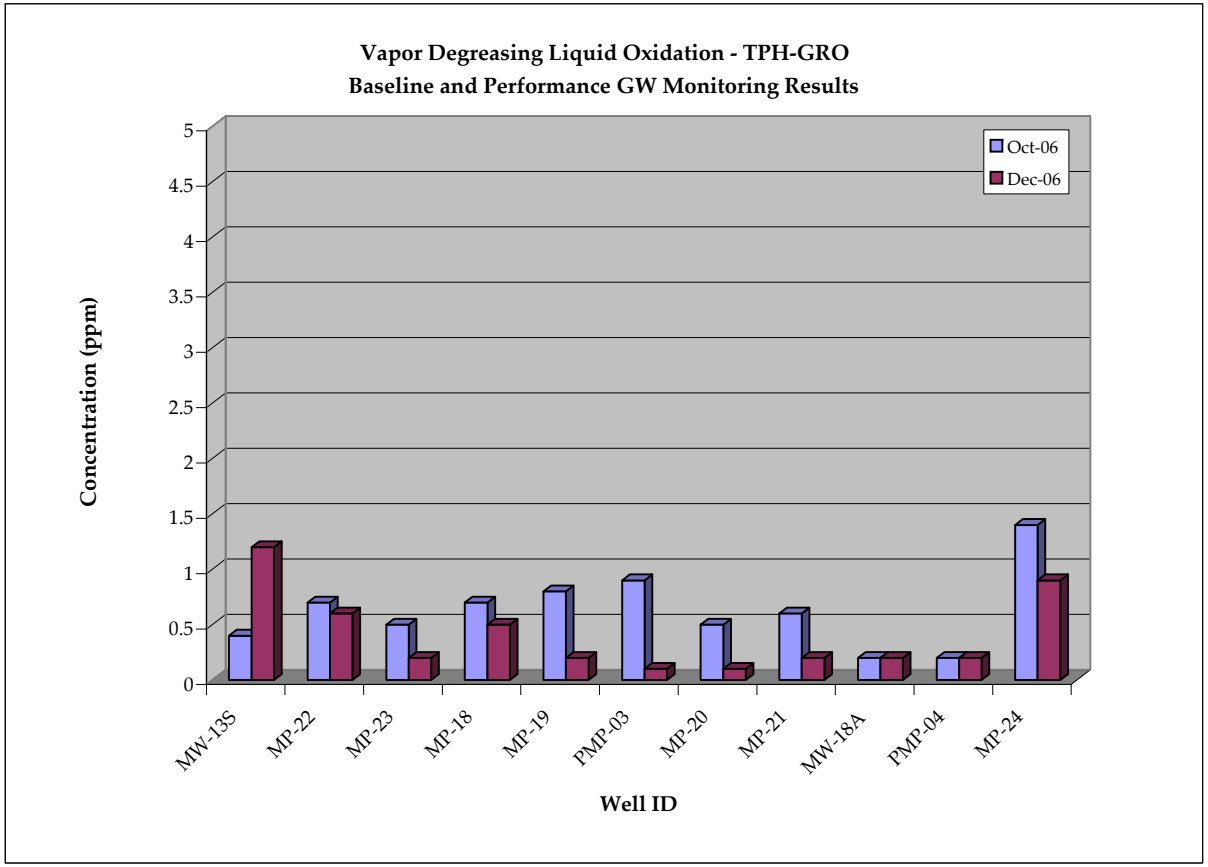
Figure 7
Total Petroleum Hydrocarbon - GRO
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products, Inc.



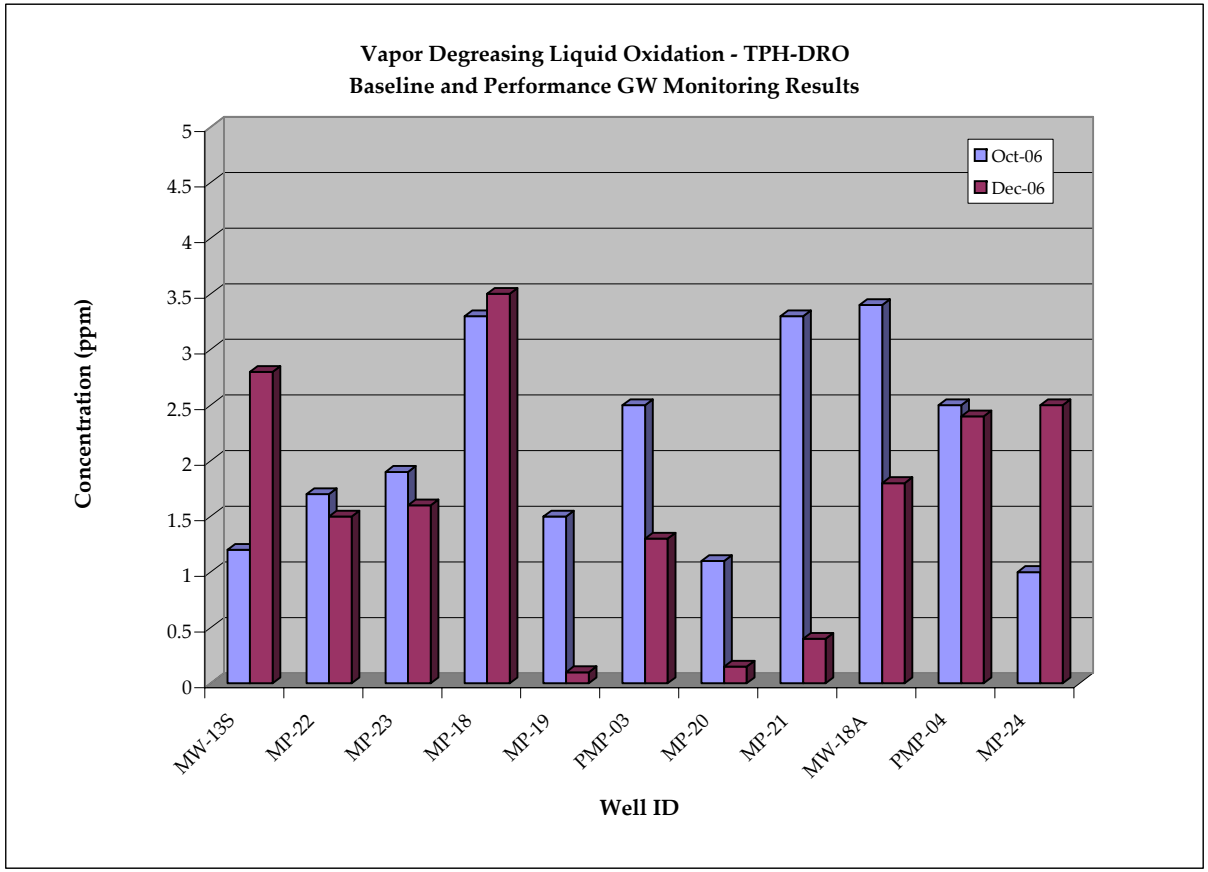
Well ID	TPH-GRO	
	Oct-06 Baseline	Dec-06 Performance
MW-13S	**0.4**	**1.2**
MP-22	**0.7**	**0.6**
MP-23	**0.5**	< 0.2
MP-18	**0.7**	**0.5**
MP-19	**0.8**	< 0.2
PMP-03	**0.9**	**0.1**
MP-20	**0.5**	**0.1**
MP-21	**0.6**	**0.2**
MW-18A	**0.2**	< 0.2
PMP-04	**0.2**	**0.2**
MP-24	**1.4**	**0.9**

< - Concentration less than the Quantitation Limit.
Bolding indicates sample detection.

Note: Non Detects (<) are graphed
at one half the detection limit (as shown on table)

Close File

Figure 8
Total Petroleum Hydrocarbon - DRO
Columbia Manufacturing Facility, Westfield, Massachusetts
MTD Products, Inc.



Well ID	TPH-DRO	
	Oct-06 Baseline	Dec-06 Performance
MW-13S	**1.2**	**2.8**
MP-22	**1.7**	**1.5**
MP-23	**1.9**	**1.6**
MP-18	**3.3**	**3.5**
MP-19	**1.5**	< 0.1
PMP-03	**2.5**	**1.3**
MP-20	**1.1**	< 0.15
MP-21	**3.3**	**0.4**
MW-18A	**3.4**	**1.8**
PMP-04	**2.5**	**2.4**
MP-24	**1**	**2.5**

< - Concentration less than the Quantitation Limit.
Bolding indicates sample detection.

Note: Non Detects (<) are graphed
at one half the detection limit (as shown on table)