Miller Springs Remediation Management, Inc.
An affiliate of Glenn Springs Holdings, Inc.

Rick Passmore
Project Manager
Direct Dial (859) 543-2152

2480 Fortune Drive, Suite 300
Lexington, KY 40509
Facsimile (859) 543-2171

January 15, 2008

Mr. Michael Negrelli
Western New York Remediation Section
Emergency and Remedial Response Division
United States Environmental Protection Agency
Region II
290 Broadway, 20th Floor
New York, NY 10007-1866

Dear Mr. Negrelli:

Re: Quarterly Report – Fourth Quarter 2007 (October through December)
And Evaluation of First Year Operation of Phase I Biosparge System
Administrative Orders Hooker Chemical/Ruco Polymer Corporation Site
Index Nos. II-CERCLA-80216, II-CERCLA-94-0210, and II-CERCLA-02-2001-2018

Consistent with Sections 42, 91, and 55 of the above-referenced orders and the USEPA approved 100% Biosparge System Design Report, this letter and attached Table 1 provide the Quarterly Progress Report covering October through December 2007. This report covers OU-1, OU-2 and OU-3. Please note that the next Quarterly Progress Report will be submitted by April 15, 2008 and will cover January through March 2008.

This quarterly report also presents an evaluation of the first year of operation of Phase I of the biosparge system and the proposed modifications to the design and operations of the biosparge system. The design modifications will be applied to the remainder of the biosparge system which is still to be constructed and the operations modifications will be applied to the entire biosparge system.

Quarterly Progress Report

The following activities were performed in October through December 2007.

Operable Unit-1

A copy of the USEPA document titled "Approval of the Remedial Action Report for Operable Unit One" dated September 28, 2007 was received on November 14, 2007. Based upon the conclusions of this document, work on Operable Unit One is now complete. No further actions or reporting regarding Operable Unit One are required.

It is acknowledged that MSRMI is continuing to work cooperatively with Bayer on some investigatory activities that are still ongoing between Bayer and the NYSDEC. The activities are being completed in conjunction with the RCRA closure of the Site and do not have an impact on the Superfund Site closing or the EPA ruling that Operable Unit One is now complete.

Operable Unit-2

A conference call was held on June 18, 2007 with the USEPA, NYSDEC, MSRMI, and CRA. During the call, it was confirmed that all work associated with the OU-2 Therminol Spill has been successfully completed. Awaiting USEPA written concurrence of such.

Operable Unit-3

Supplemental Treatment System

- Operation and monitoring of the GP-1/GP-3 supplemental treatment system continued.

Biosparge System

- The Phase I system is operating with air injection occurring weekly at each well for eight hours rather than monthly for eight hours. The one exception is for IW16-DIA, which is experiencing a high back pressure, even after redevelopment. In order to resolve this situation, the following activities were performed in November in air injection well IW16-DIA and water injection well IW16-IDL using temporary connections:

  i) injection of water via the air injection well IW16-DIA; and
  ii) injection of air via the liquid injection well IW16-DIL.

  It was observed that the air could be injected via the liquid injection well. Based on the results of the testing, the temporary connections are being used to inject air into the former water delivery well. No water injection is occurring at this time. It is planned to convert the temporary connections to hard piping in the next quarter.
- The quarterly performance monitoring of the biosparge system was performed from October 8 to 18, 2007. The groundwater and soil gas analytical results and QA/QC review for the quarterly performance monitoring are attached.
- Injection of treated water from Northrop's Tower 96 (GP-1/GP-3) system started on January 22, 2007 at a flow rate of 10 gpm and has been ongoing since that time. The injection rate was increased to 15 gpm in July 2007 to overcome some of the back pressure created by the air injections.
- The specifications and drawings for the north fence were provided to Steel Equities on September 7 and 10, 2007. Comments were received from Steel Equities on September 24, 2007. Steel Equities has informed CRA that they plan to have all the subsurface Site works completed in early 2008. It is planned to install some of the underground components of the north fence in conjunction with the other subsurface works.

- Notification of the fifth quarterly Phase I biopsparge system sampling event scheduled for the week of January 21, 2008 was emailed to the USEPA and their oversight contractor on January 2, 2008.

Evaluation of First Year Operation of Phase I Biosparge System

This section presents an evaluation of the first year of operation of the Phase I Biosparge System. A layout of the system is shown on Figure 2.

A summary of the results of the biosparge system performance monitoring (see Table 2) and figures showing dissolved oxygen (DO), VCM, and total VOC concentrations are attached. In summary, these results show that DO is increasing in the monitoring wells even for those wells primarily dependent upon air injection well IW-16DIA. Increases in DO are being observed which confirm that the 100-foot spacing between the injection wells is appropriate. As expected, the increases are occurring at different rates in the wells. Additional discussion regarding these results is provided below.

The results presented on the figures show:

i) After the initial 40-hour air injection in October 2006, the DO concentrations in all the D1 wells, except MW-61D1 and MW-81D1, and all the D2 wells, except MW-88D2, increased quickly;

ii) Thereafter, the DO concentrations have fluctuated, however, the target concentration of >2 mg/L DO has been achieved in all wells except MW-82D1 and MW-88D1;

iii) Well nest MW-82 is located approximately 50 feet east (cross-gradient) of the easternmost Phase I injection well nest (IW-19) and well nest MW-88 is located approximately 70 feet southeast (cross-gradient/downgradient) of IW-19. It is anticipated that once IW-20, to be located 100 feet east of IW-19, is installed and becomes operational, the DO concentrations in these wells will achieve the target DO concentration;

iv) Even without the injection of air via the shallower well IW-16D1A, the DO concentrations in the shallow monitoring wells of well nests MW-83 (located 20 feet downgradient of IW-16) and MW-87 (located 50 feet cross-gradient of IW-16) achieved the target DO concentration by October 2007. It is expected that the DO concentrations will further increase coinciding with the start of air injection via well IW-16DIL (located in the same interval as IW-16DIA) which began in November 2007;

v) With regard to the TVOC and VCM concentration, the results for wells MW-61, MW-81, MW-82, and MW-88 show that mixing is occurring between the two monitored intervals. Fluctuations in the concentrations are occurring with an overall decreasing concentration trend. The TVOC and VCM concentrations for the remaining wells appear to show that mixing is limited, if it is occurring at all. While the concentrations fluctuate, the overall trend appears to be one of decreasing concentrations.

vi) Water from Northrop's Tower 96 treatment system has been used as the supply of oxygenated water for injection into the biosparge treatment zone. The total volume of water injected into the formation since the start of water injection through to the end of December 2007 is approximately 3,096,000 gallons. The water has been injected uniformly

amongst the four liquid injection wells with the exception that water has not been injected into well IW16-DIL over the latter half of this quarter due to the previously mentioned air injection situation at this well nest location.

Another measure of the change from anaerobic to aerobic conditions is the microbial population and the distribution between aerobic and anaerobic microorganisms. The results of the microbial analyses are presented in Table 3. The results show that initially the anaerobic microbial populations were generally greater than the aerobic populations. By October 2007, the aerobic microbial populations were generally greater than the anaerobic populations. This demonstrates that the oxygen injections have had a positive influence on the oxygen levels in the formation thereby improving the conditions by which the desired biodegradation of the VCM can occur.

As part of the monitoring program, soil gas samples of the vadose zone have also been collected. The results of the soil gas samples are provided in Table 4. In summary, the results show that VCM and the chloroethylene family of compounds are either not present or at very low levels. It was observed that for the October 2007 samples, only low level concentrations of PCE (ND to 12ppbv) and VCM (ND to 18 ppbv) were detected except for a higher VCM concentration of 262 ppbv in well VZ-16D. It is noted that in the overlying shallow well (VZ-16S), VCM was non-detect. The parameters TCE and cis-1,2-DCE were not detected in any samples. This demonstrates that the air injections have had minimal impact on the vadose zone air quality and therefore will have minimal effect on the neighbors.

It is noted however, that some chemicals unrelated to the VCM subplume have been detected in the vadoze zone. Concentrations of methyl ethyl ketone and tetrahydrofuran are present just above the groundwater table, which is located on the order of approximately 50 to 55 feet below ground surface (bgs). In the vicinity of well VZ-10, concentrations of theses two compounds are also detected in the shallow well located approximately 8 ft bgs. For the remaining shallow wells (i.e., VZ-11S, VZ-14S, VZ-15S, and VZ-16S) the concentrations are relatively low (<100 ppbv for each individual compound). Although the source of these compounds is unknown, it is known that they are not related to the VCM subplume.

Recommended Modifications to Biosparging System Design and Operations

Based on the results of the first year of performance monitoring of the Phase I biosparge system, the following changes are recommended for the remainder of the biosparge system:

i) increase the diameter of the water and air injection wells from 1-inch to 1.25-inch;
ii) install the water injection well and shallow air injection well in separate sandpacked intervals;
iii) install a steel plate on the bottom of the air injection wells to prevent settling of the wells;
iv) install a spacer in the upper 0 to 20 feet of the injection well nests to maintain separation between the wells;
v) maintain the current weekly frequency of the 8-hour air injections to the extent practicable; and
vi) maintain the injection rate at the current 100 cfm.

The support for these recommendations is described below.

A) Increase Injection Well Diameter

During operation of the Phase I system it was difficult to inject air into well IW-16DIA. One of the first activities to remedy this difficulty was to redevelop the well. The redevelopment included the insertion of 5/8-inch diameter polyethylene tubing which was used with an air lift pump. The tubing could not be inserted further than approximately 300 feet into the 400-foot deep well due to wall friction and bends in the 1-inch diameter well. Because the tubing could not be inserted to the full depth, redevelopment removed only approximately two feet of the approximately six feet of sediment in the well. Thus, only the upper one foot of the five foot screen was available for air injection. To allow for greater success should redevelopment be needed for some of the future injection wells, larger diameter piping will be used. It is noted that 1.25-inch diameter piping is the maximum size that can practically be used to install three wells into one six-inch diameter borehole.

B) Separate Sandpack Intervals for Injection Wells

Operation of the Phase I system identified back pressure issues when trying to inject water via the water injection well after injecting air via the shallow air injection well in the same well nest. As shown on Drawing MP-05 of the 100% Design Report, the water injection well screen and shallow air injection well screen were installed within the same sandpacked interval. Specifically, water could not be injected until the air pressure built up in the interval had been released. To reduce or eliminate this operational constraint of not being able to inject water until the air pressure has been released, it is planned to install the shallow air injection well and liquid injection well in separate sandpacked intervals. The proposed installation is shown on the attached Figure 1. To be consistent with the modified injection well installation details, the depths included on Drawing MP-05 have also been modified. The modified depths are listed in Table 5. The water injection well has been placed at a higher elevation than the air injection well.

C) During installation of the air injection wells in each nest, extra measurers had to be taken to keep these wells (which are heavier due to their steel construction) from settling into the borehole. To control such settlement, it is proposed that a 3-inch and 4-inch diameter stainless steel plate be attached to the bottom of the shallower and deeper air injection well, respectively (see Figure 1).

D) Separation of Injection Well Risers within the Well Vault

During construction of Phase I, it was observed that the injection well risers often had little space between each other where they entered the injection vault. This resulted in increased difficulty in preparing the piping (e.g., threading) and completing the required connections.

To assist in making the threading needed for the installation of couplings, etc. to connect the well risers to the air and water piping easier, a spacer will be used to keep the well risers separate.

E) Increase Frequency of Air Injection

The original design specified the injection of air for an initial 40-hour period followed by a period of 8-hours at a frequency of once every two weeks. Because the air compressor was designed to supply air to the entire biosparge system, it has excess capacity for the Phase I system. Thus, the frequency was increased to weekly. Based on the observed increases in DO concentrations and that the compressor will still have excess capacity when the entire middle fence is operational, it is recommended that the frequency of the 8-hour injections remain weekly to the extent practical. It is noted that once the north fence becomes operational (to be installed in 2009), that the injection frequency will have to be decreased to match the available compressor capacity.

Summary of Biosparge Pilot System

To date the biosparge system has operated successfully. The oxygen levels in the formation are increasing. The VCM concentrations are decreasing. No detrimental side effects are evident. The injection well spacing appears to be correct. The water injections have also contributed to the oxygen levels in the formation. Based on these results, it is recommended that the remainder of the middle fence of injection wells be installed.

Planned First Quarter 2008 Activities

- The following activities are planned for the first quarter of 2008:

  i) With regard to IW16-DIL, it is planned to convert the temporary connections to permanent connections;

  ii) Quarterly sampling of the biosparge system will be performed the week of January 21, 2008;

  iii) Continue operation and monitoring of the GP-1/GP-3 supplemental system;

  iv) Sumps 1 and 2 on the former Hooker/Ruco Site are to be back-filled by the new property owner once the property transfer is completed; and

  v) Upon receipt of EPA acceptance of the proposed modifications for the physical and operational components of the biosparge system, start preparation of the bid documents for construction of the remainder of the middle fence. Construction is anticipated to start in the summer of 2008 contingent upon timely EPA acceptance. In accordance with the 100% Design Report, additional injection wells will be installed at 100-foot spacings west of IW-16 and east of IW-19 to a location where the groundwater VCM concentration is ≤ 40 µg/L. The number and locations of groundwater and vadose zone monitoring wells will be based on the number and locations of the additional injection wells installed.

- The following activities are pending an approval or review by an outside party or Agency. The follow-up schedule is based on receipt of the review or approval.

  i) Awaiting USEPA comments on the draft Declaration of Covenants and Restrictions for the Site, which was submitted on April 20, 2006 by Bayer; and

ii) Awaiting USEPA comments on the Phase I As-Built drawings, O&M Manual, and HASP submitted February 1, 2007.

Should you have any questions on the above, please do not hesitate to contact me at (859) 543-2152 or e-mail at rick_passmore@oxy.com.

Sincerely yours,

Klaus Schmidtke

for Rick Passmore
Project Manager

KDS/ca/006883/1
Encl.

c.c.: P. Olivio (USEPA)
K. Lynch (USEPA)
M. E. Wieder (USEPA)
S. Scharf (NYSDEC)
M. Popper (CDM)
T. Kelly (Nassau County)
W. Baldwin (Bayer)
J. Kay (CRA)

TABLE 1

MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

Groundwater Investigations Beyond the Ruco Property (OU-3)

July through September 2007

Task and Activity	*Percentage of Activity Completed*	*Start Date*	*Scheduled Completion Date*	*Completion Date*
• Work Plan	100	July 1993		September 23, 1993
• Borehole/Well Installation (MW-50, MW-53, MW-54 and MW-55)	100	September 30, 1994		June 19, 1995
• Well Development, Sampling and Analysis	100	July 10, 1995		August 9, 1995
• Water Level Measurements	100	August 15, 1995		April, 1996
• Interim Report	100	May 23, 1995		June 15, 1995
• Interim Report - Addendum No. 1	100	July 28, 1995		August 2, 1995
• Grumman Production Wells Sample Collection and Analysis	100	August 1, 1995		October 4, 1995
• Well Installation (MW-51, MW-52, MW-56 and MW-57)	100	August 30, 1995		January 26, 1996
• Regional Groundwater Level Monitoring Event	100	October 3, 1995		October 3, 1995
• Well Development, Sampling and Analysis	100	January 22, 1996		July 5, 1996
• Grumman Groundwater Model	100	July 27, 1995		November 20, 1997
• Phase I Report	100	February 21, 1996		April 26, 1996
• Supporting Documentation Regarding the Effectiveness of In Situ Remediation	100	June 10, 1996		August 9, 1996
• Phase II Report	100	February 21, 1996		August 12, 1996
• Comments on DEC Draft Supplemental Feasibility Study	100	September 23, 1996		October 17, 1996
• Responses to Northrop Comments on the Phase I Report	100	April 17, 1997		June 6, 1997
• Comments on DEC Supplemental Feasibility Study	100	June 1, 1997		June 20, 1997
• Comments on Navy Regional Groundwater Feasibility Study	100	July 28, 1997		October 8, 1997
• Revised Pages for Navy Regional Groundwater Feasibility Study	100	July 28, 1997		November 3, 1997
• Comments on Groundwater Flow Model Report	100	November 20, 1997		December 5, 1997
• Comments on Draft Final Regional Groundwater Feasibility Study	100	March 27, 1998		May 1, 1998
• Comments on Northrop Letter Report	100	May 20, 1998		June 4, 1998
• Evaluation of MW-52 Area Groundwater Extraction System	100	July 1, 1998		July 29, 1998
• Remedial Investigation Report	100	December 1, 1998		January 21, 1999
• Feasibility Study Report	100	December 1, 1998		March 16, 1999
• Groundwater Treatability Study (GTS)	100	December 16, 1998		July 19, 1999
• Responses to EPA Comments on RI Report	100	May 25, 1999		June 11, 1999
• Responses to EPA Comments on FS Report	100	June 21, 1999		July 7, 1999
• Scope of Predesign Investigative Activities				
- Initial	100	June 1, 1999		June 11, 1999
- Revised	100	February 16, 2001		May 28, 2001

TABLE 1

MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

Groundwater Investigations Beyond the Ruco Property (OU-3)

July through September 2007

Task and Activity	*Percentage of Activity Completed*	*Start Date*	*Scheduled Completion Date*	*Completion Date*
• Revised RI Report	100	May 25, 1999		November 16, 1999
• Revised FS Report	100	July 7, 1999		December 22, 1999
• Responses to EPA Comments on GTS	100	October 14, 1999		November 3, 1999
• Responses to EPA Comments on FS Report Responses	100	October 14, 1999		November 3, 1999
• Obtain access agreements	100	June 1999		December 2001
• Final RI Report	100	March 15, 2000		July 21, 2000
• Final FS Report	100	April 10, 2000		July 25, 2000
• PRAP	100			July 28, 2000
• ROD	100			September 29, 2000
• Unilateral Administrative Order	100			April 26, 2001
• Evaluate VCM presence in GP-3	100			August 15, 2001
• Design Supplemental System for VCM in GP-3	100	August 15, 2001		December 2001
• EPA Conditional Approval for Predesign Activities	100			September 28, 2001
• Issued Request for Bid for Well Installation	100			October 26, 2001
• Contractor Arrangements	100			January 15, 2002
• Arrangements for Biosparge Testing of Existing Wells	100			April 12, 2002
• Biosparge Testing of Existing Wells	100	April 15, 2002		August 13, 2002
• Phase 1 Well Installation	100	February 4, 2002		June 28, 2002
• Upgrade of GP-1/GP-3 Treatment System	100	April 8, 2002		July 9, 2003
• Sample Wells	100	June 17, 2002		July 12, 2002
• Evaluate Pre-Design Information /Develop Scope of Biosparge Remedy	100			November 22, 2002
• Install 2 Additional Wells (MW-67/68)	100	December 18, 2002		February 14, 2003
• Sample Wells MW-67 & MW-68				March 25/26, 2003
• Responses to EPA comments on Predesign Information Report	100	March 6, 2003		March 27, 2003
• EPA Meeting				April 17, 2003
• Closed Well T-1	100			May 12, 2003
• MW-67/68 Installation Report	100			May 23, 2003
• Responses to EPA comments on March 27, 2003 Responses	100	June 25, 2003		July 29, 2003
• Pre-Final (95%) RD Report	100	July 7, 2003		October 31, 2003
• Responses to EPA comments on 95% RD Report	100	April 12, 2004		May 27, 2004
• Submitted Due Diligence Request to Northrop	100			May 10, 2004

TABLE 1

MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

Groundwater Investigations Beyond the Ruco Property (OU-3)

July through September 2007

Task and Activity	*Percentage of Activity Completed*	*Start Date*	*Scheduled Completion Date*	*Completion Date*
• Follow up Due Diligence Clarification to Northrop 6/11 Data Package	100			June 25, 2004
• Offer to Northrop for Property Purchase	100			October 1, 2004
• Sample 13 Wells and Submit Results	100	August 23, 2004		October 14, 2004
• Responses to EPA Comments on 95% RD Report	100	November 17, 2004		December 6, 2004
• Revised Property Purchase offer submitted to Northrop	100	December 22, 2004		December 22,2004
• Prepare 100% RD Report	100	January 12, 2005		May 27, 2005
• Property Purchased	100			June 2005
• 100% Design Approved	100			July 7, 2005
• Obtain Building Permits	100	July 11, 2005		November 10, 2005
• Arrange Contractors	100	January 2005		July 22, 2005
• Well Installation	100	September 13, 2005		April 28, 2006
• Biosparge System Installation	100	November 2005		May 2006
• Closure of On-Site and Off-Site Wells	100	November 2005		May 10, 2006
• OU-1 Soil Borings	100	November 2005		January 11, 2006
• Background Groundwater Sampling	100	March 27, 2006		June 14, 2006
• Pre-Start Sampling	100			October 24, 25, and 26, 2006
• Final Inspection	100			October 27, 2006
• Biosparge System Start-Up	100			October 27, 2006
• First Monthly Sampling	100			November 28 to 30, 2006
• Second Monthly Sampling	100			December 20 and 21, 2006
• Noise Survey	100			January 18, 2007
• First Quarterly Sampling	100			January 23 to 30, 2007
• Submission of Phase I Construction Documents	100			February 1, 2007
• Second Quarterly Sampling	100			April 18 to 27, 2007
• Third Quarterly Sampling	100			July 16 to 27, 2007
• Fourth Quarterly Sampling	100			October 8 to 18, 2007

TABLE 2

SUMMARY OF PURGING FINAL STABILIZATION PARAMETER VALUES
HOOKER RUCO SITE
HICKSVILLE, NEW YORK

Well	*Date Sampled*	*Drawdown from Initial Water Level* [1] *(feet)*	*Well Screen Volumes Purged*	*pH (S.U.)*	*Temperature (Celsius)*	*Conductivity (mS/cm)*	*ORP (mV)*	*DO (mg/L)*	*Turbidity (NTU)*	*Fe^{+2} (mg/L)*
MW-52 S	4/7/2006	0.03	4.3	5.62	14.3	0.199	-7	0.00	0.0	1.60
	3/13/2007	0.20	6.1	6.34	14.8	0.652	5	1.64	58.4	1.66
MW-52 I	4/13/2006	0.04	4.5	4.56	15.0	0.121	303	9.77	12.4	0.05
	3/14/2007	0.05	4.9	5.42	14.6	0.192	259	5.85	44.8	0.04
MW-52D	3/14/2007	0.00	5.3	5.67	14.7	0.314	226	3.07	307	0.11
MW-58 D	10/26/2006	0.01	3.4	5.69	16.8	0.192	21	2.42	58.1	4.30
MW-58 D1	10/26/2006	0.14	3.2	6.34	16.9	0.222	-101	2.58	68.6	8.80
MW-58 D2	10/25/2006	0.11	2.8	6.95	17.3	0.266	-198	0.00	15.1	5.16
MW-59 D1	10/25/2006	0.00	2.0	6.07	17.4	0.432	-20	0.58	261	3.24
MW-59 D2	10/25/2006	0.02	5.5	6.50	17.5	0.452	-99	0.47	240	2.00
MW-59 D	10/26/2006	0.07	4.5	10.29	17.1	0.364	-108	0.00	9.6	2.65
MW-61 I	4/28/2006	0.00	4.6	5.68	14.3	0.221	139	0.00	121	1.76
	5/8/2006	0.08	1.9	4.86	14.9	0.182	136	0.00	64.7	1.49
	5/18/2006	0.20	2.9	4.90	16.1	0.155	123	0.00	571	2.16
	5/30/2006	0.20	5.7	5.10	15.7	0.167	118	0.00	110	2.61
	10/24/2006	0.14	4.3	5.53	15.1	0.999	102	0.00	166	2.76
	10/25/2006	0.00	4.1	5.32	15.1	0.202	112	0.41	370	3.04
	10/26/2006	0.02	3.9	5.33	14.6	0.251	133	0.00	900	2.49
	11/29/2006	0.10	5.1	5.58	14.8	0.242	60	0.00	397	1.96
	11/29/2006	0.10	5.1	5.58	14.8	0.242	60	0.00	397	1.96
	12/21/2006	0.08	5.2	5.20	14.4	0.185	118	0.00	18.2	2.17
	1/24/2007	-0.05	4.5	5.54	14.9	0.275	101	1.93	46.4	1.84
	4/19/2007	0.00	6.1	5.88	14.7	0.320	124	3.21	254	0.03
	10/11/2007	0.22	10.7	5.61	15.6	0.193	50	3.56	33.6	3.12
MW-61 D1	4/28/2006	0.00	4.7	6.07	14.5	0.210	122	0.00	356	1.78
	5/8/2006	0.05	5.7	5.07	15.0	0.210	101	0.00	172	2.77
	5/18/2006	0.16	2.9	5.18	16.2	0.170	91	0.00	>999	>3.30
	5/30/2006	0.25	4.5	5.27	15.9	0.196	93	0.00	138	4.66
	10/24/2006	0.01	4.4	5.49	15.2	0.999	110	0.00	72.4	2.30
	10/25/2006	0.08	4.1	5.33	15.1	0.201	107	0.65	129	3.74
	10/26/2006	0.03	3.9	5.41	14.9	0.273	109	0.00	86	2.99
	11/29/2006	0.00	3.6	5.72	14.9	0.246	54	0.00	310	1.92
	12/21/2006	0.08	5.8	5.29	14.6	0.192	90	0.00	80.7	2.59
	1/23/2007	0.00	8.1	5.73	14.3	0.389	54	1.21	137	1.84
	4/19/2007	0.14	8.1	6.19	14.6	0.304	79	6.66	95.9	0.26
	7/20/2007	0.23	11.7	5.31	16.4	0.163	83	0.44	20	3.30
	10/10/2007	0.00	4.9	5.84	15.5	0.198	26	3.39	27.2	4.20
MW-61 D2	4/28/2006	0.05	6.4	7.03	15.2	0.230	-186	0.00	413	2.00
	5/5/2006	0.00	10.5	6.65	15.1	0.370	-160	0.00	>999	10.08
	5/18/2006	0.30	4.9	6.63	16.1	0.294	-127	0.00	999	>3.30
	5/30/2006	0.00	4.4	6.32	15.8	0.249	-100	0.00	84.6	2.99
	10/24/2006	0.10	6.4	6.22	14.9	0.904	37	0.00	>999	0.15
	10/25/2006	0.20	4.4	5.77	15.1	0.236	27	1.42	316	5.46
	10/26/2006	0.25	4.2	5.63	14.9	0.233	62	1.94	550	4.04
	11/29/2006	0.00	4.4	6.25	14.8	0.253	110	11.12	>999	1.91
	12/21/2006	0.19	5.1	5.58	14.2	0.216	120	9.28	89.4	2.36
	1/23/2007	0.10	5.1	6.62	14.0	0.273	131	>20	>999	0.89
	4/23/2007	0.05	8.6	5.38	15.1	0.189	361	>20	231	0.21
	7/23/2007	0.04	5.1	5.19	17.6	0.219	71	13.45	>999	1.34
	10/11/2007	0.00	2.0	5.95	15.4	0.211	300	11.71	>999	0.21
MW-62I	5/16/2007	0.10	7.1	5.31	14.1	0.278	59	0.00	113	0.69
MW-62D	5/16/2007	0.15	5.4	10.56	14.9	0.119	-125	0.00	570	0.38
MW-63 D1	5/23/2006	0.20	2.4	5.03	15.9	0.152	230	0.00	0.0	2.13
MW-63 D2	5/24/2006	-0.21	5.5	5.30	15.0	0.152	246	0.41	6.5	0.06
	6/14/2006	0.05	5.1	5.01	16.3	0.171	222	0.92	3.5	NM
MW-63 S	5/19/2006	0.12	2.4	5.20	14.8	0.150	238	0.16	411	0.18
MW-63 I	5/23/2006	0.20	4.6	5.09	15.4	0.154	241	0.00	0.0	0.03
MW-64 S	3/23/2006	0.10	2.9	5.83	14.3	0.188	-18	0.00	13.8	4.71
	4/26/2007	0.00	5.3	6.71	14.2	0.304	-114	0.00	53.6	2.37
MW-64 I	3/24/2006	-0.01	3.6	5.87	14.1	0.203	-38	0.00	0.0	3.21
	4/26/2007	0.00	6.1	6.78	14.2	0.317	-121	0.00	17.5	1.87
MW-64D	4/26/2007	0.00	2.7	6.72	14.6	0.324	-115	0.00	22.9	1.98
MW-66 D2	4/3/2006	0.03	5.2	5.23	15.2	0.197	-16	0.00	24.3	4.50
MW-67 S	3/28/2006	0.35	5.2	5.88	15.7	0.206	-117	0.00	271	13.08
MW-67 D	3/29/2006	0.47	4.3	5.64	17.1	0.223	86	0.50	>999	16.88
MW-68 S	4/6/2006	-0.10	5.1	8.87	17.4	0.144	-281	0.00	27.8	0.60

TABLE 2

SUMMARY OF PURGING FINAL STABILIZATION PARAMETER VALUES
HOOKER RUCO SITE
HICKSVILLE, NEW YORK

Well	Date Sampled	Drawdown from Initial Water Level [1] (feet)	Well Screen Volumes Purged	pH (S.U.)	Temperature (Celsius)	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Fe^{+2} (mg/L)
MW-68 D	3/31/2006	0.10	5.1	5.67	17.6	0.165	-150	0.00	440	9.72
MW-81 D1	4/12/2006	0.16	2.9	6.44	14.5	0.228	-65	0.00	132	1.47
	5/2/2006	0.05	2.9	5.44	15.1	0.303	-31	0.00	0.9	3.20
	5/17/2006	0.00	3.9	6.04	16.8	0.263	-75	0.00	86.4	2.81
	5/25/2006	0.07	2.5	5.62	15.6	0.268	-32	0.00	31.1	>3.3
	10/24/2006	0.08	4.0	5.72	14.5	0.420	15	2.26	14	3.23
	10/25/2006	0.21	0.7	5.77	15.3	0.349	-55	3.01	0.0	9.76
	10/26/2006	-0.08	1.3	6.02	14.7	0.321	-25	0.00	0.0	10.12
	1/29/2007	-0.07	6.1	6.19	13.1	0.429	-55	2.26	704	2.36
	4/19/2007	0.18	5.3	6.20	14.2	0.380	-128	0.00	629	2.06
	7/23/2007	0.07	5.3	6.13	15.9	0.247	-22	0.74	9.2	5.19
	10/9/2007	0.00	7.9	6.02	15.8	0.228	-77	3.08	5.1	4.98
MW-81 D2	4/12/2006	0.05	2.4	5.79	15.2	0.357	-51	0.00	4.1	5.04
	5/4/2006	0.00	5.8	6.12	16.8	0.204	-6	1.10	119	1.37
	5/18/2006	0.12	3.4	8.18	15.1	0.220	-58	0.00	906	>3.30
	5/26/2006	0.21	3.2	8.58	15.8	0.225	-129	0.00	>999	>3.3
	10/24/2006	0.09	3.2	6.33	14.5	0.263	78	16.87	396	2.37
	10/25/2006	-0.04	1.9	6.49	15.7	0.251	73	17.96	170	0.40
	10/26/2006	0.21	1.9	7.64	15.1	0.229	93	15.00	>999	0.74
	1/24/2007	-0.05	5.9	7.21	13.1	0.234	-39	2.90	>999	0.98
	4/18/2007	0.00	1.3	9.84	12.5	0.301	-110	0.00	519	2.71
	7/19/2007	0.08	2.6	6.03	17.6	0.181	48	14.10	121	1.48
	10/10/2007	0.18	7.5	6.72	15.3	0.180	35	7.45	413	9.39
MW-82 D1	4/17/2006	0.00	2.8	6.88	16.4	0.391	-126	0.00	10.8	1.28
	4/25/2006	0.12	4.9	6.23	17.2	0.351	-170	0.00	281	1.89
	5/11/2006	0.10	2.4	6.39	16.5	0.356	-190	0.00	150	4.32
	5/25/2006	0.00	6.6	6.27	17.8	0.341	-200	0.00	226	5.22
	5/31/2006	0.00	5.0	6.98	20.8	0.374	-214	0.00	297	5.28
	10/24/2006	0.23	0.9	6.44	14.5	0.411	-119	1.93	202	6.14
	10/25/2006	0.00	1.6	7.37	14.5	0.491	-154	0.00	9	9.36
	10/26/2006	0.02	1.0	6.63	16.0	0.317	-142	2.77	116	6.32
	11/30/2006	-0.30	2.6	7.39	15.8	0.463	-158	0.00	252	1.86
	12/20/2006	0.05	2.3	6.89	12.9	0.327	-149	0.00	146	1.98
	1/25/2007	0.05	5.7	7.25	12.9	0.440	-145	1.21	48.8	1.94
	4/20/2007	0.05	2.6	6.76	18.1	0.305	-153	0.76	357	2.79
	7/25/2007	0.05	3.0	5.39	23.0	0.186	95	15.15	73	2.58
	10/18/2007	0.04	3.6	6.04	18.1	0.219	125	0.73	339	5.25
MW-82 D2	4/17/2006	0.08	3.6	6.14	16.2	0.256	-152	0.00	636	5.12
	4/24/2006	0.00	4.3	7.34	15.7	0.295	-367	0.00	315	1.64
	5/25/2006	0.00	2.9	6.06	17.2	0.239	-140	0.00	95	3.02
	6/5/2006	0.05	3.0	6.52	17.7	0.251	-139	0.00	65.1	6.40
	5/31/2006	0.00	3.9	6.54	16.7	0.239	-125	0.00	27.9	6.58
	10/24/2006	0.07	4.1	6.91	16.3	0.231	-166	0.38	234	10.44
	10/25/2006	-0.08	1.0	6.07	15.4	0.282	-95	1.98	6.8	11.64
	10/26/2006	0.14	1.3	6.23	17.5	0.260	-110	3.37	59	8.60
	11/30/2006	0.00	2.7	7.48	16.6	0.313	-179	0.00	37.9	2.31
	12/20/2006	0.00	3.4	7.11	14.1	0.226	-178	0.00	14.1	0.34
	1/25/2007	0.00	3.2	7.23	13.5	0.284	-147	1.70	66.1	2.01
	4/20/2007	0.00	3.4	6.87	18.9	0.182	-183	0.61	182	1.91
	7/25/2007	0.05	3.7	6.49	18.9	0.211	-192	0.50	47	6.56
	10/18/2007	0.05	5.2	9.88	20.6	0.499	-359	2.93	760	1.22
MW-83 D1	4/11/2006	0.08	4.3	10.04	15.3	0.472	-195	0.00	648	0.20
	5/1/2006	0.07	4.5	10.35	17.1	0.518	-125	0.00	178	0.44
	5/16/2006	0.01	5.7	11.56	13.5	0.978	-235	0.00	>999	1.20
	5/24/2006	0.05	6.3	10.89	16.0	0.375	-211	0.00	350	1.36
	10/24/2006	0.20	1.0	11.70	13.1	1.190	70	0.00	108	1.94
	10/25/2006	0.11	2.0	12.80	14.4	0.990	-146	0.00	102	0.23
	10/26/2006	0.24	3.1	10.30	14.1	0.561	-64	2.06	9.9	0.06
	1/30/2007	0.03	5.3	11.07	13.4	0.342	6	1.74	79.4	0.01
	4/18/2007	0.00	4.9	10.70	12.7	0.256	-70	0.00	690	0.00
	7/17/2007	0.00	2.4	10.70	16.3	0.271	-14	0.41	12	0.04
	10/12/2007	0.00	12.4	10.10	15.3	0.226	64	3.00	127	0.13
MW-83 D2	5/2/2006	-0.25	3.6	6.00	15.0	0.235	50	1.70	0.0	0.49
	5/16/2006	0.08	4.5	6.88	15.0	0.224	42	2.02	0.0	0.02
	5/25/2006	0.13	2.4	6.61	15.5	0.216	73	2.91	0.0	0.00
	10/24/2006	0.09	4.9	6.56	13.7	0.226	241	>19.99	17.5	9.88
	10/25/2006	0.10	1.2	6.18	14.3	0.297	179	>20	92	0.00
	10/26/2006	0.10	1.5	6.46	13.1	0.216	171	>20	0.0	0.06
	1/29/2007	0.00	2.9	6.55	10.3	0.197	249	13.20	69.3	0.00
	4/18/2007	0.21	3.4	8.16	13.0	0.233	97	0.00	103	0.00
	7/17/2007	0.04	3.0	6.42	17.3	0.147	289	>19.99	25	0.08
	10/15/2007	0.15	13.0	5.92	15.6	0.140	279	11.44	0	0.23

TABLE 2

SUMMARY OF PURGING FINAL STABILIZATION PARAMETER VALUES
HOOKER RUCO SITE
HICKSVILLE, NEW YORK

Well	Date Sampled	Drawdown from Initial Water Level (1) (feet)	Well Screen Volumes Purged	pH (S.U.)	Temperature (Celsius)	Conductivity (mS/cm)	ORP (mV)	DO (mg/L)	Turbidity (NTU)	Fe^{+2} (mg/L)
MW-84 D1	5/23/2006	0.09	1.7	6.25	16.1	0.301	-71	0.00	18.5	3.19
	5/26/2006	0.00	3.4	6.45	16.8	0.305	-118	0.00	91.9	4.50
	6/6/2006	0.15	4.1	6.55	16.6	0.280	-139	0.00	10.3	5.50
	6/8/2006	0.00	5.1	6.58	16.3	0.263	-163	0.00	10.4	2.35
	10/24/2006	0.00	4.7	5.46	15.7	0.197	50	7.89	54.7	1.44
	10/25/2006	0.06	1.3	6.32	15.4	0.296	86	8.03	0.0	1.37
	10/26/2006	0.04	2.9	6.19	15.8	0.300	78	6.51	77	1.19
	1/30/2007	0.00	3.6	6.16	13.1	0.254	160	7.53	188	1.24
	4/24/2007	0.00	3.6	6.49	16.5	0.249	282	>20	113	0.05
	7/24/2007	0.10	5.1	6.26	19.2	0.137	301	>20	6.9	0.05
	10/17/2007	0.21	4.9	6.45	15.8	0.143	304	8.81	85	0.62
MW-84 D2	5/23/2006	0.15	3.9	6.74	17.4	0.246	-131	0.00	780	12.68
	5/30/2006	0.20	2.4	6.59	18.8	0.241	-152	2.70	595	3.18
	6/6/2006	0.00	5.7	7.17	16.8	0.219	-221	0.00	228	2.70
	6/8/2006	0.00	3.0	6.78	16.5	0.220	-162	0.00	230	3.78
	10/24/2006	0.00	6.8	8.47	14.9	0.295	-90	4.69	131	1.53
	10/25/2006	-0.02	1.0	8.68	15.1	0.395	-47	2.84	127	0.27
	10/26/2006	-0.01	5.0	8.00	15.5	0.393	-77	2.67	>999	0.64
	1/29/2007	0.00	1.9	9.97	12.2	0.322	7	3.91	199	0.18
	4/24/2007	0.10	6.7	10.22	16.5	0.339	138	16.31	470	0.30
	7/24/2007	0.10	8.9	10.33	20.6	0.313	139	>20	200	0.21
	10/17/2007	0.09	4.7	10.88	17.1	0.396	34	4.68	817	0.23
MW-87 D1	4/5/2006	-0.04	2.9	5.04	12.8	0.197	142	0.00	64	0.99
	4/20/2006	0.02	3.9	4.94	17.5	0.184	218	0.00	43.8	0.30
	5/4/2006	0.02	2.6	5.03	16.2	0.187	231	0.00	0.0	0.34
	5/15/2006	0.02	2.0	5.28	15.1	0.165	207	0.00	66.2	0.27
	10/24/2006	0.25	4.5	5.45	14.9	0.229	234	0.70	5.4	0.17
	10/25/2006	-0.01	2.8	5.23	15.9	0.224	221	0.00	0.0	0.35
	10/26/2006	0.03	2.1	5.26	15.0	0.192	226	2.63	22.2	0.05
	1/24/2007	0.10	2.1	5.31	14.7	0.200	248	0.78	11.0	0.10
	4/17/2007	0.10	5.3	5.47	14.5	0.999	169	0.00	62	0.14
	7/17/2007	0.00	4.0	5.30	17.2	0.186	223	0.44	54	0.09
	10/8/2007	0.00	5.7	5.30	19.1	0.229	203	4.39	17.3	0.40
MW-87 D2	4/5/2006	0.00	2.8	5.21	14.1	0.172	121	1.81	129	1.14
	4/25/2006	-0.05	5.1	5.40	15.5	0.163	149	2.62	42.8	0.20
	5/15/2006	0.32	4.3	5.80	15.4	0.152	104	1.59	54.8	NM
	5/24/2006	0.10	4.9	5.45	16.2	0.155	163	1.62	0.0	1.36
	10/24/2006	0.13	3.9	5.69	15.5	0.183	212	4.00	131	0.08
	10/25/2006	0.06	1.5	5.34	15.5	0.173	137	6.68	25.5	0.09
	10/26/2006	-0.03	2.1	5.37	15.2	0.160	226	4.53	0.0	0.02
	1/24/2007	0.00	4.7	5.61	13.3	0.186	131	3.64	160	0.25
	4/17/2007	0.00	5.3	5.83	14.5	0.228	106	3.89	0.9	0.09
	7/16/2007	0.00	2.0	5.65	17.8	0.168	145	3.31	5.1	0.07
	10/9/2007	0.18	2.9	5.57	16.2	0.172	287	7.45	60.1	0.12
MW-88 D1	4/19/2006	0.08	2.9	6.09	17.9	0.273	-90	0.00	>999	9.64
	4/26/2006	0.32	6.7	5.99	16.7	0.204	-53	0.00	589	4.96
	5/10/2006	0.25	4.2	5.68	15.4	0.200	-2	0.00	393	2.75
	5/30/2006	0.00	3.6	5.90	17.1	0.188	-65	3.13	408	3.62
	6/1/2006	0.10	5.0	6.13	19.9	0.188	-73	0.00	367	5.12
	10/24/2006	0.06	1.8	6.06	15.6	0.252	-43	0.00	88.6	11.04
	10/25/2006	0.09	1.4	5.86	15.3	0.233	-13	0.00	4.7	10.20
	10/26/2006	0.00	3.4	5.59	15.6	0.317	33	3.36	415	6.56
	1/30/2007	0.10	2.9	6.12	11.8	0.193	-45	1.16	257	2.01
	4/19/2007	0.03	4.9	5.84	15.4	0.187	172	11.88	334	1.84
	7/26/2007	0.22	2.0	5.75	22.4	0.249	232	9.48	284	0.74
	10/16/2007	0.00	2.5	6.35	17.7	0.226	3	0.02	92	5.47
MW-88 D2	4/20/2006	0.00	3.7	6.25	17.4	0.244	-152	0.00	951	6.16
	5/10/2006	0.03	3.5	8.05	16.6	0.330	-331	0.00	>999	9.44
	6/1/2006	0.00	4.9	7.24	18.5	0.287	-210	0.00	>999	12.95
	6/7/2006	0.10	4.3	8.44	15.9	0.320	-380	0.00	>999	12.52
	10/24/2006	0.00	5.8	9.10	15.8	0.387	-282	1.44	>999	18.96
	10/25/2006	0.17	1.0	9.44	15.0	0.426	-253	1.97	>999	11.40
	10/26/2006	0.00	1.5	7.33	17.7	0.286	-212	0.00	>999	NM
	1/25/2007	0.00	8.5	9.17	11.3	0.323	-315	0.82	993	0.16
	4/19/2007	0.10	4.0	7.13	16.8	0.278	-219	0.37	>999	2.17
	7/26/2007	0.31	2.5	9.18	31.2	0.427	-333	0.44	>999	1.21
	10/16/2007	0.03	5.7	7.48	18.2	0.192	-291	3.04	145	9.39
MW-90 D1	6/13/2006	0.10	7.8	6.25	17.0	0.230	-112	0.00	76.8	4.10
	4/25/2007	0.00	4.9	6.07	16.1	0.231	-100	0.93	542	2.30
MW-90 D2	6/13/2006	0.05	7.8	5.91	18.4	0.191	-9	0.20	95.3	3.06
	4/25/2007	0.05	4.7	5.95	15.3	0.209	-47	1.38	102	1.76

Notes:

(1) Negative indicates groundwater level during purging higher than initial water level
NM Not measured

TABLE 3

MICROBIAL POPULATION COUNTS
FORMER HOOKER RUOCO SITE
HICKSVILLE, NEW YORK

Sample/ Parameter	*Units*	*MW-87D1*				*MW-87D2*		
		4/5/2006	***4/20/2006***	***5/2/2006***	***10/8/2007***	***4/5/2006***	*4/25/2006*	***10/9/2007***
Total Aerobic Microbial Population	*(CFUs/mL)*	6.80E+02	1.31E+03	6.92E+03	3.20E+02	1.26E+04	6.28E+03	8.00E+02
Aerobic TCE Specific Microbial Population	*(CFUs/mL)*	2.50E+01	2.10E+02	8.80E+02	8.50E+01	1.22E+03	7.65E+02	1.00E+01
Total Anaerobic Microbial Population	*(CFUs/mL)*	2.32E+03	5.30E+02	3.40E+03	6.50E+01	2.57E+04	7.00E+01	3.00E+01
Anaerobic TCE Specific Microbial Population	*(CFUs/mL)*	1.10E+02	2.10E+02	6.95E+02	2.50E+01	1.02E+04	1.13E+03	1.50E+01

Sample/ Parameter	*Units*	*MW-83D1*			*MW-83D2*		*MW-88D2*	
		4/11/2006	***5/1/2006***	***10/12/2007***	***5/2/2006***	***10/15/2007***	***4/20/2006***	***10/16/2007***
Total Aerobic Microbial Population	*(CFUs/mL)*	1.10E+02	3.00E+01	1.55E+02	6.50E+02	8.60E+02	1.40E+04	1.40E+04
Aerobic TCE Specific Microbial Population	*(CFUs/mL)*	5.00E+01	1.15E+02	2.00E+01	8.80E+02	6.00E+01	2.65E+02	5.00E+01
Total Anaerobic Microbial Population	*(CFUs/mL)*	1.55E+02	1.45E+02	4.00E+01	2.08E+04	1.05E+02	1.28E+04	2.75E+02
Anaerobic TCE Specific Microbial Population	*(CFUs/mL)*	1.00E+02	5.00E+01	2.00E+01	5.30E+02	2.50E+01	1.38E+03	1.45E+02

Notes:
CFUs = Colony Forming Units.
Values are averages of duplicates
Microbial Counts - Method 9215B Adapted from Standard
Methods for the Examination of Water and Wastewater 17th ed.

TABLE 3

MICROBIAL POPULATION COUNTS
FORMER HOOKER RUOCO SITE
HICKSVILLE, NEW YORK

Sample/ Parameter	*Units*	*MW-81D1*			*MW-81D2*			*MW-61D1*		
		4/12/2006	*5/2/2006*	*10/9/2007*	*4/12/2006*	*5/4/2006*	*10/10/2007*	*4/28/2006*	*5/8/2006*	*10/10/2007*
Total Aerobic Microbial Population	*(CFUs/mL)*	1.45E+04	3.05E+02	5.20E+02	2.01E+04	1.29E+04	1.58E+04	1.80E+04	1.49E+04	8.30E+02
Aerobic TCE Specific Microbial Population	*(CFUs/mL)*	6.95E+02	7.00E+01	no growth	1.00E+02	1.29E+04	1.80E+02	6.12E+03	2.74E+03	4.00E+01
Total Anaerobic Microbial Population	*(CFUs/mL)*	1.85E+04	1.05E+04	5.00E+01	2.47E+04	1.36E+03	3.85E+02	1.33E+03	6.10E+02	4.00E+01
Anaerobic TCE Specific Microbial Population	*(CFUs/mL)*	3.15E+02	1.65E+02	no growth	3.45E+02	1.60E+03	1.50E+01	9.40E+02	2.60E+02	2.50E+01

Sample/ Parameter	*Units*	*MW-88D1*			*MW-84D1*		*MW-84D2*	
		4/19/2006	*4/26/2006*	*10/16/2007*	*5/23/2006*	*10/17/2007*	*5/23/2006*	*10/17/2007*
Total Aerobic Microbial Population	*(CFUs/mL)*	1.97E+04	2.29E+04	7.44E+03	2.72E+03	3.30E+03	6.02E+03	1.41E+03
Aerobic TCE Specific Microbial Population	*(CFUs/mL)*	5.00E+01	4.74E+03	no growth	4.70E+02	8.50E+01	2.50E+01	1.40E+02
Total Anaerobic Microbial Population	*(CFUs/mL)*	2.12E+04	1.18E+04	8.50E+02	2.65E+04	2.12E+03	1.50E+04	6.50E+01
Anaerobic TCE Specific Microbial Population	*(CFUs/mL)*	7.45E+02	5.08E+03	no growth	2.40E+03	7.50E+01	5.94E+03	no growth

Notes:
CFUs = Colony Forming Units.
Values are averages of duplicates
Microbial Counts - Method 9215B Adapted from Standard
Methods for the Examination of Water and Wastewater 17th ed.

TABLE 3

MICROBIAL POPULATION COUNTS
FORMER HOOKER RUOCO SITE
HICKSVILLE, NEW YORK

Sample/ Parameter	*Units*	*MW-61I*			*MW61D2*		
		4/28/2006	*5/8/2006*	*10/11/2007*	*4/28/2006*	*5/5/2006*	*10/11/2007*
Total Aerobic Microbial Population	*(CFUs/mL)*	1.24E+04	1.71E+04	9.60E+02	2.39E+04	1.26E+04	1.79E+03
Aerobic TCE Specific Microbial Population	*(CFUs/mL)*	7.68E+03	4.00E+04	no growth	3.26E+03	6.24E+03	1.50E+01
Total Anaerobic Microbial Population	*(CFUs/mL)*	9.60E+02	9.40E+02	1.20E+02	1.58E+04	1.71E+04	1.60E+02
Anaerobic TCE Specific Microbial Population	*(CFUs/mL)*	7.95E+02	9.90E+02	1.50E+01	4.24E+03	1.26E+04	1.50E+01

Sample/ Parameter	*Units*	*MW-82D1*			*MW-82-D2*			*Sterile Water*
		4/17/2006	*4/25/2006*	*10/18/2007*	*4/17/2006*	*4/24/2006*	*10/18/2007*	*10/18/2007*
Total Aerobic Microbial Population	*(CFUs/mL)*	4.26E+04	1.63E+04	4.00E+03	1.12E+04	1.87E+04	1.04E+04	no growth
Aerobic TCE Specific Microbial Population	*(CFUs/mL)*	1.30E+02	8.45E+02	4.10E+02	1.00E+01	2.40E+03	6.64E+03	no growth
Total Anaerobic Microbial Population	*(CFUs/mL)*	2.10E+04	1.28E+03	9.00E+03	1.09E+04	1.08E+04	9.68E+03	no growth
Anaerobic TCE Specific Microbial Population	*(CFUs/mL)*	8.08E+03	2.04E+03	1.05E+02	3.50E+01	8.25E+02	1.00E+01	no growth

Notes:
CFUs = Colony Forming Units.
Values are averages of duplicates
Microbial Counts - Method 9215B Adapted from Standard
Methods for the Examination of Water and Wastewater 17th ed.

TABLE 4

PRIMARY DETECTED COMPOUNDS IN VADOSE ZONE AIR
BIOSPARGE SYSTEM
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

	VZ-10S		
Parameter	*11/28/2006*	*7/25/2007*	*10/15/2007*
Acetone	12,000	51,000	4,500
Ethanol	ND	24	ND
Methyl Ethyl Ketone	160,000	1,220,000	144,000
Methyl Chloride	ND	ND	114
Tetrachloroethene	ND	1.9J	ND
Tetrahydrofuran	100,000	480,000	56,500
Toluene	960	21	13
Vinyl Chloride	ND	28	18

	VZ-10D		
Parameter	*11/28/2006*	*7/25/2007*	*10/15/2007*
Acetone	ND/ND	9.8	16
Ethanol	ND/ND	23	8.4
Methyl Ethyl Ketone	22/22	104	629
Tetrachloroethene	1.1/0.92	2.6	9.2
Tetrahydrofuran	13/14	28	506
Toluene	ND/ND	ND	ND
Vinyl Chloride	0.68/ND	ND	ND

Notes:

(1) Units are ppbv.

TABLE 4

PRIMARY DETECTED COMPOUNDS IN VADOSE ZONE AIR
BIOSPARGE SYSTEM
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

	VZ-11S		
Parameter	*11/28/2006*	*7/25/2007*	*10/15/2007*
Acetone	5.7	6.7	4.7
Ethanol	6.1	7.0	1.5
Methyl Ethyl Ketone	100	119	96
Methyl Chloride	ND	ND	ND
Tetrachloroethene	2.3	3.3	6.6
Tetrahydrofuran	96	30	35
Toluene	4.3	0.2	ND
Vinyl Chloride	ND	ND	ND

	VZ-11D			
Parameter	*10/26/2006*	*11/28/2006*	*7/25/2007*	*10/15/2007*
Acetone	ND	ND/12	32	213
Ethanol	ND	4.1/5.4	14	5.9
Methyl Ethyl Ketone	7,600	780/700	5,540	49,800
Methyl Chloride	ND	ND	ND	58
Tetrachloroethene	ND	4.8/4.6	0.7	5.2
Tetrahydrofuran	1,900	190/140	912	15,500
Toluene	ND	ND1.3	0.4	ND
Vinyl Chloride	ND	ND	ND	2.5

Notes:

(1) Units are ppbv.

TABLE 4

PRIMARY DETECTED COMPOUNDS IN VADOSE ZONE AIR
BIOSPARGE SYSTEM
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

	VZ-14S	
Parameter	*11/28/2006*	*10/15/2007*
Acetone	3.5	4.4
Ethanol	ND	4.6
Methyl Ethyl Ketone	80	41
Tetrachloroethene	1.5	10
Tetrahydrofuran	39	53
Vinyl Chloride	0.90	ND

	VZ-14D	
Parameter	*11/28/2006*	*10/15/2007*
Acetone	150	3,600
Ethanol	ND	ND
Methyl Ethyl Ketone	4,200	351,000
Methyl Chloride	ND	101
Tetrachloroethene	ND	6.4
Tetrahydrofuran	2,800	306,000
Vinyl Chloride	17	6.7

Notes:

(1) Units are ppbv.

TABLE 4

PRIMARY DETECTED COMPOUNDS IN VADOSE ZONE AIR
BIOSPARGE SYSTEM
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

	VZ-15S	
Parameter	*11/28/2006*	*10/16/2007*
Acetone	ND	30
Methyl Ethyl Ketone	15,000	7,370
Methyl Chloride	ND	ND
Tetrachloroethene	ND	ND
Tetrahydrofuran	4,700	1,690
Vinyl Chloride	ND	ND

	VZ-15D	
Parameter	*11/28/2006*	*10/16/2007*
Acetone	16	51
Methyl Ethyl Ketone	150	2,340
Methyl Chloride	19	7.2
Tetrachloroethene	590	16,000
Tetrahydrofuran	16	ND
Vinyl Chloride	ND	7.8

Notes:

(1) Units are ppbv.

TABLE 4

PRIMARY DETECTED COMPOUNDS IN VADOSE ZONE AIR
BIOSPARGE SYSTEM
HOOKER/RUCO SITE
HICKSVILLE, NEW YORK

Parameter	*VZ-16S* 10/17/2007
Acetone	2.9
Carbon Disulfide	ND
Chloroethane	ND
Ethanol	1.9
Methyl Ethyl Ketone	9.6
Methyl Chloride	ND
Tetrachloroethene	12
Tetrahydrofuran	31
Toluene	2.6
Vinyl Chloride	ND

Parameter	*VZ-16D* 10/17/2007
Acetone	144,000
Carbon Disulfide	120,000
Chloroethane	120,000
Ethanol	ND
Methyl Ethyl Ketone	3,240,000
Methyl Chloride	120,000
Tetrachloroethene	3.6
Tetrahydrofuran	1,500,000
Toluene	44
Vinyl Chloride	262

Notes:

(1) Units are ppbv.

TABLE 5

WELL INSTALLATION ESTIMATED DEPTHS
OU-3 BIOSPARGE REMEDY
HOOKER RUCO SITE
HICKSVILLE, NEW YORK

	Depth to Top of Sandpack (ft bgs)	*Depth to Top of Screen (ft bgs)*	*Depth to Bottom of Screen (ft bgs)*	*Depth to Bottom of Sandpack (ft bgs)*	*Pipe/Screen Diameter (in)*	*Pipe/Screen Material*
a) North Fence						
Liquid-Injection Wells	210	215	230	235	1.0	PVC
Air-Injection Wells						
- Shallow	245	250	255	260	1.0	CS/SS
- Deep	285	290	295	300	1.0	CS/SS
Vadose Zone Wells						
- Shallow	4	6	8	8.5	1.0	PVC
- Deep	53	55	60	60.5	1.0	PVC
Groundwater Wells						
- Shallow	195	200	210	215	2.0	CS/SS or PVC
- Deep	235	240	250	251	2.0	CS/SS or PVC
b) Middle Fence						
Liquid-Injection Wells	325	330	345	350	1.0	PVC
Air-Injection Wells						
- Shallow	360	365	370	375	1.0	CS/SS
- Deep	400	405	--	415	1.0	CS/SS
Vadose Zone Wells						
- Shallow	4	6	8	6.5	1.0	PVC
- Deep	53	55	60	60.5	1.0	PVC
Groundwater Wells						
- Shallow	300	305	315	320	2.0	CS/SS or PVC
- Deep	340	345	355	356	2.0	CS/SS or PVC

CONESTOGA-ROVERS & ASSOCIATES

E-Mail Date: January 7, 2008
E-Mail To: Klaus Schmidtke
c.c.: Sheri Finn
E-Mail and Interoffice Mail:

☒

ANALYTICAL DATA ASSESSMENT AND VALIDATION
HOOKER-RUCO QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HICKSVILLE, NEW YORK
OCTOBER 2007

PREPARED BY:
CONESTOGA-ROVERS & ASSOCIATES
2055 Niagara Falls Blvd., Suite #3
Niagara Falls, New York 14304
Telephone: 716-297-6150 Fax: 716-297-2265
Contact: Sheri Finn [jbh]
Date: January 7, 2008
www.CRAworld.com

TABLE OF CONTENTS

		Page
1.0	INTRODUCTION	1
2.0	SAMPLE HOLDING TIMES	1
3.0	GAS CHROMATOGRAPH/MASS SPECTROMETER (GC/MS) TUNING AND MASS CALIBRATION - VOCs	2
4.0	INSTRUMENT CALIBRATION	2
4.1	CC/MS CALIBRATION - VOCs	2
4.1.1	TUNING AND MASS CALIBRATION	2
4.1.2	INITIAL CALIBRATION	3
4.1.3	CONTINUING CALIBRATION	3
4.2	GC CALIBRATION – DISSOLVED GASES	3
4.2.1	INITIAL CALIBRATION	3
4.2.2	CONTINUING CALIBRATION	4
4.3	INSTRUMENTAL CALIBRATION – GENERAL CHEMISTRY	4
4.3.1	INITIAL CALIBRATION	4
4.3.2	CONTINUING CALIBRATION	5
5.0	SURROGATE COMPOUND ANALYSES - VOCs	5
6.0	INTERNAL STANDARD (IS) RECOVERIES - VOCs	5
7.0	MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES VOCs	6
8.0	MATRIX SPIKE (MS) AND DUPLICATE ANALYSES - GENERAL CHEMISTRY	6
9.0	LABORATORY CONTROL SAMPLE (LCS) ANALYSES	6
10.0	METHOD BLANK ANALYSES	7
11.0	TENTATIVELY IDENTIFIED COMPOUNDS (TICS) - VOCs	7
12.0	FIELD QA/QC SAMPLES	7
13.0	CONCLUSION	8

LIST OF TABLES
(Following Text)

TABLE 1	SAMPLING AND ANALYSIS SUMMARY
TABLE 2A	ANALYTICAL RESULTS SUMMARY - GROUNDWATER
TABLE 2B	ANALYTICAL RESULTS SUMMARY - GASES
TABLE 3	QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
TABLE 4	QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INTERNAL STANDARD RECOVERIES
TABLE 5	QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RECOVERIES
TABLE 6	QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
TABLE 7	TENTATIVELY IDENTIFIED COMPOUNDS

1.0 INTRODUCTION

Groundwater samples were collected at the former Hooker Ruco Site in Hicksville, New York (Site) in support of the quarterly groundwater sampling program. Analytical services were performed by H2M Labs, Inc., in Melville, New York (H2M). A summary of the sampling and analysis scheme is presented in Table 1.

A summary of the analytical data is presented in Table 2. The samples were analyzed for volatile organic compounds (VOCs), dissolved gases, total organic carbon (TOC), nitrite, and nitrate.

The quality assurance/quality control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods. Additional validation guidelines were referenced from the following documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-94-012, February 1994; and

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94-013, February 1994.

Full raw data deliverables were provided by the laboratory. The data quality assessment and validation presented in the following subsections were performed based on the sample results and supporting QA/QC provided.

2.0 SAMPLE HOLDING TIMES

The method-specific holding time criteria are summarized in Table 5.1 of the Quality Assurance Project Plan (QAPP). All sample extractions and/or analyses were performed within the specified holding times.

All samples were properly preserved and cooled to 4°C (±2°C) after collection. All samples were received by the laboratory in good condition.

3.0 GAS CHROMATOGRAPH/MASS SPECTROMETER (GC/MS) TUNING AND MASS CALIBRATION - VOCs

Prior to analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the VOC method requires the analysis of the specific tuning compound bromofluorobenzene (BFB). The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Instrument tuning data were reviewed. Tuning compounds were analyzed at the required frequency throughout the VOC analysis period. All tuning criteria were met for the analyses, indicating proper optimization of the instrumentation.

4.0 INSTRUMENT CALIBRATION

4.1 CC/MS CALIBRATION - VOCs

4.1.1 TUNING AND MASS CALIBRATION

Prior to analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the VOC method require the analysis of the specific tuning compounds BFB. The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Instrument tuning data were reviewed. Tuning compounds were analyzed at the required frequency throughout the VOC analysis period. All tuning criteria were met for the analyses, indicating proper optimization of the instrumentation.

4.1.2 INITIAL CALIBRATION

To quantify compounds of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. Linearity of the calibration curve and instrument sensitivity are evaluated against the following criteria:

i) all relative response factors (RRFs) must be greater than or equal to 0.05; and

ii) for average response factors are employed, percent relative standard deviation (%RSD) values must not exceed 30 percent.

The initial calibration data for VOCs were reviewed and met the above criteria for linearity and sensitivity for all compounds of interest.

4.1.3 CONTINUING CALIBRATION

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

The following criteria were employed to evaluate continuing calibration data:

i) all RRF values must be greater than or equal to 0.05; and

ii) percent difference (%D) values must not exceed 25 percent.

Calibration standards were analyzed at the required frequency and the results met the above criteria for instrument sensitivity and linearity of response with the exception of some high %D recoveries. Associated sample results have been qualified as estimated (see Table 3).

4.2 GC CALIBRATION – DISSOLVED GASES

4.2.1 INITIAL CALIBRATION

To quantify compounds of interest in samples, calibration of the GC over a specific concentration range must be performed. Initially, a five-point calibration curve

containing all compounds of interest is analyzed and linearity is assessed against a %RSD criterion of 25 percent for average response factors or correlation coefficient criterion of 0.990 or greater for liner regression.

The initial calibration data for dissolved gases were reviewed and met the above criteria for linearity and sensitivity for all compounds.

4.2.2 CONTINUING CALIBRATION

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

Calibration standards were analyzed at the required frequency and the results met the criteria of 25 %RPD for instrument sensitivity and linearity of response.

4.3 INSTRUMENTAL CALIBRATION – GENERAL CHEMISTRY

4.3.1 INITIAL CALIBRATION

Initial calibration of the instruments ensures that they are capable of producing satisfactory quantitative data at the beginning of a series of analyses. For general chemistry, calibration is performed based on the analysis of at least three standards and a blank. Resulting correlation coefficients for curves must be at least 0.995.

After calibration, an initial calibration verification (ICV) standard must be analyzed to verify the analytical accuracy of the calibration curves. All analyte recoveries from the analyses of the ICVs must be within control limits of 85 to 115 percent.

Upon review of the data, it was determined that all inorganic calibration curves and ICVs were analyzed at the proper frequencies and that all of the above-specified criteria were met. The laboratory effectively demonstrated that instrumentation used for these analyses were properly calibrated prior to sample analyses.

4.3.2 CONTINUING CALIBRATION

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration verification (CCV) standards are analyzed on a regular basis. Each CCV is deemed acceptable if all analyte recoveries are within the control limits specified above for the ICVs. If some of the CCV analyte recoveries are outside the control limits, samples analyzed before and after the CCV, up until the previous and proceeding CCV analyses, are affected.

For this study, CCVs were analyzed at the proper frequency. All analyte recoveries reported for the CCVs were within the specified limits.

5.0 SURROGATE COMPOUND ANALYSES - VOCs

In accordance with the methods employed, all samples, blanks, and standards analyzed for VOCs are spiked with surrogate compounds prior to sample analysis. Surrogate recoveries provide a means to evaluate the effects of individual sample matrices on analytical efficiency and are assessed against method control limits.

Surrogates were added to all samples, blanks, and QC samples prior to analysis. Surrogate recoveries met the acceptance criteria for all samples demonstrating acceptable analytical accuracy in this sample matrix.

6.0 INTERNAL STANDARD (IS) RECOVERIES - VOCs

To ensure that changes in GC/MS response and sensitivity do not affect sample analysis results, IS compounds are added to all samples, blanks, and spike samples prior to VOC analysis. All results are calculated as a ratio of the IS response. The criteria by which the IS results are assessed are as follows:

i) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated calibration standard; and

ii) the retention time of the IS must not vary more than ±30 seconds from the associated calibration standard.

The sample IS recoveries met the above criteria and were used to calculate all positive sample results with the exception of a low bromochloromethane recovery. The associated sample results were qualified as estimated (see Table 4).

7.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES VOCs

To evaluate the effects of sample matrices on the measurement procedures, and accuracy of a particular analysis, samples are spiked in duplicate with a known concentration of the analytes of concern and analyzed as MS/MSD samples. Spike recoveries are not assessed for samples having original concentrations significantly greater than the spike concentration (>four times).

Analytical precision is evaluated based on the relative percent difference (RPD) between the MS and MSD.

MS/MSDs were performed at the required frequency for VOCs. The results showed acceptable accuracy and precision on this sample matrix.

8.0 MATRIX SPIKE (MS) AND DUPLICATE ANALYSES - GENERAL CHEMISTRY

To evaluate the effects of sample matrices on the measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS samples. The established control limits for inorganic matrix spike recoveries are 75 to 125 percent. Spike recoveries are not assessed for samples having original concentrations significantly greater than the spike concentration (>four times).

Analytical precision is evaluated based on the analysis of duplicate samples. Laboratory duplicate results are assessed against a maximum RPD of 20 percent.

MS and duplicate analyses were performed at the required frequency for all general chemistry parameters. The results showed acceptable accuracy and precision on this sample matrix.

9.0 LABORATORY CONTROL SAMPLE (LCS) ANALYSES

The LCS serves as a monitor of the overall performance of all steps in the analysis, including the sample preparation. LCSs are analyzed using the same sample

preparation, analytical methods, and QA/QC procedures employed for the investigative samples.

LCSs were prepared and analyzed for all general chemistry, dissolved gases and VOC parameters. Most LCS results showed good overall analytical accuracy. Associated sample results for low VOC recoveries were qualified as estimated to reflect the potential low bias (see Table 5).

10.0 METHOD BLANK ANALYSES

Method blanks are prepared from deionized water and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the procedures. Additionally, continuing calibration blanks (CCBs) are routinely analyzed after each CCV for the inorganic parameters.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch and CCBs were analyzed for inorganic parameters after each CCV. The data were non-detect for the analytes of interest with the exception of acetone. Associated sample results with concentrations similar to those found in the blank were qualified as non-detect (see Table 6).

11.0 TENTATIVELY IDENTIFIED COMPOUNDS (TICs) - VOCs

Chromatographic peaks for VOC analyses, which are not target compounds, surrogates, or internal standards, are potential TICs. The 10 largest TICs for the VOC analysis with areas greater than 10 percent of the area of the nearest IS are tentatively identified and quantitated.

A summary of the TICs reported is presented in Table 7. TICs, which were present in laboratory blanks or were identified as aldol condensation products, were disregarded and are not included on the table.

12.0 FIELD QA/QC SAMPLES

The field QA/QC consisted of four trip blanks, one rinse blank, and one field duplicate sample.

The trip blanks, equipment blanks and rinse blank were non-detect for the compounds of interest with the exception of some VOCs. The associated VOC sample results were considerably greater than the concentrations found in the blanks and no qualification of data was necessary.

The field duplicate sample was collected as summarized in Table 1 and submitted "blind" to the laboratory for analysis. All sample results outside estimated ranges of detection showed acceptable sampling and analytical precision.

13.0 CONCLUSION

Based on the preceding assessment, the data summarized in Tables 2A and 2B are acceptable with the specific qualifications noted herein.

TABLES

TABLE 1

SAMPLING AND ANALYSIS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

				Analysis/Parameters			
Sample ID	*Location ID*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*VOCs*	*TOC, NO_2, NO_3,*	*Dissolved Gases*	*Comments*
GW-100807-RR-001	MW-87-D1	10/08/07	14:30	X	X	X	
GW-100907-RR-002	MW-87-D2	10/09/07	10:20	X	X	X	
GW-100907-RR-003	MW-81-D1	10/09/07	14:20	X	X	X	
GW-101007-RR-004	MW-81-D2	10/10/07	11:30	X	X	X	
GW-101007-RR-005	MW-61-D1	10/10/07	14:45	X	X	X	
GW-101107-RR-006	MW-61-DI	10/11/07	11:25	X	X	X	
GW-101107-RR-007	MW-61-D2	10/11/07	14:25	X	X	X	
GW-101207-RR-008	MW-83-D1	10/12/07	12:10	X	X	X	
GW-101507-RR-009	MW-83-D2	10/15/07	13:50	X	X	X	
GW-101607-RR-010	MW-88-D2	10/16/07	11:30	X	X	X	
GW-101607-RR-011	MW-88-D1	10/16/07	14:30	X	X	X	
GW-101707-RR-012	MW-84-D1	10/17/07	10:20	X	X	X	
GW-101707-RR-013	MW-84-D1	10/17/07	10:40	X	X	X	Field Duplicate of GW-101707-RR-012
GW-101707-RR-014	MW-84-D2	10/17/07	14:35	X	X	X	
GW-101807-RR-015	MW-82-D1	10/18/07	11:15	X	X	X	
GW-101807-RR-016	MW-82-D2	10/18/07	14:35	X	X	X	
GW-101807-RR-017	RINSE BLANK	10/18/07	15:20	X	X	X	Rinse Blank
GW-181807-RR-018	PURGE WATER	10/18/07	15:30	X			
SG-101507-RR-001	VD-14S	10/15/07	13:55	X			
SG-101507-RR-002	VD-14D	10/15/07	14:25	X			
SG-101507-RR-003	VD-10-S	10/15/07	15:05	X			
SG-101507-RR-004	VD-10D	10/15/07	15:35	X			
SG-101607-RR-005	VD-15S	10/16/07	12:35	X			
SG-101607-RR-006	VD-15D	10/16/07	13:10	X			
SG-101707-RR-007	VD-11S	10/17/07	9:25	X			
SG-101707-RR-008	VD-11D	10/17/07	10:30	X			
SG-101707-RR-009	VD-16S	10/17/07	12:35	X			
SG-101707-RR-010	VD-16D	10/17/07	13:15	X			
TRIP BLANK	-	10/12/07	-	X			
TRIP BLANK	-	10/11/07	-	X			
TRIP BLANK	-	10/18/07	-	X			

Notes:
- Not applicable.
NO_2 Nitrate.
NO_3 Nitrite.
TOC Total Organic Carbon.
VOCs Volatile Organic Compounds.

TABLE 2A

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Parameters	*Units*	*Sample Location:* / *Sample ID:* / *Sample Date:*						
		CompositeDevelopment / *GW-101807-RR-018* / *10/18/2007*	*MW-61D1* / *GW-101007-RR-005* / *10/10/2007*	*MW-61D1* / *GW-101107-RR-006* / *10/11/2007*	*MW-61D2* / *GW-101107-RR-007* / *10/11/2007*	*MW-81D1* / *GW-100907-RR-003* / *10/9/2007*	*MW-81D2* / *GW-101007-RR-004* / *10/10/2007*
Volatile Organic Compounds							
1,1,1-Trichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	ug/L	5 U	5 U	5 U	1 J	5 U	4 J
1,1-Dichloroethene	ug/L	5 U	5 U	5 U	1 J	5 U	2 J
1,2-Dichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	ug/L	5 U	4 J	4 J	72	39	8.1
1,2-Dichloropropane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	15 J	5 UJ	5 UJ	5 U	5 U	5 U
2-Hexanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	52 J	5 UJ	5 UJ	5 U	5 U	3 J
Benzene	ug/L	0.7 U	0.7 U	0.7 U	0.7 U	1.2	0.7 U
Bromodichloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane (Methyl Bromide)	ug/L	5 UJ	5 UJ	5 UJ	5 U	5 U	5 U
Carbon disulfide	ug/L	2700	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	ug/L	5 U	2 J	2 J	5 U	1 J	5 U
Chloroethane	ug/L	5 U	5 U	5 U	5 U	42	5 U
Chloroform (Trichloromethane)	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane (Methyl Chloride)	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	5 U	5 U	5 U	62	39	13
Toluene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
trans-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	ug/L	2 J	5 U	5 U	210	110	81
Vinyl chloride	ug/L	8.5	1 J	2.5	610	620	37
Xylene (total)	ug/L	5 U	5 U	5 U	5 U	3 J	5 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

	Sample Location:	*CompositeDevelopment*	*MW-61D1*	*MW-61D1*	*MW-61D2*	*MW-81D1*	*MW-81D2*
	Sample ID:	*GW-101807-RR-018*	*GW-101007-RR-005*	*GW-101107-RR-006*	*GW-101107-RR-007*	*GW-100907-RR-003*	*GW-101007-RR-004*
	Sample Date:	*10/18/2007*	*10/10/2007*	*10/11/2007*	*10/11/2007*	*10/9/2007*	*10/10/2007*
Parameters	*Units*						
General Chemistry							
Nitrate (as N)	mg/L	-	0.1 U	0.1 U	2.09	0.1 U	2.93
Nitrite (as N)	mg/L	-	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Total Organic Carbon (TOC)	mg/L	-	8.4	8.7	1 U	1.3	1 U

Notes:
- \- Not analyzed.
- J Estimated.
- U Not detected.
- UJ Not detected, estimated reporting limit.

TABLE 2A

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Sample Location: / *Sample ID:* / *Sample Date:* / *Parameters*	*Units*	*MW-82D1* *GW-101807-RR-015* *10/18/2007*	*MW-82D2* *GW-101807-RR-016* *10/18/2007*	*MW-83D1* *GW-101207-RR-008* *10/12/2007*	*MW-83D2* *GW-101507-RR-009* *10/15/2007*	*MW-84D1* *GW-101707-RR-012* *10/17/2007*	*MW-84D1* *GW-101707-RR-013* *10/17/2007* *(Field Duplicate)*	*MW-84D2* *GW-101707-RR-014* *10/17/2007*
Volatile Organic Compounds								
1,1,1-Trichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	ug/L	5 U	3 J	5 U	5 U	5 U	5 U	2 J
1,1-Dichloroethene	ug/L	5 U	1 J	1 J	5 U	5 U	5 U	5 U
1,2-Dichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	ug/L	14	66	50	5 U	5 U	2 J	17
1,2-Dichloropropane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	2 J	5 UJ	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	5.4	5 UJ	5 U	5 U	5 U	5 U	10
Benzene	ug/L	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U
Bromodichloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromoform	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Bromomethane (Methyl Bromide)	ug/L	5 U	5 UJ	5 U	5 U	5 U	5 U	5 U
Carbon disulfide	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon tetrachloride	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chlorobenzene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloroethane	ug/L	4 J	5 U	4 J	5 U	5 U	5 U	5 U
Chloroform (Trichloromethane)	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chloromethane (Methyl Chloride)	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	19	34	68	2 J	15	15	16
Toluene	ug/L	1 J	26	2 J	5	5 U	5 U	5 U
trans-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Trichloroethene	ug/L	24	3 J	200	10	48	56	170
Vinyl chloride	ug/L	430	2100	220	2 U	2.1	2.4	7.1
Xylene (total)	ug/L	2 J	5 U	5 U	5 U	5 U	5 U	5 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Parameters	Units	Sample Location: MW-82D1 Sample ID: GW-101807-RR-015 Sample Date: 10/18/2007	Sample Location: MW-82D2 Sample ID: GW-101807-RR-016 Sample Date: 10/18/2007	Sample Location: MW-83D1 Sample ID: GW-101207-RR-008 Sample Date: 10/12/2007	Sample Location: MW-83D2 Sample ID: GW-101507-RR-009 Sample Date: 10/15/2007	Sample Location: MW-84D1 Sample ID: GW-101707-RR-012 Sample Date: 10/17/2007	Sample Location: MW-84D1 Sample ID: GW-101707-RR-013 Sample Date: 10/17/2007 (Field Duplicate)	Sample Location: MW-84D2 Sample ID: GW-101707-RR-014 Sample Date: 10/17/2007
General Chemistry								
Nitrate (as N)	mg/L	0.1 U	0.1 U	1.44	4.06	4.42	4.39	0.90
Nitrite (as N)	mg/L	0.1 U	0.1 U	0.15	0.1 U	0.1 U	0.1 U	0.65
Total Organic Carbon (TOC)	mg/L	1.7	7.4	1 U	1 U	1 U	1 U	1.1

Notes:
- \- Not analyzed.
- J Estimated.
- U Not detected.
- UJ Not detected, estimated reporting limit.

TABLE 2A

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Parameters	*Units*	*Sample Location:* *MW-87D1* *Sample ID:* *GW-100807-RR-001* *Sample Date:* *10/8/2007*	*MW-87D2* *GW-100907-RR-002* *10/9/2007*	*MW-88D1* *GW-101607-RR-011* *10/16/2007*	*MW-88D2* *GW-101607-RR-010* *10/16/2007*
Volatile Organic Compounds					
1,1,1-Trichloroethane	ug/L	5 U	2 J	1 J	5 U
1,1,2,2-Tetrachloroethane	ug/L	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	ug/L	5 U	5 U	5 U	5 U
1,1-Dichloroethane	ug/L	2 J	7.6	3 J	5 U
1,1-Dichloroethene	ug/L	2 J	5.1	2 J	5 U
1,2-Dichloroethane	ug/L	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	ug/L	47	11	140	11
1,2-Dichloropropane	ug/L	5 U	5 U	5 U	5 U
2-Butanone (Methyl Ethyl Ketone)	ug/L	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	5 U	5 U	5 U	5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ug/L	5 U	5 U	5 U	5 U
Acetone	ug/L	5 U	5 U	4 J	5 U
Benzene	ug/L	1.2	0.7 U	1.0	0.7 U
Bromodichloromethane	ug/L	5 U	5 U	5 U	5 U
Bromoform	ug/L	5 U	5 U	5 U	5 U
Bromomethane (Methyl Bromide)	ug/L	5 U	5 U	5 U	5 U
Carbon disulfide	ug/L	5 U	5 U	5 U	5 U
Carbon tetrachloride	ug/L	5 U	5 U	5 U	5 U
Chlorobenzene	ug/L	1 J	5 U	5 U	5 U
Chloroethane	ug/L	4 J	5 U	7.9	5 U
Chloroform (Trichloromethane)	ug/L	5 U	5 U	5 U	5 U
Chloromethane (Methyl Chloride)	ug/L	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U
Dibromochloromethane	ug/L	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	5 U	5 U	5 U	5 U
Methylene chloride	ug/L	5 U	5 U	5 U	5 U
Styrene	ug/L	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	37	14	66	41
Toluene	ug/L	1 J	5 U	5 U	5 U
trans-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U
Trichloroethene	ug/L	190	32	270	25
Vinyl chloride	ug/L	190	2 U	1100	31
Xylene (total)	ug/L	5 U	5 U	1 J	5 U

TABLE 2A

ANALYTICAL RESULTS SUMMARY - GROUNDWATER
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

	Sample Location:	*MW-87D1*	*MW-87D2*	*MW-88D1*	*MW-88D2*
	Sample ID:	*GW-100807-RR-001*	*GW-100907-RR-002*	*GW-101607-RR-011*	*GW-101607-RR-010*
	Sample Date:	*10/8/2007*	*10/9/2007*	*10/16/2007*	*10/16/2007*
Parameters	*Units*				
General Chemistry					
Nitrate (as N)	mg/L	3.58	3.49	1.12	1.67
Nitrite (as N)	mg/L	0.1 U	0.1 U	0.1 U	0.1 U
Total Organic Carbon (TOC)	mg/L	1 U	1 U	1.5	1 U

Notes:
- \- Not analyzed.
- J Estimated.
- U Not detected.
- UJ Not detected, estimated reporting limit.

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GAS SAMPLING
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Parameters	*Units*	*Sample Location:* *VZ-10 (D)* *Sample ID:* *SG-101507-RR-004* *Sample Date:* *10/15/2007*	*VZ-10 (S)* *SG-101507-RR-003* *10/15/2007*	*VZ-11 (D)* *SG-101707-RR-008* *10/17/2007*	*VZ-11 (S)* *SG-101707-RR-007* *10/17/2007*	*VZ-14 (D)* *SG-101507-RR-002* *10/15/2007*	*VZ-14 (S)* *SG-101507-RR-001* *10/15/2007*
Volatile Organic Compounds							
1,1,1-Trichloroethane	ppbv	8 U	5 U	5 U	1.7 J	5 U	0.46 J
1,1,2,2-Tetrachloroethane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,1,2-Trichloroethane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,1-Dichloroethane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,1-Dichloroethene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,2,4-Trichlorobenzene	ppbv	3.4 J	5 U	5 U	2 U	5 U	1 U
1,2,4-Trimethylbenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,2-Dibromoethane (Ethylene Dibromide)	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,2-Dichlorobenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,2-Dichloropropane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,3,5-Trimethylbenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,3-Butadiene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,3-Dichlorobenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,4-Dichlorobenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
1,4-Dioxane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
2-Butanone (Methyl Ethyl Ketone)	ppbv	629	144000	49800	96.0	351000	41.3
2-Hexanone	ppbv	8 UJ	5 UJ	5 UJ	2 UJ	5 UJ	1 UJ
4-Ethyl toluene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ppbv	8 U	5 U	5 U	2 U	3.6 J	1 U
Acetone	ppbv	16.0	4500	213	4.72	3600 J	4.42
Benzyl Chloride	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Bromodichloromethane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Bromoform	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Bromomethane (Methyl Bromide)	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Carbon disulfide	ppbv	8 U	101	32.9	2 U	110	1 U
Chlorobenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Chloroethane	ppbv	8 U	14.2	5 U	2 UJ	5 U	1 U
Chloroform (Trichloromethane)	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Chloromethane (Methyl Chloride)	ppbv	8 U	114	57.6	2 U	101	1 U
cis-1,3-Dichloropropene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Cyclohexane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Dibromochloromethane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Dichlorodifluoromethane (CFC-12)	ppbv	8 U	5 U	5 U	2 U	5 U	0.82 J
Ethanol	ppbv	8.40	5 U	5.90	1.5 J	5 U	4.58

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GAS SAMPLING
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Sample Location:		*VZ-10 (D)*	*VZ-10 (S)*	*VZ-11 (D)*	*VZ-11 (S)*	*VZ-14 (D)*	*VZ-14 (S)*
Sample ID:		*SG-101507-RR-004*	*SG-101507-RR-003*	*SG-101707-RR-008*	*SG-101707-RR-007*	*SG-101507-RR-002*	*SG-101507-RR-001*
Sample Date:		*10/15/2007*	*10/15/2007*	*10/17/2007*	*10/17/2007*	*10/15/2007*	*10/15/2007*
Parameters	***Units***						
Volatiles (Cont'd.)							
Ethylbenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Hexachlorobutadiene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Hexane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Isopropyl Alcohol	ppbv	8 U	5 U	5 U	3.56	5 U	1.76
Isopropylbenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
m&p-Xylene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Methyl Tert Butyl Ether	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Methylene chloride	ppbv	42.4	5 U	5 U	1.2 J	5 U	0.82 J
N-Heptane	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
n-Propylbenzene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
o-Xylene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Styrene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Tetrachloroethene	ppbv	9.15 J	5 U	5.20	6.56	6.40	10.1
Tetrahydrofuran	ppbv	506	56500	15500	35.1	306000	52.7
Toluene	ppbv	8 U	13.3	5 U	2 U	5 U	1 U
trans-1,2-Dichloroethene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
trans-1,3-Dichloropropene	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Trichlorofluoromethane (CFC-11)	ppbv	8 U	5 U	5 U	0.88 J	5 U	1.96
Trifluorotrichloroethane (Freon 113)	ppbv	8 U	5 U	5 U	2 U	5 U	1.74
Vinyl acetate	ppbv	8 U	5 U	5 U	2 U	5 U	1 U
Vinyl chloride	ppbv	8 U	18.0	2.5 J	2 U	6.70	1 U
Gas							
Methane	ppbv	9 U	9.0	49	4 U	390	7.5

Notes:
J Estimated.
U Not detected.
UJ Not detected, estimated reporting limit.

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GAS SAMPLING
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

	Sample Location:	*VZ-15 (D)*	*VZ-15 (S)*	*VZ-16 (D)*	*VZ-16 (S)*
	Sample ID:	*SG-101607-RR-006*	*SG-101607-RR-005*	*SG-101707-RR-010*	*SG-101707-RR-009*
	Sample Date:	*10/16/2007*	*10/16/2007*	*10/17/2007*	*10/17/2007*
Parameters	*Units*				
Volatiles (Cont'd.)					
Ethylbenzene	ppbv	5 U	5 U	2.4 J	1 U
Hexachlorobutadiene	ppbv	5 U	5 U	5 U	1 U
Hexane	ppbv	5 U	5 U	5 UJ	1 U
Isopropyl Alcohol	ppbv	5 U	5 U	5 UJ	0.92 J
Isopropylbenzene	ppbv	5 U	5 U	5 U	1 U
m&p-Xylene	ppbv	5 U	5 U	5 U	0.48 J
Methyl Tert Butyl Ether	ppbv	5 U	5 U	5 UJ	1 U
Methylene chloride	ppbv	3.4 J	2.2 J	5 UJ	2.58
N-Heptane	ppbv	5 U	5 U	5 U	1 U
n-Propylbenzene	ppbv	5 U	5 U	5 U	1 U
o-Xylene	ppbv	5 U	5 U	5 U	1 U
Styrene	ppbv	5 U	5 U	5 U	1 U
Tetrachloroethene	ppbv	7.20	5 U	3.6 J	11.6 J
Tetrahydrofuran	ppbv	16000	1690	1500000 J	31.1
Toluene	ppbv	5 U	5 U	43.7	2.64
trans-1,2-Dichloroethene	ppbv	5 U	5 U	5 UJ	1 U
trans-1,3-Dichloropropene	ppbv	5 U	5 U	5 U	1 U
Trichlorofluoromethane (CFC-11)	ppbv	5 U	5 U	5 UJ	0.84 J
Trifluorotrichloroethane (Freon 113)	ppbv	5 U	5 U	5 U	1.98
Vinyl acetate	ppbv	5 U	5 U	5 U	1 U
Vinyl chloride	ppbv	7.80	5 U	262 J	1 U
Gas					
Methane	ppbv	4500	4 U	44	4 U

Notes:
J Estimated.
U Not detected.
UJ Not detected, estimated reporting limit.

TABLE 2B

ANALYTICAL RESULTS SUMMARY - GAS SAMPLING
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Sample Location:	*VZ-15 (D)*	*VZ-15 (S)*	*VZ-16 (D)*	*VZ-16 (S)*
Sample ID:	*SG-101607-RR-006*	*SG-101607-RR-005*	*SG-101707-RR-010*	*SG-101707-RR-009*
Sample Date:	*10/16/2007*	*10/16/2007*	*10/17/2007*	*10/17/2007*

Parameters	*Units*				
Volatile Organic Compounds					
1,1,1-Trichloroethane	ppbv	5 U	5 U	5 U	1 U
1,1,2,2-Tetrachloroethane	ppbv	5 U	5 U	5 U	1 U
1,1,2-Trichloroethane	ppbv	5 U	5 U	5 U	1 U
1,1-Dichloroethane	ppbv	5 U	5 U	5 UJ	1 U
1,1-Dichloroethene	ppbv	5 U	5 U	5 UJ	1 U
1,2,4-Trichlorobenzene	ppbv	5 U	5 U	5 U	1 U
1,2,4-Trimethylbenzene	ppbv	5 U	5 U	5 U	0.54 J
1,2-Dibromoethane (Ethylene Dibromide)	ppbv	5 U	5 U	5 U	1 U
1,2-Dichlorobenzene	ppbv	5 U	5 U	5 U	1 U
1,2-Dichloropropane	ppbv	5 U	5 U	5 U	1 U
1,2-Dichlorotetrafluoroethane (CFC 114)	ppbv	5 U	5 U	5 UJ	1 U
1,3,5-Trimethylbenzene	ppbv	5 U	5 U	5 U	1 U
1,3-Butadiene	ppbv	5 U	5 U	5 UJ	1 U
1,3-Dichlorobenzene	ppbv	5 U	5 U	5 U	1 U
1,4-Dichlorobenzene	ppbv	5 U	5 U	5 U	1 U
1,4-Dioxane	ppbv	5 U	5 U	5 U	1 U
2-Butanone (Methyl Ethyl Ketone)	ppbv	2340	7370	3240000 J	9.60
2-Hexanone	ppbv	5 UJ	5 UJ	5 U	1 UJ
4-Ethyl toluene	ppbv	5 U	5 U	5 U	0.60 J
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	ppbv	5 U	5 U	5 U	1 U
Acetone	ppbv	50.6	30.0	144000 J	2.86
Benzyl Chloride	ppbv	5 U	5 U	5 U	1 U
Bromodichloromethane	ppbv	5 U	5 U	5 U	1 U
Bromoform	ppbv	5 U	5 U	5 U	1 U
Bromomethane (Methyl Bromide)	ppbv	5 U	5 U	5 UJ	1 U
Carbon disulfide	ppbv	20.8	5 U	120000 UJ	1 U
Chlorobenzene	ppbv	5 U	5 U	5 U	1 U
Chloroethane	ppbv	5.30	5 U	120000 UJ	1 UJ
Chloroform (Trichloromethane)	ppbv	5 U	5 U	5 UJ	1 U
Chloromethane (Methyl Chloride)	ppbv	90.9	5 U	120000 UJ	0.40 J
cis-1,3-Dichloropropene	ppbv	5 U	5 U	5 U	1 U
Cyclohexane	ppbv	5 U	5 U	5 U	1 U
Dibromochloromethane	ppbv	5 U	5 U	5 U	1 U
Dichlorodifluoromethane (CFC-12)	ppbv	5 U	5 U	2.5 J	0.86 J
Ethanol	ppbv	5 U	5 U	5 UJ	1.94

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Parameter	*Calibration Date*	*Compound*	*%D*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
VOCs	10/22/07	Bromomethane	35	GW-101007-RR-005	5 U	ug/L	UJ
				GW-101107-RR-006	5 U	ug/L	UJ
				GW-101807-RR-016	5 U	ug/L	UJ
				GW-101807-RR-018	5 U	ug/L	UJ
VOCs	10/22/07	Acetone	41	GW-101007-RR-005	5 U	ug/L	UJ
				GW-101107-RR-006	5 U	ug/L	UJ
				GW-101807-RR-016	5 U	ug/L	UJ
				GW-101807-RR-018	52	ug/L	J
VOCs	10/22/07	2-Butanone	29	GW-101007-RR-005	5 U	ug/L	UJ
				GW-101107-RR-006	5 U	ug/L	UJ
				GW-101807-RR-016	5 U	ug/L	UJ
				GW-101807-RR-018	15	ug/L	J
VOCs	10/25/07	Chloroethane	31	SG-101707-RR-007	2 U	ppbv	UJ
				SG-101707-RR-009	1 U	ppbv	UJ

Notes:
%D Percent Difference.
J Estimated.
U Not detected.
UJ Not detected, estimated reporting limit.
VOCs Volatile Organic Compounds.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INTERNAL STANDARD (IS) RECOVERIES
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Parameter	*Sample ID*	*IS*	*IS Area Count (percent)*	*Control Limits (percent)*	*Analytes*	*Sample Results*	*Units*	*Qualifier*
VOCs	SG-101707-RR-010	Bromochloromethane	24	60 - 140	Dichlordifluoromethane	2.5 J	ppbv	*
					1,2-Dichlorotetrafluoroethane	5 U	ppbv	UJ
					Chloromethane	120000 U	ppbv	UJ
					1,3-Butadiene	5 U	ppbv	UJ
					Bromomethane	5 U	ppbv	UJ
					Vinyl Chloride	262	ppbv	J
					Choroethane	120000 U	ppbv	UJ
					Ethanol	5 U	ppbv	UJ
					Isopropyl alcohol	5 U	ppbv	UJ
					Methylene chloride	5 U	ppbv	UJ
					Acetone	144000	ppbv	J
					Carbon disulfide	120000 U	ppbv	UJ
					1,1-Dichloroethene	5 U	ppbv	UJ
					1,1-Dichloroethane	5 U	ppbv	UJ
					Trichlorofluoromethane	5 U	ppbv	UJ
					Hexane	5 U	ppbv	UJ
					Methyl tert-butyl ether	5 U	ppbv	UJ
					trans-1,2-Dichloroethene	5 U	ppbv	UJ
					Tetrahydrofuran	1500000	ppbv	J
					2-Butanone	3240000	ppbv	J
					Choroform	5 U	ppbv	UJ

)tes

Value previously qualified as estimated by the laboratory.
Estimated.
Not detected.
Not detected, estimated reporting limit.
)Cs Volatile Organic Compounds.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE RESULTS
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Parameter	*Compound*	*Percent Recovery*	*Control Limits (percent)*	*Associated Sample ID*	*Sample Results*	*Units*	*Qualifier*
VOCs	2-Hexanone	64	70 - 130	SG-101507-RR-001	1 U	ppbv	UJ
				SG-101507-RR-002	5 U	ppbv	UJ
				SG-101507-RR-003	5 U	ppbv	UJ
				SG-101607-RR-005	5 U	ppbv	UJ
				SG-101607-RR-006	5 U	ppbv	UJ
				SG-101707-RR-008	5 U	ppbv	UJ
VOCs	2-Hexanone	64	70 - 130	SG-101707-RR-007	2 U	ppbv	UJ
VOCs	2-Hexanone	69	70 - 130	SG-101507-RR-004	8 U	ppbv	UJ
				SG-101707-RR-009	1 U	ppbv	UJ
VOCs	Tetrachloroethene	69	70 - 130	SG-101507-RR-004	9	ppbv	J
				SG-101707-RR-009	12	ppbv	J

Notes
J Estimated.
U Not detected.
UJ Not detected, estimated reporting limit.
VOCs Volatile Organic Compounds.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Parameter	*Analysis Date*	*Analyte*	*Blank Result*	*Sample ID*	*Sample Result*	*Qualified Result*	*Units*
VOCs	10/22/07	Acetone	5.1	GW-101007-RR-005	4 J	5U	ug/L
				GW-101107-RR-006	4 J	5U	ug/L

Notes:
J Estimated.
U Not detected.
VOCs Volatile Organic Compounds.

TABLE 7

TENTATIVELY IDENTIFIED COMPOUNDS
QUARTERLY GROUNDWATER SAMPLING
MILLER SPRINGS REMEDIATION MANAGEMENT, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
OCTOBER 2007

Sample Identification	*Volatile Organics*	*Estimated Concentration (ppbv)*	*Semi-Volatile Organics*	*Estimated Concentration (ppbv)*
SG-101507-RR-001	Cyclohexanone	12.8J	-	-
SG-101507-RR-002	Unknown	258J	-	-
	Unknown Alkene	327J	-	-
	Unknown Alkane	36J	-	-
	Thiirane	2960J	-	-
	Cyclohexanol	1120J	-	-
	Cyclohexanone	10300J	-	-
SG-101507-RR-003	Unknown	241J	-	-
	Unknown Alkene	187J	-	-
	Unknown Alkane	101J	-	-
	Thiirane	3630J	-	-
	Cyclohexanol	186J	-	-
	Cyclohexanone	2810J	-	-
SG-101507-RR-004	Ethane, 1-chloro-1, 1-difluoro-	404J	-	-
	Cyclohexanone	201J	-	-
SG-101607-RR-005	Cyclohexanol	13J	-	-
	Cyclohexanone	382J	-	-
SG-101607-RR-006	Unknown	16J	-	-
	Unknown Alkene	64J	-	-
	Thiirane	30J	-	-
	Cyclohexanone	68J	-	-
SG-101707-RR-007	Ethane, 1-chloro-1, 1-difluoro-	7.6J	-	-
	Cyclohexanone	96J	-	-
SG-101707-RR-008	Unknown	30J	-	-
	Thiirane	106J	-	-
	Cyclohexanol	301J	-	-
	Cyclohexanone	3720J	-	-
SG-101707-RR-009	Cyclohexanone	6J	-	-
SG-101707-RR-010	Unknown	145J	-	-
	Unknown Alkene	298J	-	-
	Unknown Alkane	275J	-	-
	Unknown ketone	715J	-	-
	Thiirane	140J	-	-
	Cyclohexanone	6630J	-	-

Notes:
- Not applicable.
J Estimated.