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April 10, 2014

Mr. Michael Hinton
New York State Department of Environmental Conservation (NYSDEC)
Division of Water, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2399

RE: Ekonol Polyester Resins Site (#V00653-9)
Quarterly Report for Groundwater Monitoring
Fourth Quarter 2013

Dear Mr. Hinton:

Attached is the performance and quarterly monitoring report for the fourth quarter of 2013 at the Ekonol Polyester Resins Site (Site). The performance and quarterly monitoring scope of work is defined in the February 2010 NYSDEC approved "Remedial Action Work Plan (RAWP) for *In Situ* Treatment Using Enhanced Bioremediation," and the NYSDEC-approved (April 10, 2012) changes to the reporting scope and schedule. Documentation of well inspection and maintenance, and sub-slab depressurization system operations and maintenance is also provided in the report.

If you have any questions, please feel free to contact me at (716) 407-4990.

Sincerely,

George W. Hermance

George Hermance
Project Manager

Attachments

cc: W. Barber, Atlantic Richfield Co.
S. Fiorenza, BP (e-copy)
M. Forcucci, NYSDOH (e-copy)
M. Kolar, Patriot (e-copy)
J. Sabbatis, Saint-Gobain (e-copy)
G. Brown, RT Environmental Services (e-copy)

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PERFORMANCE MONITORING REPORT
FOURTH QUARTER 2013
IN SITU TREATMENT USING ENHANCED BIOREMEDIATION

Ekonol Polyester Resins, NYSDEC # V00653-9
6600 Walmore Road

Town of Wheatfield, Niagara County, New York

SUBMITTED TO:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

DIVISION OF HAZARDOUS WASTE REMEDIATION

SUBMITTED BY:

ATLANTIC RICHFIELD COMPANY

A BP affiliated company

4850 East 49th Street
Cuyahoga Heights, Ohio 44125

PREPARED BY:

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April 2014

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ATTACHMENT C: Data Usability Report

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1.0 INTRODUCTION

This report summarizes the December 2013 performance and routine monitoring following installation of the bioremediation systems at the Ekonol Polyester Resins Site (Site). The scope of work is defined in the February 2010 NYSDEC-approved "Remedial Action Work Plan (RAWP) for *In Situ* Treatment Using Enhanced Bioremediation," and the NYSDEC-approved (April 10, 2012) changes to the reporting scope and schedule. Additionally, this report includes discussion on site management activities such as: well inspection and maintenance, and sub-slab depressurization system operations and maintenance.

2.0 BIOREACTOR AND INJECTION/MONITORING WELL INSPECTION

As part of the December 2013 event, the surface conditions above the bioreactor trenches were inspected for settlement, and the protective casings were inspected for integrity. Inspection records are provided in Attachment A. In December 2013, repair or maintenance of the protective casings or wells associated with the bioreactor was not necessary. Paving repairs were performed in November 2013 to fill in minor pits and to prevent rainwater from ponding in between the bioreactor trenches in front of the Ekonol building.

3.0 SUB-SLAB DEPRESSURIZATION SYSTEM OPERATIONS AND MAINTENANCE

During the December 2013 sampling event, the sub-slab depressurization system was inspected in accordance with the NYSDEC-approved operations and maintenance plan for the system dated December 5, 2011. Results of the inspection identified that the system is in proper working order. The inspection included a visual inspection of the system's interior and exterior components, recording of U-Tube manometer measurements, and smoke stick testing. Additionally, the system was shut down temporarily to confirm that the audible alarm functions as designed. The December 2013 inspection checklist for the SSD system is included in Attachment A. In December 2013, repairs and maintenance to the sub-slab depressurization system were not needed.

4.0 PERFORMANCE AND QUARTERLY MONITORING

In addition to the operations, monitoring and maintenance (OM&M) activities discussed above, the fourth of four groundwater sampling events scheduled for 2013 was completed in December in accordance with the approved work plans and previously reported procedures. In addition to monitoring the overall groundwater conditions, performance monitoring was completed to assist in evaluating the effectiveness of the

groundwater remediation from the bioreactor and in the bedrock groundwater treatment area. The following activities were completed as part of the sampling event:

- a complete round of water levels was collected from the monitoring wells;
- wells were purged by low-flow techniques and sampled for field laboratory analytes; and
- samples were collected and analyzed for laboratory parameters.

The water levels, sampling matrix, and sampling records are provided in Attachment B. The analytical results for these samples were reviewed for usability with respect to NYSDEC requirements. The data are provided in the data usability report included in Attachment C. The data are considered valid for its intended use.

5.0 BIOREACTOR PERFORMANCE AND QUARTERLY MONITORING RESULTS

This section presents the most recent concentrations and data trends for the overburden bioreactor and site overburden wells through the December 2013 sampling event. Analytical data tables for all site overburden wells can be found in Attachment D. The following section will also detail and evaluate the performance of *in situ* bioremediation in the overburden to date.

OVERBURDEN OBSERVATIONS INSIDE THE BIOREACTOR TRENCHES

CVOC concentrations within the trenches remain at significantly decreased levels (Figure 1) compared to samples taken within the first three to six months after installation (the installation of the bioreactors was completed in April 2011). TCE, the primary CVOC, was generally depleted from the shallow groundwater within the first six months of remediation. December 2013 concentrations of TCE in the bioreactor trenches are non-detect at all locations, with the exception of OR-4SM (2.3 µg/L). Concentrations of cis-1,2 DCE and VC inside the bioreactor significantly declined during the first year of monitoring, and have remained below original concentrations, with the exception of OR-6SM which increased during the first and second quarter of 2013 (10,000 µg/L cis-1,2 DCE; 3,100 µg/L VC in July 2013) but decreased to lower levels in the third and fourth quarters of 2013 (800 µg/L cis-1,2 DCE; 180 µg/L VC in December 2013).

In December 2013, all bioreactor wells indicated low ORP (with the exception of OR-3SM), a stable pH between 6 and 8, decreasing concentrations of sulfate (with the exception of OR-14SM), stable TOC concentrations, and low sulfide concentrations, which all provide appropriate geochemical conditions for anaerobic *in situ* bioremediation.

TOC concentrations in the bioreactor wells have decreased substantially from initial concentrations in July 2011 (a median average of 1,490 mg/L) to December 2013 (median average of 59.9 mg/L), although TOC concentrations have generally been stable since April 2013. Microbial population results of *Dehalococcoides* (DHC), which is known to degrade chlorinated solvent compounds, indicate that concentrations have generally decreased slightly within the bioreactor trenches from October 2013 to December 2013. DHC concentrations range from between zero to three orders of magnitude higher than concentrations measured after bioreactor installation in July 2011. The highest DHC concentrations for all wells within the bioreactor were observed in March 2012. The DHC data results are included in Attachment D.

OVERBURDEN OBSERVATIONS OUTSIDE THE BIOREACTOR TRENCHES

Overall, the overburden groundwater total chlorinated ethene concentration (sum of TCE, DCE, and VC) from PMW wells outside the bioreactors (including PMW-1S through PMW-11S) decreased from the July 2011 event (about 178,000 µg/L) three months after bioreactor installation, to the December 2013 event (about 90,000 µg/L) thirty-two months after installation. At individual wells, CVOC (TCE, DCE, VC, etc.) concentrations remain variable, with some wells showing increases, some showing decreases and others remaining relatively unchanged.

At well locations between and downgradient of the bioreactors, evidence of increased TOC concentrations and biodegradation have been observed since July 2011, south (and downgradient) of the former containment area at locations PMW-2S, PMW-3S, PMW-4S, and PMW-6S. TOC was originally elevated at these locations but steady decreased to near background concentrations (Figure 2). Where TOC was elevated, notable changes in DCE were observed (TCE was primarily absent throughout). At other locations between and downgradient of the bioreactors, the TOC remained low. Due to the low hydraulic conductivity of the fine-grained silt, clay and sand soils (less than 1 feet/day), it is expected that the transport of TOC and associated expansion of the treatment zone will be slow. Locations of the highest and most persistent CVOC concentrations in the overburden remain in:

- the area of the former secondary containment excavation (e.g. well MW-2S) which was backfilled with gravel and included remediation piping. This area is (and historically was) a groundwater mound, and

- locations downgradient of the southernmost trench at PMW-3S, PMW-4S and PMW-6S.

Another injection may increase the treatment away from the bioreactors. Injection of additional substrate in the bioreactor trenches is being planned.

OVERBURDEN OBSERVATIONS - OTHER WELLS

Side-gradient shallow wells and down-gradient shallow wells farther away from the bioreactors (over 150 feet), generally showed a decreasing CVOC trend over the long term. In particular, down-gradient shallow wells MW-11S (reductions in cis-1,2 DCE and VC from July 2011 to December 2013) and MW-12S (reductions in TCE and cis-1,2 DCE from July 2011 to December 2013) show this decreasing CVOC trend (Figure 2A and 2B). Due to their location in relation to the bioreactor, the cause of these observed changes are currently unknown (e.g. enhanced natural attenuation as the results of the trench and groundwater movement). Trends in ORP and methane concentrations suggest that site remediation activities influenced far downgradient areas (MW-6S, MW-11S and MW-12S) potentially through connections with the bedrock. The ORP of MW-6S, MW-11S and MW-12S cycled (decreased then increased) following each of the bedrock injection events (Figures 2A through 2C). Increasing methane concentrations at MW-6S, MW-11S and MW-12S (Figures 2A through 2C) after August 2011 are consistent with influence from either the bedrock injections and/or the trench bioreactors. At MW-1S, located approximately 150 feet upgradient of the overburden reactors, concentrations of CVOCs have remained relatively stable throughout the monitoring period.

6.0 BEDROCK REMEDIATION PERFORMANCE AND QUARTERLY MONITORING RESULTS

This section presents the most recent concentrations and data trends for the bedrock remediation system through the December 2013 sampling event. Laboratory analytical results for all site bedrock wells can be found in Attachment D. The following section will also provide detail on the performance of *in situ* bioremediation in the bedrock to date.

BEDROCK BIOREMEDIATION PERFORMANCE SUMMARY

Figure 3 provides time-series plots (from July 2011 to present) of key CVOCs, total ethene and/or ethane, and TOC concentrations for the bedrock injection and monitoring wells.

The data indicate a continuation of enhanced CVOC biodegradation attributed to the November 2012 injection (see Figure 3). The enhanced degradation patterns (typically including increasing ethane/ethene (E+E) and decreasing TCE accompanied by an increase in DCE) observed in December 2012 have been sustained or progressed further (TCE decreased and DCE increased then decreased). Wells that showed an enhanced degradation pattern include INJ-1, INJ-10D, INJ-13D, PMW-9D, PMW-13D, PMW-14D, PMW-15D, and PMW-17D. Many of these wells are located just downgradient of the November 2012 injection locations.

Notable increases in E+E concentrations (1 - 2 orders of magnitude) from September 2012 (prior to the November 2012 injections) to December 2013 are observed within and immediately downgradient of the injection area, including wells INJ-07D, INJ-08D, INJ-09D, INJ-10D, INJ-12D, INJ-13D, PMW-1D, PMW-9D, PMW-10D, PMW-12D, PMW-13D, PMW-14D, PMW-15D, and RMW-2D. DHC concentrations (sampled from wells INJ-07D, INJ-09D, INJ-10D, PMW-11D, PMW-15D, PMW-17D, and RMW-2D) have also increased in this area, from a median average of 10^3 cells/mL in September 2012 to 10^5 cells/mL in December 2013. Additionally, pH in the above wells has increased to greater than 6.0 SU in December 2013, while sulfate concentrations in these wells have decreased (median average of 56.5 mg/L in September 2012 to 20 mg/L in December 2013), and sulfide concentrations have decreased (median average of 50.3 mg/L in September 2012 to 16 mg/L in December 2013). These conditions indicate the presence of active bioremediation in the area and downgradient of the November 2012 injection locations.

The highest concentrations of TCE have been measured in bedrock at INJ-7D located in the vicinity of the previous excavation area. TCE concentrations have been relatively stable at INJ-7D since August 2011 but decreased in December 2013 (Figure 3). This decrease was accompanied by an increase in DCE. DCE concentrations at INJ-7D increased between April 2013 and December 2013 after the November 2012 injection event on a molar basis to a concentration greater than the concentration of TCE.

Within the source area and about 50 ft downgradient (PMW-15D), the average total molar chlorinated ethene and ethane concentrations have increased during the remediation (Table 1). Slightly farther downgradient (PMW-16D, PMW-17D and RMW-3D) from the source area, as well as the locations farthest downgradient (MW-20D and MW-21D), the average total chlorinated ethene and ethane concentrations have decreased since the first substrate applications in July 2011.

Groundwater elevation data indicate the groundwater flow conditions have remained similar since the initial June 2011 substrate injections. Groundwater flow is generally southerly across the site with no apparent changes from the bioremediation.

PERFORMANCE ENHANCEMENT TESTING

Previous sampling results indicated the bedrock remediation was limited by geochemical conditions (low pH and elevated hydrogen sulfide). Wells with the highest degradation rates had a pH above approximately 6.5 SU and/or hydrogen sulfide approximately less than 30 mg/L. As previously discussed, tests were conducted during the November 2012 substrate injections to mitigate potential limitations to the performance of the bedrock remediation system. The tests included addition of calcium carbonate buffer, instead of sodium bicarbonate, throughout the 2012 injection area to raise the pH, and addition of iron at INJ-7D to remove hydrogen sulfide during the substrate injections. Review of the analytical data to date provided the following observations:

- **pH:** The calcium carbonate appeared to lack enough buffering capacity to prevent the initial pH drop (5.5 – 6.0; Figure 3). The pH of most wells in December 2013 were between 6.0 and 6.5 SU, however above 6.5 appears to be a more optimum pH for bioremediation in bedrock groundwater at the Site.

- **INJ-7D Iron Injection:** Injection of iron (soluble and mineral sources) during the November 2012 substrate injection event resulted in significant increases in iron accompanied by decreases in sulfides at location INJ-7D and wells downgradient (for example PMW-9D, PMW-12D, PMW-13D, PMW-14D, and INJ-13D), see Figure 4 (A and B). There is also evidence that iron has migrated downgradient to the northern perimeter of the pilot area, as initial increases in iron and decreases in sulfides were seen in INJ-01, INJ-02, and INJ-04 in the four sampling events following the November 2012 injections. The December 2013 sampling results show that concentrations of iron and sulfides have generally returned to previous levels in these far downgradient wells. Noticeable increases in ethene plus ethane and/or DHC were observed in INJ-7D as well as locations downgradient of this well (INJ-9D, INJ-10D, INJ-12D, INJ-13D, PMW-9D, PMW-10D, PMW-12D, PMW-13D, PMW-14D, PMW-15D, PMW-17D and RMW-2D). Although VC increases attributed to stimulating DCE biodegradation were observed in several of these wells, increasing E+E indicates VC biodegradation. Based on the results from the iron injections at INJ-7D, it appears that sulfide can be effectively controlled, and that iron will improve the rate of CVOC biodegradation.

The iron injection results impacted the geochemistry and have had a positive effect on biodegradation. Future activities will focus on testing and isolating the best conditions for optimal bioremediation (see below).

7.0 GENERAL SITE CONCLUSIONS AND ANTICIPATED FUTURE ACTIVITIES

Bioreactor: Results of the December 2013 data indicate that TOC has largely been depleted and that the addition of vegetable oil substrate to the bioreactor trenches is needed to enhance TOC migration and CVOC biodegradation. Injection of additional substrate for the bioreactor trenches is being planned. Methane and hydrogen sulfide may increase during biodegradation activities. Increases have been observed previously and these parameters will be monitored. Current results indicate that iron should be included in the injections in order to mitigate sulfide formation in the trenches. Pitting of the surface pavement was repaired with asphalt in November 2013.

Bedrock Bioremediation Area: The data to date continue to suggest that the remediation program can be optimized in the bedrock source area. The iron injection test in the bedrock source area indicates that sulfide can be effectively controlled, and it appears that iron will improve the rate of CVOC biodegradation. Downgradient

concentrations of CVOCs, particularly TCE, continue to decrease or remain depleted. Increasing downgradient concentrations of DHC and E+E, combined with decreasing concentrations of sulfate and decreasing cumulative CVOCs, indicate an overall positive performance of the bedrock remediation system. Methane and hydrogen sulfide will be monitored to ensure optimal performance and safe operation.

Amendment Evaluation: Additional laboratory bench testing is currently being performed to evaluate the use of amendments to emulsified vegetable oil substrate including iron, pH buffer, and nutrients, while maintaining sufficient TOC in order to enhance CVOC biodegradation in the bedrock system. The results of this optimization study will be presented in a future report.

FIGURES

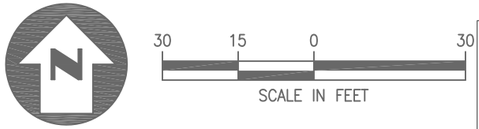
FIGURE 1: OVERBURDEN TIME SERIES PLOTS

FIGURE 2 (A, B, AND C): TIME SERIES PLOTS – MW-11S, MW-12S, MW-6S

FIGURE 3:BEDROCK TIME SERIES PLOTS

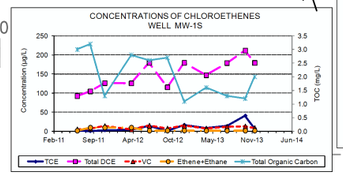
FIGURE 4: TIME SERIES PLOTS - PH AND TOTAL ORGANIC CARBON (TOC)

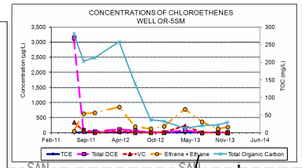
FIGURE 5 (A AND B): TIME SERIES PLOTS - IRON, SULFIDES, ETHENE, AND ETHANE

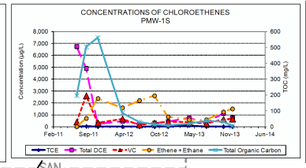


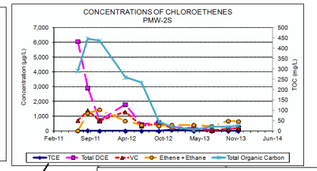
LEGEND:

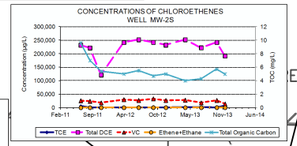
- RAILROAD TRACKS
- NEW BORING WELL (POST 2010)
- REPLACEMENT BEDROCK INVESTIGATION WELL
- OLD BORING WELL (PRE 2010)
- FW — FIRE WATER LINE
- G — GAS LINE
- SAN — SANITARY LINE
- STM — STORM LINE
- CB — CATCH BASIN
- MH — MANHOLE
- MULCH AND GRAVEL BIOREACTOR
- EDGE OF NEW ASPHALT

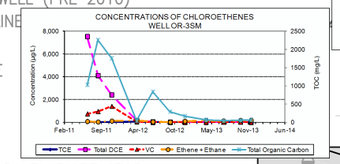


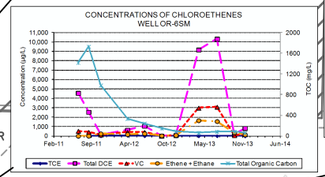


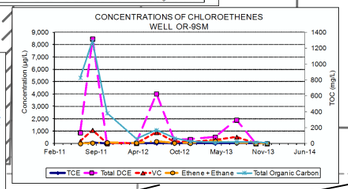


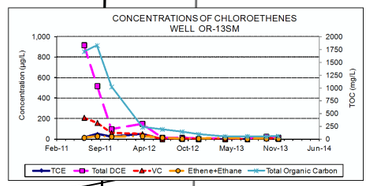


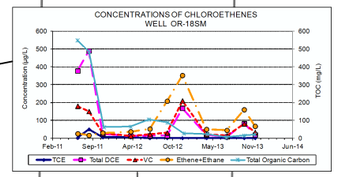


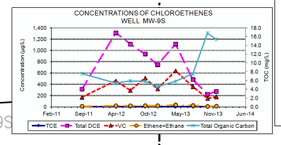


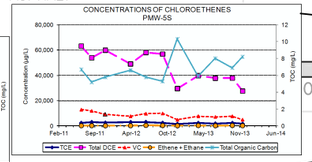


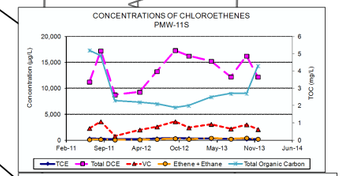


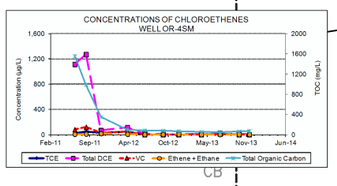


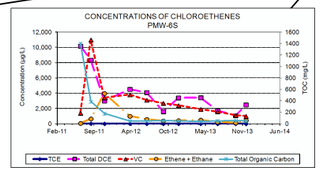


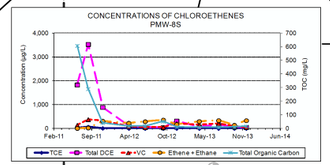


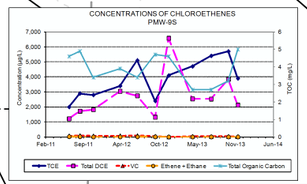


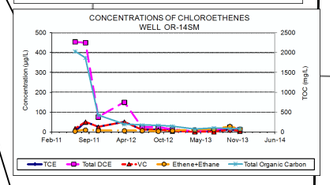


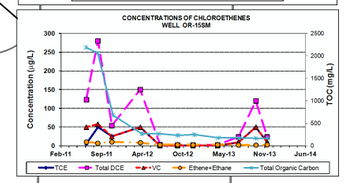


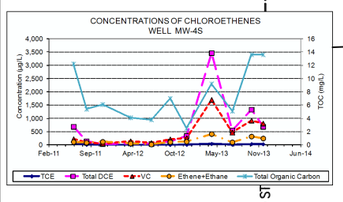


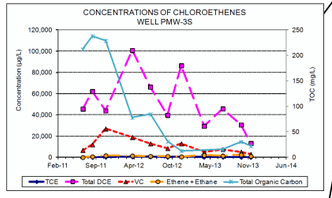


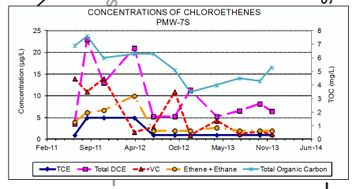


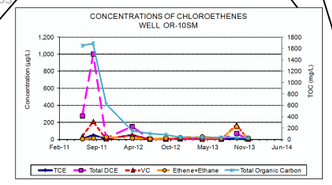


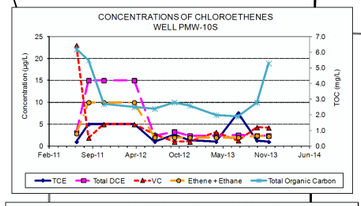


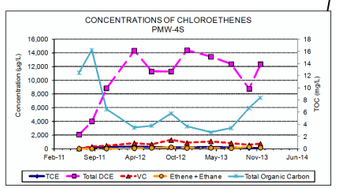


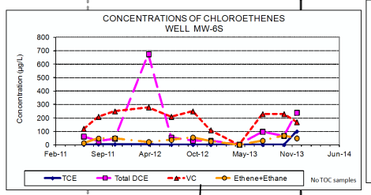


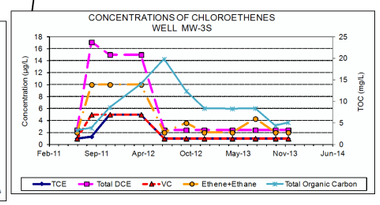


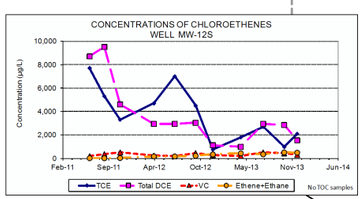


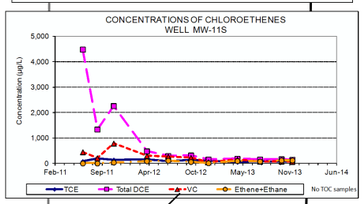












NOTES:
Utility locations are approximate, other utilities may exist.
Overburden Bioreactor Trenches were installed in April 2011.
Pilot Test Bedrock Injections performed in June 2008,
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Injections in Nov. 2012.

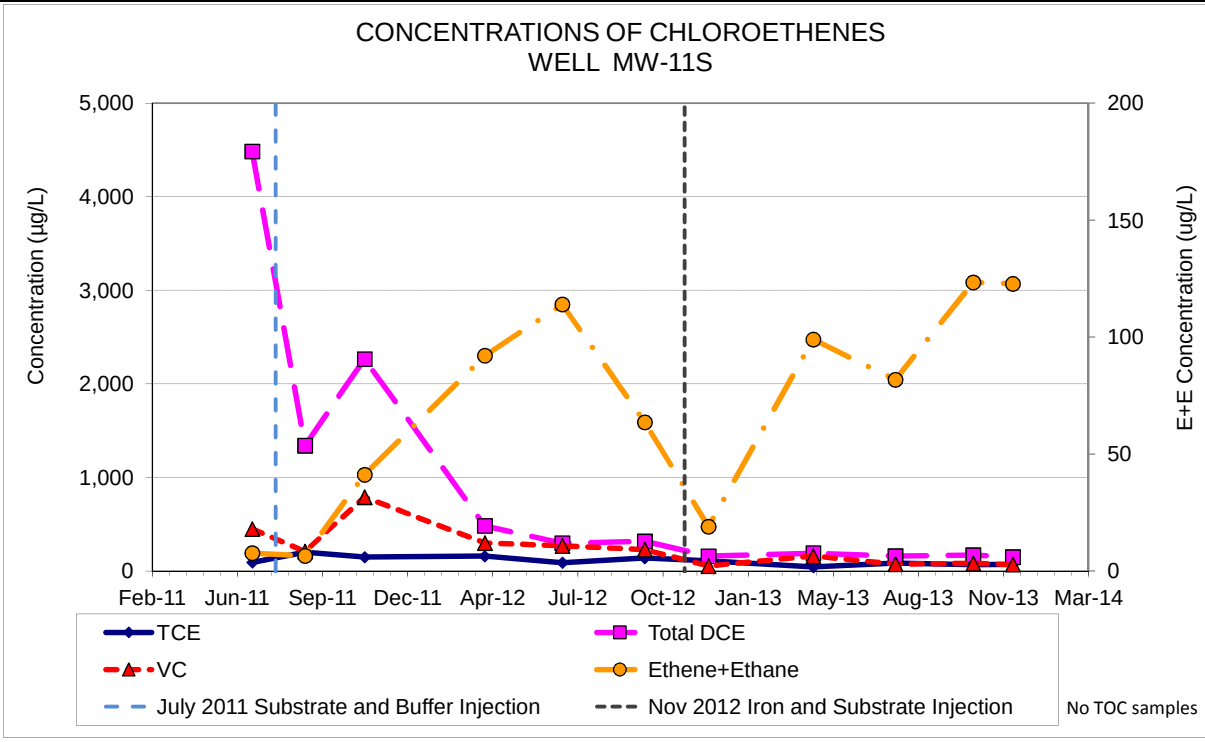
ATLANTIC RICHFIELD COMPANY

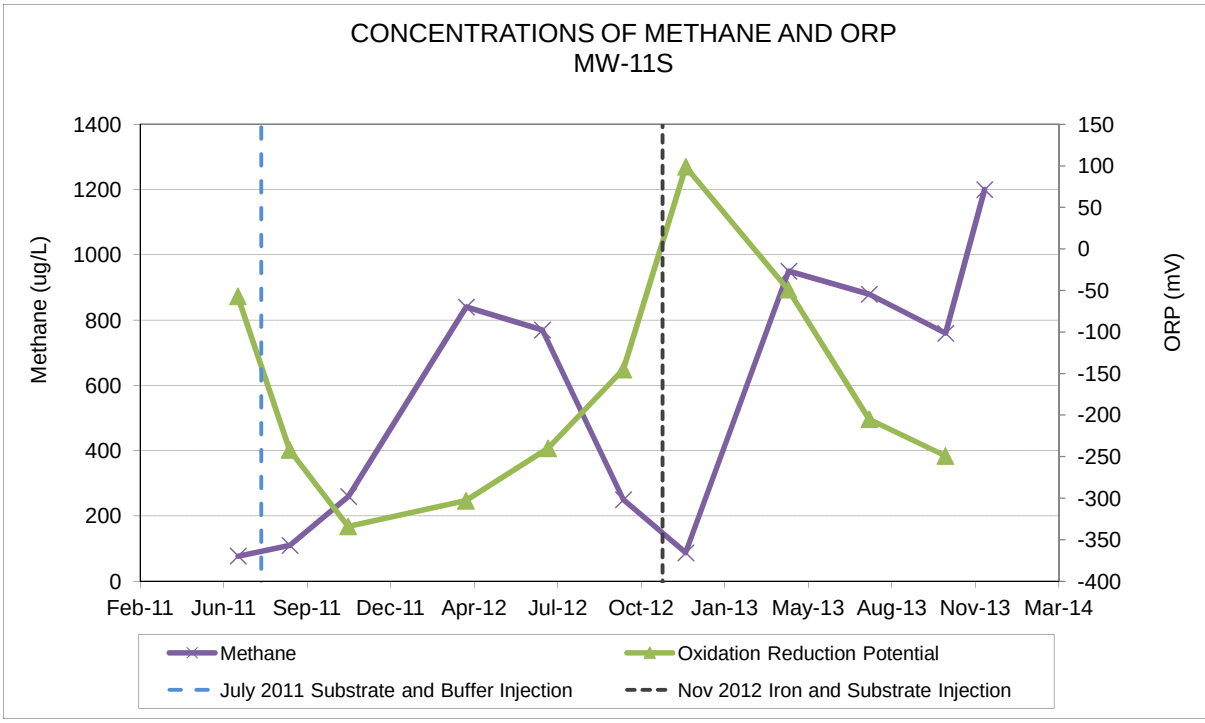
EKONOL POLYESTER
6600 WALMORE ROAD
NIAGARA FALLS, NY

FIGURE 1
OVERBURDEN TIME SERIES PLOTS

PARSONS
40 LA RIVIERE DR, SUITE 350, BUFFALO, NY 14202 PHONE: 716-541-0730

447355.02000
\\NYBUF03FS01\PCTGprojects\Ekonol\447355 P&Q Monitoring\CAD\Ekonol Oct 2013 rem area - updated links.dwg





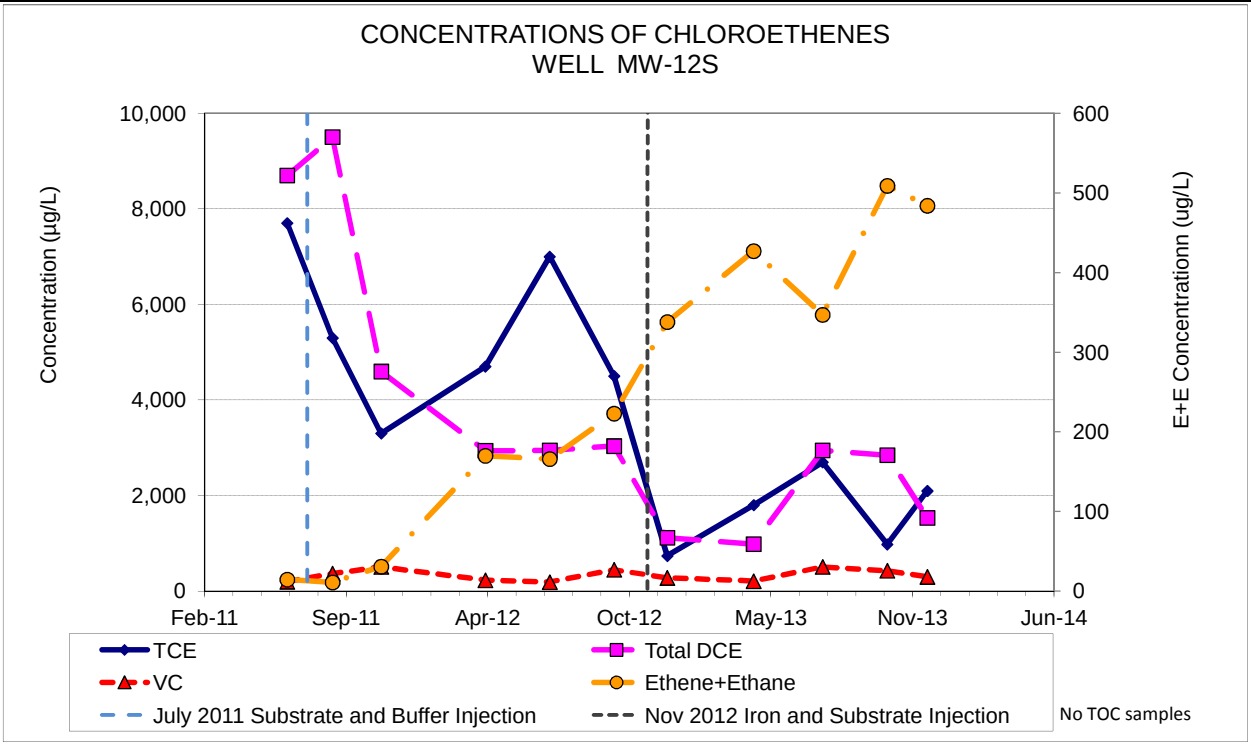
EKONOL POLYESTER RESINS, WHEATFIELD, NY

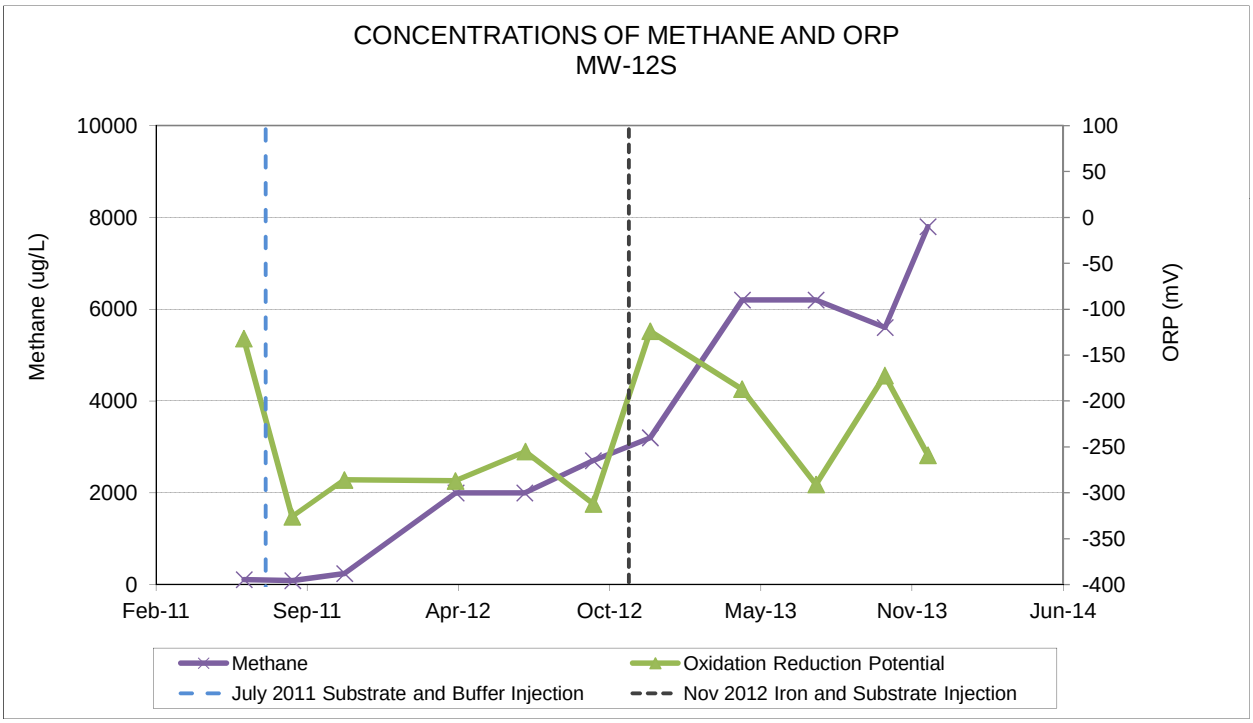
Time Series Plots

MW-11S

PARSONS
40 LA RIVIERE DRIVE · SUITE 350 ·BUFFALO, NY 14202 · (716) 541-0730

December 2013	**FIGURE 2A**





EKONOL POLYESTER RESINS, WHEATFIELD, NY

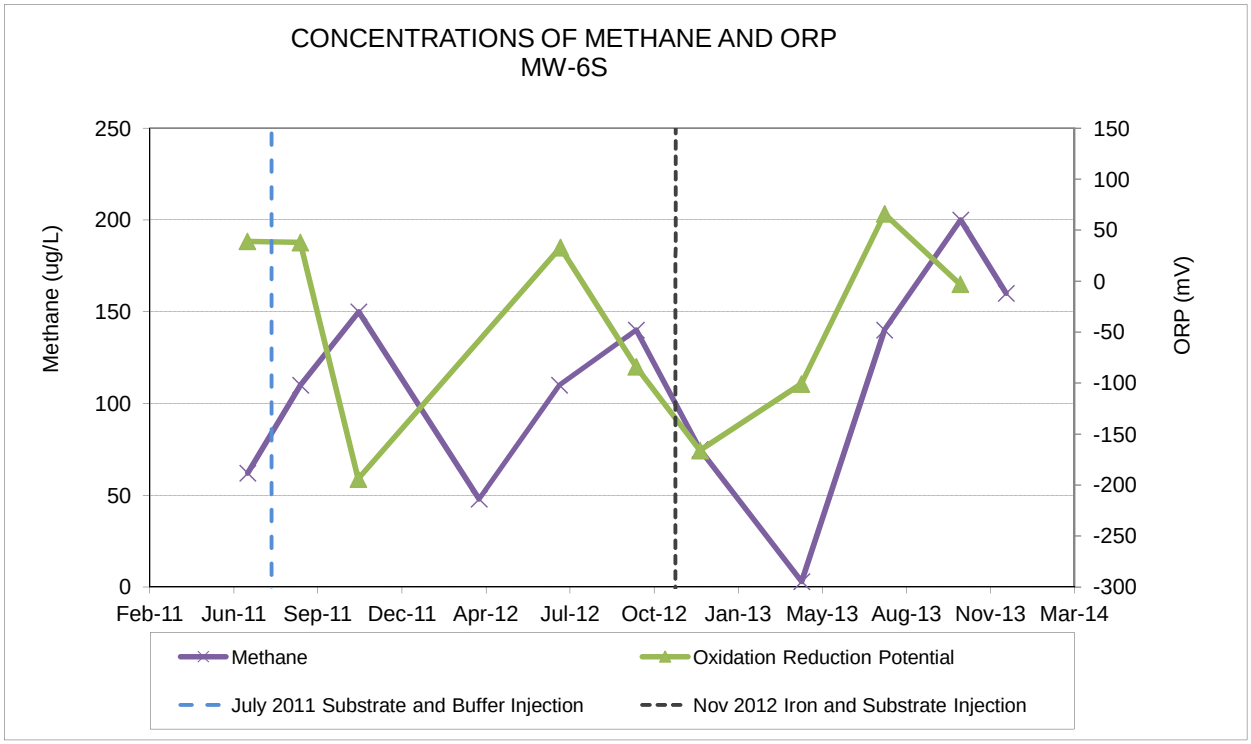
Time Series Plots

MW-12S

PARSONS

40 LA RIVIERE DRIVE · SUITE 350 ·BUFFALO, NY 14202 · (716) 541-0730

December 2013	**FIGURE 2B**



EKONOL POLYESTER RESINS, WHEATFIELD, NY

Time Series Plots

MW-6S

PARSONS

40 LA RIVIERE DRIVE · SUITE 350 ·BUFFALO, NY 14202 · (716) 541-0730

December 2013	**FIGURE 2C**

N

30 15 0 30

SCALE IN FEET

LEGEND:

- RAILROAD TRACKS
- NEW BORING WELL (POST 2010)
- REPLACEMENT BEDROCK INVESTIGATION WE
- OLD BORING WELL (PRE 2010)
- FW — FIRE WATER LINE
- G — GAS LINE
- SAN — SANITARY LINE
- STM — STORM LINE
- CB — CATCH BASIN
- MH — MANHOLE
- MULCH AND GRAVEL BIOREACTOR
- EDGE OF NEW ASPHALT

LDING No. 4

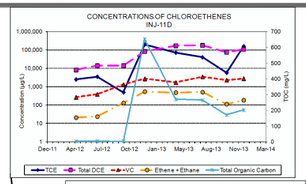
VIOUS EXCAVATION AREA

SLIDING BAY DOOR

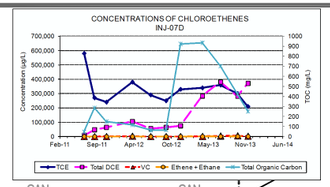
BLD. EXT.

INJ-11D
INJ-7D
INJ-8D
INJ-13D
INJ-6D
RMW-2D
PMW-1D
PMW-9D
PMW-10D
PMW-11D
INJ-9D
INJ-10D
PMW-12D
PMW-13D
PMW-14D
PMW-15D
INJ-03
INJ-02
PMW-2D
PMW-8D
INJ-01
INJ-04
INJ-05
PMW-3D
PMW-5D
PMW-16D
RMW-3D
RMW-4D
PMW-4D
PMW-6D
PMW-7D
MW-7D
PMW-17D
MW-11D

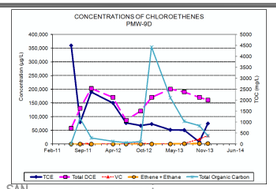
CONCENTRATIONS OF CHLOROETHENES INJ-11D



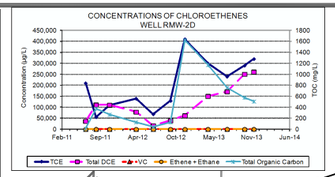
CONCENTRATIONS OF CHLOROETHENES INJ-07D



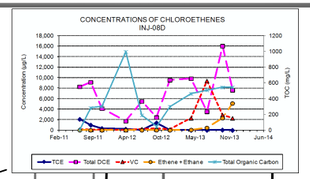
CONCENTRATIONS OF CHLOROETHENES PMW-9D



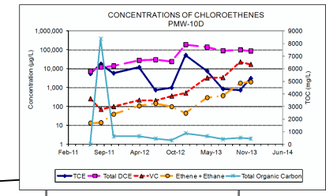
CONCENTRATIONS OF CHLOROETHENES WELL RMW-2D



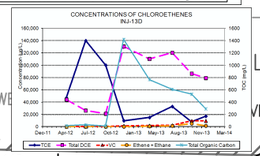
CONCENTRATIONS OF CHLOROETHENES INJ-08D



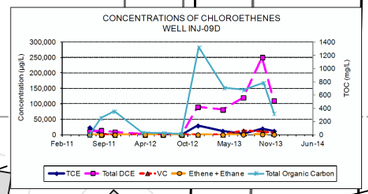
CONCENTRATIONS OF CHLOROETHENES PMW-10D



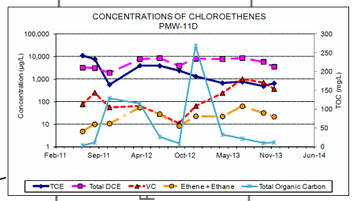
CONCENTRATIONS OF CHLOROETHENES INJ-13D



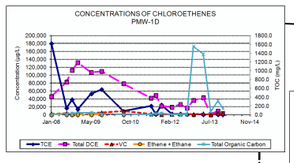
CONCENTRATIONS OF CHLOROETHENES WELL INJ-09D



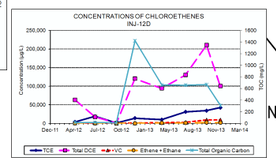
CONCENTRATIONS OF CHLOROETHENES PMW-11D



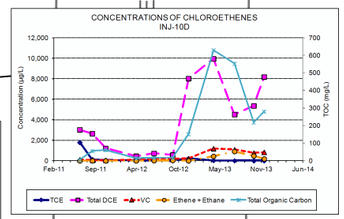
CONCENTRATIONS OF CHLOROETHENES PMW-1D



CONCENTRATIONS OF CHLOROETHENES INJ-12D



CONCENTRATIONS OF CHLOROETHENES INJ-10D



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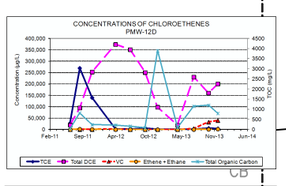
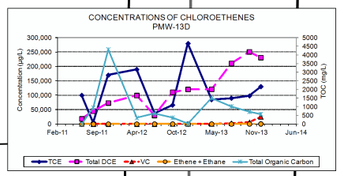
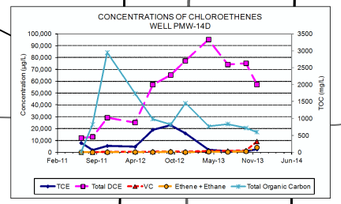


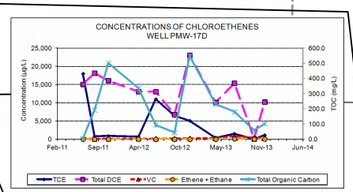
CONCENTRATIONS OF CHLOROETHENES PMW-13D



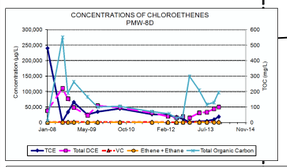
CONCENTRATIONS OF CHLOROETHENES WELL PMW-14D



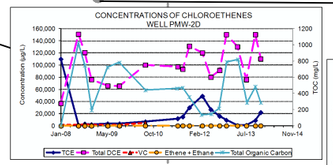
CONCENTRATIONS OF CHLOROETHENES WELL PMW-17D



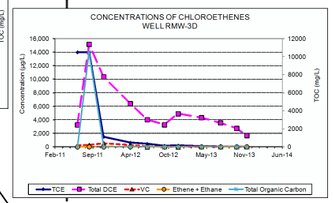
CONCENTRATIONS OF CHLOROETHENES PMW-8D



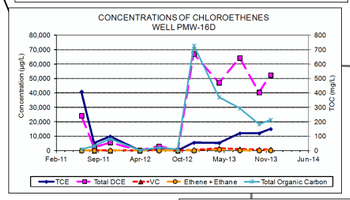
CONCENTRATIONS OF CHLOROETHENES WELL PMW-2D



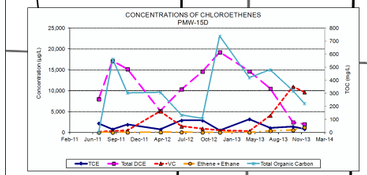
CONCENTRATIONS OF CHLOROETHENES WELL RMW-3D



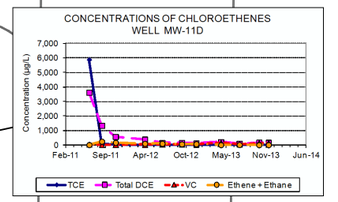
CONCENTRATIONS OF CHLOROETHENES WELL PMW-16D



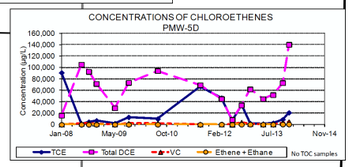
CONCENTRATIONS OF CHLOROETHENES PMW-15D



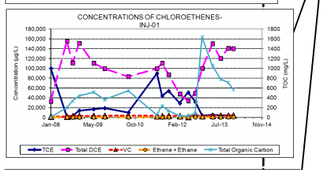
CONCENTRATIONS OF CHLOROETHENES WELL MW-11D



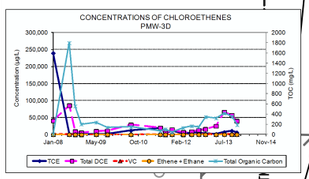
CONCENTRATIONS OF CHLOROETHENES PMW-5D



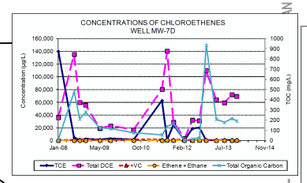
CONCENTRATIONS OF CHLOROETHENES-INJ-01



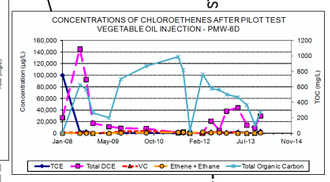
CONCENTRATIONS OF CHLOROETHENES PMW-3D



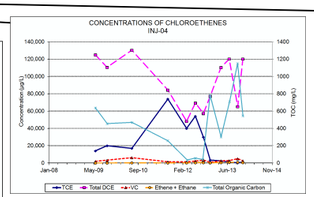
CONCENTRATIONS OF CHLOROETHENES WELL MW-7D



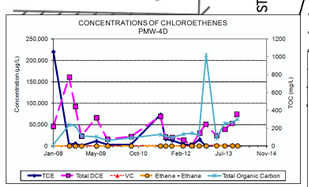
CONCENTRATIONS OF CHLOROETHENES AFTER PILOT TEST VEGETABLE OIL INJECTION - PMW-6D



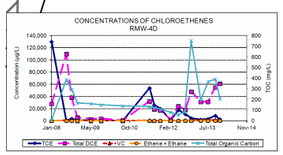
CONCENTRATIONS OF CHLOROETHENES INJ-04



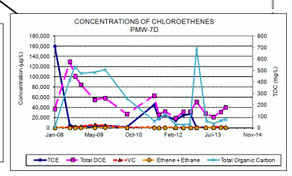
CONCENTRATIONS OF CHLOROETHENES PMW-4D



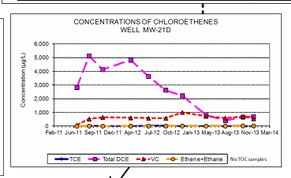
CONCENTRATIONS OF CHLOROETHENES RMW-4D



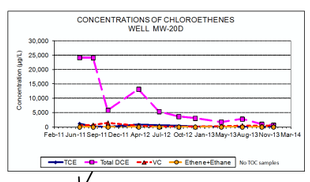
CONCENTRATIONS OF CHLOROETHENES PMW-7D



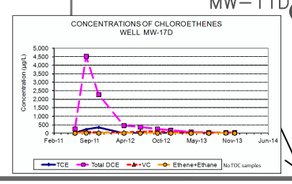
CONCENTRATIONS OF CHLOROETHENES WELL MW-21D



CONCENTRATIONS OF CHLOROETHENES WELL MW-20D



CONCENTRATIONS OF CHLOROETHENES WELL MW-17D



NOTES:
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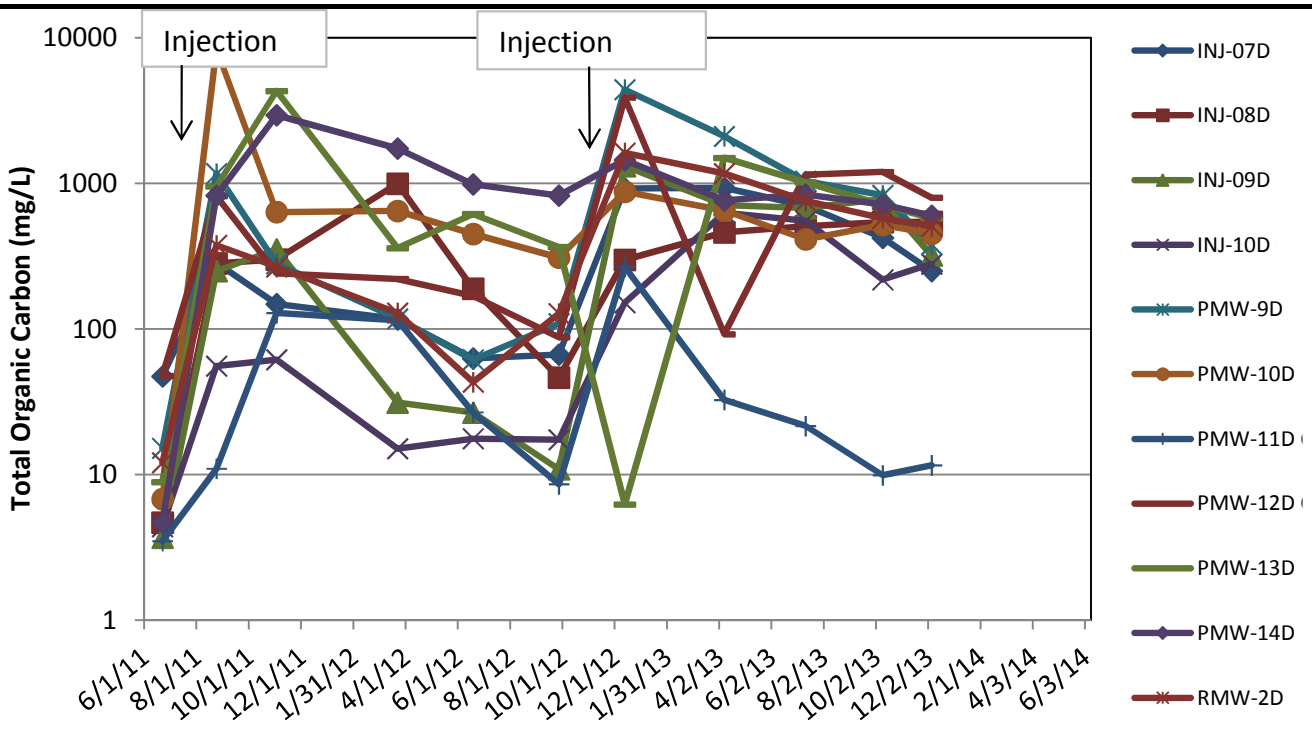
ATLANTIC RICHFIELD COMPANY

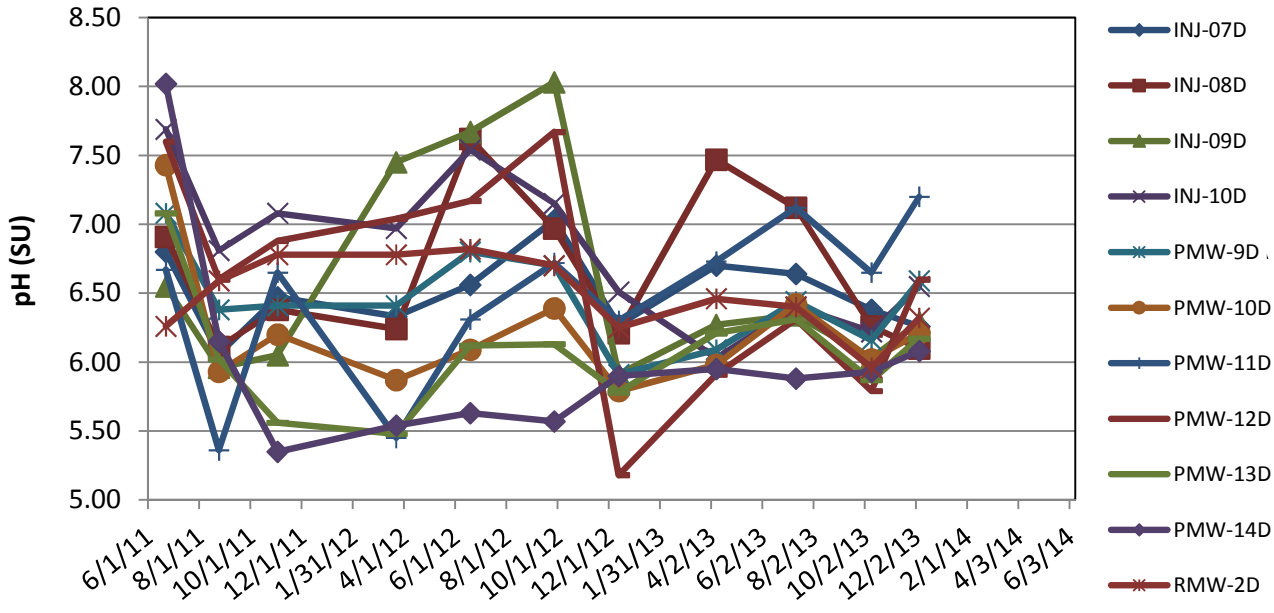
EKONOL POLYESTER
6600 WALMORE ROAD
NIAGARA FALLS, NY

FIGURE 3
BEDROCK WELL
TIME SERIES PLOTS

PARSONS
40 LA RIVIERE DR, SUITE 350, BUFFALO, NY 14202 PHONE: 716-541-0730

447355.02000
\\NYBUF03FS01\PCTGprojects\Ekonol\447355 P&Q Monitoring\CAD\Ekonol Oct 2013 rem area - updated links.dwg





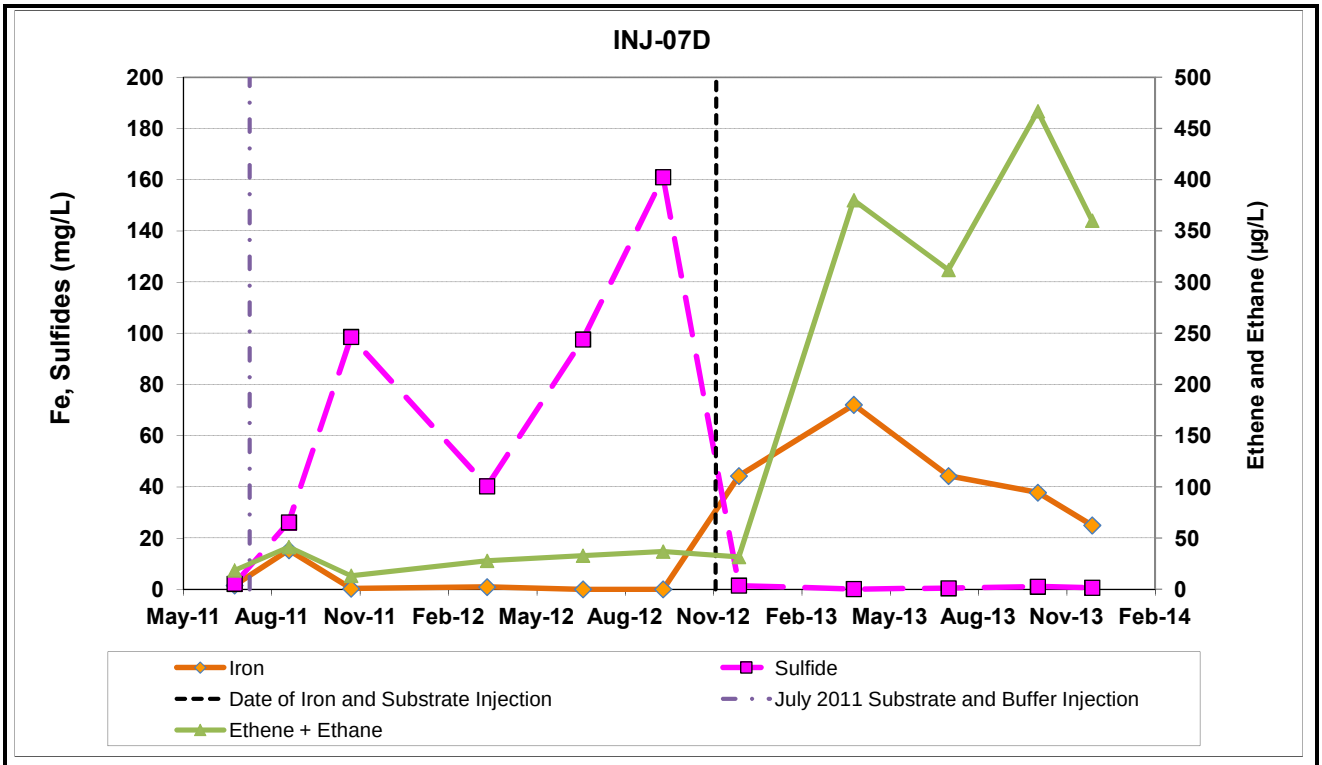
EKONOL POLYESTER, NY

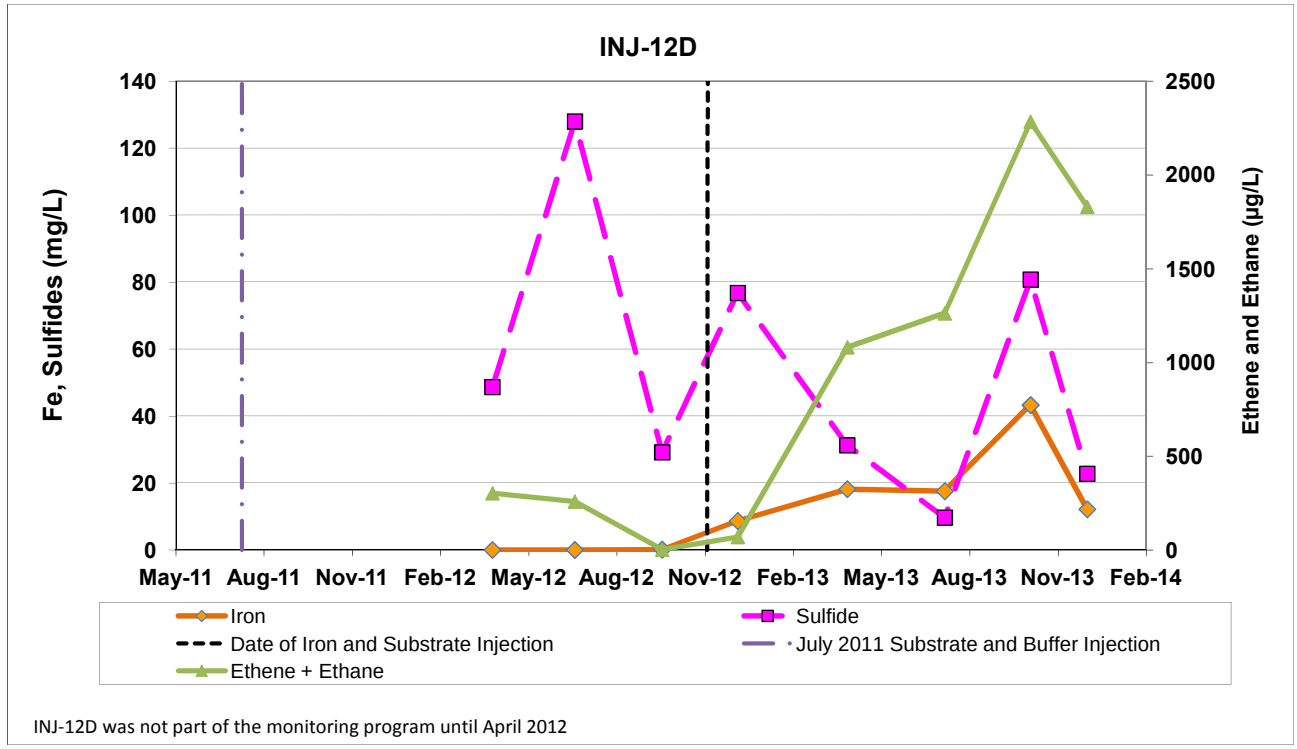
TIME-SERIES PLOTS

pH and Total Organic Carbon

PARSONS
40 LA RIVEIRE DRIVE · SUITE 350 ·BUFFALO, NY 14202 · (716) 541-0730

December 2013 | **FIGURE 4**





INJ-12D was not part of the monitoring program until April 2012

EKONOL POLYESTER RESINS, WHEATFIELD, NY

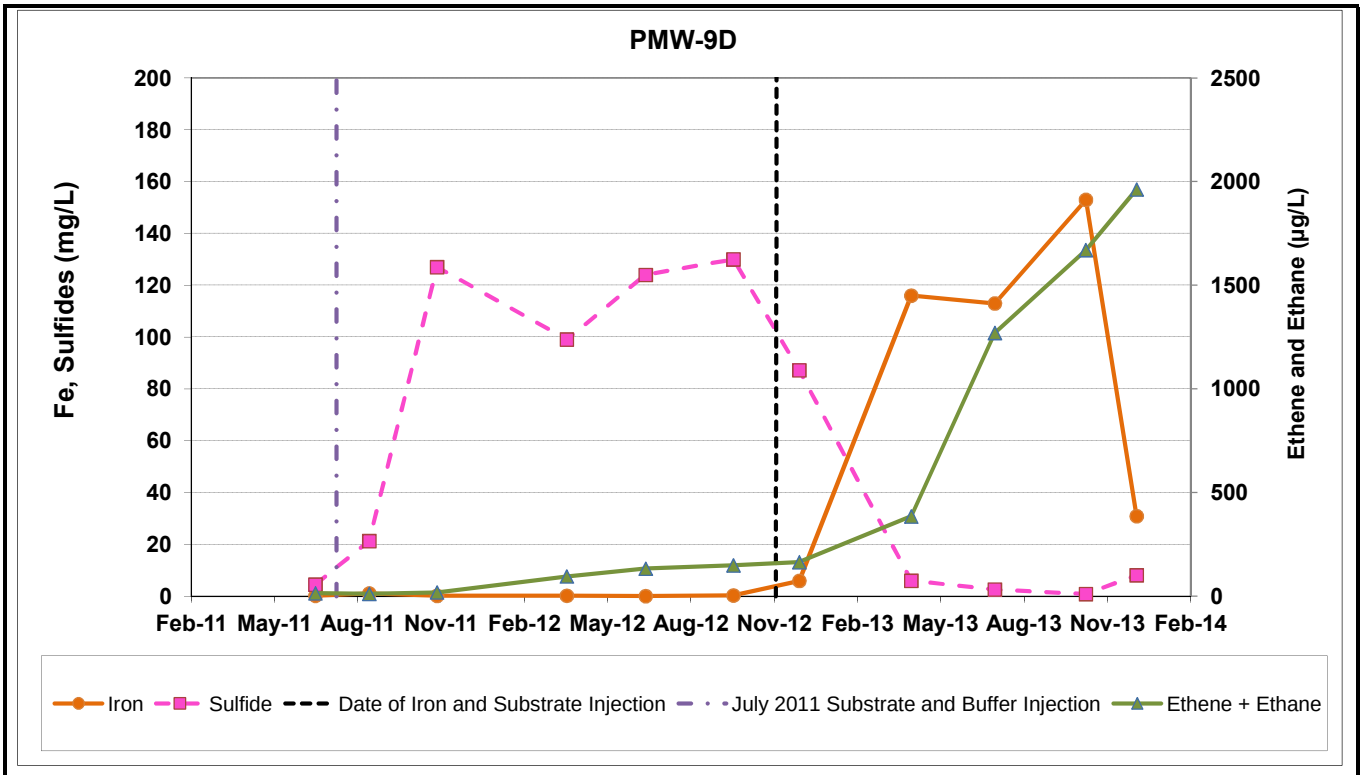
Time Series Plots

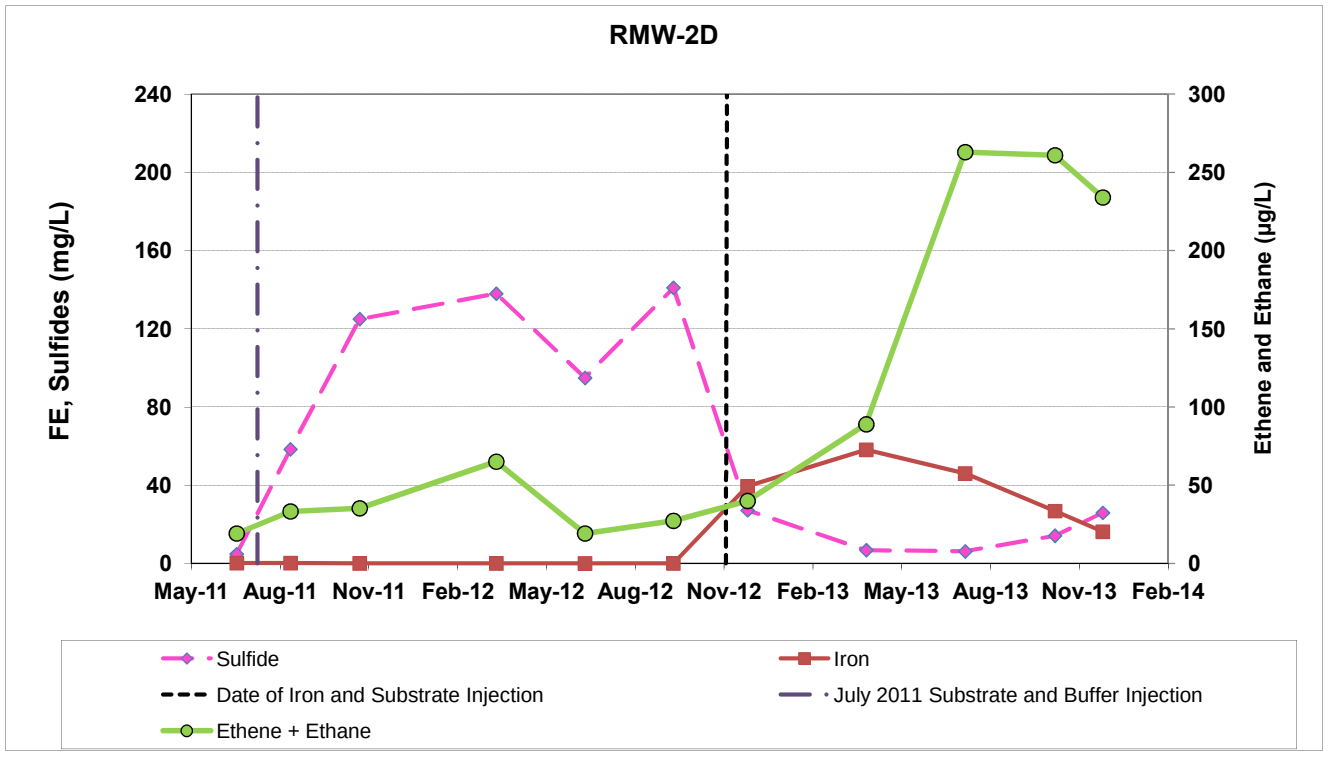
Iron, Sulfides, Ethene and Ethane

PARSONS

40 LA RIVIERE DRIVE · SUITE 350 ·BUFFALO, NY 14202 · (716) 541-0730

December 2013 | **FIGURE 5A**





EKONOL POLYESTER RESINS, WHEATFIELD, NY

Time Series Plots

Iron, Sulfides, Ethene and Ethane

PARSONS

40 LA RIVIERE DRIVE · SUITE 350 ·BUFFALO, NY 14202 · (716) 541-0730

December 2013	FIGURE 5B

TABLE

TABLE 1: AVERAGE DIFFERENCE IN CVOC CONCENTRATION FROM BASELINE SAMPLING EVENT

TABLE 1

AVERAGE DIFFERENCE IN CHLORINATED ETHENE AND CHLORINATED ETHANE CONCENTRATIONS

FROM BASELINE SAMPLING EVENT (JULY 2011)

Sampling Date	Group 1*	Group 2*	Group 3*	Group 4*
July 2011	0.0	0.0	0.0	0.0
August 2011	-390.4	106.3	-232.1	9.7
November 2011	-383.0	731.1	-290.8	-89.6
March 2012	-126.2	762.1	-431.8	-25.2
June 2012	-547.9	310.8	-411.4	-49.3
September 2012	-480.4	363.6	-483.0	-81.6
December 2012	601.1	411.6	-176.2	-93.6
April 2013	824.6	118.5	-287.7	-123.9
July 2013	988.9	574.8	-107.8	-119.0
October 2013	1275.1	573.8	-326.4	-135.8
December 2013	1044.2	785.0	-218.0	-140.4

*Average total molar chlorinated ethene and ethane concentration in µmols per liter (µM).

Notes:

Group 1 includes Source Area Wells:	*INJ-7D*	*INJ-10D*
	INJ-8D	*PMW-10D*
	INJ-9D	*RMW-2D*
Group 2 includes Downgradient wells:	*PMW-9D*	*PMW-13D*
	PMW-11D	*PMW-14D*
	PMW-12D	*PMW-15D*
Group 3 includes Further Downgradient wells:	*PMW-16D*	
	PMW-17D	
	RMW-3D	
Group 4 includes Far Downgradient wells:	*MW-20D*	
	MW-21D	

Negative number means a decrease in total CVOC concentrations relative to July 2011.

Positive number means an increase in total CVOC concentrations relative to July 2011.

ATTACHMENT A

INSPECTION RECORDS

OPERATION, MONITORING AND MAINTENANCE CHECKLIST

Date: 02/13/13

Checklist Completed By: DAN CHAMBERLAND

Project Number: 447986020.00

Property Location: EKONOL

System Installation Date: _____

The purpose of this form is to document the operation and maintenance of the sub-slab depressurization system to provide assurance that the system is functioning as designed or identify and execute any actions required to achieve the mitigation of subsurface vapor intrusion of volatile organic compounds to indoor air

1. MITIGATION SYSTEM INSPECTION

Occupant Interview

Any concerns identified by the building occupants? YES (NO)

Comments / Action Items

Occupant's Initials: MJK

External Piping

Vent pipes securely fastened to building	(YES)	NO	
Are there any visible openings or breaks in the pipe system	YES	(NO)	
Is the rain cap present and intact at discharge point	(YES)	NO	N/A
Inspection of the exhaust point verified that no air intakes have been located nearby	(YES)	NO	
The sealing/caulking around wall penetrations is intact	(YES)	NO	

Comments / Action Items

Mitigation Fan

Fan is mounted securely to building (no excessive vibrations during operation)	(YES)	NO
Fan cover is installed	(YES)	NO
No visible damage to fan or cover	(YES)	NO

Comments / Action Items

OPERATION, MONITORING AND MAINTENANCE CHECKLIST

Internal Piping

Vertical and horizontal pipe runs are secured, including at all penetration points	(YES)	NO	
The sealing/caulking is intact around the extraction point or points through the basement floor, crawlspace floor, and/or crawlspace/basement wall interface.	(YES)	NO	
Vibration dampener installed and intact (pertains to fan mount)	YES	NO	N/A
Mitigation system operation placard present and visible/legible	(YES)	NO	
Contains description of major components, valid contact number and instructions for occupant inquiries and/or system failure	(YES)	NO	
Mitigation system maintenance tag present and filled out	YES	NO	
Date of last inspection shown on tag:_____			
U-tube manometer present and intact at each extraction point	(YES)	NO	

Comments / Action Items

Electrical

Electrical connections secured	(YES)	NO	
Junction boxes are closed	(YES)	NO	
Conduit is supported	(YES)	NO	
Circuit breakers controlling the mitigation fan and alarm circuits operate and are labeled "Mitigation System"	YES	(NO)	
Power switch tagged with intact tamper proof seal	YES	(NO)	
Audible alarm present	(YES)	NO	
Audible alarm switch in "on" position (light on alarm is green)	YES	NO	

Comments / Action Items

LABELED "FAN"

Water Sumps (skip this section if no sump(s) present)

Sump present	YES	NO	
Number of sumps and locations are all shown on as-built drawing	YES	NO	
Sump pit is sealed to minimize influx of conditioned air	YES	NO	N/A
Penetrations to sump covers to accommodate electrical wiring, water injection pipes or vent pipes are sealed	YES	NO	N/A
Sump pits used as suction pits are identified with a label that reads; "This cover must be properly sealed for effective operation of the mitigation system - Contact Geosyntec Consultants (toll free 1-800-695-4436) for instructions on the correct procedure for replacement and sealing if removal or modification for any reason is performed"	YES	NO	N/A

Comments / Action Items

N/A

OPERATION, MONITORING AND MAINTENANCE CHECKLIST

2. OPERATIONAL CHECKS

Fan is operating — (YES) NO
Noise and Vibration within normal range — (YES) NO
Alarm sounds when fan is turned off — (YES) NO

U-Tube manometer indicating negative sub slab pressure — YES NO

U-Tube Manometer Reading: Location: OFFICE Vacuum 0.8 in H_20
U-Tube Manometer Reading: Location:_____ Vacuum _____ in H_20
U-Tube Manometer Reading: Location:_____ Vacuum _____ in H_20
U-Tube Manometer Reading: Location:_____ Vacuum _____ in H_20
U-Tube Manometer Reading: Location:_____ Vacuum _____ in H_20
U-Tube Manometer Reading: Location:_____ Vacuum _____ in H_20
U-Tube Manometer Reading: Location:_____ Vacuum _____ in H_20
U-Tube Manometer Reading: Location:_____ Vacuum _____ in H_20
U-Tube Manometer Reading: Location:_____ Vacuum _____ in H_20

Smoke test performed on internal penetrations and pipe joints
Smoke test indicated no leaks — (YES) NO N/A
Smoke test confirms air flow into sump — (YES) NO N/A
Back draft test confirms proper air flow at combustion appliances — YES NO N/A
Smoke test indicated no leaks — (YES) NO N/A

3. MAINTENANCE

Fan last replaced on (date): _____

Fan due to be replaced; _____

Additional Maintenance Action Items Performed

4. ADDITIONAL ACTION ITEMS/ COMMENTS/COMPLETION DATES

5. CERTIFICATION

I certify that the information on this form is true, accurate and complete (all blanks filled in) to the best of my knowledge and ability, and that I have the appropriate training and experience to perform this monitoring/inspection:

Name: DAN CHAMBERLAND Affiliation: PARSONS

Signature: _____ Date (dd/mm/yy): 12/13/13 12:25 am/pm

EKONOL SITE PAVEMENT INSPECTION FORM
WHEATFIELD, NEW YORK

Date of Inspection: 12/12/13 **Time:** 1400

Inspector(s) Name/Title: DAN CHAMBERLAND

Inspection of	Condition Present?		Action Required?		Comments/Location	Correction Date
	Yes	No	Yes	No		
1. Site Pavement						
A. Surface cracks		✓		✓		
B. Pits/divots		✓		✓		
C. Sinking		✓		✓		
2. Well curb boxes						
A. Cracks		✓		✓		
B. Loose	✓			✓	MISSING WELL CAPS WERE FOUND WHILE SAMPLING. SOME	12/9-12/16
C. Well caps missing		✓		✓	ARE LOOSE BUT FLUSH WITH CURB BOX	
D. Settlement		✓		✓		

ATTACHMENT B

WATER LEVEL MEASUREMENT, SAMPLING MATRIX AND SAMPLING RECORDS

Ekonol Water Levels
12/2/2013

#	Well ID	DTW (ft btoc)	Time	Comments
1	INJ-01	6.14	1155	
2	INJ-02	6.81	1151	Product at 6.42
3	INJ-03	6.2	1153	
4	INJ-04	7.21	1145	Product at 6.50
5	INJ-05	6.57	1140	
6	INJ-06D	6.51	1310	
7	INJ-07D	6.6	1214	
8	INJ-08D	6.63	1151	
9	INJ-09D	6.65	1209	
10	INJ-10D	0.65	1150	J-plug off, surface water infiltration.
11	INJ-11D	6.72	1318	
12	INJ-12D	6.91	1213	
13	INJ-13D	6.31	1317	
14	MW-1S	4.92	1055	
15	MW-2S	2.91	1321	
16	MW-3S	4.77	1150	
17	MW-4S	6.21	1144	
18	MW-5S	6.02	1100	
19	MW-6S	4.05	1133	
20	MW-7D	6.87	1138	
21	MW-7S	5.08	1137	
22	MW-8S	4.46	1317	No bolts
23	MW-9S	6.72	1320	
24	MW-10D	6.71	1209	
25	MW-10S	4.58	1115	
26	MW-11D	4.15	1309	
27	MW-11S	6.84	1301	
28	MW-12D	7.02	1206	
29	MW-12S	6.44	1131	
30	MW-13D	10.64	1111	
31	MW-14D	8.46	1126	
32	MW-15D	7.09	1102	
33	MW-16D	11.95	1113	
34	MW-17D	8.28	1250	
35	MW-18D	7.76	1107	
36	MW-19D	6.85	1107	
37	MW-20D	7.68	1128	
38	MW-21D	7.36	1120	
39	OR-1SI	2.74	1218	
40	OR-2SI	3.18	1222	
41	OR-3SM	2.75	1217	

Ekonol Water Levels
12/2/2013

#	Well ID	DTW (ft btoc)	Time	Comments
42	OR-4SM	3.24	1315	
43	OR-5SM	2.68	1159	
44	OR-6SM	5.13	1201	
45	OR-7SI	2.23	1156	
46	OR-8SI	5.09	1157	Cap missing- hit by plow
47	OR-9SM	5.31	1139	
48	OR-10SM	5.65	1143	
49	OR-11SI	5.81	1138	
50	OR-12SI	5.76	1136	Bolt holes broken off/missing
51	OR-13SM	5.81	1132	
52	OR-14SM	5.84	1134	
53	OR-15SM	5.41	1125	
54	OR-16SI	4.96	1129	
55	OR-17SI	5.12	1121	
56	OR-18SM	4.61	1118	
57	PMW-1D	6.63	1214	
58	PMW-1S	2.85	1154	
59	PMW-2D	6.75	1144	
60	PMW-2S	3.15	1200	
61	PMW-3D	6.73	1141	
62	PMW-3S	5.24	1202	
63	PMW-4D	6.69	1137	Cover missing- hit by plow
64	PMW-4S	4.68	1203	
65	PMW-5D	6.66	1150	
66	PMW-5S	3.3	1216	
67	PMW-6D	6.35	1149	
68	PMW-6S	5.58	1323	
69	PMW-7D	6.82	1137	
70	PMW-7S	5.82	1142	
71	PMW-8D	6.41	1140	
72	PMW-8S	5.77	1145	
73	PMW-9D	6.58	1211	
74	PMW-9S	5.9	1132	
75	PMW-10S	4.98	1135	
76	PMW-10D	5.91	1204	
77	PMW-11D	5.83	1147	
78	PMW-11S	5.03	1120	
79	PMW-12D	6.71	1212	Cover missing- hit by plow
80	PMW-13D	6.64	1208	
81	PMW-14D	6.81	1205	
82	PMW-15D	6.54	1155	

Ekonol Water Levels
12/2/2013

#	Well ID	DTW (ft btoc)	Time	Comments
83	PMW-16D	6.42	1207	
84	PMW-17D	6.7	1206	
85	RMW-1D	6.46	1052	
86	RMW-2D	6.28	1313	
87	RMW-3D	6.79	1151	
88	RMW-4D	6.74	1143	
89	TP-1	6.07	1215	
90	TP-2	6.22	1216	

TABLE 2
SUMMARY OF PROPOSED MONITORING
EKONOL POLYESTER RESINS, WHEATFIELD, NEW YORK

Location	Synoptic Water Level Measurement[g/]	VOCs[a/] (SW8260B)	Methane, Ethane, Ethene (Lab SOP)	Chloride, Nitrate, Sulfate[b/] (E300.1)	Dissolved Inorganics[b/c/] (SW6010B)	Ortho-phosphate[b/] (EPA 365.1)	Sulfide[b/] (MS 4500-S2-F)	Total Organic Carbon (SW9060)	Total Inorganic Carbon (SW9060)	Microbial Population[d/] (Lab SOP)	Acetylene and Hydrogen	Real time Analyses[e/]	Mobile Lab Analysis[f/]
Overburden Bioreactor Monitoring Wells													
OR-3SM	1	1	1	1	1	1	1	1	1			1	1
OR-4SM	1	1	1	1	1	1	1	1	1			1	1
OR-5SM	1	1	1	1	1	1	1	1	1	1	1	1	1
OR-6SM	1	1	1	1	1	1	1	1	1	1	1	1	1
OR-9SM	1	1	1	1	1	1	1	1	1			1	1
OR-10SM	1	1	1	1	1	1	1	1	1			1	1
OR-13SM	1	1	1	1	1	1	1	1	1	1	1	1	1
OR-14SM	1	1	1	1	1	1	1	1	1	1	1	1	1
OR-15SM	1	1	1	1	1	1	1	1	1			1	1
OR-18SM	1	1	1	1	1	1	1	1	1			1	1
PMW-1S	1	1	1	1	1	1	1	1	1	1	1	1	1
PMW-2S	1	1	1	1	1	1	1	1	1	1	1	1	1
PMW-3S	1	1	1	1	1	1	1	1	1	1	1	1	1
PMW-4S	1	1	1	1	1	1	1	1	1			1	1
PMW-5S	1	1	1	1	1	1	1	1	1			1	1
PMW-6S	1	1	1	1	1	1	1	1	1			1	1
PMW-7S	1	1	1	1	1	1	1	1	1			1	1
PMW-8S	1	1	1	1	1	1	1	1	1			1	1
PMW-9S	1	1	1	1	1	1	1	1	1	1	1	1	1
PMW-10S	1	1	1	1	1	1	1	1	1	1	1	1	1
PMW-11S	1	1	1	1	1	1	1	1	1			1	1
Bedrock Injection/Withdrawal Wells													
INJ-7D	1	1	1	1	1	1	1	1	1	1	1	1	1
INJ-8D	1	1	1	1	1	1	1	1	1			1	1
INJ-9D	1	1	1	1	1	1	1	1	1	1	1	1	1
INJ-10D	1	1	1	1	1	1	1	1	1	1	1	1	1
INJ-11D	1	1	1	1	1	1	1	1	1			1	1
INJ-12D	1	1	1	1	1	1	1	1	1			1	1
INJ-13D	1	1	1	1	1	1	1	1	1			1	1
Bedrock Monitoring Wells													
PMW-9D	1	1	1	1	1	1	1	1	1			1	1
PMW-10D	1	1	1	1	1	1	1	1	1			1	1
PMW-11D	1	1	1	1	1	1	1	1	1	1	1	1	1
PMW-12D	1	1	1	1	1	1	1	1	1			1	1
PMW-13D	1	1	1	1	1	1	1	1	1			1	1
PMW-14D	1	1	1	1	1	1	1	1	1			1	1
PMW-15D	1	1	1	1	1	1	1	1	1	1	1	1	1
PMW-16D	1	1	1	1	1	1	1	1	1			1	1
PMW-17D	1	1	1	1	1	1	1	1	1	1	1	1	1
Pilot Test Wells													
PMW-1D	1	1	1	1	1	1	1	1	1			1	1
INJ-01	1	1	1	1	1	1	1	1	1			1	1
PMW-2D	1	1	1	1	1	1	1	1	1	1		1	1
PMW-3D	1	1	1	1	1	1	1	1	1			1	1
PMW-4D	1	1	1	1	1	1	1	1	1			1	1
PMW-6D	1	1	1	1	1	1	1	1	1	1		1	1
RMW-4D	1	1	1	1	1	1	1	1	1			1	1
PMW-7D	1	1	1	1	1	1	1	1	1			1	1
MW-7D	1	1	1	1	1	1	1	1	1			1	1
Site Investigation Wells													
MW-1S	1	1	1	1	1	1	1	1	1			1	1
MW-2S	1	1	1	1	1	1	1	1	1	1		1	1
MW-3S	1	1	1	1	1	1	1	1	1			1	1
MW-4S	1	1	1	1	1	1	1	1	1			1	1
MW-6S	1	1	1									1	1
MW-10S	1	1	1									1	1
MW-11S	1	1	1									1	1
MW-12S	1	1	1									1	1
RMW-2D	1	1	1	1	1	1	1	1	1	1		1	1
RMW-3D	1	1	1	1	1	1	1	1	1			1	1
MW-11D	1	1	1									1	1
MW-17D	1	1	1									1	1
MW-20D	1	1	1									1	1
MW-21D	1	1	1									1	1
Monitoring Subtotal	60	60	60	52	52	52	52	52	52	19	15	60	60
Added for Annual													
RMW-1D	1	1	1	1	1	1	1	1				1	
PMW-5D	1	1	1	1	1	1	1	1				1	
PMW-8D	1	1	1	1	1	1	1	1				1	
MW-14D	1	1	1	1	1	1	1	1				1	
MW-15D	1	1	1	1	1	1	1	1				1	
MW-16D	1	1	1	1	1	1	1	1				1	
MW-18D	1	1	1	1	1	1	1	1				1	
MW-19D	1	1	1	1	1	1	1	1				1	
MW-10D	1	1	1	1	1	1	1	1				1	
MW-12D	1	1	1	1	1	1	1	1				1	
MW-13D	1	1	1	1	1	1	1	1				1	
MW-5S	1	1	1	1	1	1	1	1				1	
MW-9S	1	1	1	1	1	1	1	1				1	
MW-7S	1	1	1	1	1	1	1	1				1	
MW-8S	1	1	1	1	1	1	1	1				1	
INJ-02	1	1	1	1	1	1	1	1				1	
INJ-04	1	1	1	1	1	1	1	1				1	
INJ-05	1	1	1	1	1	1	1	1				1	
ANNUAL SUBTOTAL	18	18	18	18	18	18	18	18	0	0	0	18	0
QA/QC													
Duplicates	4	4	4	4			4						
Matrix Spike	4												
Matrix Spike Duplicate	4												
Trip Blanks	15												
TASK TOTAL PER SAMPLING	105	82	74	74	70	70	74	52	19	15	78	60	

[a/] VOCs = volatile organic compounds, including aromatic and chlorinated aliphatic hydrocarbons. If present, an oil sample will also be collected and analyzed for VOCs.

[b/] All metal and cation samples must be field-filtered and immediately preserved (Al, As, Ca, Fe, K, Mg, Mn, Se, Na)

[c/] Dissolved inorganic compounds will consist of aluminum (Al), arsenic (As), calcium (Ca), iron (Fe), potassium (K), magnesium (Mg), manganese(Mn), selenium (Se), and sodium (Na). Samples will be field filtered.

[d/] Analysis of microbial population composition will include concentration measurements of dehalococcoides (DHC) and dehalobacter (DHB) species in cells per milliliter as well as DHC functional genes

[e/] Well head analyses include dissolved oxygen, oxidation-reduction potential, pH, temperature, electrical conductivity, and visual appearance.

[f/] Mobile lab analyses include carbon dioxide, alkalinity, sulfide, ferrous iron, and manganese.

[g/] For the baseline monitoring round, all Site Water Levels will be recorded

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-01

Manual Entry:

Well Diameter: inches

Samplers: Dan chamberland

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft):

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow geopump

Date: 12/09/2013

Time: 12:40 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
12:40	6.75	200	0	6.42	3.36	OR	3.41	9.10	2.17	-287	Substrate
12:50	7.55	200	0.5	6.19	2.00	6.42	3.31	11.03	2.12	-330	Clear, susp solids, strong substrate odor
13:00	7.87	200	1.0	6.19	1.81	4.06	3.24	11.13	2.08	-340	Same, water oxidizing
13:10	8.01	200	1.5	6.20	1.75	4.49	3.25	11.06	2.08	-338	Same
13:15	8.06	200	1.7	6.21	1.77	4.86	3.25	10.89	2.08	-340	Same
13:20	8.10	200	1.9	6.22	1.79	5.18	3.27	10.74	2.09	-342	Same
13:25	8.13	200	2.1	6.23	1.75	4.32	3.24	11.0	2.06	-343	Same
13:30	8.15	200	2.4	6.24	1.70	3.76	3.20	11.25	2.05	-344	Same
13:35	8.17	200	2.6	6.24	1.71	3.99	3.19	11.21	2.04	-345	Same
13:40	8.21	200	2.8	6.23	1.65	4.63	3.18	11.43	2.03	-347	Same
13:45	8.24	200	3.1	6.22	1.63	4.87	3.16	11.43	2.03	-348	Same
13:50	8.28	200	3.3	6.22	1.64	5.05	3.19	11.45	2.04	-351	Same

Sampling Data

Method: *(i.e. low flow)*

Date:

Time: *(i.e. 14:32)*

Total Volume of Water Purged:

Dedicated tubing	12/09/2013	13:50	3.3 (gal)

HORIBA	
pH	6.22
Spec. Cond. (mS/cm)	3.19
Turbidity (NTU)	5.05
DO (mg/L)	1.64
Temp.(^{o}C)	11.45
ORP (mv)	-351
TDS (g/L)	2.04

HACH TEST KITS	
Alkalinity (mg/L)	480
Carbon Dioxide (mg/L)	832
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	8.28

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-02

Manual Entry:

Well Diameter: 4 inches

Samplers: dan chamberland

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 8.20

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow-geopump

Date: 12/11/2013

Time: 1450 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1450	8.20	200	0	6.53	0.94	18.0	1.05	13.09	0.671	-129	clear, product on top of water
1500	9.15	200	0.5	6.30	0.96	18.9	0.995	12.50	0.636	-123	substrate odor
1510	9.23	200	1.0	6.09	0.0	15.3	1.01	12.05	0.644	-113	
1520	9.28	200	1.5	6.09	0.0	13.4	1.09	7.80	0.695	-88	
1525	9.17	180	1.7	6.18	0	13.2	1.10	7.91	0.710	-96	
1530	9.08	120	1.8	6.29	0	12.9	1.11	8.06	0.717	-103	pump is at 100% speed, but tubing is
1535	9.16	120	2.1	6.27	0	11.6	1.17	6.16	0.748	-90	needed to clear horiba fittings of ice
1555	9.27	150	2.3	6.32	0	38.1	1.14	11.14	0.730	-117	clear, substrate odor
1600	9.22	200	2.4	6.30	0	33.7	1.12	11.95	0.712	-119	same
1605	9.18	200	2.6	6.28	0	31.5	1.09	12.88	0.699	-122	same
1610	9.25	200	2.8	6.28	0	25.6	1.09	12.89	0.698	-125	
1615	9.32	200	3.1	6.24	0	14.9	1.14	12.63	0.728	-147	
1620	9.47	200	3.3	6.19	0	27.8	1.17	12.86	0.764	-153	

1625	9.54	200	3.5	6.14	0	20.6	1.23	13.05	0.802	-156	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(i.e. 14:32)*	Total Volume of Water Purged:
low flow-dedicated tubing	12/11/2013	1625	3.5 (gal)

HORIBA		HACH TEST KITS	
pH	6.14	Alkalinity (mg/L)	
Spec. Cond. (mS/cm)	1.23	Carbon Dioxide (mg/L)	
Turbidity (NTU)	20.6	Ferrous Iron (mg/L)	
DO (mg/L)	00	Manganese (mg/L)	
Temp.(^{o}C)	13.05	Hydrogen Sulfide (mg/L)	5
ORP (mv)	-156	DTW (ft)	9.54
TDS (g/L)	0.802	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-04

Manual Entry:

Samplers: dpc

Well Diameter: 4 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 11.2

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow-geopump

Date: 12/12/2013

Time: 0910 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
0910	11.2	200	0	5.78	6.05	20.9	1.85	7.63	1.18	-90	clear, some oil globules
0920	11.78	200	0.5	5.96	4.25	19.2	1.85	9.27	1.18	-109	
0930	11.93	200	1.0	6.05	2.98	18.3	1.82	11.09	1.17	-120	
0940	12.07	200	1.5	6.10	2.77	22.1	1.81	10.81	1.16	-125	
0945	12.11	200	1.7	6.10	2.72	20.6	1.81	10.76	1.16	-127	
0950	12.15	200	1.9	6.11	2.68	22.7	1.82	10.65	1.17	-128	
0955	12.18	250	2.1	6.13	2.55	20.8	1.82	10.79	1.16	-133	
1000	12.21	250	2.4	6.15	2.31	25.6	1.84	11.36	1.18	-142	
1005	12.22	250	2.7	6.16	2.26	25.0	1.84	11.47	1.18	-149	
1010	12.23	250	3.0	6.17	2.19	24.3	1.85	11.60	1.18	-158	
1015	12.22	250	3.3	6.15	2.13	23.2	1.87	11.60	1.21	-163	
1020	12.24	250	3.6	6.11	2.09	27.3	1.80	11.49	1.25	-167	

Sampling Data

Method: *(i.e. low flow)*

Date:

Time: *(i.e. 14:32)*

Total Volume of Water Purged:

dedicated tubing	12/12/2013	1020	12.24 (gal)

HORIBA	
pH	6.11
Spec. Cond. (mS/cm)	1.80
Turbidity (NTU)	27.3
DO (mg/L)	2.09
Temp.(^{o}C)	11.49
ORP (mv)	-167
TDS (g/L)	1.25

HACH TEST KITS	
Alkalinity (mg/L)	220
Carbon Dioxide (mg/L)	798
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	12.24

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-05

Manual Entry:

Well Diameter: 4 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.97

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: 0950 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1000	7.10	200	0.53	5.78	0.30	150	1.729	12.33	1.124	-183.6	Turning black
1010	7.56	200	1.06	5.80	0.21	155	2.364	12.50	1.541	-312.0	
1020	7.83	200	1.59	6.03	0.19	158	3.216	11.80	2.091	-394.1	
1025	8.02	200	1.85	6.08	0.11	139	3.243	11.69	2.107	-385.5	
1030	8.05	200	2.12	6.13	0.10	154	3.334	11.68	2.169	-378.2	
1035	8.10	200	2.38	6.10	0.09	162	3.375	11.69	2.193	-373.3	
1040	8.12	200	2.65	6.12	0.05	158	3.371	11.73	2.191	-373.2	
1045	8.14	200	2.91	6.13	0.0	166	3.375	11.75	2.196	-372.9	
1050	8.15	200	3.18	6.16	0.0	159	3.410	11.67	2.216	-370.8	
1055	8.16	200	3.44	6.17	0.0	148	3.423	11.69	2.223	-367.3	
1100	8.16	200	3.71	6.17	0.0	143	3.430	11.71	2.221	-364.4	
1105	8.18	200	3.97	6.18	0.0	139	3.437	11.76	2.232	-363.6	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(i.e. 14:32)*	Total Volume of Water Purged:

Low flow	12/12/2013	1110	4.5 (gal)

HORIBA	
pH	6.18
Spec. Cond. (mS/cm)	3.437
Turbidity (NTU)	139
DO (mg/L)	0
Temp.(^{o}C)	11.76
ORP (mv)	-363.6
TDS (g/L)	2.232

HACH TEST KITS	
Alkalinity (mg/L)	0
Carbon Dioxide (mg/L)	0
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	8.18

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Water turned black. VOAs effervescing,

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-07D

Manual Entry:

Samplers: C Huey

Well Diameter: 4 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft):	Depth to Well Bottom (ft):
6.11	

Purging Data

Method: *(i.e. low flow)*: Low flow

Date: 12/05/2013

Time: 0755 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
0805	6.39	200	0.53	6.74	0.80	35.2	1.039	14.88	0.686	77.5	Black particles, clear and turning black
0815	6.78	200	1.06	6.57	0.53	17.3	1.552	14.95	1.012	28.6	
0825	6.90	200	1.59	6.21	0.48	9.04	2.209	15.00	1.437	-9.4	
0835	6.92	200	2.12	6.21	0.44	9.32	2.284	15.03	1.486	-17.4	
0840	6.93	200	2.38	6.27	0.43	9.18	2.300	15.04	1.495	-31.7	
0845	6.93	200	2.65	6.28	0.43	9.09	2.298	15.04	1.494	-32.5	
0850	6.94	200	2.91	6.28	0.43	9.00	2.296	15.05	1.491	-33.4	
0855	6.94	200	3.18	6.26	0.43	9.14	2.295	15.05	1.492	-34.1	

Sampling Data

Method: *(i.e. low flow)*: Low flow

Date: 12/05/2013

Time: *(i.e. 14:32)* 0900

Total Volume of Water Purged: 5 (gal)

HORIBA	
pH	6.26
Spec. Cond. (mS/cm)	2.295
Turbidity (NTU)	9.14
DO (mg/L)	0.43

HACH TEST KITS	
Alkalinity (mg/L)	0
Carbon Dioxide (mg/L)	0
Ferrous Iron (mg/L)	0
Manganese	0

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate /		2-40 mL glass		

Temp.(°C)	15.05
ORP (mv)	-34.1
TDS (g/L)	1.492

(mg/L)	
Hydrogen Sulfide (mg/L)	0.5
DTW (ft)	6.94

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Collect duplicate-INJ-107D_120513 @1201 (VOCs, MEE, c/n/s, diss. Inorganics, TOC)
Dissolved hydrogen: start @0922/ stop @0942. Water turned black

Sulfate	☑	(Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1- filter		1000 ml
Hydrogen Acetylene	☑	1-20 ml vial 2- 40 ml vials		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-08D

Manual Entry:

Well Diameter: 4 inches

Samplers: C.HUEY

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.64

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/09/2013

Time: 1410 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1420	7.40	180	0.5	6.45	0.64	27.8	2.341	13.62	1.516	-28.2	clear with particles
1430	7.63	180	1.0	6.34	0.32	23.2	2.411	13.95	1.564	-33.9	
1440	7.84	180	1.5	6.29	0.24	19.0	2.519	14.14	1.639	-57.5	turning black
1450	7.96	180	2.0	6.28	0.17	18.5	2.464	14.21	1.603	-71.6	
1455	8.01	180	2.25	6.22	0.11	18.6	2.562	14.31	1.668	-86.5	
1500	8.02	180	2.5	6.16	0.09	20.1	2.679	14.21	1.741	-98.5	
1505	8.02	180	3.0	6.14	0.07	19.4	2.691	14.30	1.750	-106.7	
1510	8.03	180	3.25	6.11	0.06	18.7	2.689	14.31	1.757	-108.1	
1515	8.03	180	3.5	6.05	0.04	17.9	2.684	14.34	1.768	-109.6	
1520	8.04	180	3.75	6.10	0.09	17.3	2.690	14.35	1.770	-110.0	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/09/2013

Time: *(i.e. 14:32)* 1525

Total Volume of Water Purged: 4.5 (gal)

HORIBA	
pH	6.10

HACH TEST KITS	
Alkalinity (mg/L)	0

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	2.69	Carbon Dioxide (mg/L)	0
Turbidity (NTU)	17.3	Ferrous Iron (mg/L)	0
DO (mg/L)	0.09	Manganese (mg/L)	0
Temp.(^{O}C)	14.35	Hydrogen Sulfide (mg/L)	2
ORP (mv)	-110	DTW (ft)	8.04
TDS (g/L)	1.77	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

water turned black. Voas effervescing.

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-09D

Manual Entry:

Well Diameter: 4 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.01

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/05/2013

Time: 1120 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1130	7.02	500	1.3	7.69	5.34	622	0.186	15.69	0.121	-222	clear, water oxidizing
1140	7.40	500	2.6	7.63	4.57	16.6	0.205	15.69	0.134	-233	
1150	7.70	500	3.9	7.54	4.05	17.4	0.215	15.67	0.142	-213	
1155	7.81	500	4.6	7.25	3.89	23.4	0.344	15.66	0.238	-209	
1205	7.99	500	5.9	6.47	4.03	19.2	0.891	15.62	0.594	-274	
1215	8.00	500	7.2	6.37	4.23	13.6	1.19	15.60	0.770	-309	
1225	7.80	500	8.5	6.33	2.37	15.09	1.41	15.58	0.904	-333	
1230	7.87	500	9.1	6.31	3.40	13.72	1.49	15.60	0.960	-341	
1235	7.91	500	9.8	6.30	3.50	12.26	1.57	15.58	1.00	-347	
1240	7.90	500	10.5	6.29	3.41	12.30	1.68	15.57	1.09	-357	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/05/2013

Time: *(i.e. 14:32)* 1250

Total Volume of Water Purged: 10.5 (gal)

HORIBA	
pH	6.29

HACH TEST KITS	
Alkalinity (mg/L)	

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	1.68	Carbon Dioxide (mg/L)	
Turbidity (NTU)	12.30	Ferrous Iron (mg/L)	
DO (mg/L)	3.41	Manganese (mg/L)	
Temp.(^{O}C)	15.57	Hydrogen Sulfide (mg/L)	4
ORP (mv)	-357	DTW (ft)	
TDS (g/L)	1.09	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

sample oxidized black, could only test H2S

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1 - 170ml 2 - 185ml		
Hydrogen Acetylene	☐	10 min 2 500ML/MIN		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-10D

Manual Entry:

Samplers: bill simons

Well Diameter: 4 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 1.25

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/05/2013

Time: 1450 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1500	3.20	450	1.2	7.79	3.13	1012	0.361	14.42	0.234	-293	SWL high due to surf infiltration
1520	6.44	300	3.6	7.75	2.35	50.5	0.361	14.44	0.235	-272	clear
1530	7.55	300	4.4	7.72	2.19	54.5	0.403	14.34	0.264	-265	
1540	8.35	300	5.2	7.26	2.01	61.3	0.596	14.36	0.393	-285	
1550	9.11	300	6	6.67	1.87	65	1.03	14.28	0.673	-361	
1600	9.37	300	6.8	6.64	1.82	77.7	1.38	14.15	0.889	-379	
1610	9.50	300	7.6	6.61	1.79	13.12	1.61	14.08	1.03	-389	
1620	9.69	300	8.4	6.59	1.72	11.08	1.61	14.19	1.03	-401	
1625	9.76	300	8.8	6.57	1.71	11.25	1.72	14.13	1.10	-400	
1630	9.81	300	9.2	6.56	1.77	11.61	1.70	14.10	1.13	-399	
1635	9.82	300	9.6	6.55	1.69	11.55	1.72	14.11	1.17	-397	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/05/2013

Time: *(i.e. 14:32)* 1645

Total Volume of Water Purged: 9.6 (gal)

HORIBA	HACH TEST KITS	SAMPLE SET

pH	6.55	Alkalinity (mg/L)	860
Spec. Cond. (mS/cm)	1.72	Carbon Dioxide (mg/L)	830
Turbidity (NTU)	11.55	Ferrous Iron (mg/L)	0.1
DO (mg/L)	1.69	Manganese (mg/L)	0
Temp.(^{o}C)	14.11	Hydrogen Sulfide (mg/L)	4
ORP (mv)	-397	DTW (ft)	
TDS (g/L)	1.17	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1 - 190ml 2 - 185ml		
Hydrogen Acetylene	☑	300ml/min 15 min		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-11D

Manual Entry:

Samplers: C Huey

Well Diameter: 4 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.88

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: 1245 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1255	7.18	200	0.53	6.65	0.60	33.8	2.106	11.31	1.223	-120	Clear with particles
1305	7.24	200	1.06	6.44	0.56	32.6	2.112	11.45	1.234	-123.4	Turning black
1315	7.32	200	1.59	6.39	0.42	30.4	2.149	11.94	1.402	-135.9	
1325	7.32	200	2.12	6.37	0.57	28.9	2.246	12.01	1.463	-216.5	
1330	7.32	200	2.38	6.38	0.60	28.4	2.259	11.90	1.469	-221.5	
1335	7.31	200	2.64	6.37	0.61	25.4	2.276	11.72	1.480	-225.6	
1340	7.31	200	2.90	6.36	0.59	24.9	2.281	11.68	1.489	-227.4	
1345	7.31	200	3.16	6.43	0.56	25.7	2.302	11.69	1.497	-271.4	
1350	7.32	200	3.42	6.44	0.55	26.4	2.307	11.67	1.496	-272.7	
1355	7.32	200	3.78	6.44	0.54	27.6	2.303	11.72	1.497	-274.6	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: *(i.e. 14:32)* 1400

Total Volume of Water Purged: 4.5 (gal)

HORIBA	
pH	6.44

HACH TEST KITS	
Alkalinity (mg/L)	0

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	2.303	Carbon Dioxide (mg/L)	0
Turbidity (NTU)	27.6	Ferrous Iron (mg/L)	0
DO (mg/L)	0.54	Manganese (mg/L)	0
Temp.(^{O}C)	11.72	Hydrogen Sulfide (mg/L)	5
ORP (mv)	-274.6	DTW (ft)	7.32
TDS (g/L)	1.497	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Water turned black.

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: INJ-12D

Manual Entry:

Samplers: Wps

Well Diameter: 4 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.6

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/09/2013

Time: 1520 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1530	7.01	300	0.8	7.57	1.36	142	1.33	11.54	0.207	-203	
1540	8.01	300	1.6	7.27	1.25	136	0.381	12.07	0.256	-265	Clear, oxidizing black, black specs
1550	8.35	300	2.4	7.13	1.23	121	0.561	12.28	0.360	-325	
1600	8.58	300	3.2	7.07	1.24	139	0.571	12.09	0.365	-332	
1605	8.71	300	3.6	6.98	1.26	238	0.634	11.84	0.414	-339	
1615	8.83	300	4.4	6.60	1.28	117	1.28	11.47	0.813	-424	
1625	8.94	300	5.2	6.53	1.27	59	1.60	11.51	1.03	-452	
1630	9.00	300	5.6	6.51	1.26	57.2	1.68	11.71	1.08	-456	
1635	9.05	300	6	6.50	1.23	49.6	1.69	12.00	1.08	-457	
1640	9.11	300	6.4	6.50	1.21	45.6	1.71	12.21	1.10	-456	
1645	9.15	300	6.8	6.49	1.18	58.8	1.78	12.58	1.14	-456	
1650	9.18	300	7.2	6.47	1.20	41.8	1.84	12.30	1.17	-454	

Sampling Data

Method: *(i.e. low flow)*

Date:

Time: *(i.e. 14:32)*

Total Volume of Water Purged:

Low flow	12/09/2013	1700	7.2 (gal)

HORIBA	
pH	6.47
Spec. Cond. (mS/cm)	1.84
Turbidity (NTU)	41.8
DO (mg/L)	1.20
Temp.(^{o}C)	12.30
ORP (mv)	-454
TDS (g/L)	1.17

HACH TEST KITS	
Alkalinity (mg/L)	
Carbon Dioxide (mg/L)	
Ferrous Iron (mg/L)	
Manganese (mg/L)	
Hydrogen Sulfide (mg/L)	5
DTW (ft)	9.18

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Turbidity measured using Horiba.
Water too stained for colorimetric tests
H2S >5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-15D

Manual Entry:

Well Diameter: 4 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.19

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/04/2013

Time: 1225 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1235	6.54	250	0.7	6.94	2.76	9.05	2.20	15.51	1.41	-183	clear w/ black particulate
1245	6.61	250	1.4	6.91	2.72	9.66	2.20	15.45	1.40	-211	
1255	6.69	250	2.1	6.90	2.54	9.78	2.19	15.47	1.40	-229	
1305	6.69	250	2.8	6.90	2.34	10.45	2.19	15.43	1.40	-240	
1310	6.74	250	3.3	6.89	2.21	10.49	2.19	15.54	1.40	-254	
1315	6.72	250	3.7	6.89	2.15	10.99	2.20	15.56	1.40	-277	
1320	6.69	250	4.1	6.88	2.10	6.08	2.19	15.60	1.40	-278	
1325	6.69	250	4.5	6.88	2.08	5.45	2.19	15.57	1.40	-281	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/04/2013

Time: *(hhmm)* 1325

Total Volume of Water Purged: (gal)

HORIBA	
pH	6.88
Spec. Cond. (mS/cm)	2.19
Turbidity (NTU)	5.45
DO (mg/L)	

HACH TEST KITS	
Alkalinity (mg/L)	720
Carbon Dioxide (mg/L)	694
Ferrous Iron (mg/L)	0
Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	2.08
Temp.(°C)	15.57
ORP (mv)	-281
TDS (g/L)	1.40

(mg/L)	0
Hydrogen Sulfide (mg/L)	4
DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1-350ml 2-350ml		
Hydrogen Acetylene	☑	250ml/min+ 15 min		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-1S

Manual Entry:

Well Diameter: 2 inches

Samplers: C huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 4.81

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/02/2013

Time: 1506 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1516	6.63	100	0.26	6.67	1.23	5.66	2.694	13.09	1.754	87.9	Clear and well drawing down.

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: *(i.e. 14:32)* 0845

Total Volume of Water Purged: 5 (gal)

HORIBA	
pH	
Spec. Cond. (mS/cm)	
Turbidity (NTU)	
DO (mg/L)	
Temp.(^{o}C)	
ORP (mv)	
TDS (g/L)	

HACH TEST KITS	
Alkalinity (mg/L)	140
Carbon Dioxide (mg/L)	101
Ferrous Iron (mg/L)	0.1
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0
DTW (ft)	4.82

* NOTE * HACH test kits are only required for MNA analysis wells.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			

Comments:

Well pumped dry on 12/2/13 at 16:09. Sampled within 24hrs.	Hydrogen Acetylene	☐		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-2S

Manual Entry:

Samplers: D Chamberland; A Kowalczk

Well Diameter: 2 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 2.76

Depth to Well Bottom (ft): 12.11

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/04/2013

Time: 08:10 *(i.e. 1432)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
08:20	2.76	200	0	6.62	1.87	7.8	5.11	11.90	3.22	-135	Clear with V lt odor
08:30	5.81	200	0.5	6.79	0.11	1.70	5.14	13.14	3.24	-178	
08:40	7.65	125	1	6.78	0.0	1.47	5.15	12.87	3.24	-176	
08:50	7.65	125	1.3	6.77	0.0	3.17	5.15	13.06	3.25	-179	
09:00	7.66	125	1.8	6.72	0.03	4.44	4.59	13.08	2.97	-113	
09:10	7.58	125	2.1	6.67	0.16	2.88	4.58	13.16	2.93	-57	
09:20	7.62	125	2.5	6.69	0.0	1.79	4.72	13.16	3.02	-47	
09:30	7.65	125	2.8	6.70	0.0	1.02	4.85	13.25	3.10	-41	
0940	7.98	125	3.1	6.71	0.0	0.78	5.00	13.35	3.19	-36	
09:50	8.45	125	3.5	6.71	0.0	0.69	5.06	13.57	3.18	-36	
10:00	8.80	125	4	6.71	0.0	0.87	5.11	13.62	3.22	-44	
10:10	9.18	125	4.3	6.71	0.0	1.40	5.13	13.73	3.23	-46	

10:20	9.56	125	4.7	6.71	0.0	1.38	5.14	13.89	3.24	-50	
10:30	9.97	125	5.1	6.72	0.0	0.57	5.14	14.24	3.24	-71	
10:40	10.42	125	5.5	6.74	0.0	1.27	5.16	14.49	3.25	-121	
10:50	10.68	125	6	6.76	0.0	1.92	5.11	13.47	3.22	-136	
11.00	11.05	125	6.3	6.77	0.11	7.14	4.56	13.25	2.91	-105	
11:10	11.26	125	6.8	6.77	0.0	4.95	4.65	13.37	2.98	-103	
11:15	11.55	125	7	6.77	0.17	8.05	4.40	13.19	2.81	-79	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(i.e. 14:32)*	Total Volume of Water Purged:
Low flow	12/05/2013	08:20	7.3 (gal)

HORIBA	
pH	
Spec. Cond. (mS/cm)	
Turbidity (NTU)	
DO (mg/L)	
Temp.(^{o}C)	
ORP (mv)	
TDS (g/L)	

HACH TEST KITS	
Alkalinity (mg/L)	220
Carbon Dioxide (mg/L)	130
Ferrous Iron (mg/L)	0.5
Manganese (mg/L)	0.1
Hydrogen Sulfide (mg/L)	0
DTW (ft)	9.47

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Well ran dry at 11:20 on 12/04/13.

Sampled well at 08:20 on 12/05/13.
12/05/13 DTW= 9.47'

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-4S

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.35

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: 1409 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1419	8.54	150	0.4	6.48	1.23	4.32	5.178	12.03	3.367	-198.4	
1429	9.12	150	0.8	6.50	0.95	3.81	5.218	12.16	3.405	-216.7	
1439	9.20	150	1.2	6.47	0.55	2.79	5.656	11.59	3.677	-224.7	
1449	9.51	150	1.6	6.45	0.53	2.24	5.835	11.32	3.793	-251.8	
1454	9.65	130	1.77	6.44	0.24	2.12	5.837	10.95	3.796	-269	
1459	9.76	130	1.94	6.45	0.10	2.36	5.839	10.88	3.796	-279.9	
1504	9.84	130	2.11	6.46	0.06	2.40	5.842	10.78	3.799	-285.3	
1509	9.91	130	2.28	6.45	0.04	2.36	5.820	10.81	3.783	-291.8	
1514	9.92	130	2.45	6.44	0.08	2.64	5.797	10.66	3.769	-296.8	
1519	9.93	130	2.62	6.44	0.07	2.86	5.742	10.47	3.730	-293.4	
1524	9.95	130	2.79	6.44	0.03	2.56	5.738	10.44	3.728	-292.4	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: *(hhmm)* 1525

Total Volume of Water Purged: 3.5 (gal)

HORIBA	HACH TEST KITS

pH	6.44	Alkalinity (mg/L)	500
Spec. Cond. (mS/cm)	5.738	Carbon Dioxide (mg/L)	448
Turbidity (NTU)	2.56	Ferrous Iron (mg/L)	0.4
DO (mg/L)	0.03	Manganese (mg/L)	0
Temp.(^{o}C)	10.44	Hydrogen Sulfide (mg/L)	3
ORP (mv)	-292.4	DTW (ft)	9.95
TDS (g/L)	3.728	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-5S

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 5.72

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: 1120 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1130	5.93	200	0.53	7.09	1.03	4.54	3.553	11.99	2.307	-12.2	Clear
1140	5.95	200	1.06	7.03	0.46	3.07	3.301	12.14	2.142	-35.2	
1150	5.95	200	1.59	7.00	0.31	2.42	2.867	12.22	1.855	-58.5	
1155	5.95	200	1.85	6.97	0.19	2.86	2.591	12.18	1.682	-79.3	
1200	5.95	200	2.12	6.97	0.18	2.98	2.564	12.16	1.665	-82.6	
1205	5.95	200	2.38	6.96	0.15	1.76	2.484	12.09	1.613	-92.3	
1210	5.95	200	2.64	6.94	0.21	1.79	2.393	12.02	1.556	-100.3	
1215	5.96	200	2.91	6.94	0.20	1.73	2.354	12.14	1.529	-104.3	
1220	5.96	200	3.17	6.94	0.20	1.59	2.348	12.12	1.526	-105.6	Clear

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: *(hhmm)* 1225

Total Volume of Water Purged: 3.5 (gal)

HORIBA	
pH	6.94
Spec. Cond. (mS/cm)	2.348

HACH TEST KITS	
Alkalinity (mg/L)	240
Carbon Dioxide (mg/L)	244

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	1.59
DO (mg/L)	0.20
Temp.(°C)	12.12
ORP (mv)	-105.6
TDS (g/L)	1.526

Ferrous Iron (mg/L)	0.5
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0
DTW (ft)	5.96

* NOTE * HACH test kits are only required for MNA analysis wells.

Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

Comments:

Collected duplicate MW-5S_120313@12:01
VOCs, MEE, chloride/sulfate/nitrate, dissolved Inorganics, toc

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-6S

Manual Entry:

Well Diameter: 2 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.28

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: 1545 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1555	8.51	200	0.5	6.99	2.04	9.4	6.25	11.88	3.94	-206	Clear
1635	10.56	200	2.5	6.89	1.20	0	6.17	12.74	3.89	-221	
1640	10.81	200	2.8	6.89	1.18	0	6.22	12.76	3.92	-221	
1645	11.02	200	3.1	6.89	1.17	0	6.35	12.75	4.00	-222	
1650	11.25	200	3.4	6.90	1.20	0	6.46	12.65	4.07	-222	
1655	11.33	150	3.6	6.91	1.23	0	6.86	12.08	4.30	-219	
1700	11.41	150	3.8	6.91	1.23	0	6.72	11.62	4.23	-217	
1705	11.42	150	4	6.91	1.20	0	6.90	11.70	4.40	-217	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: *(hhmm)* 1705

Total Volume of Water Purged: 4 (gal)

HORIBA		HACH TEST KITS	
pH	6.91	Alkalinity (mg/L)	460
Spec. Cond. (mS/cm)	6.90	Carbon Dioxide (mg/L)	360
Turbidity (NTU)	0	Ferrous Iron (mg/L)	0.1
DO (mg/L)		Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☐	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	1.20
Temp.(°C)	11.70
ORP (mv)	-217
TDS (g/L)	4.40

(mg/L)	0.2
Hydrogen Sulfide (mg/L)	0
DTW (ft)	11.42

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Turb. Measured using Horiba.

Chloride / Nitrate / Sulfate	☐	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☐	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☐	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☐	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-7D

Manual Entry:

Well Diameter: 4 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.45

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/13/2013

Time: 0820 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0830	7.46	300	0.8	6.84	0.16	164	2.32	12.12	1.49	-376	Clear, odor
0840	7.47	300	1.6	6.76	0	28.9	2.33	12.60	1.48	-375	
0850	7.47	300	2.4	6.60	0	0	2.07	12.76	1.32	-369	
0900	7.47	300	3.2	6.57	0	0	2.03	12.81	1.30	-369	
0905	7.47	300	3.6	6.56	0	0	2.02	12.74	1.29	-367	
910	7.47	300	4	6.55	0	0	2.01	12.77	1.28	-367	
0915	7.47	300	4.4	6.55	0	0	2.01	12.76	1.28	-367	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/13/2013

Time: *(hhmm)* 0925

Total Volume of Water Purged: 4.4 (gal)

HORIBA	
pH	6.55
Spec. Cond. (mS/cm)	2.02
Turbidity (NTU)	0
DO (mg/L)	0
Temp.(^oC)	12.76

HACH TEST KITS	
Alkalinity (mg/L)	880
Carbon Dioxide (mg/L)	670
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	4

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	-367
TDS (g/L)	1.28

DTW (ft)	7.47

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-7S

Manual Entry:

Well Diameter: 2 inches

Samplers: wps

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 5.05

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/02/2013

Time: 1445 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1455	6.55	200	.5	6.83	10.93	10	8.15	12.89	5.13	49	
1505	7.8	200	1	6.89	8.02	9	9.3	13.23	5.12	47	
1515	8.34	200	1.5	6.85	6.57	1.4	8.1	13.47	5.1	64	
1525	8.88	200	2	6.8	5.57	8.19	8.18	13.31	5.16	67	
1535	9.41	200	2.5	6.77	4.85	0	8.29	13.28	5.22	70	
1545	9.92	200	3	6.75	4.26	0	8.28	13.59	5.21	74	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/03/2013

Time: *(hhmm)* 0830

Total Volume of Water Purged: 5 (gal)

HORIBA	
pH	
Spec. Cond. (mS/cm)	
Turbidity (NTU)	
DO (mg/L)	
Temp.(^oC)	
ORP (mv)	

HACH TEST KITS	
Alkalinity (mg/L)	400
Carbon Dioxide (mg/L)	259
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0
DTW (ft)	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F

TDS (g/L)	

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

pumped dry @1605.

Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-8S

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 5.52

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: 0816 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
0826	7.62	120	0.32	7.08	2.16	7.89	7.243	9.97	4.709	146.3	Clear
0836	8.18	100	0.58	7.09	1.71	6.49	7.450	8.84	4.893	143.9	
0846	9.34	100	0.84	7.10	1.43	1.45	7.402	9.94	4.811	130.4	
0856	9.25	100	1.1	7.10	1.30	4.51	7.414	10.21	4.820	121.3	
0906	9.14	100	1.36	7.09	1.07	4.64	7.400	10.30	4.811	115.2	
0916	9.12	120	1.68	7.08	1.02	4.86	7.389	10.34	4.803	110.3	
0926	9.12	120	2.0	7.06	0.98	5.12	7.378	10.36	4.799	108.3	
0931	9.13	120	2.32	7.06	0.95	4.89	7.376	10.40	4.787	105.4	
0936	9.13	120	2.64	7.05	0.94	4.87	7.369	10.42	4.779	101.4	
0941	9.12	120	2.9	7.05	0.94	4.98	7.366	10.44	4.760	100.8	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: *(hhmm)* 0945

Total Volume of Water Purged: 3.5 (gal)

HORIBA	
pH	7.05

HACH TEST KITS	
Alkalinity (mg/L)	180

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	7.366	Carbon Dioxide (mg/L)	134
Turbidity (NTU)	4.98	Ferrous Iron (mg/L)	0.4
DO (mg/L)	0.94	Manganese (mg/L)	0
Temp.(^{o}C)	10.44	Hydrogen Sulfide (mg/L)	0
ORP (mv)	100.8	DTW (ft)	9.12
TDS (g/L)	4.76	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Collected MS/MSD (VOCs only)
Same time as sample.

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-9S

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.16

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: 1013 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1023	8.40	130	0.34	6.59	3.52	74.8	2.360	10.45	1.533	10.7	Cloudy
1033	8.69	130	0.68	6.51	2.00	15.3	3.040	10.53	1.976	5.1	Clearer
1043	8.75	130	1.02	6.56	1.45	7.86	3.113	10.36	2.023	-10.5	
1053	8.76	130	1.36	6.56	1.34	7.32	3.116	10.30	2.023	-11.6	
1103	8.78	130	1.7	6.58	1.32	7.34	3.090	10.54	2.011	-10.0	
1113	8.78	130	2.04	6.59	1.31	7.12	3.091	10.58	2.009	-8.4	
1118	8.78	130	2.21	6.61	1.19	6.56	3.081	10.50	2.004	-12.7	
1123	8.78	130	2.38	6.63	1.14	6.34	3.077	10.47	1.999	-19.9	
1128	8.78	130	2.55	6.62	1.13	5.88	3.071	10.66	1.985	-20.5	
1133	8.78	130	2.72	6.61	1.11	5.66	3.069	10.67	1.986	-21.1	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: *(hhmm)* 1135

Total Volume of Water Purged: 3 (gal)

HORIBA	
pH	6.61

HACH TEST KITS	
Alkalinity (mg/L)	220

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	3.069	Carbon Dioxide (mg/L)	92
Turbidity (NTU)	5.66	Ferrous Iron (mg/L)	0.5
DO (mg/L)	1.11	Manganese (mg/L)	0
Temp.(^{o}C)	10.67	Hydrogen Sulfide (mg/L)	0.5
ORP (mv)	-21.1	DTW (ft)	8.78
TDS (g/L)	1.986	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-10D

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.48

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: 1505 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1515	7.86	160	0.42	6.76	5.34	8.65	2.546	11.97	1.654	12.3	Clear
1525	7.90	160	0.84	6.74	3.18	7.13	2.516	12.47	1.628	-35.6	
1535	7.92	160	1.26	6.76	2.34	6.56	2.367	12.44	1.534	-38.5	
1545	7.93	160	1.68	6.77	1.12	6.42	2.092	12.46	1.359	-45.4	
1550	7.94	160	1.89	6.78	0.98	5.68	2.045	12.34	1.345	-50.9	
1555	7.95	160	2.1	6.74	0.97	5.42	2.063	11.20	1.341	-50.9	
1600	7.95	160	2.32	6.74	0.97	5.12	2.062	11.26	1.340	-52.3	
1605	7.96	160	2.53	6.74	0.96	4.87	2.060	11.29	1.336	-54.1	
1610	7.96	160	2.74	6.73	0.95	4.34	2.056	11.34	1.332	-56.5	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: *(hhmm)* 1615

Total Volume of Water Purged: 3.5 (gal)

HORIBA		HACH TEST KITS	
pH	6.73	Alkalinity (mg/L)	180
Spec. Cond. (mS/cm)	2.056	Carbon Dioxide (mg/L)	94

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	4.34
DO (mg/L)	0.95
Temp.(^{o}C)	11.34
ORP (mv)	-56.5
TDS (g/L)	1.332

Ferrous Iron (mg/L)	0.3
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	7.96

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-10S

Manual Entry:

Well Diameter: 2 inches

Samplers: A Kowalczk

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 4.13

Depth to Well Bottom (ft): 11.1

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: 13:30 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
13:40	4.26	200	0.75	7.23	1.13	0.5	2.85	12.82	1.82	-219	
13:50	4.26	200	1.25	7.16	0.0	0.0	2.71	12.69	1.73	-219	
14:00	4.25	200	1.75	7.12	0.0	0.0	2.40	12.63	1.53	-203	
14:10	4.26	200	2.5	7.10	0.0	0.0	2.14	12.56	1.36	-196	
14:20	4.26	200	3	7.09	0.0	0.0	2.00	12.55	1.28	-191	
14:25	4.26	200	3.2	7.09	0.0	0.0	1.93	12.57	1.24	-189	
14:30	4.26	200	3.5	7.09	0.0	0.0	1.87	12.57	1.20	-186	
14:40	4.26	200	4	7.09	0.0	0.0	1.80	12.43	1.16	-182	
14:45	4.26	200	4.2	7.10	0.0	0.0	1.88	12.47	1.17	-199	
14:50	4.26	200	4.6	7.09	0.0	0.0	1.86	12.50	1.18	-191	
14:55	4.26	200	4.9	7.09	0.0	0.0	1.76	12.49	1.13	-185	
15:00	4.26	200	5.2	7.09	0.0	0.0	1.72	12.56	1.10	-180	
15:05	4.26	200	5.4	7.09	0.0	0.0	1.71	12.56	1.09	-179	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
Low flow	12/03/2013	15:10	5.7 (gal)

HORIBA	
pH	7.09
Spec. Cond. (mS/cm)	1.71
Turbidity (NTU)	0
DO (mg/L)	0.0
Temp.(^{o}C)	12.56
ORP (mv)	-179
TDS (g/L)	1.09

HACH TEST KITS	
Alkalinity (mg/L)	260
Carbon Dioxide (mg/L)	174
Ferrous Iron (mg/L)	2.2
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0.3
DTW (ft)	4.26

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Final turbidity = 0.35 NTU

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☐	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☐	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☐	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☐	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☐	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-11D

Manual Entry:

Well Diameter: 2 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 9.49

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/03/2013

Time: 1530 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1540	9.50	200	0.5	7.55	2.16	3.08	2.23	12.08	1.42	-323	clear
1550	9.52	300	1.3	7.55	1.70	1.81	2.07	12.42	1.32	-312	
1600	9.52	300	2.1	7.52	1.57	2.17	2.07	12.47	1.33	-314	
1610	9.53	300	2.9	7.52	1.52	1.88	2.07	12.41	1.33	-315	
1620	9.53	300	3.7	7.51	1.45	1.17	2.07	12.54	1.32	-317	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/03/2013

Time: *(hhmm)* 1630

Total Volume of Water Purged: 3.7 (gal)

HORIBA	
pH	7.51
Spec. Cond. (mS/cm)	2.07
Turbidity (NTU)	1.17
DO (mg/L)	1.45
Temp.(^oC)	12.54
ORP (mv)	-317
TDS (g/L)	1.32

HACH TEST KITS	
Alkalinity (mg/L)	240
Carbon Dioxide (mg/L)	168
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	1
DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☐	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☐	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☐	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☐	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☐	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon		1-120 mL glass amber	None	SW9060

	☐			
Microbial Census	☐			
Hydrogen Acetylene	☐			

Comments:

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-11S

Manual Entry:

Well Diameter: 2 inches

Samplers: A Kowalczk

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.58

Depth to Well Bottom (ft): 13.95

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: 10:35 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
10:50	6.65	150	0.75	6.81	1.41	30.0	5.89	13.19	3.71	-32	
11:00	6.66	150	1	6.83	0.45	10.0	5.82	13.50	3.66	-98	
11:10	6.66	200	1.4	6.85	0.0	4.2	5.49	13.90	3.46	-138	
11:20	6.66	200	2	6.86	0.0	0.1	5.22	13.77	3.29	-156	
11:30	6.66	200	2.5	6.87	0.0	0.0	5.03	13.67	3.16	-167	
11:40	6.66	200	3.1	6.87	0.0	0.0	4.88	13.55	3.12	-176	
11:50	6.66	200	3.8	6.87	0.0	0.0	4.75	13.56	3.04	-185	
11:55	6.66	200	4.1	6.87	0.0	0.0	4.71	13.55	3.02	-189	
12:00	6.66	200	4.8	6.87	0.0	0.0	4.65	13.48	2.98	-195	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: *(hhmm)* 12:05

Total Volume of Water Purged: 5.2 (gal)

HORIBA	
pH	6.87
Spec. Cond. (mS/cm)	4.65

HACH TEST KITS	
Alkalinity (mg/L)	280
Carbon Dioxide (mg/L)	175.8

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	0	Ferrous Iron (mg/L)	0.7
DO (mg/L)	0.0	Manganese (mg/L)	0
Temp.(^{o}C)	13.48	Hydrogen Sulfide (mg/L)	1
ORP (mv)	-195	DTW (ft)	6.66
TDS (g/L)	2.98	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Final turbidity = 2.41 NTU

Dissolved Inorganics	☐	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☐	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☐	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☐	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☐	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-12D

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.26

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: 1437 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1447	7.28	150	0.40	7.24	4.07	8.86	1.514	11.48	1.088	-60.5	Clear
1457	7.29	150	0.8	6.72	1.31	8.14	2.695	11.38	1.863	-228.8	
1507	7.30	150	1.2	6.74	1.39	7.89	2.910	11.40	1.893	-274.1	
1517	7.30	150	1.6	6.74	0.98	7.12	2.920	11.41	1.891	-277.8	
1522	7.30	150	1.8	6.74	0.61	6.84	2.929	11.49	1.904	-289.5	
1527	7.30	150	2.0	6.74	0.58	6.53	2.933	11.52	1.906	-302.9	
1532	7.31	150	2.2	6.74	0.51	6.44	2.936	11.54	1.909	-303.5	
1537	7.31	150	2.4	6.74	0.49	6.36	2.939	11.51	1.911	-314.5	
1542	7.31	150	2.6	6.74	0.48	6.22	2.934	11.61	1.907	-313.6	
1547	7.31	150	2.8	6.74	0.42	6.16	2.942	11.64	1.915	-316.3	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: *(hhmm)* 1550

Total Volume of Water Purged: 3.25 (gal)

HORIBA	
pH	6.74

HACH TEST KITS	
Alkalinity (mg/L)	180

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	2.942	Carbon Dioxide (mg/L)	194
Turbidity (NTU)	6.16	Ferrous Iron (mg/L)	0
DO (mg/L)	0.42	Manganese (mg/L)	0
Temp.(^{o}C)	11.64	Hydrogen Sulfide (mg/L)	5
ORP (mv)	-316.3	DTW (ft)	7.31
TDS (g/L)	1.915	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-12S

Manual Entry:

Well Diameter: 2 inches

Samplers: dpc

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.01

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow geopump

Date: 12/13/2013

Time: 0855 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0855	7.01	200	0	5.37	8.75	or	8.29	11.89	5.24	34	
0905	8.67	200	0.5	6.08	3.80	31.9	8.32	13.42	5.24	-76	clear,lt substrate odor
0915	8.99	200	1.0	6.21	3.33	12.4	7.91	13.52	4.93	-128	same
0925	9.32	200	1.5	6.31	3.13	11.7	7.57	13.54	4.77	-152	same
0930	9.45	200	1.7	6.36	3.08	13.6	7.33	13.58	4.62	-165	same
0935	9.56	200	1.9	6.41	2.98	19.1	7.16	13.60	4.50	-184	same
0940	9.63	200	2.2	6.61	2.94	25.3	6.95	13.51	4.40	-193	ame
0945	9.72	200	2.4	6.81	2.90	29.4	6.80	13.42	4.28	-202	same
0950	9.84	200	2.6	6.79	2.84	35.3	6.50	13.68	4.07	-212	
0955	9.95	200	2.8	6.77	2.79	36.7	6.22	13.94	3.91	-223	
1000	9.95	20	3.0	6.69	2.80	40.1	6.16	13.82	3.80	-229	
1005	9.96	200	3.3	6.61	2.81	43.1	6.09	13.37	3.70	-236	
1010	9.95	200	3.5	6.65	2.77	45.0	5.95	13.31	3.47	-252	

1015	9.95	200	3.7	6.67	2.72	31.8	5.81	13.30	3.36	-257	
1020	9.94	200	3.9	6.69	2.67	25.4	5.73	13.30	3.23	-259	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
DEDICATED TUBING	12/13/2013	1020	3.9 (gal)

HORIBA	
pH	6.69
Spec. Cond. (mS/cm)	5.73
Turbidity (NTU)	25.4
DO (mg/L)	2.67
Temp.(^{o}C)	13.30
ORP (mv)	-259
TDS (g/L)	3.23

HACH TEST KITS	
Alkalinity (mg/L)	360
Carbon Dioxide (mg/L)	284
Ferrous Iron (mg/L)	0.8
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	3.0
DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☐	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☐	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☐	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☐	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☐	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-13D

Manual Entry:

Well Diameter: 2 inches

Samplers: DU

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 10.84

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* LOW FLOW

Date: 12/10/2013

Time: 1145 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1155	11.11	200	0.27	6.84	6.53	10.7	3.36	5.01	2.15	-308	TURB MEASURED WITH HORIBA
1205	11.11	200	0.80	6.70	0.0	0.0	3.50	7.61	2.24	-301	
1210	11.12	200	1.36	6.69	0.00	0.0	3.47	8.02	2.22	-306	
1220	11.13	200	1.89	6.69	0.00	0.0	3.41	8.35	2.18	-303	
1230	11.15	200	2.42	6.73	0.00	0.7	3.20	8.44	2.04	-304	
1235	11.16	200	2.69	6.80	0.00	0.0	2.75	8.69	1.74	-303	
1240	11.16	200	3.06	6.83	0.00	0.0	2.49	8.82	1.60	-309	
1250	11.16	200	3.59	6.88	0.00	0.0	2.10	9.21	1.34	-294	
1300	11.17	200	4.22	6.90	0.00	0.0	1.98	9.19	1.26	-282	
1305	11.17	200	4.49	6.91	0.00	0.0	1.95	9.32	1.24	-277	
1310	11.17	200	5.02	6.91	0.00	0.0	1.93	9.39	1.23	-274	

Sampling Data

Method: *(i.e. low flow)* DT

Date: 12/10/2013

Time: *(hhmm)* 1315

Total Volume of Water Purged: 5.30 (gal)

HORIBA	HACH TEST KITS

pH	6.91
Spec. Cond. (mS/cm)	1.93
Turbidity (NTU)	0
DO (mg/L)	0.00
Temp.(^{o}C)	9.39
ORP (mv)	-274
TDS (g/L)	1.23

Alkalinity (mg/L)	260
Carbon Dioxide (mg/L)	210
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	4.0
DTW (ft)	11.17

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-14D

Manual Entry:

Well Diameter: 2 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 8.16

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/06/2013

Time: 0820 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0830	8.20	300	0.8	7.33	4.85	8.95	2.42	12.53	1.54	-269	clear
0840	8.20	300	1.6	7.24	4.15	4.39	2.36	12.67	1.51	-272	
0845	8.20	300	2	7.23	4.15	3.47	2.34	12.65	1.50	-270	
0850	8.20	300	2.4	7.21	4.09	2.48	2.33	12.66	1.49	-269	
0855	8.20	300	2.8	7.20	4.03	2.11	2.32	12.66	1.49	-269	
0900	8.20	300	3.2	7.19	3.98	2.48	2.31	12.67	1.48	-267	
0905	8.20	300	3.6	7.18	3.90	2.11	2.31	12.67	1.48	-266	
0910	8.20	300	4	7.18	3.89	2.60	2.34	12.68	1.49	-265	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/06/2013

Time: *(hhmm)* 0910

Total Volume of Water Purged: 4 (gal)

HORIBA		HACH TEST KITS	
pH	7.18	Alkalinity (mg/L)	400
Spec. Cond. (mS/cm)	2.34	Carbon Dioxide (mg/L)	290
Turbidity (NTU)	2.60	Ferrous Iron (mg/L)	0
DO (mg/L)		Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	3.89
Temp.(^{O}C)	12.68
ORP (mv)	-265
TDS (g/L)	1.49

(mg/L)	0
Hydrogen Sulfide (mg/L)	1
DTW (ft)	8.20

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-15D

Manual Entry:

Well Diameter: 2 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.95

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/04/2013

Time: 1530 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1540	8.50	300	0.8	7.51	2.95	7.78	1.50	14.97	0.957	-308	clear
1550	8.49	300	1.6	7.37	2.62	2.48	1.62	14.97	1.05	-308	
1600	8.57	300	2.4	7.30	2.34	2.45	1.63	15.00	1.04	-316	
1610	8.53	300	3.2	7.26	2.18	1.50	1.67	14.96	1.07	-318	
1615	8.54	300	4	7.25	2.13	1.38	1.68	14.94	1.07	-319	
1620	8.54	300	4.8	7.24	2.08	1.90	1.69	14.90	1.08	-319	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/04/2013

Time: *(hhmm)* 1630

Total Volume of Water Purged: 4.8 (gal)

HORIBA	
pH	7.24
Spec. Cond. (mS/cm)	1.69
Turbidity (NTU)	1.90
DO (mg/L)	2.08
Temp.(^oC)	14.90
ORP (mv)	-319

HACH TEST KITS	
Alkalinity (mg/L)	300
Carbon Dioxide (mg/L)	188
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0.6
DTW (ft)	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F

TDS (g/L)	1.08

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-16D

Manual Entry:

Well Diameter: 2 inches

Samplers: DU

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 12.15

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* LF

Date: 12/10/2013

Time: 1500 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1505	12.87	200	0.27	6.81	0.34	6.6	2.77	8.73	1.77	-305	
1510	12.87	200	0.53	6.81	0.00	0.7	2.67	9.04	1.71	-294	
1520	12.87	200	1.06	6.81	0.00	0.0	2.66	8.84	1.70	-290	
1530	12.87	200	1.59	6.81	0.00	0.0	2.67	8.93	1.71	-291	
1535	12.87	200	1.86	6.81	0.00	0.0	2.67	8.88	1.71	-290	
1540	12.84	200	2.13	6.81	0.00	0.0	2.67	8.77	1.71	-289	
1545	12.81	200	2.40	6.81	0.00	0.0	2.67	8.66	1.71	-289	
1550	12.81	200	2.67	6.81	0.00	0.0	2.66	8.74	1.70	-288	
1555	12.81	200	2.94	6.81	0.00	0.0	2.64	8.92	1.69	-288	
1600	12.81	200	3.21	6.81	0.00	0.0	2.63	8.83	1.68	-287	
1605	12.81	200	3.38	6.81	0.00	0.0	2.63	8.89	1.68	-289	

Sampling Data

Method: *(i.e. low flow)* DT

Date: 12/10/2013

Time: *(hhmm)* 1605

Total Volume of Water Purged: 3.40 (gal)

HORIBA	HACH TEST KITS

pH	6.81
Spec. Cond. (mS/cm)	2.63
Turbidity (NTU)	0
DO (mg/L)	0.00
Temp.(^{o}C)	8.89
ORP (mv)	-289
TDS (g/L)	1.68

Alkalinity (mg/L)	260
Carbon Dioxide (mg/L)	180
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	1.0
DTW (ft)	12.81

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-17D

Manual Entry:

Well Diameter: 2 inches

Samplers: A Kowalczk

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft):	Depth to Well Bottom (ft):
8	33.43

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: 15:57 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
16:20	8.10	210	0.75	6.98	0.11	0.0	2.68	11.75	1.73	-215	
16:20	8.10	250	1.5	6.97	0.0	0.0	2.80	11.80	1.79	-226	
16:30	8.12	300	2	6.97	0.0	0.0	2.82	11.85	1.81	-238	
16:35	8.12	300	2.3	6.97	0.0	0.0	2.83	11.83	1.81	-241	
16:40	8.12	300	2.7	6.97	0.0	0.0	2.83	11.79	1.81	-246	
16:45	8.12	300	3.1	6.96	0.0	0.0	2.83	11.72	1.81	-249	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: *(hhmm)* 16:50

Total Volume of Water Purged: 3.5 (gal)

HORIBA	
pH	6.96
Spec. Cond. (mS/cm)	2.83
Turbidity (NTU)	0
DO (mg/L)	0.0
Temp.(^{o}C)	11.72
ORP (mv)	-249

HACH TEST KITS	
Alkalinity (mg/L)	280
Carbon Dioxide (mg/L)	254
Ferrous Iron (mg/L)	0.1
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	4
DTW (ft)	8.12

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☐	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☐	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☐	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☐	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F

TDS (g/L)	1.81	* NOTE * HACH test kits are only required for MNA analysis wells.			

Comments:

Final turbidity = 0.12 NTU

Total Organic Carbon	☐	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-18D

Manual Entry:

Well Diameter: 2 inches

Samplers: A Kowalcxk

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.4

Depth to Well Bottom (ft): 28.35

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/04/2013

Time: 14:35 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
14:50	7.48	275	0.8	7.25	0.0	40.2	2.10	13.23	1.34	-223	
15:00	7.48	275	1.4	7.22	0.0	24.8	2.11	12.41	1.35	-243	
15:10	7.47	275	1.9	7.19	0	12.1	2.14	12.00	1.37	-255	
15:20	7.47	275	2.4	7.17	0	7.30	2.18	11.78	1.39	-258	
15:30	7.46	275	3	7.16	0	4.38	2.20	11.64	1.41	-260	
15:35	7.46	275	3.2	7.16	0	5.00	2.20	11.59	1.41	-261	
15:40	7.46	275	3.6	7.16	0	2.37	2.19	11.53	1.40	-261	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/04/2013

Time: *(hhmm)* 15:45

Total Volume of Water Purged: 4.5 (gal)

HORIBA	
pH	7.16
Spec. Cond. (mS/cm)	2.19
Turbidity (NTU)	2.37
DO (mg/L)	0
Temp.(^oC)	11.53

HACH TEST KITS	
Alkalinity (mg/L)	220
Carbon Dioxide (mg/L)	84
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0.5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	-261
TDS (g/L)	1.40

DTW (ft)	7.46

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-19D

Manual Entry:

Well Diameter: inches

Samplers: DU

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.46

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/06/2013

Time: 0910 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
0915	6.52	100	0.13	6.44	0.83	10.9	5.66	6.36	3.57	8	Turbidity measured with horiba
0920	6.54	100	0.27	6.42	0.00	10.5	5.68	6.74	3.57	6	
0930	6.54	100	0.53	6.41	0.00	9.6	5.49	7.65	3.46	-3	
0940	6.54	100	0.80	6.41	0.00	4.2	5.45	7.80	3.43	-8	
0950	6.54	100	1.06	6.41	0.00	3.9	5.45	7.83	3.43	-14	
1000	6.54	100	1.33	6.40	0.00	2.3	5.42	7.88	3.41	-21	
1010	6.54	100	1.60	6.41	0.00	1.7	5.44	7.75	3.43	-25	
1020	6.54	100	1.87	6.40	0.00	1.0	5.44	7.70	3.43	-29	
1030	6.54	100	2.05	6.40	0.00	0.7	5.47	7.72	3.45	-30	
1040	6.54	100	2.32	6.40	0.00	0.8	5.47	7.71	3.45	-33	
1050	6.54	100	2.70	6.42	0.00	0.8	5.47	7.70	3.45	-33	

Sampling Data

Method: *(i.e. low flow)* DT

Date: 12/06/2013

Time: *(hhmm)* 1050

Total Volume of Water Purged: 2.7 (gal)

HORIBA	HACH TEST KITS

pH	6.42	Alkalinity (mg/L)	540
Spec. Cond. (mS/cm)	5.47	Carbon Dioxide (mg/L)	434
Turbidity (NTU)	0.8	Ferrous Iron (mg/L)	2
DO (mg/L)	0,00	Manganese (mg/L)	0
Temp.(^{o}C)	7.70	Hydrogen Sulfide (mg/L)	0
ORP (mv)	-33	DTW (ft)	6.54
TDS (g/L)	3.45	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-20D

Manual Entry:

Well Diameter: 2 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.83

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: 0830 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0840	8.10	300	0.8	7.30	3.02	0	1.85	13.46	1.19	-283	Clear
0850	8.14	300	1.6	7.22	2.32	0	1.83	14.40	1.17	-313	
0900	8.16	300	2.4	7.28	2.27	0	1.84	14.37	1.18	-329	
0905	8.17	300	2.8	7.22	2.23	0	1.85	14.37	1.19	-334	
0910	8.18	300	3.2	7.17	2.19	0	1.87	14.36	1.20	-338	
0915	8.18	300	3.6	7.16	2.16	0	1.88	14.40	1.20	-339	
0920	8.18	300	4.2	7.14	2.14	0	1.87	14.48	1.19	-340	
0925	8.18	300	4.6	7.13	2.13	0	1.87	14.38	1.20	-340	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: *(hhmm)* 0935

Total Volume of Water Purged: 4.6 (gal)

HORIBA	
pH	7.13
Spec. Cond. (mS/cm)	1.87
Turbidity (NTU)	0
DO (mg/L)	

HACH TEST KITS	
Alkalinity (mg/L)	260
Carbon Dioxide (mg/L)	330
Ferrous Iron (mg/L)	0
Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☐	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	2.13
Temp.(°C)	14.38
ORP (mv)	-340
TDS (g/L)	1.20

(mg/L)	0
Hydrogen Sulfide (mg/L)	4
DTW (ft)	8.18

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Turb measured using Horiba.

Chloride / Nitrate / Sulfate	☐	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☐	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☐	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☐	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: MW-21D

Manual Entry:

Well Diameter: 4 inches

Samplers: DU

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.45

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* lowflow

Date: 12/10/2013

Time: 0840 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0845	7.46	280	0.37	9.25	1.14	37.0	0.405	12.14	0.263	-265	
0855	7.46	280	1.48	9.66	0.25	20	0.414	13.00	0.269	-275	
0905	7.46	280	2.22	9.67	0.00	0.0	0.485	13.10	0.317	-283	
0915	7.46	280	2.60	9.52	0.00	0.0	0.688	13.25	0.442	-324	
0925	7.46	280	3.34	9.12	0.00	0.0	0.892	13.46	0.572	-334	
0935	7.46	280	4.11	7.83	0.00	0.0	1.11	13.68	0.711	-228	
0945	7.46	280	4.85	7.29	0.0	0.0	1.48	13.37	0.948	-241	
0950	7.46	280	5.22	7.20	0.00	0.0	1.54	13.16	0.987	-273	
0955	7.46	280	5.59	7.16	0.00	0.0	1.56	13.14	1.00	-282	
1000	7.46	280	5.96	7.13	0.00	0.0	1.57	13.17	1.00	-284	

Sampling Data

Method: *(i.e. low flow)* DT

Date: 12/10/2013

Time: *(hhmm)* 1000

Total Volume of Water Purged: 6.00 (gal)

HORIBA	
pH	7.13

HACH TEST KITS	
Alkalinity (mg/L)	260

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	1.57	Carbon Dioxide (mg/L)	160
Turbidity (NTU)	0	Ferrous Iron (mg/L)	0
DO (mg/L)	0.00	Manganese (mg/L)	0
Temp.(^{O}C)	1317	Hydrogen Sulfide (mg/L)	0.4
ORP (mv)	-284	DTW (ft)	7.56
TDS (g/L)		* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☐	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☐	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☐	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☐	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☐	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-3SM

Manual Entry:

Samplers: C Huey

Well Diameter: 2 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 2.65

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)*: Low flow

Date: 12/06/2013

Time: 0806 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
0816	3.60	200	0.53	6.07	1.19	23.1	6.659	12.16	4.338	147.5	Slightly cloudy
0826	3.62	200	1.06	6.10	0.80	25.8	6.999	12.26	4.551	93.4	
0836	3.65	200	1.59	6.11	0.60	24.1	6.997	12.42	4.547	53.7	
0841	3.66	200	1.85	6.11	0.57	23.9	6.991	12.48	4.544	50.2	
0846	3.66	200	2.12	6.11	0.52	23.3	6.991	12.50	4.452	19.4	
0851	3.66	200	2.38	6.11	0.40	22.3	6.991	12.52	4.453	18.4	
0856	3.66	200	2.65	6.11	0.38	21.9	6.991	12.53	4.452	18.2	
0901	3.66	200	2.87	6.11	0.37	21.5	6.990	12.54	4.453	18.0	

Sampling Data

Method: *(i.e. low flow)*: Low flow

Date: 12/06/2013

Time: *(hhmm)* 0905

Total Volume of Water Purged: 3.25 (gal)

HORIBA	
pH	6.11
Spec. Cond. (mS/cm)	6.990
Turbidity (NTU)	21.5
DO (mg/L)	

HACH TEST KITS	
Alkalinity (mg/L)	880
Carbon Dioxide (mg/L)	116
Ferrous Iron (mg/L)	0.5
Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	0.37
Temp.(°C)	12.54
ORP (mv)	18
TDS (g/L)	4.453

(mg/L)	0
Hydrogen Sulfide (mg/L)	0.1
DTW (ft)	3.66

* NOTE * HACH test kits are only required for MNA analysis wells.

Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

Comments:

VOAs effervescing

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-4SM

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 3.27

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/06/2013

Time: 1132 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1142	3.40	250	0.66	6.24	0.29	13.5	3.351	13.69	2.178	-16.5	Clear w/ particles
1152	3.42	250	1.32	6.23	0.16	13.7	3.400	13.75	2.210	-40.9	
1157	3.43	250	1.65	6.23	0.16	11.1	3.409	13.80	2.217	-46.8	
1202	3.44	250	1.98	6.23	0.07	10.6	3.423	13.82	2.226	-54.4	Slight yellow color
1207	3.44	250	2.31	6.23	0.03	10.8	3.428	13.82	2.228	-55.6	
1212	3.45	250	2.64	6.23	0.02	10.5	3.445	13.97	2.240	-67.8	
1217	3.46	250	2.97	6.23	0.01	10.7	3.452	13.95	2.243	-80.6	
1222	3.46	250	3.3	6.23	0.0	10.1	3.458	13.82	2.248	-81.4	
1227	3.46	250	3.63	6.22	0.0	10.3	3.453	13.82	2.244	-82.1	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/06/2013

Time: *(hhmm)* 1230

Total Volume of Water Purged: 4.25 (gal)

HORIBA	
pH	6.22
Spec. Cond. (mS/cm)	3.453

HACH TEST KITS	
Alkalinity (mg/L)	1,180
Carbon Dioxide (mg/L)	182

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	10.3
DO (mg/L)	0
Temp.(°C)	13.82
ORP (mv)	-82.1
TDS (g/L)	2.244

Ferrous Iron (mg/L)	0.4
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0.3
DTW (ft)	3.46

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

VOAs effervescing

Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-5SM

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 2.43

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/05/2013

Time: 1230 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1240	2.46	230	0.61	6.16	1.12	13.2	4.212	14.02	2.739	-26.5	Clear w/ particles
1250	2.46	230	1.22	6.15	0.59	16.2	4.278	14.10	2.780	-51.4	
1300	2.46	230	1.82	6.14	0.38	12.4	4.285	14.07	2.785	-76.8	
1305	2.47	230	2.12	6.15	0.31	11.9	4.285	14.02	2.786	-87.4	
1310	2.47	230	2.42	6.15	0.28	11.8	4.287	14.00	2.786	-90.9	
1315	2.47	230	2.72	6.15	0.25	12.4	4.285	13.99	2.785	-93.2	
1320	2.47	230	3.02	6.15	0.23	12.7	4.284	13.99	2.785	-95.9	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/05/2013

Time: *(hhmm)* 1325

Total Volume of Water Purged: 5 (gal)

HORIBA	
pH	6.15
Spec. Cond. (mS/cm)	4.284
Turbidity (NTU)	12.7
DO (mg/L)	0.23
Temp.(^oC)	13.99

HACH TEST KITS	
Alkalinity (mg/L)	640
Carbon Dioxide (mg/L)	82
Ferrous Iron (mg/L)	1
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	1

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	-95.9
TDS (g/L)	2.785

DTW (ft)	2.47

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Dissolved hydrogen: start @1401 / stop@1416

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1- filter		900 ml
Hydrogen Acetylene	☑	1-20 ml vial 2-40 ml vials		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-6SM

Manual Entry:

Well Diameter: inches

Samplers: DU

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 4.74

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/05/2013

Time: 1505 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1510	5.82	120	0.13	6.70	2.17	5.41	5.54	12.73	3.49	-151	
1515	5.81	100	0.27	6.68	1.03	6.44	5.54	12.65	3.49	-155	
1520	5.80	100	0.40	6.66	0.46	7.24	5.54	12.60	3.49	-158	
1525	5.75	100	0.53	6.61	0.00	0.52	5.56	12.51	3.50	-169	
1530	5.76	100	0.66	6.58	0.00	NA	5.58	12.43	3.52	-181	Turbidity meter malfunctioning.
1540	5.86	100	0.93	6.55	0.00	NA	5.66	12.32	3.56	-196	
1545	5.87	100	1.06	6.53	0.00	NA	5.68	12.31	3.58	-213	
1550	5.87	100	1.20	6.53	0.00	NA	5.67	12.33	3.57	-223	
1600	5.87	100	1.46	6.52	0.00	NA	5.68	12.19	3.58	-252	
1610	5.88	100	1.73	6.51	0.00	NA	5.71	12.08	3.60	-269	
1615	5.91	100	1.86	6.50	0.00	8.38	5.72	12.01	3.61	-289	
1625	5.95	100	2.13	6.49	0.00	NA	7.74	11.89	3.62	-293	
1635	5.98	100	2.40	6.48	0.00	14.7	5.76	11.73	3.64	-313	

1645	6.00	100	2.67	6.47	0.00	18.7	5.78	11.65	3.64	-343	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
Dt	12/05/2013	1650	2.8 (gal)

HORIBA		HACH TEST KITS	
pH	6.47	Alkalinity (mg/L)	
Spec. Cond. (mS/cm)	5.78	Carbon Dioxide (mg/L)	
Turbidity (NTU)	18.7	Ferrous Iron (mg/L)	
DO (mg/L)	0.00	Manganese (mg/L)	
Temp.(^{o}C)	11.65	Hydrogen Sulfide (mg/L)	0.4
ORP (mv)	-343	DTW (ft)	6
TDS (g/L)	3.64	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1 Vial 900 mL		
Hydrogen Acetylene	☑	20mins 15 mL		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-9SM

Manual Entry:

Samplers: Bill simons

Well Diameter: 2 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.46

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: 1045 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1055	6.84	250	0.7	6.94	4.81	1	1.41	9.54	0.904	-333	Clear
1105	6.87	250	1.4	6.86	3.90	0	1.40	10.11	0.895	-338	
1115	6.91	250	2.1	6.81	3.22	0	1.39	10.77	0.889	-340	
1125	6.92	250	2.8	6.82	2.81	0	1.40	11.12	0.898	-340	
1130	6.93	250	3.1	6.83	2.75	0	1.41	11.05	0.899	-340	
1135	6.94	250	3.4	6.83	2.68	0	1.40	11.03	0.896	-340	
1140	6.94	250	3.7	6.84	2.62	0	1.39	11.11	0.892	-340	
1145	6.94	250	4	6.85	2.52	0	1.38	11.23	0.885	-340	
1150	6.94	250	4.3	6.85	2.47	0	1.39	11.13	0.888	-340	
1155	6.94	250	4.6	6.85	2.45	0	1.39	11.02	0.889	-340	
1200	6.94	250	4.9	6.84	2.39	0	1.38	11.15	0.886	-340	
1205	6.94	250	5.2	6.84	2.36	0	1.39	11.13	0.890	-340	

Sampling Data

Method: *(i.e. low flow)* | Date: | Time: *(hhmm)* | Total Volume of Water Purged:

Low flow	12/10/2013	1215	5.2 (gal)

HORIBA	
pH	6.84
Spec. Cond. (mS/cm)	1.39
Turbidity (NTU)	0
DO (mg/L)	2.36
Temp.(^{o}C)	11.13
ORP (mv)	-340
TDS (g/L)	0.890

HACH TEST KITS	
Alkalinity (mg/L)	460
Carbon Dioxide (mg/L)	510
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	6.94

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Turn. Measured using Horiba.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-10SM

Manual Entry:

Samplers: Bill simons

Well Diameter: 2 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.23

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: 1400 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1410	6.65	250	0.7	7.38	8.76	26.7	2.25	10.39	1.44	-206	Clear
1420	6.68	250	1.4	6.89	5.54	10.1	2.38	11.03	1.53	-232	
1430	6.75	250	2.1	6.73	4.14	1.6	2.45	11.72	1.57	-255	
1450	6.76	250	3.5	6.62	3.16	0	2.56	11.79	1.64	-282	
1500	6.77	250	4.2	6.60	2.96	0	2.62	11.70	1.68	-291	
1510	6.79	250	4.9	6.58	2.75	0	2.70	11.82	1.73	-298	
1520	6.82	250	5.6	6.57	2.65	0	2.73	11.89	1.75	-302	
1530	6.83	250	6.3	6.57	2.57	0	2.76	11.87	1.77	-305	
1600	6.90	250	8.4	6.56	2.36	0	2.86	11.95	1.83	-312	
1605	6.90	250	8.7	6.56	2.31	0	2.87	11.98	1.83	-313	
1610	6.90	250	9	6.56	2.29	0	2.87	12.02	1.84	-313	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/10/2013

Time: *(hhmm)* 1625

Total Volume of Water Purged: 9 (gal)

HORIBA	HACH TEST KITS

pH	6.56	Alkalinity (mg/L)	
Spec. Cond. (mS/cm)	2.87	Carbon Dioxide (mg/L)	
Turbidity (NTU)	0	Ferrous Iron (mg/L)	
DO (mg/L)	2.29	Manganese (mg/L)	
Temp.(^{o}C)	12.02	Hydrogen Sulfide (mg/L)	3
ORP (mv)	-313	DTW (ft)	6.90
TDS (g/L)	1.84	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Turn. Measured using Horiba.
Water stained black, could not do colorimetric tests.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-13SM

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 5.84

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/04/2013

Time: 1443 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (°C)	TDS (g/L)	ORP (mV)	Comments
1453	6.15	200	0.53	6.65	0.50	29.6	4.669	14.37	3.034	-46.4	Slight yellow color
1503	6.13	200	1.06	6.64	0.42	26.1	4.656	14.44	3.026	-59.8	
1513	6.16	200	1.59	6.61	0.25	29.3	4.678	14.63	3.042	-86.3	
1518	6.16	200	1.85	6.60	0.14	27.5	4.631	14.87	3.009	-100.8	
1523	6.17	200	2.12	6.59	0.17	27.9	4.608	14.66	2.992	-106.8	
1528	6.17	200	2.38	6.59	0.16	28.4	4.589	14.63	2.983	-109.4	
1533	6.18	200	2.65	6.58	0.14	27.6	4.578	14.60	2.976	-111.7	
1538	6.18	200	2.91	6.58	0.15	28.0	4.576	14.58	2.971	-111.0	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/04/2013

Time: *(hhmm)* 1540

Total Volume of Water Purged: 4.25 (gal)

HORIBA		HACH TEST KITS	
pH	6.58	Alkalinity (mg/L)	1,160
Spec. Cond. (mS/cm)	4.576	Carbon Dioxide (mg/L)	372
Turbidity (NTU)	28	Ferrous Iron (mg/L)	0.1
DO (mg/L)		Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	0.15
Temp.(°C)	14.58
ORP (mv)	-111
TDS (g/L)	2.971

(mg/L)	0.5
Hydrogen Sulfide (mg/L)	0.1
DTW (ft)	6.18

* NOTE * HACH test kits are only required for MNA analysis wells.

Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1- filter		960 ml
Hydrogen Acetylene	☑	1-20 ml vial 2-40ml vials		

Comments:

Dissolved hydrogen: start @ 1613 /stop@1633. VOAs effervescing. Collected MS/MSD (VOCs only)

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-14SM

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 5.5

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/04/2013

Time: 0933 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0943	5.69	200	0.53	6.59	0.74	13.0	3.969	14.11	2.580	-24.5	Clear w/ particles
0953	5.68	200	1.06	6.59	0.35	13.7	4.087	14.58	2.656	-123.9	Turning black
1003	5.68	200	1.59	6.60	0.24	11.5	4.110	14.59	2.672	-179.9	
1008	5.69	200	1.85	6.61	0.21	9.07	4.129	14.74	2.683	-207.9	
1013	5.69	200	2.12	6.61	0.19	9.13	4.134	14.71	2.687	-210.1	
1018	5.69	200	2.38	6.61	0.18	9.01	4.125	14.70	2.682	-213.4	
1023	5.69	200	2.65	6.61	0.22	9.98	4.123	14.75	2.681	-215.3	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/04/2013

Time: *(hhmm)* 1025

Total Volume of Water Purged: 4.25 (gal)

HORIBA		HACH TEST KITS	
pH	6.61	Alkalinity (mg/L)	0
Spec. Cond. (mS/cm)	4.123	Carbon Dioxide (mg/L)	0
Turbidity (NTU)	9.98	Ferrous Iron (mg/L)	0
DO (mg/L)	0.22	Manganese (mg/L)	0
Temp.(^oC)	14.75	Hydrogen Sulfide (mg/L)	5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	-215.3
TDS (g/L)	2.681

DTW (ft)	5.69

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Collected duplicate @ 1201
OR-140SM_120413 (VOCs, C/S/N,dissolved Inorganics, MEE, TOC. Dissolved hydrogen: start @1102/ stop@1122

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	2-filters		410 ml 415 ml
Hydrogen Acetylene	☑	1-20ml vial 2-40ml vials		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-15SM

Manual Entry:

Well Diameter: 2 inches

Samplers: Dan chamberland

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 5.08

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow-geopump

Date: 12/09/2013

Time: 09:40 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
09:40	5.08	200	0	6.61	6.34	15.8	4.20	9.43	2.70	-162	
09:50	5.39	200	0.5	6.74	4.72	14.31	4.14	10.42	2.65	-178	Yellow tint, substrate odor
10:00	5.36	200	1.0	6.74	4.43	12.1	4.08	10.73	2.61	-174	Same
10:10	5.39	200	1.5	6.76	4.25	14.5	4.07	10.37	2.60	-160	Same
10:15	5.42	200	1.8	6.76	4.14	14.2	4.08	10.16	2.60	-160	Same
10:20	5.45	200	1.9	6.77	4.09	13.9	4.08	10.03	2.61	-161	Same
10:25	5.45	200	2.1	6.76	3.98	13.3	4.06	10.11	2.60	-160	Same
10:30	5.45	200	2.3	6.75	3.93	12.8	4.05	10.24	2.59	-159	Same
10:35	5.45	200	2.5	6.75	3.98	12.2	4.04	10.11	2.59	-158	Same
10:40	5.45	200	2.8	6.75	4.01	11.6	4.03	10.04	2.58	-158	Same

Sampling Data

Method: *(i.e. low flow)* Dedicated tubing

Date: 12/09/2013

Time: *(hhmm)* 10:40

Total Volume of Water Purged: 2.8 (gal)

HORIBA	
pH	6.75

HACH TEST KITS	
Alkalinity (mg/L)	1,940

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	4.03	Carbon Dioxide (mg/L)	690
Turbidity (NTU)	11.6	Ferrous Iron (mg/L)	1.4
DO (mg/L)	4.01	Manganese (mg/L)	0
Temp.(^{o}C)	10.04	Hydrogen Sulfide (mg/L)	0
ORP (mv)	-158	DTW (ft)	5.45
TDS (g/L)	2.58	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: OR-18SM

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 4.21

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: 1328 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1338	4.41	175	0.46	6.81	0.59	3.31	1.147	12.66	0.747	-118.9	Clear
1348	4.41	175	0.92	6.60	0.22	3.84	1.273	12.51	0.829	-188.5	
1358	4.40	175	1.38	6.57	0.16	3.38	1.330	12.60	0.856	-266.6	
1408	4.41	175	1.84	6.53	0.20	6.14	1.378	12.74	0.896	-310.8	
1413	4.41	175	2.07	6.51	0.21	4.03	1.405	12.78	0.914	-319.6	
1418	4.41	175	2.30	6.49	0.26	3.39	1.427	12.58	0.928	-324.3	
1423	4.41	175	2.53	6.48	0.29	3.41	1.436	12.49	0.934	-327.9	
1428	4.41	175	2.76	6.44	0.26	2.70	1.439	12.53	0.937	-329.8	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: *(hhmm)* 1430

Total Volume of Water Purged: 3.5 (gal)

HORIBA	
pH	6.44
Spec. Cond. (mS/cm)	1.439
Turbidity (NTU)	2.7
DO (mg/L)	

HACH TEST KITS	
Alkalinity (mg/L)	460
Carbon Dioxide (mg/L)	372
Ferrous Iron (mg/L)	0
Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	0.26
Temp.(°C)	12.53
ORP (mv)	-329.8
TDS (g/L)	0.937

(mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	4.41

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-13D

Manual Entry:

Well Diameter: 4 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.45

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: 1550 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1600	8.00	400	1.1	6.89	0	317	2.72	11.25	1.74	-218	
1610	8.75	400	2.2	6.90	0	182	2.77	11.66	1.77	-218	
1620	9.39	400	3.3	6.88	0	37.5	2.80	12.29	1.79	-218	
1630	10.40	400	4.4	6.76	0	34.3	2.79	12.26	1.78	-304	
1640	10.92	400	5	6.48	0	74	2.75	12.41	1.76	-425	
1645	11.17	400	5.6	6.58	0	74.2	2.76	12.38	1.76	-435	
1650	11.56	400	6.2	6.39	0	146	2.65	12.20	1.70	-455	
1655	11.89	400	6.8	6.34	0	145	2.62	12.22	1.67	-459	
1700	11.99	400	7.4	6.22	0	173	2.55	12.16	1.63	-460	
1705	12.00	400	8	6.20	0	233	2.49	11.58	1.60	-471	
1710	12.03	400	8.6	6.17	0	194	2.51	11.20	1.61	-472	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: *(hhmm)* 1715

Total Volume of Water Purged: 8.6 (gal)

HORIBA	HACH TEST KITS

pH	6.17	Alkalinity (mg/L)	
Spec. Cond. (mS/cm)	2.51	Carbon Dioxide (mg/L)	
Turbidity (NTU)	194	Ferrous Iron (mg/L)	
DO (mg/L)	0	Manganese (mg/L)	
Temp.(^{o}C)	11.20	Hydrogen Sulfide (mg/L)	5
ORP (mv)	-472	DTW (ft)	12.03
TDS (g/L)	1.61	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Could only analyze H2S. H2S >5.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-1D

Manual Entry:

Well Diameter: 4 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.7

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)*: Low flow

Date: 12/11/2013

Time: 0827 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
0837	6.81	220	0.58	6.49	3.40	64.3	0.966	13.27	0.629	17.9	Slightly cloudy
0847	6.85	220	1.16	6.57	2.80	54.1	0.767	13.61	0.499	-16.3	
0857	6.86	220	1.74	6.64	2.48	50.2	0.639	13.56	0.415	-43.2	
0902	6.86	220	2.03	6.58	2.20	44.5	0.570	13.55	0.370	-57.4	
0907	6.86	220	2.32	6.50	2.11	42.3	0.536	13.59	0.356	-62.7	
0912	6.86	220	2.61	6.46	2.00	41.7	0.529	13.61	0.340	-69.9	
0917	6.87	220	2.9	6.23	1.98	42.2	0.461	13.63	0.301	-99.6	
0922	6.88	220	3.19	6.19	1.96	41.5	0.433	13.64	0.282	-105.2	
0927	6.88	220	3.48	6.18	1.94	40.2	0.430	13.65	0.280	-106.4	
0932	6.88	220	3.77	6.17	1.91	39.8	0.429	13.68	0.276	-107.1	

Sampling Data

Method: *(i.e. low flow)*: Low flow

Date: 12/11/2013

Time: *(hhmm)* 0935

Total Volume of Water Purged: 4.25 (gal)

HORIBA	
pH	6.17

HACH TEST KITS	
Alkalinity (mg/L)	80

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	0.429	Carbon Dioxide (mg/L)	114
Turbidity (NTU)	39.8	Ferrous Iron (mg/L)	1.1
DO (mg/L)	1.91	Manganese (mg/L)	0
Temp.(^{o}C)	13.68	Hydrogen Sulfide (mg/L)	0.5
ORP (mv)	-107.1	DTW (ft)	6.88
TDS (g/L)	0.276	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-1S

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 2.58

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/05/2013

Time: 1008 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1018	3.04	160	0.42	6.71	0.66	5.32	3.305	14.79	2.150	0.2	Clear
1028	3.06	160	0.84	6.83	0.38	2.34	3.448	15.01	2.242	-66.5	
1038	3.07	160	1.26	6.84	0.28	1.90	3.487	15.16	2.267	-100.6	
1048	3.07	160	1.68	6.83	0.29	6.53	3.501	15.16	2.275	-115.5	
1053	3.07	160	1.89	6.85	0.28	5.05	3.503	15.27	2.277	-131.8	
1058	3.08	160	2.1	6.85	0.35	2.18	3.505	15.27	2.278	-138.6	
1103	3.08	160	2.22	6.85	0.35	1.69	3.504	15.28	2.278	-140.5	
1108	3.09	160	2.43	6.85	0.34	1.99	3.504	15.31	2.278	-142.3	
1113	3.09	160	2.65	6.85	0.33	2.12	3.506	15.29	2.280	-145.1	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/05/2013

Time: *(hhmm)* 1115

Total Volume of Water Purged: 4 (gal)

HORIBA	
pH	6.85
Spec. Cond. (mS/cm)	3.506

HACH TEST KITS	
Alkalinity (mg/L)	240
Carbon Dioxide (mg/L)	90

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	2.12
DO (mg/L)	0.33
Temp.(°C)	15.29
ORP (mv)	-145.1
TDS (g/L)	2.280

Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	4
DTW (ft)	3.09

* NOTE * HACH test kits are only required for MNA analysis wells.

Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1- filter		1000 ml
Hydrogen Acetylene	☑	1-20 ml vial 2-40 ml vials		

Comments:

Collect MS/MSD ((VOCs only) PMW-1S_120513 MS/MSD
Dissolved hydrogen: start @1129 /stop @1154

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-2D

Manual Entry:

Well Diameter: 2 inches

Samplers: DPC

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.75

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow geopump

Date: 12/12/2013

Time: 1135 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1135	6.75	200	0	6.29	3.82	200	3.81	5.07	2.44	-340	susp solids, no odor
1145	11.70	200	0.5	6.67	2.63	55.1	3.70	7.02	2.37	-353	clear, water oxidizing
1155	12.50	130	0.9	6.76	2.57	46.2	3.53	6.69	2.27	-355	same
1205	13.02	130	1.1	6.77	2.61	49.9	3.58	6.29	2.29	-355	same
1210	13.38	130	1.2	6.78	2.67	41.7	3.54	6.13	2.27	-354	same
1215	13.70	120	1.3	6.78	2.65	34.6	3.50	6.66	2.25	-354	same
1220	14.0	120	1.4	6.79	2.59	32.2	3.50	6.48	2.25	-354	same
1225	14.3	120	1.5	6.80	2.54	29.0	3.50	6.34	2.24	-354	same
1230	14.58	120	1.6	6.80	2.84	27.1	3.49	5.79	2.24	-353	same
1235	15.02	120	1.7	6.78	2.84	25.0	3.53	5.68	2.26	-352	same
1240	16.0	120	1.9	6.76	2.10	26.4	3.68	7.40	2.35	-360	same
1245	16.27	120	2.0	6.76	2.16	23.7	3.63	7.00	2.33	-359	same
1250	16.55	120	2.1	6.75	2.29	19.2	3.63	6.40	2.32	-356	same

1255	16.67	120	2.2	6.72	2.40	17.7	3.60	6.23	2.30	-352	
1300	16.81	120	2.4	6.67	2.63	10.0	3.58	5.81	2.29	-349	
1305	16.97	120	2.5	6.65	2.64	13.5	3.59	5.63	2.30	-349	
1310	17.10	120	2.6	6.64	2.66	17.1	3.61	5.44	2.31	-349	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
dedicated tubing	12/12/2013	1310	2.6 (gal)

HORIBA	
pH	6.64
Spec. Cond. (mS/cm)	3.61
Turbidity (NTU)	17.1
DO (mg/L)	2.66
Temp.(^{o}C)	5.44
ORP (mv)	-349
TDS (g/L)	2.31

HACH TEST KITS	
Alkalinity (mg/L)	1,000
Carbon Dioxide (mg/L)	742
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	3.5
DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	380mL, 160mL		
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-2S

Manual Entry:

Well Diameter: 2 inches

Samplers: A Kowalczk

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 3.16

Depth to Well Bottom (ft): 11.1

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/05/2013

Time: 10:08 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
10:20	4.89	250	1	7.46	4.59	196	0.390	14.23	0.253	-1	
10:30	5.07	200	1.5	6.86	2.93	76.5	0.410	14.17	0.266	-37	
10:40	5.27	200	2	6.38	1.68	47.4	0.438	14.31	0.284	-100	
10:50	5.33	200	2.5	6.34	1.00	25.6	0.528	14.59	0.340	-122	
11:00	5.35	200	3	6.36	0.46	20.5	0.766	14.76	0.491	-140	
11:10	5.31	200	3.5	6.35	0.18	14.3	1.11	14.88	0.708	-151	
11:20	5.26	200	4	6.36	0.0	13.3	1.56	15.00	0.995	-161	
11:30	5.19	200	4.5	6.34	0.0	9.26	1.86	15.08	1.19	-165	
11:40	5.04	200	5	6.36	0.0	8.48	1.97	15.16	1.26	-169	
11:50	5.43	200	5.5	6.37	0.0	21.4	2.25	15.25	1.44	-171	
12:00	5.66	200	6	6.36	0.0	21.9	2.43	15.30	1.56	-159	
12:10	5.55	200	6.5	6.34	0.0	27.2	2.63	15.31	1.68	-168	
12:20	5.64	200	7	6.34	0.0	17.0	2.84	15.36	1.82	-177	

12:30	5.65	200	7.5	6.35	0.0	14.2	2.98	15.41	1.91	-184	
12:40	5.47	180	8	6.33	0.0	9.95	3.13	15.48	2.01	-194	
12:45	5.45	180	8.25	6.32	0.0	10.31	3.18	15.52	2.04	-200	
12:50	5.42	180	8.5	6.33	0.0	9.58	3.21	15.55	2.06	-203	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
Low flow	12/05/2013	13:00	9 (gal)

HORIBA	
pH	6.33
Spec. Cond. (mS/cm)	3.21
Turbidity (NTU)	9.58
DO (mg/L)	0.0
Temp.(^{o}C)	15.55
ORP (mv)	-203
TDS (g/L)	2.06

HACH TEST KITS	
Alkalinity (mg/L)	
Carbon Dioxide (mg/L)	
Ferrous Iron (mg/L)	
Manganese (mg/L)	
Hydrogen Sulfide (mg/L)	
DTW (ft)	5.42

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑			
Hydrogen Acetylene	☑			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-3D

Manual Entry:

Well Diameter: 2 inches

Samplers: Doruk ucak

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.78

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow geopump

Date: 12/09/2013

Time: 1310 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1315	7.90	150	0.20	7.00	0.45	3.12	2.79	8.65	1.79	-362	
1325	9.50	150	0.60	6.85	0.00	4.82	2.93	8.92	1.88	-359	
1335	9.61	150	1.00	6.77	0.00	35.3	2.98	8.91	1.91	-355	
1345	9.73	150	1.40	6.73	0.00	45.4	3.02	8.88	.95	-352	
1355	11.13	150	1.80	6.59	0.00	13.0	3.11	10.67	1.99	-360	
1405	10.83	150	2.20	6.57	0.00	4.11	3.08	9.75	1.97	-355	
1415	10.80	150	2.60	6.52	0.00	4.11	3.03	9.67	1.93	-351	Pump stopped
1425	10.91	150	3.00	6.46	0.00	4.4	2.96	10.43	1.89	-352	
1435	10.91	150	3.40	6.45	0.00	5.3	2.93	10.16	1.88	-349	
1440	10.91	150	3.60	6.44	0.00	5.7	2.92	10.20	1.87	-348	

Sampling Data

Method: *(i.e. low flow)* DT

Date: 12/09/2013

Time: *(hhmm)* 1445

Total Volume of Water Purged: 3.6 (gal)

HORIBA	
pH	6.44

HACH TEST KITS	
Alkalinity (mg/L)	640

SAMPLE SET

Parameter		Bottle	Pres.	Method
				EPA 8260

Spec. Cond. (mS/cm)	2.92
Turbidity (NTU)	5.7
DO (mg/L)	0.00
Temp.(^{o}C)	10.20
ORP (mv)	-348
TDS (g/L)	1.87

Carbon Dioxide (mg/L)	454
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	10.91

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Select VOCs	☑	3-40 mL glass vial	HCl	
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-3S

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 4.75

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/05/2013

Time: 1445 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1455	5.80	100	0.26	6.44	1.44	10.5	5.063	13.60	3.291	1.5	Clear
1505	5.99	100	0.52	6.44	0.74	7.24	5.072	13.66	3.296	-13.8	
1515	6.14	100	0.77	6.45	0.59	4.80	5.066	13.68	3.294	-33.7	
1525	6.19	100	1.03	6.43	0.55	3.94	5.036	13.72	3.273	-60.8	
1535	6.19	100	1.29	6.41	0.46	4.65	4.988	13.80	3.242	-102.3	
1545	6.22	120	1.60	6.40	0.49	4.05	4.936	13.88	3.208	-132.4	
1555	6.29	120	1.91	6.37	0.44	5.05	4.885	13.94	3.175	-155.2	
1600	6.30	120	2.06	6.38	0.42	5.45	4.861	13.95	3.159	-167.4	
1605	6.31	120	2.22	6.38	0.41	4.56	4.836	13.96	3.143	-177.3	
1610	6.31	120	2.37	6.38	0.41	5.37	4.816	13.98	3.130	-182.9	
1615	6.31	120	2.53	6.38	0.44	5.29	4.801	13.99	3.115	-184.3	
1620	6.31	120	2.68	6.38	0.37	5.02	4.800	14.00	3.105	-186.7	

Sampling Data

Method: *(i.e. low flow)* | Date: | Time: *(hhmm)* | Total Volume of Water Purged:

Low flow	12/05/2013	1625	3.5 (gal)

HORIBA	
pH	6.38
Spec. Cond. (mS/cm)	4.800
Turbidity (NTU)	5.02
DO (mg/L)	0.37
Temp.(^{o}C)	14.00
ORP (mv)	-186.7
TDS (g/L)	3.105

HACH TEST KITS	
Alkalinity (mg/L)	560
Carbon Dioxide (mg/L)	134
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	3
DTW (ft)	6.31

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Dissolved hydrogen: start @1651 / stop @1721

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1- filter		1000 ml
Hydrogen Acetylene	☑	1-20 ml vial 2-40 ml vials		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-4D

Manual Entry:

Well Diameter: 2 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.66

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/03/2013

Time: 1255 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1305	7.65	200	0.5	7.49	4.43	2.96	3.09	14.67	1.98	-379	clear
1315	7.65	200	1	7.45	1.89	5.63	3.19	14.76	2.04	-390	
1325	7.73	200	1.5	7.19	1.60	5.41	3.23	14.73	2.06	-385	
1335	7.96	200	2	6.96	1.54	3.65	3.25	14.54	2.08	-376	
1345	7.91	200	2.5	6.89	1.45	3.96	3.28	14.42	2.10	-372	
1350	7.89	200	2.8	6.89	1.44	4.10	3.29	14.30	2.11	-371	
1355	7.89	200	3.2	6.87	1.43	3.03	3.33	14.24	2.13	-370	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/03/2013

Time: *(hhmm)* 1405

Total Volume of Water Purged: 3.7 (gal)

HORIBA	
pH	6.87
Spec. Cond. (mS/cm)	3.33
Turbidity (NTU)	3.03
DO (mg/L)	1.43
Temp.(^oC)	14.24

HACH TEST KITS	
Alkalinity (mg/L)	1,080
Carbon Dioxide (mg/L)	900
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	-370
TDS (g/L)	2.13

DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

H2S >5

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-4S

Manual Entry:

Samplers: C. Huey

Well Diameter: 2 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 3.19

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)*: low flow

Date: 12/09/2013

Time: 1216 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1226	5.48	150	0.39	6.19	8.49	28.6	2.100	8.75	1.375	9.3	YELLOWISH COLOR
1236	7.68	150	0.8	6.14	6.31	27.4	3.430	11.43	2.375	9.3	
1246	7.65	150	1.2	6.14	1.30	24.7	6.288	13.11	4.090	5.6	
1256	8.20	150	1.6	6.15	0.66	25.7	6.190	13.11	4.029	-16.9	
1301	8.61	150	1.8	6.16	0.47	6.01	6.360	13.53	4.133	-25.9	
1306	8.68	150	2.0	6.17	0.48	5.83	6.393	13.29	4.161	-27.7	
1311	8.70	150	2.25	6.18	0.44	5.49	6.389	13.30	4.169	-29.3	
1316	8.70	150	2.5	6.18	0.42	5.63	6.392	13.25	4.173	-30.4	
1321	8.73	150	2.75	6.18	0.40	5.36	6.390	13.23	4.180	-31.0	

Sampling Data

Method: *(i.e. low flow)*: LOW FLW

Date: 12/09/2013

Time: *(hhmm)* 1325

Total Volume of Water Purged: 3.25 (gal)

HORIBA	
pH	6.18
Spec. Cond. (mS/cm)	6.390

HACH TEST KITS	
Alkalinity (mg/L)	260
Carbon Dioxide (mg/L)	210

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	5.36
DO (mg/L)	0.4
Temp.(^{o}C)	13.23
ORP (mv)	-31
TDS (g/L)	4.180

Ferrous Iron (mg/L)	1.2
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0.1
DTW (ft)	8.73

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-5D

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.99

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: 1247 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1302	9.46	150	0.6	6.47	2.40	57.5	3.555	12.19	2.312	-332.7	Slightly cloudy
1312	9.12	120	0.91	6.43	1.12	42.0	3.489	11.54	2.234	-337.8	
1322	9.04	120	1.22	6.41	0.33	39.5	3.472	11.18	2.242	-344.4	
1332	9.11	120	1.53	6.40	0.29	69.6	3.466	11.32	2.254	-343	
1342	9.09	120	1.84	6.40	0.20	60.4	3.532	11.09	2.297	-343.2	
1347	9.10	120	1.99	6.39	0.15	58.8	3.542	10.85	2.300	-343.7	
1352	9.11	120	2.15	6.39	0.14	56.7	3.550	10.90	2.307	-343.9	
1357	9.14	120	2.3	6.38	0.11	55.6	3.543	11.08	2.305	-343.9	
1402	9.15	120	2.46	6.38	0.12	52.8	3.580	11.09	2.328	-343.2	
1407	9.15	120	2.61	6.38	0.07	53.0	3.590	11.0	2.371	-344.5	
1412	9.15	120	2.77	6.38	0.08	51.9	3.596	10.94	2.378	-345.1	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: *(hhmm)* 1415

Total Volume of Water Purged: 3.25 (gal)

HORIBA	HACH TEST KITS

pH	6.38	Alkalinity (mg/L)	340
Spec. Cond. (mS/cm)	3.596	Carbon Dioxide (mg/L)	372
Turbidity (NTU)	51.9	Ferrous Iron (mg/L)	0
DO (mg/L)	0.08	Manganese (mg/L)	0
Temp.(^{o}C)	10.94	Hydrogen Sulfide (mg/L)	0.5
ORP (mv)	-345.1	DTW (ft)	9.15
TDS (g/L)	2.378	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

New tubing installed in well.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-5S

Manual Entry:

Samplers: C Huey

Well Diameter: 2 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 3.4

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/06/2013

Time: 0937 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0947	4.99	150	0.4	6.40	2.77	16.8	3.228	11.85	2.076	14.7	
0957	5.86	100	0.66	6.42	4.07	14.3	2.280	11.71	1.477	6.0	
1007	6.69	100	0.92	6.41	3.45	10.9	2.167	12.21	1.410	4.4	
1017	6.70	100	1.18	6.40	2.13	8.67	2.125	12.39	1.630	0.1	
1027	6.74	100	1.44	6.40	2.10	8.53	2.516	12.46	1.636	-1.0	
1037	6.76	100	1.7	6.41	1.99	7.94	2.655	12.74	1.745	-13.0	
1047	6.79	100	1.96	6.42	1.87	7.61	2.684	12.79	1.749	-14.6	
1052	6.81	100	2.09	6.41	1.30	7.38	2.706	12.84	1.760	-20.5	
1057	6.84	100	2.22	6.39	0.53	7.22	3.069	13.18	1.997	-32	
1102	6.85	100	2.35	6.39	0.54	7.12	3.082	13.17	2.007	-32.7	
1107	6.86	100	2.48	6.39	0.52	6.98	3.093	13.16	2.012	-33.3	
1112	6.87	100	2.61	6.39	0.50	6.88	3.100	13.15	2.017	-33.9	Clear

Sampling Data

Method: *(i.e. low flow)* | Date: | Time: *(hhmm)* | Total Volume of Water Purged:

Low flow	12/06/2013	1115	3 (gal)

HORIBA	
pH	6.39
Spec. Cond. (mS/cm)	3.100
Turbidity (NTU)	6.88
DO (mg/L)	0.50
Temp.(^{o}C)	13.15
ORP (mv)	-33.9
TDS (g/L)	2.017

HACH TEST KITS	
Alkalinity (mg/L)	340
Carbon Dioxide (mg/L)	168
Ferrous Iron (mg/L)	0.8
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0
DTW (ft)	6.87

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-6D

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 9.05

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: 0835 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0845	14.01	200	0.53	6.36	0.41	28.8	2.451	12.94	1.587	-285.8	Clear with particles
0855	16.78	200	1.06	6.42	0.21	23.9	1.975	12.74	1.283	-331.7	
0905	19.00	200	1.59	6.44	0.02	24.2	1.741	12.85	1.144	-343.7	
0915	22.34	180	2.06	6.41	0.0	25.6	1.678	12.45	1.134	-346.2	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: *(hhmm)* 1607

Total Volume of Water Purged: 2.5 (gal)

HORIBA	
pH	0
Spec. Cond. (mS/cm)	0
Turbidity (NTU)	0
DO (mg/L)	0
Temp.(^oC)	0
ORP (mv)	0
TDS (g/L)	0

HACH TEST KITS	
Alkalinity (mg/L)	260
Carbon Dioxide (mg/L)	304
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	1
DTW (ft)	18.53

* NOTE * HACH test kits are only required for MNA analysis wells.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	2-filters		240ml 300ml

Comments:

Water level dropping. 0918- well pumped dry. Collect microbial on 12/12/13@1607 (DTW@19.88). Collect other samples on 12/13/13@0800	Hydrogen Acetylene	☐		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-7D

Manual Entry:

Well Diameter: 2 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.46

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: 1400 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1410	7.91	150	0.4	7.46	0	3	4.20	8.91	2.68	-345	
1420	7.86	150	0.8	7.15	0	0	3.92	9.78	2.51	-352	
1430	8.12	200	1.3	7.08	0	1.7	3.77	11.25	2.41	-356	
1440	8.07	200	1.8	7.02	0	0	3.70	11.28	2.37	-364	
1450	8.12	200	2.3	7.00	0	0	3.68	11.52	2.36	-370	
1455	8.17	200	2.6	7.00	0	0	3.67	11.72	2.35	-371	
1500	8.15	200	2.9	6.99	0	0	3.65	11.63	2.34	-371	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: *(hhmm)* 1515

Total Volume of Water Purged: 2.9 (gal)

HORIBA		HACH TEST KITS	
pH	6.99	Alkalinity (mg/L)	940
Spec. Cond. (mS/cm)	3.65	Carbon Dioxide (mg/L)	764
Turbidity (NTU)	0	Ferrous Iron (mg/L)	0
DO (mg/L)	0	Manganese (mg/L)	0
Temp.(^oC)	11.63	Hydrogen Sulfide (mg/L)	5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	-371
TDS (g/L)	2.34

DTW (ft)	8.15

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

H2S >5

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-7S

Manual Entry:

Well Diameter: 2 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.46

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: 1100 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1110	7.70	200	0.5	7.05	3.03	7.4	3.86	11.71	2.47	-174	
1120	8.43	200	1	6.99	2.20	3.8	3.34	11.86	2.14	-183	
1130	9.31	200	1.5	6.98	1.92	2	3.50	12.30	2.24	-179	
1140	9.71	150	1.9	6.98	1.83	0	3.64	11.59	2.33	-174	
1150	10.25	150	2.3	6.99	1.72	0	3.69	11.40	2.36	-172	Pumped dry @ 11'.

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: *(hhmm)* 1220

Total Volume of Water Purged: 2.7 (gal)

HORIBA	
pH	
Spec. Cond. (mS/cm)	
Turbidity (NTU)	
DO (mg/L)	
Temp.(^{o}C)	
ORP (mv)	
TDS (g/L)	

HACH TEST KITS	
Alkalinity (mg/L)	460
Carbon Dioxide (mg/L)	370
Ferrous Iron (mg/L)	0.4
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0.1
DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon		1-120 mL glass amber	None	SW9060

	☑			
Microbial Census	☐			
Hydrogen Acetylene	☐			

Comments:

Turb. Measured using Horiba.
Pumped dry @150ml/min.

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-8D

Manual Entry:

Well Diameter: 2 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.03

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/06/2013

Time: 1005 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1015	7.25	300	0.8	7.06	5.15	3.75	3.80	13.47	2.44	-356	clea
1025	7.25	300	1.6	6.86	4.28	3.34	4.01	13.09	2.57	-353	
1035	7.45	300	2.4	6.74	3.45	3.03	4.02	13.45	2.58	-366	
1045	7.50	300	3.2	6.69	3.10	2.73	4.04	13.58	2.59	-365	
1055	7.57	300	4	6.68	2.98	3.82	4.06	13.50	2.60	-366	
1100	7.58	300	4.4	6.67	2.89	4.51	4.07	13.60	2.61	-366	
1105	7.60	300	4.8	6.67	2.81	4.51	4.09	13.62	2.62	-365	
1115	7.65	300	5.4	6.67	2.66	3.20	4.10	13.65	2.62	-365	
1120	7.65	300	5.8	6.67	2.65	3.26	4.11	13.60	2.64	-364	
1125	7.64	300	6.2	6.67	2.62	3.08	4.11	13.61	2.63	-364	
1135	7.70	300	7	6.66	2.52	3.65	4.15	13.59	2.66	-364	
1140	7.70	300	7.4	6.66	2.48	3.60	4.15	13.66	2.66	-364	
1145	7.71	300	7.8	6.66	2.47	3.60	4.17	13.58	2.67	-364	

1150	7.71	300	8.2	6.66	2.43	3.60	4.17	13.69	2.67	-364	
1155	7.71	300	8.6	6.66	2.39	3.65	4.17	13.66	2.67	-363	
1200	7.71	300	9	6.66	2.38	3.59	4.19	13.64	2.68	-363	
1205	7.71	300	9.4	6.65	2.37	3.65	4.19	13.71	2.68	-363	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
low flow	12/06/2013	1215	9.4 (gal)

HORIBA	
pH	6.65
Spec. Cond. (mS/cm)	4.19
Turbidity (NTU)	3.65
DO (mg/L)	2.37
Temp.(^{o}C)	13.71
ORP (mv)	-363
TDS (g/L)	2.68

HACH TEST KITS	
Alkalinity (mg/L)	880
Carbon Dioxide (mg/L)	934
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	7.71

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

H2S is >5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-8S

Manual Entry:

Well Diameter: 2 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.75

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: 0830 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0840	7.56	200	0.5	6.65	3.90	17.6	3.23	10.32	2.06	-107	Clear
0850	8.16	200	1	6.77	3.23	10	3.32	10.95	2.13	-126	
0900	8.61	200	1.5	6.83	2.97	5.4	3.54	11.04	2.26	-136	
910	9.02	200	2	6.84	2.75	3.5	3.59	11.45	2.30	-184	
0920	9.57	200	2.5	6.83	2.39	1.8	3.53	11.69	2.26	-236	
0930	9.86	200	3	6.81	2.24	1	3.53	11.69	2.26	-262	
0940	10.20	200	3.5	6.78	2.06	0.4	3.55	11.73	2.27	-288	
0950	10.33	200	4	6.78	2.02	0	3.44	11.23	2.19	-301	
0955	10.33	150	4.2	6.78	2.12	0	3.28	10.58	2.09	-305	
1000	10.33	150	4.4	6.78	2.04	0	3.18	10.78	2.03	-306	
1005	10.33	150	4.6	6.78	2.03	0	3.14	10.57	2	-309	
1010	10.33	150	4.8	6.78	2.03	0	3.09	10.37	1.98	-311	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:

Low flow	12/11/2013	1020	4.8 (gal)

HORIBA	
pH	6.78
Spec. Cond. (mS/cm)	3.09
Turbidity (NTU)	0
DO (mg/L)	2.03
Temp.(^{o}C)	10.37
ORP (mv)	-311
TDS (g/L)	1.98

HACH TEST KITS	
Alkalinity (mg/L)	620
Carbon Dioxide (mg/L)	804
Ferrous Iron (mg/L)	0.9
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0.7
DTW (ft)	10.33

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Turn. Measured using Horiba.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-9D

Manual Entry:

Well Diameter: 4 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.21

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/11/2013

Time: 1330 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1345	9.18	350	1.5	7.19	1.99	24.5	2.99	13.57	1.91	-190	
1355	9.95	350	2.4	7.18	1.62	21.5	2.97	13.50	1.90	-195	
1405	10.30	350	3.3	7.11	1.43	21.8	2.90	13.66	1.85	-222	
1415	10.68	350	4.2	6.96	1.30	47.5	2.82	13.50	1.80	-342	
1425	10.72	200	4.7	6.83	1.29	70.2	2.70	12.83	1.73	-375	
1430	10.67	200	5	6.79	1.30	79.5	2.70	12.43	1.73	-388	
1435	10.62	200	5.3	6.72	1.26	96	2.67	12.47	1.71	-408	
1440	10.57	200	5.6	6.66	1.24	98	2.65	12.38	1.70	-440	
1445	10.54	200	5.9	6.66	1.23	101	2.65	12.39	1.69	-449	
1450	10.52	200	6.2	6.62	1.22	106	2.64	12.30	1.69	-473	
1455	10.51	200	6.5	6.61	1.19	110	2.64	12.38	1.69	-485	
1500	10.50	200	6.8	6.61	1.16	118	2.63	12.45	1.69	-489	
1505	10.50	200	7.1	6.59	1.16	117	2.62	12.37	1.68	-492	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
Low flow	12/11/2013	1505	7.1 (gal)

HORIBA	
pH	6.59
Spec. Cond. (mS/cm)	2.62
Turbidity (NTU)	117
DO (mg/L)	1.16
Temp.(^{o}C)	12.37
ORP (mv)	-492
TDS (g/L)	1.68

HACH TEST KITS	
Alkalinity (mg/L)	
Carbon Dioxide (mg/L)	
Ferrous Iron (mg/L)	
Manganese (mg/L)	
Hydrogen Sulfide (mg/L)	4
DTW (ft)	10.50

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Turb. Measured using Horiba.
Could not conduct colorimetric tests.

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-9S

Manual Entry:

Well Diameter: 2 inches

Samplers: C huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 5.56

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/04/2013

Time: 1146 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1156	6.96	100	0.26	6.92	2.12	8.12	6.191	14.62	4.036	-0.8	Clear
1206	7.50	100	0.52	6.87	2.73	7.61	7.146	14.47	4.655	-1.8	
1216	7.76	100	0.78	6.84	2.64	3.25	7.329	14.51	4.767	-7.0	
1226	7.94	100	1.04	6.83	2.86	3.29	7.402	14.60	4.810	-8.9	
1236	8.08	100	1.3	6.83	2.76	3.21	7.345	14.74	4.771	-9.9	
1246	8.06	100	1.56	6.85	2.64	3.08	7.195	14.76	4.673	-12.7	
1256	8.01	100	1.82	6.84	2.59	2.99	7.019	14.94	4.563	-15.4	
1301	8.02	100	1.95	6.85	2.52	3.04	7.009	14.94	4.556	-16.0	
1306	8.03	100	2.08	6.84	2.48	3.12	6.994	14.96	4.542	-16.3	
1311	8.03	100	2.21	6.84	2.33	3.08	6.974	15.19	4.533	-16.5	
1316	8.03	100	2.34	6.84	2.22	3.02	6.840	15.21	4.448	-18.2	
1321	8.04	100	2.47	6.84	2.21	3.16	6.843	15.23	4.451	-18.4	
1326	8.04	100	2.6	6.84	2.19	3.19	6.849	15.24	4.456	-18.5	Clear

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
Low flow	12/04/2013	1330	4 (gal)

HORIBA	
pH	6.84
Spec. Cond. (mS/cm)	6.849
Turbidity (NTU)	3.19
DO (mg/L)	2.19
Temp.(^{o}C)	15.24
ORP (mv)	-18.5
TDS (g/L)	4.456

HACH TEST KITS	
Alkalinity (mg/L)	320
Carbon Dioxide (mg/L)	230
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0
DTW (ft)	8.04

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Dissolved hydrogen: start @1348 / stop@1418

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1-filter		1000 ml
Hydrogen Acetylene	☑	1-20 ml vial 2-40 ml vials		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-10D

Manual Entry:

Well Diameter: 4 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.25

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: 0815 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0825	8.02	300	0.8	6.94	7.63	14.1	2.03	11.43	1.30	-186	
0835	8.53	300	1.6	6.64	7.03	-77	1.99	11.84	1.27	-291	
0845	8.88	300	2.4	6.52	5.59	-77	1.79	11.78	1.14	-356	Slightly cloudy
0900	9.31	300	3.6	6.38	0	37	1.67	12.38	1.07	-424	
0910	9.47	300	4.4	6.33	0	27.8	1.70	12.15	1.09	-435	
0920	9.59	300	5.2	6.29	0	36	1.75	11.70	1.12	-443	
0925	9.66	300	5.6	6.27	0	44	1.77	11.69	1.13	-447	
0930	9.72	300	6	6.25	0	50.8	1.78	11.78	1.14	-451	
0935	9.77	300	6.4	6.24	0	53.4	1.80	11.86	1.16	-454	
0940	9.82	300	6.8	6.22	0	59	1.84	11.92	1.18	-456	
0945	9.86	300	7.2	6.21	0	59.8	1.86	11.92	1.19	-458	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: *(hhmm)* 0950

Total Volume of Water Purged: 7.2 (gal)

HORIBA	HACH TEST KITS

pH	6.21	Alkalinity (mg/L)	
Spec. Cond. (mS/cm)	1.86	Carbon Dioxide (mg/L)	
Turbidity (NTU)	59.8	Ferrous Iron (mg/L)	
DO (mg/L)	0	Manganese (mg/L)	
Temp.(^{o}C)	11.92	Hydrogen Sulfide (mg/L)	5
ORP (mv)	-458	DTW (ft)	9.86
TDS (g/L)	1.19	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

H2S >5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-10S

Manual Entry:

Samplers: C Huey

Well Diameter: 2 inches

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 4.98

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: 1515 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1525	6.82	100	0.26	6.89	3.47	5.81	4.649	13.96	3.025	-40.6	Clear
1535	7.78	100	0.52	6.81	3.89	5.15	4.703	14.00	3.058	-41.6	
1545	8.21	100	0.78	6.74	3.61	4.92	4.579	13.84	2.984	-36.3	
1555	8.83	100	1.04	6.65	3.72	4.94	4.497	13.86	2.922	-28.8	
1605	9.29	100	1.30	6.67	3.64	5.01	4.604	14.02	2.993	-25.3	
1615	9.84	100	1.56	6.68	3.47	5.12	4.668	13.64	3.035	-21.5	
1625	10.99	500	2.75	6.72	3.76	5.43	4.646	14.83	3.022	-21.5	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: *(hhmm)* 0810

Total Volume of Water Purged: 4.5 (gal)

HORIBA	
pH	
Spec. Cond. (mS/cm)	
Turbidity (NTU)	
DO (mg/L)	
Temp.(^oC)	

HACH TEST KITS	
Alkalinity (mg/L)	300
Carbon Dioxide (mg/L)	232
Ferrous Iron (mg/L)	0.1
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	0

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	
TDS (g/L)	

DTW (ft)	5.42

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Well pumped dry on 12/3/13 @16:27
12/4/13 DTW@ 5.42 sampled
Dissolved hydrogen: start @0838 / stop @ 0908

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1-filter		1000 ml
Hydrogen Acetylene	☑	1-20 ml vial 2-40 ml vials		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-11D

Manual Entry:

Well Diameter: 4 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.36

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/04/2013

Time: 0910 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0920	6.40	250	0.7	7.21	2.97	1222	1.96	12.35	1.26	-328	high quantity of wax and black
0930	6.40	250	1.4	7.24	2.69	11.86	1.93	12.29	1.24	-351	
0940	6.40	250	2.1	7.22	2.58	8.31	1.93	12.39	1.23	-351	
0950	6.40	250	2.8	7.21	2.46	8.22	1.91	12.69	1.22	-353	
1000	6.40	400	3.8	7.20	2.20	-78	1.86	13.68	1.19	-382	
1005	6.40	400	4.3	7.20	2.16	9.89	1.84	13.77	1.18	-375	
1010	6.40	400	4.8	7.20	2.15	10.17	1.83	13.75	1.17	-374	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/04/2013

Time: *(hhmm)* 1020

Total Volume of Water Purged: 4.8 (gal)

HORIBA	
pH	7.20
Spec. Cond. (mS/cm)	1.83
Turbidity (NTU)	10.17
DO (mg/L)	2.15
Temp.(^oC)	13.75

HACH TEST KITS	
Alkalinity (mg/L)	340
Carbon Dioxide (mg/L)	310
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	-374
TDS (g/L)	1.17

DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

tubing blocked, replaced.

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1 - 1,000ml		
Hydrogen Acetylene	☑	15 min @ 300ml/min		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-11S

Manual Entry:

Well Diameter: inches

Samplers: DU

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 5.16

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/09/2013

Time: 1010 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1015	6.36	100	0.13	6.42	0.00	7.1	4.22	9.82	2.70	59	
1025	6.54	100	0.40	6.47	1.87	6.0	4.20	8.91	6.69	52	
1035	6.89	100	0.67	6.51	2.15	5.7	4.18	8.42	2.67	47	
1045	7.32	100	0.93	6.47	1.14	3.2	4.18	9.28	2.68	42	
1055	7.34	100	1.20	6.64	3.40	3.4	7.93	8.25	2.67	43	
1105	7.36	100	1.47	6.72	4.03	5.77	4.18	7.83	2.67	42	
1115	7.36	100	1.74	6.67	3.87	8.9	4.77	8.72	2.67	51	
1125	7.71	100	2.01	6.50	0.90	5.2	4.26	9.82	2.73	64	
1135	7.71	100	2.28	6.48	0.00	2.1	4.27	9.98	2.73	61	
1145	7.91	100	2.55	6.48	0.00	1.8	4.26	10.15	2.73	54	
1155	7.99	100	2.82	6.48	0.00	1.9	4.26	10.21	2.73	51	
1205	8.04	100	2.95	6.48	0.00	2.1	4.25	10.23	2.73	50	

Sampling Data

Method: *(i.e. low flow)* | Date: | Time: *(hhmm)* | Total Volume of Water Purged:

Dedicated tubing	12/09/2013	1150	2.95 (gal)

HORIBA	
pH	6.48
Spec. Cond. (mS/cm)	4.25
Turbidity (NTU)	2.1
DO (mg/L)	0.00
Temp.(^{o}C)	10.23
ORP (mv)	50
TDS (g/L)	2.73

HACH TEST KITS	
Alkalinity (mg/L)	
Carbon Dioxide (mg/L)	
Ferrous Iron (mg/L)	
Manganese (mg/L)	
Hydrogen Sulfide (mg/L)	
DTW (ft)	8.04

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-12D

Manual Entry:

Well Diameter: 4 inches

Samplers: DPC

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.75

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* LOW FLOW GEOPU...

Date: 12/12/2013

Time: 1450 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1450	6.75	200	0	6.80	3.19	27.6	3.57	5.08	2.28	-223	LOTS OF GUNK IN WELL
1500	8.05	200	0.5	6.79	2.00	26.6	3.41	8.59	2.19	-234	
1510	8.10	200	1.0	6.74	1.95	31.9	3.41	8.79	2.18	-233	CLEAR, SLIGHT SUBSTRATE ODOR
1520	8.30	200	1.5	6.68	1.75	36.0	3.33	9.55	2.13	-234	TURNING BLACK
1525	8.35	200	1.7	6.67	1.60	37.8	3.29	11.02	2.11	-238	SAME
1530	8.40	200	1.9	6.66	1.48	39.6	3.26	11.49	2.09	-242	SAME
1535	8.50	200	2.2	6.67	1.48	37.3	3.30	10.32	2.11	-245	SAME
1540	8.55	200	2.4	6.66	1.43	31.1	3.25	10.95	2.07	-252	SAME
1545	8.59	200	2.6	6.64	1.40	31.0	3.21	11.28	2.05	-258	SAME
1550	8.61	200	2.9	6.64	1.43	26.7	3.20	10.87	2.05	-265	SAME
1555	8.63	200	3.1	6.62	1.42	33.2	3.13	10.96	2.00	-291	SAME
1600	8.67	200	3.3	6.61	1.41	29.8	3.10	10.99	1.98	-306	
1605	8.69	200	3.6	6.61	1.45	33.7	3.07	10.96	1.97	-299	

1610	8.72	200	3.8	6.60	1.50	35.7	3.08	10.65	1.97	-302	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
DEDICATED TUBING	12/12/2013	1610	3.8 (gal)

HORIBA		HACH TEST KITS	
pH	6.60	Alkalinity (mg/L)	
Spec. Cond. (mS/cm)	3.08	Carbon Dioxide (mg/L)	
Turbidity (NTU)	35.7	Ferrous Iron (mg/L)	
DO (mg/L)	1.50	Manganese (mg/L)	
Temp.(^{o}C)	10.6	Hydrogen Sulfide (mg/L)	0.4
ORP (mv)	-302	DTW (ft)	
TDS (g/L)	1.97	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-14D

Manual Entry:

Well Diameter: 4 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.33

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/13/2013

Time: 0845 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0855	8.30	150	0.4	6.51	1.85	36.7	3.301	11.61	2.146	15.0	Black particles
0905	8.78	150	0.8	6.46	1.16	38.9	3.250	11.56	2.113	-25	Water turning black
0915	9.26	150	1.2	6.40	0.76	35.1	3.241	11.47	2.106	-56.3	
0925	9.75	150	1.6	6.30	0.47	39.5	3.227	11.55	2.097	-76.8	
0935	9.99	150	2.0	6.27	0.41	38.1	3.216	11.58	2.090	-89.9	
0940	10.18	150	2.2	6.23	0.37	35.9	3.206	11.63	2.084	-100.4	
0945	10.48	150	2.4	6.18	0.33	34.5	3.183	11.68	2.069	-106.5	
0950	10.52	150	2.6	6.15	0.17	36.9	3.149	11.53	2.047	-116.9	
0955	10.53	150	2.8	6.11	0.11	40.2	3.107	11.49	2.020	-126.2	
1005	10.53	150	3.2	6.16	0.14	38.9	3.098	11.61	2.013	-135.9	
1015	10.54	150	3.6	6.21	0.10	39.7	3.063	11.90	1.990	-144.9	
1020	10.54	150	3.8	6.21	0.05	40.3	3.039	11.79	1.975	-150.0	
1025	10.54	150	4.0	6.22	0.04	36.4	3.027	11.67	1.966	-154.2	

1030	10.55	150	4.2	6.13	0.03	38.5	2.952	11.78	1.918	-159.1	
1035	10.55	150	4.4	6.12	0.0	35.5	2.933	11.79	1.906	-161.3	
1040	10.55	150	4.6	6.11	0.0	34.3	2.911	11.80	1.893	-167.3	
1045	10.55	150	4.8	6.11	0.0	36.1	2.900	11.85	1.887	-169.4	
1050	10.55	150	5.0	6.09	0.0	35.7	2.896	11.74	1.854	-170.9	
1055	10.56	150	5.2	6.08	0.0	35.1	2.879	11.69	1.839	-174.3	

Sampling Data

Method: *(i.e. low flow)*	Date:	Time: *(hhmm)*	Total Volume of Water Purged:
Low flow	12/13/2013	1100	5.5 (gal)

HORIBA	
pH	6.08
Spec. Cond. (mS/cm)	2.879
Turbidity (NTU)	35.1
DO (mg/L)	0
Temp.(^{o}C)	11.69
ORP (mv)	-174.3
TDS (g/L)	1.839

HACH TEST KITS	
Alkalinity (mg/L)	0
Carbon Dioxide (mg/L)	0
Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	10.56

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Water turned black

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-15D

Manual Entry:

Well Diameter: 4 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.19

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/04/2013

Time: 1225 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^{o}C)	TDS (g/L)	ORP (mV)	Comments
1235	6.54	250	0.7	6.94	2.76	9.05	2.20	15.51	1.41	-183	clear w/ black particulate
1245	6.61	250	1.4	6.91	2.72	9.66	2.20	15.45	1.40	-211	
1255	6.69	250	2.1	6.90	2.54	9.78	2.19	15.47	1.40	-229	
1305	6.69	250	2.8	6.90	2.34	10.45	2.19	15.43	1.40	-240	
1310	6.74	250	3.3	6.89	2.21	10.49	2.19	15.54	1.40	-254	
1315	6.72	250	3.7	6.89	2.15	10.99	2.20	15.56	1.40	-277	
1320	6.69	250	4.1	6.88	2.10	6.08	2.19	15.60	1.40	-278	
1325	6.69	250	4.5	6.88	2.08	5.45	2.19	15.57	1.40	-281	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/04/2013

Time: *(hhmm)* 1325

Total Volume of Water Purged: (gal)

HORIBA	
pH	6.88
Spec. Cond. (mS/cm)	2.19
Turbidity (NTU)	5.45
DO (mg/L)	

HACH TEST KITS	
Alkalinity (mg/L)	720
Carbon Dioxide (mg/L)	694
Ferrous Iron (mg/L)	0
Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	2.08
Temp.(°C)	15.57
ORP (mv)	-281
TDS (g/L)	1.40

(mg/L)	0
Hydrogen Sulfide (mg/L)	4
DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1-350ml 2-350ml		
Hydrogen Acetylene	☑	250ml/min+ 15 min		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-16D

Manual Entry:

Well Diameter: 4 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.09

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: 1200 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1210	7.31	180	0.47	6.18	1.26	25.8	2.285	11.59	1.486	-156.3	Clear with particles
1220	7.34	180	0.95	6.25	0.72	20.5	2.274	11.62	1.481	-278.3	
1230	7.34	180	1.42	6.26	0.21	15.9	2.266	11.65	1.473	-345.0	
1240	7.34	180	1.9	6.26	0.05	12.4	2.257	11.79	1.470	-345.3	
1245	7.34	180	2.13	6.27	0.08	13.6	2.254	11.92	1.468	-345.5	
1250	7.35	180	2.37	6.27	0.10	14.4	2.254	11.94	1.465	-346.1	
1255	7.35	180	2.6	6.27	0.07	15.3	2.254	11.95	1.464	-346.6	
1300	7.35	180	2.84	6.27	0.08	16.1	2.253	11.98	1.462	-346.9	
1305	7.35	180	3.07	6.27	0.03	15.2	2.251	11.99	1.460	-347.4	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: *(hhmm)* 1310

Total Volume of Water Purged: 3.75 (gal)

HORIBA	
pH	6.27
Spec. Cond. (mS/cm)	2.251

HACH TEST KITS	
Alkalinity (mg/L)	300
Carbon Dioxide (mg/L)	362

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	15.2
DO (mg/L)	0.03
Temp.(°C)	11.99
ORP (mv)	-347.4
TDS (g/L)	1.460

Ferrous Iron (mg/L)	0.1
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	7.35

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

VOAs effervescing.

Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: PMW-17D

Manual Entry:

Well Diameter: 4 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.12

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* low flow

Date: 12/05/2013

Time: 0805 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0815	6.33	300	0.8	7.65	4.69	23.5	0.184	15.08	0.120	-182	clear w/ black specs
0825	6.33	300	1.6	8.17	3.86	18.7	0.182	15.22	0.119	-227	
0835	6.33	300	2.4	8.42	3.05	18.7	0.183	15.26	0.119	-252	
0845	6.33	300	3.2	8.44	2.75	14.7	0.187	15.30	0.122	-256	
0850	6.33	300	3.6	8.43	2.70	13.7	0.189	15.31	0.123	-256	
0855	6.33	300	4	8.41	2.66	10.4	0.210	15.31	0.180	-252	
0900	6.33	300	4.4	7.24	2.58	9.18	1.02	15.31	0.686	-316	
0905	6.33	300	4.8	6.88	2.51	3.85	1.89	15.34	1.22	-363	
0910	6.33	300	5.2	6.85	2.48	3.48	1.98	15.36	1.27	-367	
0915	6.33	300	5.6	6.85	2.44	3.48	2.01	15.38	1.28	-369	
0920	6.33	300	6	6.86	2.39	3.87	2.01	15.38	1.28	-368	

Sampling Data

Method: *(i.e. low flow)* low flow

Date: 12/05/2013

Time: *(hhmm)* 0930

Total Volume of Water Purged: 6 (gal)

HORIBA	HACH TEST KITS

pH	6.86
Spec. Cond. (mS/cm)	2.01
Turbidity (NTU)	3.87
DO (mg/L)	2.39
Temp.(^{o}C)	15.38
ORP (mv)	-368
TDS (g/L)	1.28

Alkalinity (mg/L)	760
Carbon Dioxide (mg/L)	590
Ferrous Iron (mg/L)	0
Manganese (mg/L)	5
Hydrogen Sulfide (mg/L)	
DTW (ft)	

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1 - 1,000ml		
Hydrogen Acetylene	☑	15 min @ 300ml/min		

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: RMW-1D

Manual Entry:

Well Diameter: 2 inches

Samplers: C Huey

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.2

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: 0934 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
0944	6.25	200	0.53	7.10	0.99	1.0	1.886	12.72	1.234	23.0	Clear
0954	6.26	200	1.06	6.87	0.38	1.06	2.344	12.77	1.520	-97.6	
1004	6.26	200	1.59	6.89	0.28	1.10	2.066	13.10	1.341	-122.0	
1009	6.26	200	1.85	6.88	0.18	0.74	1.995	13.14	1.297	-132.7	
1014	6.27	200	2.12	6.88	0.15	0.81	1.996	13.02	1.297	-133.9	
1019	6.27	200	2.38	6.87	0.16	0.84	1.995	12.67	1.297	-137.6	
1024	6.27	200	2.65	6.87	0.15	0.8	1.994	12.69	1.296	-138.0	Clear

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/03/2013

Time: *(hhmm)* 1025

Total Volume of Water Purged: 3.25 (gal)

HORIBA		HACH TEST KITS	
pH	6.87	Alkalinity (mg/L)	180
Spec. Cond. (mS/cm)	1.994	Carbon Dioxide (mg/L)	91.4
Turbidity (NTU)	0.8	Ferrous Iron (mg/L)	0.2
DO (mg/L)	0.15	Manganese (mg/L)	0
Temp.(^oC)	12.69	Hydrogen Sulfide (mg/L)	0.5

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic	None	EPA 365.1

ORP (mv)	-138
TDS (g/L)	1.296

DTW (ft)	6.27

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Collected MS/MSD
RMW-1D_120313 MS / MSD
Same time as sample.

		(Field filtered)		
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☐	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: RMW-2D

Manual Entry:

Well Diameter: 2 inches

Samplers: bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.22

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)*: low flow

Date: 12/03/2013

Time: 0950 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1000	8.43	300	0.8	6.27	4.03	10.27	3.57	14.13	2.29	-108	clear
1010	9.30	300	1.6	6.39	2.90	10.43	3.67	14.94	2.35	-216	
1020	9.9	300	2.4	6.23	1.97	24.5	3.47	15.31	2.23	-342	
1030	10.1	300	3.2	6.25	1.94	-50	3.46	15.34	2.20	-347	turbidity-sample oxidized on vial
1040	10.25	300	4	6.29	1.67	26.6	3.25	15.45	2.09	-378	
1050	10.32	300	4.8	6.32	1.55	19.8	3.15	15.51	2.01	-390	
1100	10.35	300	5.6	6.33	1.47	19.6	3.07	15.64	1.97	-396	
1105	10.32	300	6	6.32	1.45	18.1	2.99	15.64	1.92	-401	
1110	10.32	300	6.4	6.32	1.42	16	3.00	15.72	1.92	-403	

Sampling Data

Method: *(i.e. low flow)*: low flow

Date: 12/03/2013

Time: *(hhmm)* 1120

Total Volume of Water Purged: 6.4 (gal)

HORIBA		HACH TEST KITS	
pH	6.32	Alkalinity (mg/L)	
Spec. Cond. (mS/cm)	3.00	Carbon Dioxide (mg/L)	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	16	Ferrous Iron (mg/L)	
DO (mg/L)	1.42	Manganese (mg/L)	
Temp.(^{o}C)	15.72	Hydrogen Sulfide (mg/L)	3
ORP (mv)	-403	DTW (ft)	
TDS (g/L)	1.92	* NOTE * HACH test kits are only required for MNA analysis wells.	

Comments:

sample oxidized, could not perform colorometric analyses

Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☑	1 of 2 110ml 2 of2 160ml		
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: RMW-3D

Manual Entry:

Well Diameter: 2 inches

Samplers: A Kowalczk

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 6.44

Depth to Well Bottom (ft): 27.3

Purging Data

Method: *(i.e. low flow)*: Low flow

Date: 12/04/2013

Time: 11:42 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
11:50	6.56	200	0.5	7.08	0.0	42.8	3.22	14.15	2.05	-350	Strong odor
12:00	6.56	200	1	7.11	0.0	19.3	3.29	14.35	2.10	-367	Strong odor
12:10	6.56	200	1.5	7.12	0.0	3.72	2.38	14.42	1.53	-353	Strong odor
12:20	6.57	200	2	7.10	0.0	2.74	2.13	14.50	1.36	-349	Strong odor
12:30	6.57	200	2.5	7.10	0.0	5.92	2.04	14.54	1.30	-347	Strong odor
12:40	6.56	200	3	7.10	0.0	1.21	1.99	14.53	1.27	-345	Strong odor
12:45	6.57	200	3.5	7.10	0.0	0.50	1.96	14.56	1.26	-345	Strong odor
12:50	6.57	200	4.2	7.10	0.0	0.82	1.94	14.59	1.25	-344	Strong odor

Sampling Data

Method: *(i.e. low flow)*: Low flow

Date: 12/04/2013

Time: *(hhmm)* 12:55

Total Volume of Water Purged: 5 (gal)

HORIBA		HACH TEST KITS	
pH	7.1	Alkalinity (mg/L)	280
Spec. Cond. (mS/cm)	1.94	Carbon Dioxide (mg/L)	72
Turbidity (NTU)	0.82	Ferrous Iron (mg/L)	0.1
DO (mg/L)		Manganese	

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP
Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B

	0.0
Temp.(°C)	14.59
ORP (mv)	-344
TDS (g/L)	1.25

(mg/L)	0
Hydrogen Sulfide (mg/L)	5
DTW (ft)	6.57

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Very strong H2S odor

Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

LOW FLOW WELL SAMPLING RECORD

Site Name: Ekonol Facility

Well ID: RMW-4D

Manual Entry:

Well Diameter: 2 inches

Samplers: Bill simons

WATER VOLUME CALCULATION

= (Total Depth of Well - Depth To Water) x Casing Volume per Foot

Initial Depth to Water (ft): 7.56

Depth to Well Bottom (ft):

Purging Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: 1035 *(hhmm)*

1-inch=0.041	1.5-inch=0.092	2-inch=0.16	3-inch=0.36
4-inch=0.64	6-inch=1.4	8-inch=2.5	10-inch=4

Time (hhmm)	DTW (ft)	Pump Rate (ml/min)	Volume (gal.)	pH	DO (mg/L)	Turbidity (NTU)	Spec Cond (mS/cm)	Temp (^oC)	TDS (g/L)	ORP (mV)	Comments
1045	9.52	150	0.4	7.30	0	10.2	2.10	11.22	1.34	-362	
1105	10.28	150	1.2	7.01	0	0.1	2.15	12.33	1.38	-357	
1115	10.50	150	1.6	6.89	0	0	2.28	12.43	1.46	-356	
1125	10.58	150	2	6.82	0	0	2.39	12.24	1.53	-354	
1135	10.54	150	2.4	6.78	0	0	2.49	12.17	1.59	-352	
1145	10.39	150	2.8	6.75	0	0	2.60	12.18	1.66	-351	
1150	10.31	150	3	6.75	0	0	2.63	12.19	1.69	-350	
1155	10.27	150	3.2	6.74	0	0	2.68	12.26	1.71	-350	
1200	10.27	150	3.4	6.73	0	0	2.71	12.39	1.73	-350	

Sampling Data

Method: *(i.e. low flow)* Low flow

Date: 12/12/2013

Time: *(hhmm)* 1215

Total Volume of Water Purged: 3.4 (gal)

HORIBA	
pH	6.73
Spec. Cond. (mS/cm)	2.71

HACH TEST KITS	
Alkalinity (mg/L)	940
Carbon Dioxide (mg/L)	810

SAMPLE SET

Parameter		Bottle	Pres.	Method
Select VOCs	☑	3-40 mL glass vial	HCl	EPA 8260
MEE	☑	2-40 mL glass vial	HCl	Lab SOP

Turbidity (NTU)	0
DO (mg/L)	0
Temp.(°C)	12.39
ORP (mv)	-350
TDS (g/L)	1.73

Ferrous Iron (mg/L)	0
Manganese (mg/L)	0
Hydrogen Sulfide (mg/L)	4
DTW (ft)	10.27

* NOTE * HACH test kits are only required for MNA analysis wells.

Comments:

Dissolved Inorganics	☑	1-250 mL plastic (Field Filtered)	HNO3	SW6010B
Chloride / Nitrate / Sulfate	☑	2-40 mL glass (Field Filtered)	None	lab specified
Ortho Phosphate	☑	1-250 mL plastic (Field filtered)	None	EPA 365.1
Sulfide	☑	1-250 mL plastic (Field filtered)	NaOH/Zn Acetate	MS-45000-S2-F
Total Organic Carbon	☑	2-40 mL amber glass vial	H3PO4	SW9060
Total Inorganic Carbon	☑	1-120 mL glass amber	None	SW9060
Microbial Census	☐			
Hydrogen Acetylene	☐			

PARSONS

ATTACHMENT C

DATA USABILITY REPORT

DATA USABILITY SUMMARY REPORT

EKONOL FACILITY

Prepared For:

Atlantic Richfield Company

4850 East 49th Street
MBC 3-147
Cuyahoga Heights, Ohio 44125

Prepared By:

PARSONS

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FEBRUARY 2014

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LIST OF ATTACHMENTS

ATTACHMENT A VALIDATED LABORATORY DATA

SECTION 1

DATA USABILITY SUMMARY

Groundwater samples were collected for the 2013 4th Quarter Monitoring from the Ekonol Facility site in Wheatfield, New York from December 2, 2013 through December 13, 2013. Analytical results from these samples were reviewed by Parsons for usability with respect to the following requirements:

- Work Plan,
- NYSDEC Analytical Services Protocol (ASP), and
- USEPA Region II Standard Operating Procedures (SOPs).

The analytical laboratories for this project were Eurofins Laboratories, Inc. (Eurofins), Microseeps, Inc. (Microseeps), and Microbial Insights (MI). Eurofins is approved to conduct project analyses through the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP).

1.1 LABORATORY DATA PACKAGES

The laboratory data package turnaround time, defined as the time from sample receipt by the laboratory to receipt of the analytical data packages by Parsons, was 29-35 days for the Ekonol samples. Comments on specific quality control (QC) and other requirements are discussed in detail in the attached data validation report.

1.2 SAMPLING AND CHAIN-OF-CUSTODY

The samples were collected, shipped under a COC record, and received at the laboratory within one day of sampling. All samples were received intact and in good condition at the laboratories. It was noted that volatile samples OR-4SM, OR-6SM, OR-13SM, OR-14SM, OR-140SM, and OR-15SM and the methane, ethane, and ethene samples OR-6SM and INJ-10D were received and analyzed at Eurofins with a pH of 5-7 which exceeds the pH<2 preservation requirement.

1.3 LABORATORY ANALYTICAL METHODS

The groundwater samples collected from the Ekonol site were analyzed for certain volatile organic compounds (VOCs) including methane, ethane, and ethene; dissolved metals; dissolved chloride; dissolved nitrate; dissolved orthophosphate; dissolved sulfate; dissolved sulfide; total organic carbon (TOC); total inorganic carbon (TIC); total carbon; hydrogen; acetylene; and/or dechlorinating bacteria and functional genes. Summaries of issues concerning these laboratory analyses are presented in Subsections 1.3.1 through 1.3.3. The data qualifications resulting from the data review and statements on the laboratory analytical precision, accuracy, representativeness, completeness, and comparability (PARCC) are discussed for each analytical

method in Section 2. The laboratory data were reviewed and may be qualified with the following validation flags:

"U" - not detected at the value given,

"UJ" - estimated and not detected at the value given,

"J" - estimated at the value given,

"N" - presumptive evidence at the value given, and

"R" - unusable value.

The validated laboratory data were tabulated and are presented in Attachment A.

1.3.1 Volatile Organic Analysis Including Methane, Ethane, and Ethene

The groundwater samples collected from the Ekonol site were analyzed for certain VOCs using the USEPA SW-846 8260C analytical method. In addition, certain groundwater samples were analyzed for methane, ethane, and ethene using the modified USEPA approved RSK-175 analytical method. Certain reported results for these samples were considered estimated based upon instrument calibrations. The reported VOC and methane, ethane, and ethene analytical results were 100% complete (i.e., usable) based upon the groundwater data presented by Eurofins. PARCC requirements were met.

1.3.2 Metals Analysis

Certain groundwater samples collected from the Ekonol site were analyzed for dissolved metals using the USEPA SW-846 6010C analytical method. Certain reported results for the metals samples were considered estimated based upon instrument calibrations and matrix spike recoveries. The reported metals analytical results were 100% complete (i.e., usable) based upon the groundwater data presented by Eurofins. PARCC requirements were met.

1.3.3 Other Parameters

The groundwater samples collected from the Ekonol site were analyzed for dissolved chloride, nitrate, and sulfate using the USEPA 300.0 analytical method; dissolved sulfide using the SM20 4500 analytical method; dissolved orthophosphate using the USEPA 365.3; TOC, TIC, and total carbon using the SM20 5310C analytical method; hydrogen and acetylene using the Microseeps SOP AM20GAX; and/or dechlorinating bacteria and functional genes using the MI SOP. Custody documentation, holding times, laboratory blanks, matrix spike/matrix spike duplicate, laboratory duplicate precision, laboratory control samples, instrument calibrations, quantitation limits, sample result identification, and field duplicate precision were reviewed for compliance. The reported results for these samples did not require qualification resulting from data validation with the exception of the following:

- The TOC results for samples collected on 12/3/13 were considered estimated and qualified “J” based upon poor laboratory duplicate precision for TOC (28%RPD; QC limit 0-20%RPD).

- The positive nitrate and sulfate results for samples collected on 12/4/13 were considered estimated, possibly biased high, and qualified "J" based upon high matrix spike recoveries for nitrate (115%R; QC limit 90-110%R) and sulfate (171%R; QC limit 90-110%R).

- The nitrate results for samples collected on 12/5/13 and 12/10/13 were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" based upon poor laboratory duplicate precision for nitrate (200%RPD, 30%RPD; QC limit 0-20%RPD).

- The nondetected nitrate result for sample INJ-07D was considered estimated, possibly biased low, and qualified "UJ" based upon an exceedance in the 48-hour holding time for analysis by one day.

The reported analytical results for these parameters were 100% complete (i.e., usable) based upon the groundwater data presented by Eurofins, Microseeps, and MI. PARCC requirements were met.

SECTION 2

DATA VALIDATION REPORT

2.1 4TH QUARTER MONITORING EVENT

Data review has been completed for data packages generated by Eurofins containing groundwater samples collected from the Ekonol Facility site during the 4th Quarter Monitoring event. All of these samples were shipped under a COC record and received intact by the analytical laboratory. Analytical results from the project samples were submitted by Eurofins within the following sample delivery groups (SDGs): BPW83, BPW84, BPW85, BPW86, BPW87, BPW88, BPW89, BPW90, and BPW91. Data validation was performed for all samples in accordance with the most current editions of the USEPA Region II SOPs and the NYSDEC ASP for organic and inorganic data review. This data validation and usability report is presented by analysis type. The validated laboratory data are tabulated and presented in Attachment A.

2.1.1 Volatiles Including Methane, Ethane, and Ethene (MEE)

The following items were reviewed for compliancy in the volatile analysis:

- Custody documentation
- Holding times
- Surrogate recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) precision and accuracy
- Laboratory control sample (LCS) recoveries
- Laboratory method blank and trip blank contamination
- Instrument performance
- Initial and continuing calibrations
- Internal standard responses
- Field duplicate precision
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of MS/MSD precision and accuracy and continuing calibrations as discussed below.

MS/MSD Precision and Accuracy

All MS/MSD precision (relative percent difference; RPD) and accuracy (percent recovery; %R) measurements were considered acceptable and within QC limits for designated spiked project samples with the exception of the high MS/MSD accuracy results for ethene (185%R/167%R; QC limit 35-162%R) during the spiked analyses of OR-13SM. Validation qualification was not required for parent sample OR-13SM since ethene was not detected.

Continuing Calibrations

All continuing calibration compounds were within QC limits with a relative response factor (RRF) greater than 0.05 and percent difference (%D) within ±20% with the exception of 1,1,1-trichloroethane (-21%D) in the continuing calibration associated with samples INJ-11D, PMW-9D, and PMW-5D. Therefore, the results for this compound were considered estimated with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

It was noted that cis-1,2-dichloroethene exceeded the instrument calibration ranges in sample PMW-6D. Therefore, the cis-1,2-dichloroethene result for this sample was considered estimated and qualified "J".

Usability

All volatile groundwater sample results including methane, ethane, and ethene were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The volatile groundwater presented were 100% (i.e., usable). The validated volatile laboratory data are tabulated and presented in Attachment A.

It was also noted that many samples were diluted and reanalyzed due to the exceedance in instrument calibration ranges for cis-1,2-dichloroethene, 1,1-dichloroethane, trichloroethene, 1,1,1-trichloroethane, vinyl chloride, methane, and/or ethene. Therefore, the diluted result for these compounds was reported for these samples in the validated laboratory data table in Attachment A.

It was also noted that the trip blank TB-13304-P contained cis-1,2-dichloroethene at a concentration of 3.8 µg/L. The laboratory suspected carry-over and therefore reanalyzed this sample which was nondetect for cis-1,2-dichloroethene. As a result, sample data are not affected.

2.1.2 Dissolved Metals

The following items were reviewed for compliancy in the metals analysis:

- Custody documentation
- Holding times
- Initial and continuing calibration, and preparation blank contamination
- Initial and continuing calibration verifications
- Interference check sample (ICS) recoveries
- Matrix spike recoveries
- Laboratory duplicate precision
- Field duplicate precision
- Laboratory control sample recoveries
- Serial dilutions
- Sample result verification and identification
- Quantitation limits
- Data completeness

These items were considered compliant and acceptable in accordance with the validation protocols with the exception of instrument calibrations and matrix spike recoveries as discussed below.

Instrument Calibrations

All initial and continuing calibration verifications were analyzed at the appropriate frequency with recoveries within QC limits. All instrument calibration reference standards were analyzed at the appropriate frequency with recoveries within the 50-150%R QC limit with the exception of the high standard recovery for dissolved calcium (131.7%R, 140.9%R, 149%R) associated with samples collected on 12/9/13 except OR-15SM, PMW-4S, and PMW-11S, 12/10/13, 12/12/13, and 12/13/13; and the high standard recovery for dissolved magnesium (132.6%R) associated with samples collected on 12/9/13. Positive dissolved calcium and magnesium results were considered estimated, possibly biased high, and qualified "J" for the associated samples.

Matrix Spike Recoveries

All matrix spike recoveries were considered acceptable and within the 75-125%R QC limit for all analytes with the exception of the low matrix spike recoveries for dissolved selenium (70%R, 73%R, 57%R, 59%R) associated with samples collected on 12/3/13 and 12/10/13.

Therefore, the dissolved selenium results were considered estimated, possibly biased low, with positive results qualified "J" and nondetected results qualified "UJ" for the affected samples.

Usability

All metals sample results were considered usable following data validation.

Summary

The quality assurance objectives for measurement data included considerations for precision, accuracy, representativeness, completeness, and comparability. The metals data presented by Eurofins were 100% complete (i.e., usable). The validated groundwater laboratory data are tabulated and presented in Attachment A.

ATTACHMENT A

VALIDATED LABORATORY DATA

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	INJ-01 INJ-01_120913 7307236 LANCASTERLABS BPW87 WATER 12/9/2013 13:50 1/29/2014	INJ-02 INJ-02_121113 7310788 LANCASTERLABS BPW89 WATER 12/11/2013 16:25 1/29/2014	INJ-04 INJ-04_121213 7312344 LANCASTERLABS BPW90 WATER 12/12/2013 10:20 1/29/2014	INJ-05 INJ-05_121213 7312343 LANCASTERLABS BPW90 WATER 12/12/2013 11:10 1/29/2014	INJ-07D INJ-07D_120513 7304205 LANCASTERLABS BPW85 Water 12/5/2013 1/29/2014	INJ-07D INJ-107D_120513 7304206 LANCASTERLABS BPW85 WATER 12/5/2013 12:01 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	200 U	80 U	80 U	80 U	80 U	80 U
75-34-3	1,1-DICHLOROETHANE	ug/l	250 U	100 U	120 J	110 J	100 U	100 U
75-35-4	1,1-DICHLOROETHENE	ug/l	200 U	310 J	84 J	130 J	900	850
75-00-3	CHLOROETHANE	ug/l	250 U	100 U	100 U	100 U	100 U	100 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	140000	160000	120000	140000	370000	360000
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	200 U	95 J	80 U	270 J	850	840
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	200 U	240 J	130 J	160 J	280 J	260 J
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	3200	8600	1100	30000	210000	220000
75-01-4	VINYL CHLORIDE	ug/l	4300	5800	2500	1900	2500	2400
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	620	440	520	350	340	330
74-84-0	ETHANE	ug/l	30	51	26	50	20	19
74-82-8	METHANE	ug/l	3000	1000	2300	4000	740	680
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l	378 J	358	323 J	365 J	306	303
7439-89-6	IRON	mg/l	1.2	22.4	0.792	0.633	25	24.6
7439-95-4	MAGNESIUM	mg/l	173 J	116	146	226	66.6	66.2
7439-96-5	MANGANESE	mg/l	0.844	0.846	0.768	0.469	0.775	0.769
9/7/7440	POTASSIUM	mg/l	7.59	6.2	6.65	7.29	6.37	6.3
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U
7440-23-5	SODIUM	mg/l	207	160	202	182	119	120
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l	760				397	
TOC	TOTAL ORGANIC CARBON	mg/l	571	690	546	434	251	272
TIC	TOTAL INORGANIC CARBON	mg/l	189				146	
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	349	258	388	351	337	346
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 UJ	0.25 UJ
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.6 U	0.6 U	0.6 U	0.6 U	0.03 U	
14808-79-8	SULFATE (AS SO4)	mg/l	126	42.2	13.4	333	161	158
18496-25-8	SULFIDE	mg/l	171	58	117	202	0.66	
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL					87500	
DHBt	DHBt	cells/mL					3630	
DHC	DHC	cells/mL					274000	
TCE	TCE	cells/mL					269000	
VCR	VCR	cells/mL					13600	
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l					13	
1333-74-0	Hydrogen	nM					100	

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	INJ-08D INJ-08D_120913 7307240 LANCASTERLABS BPW87 WATER 12/9/2013 15:25 1/29/2014	INJ-09D INJ-09D_120513 7304212 LANCASTERLABS BPW85 Water 12/5/2013 1/29/2014	INJ-10D INJ-10D_120513 012KL-17 LANCASTERLABS BPW85 Bubble Strip 12/5/2013 1/29/2014	INJ-11D INJ-11D_121013 7310772 LANCASTERLABS BPW88 WATER 12/10/2013 14:00 1/29/2014	INJ-12D INJ-12D_120913 7307241 LANCASTERLABS BPW87 WATER 12/9/2013 17:00 1/29/2014	INJ-13D INJ-13D_121013 7310764 LANCASTERLABS BPW88 WATER 12/10/2013 11:55 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	180	150 J	9100	80 UJ	80 U	47 J
75-34-3	1,1-DICHLOROETHANE	ug/l	610	140 J	1500	100 U	100 U	60 J
75-35-4	1,1-DICHLOROETHENE	ug/l	8.3 J	190 J	170	280 J	170 J	100
75-00-3	CHLOROETHANE	ug/l	5 U	50 U	10 U	100 U	100 U	20 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	7600	110000	8000	110000	100000	79000
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	4 U	80 J	25 J	520	380 J	100
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	21 J	73 J	22 J	110 J	110 J	90 J
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	14 J	12000	18 J	160000	42000	17000
75-01-4	VINYL CHLORIDE	ug/l	2300	5900	840	2800	9200	9600
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	5100	730	190	170	1800	1500
74-84-0	ETHANE	ug/l	24	12	12	16	30	44
74-82-8	METHANE	ug/l	19000	3500	4100	2300	4200	3800
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l	389 J	244	255	219 J	264 J	261 J
7439-89-6	IRON	mg/l	31.8	12.3	1.93	3.11	12.2	3.26
7439-95-4	MAGNESIUM	mg/l	114 J	43.3	55	75.5	55.6 J	56.6
7439-96-5	MANGANESE	mg/l	1.28	0.629	0.387	0.353	0.472	0.445
9/7/7440	POTASSIUM	mg/l	23.1	3.67	3.68	6.83	4.88	5.67
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 U	0.0084 U	0.0084 UJ	0.0084 U	0.0084 UJ
7440-23-5	SODIUM	mg/l	148	137	108	180	130	144
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l	730	381	323	301	416	368
TOC	TOTAL ORGANIC CARBON	mg/l	545	321	280	202	308	292
TIC	TOTAL INORGANIC CARBON	mg/l	185	60.6	42.5	99.9	109	75.9
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	241	238	146	365	277	275
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 UJ	0.25 UJ	0.25 UJ	0.25 U	0.25 UJ
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.03 U	0.048 J	0.6 U	0.03 U	0.28	0.32
14808-79-8	SULFATE (AS SO4)	mg/l	3.1 J	20.8	7.8	84.3	65.2	60.9
18496-25-8	SULFIDE	mg/l	2.8	11.3	91.8	45.2	22.8	20.7
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL		537000	22000			
DHBt	DHBt	cells/mL		13800	7700			
DHC	DHC	cells/mL		974000	212000			
TCE	TCE	cells/mL		361000	115000			
VCR	VCR	cells/mL		40400	30600			
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l		1.3	0.5 U			
1333-74-0	Hydrogen	nM		3	55			

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	INJ-13D INJ-130D_121013 7310765 LANCASTERLABS BPW88 WATER 12/10/2013 12:01 1/29/2014	MW- 7D MW-7D_121313 7313758 LANCASTERLABS BPW91 WATER 12/13/2013 9:25 1/29/2014	MW-10D MW-10D_121113 7310781 LANCASTERLABS BPW89 WATER 12/11/2013 16:15 1/29/2014	MW-11D MW-11D_120313 7300399 LANCASTERLABS BPW83 WATER 12/3/2013 16:30 1/29/2014	MW-12D MW-12D_121013 7310773 LANCASTERLABS BPW88 WATER 12/10/2013 15:50 1/29/2014	MW-13D MW-13D_121013 7310771 LANCASTERLABS BPW88 WATER 12/10/2013 13:15 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	50 J	2100	150	480	0.8 U	0.8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	64 J	1900	21	66	1 U	4.9 J
75-35-4	1,1-DICHLOROETHENE	ug/l	110	190 J	9.8	6.6	0.8 U	0.8 U
75-00-3	CHLOROETHANE	ug/l	20 U	100 U	1 U	1.9 J	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	78000	69000	770	170	0.8 U	180
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	110	84 J	0.8 U	0.8 U	0.8 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	98 J	110 J	2.4 J	1.5 J	0.8 U	0.8 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	17000	530	2.2 J	7.9	1 U	1.3 J
75-01-4	VINYL CHLORIDE	ug/l	7800	1100	160	140	1 U	81
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	1500	280	5.6	13	1 U	21
74-84-0	ETHANE	ug/l	37	17	16	4.6 J	41	9.7
74-82-8	METHANE	ug/l	3700	2000	240	110	210	310
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U		0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0068 U	0.0068 U		0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l	265 J	272 J	295		578 J	241 J
7439-89-6	IRON	mg/l	3.34	0.043 U	0.097 J		0.043 U	0.072 J
7439-95-4	MAGNESIUM	mg/l	57.3	135	84.3		120	114
7439-96-5	MANGANESE	mg/l	0.448	0.328	0.116		0.0193	0.046
9/7/7440	POTASSIUM	mg/l	5.77	5.98	3.12		3.29	3.27
7782-49-2	SELENIUM	mg/l	0.0084 UJ	0.0084 U	0.0084 U		0.0084 UJ	0.0084 UJ
7440-23-5	SODIUM	mg/l	150	124	64.3		49.4	88.5
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l		373				
TOC	TOTAL ORGANIC CARBON	mg/l	288	192	2.1		1.4	4.1
TIC	TOTAL INORGANIC CARBON	mg/l		181				
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	268	202	85.5		98.8	147
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 UJ	0.25 U	0.25 U		0.25 UJ	0.25 UJ
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l		0.6 U	0.03 U		0.03 U	0.03 U
14808-79-8	SULFATE (AS SO4)	mg/l	62.1	22.2	761		1250	673
18496-25-8	SULFIDE	mg/l		208	6.1		41.5	4.9
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL						
DHBt	DHBt	cells/mL						
DHC	DHC	cells/mL						
TCE	TCE	cells/mL						
VCR	VCR	cells/mL						
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-14D MW-14D_120613 7305512 LANCASTERLABS BPW86 WATER 12/6/2013 9:10 1/29/2014	MW-15D MW-15D_120413 7301952 LANCASTERLABS BPW84 WATER 12/4/2013 16:30 1/29/2014	MW-16D MW-16D_121013 7310775 LANCASTERLABS BPW88 WATER 12/10/2013 16:05 1/29/2014	MW-17D MW-17D_120313 7300400 LANCASTERLABS BPW83 WATER 12/3/2013 16:50 1/29/2014	MW-18D MW-18B_120413 7301951 LANCASTERLABS BPW84 WATER 12/4/2013 15:45 1/29/2014	MW-19D MW-19D_120613 7305513 LANCASTERLABS BPW86 WATER 12/6/2013 10:50 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	0.8 U	99	0.8 U	83	0.8 U	0.8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	1 U	46	9.8	29	1 U	1 U
75-35-4	1,1-DICHLOROETHENE	ug/l	0.8 U	4.3 J	1.7 J	1.2 J	0.8 U	0.8 U
75-00-3	CHLOROETHANE	ug/l	1 U	1 U	1 U	3.6 J	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	0.8 U	420	300	33	1.3 J	17
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	0.8 U	4.2 J	1.5 J	0.8 U	0.8 U	0.8 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U	3.2 J	1.2 J	2.2 J	1 U	1 U
75-01-4	VINYL CHLORIDE	ug/l	1 U	350	200	39	1 U	1 U
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	1 U	4.9 J	31	4.3 J	1 U	1 U
74-84-0	ETHANE	ug/l	9.8	1 U	9.7	3.4 J	1 U	1 U
74-82-8	METHANE	ug/l	52	42	370	72	15	22
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U		0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0068 U	0.0068 U		0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l	295	176	388 J		320	539
7439-89-6	IRON	mg/l	0.043 U	0.214 J	0.151 J		0.043 U	2.19
7439-95-4	MAGNESIUM	mg/l	154	84.5	142		82.2	598
7439-96-5	MANGANESE	mg/l	0.251	0.09	0.0605		0.0469	0.112
9/7/7440	POTASSIUM	mg/l	3.41	4.41	4.46		2.51	5.51
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 U	0.0084 UJ		0.0084 U	0.0084 U
7440-23-5	SODIUM	mg/l	86.7	76.8	113		88.6	143
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l						
TOC	TOTAL ORGANIC CARBON	mg/l	3.5	3.7	4.6		4.3	10.9
TIC	TOTAL INORGANIC CARBON	mg/l						
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	102	135	257		138	263
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 U	0.25 UJ		0.25 U	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.03 U	0.03 U	0.03 U		0.03 U	0.03 U
14808-79-8	SULFATE (AS SO4)	mg/l	1030	530 J	1060		860 J	2890
18496-25-8	SULFIDE	mg/l	1.8	4.8	3		0.52	0.054 U
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL						
DHBt	DHBt	cells/mL						
DHC	DHC	cells/mL						
TCE	TCE	cells/mL						
VCR	VCR	cells/mL						
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-20D MW-20D_121013 7310770 LANCASTERLABS BPW88 WATER 12/10/2013 9:35 1/29/2014	MW-21D MW-21D_121013 7310766 LANCASTERLABS BPW88 WATER 12/10/2013 10:00 1/29/2014	MW- 1S MW-1S_120313 7300390 LANCASTERLABS BPW83 WATER 12/3/2013 8:45 1/29/2014	MW- 2S MW-2S_120513 7304203 LANCASTERLABS BPW85 Water 12/5/2013 1/29/2014	MW- 3S MW-3S_120313 7300394 LANCASTERLABS BPW83 WATER 12/3/2013 8:50 1/29/2014	MW- 4S MW-4S_121213 7312338 LANCASTERLABS BPW90 WATER 12/12/2013 15:25 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	1600	130	0.8 U	40 U	0.8 U	0.8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	150	29	1 U	50 U	1 U	2.3 J
75-35-4	1,1-DICHLOROETHENE	ug/l	23	5.6	1.6 J	540	0.8 U	2.9 J
75-00-3	CHLOROETHANE	ug/l	2 U	1 U	1 U	50 U	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	630	680	170	190000	0.8 U	660
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	1.7 J	0.8 U	0.8 U	40 U	0.8 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	4.5 J	3.4 J	7.4	1200	0.8 U	20
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	9.1 J	4.2 J	7.8	7100	1 U	27
75-01-4	VINYL CHLORIDE	ug/l	380	550	8.9	14000	1 U	810
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	31	19	1 U	96	1 U	230
74-84-0	ETHANE	ug/l	2 J	1.5 J	1 U	11	1 U	16
74-82-8	METHANE	ug/l	260	64	22	240	3.4 J	3600
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l			0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l			0.0068 U	0.0087 J	0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l			285	166	226	431 J
7439-89-6	IRON	mg/l			0.961	0.183 J	0.151 J	0.587
7439-95-4	MAGNESIUM	mg/l			364	96.5	152	606
7439-96-5	MANGANESE	mg/l			0.428	0.518	0.172	0.783
9/7/7440	POTASSIUM	mg/l			4.19	1.81	26	7.71
7782-49-2	SELENIUM	mg/l			0.0084 UJ	0.0084 U	0.0084 UJ	0.0084 U
7440-23-5	SODIUM	mg/l			69.7	202	3470	197
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l			68.3	114	54.3	181
TOC	TOTAL ORGANIC CARBON	mg/l			2 J	5	5.1 J	13.6
TIC	TOTAL INORGANIC CARBON	mg/l			66.3	109	49.3	167
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l			49.4	728	5750	203
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l			0.25 U	0.25 UJ	0.45 J	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l			0.03 U	0.03 U	0.03 U	0.03 U
14808-79-8	SULFATE (AS SO4)	mg/l			1840	562	699	3050
18496-25-8	SULFIDE	mg/l			0.054 U	0.054 U	0.054 U	26.1
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL				375000		
DHBt	DHBt	cells/mL				26.9		
DHC	DHC	cells/mL				832000		
TCE	TCE	cells/mL				611		
VCR	VCR	cells/mL				240		
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW- 5S MW-5S_120313 7300397 LANCASTERLABS BPW83 WATER 12/3/2013 12:25 1/29/2014	MW- 5S MW-105S_120313 7300386 LANCASTERLABS BPW83 WATER 12/3/2013 12:01 1/29/2014	MW- 6S MW-6S_121113 7310789 LANCASTERLABS BPW89 WATER 12/10/2013 17:05 1/29/2014	MW- 7S MW-7S_120313 7300392 LANCASTERLABS BPW83 WATER 12/3/2013 8:30 1/29/2014	MW- 8S MW-8S_121013 7310767 LANCASTERLABS BPW88 WATER 12/10/2013 9:45 1/29/2014	MW- 9S MW-9S_121113 7310785 LANCASTERLABS BPW89 WATER 12/11/2013 11:35 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	0.8 U	0.8 U	80 U	0.8 U	0.8 U	0.82 J
75-34-3	1,1-DICHLOROETHANE	ug/l	1 U	1 U	100 U	1 U	1 U	2.4 J
75-35-4	1,1-DICHLOROETHENE	ug/l	0.8 U	0.8 U	80 U	0.8 U	0.8 U	0.89 J
75-00-3	CHLOROETHANE	ug/l	1 U	1 U	100 U	1 U	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	1.3 J	1.4 J	80 U	0.98 J	0.8 U	270
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	0.8 U	0.8 U	80 U	0.8 U	0.8 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	0.8 U	0.8 U	80 U	0.8 U	0.8 U	2.1 J
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U	1 U	100 U	1 U	1 U	1 U
75-01-4	VINYL CHLORIDE	ug/l	21	21	170 J	1 U	1 U	180
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	1 U	1 U	4.7 J	1 U	1 U	12
74-84-0	ETHANE	ug/l	1.3 J	1.3 J	45	1 U	1 U	1 U
74-82-8	METHANE	ug/l	22	18	160	3 U	3 U	25
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U		0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0068 U		0.0068 U	0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l	259	256		819	262 J	230
7439-89-6	IRON	mg/l	0.679	0.687		0.235 J	0.043 U	0.896
7439-95-4	MAGNESIUM	mg/l	121	120		513	276	288
7439-96-5	MANGANESE	mg/l	0.172	0.169		0.36	0.115	0.4
9/7/7440	POTASSIUM	mg/l	2.97	2.84		6.22	5.57	2.78
7782-49-2	SELENIUM	mg/l	0.0084 UJ	0.0084 UJ		0.0084 UJ	0.0084 UJ	0.0084 U
7440-23-5	SODIUM	mg/l	88.2	87.3		287	671	85.8
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l				88.3		
TOC	TOTAL ORGANIC CARBON	mg/l	2.6 J	2.8 J		2.9 J	3.6	15.4
TIC	TOTAL INORGANIC CARBON	mg/l				85.4		
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	152	150		1630	996	127
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 U		0.25 U	0.48 J	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.03 U			0.03 U	0.03 U	0.03 U
14808-79-8	SULFATE (AS SO4)	mg/l	767	751		1880	1360	1740
18496-25-8	SULFIDE	mg/l	0.054 U			0.054 U	0.054 U	1.3
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL						
DHBt	DHBt	cells/mL						
DHC	DHC	cells/mL						
TCE	TCE	cells/mL						
VCR	VCR	cells/mL						
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	MW-10S MW-10S_120313 7300398 LANCASTERLABS BPW83 WATER 12/3/2013 15:10 1/29/2014	MW-11S MW-11S_120313 7300395 LANCASTERLABS BPW83 WATER 12/3/2013 12:05 1/29/2014	MW-12S MW-12S_121313 7313757 LANCASTERLABS BPW91 WATER 12/13/2013 10:20 1/29/2014	OR- 3SM OR-3SM_120613 7305511 LANCASTERLABS BPW86 WATER 12/6/2013 9:05 1/29/2014	OR- 4SM OR-4SM_120613 7305516 LANCASTERLABS BPW86 WATER 12/6/2013 12:30 1/29/2014	OR- 5SM OR-5SM_120513 7304210 LANCASTERLABS BPW85 Bubble Strip 12/5/2013 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	0.8 U	11	27	0.8 U	0.8 U	0.8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	1 U	58	38	1 U	1 U	1.2 J
75-35-4	1,1-DICHLOROETHENE	ug/l	0.8 U	1.3 J	4.8 J	0.8 U	0.8 U	0.8 U
75-00-3	CHLOROETHANE	ug/l	1 U	1.3 J	2 U	1 U	1 U	1 J
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	280	140	1500	0.8 U	0.8 U	1.3 J
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	0.8 U	0.8 U	1.6 U	0.8 U	0.8 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	3.6 J	8.7	29	0.8 U	0.8 U	0.8 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U	73	2100	1 U	2.3 J	1 U
75-01-4	VINYL CHLORIDE	ug/l	130	70	300	1 U	1 U	2.3 J
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	48	120	450	1 U	1 U	6.6
74-84-0	ETHANE	ug/l	2.5 J	2.8 J	34	180	1.9 J	180
74-82-8	METHANE	ug/l	250	1200	7800	15000	14000	16000
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l				0.104 J	0.0828 U	0.0949 J
7440-38-2	ARSENIC	mg/l				0.0079 J	0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l				480	521	319
7439-89-6	IRON	mg/l				25.8	40.1	10.7
7439-95-4	MAGNESIUM	mg/l				132	136	61
7439-96-5	MANGANESE	mg/l				2.79	6.34	1.82
9/7/7440	POTASSIUM	mg/l				42.3	37.8	15.7
7782-49-2	SELENIUM	mg/l				0.0084 U	0.0084 U	0.0084 U
7440-23-5	SODIUM	mg/l				839	137	541
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l				415	596	295
TOC	TOTAL ORGANIC CARBON	mg/l				66.1	71.9	29.8
TIC	TOTAL INORGANIC CARBON	mg/l				348	524	265
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l				1620	203	1040
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l				0.25 U	0.25 U	0.25 UJ
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l				0.03 U	0.03 U	0.03 U
14808-79-8	SULFATE (AS SO4)	mg/l				1.5 U	11.9	9.4
18496-25-8	SULFIDE	mg/l				0.38	0.23	1.1
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL						1570
DHBt	DHBt	cells/mL						78.6
DHC	DHC	cells/mL						4390
TCE	TCE	cells/mL						798
VCR	VCR	cells/mL						325
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						0.5 U
1333-74-0	Hydrogen	nM						1.2

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	OR- 6SM OR-6SM_120513 7304214 LANCASTERLABS BPW85 Bubble Strip 12/5/2013 1/29/2014	OR- 9SM OR-9SM_121013 7310763 LANCASTERLABS BPW88 WATER 12/10/2013 12:15 1/29/2014	OR-10SM OR-10SM_121013 7310774 LANCASTERLABS BPW88 WATER 12/10/2013 16:25 1/29/2014	OR-13SM OR-13SM_120413 7301948 LANCASTERLABS BPW84 Bubble Strip 12/4/2013 15:40 1/29/2014	OR-14SM OR-14SM_120413 7301947 LANCASTERLABS BPW84 Bubble Strip 12/4/2013 1/29/2014	OR-14SM OR-140SM_120413 7301953 LANCASTERLABS BPW84 WATER 12/4/2013 12:01 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	0.8 U	0.8 U	0.8 U	4 U	4 U	0.8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	2.3 J	1 U	1 U	5 U	5 U	1 U
75-35-4	1,1-DICHLOROETHENE	ug/l	0.8 U	0.8 U	0.8 U	4 U	4 U	0.8 U
75-00-3	CHLOROETHANE	ug/l	3.1 J	1.6 J	2.5 J	6.7 J	5 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	800	2.1 J	0.8 U	4 U	4 U	0.8 U
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	0.8 U	0.8 U	0.8 U	4 U	4 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	32	0.8 U	0.8 U	4 U	4 U	0.8 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U	1 U	1 U	5 U	5 U	1 U
75-01-4	VINYL CHLORIDE	ug/l	180	5.3	1 U	5 U	5 U	1.9 J
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	74	9.8	1 U	1 U	6.7	7.5
74-84-0	ETHANE	ug/l	88	25	15	3.1 J	8.1	8.4
74-82-8	METHANE	ug/l	12000	22000	17000	12000	12000	11000
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0181 J	0.0068 U	0.0068 U	0.0082 J	0.0113 J	0.0124 J
7440-70-2	CALCIUM	mg/l	613	133 J	275 J	426	480	481
7439-89-6	IRON	mg/l	7.06	0.043 U	4.63	23.1	3.63	3.49
7439-95-4	MAGNESIUM	mg/l	194	30	96.7	159	257	259
7439-96-5	MANGANESE	mg/l	5.13	0.283	1.37	4.66	4.15	4.23
9/7/7440	POTASSIUM	mg/l	36.7	7.06	10.2	35.3	85.2	85.8
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 UJ	0.0084 UJ	0.0084 U	0.0084 U	0.0084 U
7440-23-5	SODIUM	mg/l	412	149	308	370	151	153
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l	544	124	298	507	618	
TOC	TOTAL ORGANIC CARBON	mg/l	62.9	10.1	28.1	56.9	83.1	82.6
TIC	TOTAL INORGANIC CARBON	mg/l	481	114	270	450	535	
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	914	198	499	648	208	209
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 UJ	0.25 UJ	0.25 UJ	0.25 U	0.25 U	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.68	0.21	0.03 U	0.046 J	3.2	
14808-79-8	SULFATE (AS SO4)	mg/l	43.5	32.2	73.3	2.5 J	265 J	273 J
18496-25-8	SULFIDE	mg/l	6.3	37.6	6.7	1.6	33.5	
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL	3160			1.4	1630	
DHBt	DHBt	cells/mL	324			297	916	
DHC	DHC	cells/mL	55600			526	7800	
TCE	TCE	cells/mL	46100			22.4	202	
VCR	VCR	cells/mL	11200			42.8	1370	
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l	0.5 U			0.5 U	0.5 U	
1333-74-0	Hydrogen	nM	1.2			1.2	2.1	

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	OR-15SM OR-15SM_120913 7307235 LANCASTERLABS BPW87 WATER 12/9/2013 10:40 1/29/2014	OR-18SM OR-18SM_120313 7300396 LANCASTERLABS BPW83 WATER 12/3/2013 14:30 1/29/2014	PMW- 1D PMW-1D_121113 7310787 LANCASTERLABS BPW89 WATER 12/11/2013 9:45 1/29/2014	PMW- 2D PMW-2D_121213 7312340 LANCASTERLABS BPW90 Water 12/12/2013 1/29/2014	PMW- 3D PMW-3D_120913 7307239 LANCASTERLABS BPW87 WATER 12/9/2013 14:45 1/29/2014	PMW-4D PMW-4D_120313 7300393 LANCASTERLABS BPW83 WATER 12/3/2013 14:05 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	8 U	0.8 U	2.2 J	80 U	40 U	160 U
75-34-3	1,1-DICHLOROETHANE	ug/l	10 U	1 U	7.3 J	100 U	50 U	200 U
75-35-4	1,1-DICHLOROETHENE	ug/l	8 U	0.8 U	6.2 J	140 J	51 J	160 U
75-00-3	CHLOROETHANE	ug/l	10 U	1 U	2.5 U	100 U	50 U	200 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	8 U	16	3300	110000	40000	74000
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	8 U	0.8 U	2 U	140 J	40 U	160 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	8 U	1.5 J	15	180 J	56 J	160 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	10 U	1 U	4.9 J	22000	6300	730 J
75-01-4	VINYL CHLORIDE	ug/l	10 U	33	3100	4600	630	2100
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	1 U	52	1500	240	76	360
74-84-0	ETHANE	ug/l	2.2 J	15	21	12	26	27
74-82-8	METHANE	ug/l	11000	17000	8200	2800	2200	6600
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l	674	201	31.5	343 J	436 J	360
7439-89-6	IRON	mg/l	72.7	0.043 U	11.8	0.043 U	0.043 U	0.043 U
7439-95-4	MAGNESIUM	mg/l	118 J	54.1	3.34	178	144 J	188
7439-96-5	MANGANESE	mg/l	9.62	0.537	0.292	0.27	0.219	0.373
9/7/7440	POTASSIUM	mg/l	138	12.2	6.44	11.3	7.02	9.67
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 UJ	0.0084 U	0.0084 U	0.0084 U	0.0084 UJ
7440-23-5	SODIUM	mg/l	186	54.9	49.8	272	134	174
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l	824	180	139	455	331	501
TOC	TOTAL ORGANIC CARBON	mg/l	170	21.2 J	146	286	189	301 J
TIC	TOTAL INORGANIC CARBON	mg/l	654	159	5 U	169	142	200
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	215	50.1	50.2	489	239	297
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.03 U	0.75 U	0.03 U	0.6 U	0.6 U	1.5 U
14808-79-8	SULFATE (AS SO4)	mg/l	1.5 U	121	12.7	300	617	284
18496-25-8	SULFIDE	mg/l	0.054 U	70.8	1.2	159	216	230
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL				26100		
DHBt	DHBt	cells/mL				1760		
DHC	DHC	cells/mL				38800		
TCE	TCE	cells/mL				14300		
VCR	VCR	cells/mL				2850		
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	PMW- 5D PMW-5D_121113 7310783 LANCASTERLABS BPW89 WATER 12/11/2013 14:15 1/29/2014	PMW- 6D PMW-6D_121313 7313759 LANCASTERLABS BPW91 WATER 12/13/2013 8:00 1/29/2014	PMW- 7D PMW-7D_121213 7312339 LANCASTERLABS BPW90 WATER 12/12/2013 15:15 1/29/2014	PMW- 8D PMW-8D_120613 7305515 LANCASTERLABS BPW86 WATER 12/6/2013 12:15 1/29/2014	PMW- 9D PMW-9D_121113 7310782 LANCASTERLABS BPW89 WATER 12/11/2013 15:05 1/29/2014	PMW-10D PMW-10D_121213 7312345 LANCASTERLABS BPW90 WATER 12/12/2013 9:50 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	80 UJ	2.6 J	89	40 U	80 UJ	160 J
75-34-3	1,1-DICHLOROETHANE	ug/l	140 J	60	270	50 U	100 U	240 J
75-35-4	1,1-DICHLOROETHENE	ug/l	210 J	40	49 J	72 J	420 J	170 J
75-00-3	CHLOROETHANE	ug/l	100 U	2 U	10 U	50 U	100 U	100 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	140000	30000 J	40000	50000	160000	87000
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	250 J	4.6 J	42 J	80 J	650	80 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	150 J	70	66	95 J	210 J	91 J
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	21000	3600	490	19000	75000	3100
75-01-4	VINYL CHLORIDE	ug/l	4900	1900	1100	2700	31000	17000
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	500	1000	300	310	1900	2000
74-84-0	ETHANE	ug/l	30	29	27	24	62	18
74-82-8	METHANE	ug/l	2600	4000	6200	3700	4400	5600
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0069 J	0.0068 U	0.0072 J	0.0068 U	0.0076 J	0.0068 U
7440-70-2	CALCIUM	mg/l	343	311 J	313 J	385	321	296 J
7439-89-6	IRON	mg/l	0.043 U	0.043 U	0.043 U	0.043 U	30.9	63.2
7439-95-4	MAGNESIUM	mg/l	182	107	336	365	83.4	63.9
7439-96-5	MANGANESE	mg/l	0.386	0.428	0.288	0.415	0.703	0.977
9/7/7440	POTASSIUM	mg/l	9.21	7.58	31.4	7.28	8.34	4.31
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U
7440-23-5	SODIUM	mg/l	215	110	216	201	185	118
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l		371	291		442	581
TOC	TOTAL ORGANIC CARBON	mg/l	307	271	72.9	194	381	452
TIC	TOTAL INORGANIC CARBON	mg/l		101	218		60.4	129
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	226	218	328	255	437	230
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.6 U	0.6 U	0.6 U	0.3 U	0.03 U	0.03 U
14808-79-8	SULFATE (AS SO4)	mg/l	150	254	927	1340	102	19.1
18496-25-8	SULFIDE	mg/l	161	132	228	126	8.1	11
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL		122000				
DHBt	DHBt	cells/mL		1390				
DHC	DHC	cells/mL		971000				
TCE	TCE	cells/mL		641000				
VCR	VCR	cells/mL		137000				
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	PMW-11D PMW-11D_120413 7301946 LANCASTERLABS BPW84 Bubble Strip 12/4/2013 1/29/2014	PMW-12D PMW-12D_121213 7312337 LANCASTERLABS BPW90 WATER 12/12/2013 16:10 1/29/2014	PMW-13D PMW-13D_121213 7312346 LANCASTERLABS BPW90 WATER 12/12/2013 17:15 1/29/2014	PMW-14D PMW-14D_121313 7313760 LANCASTERLABS BPW91 WATER 12/13/2013 11:00 1/29/2014	PMW-15D PMW-15D_120413 7301943 LANCASTERLABS BPW84 Bubble Strip 12/4/2013 1/29/2014	PMW-16D PMW-16D_121213 7312341 LANCASTERLABS BPW90 WATER 12/12/2013 13:10 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	15000	80 U	210 J	2100	3400	15000
75-34-3	1,1-DICHLOROETHANE	ug/l	360	160 J	400 J	1300	13000	1900
75-35-4	1,1-DICHLOROETHENE	ug/l	170 J	470 J	700	140 J	150	320
75-00-3	CHLOROETHANE	ug/l	50 U	100 U	100 U	100 U	100	20 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	3300	200000	230000	57000	1800	52000
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	130 J	80 U	850	80 U	140	430
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	40 U	160 J	100 J	87 J	73 J	60 J
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	650	5100	130000	2500	840	15000
75-01-4	VINYL CHLORIDE	ug/l	370	40000	25000	9100	9700	810
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	16	2200	640	4100	260	140
74-84-0	ETHANE	ug/l	5.5	35	57	37	980	9.9
74-82-8	METHANE	ug/l	190	2700	1600	22000	820	700
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0069 J	0.0068 U	0.0068 U	0.0078 J	0.0068 U
7440-70-2	CALCIUM	mg/l	243	417 J	362 J	327 J	285	276 J
7439-89-6	IRON	mg/l	0.163 J	158	49.5	38.3	1.27	0.043 U
7439-95-4	MAGNESIUM	mg/l	77.9	100	90.5	105	88.5	88.4
7439-96-5	MANGANESE	mg/l	0.209	1.96	1.09	1.53	0.932	0.338
9/7/7440	POTASSIUM	mg/l	3.01	12.9	12.8	8.85	4.7	3.85
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U
7440-23-5	SODIUM	mg/l	70.5	171	140	159	118	97.3
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l	85.9	897	741	692	354	374
TOC	TOTAL ORGANIC CARBON	mg/l	11.6	799	578	600	223	214
TIC	TOTAL INORGANIC CARBON	mg/l	74.3	98.8	164	92.3	131	159
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	109	391	307	260	255	159
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.03 U	0.03 U	0.03 U	0.03 U	0.13	0.6 U
14808-79-8	SULFATE (AS SO4)	mg/l	532 J	14.1	73.9	8.7	3.7 J	32.7
18496-25-8	SULFIDE	mg/l	22.1	2.3	23.5	24.5	124	182
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL	107000				68100	
DHBt	DHBt	cells/mL	1720				86900	
DHC	DHC	cells/mL	280000				228000	
TCE	TCE	cells/mL	277000				210000	
VCR	VCR	cells/mL	1950				443	
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l	0.5 U				0.5 U	
1333-74-0	Hydrogen	nM	31				28	

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	PMW-17D PMW-17D_120513 7304204 LANCASTERLABS BPW85 Bubble Strip 12/5/2013 1/29/2014	PMW- 1S PMW-1S_120513 7304207 LANCASTERLABS BPW85 Bubble Strip 12/5/2013 1/29/2014	PMW- 2S PMW-2S_120513 7304211 LANCASTERLABS BPW85 Bubble Strip 12/5/2013 1/29/2014	PMW- 3S PMW-3S_120513 7304213 LANCASTERLABS BPW85 Bubble Strip 12/5/2013 1/29/2014	PMW- 4S PMW-4S_120913 7307237 LANCASTERLABS BPW87 WATER 12/9/2013 13:35 1/29/2014	PMW- 5S PMW-5S_120613 7305514 LANCASTERLABS BPW86 WATER 12/6/2013 11:15 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	15000	0.8 U	0.8 U	4 U	8 U	16 U
75-34-3	1,1-DICHLOROETHANE	ug/l	1500	6.2	2.8 J	11 J	14 J	20 U
75-35-4	1,1-DICHLOROETHENE	ug/l	180	5.8	0.8 U	25 J	25 J	56 J
75-00-3	CHLOROETHANE	ug/l	10 U	3.7 J	1.3 J	5 U	10 U	20 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	10000	720	220	13000	12000	27000
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	78	0.8 U	0.8 U	5 J	8 U	16 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	26 J	27	13	290	320	580
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1100	4.4 J	1 U	86	140	1700
75-01-4	VINYL CHLORIDE	ug/l	370	650	190	3100	750	5100
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	35	500	240	900	48	250
74-84-0	ETHANE	ug/l	12	1000	420	310	130	45
74-82-8	METHANE	ug/l	600	20000	16000	9800	7200	3100
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0068 U	0.0085 J	0.0084 J	0.0082 J	0.0068 U
7440-70-2	CALCIUM	mg/l	257	148	263	462	630	414
7439-89-6	IRON	mg/l	0.043 U	0.206 J	5.6	0.301 J	1.07	0.0705 J
7439-95-4	MAGNESIUM	mg/l	86.3	21.1	47.4	166	302 J	217
7439-96-5	MANGANESE	mg/l	0.246	0.41	1.36	2.3	1.11	1.46
9/7/7440	POTASSIUM	mg/l	4.42	12.8	15	7.99	4.51	3.64
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U
7440-23-5	SODIUM	mg/l	88.5	538	608	430	466	125
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l	260	69	223	245	108	128
TOC	TOTAL ORGANIC CARBON	mg/l	103	6	26.1	22.3	8.4	8.2
TIC	TOTAL INORGANIC CARBON	mg/l	157	63	197	223	100	120
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	127	934	1020	815	1460	324
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 UJ	0.25 UJ	0.25 UJ	0.25 UJ	0.25 U	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.6 U	0.03 U	0.03 U	0.39	0.03 U	0.03 U
14808-79-8	SULFATE (AS SO4)	mg/l	49.1	8.3	1.6 J	670	1530	1120
18496-25-8	SULFIDE	mg/l	200	9.3	1.5	18.3	0.054 U	0.054 U
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL	45300	239000	8220	89000		
DHBt	DHBt	cells/mL	739	7810	227	306		
DHC	DHC	cells/mL	80700	5970000	51400	414000		
TCE	TCE	cells/mL	44400	443000	4140	138000		
VCR	VCR	cells/mL	1400	904000	7200	44300		
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l	0.5 U	0.5 U	0.5 U	0.5 U		
1333-74-0	Hydrogen	nM	52	0.87	0.78	0.96		

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	PMW- 6S PMW-6S_120913 7307234 LANCASTERLABS BPW87 WATER 12/9/2013 11:35 1/29/2014	PMW- 7S PMW-7S_121113 7310784 LANCASTERLABS BPW89 WATER 12/11/2013 12:20 1/29/2014	PMW- 8S PMW-8S_121113 7310786 LANCASTERLABS BPW89 WATER 12/11/2013 10:20 1/29/2014	PMW- 9S PMW-9S_120413 7301944 LANCASTERLABS BPW84 Bubble Strip 12/4/2013 1/29/2014	PMW-10S PMW-10S_120413 7301942 LANCASTERLABS BPW84 Bubble Strip 12/4/2013 1/29/2014	PMW-11S PMW-11S_120913 7307238 LANCASTERLABS BPW87 WATER 12/9/2013 12:05 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	1.6 U	0.8 U	15	8 U	0.8 U	8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	4.1 J	83	14	10 U	1 U	38 J
75-35-4	1,1-DICHLOROETHENE	ug/l	6.6 J	0.8 U	0.8 U	8 U	0.8 U	27 J
75-00-3	CHLOROETHANE	ug/l	2 U	1 U	1.7 J	10 U	1 U	10 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	2400	4.9 J	39	2100	0.8 U	12000
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	1.6 U	0.8 U	0.8 U	8 U	0.8 U	8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	82	0.8 U	3.8 J	18 J	0.8 U	180
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	4.5 J	1 U	4.1 J	3900	1 U	170
75-01-4	VINYL CHLORIDE	ug/l	990	1.2 J	50	30 J	4.2 J	2100
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	370	1 U	310	1.7 J	1 U	210
74-84-0	ETHANE	ug/l	72	1 U	24	3.5 J	1.3 J	30
74-82-8	METHANE	ug/l	11000	3.9 J	12000	43	50	3500
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U	0.0828 U
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0076 J	0.0068 U	0.0068 U	0.0068 U	0.0068 U
7440-70-2	CALCIUM	mg/l	415 J	349	321	367	417	592
7439-89-6	IRON	mg/l	27.5	2.76	0.953	0.0943 J	0.043 U	0.768
7439-95-4	MAGNESIUM	mg/l	135 J	468	234	396	509	312 J
7439-96-5	MANGANESE	mg/l	4.43	0.18	0.849	0.321	0.283	0.615
9/7/7440	POTASSIUM	mg/l	23.7	5.7	9.33	9.07	5.2	4.32
7782-49-2	SELENIUM	mg/l	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U	0.0084 U
7440-23-5	SODIUM	mg/l	148	147	178	635	136	183
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l	464	118	187	95.3	108	152
TOC	TOTAL ORGANIC CARBON	mg/l	45.7	5.3	16.3	5	5.3	4.3
TIC	TOTAL INORGANIC CARBON	mg/l	419	113	170	90.3	103	147
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	227	304	307	1090	151	421
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 U	0.25 U	0.64 J	0.25 U	0.25 U
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.03 U	0.15	0.17	0.03 U	0.03 U	0.03 U
14808-79-8	SULFATE (AS SO4)	mg/l	137	2120	1100	1990 J	2550 J	1850
18496-25-8	SULFIDE	mg/l	0.32	0.054 U	16.5	0.054 U	0.054 U	0.054 U
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL				113	0.8	
DHBt	DHBt	cells/mL				37.5	4 J	
DHC	DHC	cells/mL				328	6.3	
TCE	TCE	cells/mL				298	4.7	
VCR	VCR	cells/mL				1.1	0.1 J	
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l				0.5 U	0.5 U	
1333-74-0	Hydrogen	nM				0.95	0.99	

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	RMW-1D RMW-1D_120313 7300387 LANCASTERLABS BPW83 WATER 12/3/2013 10:25 1/29/2014	RMW-2D RMW-2D_120313 7300391 LANCASTERLABS BPW83 WATER 12/3/2013 11:20 1/29/2014	RMW-3D RMW-3D_120413 7301945 LANCASTERLABS BPW84 WATER 12/4/2013 12:55 1/29/2014	RMW-4D RMW-4D_121213 7312342 LANCASTERLABS BPW90 WATER 12/12/2013 12:15 1/29/2014	FIELDQC TB-13304A_11/20/2013 7300384 LANCASTERLABS BPW83 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-B_11/20/2013 7300385 LANCASTERLABS BPW83 WATER 11/20/2013 0:00 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	230	400 U	7000	21 J	0.8 U	0.8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	6.8	500 U	96 J	120	1 U	1 U
75-35-4	1,1-DICHLOROETHENE	ug/l	3.4 J	610 J	71 J	75 J	0.8 U	0.8 U
75-00-3	CHLOROETHANE	ug/l	1 U	500 U	20 U	20 U	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	270	260000	1600	61000	0.8 U	0.8 U
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	0.8 U	1500 J	16 U	20 J	0.8 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	1 J	400 U	16 U	87 J	0.8 U	0.8 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	11	320000	45 J	2500	1 U	1 U
75-01-4	VINYL CHLORIDE	ug/l	5.7	1200 J	33 J	1400	1 U	1 U
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l	1 U	200	1.5 J	390		
74-84-0	ETHANE	ug/l	12	34	14	36		
74-82-8	METHANE	ug/l	64	470	70	4100		
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l	0.0828 U	0.0828 U	0.0828 U	0.0828 U		
7440-38-2	ARSENIC	mg/l	0.0068 U	0.0068 U	0.0068 U	0.0068 U		
7440-70-2	CALCIUM	mg/l	278	379	253	359 J		
7439-89-6	IRON	mg/l	0.299 J	16.3	0.0701 J	0.043 U		
7439-95-4	MAGNESIUM	mg/l	90.2	85.5	76.8	173		
7439-96-5	MANGANESE	mg/l	0.147	0.698	0.154	0.321		
9/7/7440	POTASSIUM	mg/l	3.14	5.89	3	7.24		
7782-49-2	SELENIUM	mg/l	0.0084 UJ	0.0084 UJ	0.0084 U	0.0084 U		
7440-23-5	SODIUM	mg/l	69.2	149	91.1	160		
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l		656	79.1	414		
TOC	TOTAL ORGANIC CARBON	mg/l	2.6 J	508 J	5.8	208		
TIC	TOTAL INORGANIC CARBON	mg/l		148	73.2	205		
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l	105	344	154	281		
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l	0.25 U	0.25 U	0.25 U	0.25 U		
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l	0.03 U	0.07 J	0.32	0.6 U		
14808-79-8	SULFATE (AS SO4)	mg/l	716	177	590 J	313		
18496-25-8	SULFIDE	mg/l	4.7	25.9	22.3	250		
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL		23700				
DHBt	DHBt	cells/mL		5320				
DHC	DHC	cells/mL		354000				
TCE	TCE	cells/mL		97700				
VCR	VCR	cells/mL		15100				
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	FIELDQC TB-13304-C_11/20/2013 7301940 LANCASTERLABS BPW84 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-D_11/20/2013 7301941 LANCASTERLABS BPW84 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-E_11/20/2013 7304201 LANCASTERLABS BPW85 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-F_11/20/2013 7304202 LANCASTERLABS BPW85 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-G 7305510 LANCASTERLABS BPW86 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-H 7307232 LANCASTERLABS BPW87 WATER 11/20/2013 0:00 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
75-35-4	1,1-DICHLOROETHENE	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
75-00-3	CHLOROETHANE	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
75-01-4	VINYL CHLORIDE	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l						
74-84-0	ETHANE	ug/l						
74-82-8	METHANE	ug/l						
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l						
7440-38-2	ARSENIC	mg/l						
7440-70-2	CALCIUM	mg/l						
7439-89-6	IRON	mg/l						
7439-95-4	MAGNESIUM	mg/l						
7439-96-5	MANGANESE	mg/l						
9/7/7440	POTASSIUM	mg/l						
7782-49-2	SELENIUM	mg/l						
7440-23-5	SODIUM	mg/l						
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l						
TOC	TOTAL ORGANIC CARBON	mg/l						
TIC	TOTAL INORGANIC CARBON	mg/l						
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l						
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l						
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l						
14808-79-8	SULFATE (AS SO4)	mg/l						
18496-25-8	SULFIDE	mg/l						
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL						
DHBt	DHBt	cells/mL						
DHC	DHC	cells/mL						
TCE	TCE	cells/mL						
VCR	VCR	cells/mL						
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

Ekonol Facility Validated Groundwater Analytical Results Wheatfield, New York 4th Quarter 2013 (December)		Location ID: Sample ID: Lab Sample Id: Source: SDG: Matrix: Sampled: Validated:	FIELDQC TB-13304-I 7307233 LANCASTERLABS BPW87 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-J 7310761 LANCASTERLABS BPW88 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-K 7310762 LANCASTERLABS BPW88 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-L 7310779 LANCASTERLABS BPW89 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-M 7310780 LANCASTERLABS BPW89 WATER 11/20/2013 0:00 1/29/2014	FIELDQC TB-13304-P 7313756 LANCASTERLABS BPW91 WATER 11/20/2013 0:00 1/29/2014
CAS NO.	COMPOUND	UNITS:						
	VOLATILES							
71-55-6	1,1,1-TRICHLOROETHANE	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
75-34-3	1,1-DICHLOROETHANE	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
75-35-4	1,1-DICHLOROETHENE	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
75-00-3	CHLOROETHANE	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
156-59-2	CIS-1,2-DICHLOROETHYLENE	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	3.8 J
127-18-4	TETRACHLOROETHYLENE(PCE)	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
156-60-5	TRANS-1,2-DICHLOROETHENE	ug/l	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U	0.8 U
79-01-6	TRICHLOROETHYLENE (TCE)	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
75-01-4	VINYL CHLORIDE	ug/l	1 U	1 U	1 U	1 U	1 U	1 U
	RSK 175 VOLATILES							
74-85-1	ETHENE	ug/l						
74-84-0	ETHANE	ug/l						
74-82-8	METHANE	ug/l						
	DISSOLVED METALS							
7429-90-5	ALUMINUM	mg/l						
7440-38-2	ARSENIC	mg/l						
7440-70-2	CALCIUM	mg/l						
7439-89-6	IRON	mg/l						
7439-95-4	MAGNESIUM	mg/l						
7439-96-5	MANGANESE	mg/l						
9/7/7440	POTASSIUM	mg/l						
7782-49-2	SELENIUM	mg/l						
7440-23-5	SODIUM	mg/l						
	WET CHEMISTRY							
7440-44-0	TOTAL CARBON	mg/l						
TOC	TOTAL ORGANIC CARBON	mg/l						
TIC	TOTAL INORGANIC CARBON	mg/l						
	DISSOLVED INORGANICS							
16887-00-6	CHLORIDE (AS CL)	mg/l						
14797-55-8	NITROGEN, NITRATE (AS N)	mg/l						
7723-14-0	PHOSPHORUS, DISSOLVED (AS P)	mg/l						
14808-79-8	SULFATE (AS SO4)	mg/l						
18496-25-8	SULFIDE	mg/l						
	MICRO GENE ANALYSIS							
BVC	BVC	cells/mL						
DHBt	DHBt	cells/mL						
DHC	DHC	cells/mL						
TCE	TCE	cells/mL						
VCR	VCR	cells/mL						
	MICROSEEPS DATA							
74-86-2	Acetylene	ug/l						
1333-74-0	Hydrogen	nM						

ATTACHMENT D

SITE ANALYTICAL DATA – ALL SITE WELLS

EKONOL FACILITY

Well Id: **INJ-01**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	840 J	100000	23000	5000 U	5000 U	1600 J	7	17	78	5000 U	5000 U	5000 U	6.46	1480								
07/2008	5000 UJ	2600 J	150000 J	380 J	5000 UJ	1600 J	9.2 J	52 J	100 J	5000 UJ	5000 UJ	5000 UJ	202 J	1150 J								
12/2008	100 J	14000	120000 J	1100 J	220 J	3500	6.4	12	66	1300 U	62 J	1300 U	441	260								
10/2009	110 J	19000	99000	300 J	260 J	3500	11	110	440	1000 U	72 J	1000 U	365	991	0.0394 J	247						
07/2010	80 U	9900	83000	170 J	120 J	3700	40	330	1000	80 U	100 U	100 U	545	130	4.72	169						
06/2011	600 J	90000	99000	180 J	290 J	3000	12	93	170	160 U	200 U	200 U	51	1390	0.0308 J	117						
08/2011	390 J	44000	110000	240 J	220 J	2900	22	260	720	500 U	500 U	500 U	239	270	0.0878 J	272						
11/2011	660	54000	87000	130 J	200 J	3500	21	540	2800	110 J	500 U	500 U	139	464 J	0.127 J	190						
03/2012	470	29000	48000	88 J	110	3000	11	100	1800	87 J	37 J	100 U	32.4	1790 J	0.2 U	203						
06/2012	570	51000	34000	52 J	82 J	1100	13	76	1300	1000	83 J	50 U	25.6	261 J	0.04 J	148						
09/2012	450	32000	49000	80 J	120	5700	89	440	4300	290	58 J	20 U	79.5	54.2	0.0484 J	121						
12/2012	140 J	3600	100000	100 J	90 J	2800	28	310	1800	86 J	100 U	100 UJ	1640	498	0.812	170						
04/2013	84 J	5300	150000	220 J	110 J	3600	13	190	1700	80 U	140 J	100 U	1060	304	1.32	169						
07/2013	87 J	4100	120000	150 J	91 J	3900	18	370	1600	80 UJ	120 J	100 U	780	202	20.5	61.8						
10/2013	400 U	3900	140000	400 U	400 U	4000	33	610	2100	400 U	500 U	500 U	715	66.7	4.47	128						
12/2013	200 U	3200	140000	200 U	200 U	4300	30	620	3000	200 U	250 U	250 U	571	126	1.2	171						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-02**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2010	40 U	50 U	78000	240 J	170 J	29000	24 U	340	6300	40 U	50 U	50 U	121	3.5 J	0.24	62.7						
08/2011	250 U	93 J	90000	110 J	170 J	19000	31	1300	400	250 U	250 U	250 U	194	2.5 J	11.4	0.68						
03/2012	5.9 J	190	4900	8.4 J	18 J	1500	6.5	140	350	25 U	25 U	25 U	92.5	3.1 J	1.84	93.1						
06/2012	16 U	38 J	14000	26 J	51 J	4200	18 J	360 J	1200	16 UJ	20 U	20 U	97.8	1.7 J	1.32 J	24.1						
09/2012	66	5700	13000	26 J	110	2100	20	220	1400	9.4 J	10 U	10 U	50.1	2.6 J	0.339	5.8						
12/2012	93 J	3600	54000	2700	430 J	8800	17	110	1500	95 J	230 J	100 U	1940	8.4	425	9.5						
04/2013	190 J	26000	200000	220 J	160 U	2500	13	140	1400	160 U	200 U	200 U	1170	270	13.4	135						
07/2013	80 U	6200	140000	230 J	180 J	2400	45	490	1200	80 UJ	100 U	100 U	1040	5 J	241	5.5						
10/2013	160 U	270 J	190000	240 J	340 J	3800	86	690	1500	160 U	200 U	200 U	962	1.5 U	338	0.36						
12/2013	95 J	8600	160000	240 J	310 J	5800	51	440	1000	80 U	100 U	100 U	690	42.2	22.4	58						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-04**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
10/2009	240 J	20000	110000	290 J	290 J	3200	10	70	300	1000 U	120 J	1000 U	454	506	0.0381 J	221						
07/2010	150 J	17000	130000	260 J	170 J	6200	19	260	1400	80 U	120 J	100 U	469	73.3	0.442	155						
08/2011	870	74000	84000	130 J	200 J	1300	23	200	660	250 J	500 U	500 U	259	146	1.52	257						
03/2012	720	40000	48000	83 J	77 J	1300	20	250	3300	170 J	96 J	250 U	34.9	2790	0.256	254						
06/2012	780	54000	69000	89 J	160 J	2200	21	370	2600	730 J	130 J	100 U	56.5	166 J	0.0333 U	176						
09/2012	710	30000	57000	85 J	130 J	3400	60	400	3300	390	78 J	50 U	41.2	11.4 J	0.0333 U	149						
12/2012	170 J	3300 J	77000 J	80 UJ	80 UJ	780 J	13	340	3500	120 J	100 J	100 UJ	782	680	0.923	176						
04/2013	160 U	2400	110000	160 U	160 U	2500	26	440	3700	160 U	200 U	200 U	302	833	0.365	133						
07/2013	80 U	950	120000	110 J	86 J	2700	29	760	1900	80 U	150 J	100 U	709	62.3	5.78	140						
10/2013	80 U	100 U	65000	80 U	80 U	5000	74	830	2700	80 U	100 U	100 U	1150	1.5 U	479	0.17						
12/2013	80 U	1100	120000	130 J	84 J	2500	26	520	2300	80 U	120 J	100 U	546	13.4	0.792	117						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-05**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2010	800 J	270000	87000	190 J	210 J	1100	89	1400	69	160 U	200 U	200 U	258	1250	2.24	146						
08/2011	600	110000	99000	180 J	250 J	2300	80	800	360	500 U	500 U	500 U		460	0.0959 J	217						
09/2011													292									
03/2012	730	61000	48000	92	100	1600	18	140	1900	170	55	10 U	60.7	1250	0.2 U	161						
06/2012	650	45000	27000	42 J	62 J	290	15	120	730	1100 J	76 J	50 U	26.8	214 J	0.0333 U	156						
09/2012	360 J	27000	75000	80 U	230 J	830	150	1000	1500	220 J	100 U	100 U	124	23.7	2.52	61.3						
12/2012	230 J	17000	92000	80 U	80 U	1100	22	180	2500	80 U	100 U	100 U	1250	373	0.539	273						
04/2013	200 J	27000	110000	160 U	160 U	1700	28	290	4400	160 U	200 U	200 U	566	500	0.528	211						
07/2013	230 J	29000	99000	160 U	160 U	1800	20	160	3000	160 U	200 U	200 U	477	205	0.582	210						
10/2013	230 J	29000	130000	160 U	160 U	1400	54	390	2400	160 U	200 U	200 U	465	211	0.728	234						
12/2013	270 J	30000	140000	160 J	130 J	1900	50	350	4000	80 U	110 J	100 U	434	333	0.633	202						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-07D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	1400 J	580000	7900	400 U	400 U	500 U	11	7.7	73	400 UJ	500 U	500 U	47.4	971	1.6	2.2	6.8					
08/2011	1500	270000	47000	500 U	170 J	140 J	9.4	32	45	620	500 U	500 U	286	562	15.3	26.2	6.06					
11/2011	1600	240000	63000	500 U	260 J	500 U	5.5	7.9	34	1400	500 U	500 U	149	317	0.32	98.6	6.47	6.0E+01	2.2E+04	2.3E+02	3.5E+02	1.6E+02
03/2012	2200 J	380000	100000	2500 U	2500 U	2500 U	12	16	110	530 J	2500 U	2500 U	117	413 J	0.931	40.3	6.33	1.1E+04	3.4E+04	2.9E+04	2.1E+03	1.5E+04
06/2012	2300	290000	56000	64 J	200	150	13	20	170	870	53 J	20 U	62.9	407	0.0333 U	97.6	6.56	2.8E+02	5.6E+03	1.6E+03	3.4E+01	2.2E+02
09/2012	2400	250000	64000	80 U	220 J	250 J	13	24	220	760	100 U	100 U	66.8	85.5 J	0.0333 U	161	7.03	2.2E+03	1.1E+04	2.4E+03	2.9E+03	1.6E+03
11/2012	2400	350000	61000	110 J	210 J	200 J				500	100 U	100 U	70.8									
12/2012	1200	330000	75000	84 J	100 J	260 J	8.8	18	140	230 J	100 U	100 U	941	92.4	45.7	1.5	6.27	1.1E+01	1.1E+01	3.0E+04	5.7E+04	1.1E+04
04/2013	1200	340000	280000	1900 J	460	1300	40	340	470 J	48	71	1 U	935	293	72.1	0.17	6.7	1.4E+05	3.1E+05	2.3E+06	2.2E+06	3.6E+04
07/2013	1600	360000	380000	240 J	870	3800	22	290	370	120 J	100 U	100 U	703	327	44.3	0.47	6.64	4.6E+04	2.4E+04	4.8E+04	3.8E+04	4.5E+02
10/2013	1200 J	300000	280000	800 U	800 U	5500	37	430	590	800 U	1000 U	1000 U	424	341	37.8	1.1	6.38	5.0E+04	1.4E+04	1.7E+05	1.7E+05	2.2E+03
12/2013	840	220000	360000	260 J	850	2400	20	340	740	80 U	100 U	100 U	251	158	25	0.66	6.26	8.8E+04	3.6E+03	2.7E+05	2.7E+05	1.4E+04

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-08D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	63	2100	8200	14 J	73	210 J	3 J	11	49	1900	100	5 U	4.7	843	6.7	0.33	6.91					
08/2011	11 J	990	9100	21 J	25	82	5.6	3.5 J	35	1200	58	25 U	283	422	0.702	62.6	6.11					
11/2011	32	340	4100	9.2 J	22 J	79	2.4 J	2.4 J	63	2300	82	25 U	301	321	1.16	45	6.38					
03/2012	10 J	220	1700	4.2 J	21 J	65	5 U	5 U	180	2400	110	25 U	996	437	0.109 J	93.8	6.24					
06/2012	4 U	49	5500	6.8 J	12 J	250	8	6.1	15000	42	41	5 U	190	18.7	20.2	0.13 J	7.62					
09/2012	8.6	1400	2400	7.7	27	350	3.6 J	19	2700	760	99	1 U	46.5	121 J	0.0333 U	106	6.97					
12/2012	8 U	27 J	9500	27 J	19 J	180	5.6	12	7300	190	28 J	10 UJ	299	1.6 J	4.83	12.1	6.21					
04/2013	4 U	6.3 J	9800	12 J	15 J	2300	6.7	63	16000	110	200	5 U	463	7.3 J	3.36	55.3	7.47					
07/2013	8 U	10 U	3500	16 J	8 U	9400	23	450	20000	40 J	320	10 U	509	1.5 U	132	0.069 J	7.12					
10/2013	16 U	45 J	16000	16 U	16 U	2900	16	2300	7500	340	510	20 U	544	6.8	5.66	90.9	6.26					
12/2013	4 U	14 J	7600	21 J	8.3 J	2300	24	5100	19000	180	610	5 U	545	3.1 J	31.8	2.8	6.1					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-09D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	370	22000	10000	16 U	68 J	190	2.4 J	11	52	790 J	65 J	20 U	3.7	835	0.628	1.3	6.55					
08/2011	30 J	910	14000	30 J	52	36 J	2 J	2.2 J	16	3800	56	50 U	251	354	1.66	66	5.96					
11/2011	8.6 J	130	8700	29 J	25 J	100	15	7	38	360	150	50 U	353	2.3 J	90.4	5.8	6.05	3.6E+01	2.6E+03	6.0E+01	1.2E+02	5.0E+02
03/2012	10 U	14	1600	4.2 J	4 J	17	1.3 J	1.2 J	75	22	8 J	10 U	31.3	5 U	13.3	0.16 U	7.45	7.2E+02	6.9E+02	4.5E+02	1.1E+02	2.7E+01
06/2012	1.6 U	25	550	1.6 U	1.7 J	21	1 U	1 U	97	73 J	3.9 J	2 U	26.7	20 J	0.539	3.9	7.67	1.8E+02	1.2E+02	4.8E+02	4.1E+00	7.8E+01
09/2012	0.99 J	32	250	0.8 U	0.98 J	56	1 U	1 U	370	24	1.8 J	1 U	10.9	3 J	0.195 J	2.4	8.03	3.9E+03	2.6E+03	3.5E+03	2.3E+01	1.1E+03
11/2012													51.5									
12/2012	270	29000	90000	51 J	43 J	340	13	27	140	190	80 J	20 U	1320	21.9	23.6	21.5	5.91	2.8E+02	1.1E+02	2.7E+04	5.3E+04	1.2E+04
04/2013	110	12000	81000	58	69	720	18	80	6000 J	170	100	10 U	709	15.9	67.5	13.5	6.27	2.8E+03	6.9E+03	1.7E+04	1.1E+04	1.3E+01
07/2013	80 U	3700	120000	110 J	140 J	13000	27	680	3600	150 J	210 J	100 U	679	31.9	67.1	5.1	6.34	2.9E+05	2.6E+03	4.3E+05	2.0E+05	3.1E+03
10/2013	400 U	20000	250000	400 U	400 U	11000	23	1100	1600	400 U	500 U	500 U	784	44.2	15.3	27.5	6.03	1.9E+05	9.7E+03	1.0E+06	1.7E+06	1.8E+04
12/2013	80 J	12000	110000	73 J	190 J	5900	12	730	3500	150 J	140 J	50 U	321	20.8	12.3	11.3	6.29	5.4E+05	1.4E+04	9.7E+05	3.6E+05	4.0E+04

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-10D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	140	1800	2900	8 U	130	110	1 U	3.4 J	23	12000	100	10 U	4.4	706 J	0.399	0.4	7.69					
08/2011	18 J	120	2600	8.7 J	41 J	73	5 U	2.4 J	13 J	5900	67	50 U	55.7	569	0.688	20.3	6.81					
11/2011	5.2	59	1200	6	15	51	3.9 J	2.4 J	82	1100	60	5 U	61.6	93	2.64	30.2	7.08	2.1E+01	4.9E+03	1.8E+01	1.4E+00	6.9E+00
03/2012	3.1 J	18	450	2.1 J	9.7	110	1.2 J	2.9 J	47	620	30	5 U	15.1	228	0.0172 J	18.1	6.97	8.4E+03	7.8E+03	2.1E+04	5.3E+04	1.2E+03
06/2012	5.8	23	710	4.1 J	16	210	1.1 J	23	85	1400 J	59	1 U	17.7	615 J	1.36	23.9	7.54	1.3E+03	2.5E+03	1.1E+04	4.9E+03	9.7E+03
09/2012	4.9 J	14	560	3.2 J	17	190	1.8 J	40	960	1000	55	1 U	17.4	425	0.0727 J	19.7	8.03	1.4E+03	1.2E+03	3.6E+04	1.2E+04	4.2E+04
11/2012													17.3									
12/2012	11 J	220	8000	16 J	19 J	220	2 J	6.3	170	590	86	5 U	152	53.6	0.0585 J	162	6.51	7.9E+01	3.6E+01	2.9E+02	2.6E+02	9.1E+01
04/2013	16	47	9900	19	33	1200	19	430	3500	400	280	2 U	629	4.1 J	28.2	51.2	6.03	2.4E+05	1.4E+04	3.7E+06	5.4E+06	3.4E+04
07/2013	8 U	18 J	4500	11 J	18 J	1100	24	890	6100	760	400	10 U	553	71	36.3	70.5	6.4	3.8E+04	2.4E+04	6.5E+05	2.6E+05	1.4E+04
10/2013	17 J	13 J	5200	16 J	150	770	15	470	9100	9900	1700	5 U	218	3.2 J	2.45	77.6	6.22	1.3E+04	3.9E+03	4.7E+05	1.8E+05	8.8E+04
12/2013	25 J	18 J	8000	22 J	170	840	12	190	4100	9100	1500	10 U	280	7.8	1.93	91.8	6.55	2.2E+04	7.7E+03	2.1E+05	1.2E+05	3.1E+04

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-11D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
04/2012	33 J	2500	8200	19 J	35 J	270	5 U	16	53	970	82	50 U	3.8	475 J	0.295	15.3						
06/2012	27	3500	14000	29	51	390	1.8 J	22	98	980 J	98	5 U	4.1	1070 J	0.149 J	17.1	6.87	1.2E+04	2.4E+02	2.1E+04	6.0E+02	5.2E+03
09/2012	8.6 J	500	14000	33 J	68	1300	11	120	370	1000	130	10 U	3.5	812 J	0.161 J	23.9	6.73					
11/2012													7.9									
12/2012	590	200000	83000	250 J	140 J	2700	83	460	2700	170 J	100 U	100 UJ	652	337	4.67	49.1	6.18					
04/2013	360	72000	170000	170	290	1700	62	420	970 J	170	78	10 U	270	325	0.457	206	6.68					
07/2013	310 J	40000	180000	180 J	320 J	3500	70	440	2500	160 U	200 U	200 U	265	334	0.0838 J	183	6.47					
10/2013	80 U	5200	72000	99 J	140 J	2200	13	85	1700	80 U	100 U	100 U	165	195	0.194 J	97	6.28					
12/2013	520	160000	110000	110 J	280 J	2800	16	170	2300	80 UJ	100 U	100 U	202	84.3	3.11	45.2	6.44					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-12D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
03/2012																	6.25					
04/2012	43 J	3900	63000	57 J	100 J	1100	23	280	2200	110 J	250 U	250 U	17.4	251 J	0.0427 J	48.7						
06/2012	200	19000	17000	34 J	56 J	510	49	210	4100	540	31 J	20 U	17.5	267	0.0506 J	128	7.38					
09/2012	17	820	760	1.6 U	3.1 J	38	1 U	1.5 J	23	1.6 U	2 U	2 U	8.6	24.7	0.142 J	29.2	9.06					
11/2012													4.8									
12/2012	220 J	14000	120000	160 U	160 U	710 J	15	55	390	160 UJ	200 UJ	200 U	1420	86.5	8.7	76.8	5.89					
04/2013	130	10000	94000	110	80	2100	92	990	5900 J	120	70	10 U	659	36.1	18.2	31.3	6.34					
07/2013	320 J	31000	130000	160 U	160 U	2800	63	1200	4400	160 U	200 U	200 U	658	92.3	17.6	9.7	5.84					
10/2013	330 J	34000	210000	190 J	310 J	9200	85	2200	5100	160 U	200 U	200 U	668	176	43.3	80.8	6.06					
12/2013	380 J	42000	100000	110 J	170 J	9200	30	1800	4200	80 U	100 U	100 U	308	65.2	12.2	22.8	6.47					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **INJ-13D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
04/2012	340 J	47000	44000	40 J	92 J	260	1.6 J	21	57	710	79 J	250 U	15.6	820 J	0.0398 J	25						
06/2012	810	140000	26000	80 U	140 J	320 J	15	91	260	810	100 U	100 U	30	566	0.0333 U	108	6.8					
09/2012	990	100000	21000	80 U	80 U	640	13	63	310	680	100 U	100 U	13.9	703	0.0333 U	72	6.79					
11/2012													7.7									
12/2012	160 U	9800	130000	320 J	160 U	1600	34 J	130 J	1200	160 UJ	200 UJ	200 U	1420	57.2	4.78	64.4	6.02					
04/2013	120	15000	110000	130	100	1800	100	680	4500 J	110	79	10 U	767	80.4	1.97	65	6.47					
07/2013	290 J	33000	120000	140 J	130 J	2300	69	1400	5100	80 U	100 U	100 U	608	135	2.13	79.7	6.03					
10/2013	160 U	8300	86000	160 U	160 U	9400	52	5200	8500	160 U	200 U	200 U	530	133	2.2	60.7	6.07					
12/2013	110	17000	78000	98 J	100	7800	37	1500	3700	50 J	60 J	20 U	288	62.1	3.34	20.7	6.41					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 1S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	19	150	6.9	2.2 J	19	1.1 J	1.7 J	55	0.8 U	1 U		2.2	2140 J	1.98							
05/2009	5.0 U	7.1	150	6.0	1.6 J	16	1.0 U	1.0 U	29	5.0 U	5.0 U	5.0 U	3.0	2130	1.180	1.0 U						
07/2010	0.8 U	2.7 J	100 J	4.7 J	1.2 J	10	1 U	1 U	20	0.8 U	1 U	1 U	2.9	2350 J	2.44	0.16 J						
06/2011	0.8 U	2 J	88	3.6 J	0.8 U	5.3	1 U	1 U	15 J	0.8 U	1 U	1 U	3	2830	1.8	0.076 J	7					
08/2011	5 U	1.1 J	96	3.9 J	5 U	7.5	5 U	5 U	14 J	5 U	5 U	5 U	3.2	2750	1.56	0.093 J	7.03					
11/2011	5 U	3.5 J	120	5.1	1.2 J	14	5 U	5 U	25	5 U	5 U	5 U	1.3	2110	1.77	0.25						
03/2012	5 U	4.4 J	120	4.5 J	1.1 J	5.2	5 U	5 U	14 J	5 U	5 U	5 U	2.8	2420 J	0.421	0.24	6.12					
06/2012	0.8 U	14	170	7.4	2 J	15	1 U	1 U	32	0.8 U	1 U	1 U	2.6	2260	1.14	0.054 U						
09/2012	0.8 U	1.5 J	110	4.4 J	0.84 J	7.8	1 U	1.2 J	29	0.8 U	1 U	1 U	2.7	2120	1.02	0.054 U	7.21					
12/2012	0.8 U	17	170	7.2	2.1 J	15	1 U	1.2 J	37	0.8 U	1 U	1 UJ	1.1	2130	2.55	0.054 U	6.7					
04/2013	0.8 U	8.4	140	5.6	1.3 J	7.7	1 U	1 U	14	0.8 U	1 U	1 U	1.6	2030	0.427	0.054 U	7.58					
07/2013	0.8 U	14	170	7.1	1.7 J	12	1 U	1 U	25	0.8 UJ	1 U	1 U	1.3	2000	0.703	0.054 U	7.4					
10/2013	0.8 U	41	200	8.9	2.4 J	13	1 U	1 U	15	0.8 U	1 U	1 U	1.2	1940	0.043 U	0.054 U						
12/2013	0.8 U	7.8	170	7.4	1.6 J	8.9	1 U	1 U	22	0.8 U	1 U	1 U	2 J	1840	0.961	0.054 U						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 2S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	400 U	2700	400000	2300 J	1100 J	60000	44	650	290	400 U	500 U		7.6	1130 J	8.69							
06/2009	5000 U	31000	230000	1700 J	660 J	28000	40	390	210	5000 U	5000 U	5000 U	7.5	1120	4.390	0.98 U						
07/2010	400 U	2500	250000	1700 J	680 J	32000	30	320	120	400 U	500 U	500 U	7.9	1270 J	4.23	0.054 U						
06/2011	200 U	6400	230000	1400	610 J	26000	12	76	56	200 U	250 U	250 U	9.6	957 J	3.28	0.054 U	6.7					
08/2011	500 U	500 U	220000	1400	490 J	24000	12	120	55	500 U	500 U	500 U	7	1510 J	4.23	0.16 U	6.52					
11/2011	500 U	150 J	120000	1100	340 J	18000	15 J	92 J	62 J	500 U	500 U	500 U	5.4	868	1.32	0.16 U	6.95	2.1E+05	1.2E+02	3.4E+05	3.7E+02	1.7E+02
03/2012	1000 U	520 J	240000	1700	590 J	30000	17	140	98	1000 U	1000 U	1000 U	5	1100 J	1.28	0.16 U	6.5	2.5E+05	1.0E+02	2.3E+05	1.5E+02	1.4E+03
06/2012	40 U	600	250000	1700	560	27000	62	390	1800	40 UJ	50 U	50 U	5.5	1170	3.88	0.054 U	6.73	8.5E+04	8.6E+02	2.3E+05	1.5E+02	2.8E+02
09/2012	80 U	210 J	240000	1900	650	33000	80	450	2500	80 U	100 U	100 U	4.7	1090 J	3.05	0.054 U		6.6E+03	9.3E+02	2.3E+05	2.3E+04	6.3E+05
12/2012	80 U	760	230000	1700	620	27000	55	280	1800	80 U	100 U	100 U	5	1130	1.87	0.054 U	6.44	1.9E+04	2.8E+00	2.5E+04	2.9E+01	2.9E+01
04/2013	44 J	2000	250000	1800	560	28000	45	230	950 J	47 J	38 J	20 U	4	1230	0.958	0.054 U	7.07	6.8E+04	4.7E+02	1.4E+05	2.7E+02	8.0E-01
07/2013	80 U	1400	220000	1600	530	18000	18	130	300	80 U	100 U	100 U	4.3	1130	1.16	0.054 U	6.84	7.5E+03	3.1E+01	1.7E+03	1.5E+01	9.0E-01
10/2013	400 U	730 J	240000	1800 J	670 J	27000	43	460	860	400 U	500 U	500 U	5.7	1020	4.1	0.054 U	6.15	3.7E+03	1.9E+02	6.3E+03	3.7E+02	1.0E+01
12/2013	40 U	7100	190000	1200	540	14000	11	96	240	40 U	50 U	50 U	5	562	0.183 J	0.054 U		3.8E+05	2.7E+01	8.3E+05	6.1E+02	2.4E+02

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 3D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	9.7 J	150	2600	5.4 J	37	160	2.8 J	13	43	750	32		2.6	808 J	0.36							

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 3S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1 U	1.8 J	0.8 U	0.8 U	1 U	1 U	1 U	11	0.8 U	1 U		2.8	2090 J	2.25							
06/2009	5.0 U	2.2 J	1.5 J	5.0 U	5.0 U	2.0 U	1.0 U	1.0 U	3.7	5.0 U	5.0 U	5.0 U		2680	0.832	1.0 U						
07/2010	0.8 U	1 U	0.81 J	0.8 U	0.8 U	1 U	1 U	1 U	23	0.8 U	1 U	1 U		2610	1.93	0.054 U						
06/2011	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	16	0.8 U	1 U	1 U	3.3	2740	0.637	0.054 U	7.59					
08/2011	5 U	1.3 J	7.1	5 U	5 U	5 U	5 U	5 U	11 J	5 U	5 U	5 U	3.8	3170 J	1.4	0.11 J	7.39					
11/2011	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	32	5 U	5 U	5 U	8.6	3470	2.31	0.16 U	6.8					
03/2012	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	7.3 J	5 U	5 U	5 U	14.1	283 J	0.0961 J	0.16 U	6.67					
06/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	5 U	0.8 U	1 U	1 U	19.8	462	0.945	0.054 U	7.49					
09/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	2.6 J	1 U	240	0.8 U	1 U	1 U	12.4	529	0.398	0.054 U	7.54					
12/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	140	0.8 U	1 U	1 UJ	8.4	662	1.98	0.054 U	6.6					
04/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	8.3	254	0.0842 J	0.054 U						
07/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	2.8 J	1.5 J	150	0.8 U	1 U	1 U	8.4	342	0.768	0.054 U	7.11					
10/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	69	0.8 U	1 U	1 U	4.4	450	0.228 J	0.054 U						
12/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	3.4 J	0.8 U	1 U	1 U	5.1 J	699	0.151 J	0.054 U						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 4S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	34 J	15000	19000	31 J	43 J	360	13	9.8	140	16 U	20 U		3.9	2920 J	3.22							
06/2009	5.0 U	1.5 J	23	1.4 J	5.0 U	93	15	24	200	5.0 U	0.72 J	5.0 U	6.2	3750	0.671	1.7						
10/2009	5.0 U	6.7	92	2.4 J	0.51 J	79	8.8	11	120	0.38 J	0.78 J	5.0 U	11.4									
07/2010	0.8 U	1 U	34 J	1 J	0.8 U	130	16	13	170	0.8 U	1 U	1 U	3.5	3970 J	0.693	4.6						
06/2011	1.6 U	59	670	11	3 J	220	12	100	150	2.7 J	3.4 J	2 U	12.2	3730	0.338	45.4	7.69					
08/2011	5 U	10	130	3.6 J	5 U	91	12	75	110	5 U	1.8 J	5 U	5.4	4090 J	0.855	1.4	7.12					
11/2011	5 U	2.7 J	27	2.3 J	5 U	50	11	110	430	5 U	1.6 J	5 U	6.1	4190 J	0.498	11	7.04					
03/2012	5 U	1.4 J	46	5 U	5 U	140	14	42	180	5 U	1.4 J	5 U	4.1	4440 J	0.6	0.35	6.53					
06/2012	0.8 U	1.6 J	37	0.8 U	0.8 U	74	5.9	15	100 J	0.8 U	1 U	1 U	3.8	3190 J	0.72	5.1	7.14					
09/2012	0.8 U	1.8 J	96	1.2 J	0.8 U	190	13	83	380	0.8 U	1.1 J	1 U	6.7	3480 J	0.594	6.4	6.41					
12/2012	0.8 U	8	330	8.9	1.1 J	260	15	110	1400	0.8 U	1.3 J	1 UJ	2.5 U	2200	0.617	12.1	6.39					
04/2013	4 U	39	3400	55	8 J	1700	31	380	6100	4 U	6.2 J	5 U	9.2	2320	0.186 J	22.9	6.75					
07/2013	0.8 U	10	530	12	1.4 J	470	11	89	1300	1.3 J	2 J	1 U	5.1	3420	0.414	14.1	6.87					
10/2013	0.8 U	32	1300	27	4 J	920	20	300	4400	0.86 J	3.2 J	1 U	13.6	1840	0.24 J	29.1	6.25					
12/2013	0.8 U	27	660	20	2.9 J	810	16	230	3600	0.8 U	2.3 J	1 U	13.6	3050	0.587	26.1	6.44					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 5S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2009	5.0 U	5.0 U	0.85 J	5.0 U	5.0 U	15	1.6	1.0 U	38	5.0 U	5.0 U	5.0 U		1110	1.160	0.98 U						
07/2010	0.8 U	1 U	1.5 J	0.8 U	0.8 U	34	2.6 J	2 J	44	0.8 U	1 U	1 U		1150	1.3	0.054 U						
08/2011	5 U	6.5	1.2 J	5 U	5 U	24	2.4 J	1.9 J	30	5 U	5 U	5 U	2.4	932	0.723	0.16 U	7.06					
03/2012	5 U	5 U	5 U	5 U	5 U	3.6 J	5 U	5 U	7.9 J	5 U	5 U	5 U	1.7	1200	0.193 J	0.16 U						
06/2012	0.8 U	1 U	1.3 J	0.8 U	0.8 U	27	1.6 J	1.1 J	24 J	0.8 U	1 U	1 U	1.6	966 J	0.678	0.054 U						
09/2012	0.8 U	1 U	1.4 J	0.8 U	0.8 U	35	1.4 J	1 U	19	0.8 U	1 U	1 U	1.5	859	0.818	0.054 U	7.32					
12/2012	0.8 U	1 U	2 J	0.8 U	0.8 U	33	1.8 J	1.1 J	20 J	0.8 U	1 U	1 U	1.8	945	0.549	0.054 U						
04/2013	0.8 U	1 U	0.99 J	0.8 U	0.8 U	3.3 J	1 U	1 U	5.6	0.8 U	1 U	1 U	1.5	1060	0.152 J	0.054 U	7.59					
07/2013	0.8 U	1 U	1.7 J	0.8 U	0.8 U	27	1.3 J	1 U	21	0.8 UJ	1 U	1 U	2.1	877	0.639	0.054 U	7.36					
10/2013	0.8 U	1 U	1.6 J	0.8 U	0.8 U	30	1.5 J	1 U	17	0.8 U	1 U	1 U	1.9	790	0.591	0.054 U	6.93					
12/2013	0.8 U	1 U	1.4 J	0.8 U	0.8 U	21	1.3 J	1 U	18	0.8 U	1 U	1 U	2.8 J	751	0.687	0.054 U	6.94					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 6S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	2.5 J	34	0.8 U	1.6 J	280	57	8.2	300	1.4 J	11		3.5	2440 J	0.149 J							
05/2009	5.0 U	0.76 J	72	3.1 J	1.0 J	410	58	7.5	290	0.86 J	6.8	5.0 U	6.5	2610	0.0514 J	1.0 U						
07/2010	0.8 U	1 U	58	0.8 U	1.1 J	300	56	6.6	200	0.86 J	6.7	1 U	5.5	3540	0.137 J	0.054 U						
06/2011	0.8 U	1.4 J	60	2.5 J	0.8 U	120	12	2 J	62	0.8 U	1.9 J	1 U					10.1					
08/2011	5 U	5 U	23	5 U	0.98 J	210	45	3.5 J	110	5 U	6.3	5 U					6.96					
11/2011	5 U	5 U	40	5 U	1.5 J	250	46	4.8 J	150	5.5	9.9	5 U					6.78					
03/2012	5 U	5 U	670	2.4 J	3.3 J	280	17	5.4	48	1.5 J	10	5 U										
06/2012	0.8 U	1 U	53	0.8 U	0.8 U	210	34	4 J	110	0.8 U	3.9 J	1 U										
09/2012	0.8 U	1 U	31	0.8 U	1.5 J	250	50	5.8	140 J	1.1 J	8.5	1 U					6.45					
12/2012	0.8 U	1 U	29	0.8 U	0.8 U	110	24	3.3 J	75 J	0.8 U	2.8 J	1 U					6.89					
04/2013	0.8 U	1 U	1.9 J	0.8 U	0.8 U	1.3 J	1 U	1 U	3 U	0.8 U	1 U	1 U					8.37					
07/2013	0.8 U	1 U	97	0.9 J	0.8 U	230	27	4.6 J	140	1.1 J	5.3	1 U					6.45					
10/2013	0.8 U	1 U	66	0.8 U	1.3 J	230	54	15	200	0.87 J	7.4	1 U					6.24					
12/2013	80 U	100 U	80 U	80 U	80 U	170 J	45	4.7 J	160	80 U	100 U	100 U										

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 7D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	720 J	140000	26000	5000 U	5000 U	690 J	12	15	82	360 J	5000 U	5000 U	7.79	1150								
05/2008	740	75000	26000	80 U	110 J	1000	8.9	15	74	120 J	100 U		5.1	1400	1.57							
07/2008	5000 UJ	5000 UJ	130000 J	360 J	5000 UJ	900 J	16 J	28 J	72 J	5000 UJ	5000 UJ	5000 UJ	480 J	1190 J								
09/2008	2500 U	1200 J	59000	740 J	140 J	1500	4.4	13	55	2500 U	2500 U	2500 U	212	1280								
10/2008																						
12/2008	2500 U	2600	53000	350 J	2500 U	1400 J	5.3	15	62	2500 U	2500 U	2500 U	278	649								
06/2009	500 U	1600	19000	68 J	44 J	1200	7.8	18	380	500 U	53 J	500 U	124	1210	0.0430 J	304						
10/2009	100 J	3100	23000	88 J	55 J	940	12	21	890	64 J	100 J	500 U	117	485	0.0317 U							
07/2010	47 J	1800	17000	41 J	30 J	1400	13	110	3700	16 U	47 J	20 U	77	1310	0.0522 U	229						
06/2011	830 J	63000	80000	160 U	250 J	1300	8.3	56	130	730 J	200 U	200 U	56.1	856	0.106 J	128	7.64					
08/2011	500 U	770	140000	98 J	350 J	990	80	530	160	500 U	120 J	500 U	138	170	0.11 J	41.2	6.93					
11/2011	560	25000	29000	60 J	65 J	1300	38	210	3200	110 J	140 J	250 U	166	12.7 J	2.56	157	7.26					
03/2012	70	150	3100	50 U	12 J	890	19	93	170	50 U	50 U	50 U	4.4	5 U	0.977	0.27	7.42					
06/2012	390	19000	32000	56 J	60 J	630	17	190	3100	150	80 J	20 U	14.7	376	0.0333 U	230	8.67					
09/2012	420	20000	31000	63 J	75 J	1000	30	360	4200	210	110	20 U	28	212 J	0.0333 U	243	7.2					
12/2012	80 U	100 U	110000	110 J	80 U	930	22	250	2800	260 J	520	100 UJ	935	7.5	0.292	302	5.96					
04/2013	46 J	190 J	64000	81 J	130 J	740	8.1	79	1100	2600	1000	50 U	210	10 J	0.0459 J	224						
07/2013	89 J	1300	59000	91 J	80 U	1200	17	180	3400	900	1100	100 U	178	37.9	0.043 U	242	6.73					
10/2013	65 J	270	72000	89 J	81 J	850	9.9	120	2400	2100	1400	50 U	216	6.1	0.043 U	219	6.27					
12/2013	84 J	530	69000	110 J	190 J	1100	17	280	2000	2100	1900	100 U	192	22.2	0.043 U	208	6.55					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 7D PUMP**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2009	53 J	2200	26000	79 J	37 J	1200	5.6 J	10 J	200 J	42 J	75 J	500 U										

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 7D SNAP**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2009	1300 U	1800	21000	65 J	1300 U	680	6.9 J	15 J	220 J	1300 U	60 J	1300 U										

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 7S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U				0.8 U	1 U											
06/2009	5.0 U	6.9	0.75 J	5.0 U	5.0 U	2.0 U	1.0 U	1.0 U	5.7	5.0 U	5.0 U	5.0 U		2070	0.122	1.0 U						
07/2010	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	7.6 J	0.8 U	1 U	1 U		2070	0.307	0.054 U						
08/2011	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	9.4 J	5 U	5 U	5 U	3.6	2170	0.716	0.16 U	6.65					
03/2012	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	15 U	5 U	5 U	5 U	2.7	2430 J	0.0756 J	0.16 U	6.89					
06/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	7.5 J	0.8 U	1 U	1 U	2.4	1750	0.709	0.054 U	6.54					
09/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	6.9 J	0.8 U	1 U	1 U		1970	1.32	0.054 U	6.6					
12/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 UJ	2	2070	0.239	0.054 U	6.53					
04/2013	0.8 U	1 U	2.1 J	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	2.6	2210	0.0446 J	0.054 U						
07/2013	0.8 U	1 U	0.95 J	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	2.4	1940	0.043 U	0.054 U						
10/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	2	12100	0.307 J	0.054 U	6.53					
12/2013	0.8 U	1 U	0.98 J	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	2.9 J	1880	0.235 J	0.054 U						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 8S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U				0.8 U	1 U											
05/2009	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	1.0 U	1.0 U	2.7	5.0 U	5.0 U	5.0 U		850	0.0088 J	0.99 U						
07/2010	0.8 U	1 U	14	0.8 U	0.8 U	18	1 U	1 U	10 U	0.8 U	1 U	1 U		3890 J	0.0522 U	0.054 U						
09/2011	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	15 U	5 U	5 U	5 U	14.9	424 J	0.0192 J	0.16 U	9.86					
03/2012	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	15 U	5 U	5 U	5 U	7	5270 J	0.0812 J	0.16 U	6.34					
06/2012	0.8 U	1 U	4 J	0.8 U	0.8 U	3.8 J	1 U	1 U	5 U	0.8 UJ	1 U	1 U	25.1	4390 J	0.0325 J	0.054 U						
09/2012	0.8 U	1 U	2.8 J	0.8 U	0.8 U	3.5 J	1 U	1 U	8.3 J	0.8 U	1 U	1 U	5.7	4010 J	0.0333 U	0.054 U	6.94					
12/2012	0.8 U	1.5 J	2.1 J	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 UJ	5.6	2450	0.0333 U	0.054 U	6.85					
04/2013	0.8 U	1 U	1.7 J	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	5.3	3840	0.0333 U	0.054 U						
07/2013	0.8 U	1 U	0.87 J	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	6.7	3270	0.594	0.054 U						
10/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	4.2	1250	0.122 J	0.054 U	6.97					
12/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	3.6	1360	0.043 U	0.054 U	7.05					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW- 9S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	67	130	0.8 U	0.8 U	35				0.8 U	1 U											
06/2009	2500 U	30000	99000	2500 U	2500 U	4100	19	27	210	2500 U	2500 U	2500 U		1410	0.0658 J	50.2						
07/2010	0.8 U	1 U	410	2.2 J	1.6 J	140	1 U	3.2 J	24	0.8 U	1.2 J	1 U		3510	1.28	0.054 U						
08/2011	5 U	5 U	310	2 J	0.99 J	170	5 U	6	27	5 U	5 U	5 U	7.6	3190	1.61	0.16 U	5.92					
03/2012	5 U	5 U	1300	7.5	4.2 J	460	5 U	15	32	5 U	3.1 J	5 U	5.4	2640	0.81	0.16 U	6.44					
06/2012	0.8 U	1 U	1100	7.8	3.7 J	290	1 U	19	42	0.8 U	3.6 J	1 U	5.9	2300	1.06	0.054 U	6.84					
09/2012	1.6 U	2 U	930	5.4 J	2.7 J	510	1 U	20	43	1.6 U	2.8 J	2 U	5.8	2300	1.14	0.054 U	6.48					
12/2012	0.8 U	1 U	740	4.9 J	2.6 J	320	1 U	20	40	0.8 U	3.6 J	1 UJ	4.6	1990	0.752	0.054 U	6.52					
04/2013	0.8 U	1 U	1100	8.8	4.3 J	640	1 U	35	54	2.6 J	7.7	1 U	5.8	2480	0.627	15.2	7.28					
07/2013	0.8 U	1 U	480	4.1 J	0.8 U	360	1 U	25	50	0.8 U	3.6 J	1 U	7.5	2530	1.1	9	6.48					
10/2013	0.8 U	1 U	220	1.6 J	0.8 U	150	1 U	7.3	19	0.8 U	1.5 J	1 U	16.8	778	0.22 J	0.95	6.95					
12/2013	0.8 U	1 U	270	2.1 J	0.89 J	180	1 U	12	25	0.82 J	2.4 J	1 U	15.4	1740	0.896	1.3	6.61					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-10D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1 U	98	0.8 U	0.8 U	27	14	2.3 J	150	1.4 J	1 U		2.7	722 J	0.751							
05/2009	5.0 U	5.0 U	34	5.0 U	5.0 U	17	7.4	1.0 U	110	0.89 J	5.0 U	5.0 U		706	1.030	1.15						
07/2010	0.8 U	1 U	24	0.8 U	0.8 U	10	13	1.1 J	190	1.3 J	1 U	1 U		934	0.822	4						
08/2011	13 U	53	5400	14	26	170	7.9	3.9 J	120	660	28	13 U	6.3	931	0.166 J	8.4	6.17					
03/2012	10 U	10	1500	3.5 J	10	120	4.6 J	2.2 J	71	290	17	10 U	3.2	766	0.751	1.7	6.97					
06/2012	1.6 U	2.3 J	1300	3.1 J	15	91	15	3.5 J	200	190	15	2 U	2.1	932	0.168 J	6.2	6.95					
09/2012	0.8 U	1.8 J	1000	2.7 J	11	120	25	3.4 J	310	180	19	1 U	1.7	916	0.103 J	5.3	6.72					
12/2012	1.6 U	4.9 J	810	2.6 J	10	160	4.7 J	3.8 J	78	250 J	15 J	2 U	13.3	627	0.716	4.7	6.85					
04/2013	0.8 U	2.6 J	770	2.3 J	9	160	19	5.5	270	230	17	1 U	2.5	815	0.0773 J	7.5	7.92					
07/2013	1.6 U	2.8 J	1100	2.5 J	8.9 J	170	11	7.4	150	140	21	2 U	2.2	657	0.104 J	4.7	7.89					
10/2013	0.8 U	4.6 J	1100	3.2 J	13	250	5	8.4	82	250	30	1 U	1.9	636	0.125 J	3.2	7.12					
12/2013	0.8 U	2.2 J	770	2.4 J	9.8	160	16	5.6	240	150	21	1 U	2.1	761	0.097 J	6.1	6.73					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-10S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	64	730	5.3	2.3 J	140	22	14	200	0.8 U	1 U		2.4	1350 J	13.3							
05/2009	5.0 U	120	1900	37	4.7 J	240	2.3	10	46	5.0 U	5.0 U	5.0 U		804	2.990	0.99 U						
07/2010	0.8 U	3.9 J	110	5.1	2.4 J	110	1.4 J	4.1 J	31	0.8 U	1 U	1 U		1020 J	1.65	0.054 U						
06/2011	0.8 U	14	1100	8.7	2.9 J	210	5.5	18	260	0.8 U	3.4 J	1 U					6.77					
08/2011	5 U	16	1100	12	3 J	270	25	42	4400	5 U	2.3 J	5 U					6.85					
11/2011	25 U	34	5600	27	8.9 J	640	7.3	69	3000	25 U	25 U	25 U					6.86					
03/2012	5 U	6.2	880	11	2.6 J	510	12	230	1700	5 U	5 U	5 U					6.85					
06/2012	0.8 U	10	1000	19	2.7 J	740	16	590	6600	0.8 U	2.3 J	1 U					6.69					
09/2012	0.8 U	4.9 J	410	25	0.8 U	810	7	1700	1700	0.8 U	1.2 J	1 U										
12/2012	0.8 UJ	3.2 J	300	12	0.8 U	280	6.5	380	350	0.8 U	1 U	1 UJ					6.62					
04/2013	0.8 U	3 J	330	6.8	0.91 J	280	5.2	280	570 J	0.8 U	1 U	1 U										
07/2013	0.8 U	4.9 J	340	13	0.8 U	250	9	570	2700	0.8 U	1 U	1 U					7.13					
10/2013	0.8 U	1 U	230	4.2 J	0.8 U	170	3.2 J	100	240	0.8 U	1 U	1 U					6.69					
12/2013	0.8 U	1 U	280	3.6 J	0.8 U	130	2.5 J	48	250	0.8 U	1 U	1 U					7.09					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-11D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	8.4 J	260 J	190 J	0.8 U	7.3 J	9.3 J	76 J	1 U	460 J	200 J	4.6 J		4	1490 J	0.0522 U							
05/2009	21 J	1200	3500	100 U	19 J	640	46	13	280	220	48 J	100 U		1030	0.0616 J	3.0						
10/2009	10 J	280	2100	5.2 J	16 J	250	45	5.0 U	240	430	33 J	100 U	4.0									
07/2010	3.4 J	130	1300	3.6 J	12	310	60	7.4	320	140	33	1 U		1290	0.0522 U	11.9						
06/2011	310	5900	3100	40 U	490	50 U	18	1.4 J	95	25000	280	50 U					7.72					
08/2011	17	100	1300	2.8 J	44	30	250 J	5 UJ	1000 J	2300	69	10 U					6.93					
11/2011	5.8 J	21	550	10 U	17	30	170	5 U	1400	1700	33	10 U					6.87					
03/2012	2.8 J	9.8	380	1.3 J	12	38	100	5 U	430	990	37	5 U	1.4				6.52					
06/2012	1.2 J	10	150	0.8 U	4.2 J	53	110	1.9 J	750	430 J	21	1 U					7.31					
09/2012	0.8 U	9.1	150	0.8 U	6.9	67	67	2.1 J	280	320	26	1 U					6.59					
12/2012	0.8 U	7.2	120	0.8 U	3.7 J	47	81	1.3 J	350	270	26	1 UJ					6.72					
04/2013	1.1 J	9.6	210	1.3 J	9.6	160	9.6	6.9	59	630	55	1 U					7.42					
07/2013	0.8 U	5.3	99	0.8 U	4.3 J	69	24	2.3 J	110	290 J	35	1 U					7.33					
10/2013	0.8 U	8.2	170	1.2 J	7.7	140	10	5.1	63	500	60	1 U					6.77					
12/2013	0.8 U	7.9	170	1.5 J	6.6	140	4.6 J	13	110	480	66	1.9 J					7.51					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-11S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	240	920	26	14	140	2.3 J	1.9 J	140	110	67		2.7	2190 J	0.459							
05/2009	25 U	180	1700	59	13 J	240	1.5	1.0 U	97	65	88	25 U		1960	0.238	1.0 U						
07/2010	0.8 U	190	920	47	11	210	1.6 J	1.7 J	85	30	68	1 U		1850	0.599	0.054 U						
06/2011	8 U	93	4400	27 J	58	450	2.7 J	5 J	77	600	170	10 U					6.8					
08/2011	10 U	200	1300	20	21	210	2.9 J	3.6 J	110	210	81	10 U					6.79					
11/2011	5 U	150	2200	29	37	790	3.2 J	38	260	300	200	5 U					6.68					
03/2012	5 U	160	460	15	8.2	300	5.1	87	840	49	68	5 U					6.44					
06/2012	0.8 U	89	280	14	4.4 J	270	4 J	110	770	39 J	67	1 U					6.71					
09/2012	0.8 U	140	300	14	3.1 J	230	1.6 J	62	250	8.8	34	1 U					6.55					
12/2012	0.8 UJ	110	150	7.8	1.5 J	54	1 U	18	87	3.5 J	13	1 UJ					6.75					
04/2013	0.8 U	44	180	9.6	1.7 J	160	2 J	97	950	14	48	1 U					6.91					
07/2013	0.8 U	84	150	8.8	1.4 J	75	1.8 J	80	880	11	44	1 U					6.38					
10/2013	0.8 U	70	160	8.7	1.3 J	82	3.4 J	120	760	9.5	49	1 U					6.47					
12/2013	0.8 U	73	140	8.7	1.3 J	70	2.8 J	120	1200	11	58	1.3 J					6.87					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-12D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	12	1.9 J	0.8 U	0.8 U	1 U				0.8 U	1 U											
05/2009	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	37	1.0 U	210	5.0 U	5.0 U	5.0 U		1460	0.0286 J	32.8						
07/2010	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	25	1 U	130	0.8 U	1 U	1 U		1520	0.0522 U	31.4						
09/2011	5 U	5 U	5 U	5 U	5 U	5 U	24	5 U	130	5 U	5 U	5 U	1.6	1790 J	0.0172 J	47.2	6.38					
03/2012	5 U	5 U	1.6 J	5 U	5 U	5 U	27	5 U	130	5 U	5 U	5 U	1 U	1650	0.2 U	41.8	6.74					
06/2012	0.8 U	1 U	5.1	0.8 U	0.8 U	1 J	28	1 U	160	1.7 J	1 U	1 U	4.9 J	1700	0.0141 U	36.7	6.83					
09/2012	0.8 U	1.9 J	3.7 J	0.8 U	0.8 U	1 U	39	1 U	200	0.8 U	1 U	1 U	1.7	1630	0.0333 U	35.2	6.91					
12/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	26	1.2 J	130	0.8 U	1 U	1 U	0.5 U	1330	0.0333 U	28.8	6.39					
04/2013	0.8 U	1 U	16	0.8 U	0.8 U	7.9	29	1 U	160	5.1	1 U	1 U	0.5 U	1540	0.0333 U	42.8	7.39					
07/2013	0.8 U	1 U	3.5 J	0.8 U	0.8 U	1.5 J	37	1 U	200	1.2 J	1 U	1 U	0.5 U	1500	0.043 U	41.2	7.14					
10/2013	0.8 U	1 U	5.5	0.8 U	0.8 U	2.7 J	42	1 U	200	1.3 J	1 U	1 U	0.88 J	1370	0.043 U	42.2	6.82					
12/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	41	1 U	210	0.8 U	1 U	1 U	1.4	1250	0.043 U	41.5	6.74					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-12S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	21 J	11000	6200	35 J	54	240	20	10	290	400	52											
05/2009	100 U	2500	3800	26 J	23 J	1300	9.2	19	170	200	110	100 U	10.9	630	0.253	25.4						
07/2010	4 U	2900	2800	27	15 J	1500	8.1	29	110	150	93	5 U		1140	0.218	9.7						
06/2011	81 J	7700	8300	40 U	360	200 J	9.2	5.4	110	18000	400	50 U					7.62					
08/2011	18 J	5300	9300	33 J	170	370	7.2	3.8 J	86	9100	500	50 U					6.72					
11/2011	10 J	3300	4500	20 J	78	510	5.9	25	240	3000	480	25 U					6.88					
03/2012	25 U	4700	2900	26	15 J	230	20	150	2000	270	100	25 U					6.76					
06/2012	4 U	7000	2900	38	8 J	190	16	150	2000	120	48	5 U					7.19					
09/2012	8 U	4500	3000	29 J	8 U	450	13	210	2700	88	55	10 U					6.38					
12/2012	0.8 UJ	740	1100	14	5.5	280	18	320	3200	74	53	1.3 J					7.97					
04/2013	1.6 U	1800	960	22	2.6 J	210	27	400	6200	51	45	2 U					6.96					
07/2013	4 U	2700	2900	41	6.7 J	510	27	320	6200	45	49	5 U					6.29					
10/2013	0.8 U	980	2800	40	6.7	430	29	480	5600	24	28	1 U					6.58					
12/2013	1.6 U	2100	1500	29	4.8 J	300	34	450	7800	27	38	2 U					6.69					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-13D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	30	660	4.9 J	4.2 J	250	1.4 J	12	41	2.1 J	29		2.8	971 J	0.4							
05/2009	50 U	50 U	1000	6.2 J	50 U	420	2.9	15	44	50 U	42 J	50 U		923	0.169	1.0 U						
07/2010	0.8 U	1 U	700	6	4.2 J	240	1.6 J	6.9	22	1.1 J	36	1.3 J		98.6 J	0.218	0.78						
08/2011	5 U	1.4 J	510	4.2 J	2.9 J	280	2.5 J	12	27	5.6	29	5 U	3.7	1100	0.218	0.84	7.14					
03/2012	5 U	3.1 J	370	3.7 J	2.2 J	290	9.9	8.5	20	5 U	28	5 U	2.7	907 J	0.217	4.3	6.38					
06/2012	0.8 U	1 U	270	2.8 J	1.9 J	150	9.1	10	29	0.8 U	14	1 U	2.9	1700	0.242	3.1	6.88					
09/2012	0.8 U	1 U	280	2.3 J	1.5 J	140	13	7.9	29	0.8 U	10	1 U	1.8	1400	0.304	2.6	6.48					
12/2012	0.8 U	1.1 J	230	2.7 J	1.6 J	120	16	13	40	0.8 U	11	1 UJ	2	1070	0.158 J	2.8	6.53					
04/2013	0.8 U	1 U	230	2.2 J	0.99 J	230	15	26	110	0.8 U	16	1 U	2.2	1030	0.0333 U	27	6.92					
07/2013	0.8 U	1 U	250	2 J	0.97 J	170	13	32	370	0.8 U	11	1 U	2.6	936	0.0543 J	5	7.7					
10/2013	0.8 U	1 U	220	1.6 J	0.86 J	170	11	30	350	0.8 U	7.3	1 U	2.8	2350	0.176 J	5.9	6.25					
12/2013	0.8 U	1.3 J	180	0.8 U	0.8 U	81	9.7	21	310	0.8 U	4.9 J	1 U	4.1	673	0.072 J	4.9	6.91					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-14D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U				0.8 U	1 U											
05/2009	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	37	1.0 U	99	5.0 U	5.0 U	5.0 U		1060	0.155	2.50						
07/2010	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	35	1 U	95	0.8 U	1 U	1 U		1150	0.186 J	7						
09/2011	5 U	5 U	5 U	5 U	5 U	5 U	34	5 U	95	5 U	5 U	5 U	2.6	1150 J	0.0915 J	9.2	6.67					
03/2012	5 U	5 U	5 U	5 U	5 U	5 U	30	5 U	77	5 U	5 U	5 U	1.8	1150	0.0327 J	6.2	7.04					
06/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	28	1 U	82	0.8 U	1 U	1 U	2	1160 J	0.0966 J	7.4	6.99					
09/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	27	1 U	81	0.8 U	1 U	1 U	1.7	891	0.075 J	5.8	6.89					
12/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	12	1 U	51	0.8 UJ	1 UJ	1 U	1.6	764	0.0333 U	2.2	6.64					
04/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	15	1 U	45	0.8 U	1 U	1 U	1.8	1050	0.0333 U	3.8	7.29					
07/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	6.8	1 U	35	0.8 U	1 U	1 U	2	948	0.043 U	1.1	7.49					
10/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	4.3 J	1 U	28	0.8 U	1 U	1 U	2	875	0.043 U	0.69	7.14					
12/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	9.8	1 U	52	0.8 U	1 U	1 U	3.5	1030	0.043 U	1.8	7.18					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-15D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	1.6 U	3.1 J	1400	9.1 J	9.3 J	170	1 J	3.7 J	33	36	20		3	950 J	0.528							
05/2009	25 U	25 U	790	5.6 J	5.6 J	520	1.0 U	7.8	34	25	20 J	25 U		960	0.291	1.0 U						
07/2010	0.8 U	1.8 J	310	2.9 J	3.1 J	220	1 U	4.8 J	23	23	16	1 U		922	0.276	0.37						
08/2011	10 U	4.5 J	1700	4.8 J	11	540	5 U	2.5 J	18	30	20	10 U	4.2	740	0.164 J	3.5	7.66					
03/2012	5 U	2.9 J	720	3.6 J	6.1	260	5 U	1.1 J	7.5 J	34	14	5 U	0.93 J	420 J	0.16 J	0.37	7.12					
06/2012	0.8 U	2.9 J	560	3.7 J	4.3 J	220	1 U	1.1 J	10 J	41	14	1 U	1.5	52.1	0.15 J	0.47	7.24					
09/2012	0.8 U	23	820	5.8	6.3	390	1 U	2.9 J	21	40	25	1 U	2.1	958	0.309	1.5	6.57					
12/2012	0.8 U	10	940	6.2	6.6	360	1 U	2.9 J	20	53 J	37	1 U	2.7	499	0.184 J	2.4	6.08					
04/2013	0.8 U	2.7 J	480	4.5 J	4.2 J	240	1 U	3.3 J	15	49	25	1 U	1.1	506	0.169 J	1.8	7.59					
07/2013	0.8 U	1.9 J	290	3.1 J	2.5 J	260	1 U	2.7 J	17	37	23	1 U	3.1	511	0.332	1.7	7.83					
10/2013	0.8 U	1.8 J	290	3.1 J	2.3 J	320	1 J	10	67	44	27	1 U	2.1	726	0.267 J	7.4	5.95					
12/2013	0.8 U	3.2 J	420	4.2 J	4.3 J	350	1 U	4.9 J	42	99	46	1 U	3.7	530 J	0.214 J	4.8	7.24					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-16D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	2.2 J	520	2.7 J	2.9 J	160	4.3 J	5.6	31	3.3 J	12											
05/2009	25 U	25 U	560	2.6 J	25 U	200	7.0	6.3	38	25 U	11 J	25 U		1080	0.0723 J	1.6						
07/2010	0.8 U	1.5 J	490	2.1 J	2.7 J	180	24	4.9 J	68	1.4 J	7.7	1 U		1090	0.147 J	3.6						
08/2011	5 U	2.4 J	420	2 J	2.8 J	170	10	5.4	35	15	11	5 U	4	1140	0.249	1.6	6.13					
03/2012	5 U	1.8 J	380	1.8 J	2.8 J	220	5.7	4.4 J	36	6.5	12	5 U	2.9	961	0.178 J	1.6	6.98					
06/2012	0.8 U	2.2 J	450	2 J	3 J	230	6.9	8.8	46	8.7 J	14	1 U	2.7	983 J	0.228	0.54	7.27					
09/2012	0.8 U	12	330	1.5 J	2.5 J	180	5.1	7.7	41	3.9 J	11	1 U	2.3	1040	0.344	1.3	6.53					
12/2012	0.8 U	1.5 J	290	1.1 J	1.6 J	130	9.9	10	72 J	2.5 J	11	1 U	2.5	1040	0.327	1.6	7.13					
04/2013	0.8 U	1.3 J	270	1.3 J	2 J	180	11	21	150	1.7 J	11	1 U	2.6	1020	0.213	1.8	7					
07/2013	0.8 U	1.2 J	250	1.4 J	1.6 J	140	8.1	16	150	0.98 J	9.3	1 U	2.8	974	0.213	1.9						
10/2013	0.8 U	1 J	240	1.3 J	1.7 J	200	5.5	18	180	0.8 U	8.6	1 U	2.4	1020	0.17 J	2.4	6.86					
12/2013	0.8 U	1.2 J	300	1.5 J	1.7 J	200	9.7	31	370	0.8 U	9.8	1 U	4.6	1060	0.151 J	3	6.81					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-17D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	57	700	1.4 J	14	34				260	33											
05/2009	50 U	50 U	1300	50 U	11 J	600	4.1	6.0	80	230	62	50 U		875	0.0078 J	18.0						
10/2009	50 U	12 J	1100	2.6 J	8.6 J	430	4.8	6.5	85	170	49 J	50 U	5.0									
07/2010	0.8 U	9.8	1000	3.6 J	11	490	5.7	7.8	77	150	64	1 U		1090	0.0522 U	15.7						
06/2011	0.8 U	12	250	0.8 U	4.5 J	44	5.3	1 U	61	120	12	1 U					6.92					
08/2011	50 U	220	4400	50 U	86	100	15	1.2 J	94	7200	210	50 U					6.97					
11/2011	8.8 J	350	2200	5.5 J	74	52	7.2	5 U	70	5800	150	13 U					6.99					
03/2012	1.4 J	6.2	450	1.7 J	12	43	6.7	5 U	65	730	41	5 U	3.4				7					
06/2012	1.2 J	6.1	350	1.6 J	16	85	6.9	1 U	68	660	41	1 U					6.92					
09/2012	0.8 U	6.4	240	1.2 J	7.9	110	6.2	1.4 J	51	420	37	1 U					6.76					
12/2012	0.8 UJ	5.9	170	1.1 J	4.6 J	79	6.7	1.6 J	61	330	35	1 UJ					6.97					
04/2013	0.8 U	3.4 J	75	0.8 U	2.8 J	50	4.1 J	1.4 J	59	210	29	1.7 J					7.41					
07/2013	0.8 U	2.6 J	47	0.8 U	2.3 J	47	3 J	2.5 J	55	130 J	31	1.3 J					7.04					
10/2013	0.8 U	2.3 J	39	0.8 U	1.5 J	50	4.2 J	11	110	110	31	2.8 J					7.04					
12/2013	0.8 U	2.2 J	33	0.8 U	1.2 J	39	3.4 J	4.3 J	72	83	29	3.6 J					6.96					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-18D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U				0.8 U	1 U											
05/2009	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	2.0 U	2.0	1.0 U	50	5.0 U	5.0 U	5.0 U		1540	0.0077 U	2.1						
07/2010	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1.7 J	1 U	36	0.8 U	1 U	1 U		1870	0.0522 U	2.8						
08/2011	5 U	5 U	5 U	5 U	5 U	5 U	1.9 J	5 U	32	5 U	5 U	5 U	4.4	1740	0.2 U	2.4	6.54					
03/2012	5 U	5 U	5 U	5 U	5 U	5 U	1.6 J	5 U	43	5 U	5 U	5 U	4.2	1750	0.2 U	5.4	6.76					
06/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1.2 J	1 U	47	0.8 U	1 U	1 U	4.4	1630	0.0141 U	4.1	7.01					
09/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1.6 J	1 U	24	0.8 U	1 U	1 U	2.4	1530 J	0.0333 U	1.9	7.14					
12/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1.5 J	1 U	43	0.8 U	1 U	1 U	3.6	1310	0.0333 U	3.6	7.52					
04/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	33	0.8 U	1 U	1 U	3.2	1320	0.0333 U	1.6	7.16					
07/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	44	0.8 U	1 U	1 U	4.7	1420	0.043 U	5.1	6.63					
10/2013	0.8 U	1 U	1.1 J	0.8 U	0.8 U	1 U	1 U	1 U	9.2	0.8 U	1 U	1 U	3.4	976	0.043 U	0.54	7.03					
12/2013	0.8 U	1 U	1.3 J	0.8 U	0.8 U	1 U	1 U	1 U	15	0.8 U	1 U	1 U	4.3	860 J	0.043 U	0.52	7.16					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-19D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1 U	42	0.8 U	0.8 U	6.5	1 U	1 U	21	0.8 U	1.3 J											
05/2009	5.0 U	5.0 U	58	5.0 U	5.0 U	10	1.0 U	1.0 U	23	5.0 U	1.7 J	5.0 U		3710	3.010	1.0 U						
07/2010	0.8 U	1 U	60	0.8 U	0.8 U	11	1 U	1 U	24	0.8 U	1.6 J	1 U		3170	2.54	0.054 U						
08/2011	5 U	5 U	39	5 U	5 U	3.5 J	5 U	5 U	19	5 U	5 U	5 U	8	3320	2.72	0.16 U	5.49					
03/2012	5 U	5 U	38	5 U	5 U	2.1 J	5 U	5 U	25	5 U	5 U	5 U	8.8	4060	2.23	0.16 U						
06/2012	0.8 U	1 U	34	0.8 U	0.8 U	1.4 J	1 U	1 U	19	0.8 U	1 U	1 U	8.7	3660	2.26	0.054 U	6.58					
09/2012	0.8 UJ	1 U	32	0.8 U	0.8 U	1.3 J	1 U	1 U	25	0.8 U	1 U	1 U	6.9	2950 J	2.42	0.054 U						
12/2012	0.8 U	1 U	26	0.8 U	0.8 U	1.9 J	1.9 J	1 U	27	0.8 UJ	1 U	1 U	7.9	3020	4.15	0.054 U	6.69					
04/2013	0.8 U	1 U	22	0.8 U	0.8 U	1 U	1 U	1 U	23	0.8 U	1 U	1 U	8.1	3120	2.31	0.054 U	7					
07/2013	0.8 U	1 U	19	0.8 U	0.8 U	1 U	1 U	1 U	20	0.8 U	1 U	1 U	9.2	3130	2.36	0.054 U	7.32					
10/2013	0.8 U	1 U	17	0.8 U	0.8 U	1 U	1 U	1 U	24	0.8 U	1 U	1 U	8.1	2670	2.31	0.054 U	5.46					
12/2013	0.8 U	1 U	17	0.8 U	0.8 U	1 U	1 U	1 U	22	0.8 U	1 U	1 U	10.9	2890	2.19	0.054 U	6.42					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-20D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	8 U	11 J	5900	12 J	47 J	380				210	73											
05/2009	100 U	26 J	3100	12 J	22 J	1300	1.0	6.0	31	93 J	66 J	100 U	2.9	558	0.0077 U	3.1						
10/2009	50 U	5.8 J	1300	8.7 J	11 J	710	1.0 U	5.6	19	54	40 J	50 U	3.5									
07/2010	0.8 U	2.9 J	960	5.6	7.9	930	1 U	13	20	42	43	1 U	2.9	695	0.0522 U	3.4						
06/2011	16 U	1200	24000	35 J	170	610	1.3 J	6.8	34	2900	290	20 U					6.84					
08/2011	100 U	160	24000	28 J	150	680	1.3 J	6.7	32	1900	260	100 U					7.15					
11/2011	50 U	20 J	5800	13 J	36 J	1400	5 U	5.5	20	550	81	50 U					7.18					
03/2012	130 U	850	13000	24 J	150	420	1.3 J	7.2	94	6200	1300	130 U	8.7				6.45					
06/2012	15	590	5200	19	180	160	1 U	3.7 J	42	14000 J	860	2 U					7.41					
09/2012	16 J	390	3500	12 J	150	160	1 U	2.7 J	23	9800	620	10 U										
12/2012	9.5 J	100	2800	9.5 J	240	120	1 U	2.9 J	33 J	7700	410	10 U					6.88					
04/2013	5.8 J	47	1700	8.6 J	53	330	1.4 J	22	190	3700	290	2.5 U					7.29					
07/2013	4.2 J	37	2700	9.7 J	65	470	1.6 J	16	170	4000	490	5 U					6.5					
10/2013	4 U	12 J	940	4.8 J	27	400	1.7 J	23	200	2000	170	5 U					6.92					
12/2013	1.7 J	9.1 J	630	4.5 J	23	380	2 J	31	260	1600	150	2 U					7.13					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **MW-21D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1.1 J	290	1.5 J	1.7 J	43	1.2 J	5.7	37	3.4 J	2.8 J		3.9	1040 J	11.5							
05/2009	5.0 U	0.67 J	110	0.63 J	0.67 J	48	1.0 U	4.0	40	2.0 J	2.1 J	5.0 U	4.8	1170	0.623	1.0 U						
07/2010	0.8 U	1 U	85	0.8 U	0.8 U	38	1 U	2.4 J	25	1.8 J	1.5 J	1 U	4.3	1140	3.71	0.057 J						
06/2011	4 U	5 U	2800	5 J	15 J	75	1 U	1.6 J	20	39	7.7 J	5 U					6.93					
08/2011	25 U	25 U	5100	8.2 J	21 J	530	5 U	5.3	28	140	19 J	25 U					7.04					
11/2011	25 U	6.6 J	4100	10 J	19 J	650	1.7 J	6.5	35	340	33	25 U					7.12					
03/2012	25 U	7.1 J	4800	8.4 J	17 J	610	5 U	6.4	40	290	34	25 U	0.88 J				6.59					
06/2012	4 U	15 J	3600	7.9 J	13 J	580	1 U	8	37	310 J	35	5 U					6.8					
09/2012	1.6 U	11	2600	9.8 J	15	580	2.3 J	9.7	50	180	32	2 U					7.26					
12/2012	1.6 U	3.1 J	2200	7.3 J	12	1000	3.8 J	12	46 J	240	35	2 U					7.36					
04/2013	0.8 U	5.4	780	5.3	7	730	1 U	11	36	260	41	1 U					7.15					
07/2013	0.8 U	2.8 J	380	3.3 J	8.1	600	1 U	12	30	160	29	1 U					8.49					
10/2013	0.8 U	4.3 J	660	4.7 J	6.4	690	1.4 J	23	120	160	36	1 U										
12/2013	0.8 U	4.2 J	680	3.4 J	5.6	550	1.5 J	19	64	130	29	1 U					7.13					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR- 3SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	4 U	9 J	7400	120	11 J	740	11 J	63 J	170 J	4 U	5 U	5 U	1030	11.3 J	44.5	0.84	5.99					
08/2011	10 U	10 U	4000	100	7 J	950	3.7 J	30	2300	10 U	10 U	10 U	2260	3.1 J	131	0.67	5.87					
11/2011	25 U	25 U	2300	80	25 U	1400	1.6 J	110	8800	25 U	25 U	25 U	1760	2.7 J	146	0.34	6.14					
03/2012	50 UJ	50 UJ	50 UJ	48 J	50 UJ	50 UJ	130	40	11000	50 UJ	50 UJ	14 J	39.3	5 U	86	0.16 J	6.52					
06/2012	0.8 U	1 U	0.81 J	48	0.8 U	1.8 J	42	1 U	13000	0.8 UJ	1 U	1.9 J	838	2 J	73.3	0.18	6.47					
09/2012	0.8 UJ	1 U	0.8 U	7	0.8 U	1 U	17	1 U	11000	0.8 U	1 U	1 U	293	1.5 UJ	48.7	0.14 J	6.38					
12/2012	0.8 UJ	1 UJ	0.8 UJ	0.8 UJ	0.8 UJ	1 UJ	99	1.2 J	15000	0.8 UJ	1 UJ	1 UJ	171	1.7 J	42.7	0.17	6.7					
04/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	170	1 U	23000	0.8 U	1 U	1 U	69.4	276	37.7	0.39	6.5					
07/2013	8 U	10 U	8 U	8 U	8 U	10 U	120 J	1 U	20000	8 U	10 U	10 U	40.1	13.7	12.2	1.2	6.67					
10/2013	8 U	10 U	8 U	8 U	8 U	10 U	170	1 U	16000	8 U	10 U	10 U	53.8	1.5 U	22.3	0.66	5.38					
12/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	180	1 U	15000	0.8 U	1 U	1 U	66.1	1.5 U	25.8	0.38	6.11					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR- 4SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	1.6 U	19	1100	11	5.5 J	81	2 J	5.4	1500	77	97	3.9 J	1560	17.1 J	91.7	1.6	6.01					
08/2011	50 U	50 U	1200	21 J	50 U	120	5 U	5 U	7800	50 U	50 U	50 U	993	1.8 J	73.1	0.34	6.3					
11/2011	25 U	25 U	25 U	17 J	25 U	25 U	3.5 J	15	12000	25 U	25 U	25 U	352	2.7 J	46.4	0.19	6.23					
03/2012	50 U	50 U	50 U	13 J	50 U	50 U	3.3 J	5 U	12000	50 U	50 U	50 U	98.6	1.6 J	42.6	0.21	6.12					
06/2012	0.8 U	1 U	0.8 U	13	0.8 U	1 U	2.2 J	1 U	12000	0.8 U	1 U	1 U	84.7	2.2 J	42.7	0.21	6.43					
09/2012	0.8 UJ	1 U	0.8 U	5.6	0.8 U	1 U	2.9 J	1 U	11000	0.8 U	1 U	1 U	79.7	1.5 UJ	41.8	0.18	6.64					
12/2012	0.8 UJ	1 U	0.8 U	1.5 J	0.8 U	1 U	2.6 J	1 U	3500	0.8 U	1 U	1 UJ	68.3	1.8 J	42	0.16 J	6.51					
04/2013	0.8 U	6.9	1 J	0.8 U	0.8 U	1 U	1.4 J	1 U	8100	0.8 U	1 U	1 U	54.6	2.8 J	48.2	0.15 J	6.39					
07/2013	8 U	10 U	8 U	8 U	8 U	10 U	2.5 J	1 U	12000	8 U	10 U	10 U	52	5.2	46.4	0.29						
10/2013	0.8 UJ	8.4 J	0.8 UJ	0.8 UJ	0.8 UJ	1 UJ	1.6 J	1 U	9200	0.8 UJ	1 UJ	1 UJ	62.8	14.7	43.7	0.21	6.5					
12/2013	0.8 U	2.3 J	0.8 U	0.8 U	0.8 U	1 U	1.9 J	1 U	14000	0.8 U	1 U	1 U	71.9	11.9	40.1	0.23	6.22					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR- 5SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	4 U	5 U	3100	31	5.4 J	350	3.3 J	48	3200	4 UJ	5 U	5 U	281	15	2.53	26.3	5.82					
08/2011	5 U	5 U	42	32	5 U	63	21	610	7600	5 U	2.4 J	5 U	203	12.4	0.676	49.6	6.54					
11/2011	5 U	5 U	2.9 J	28	5 U	9.4	220	440	14000	5 U	1.9 J	5 U	213	4.1 J	1.5	8.6	6.61	2.0E+03	1.6E+04	6.1E+04	2.5E+04	1.3E+05
03/2012	5 U	5 U	43	65	5 U	45	400	450	15000	5 U	2.3 J	1.8 J	258	2.4 J	12.1	4.2	5.87	2.2E+04	2.1E+03	3.8E+05	2.2E+04	3.7E+05
06/2012	0.8 U	1 U	5.3	56	0.8 U	11	130	76	12000	0.8 UJ	1.7 J	1.9 J	139	1.5 U	11.3	3.1	6.38	2.6E+03	1.0E+03	4.8E+04	2.8E+03	9.1E+04
09/2012	0.8 U	1 U	2.3 J	4.9 J	0.8 U	16	110	23 J	12000	0.8 U	1.2 J	2.1 J	36.4	1.5 UJ	5.4	1.3	6.4	2.5E+02	6.0E+02	2.0E+03	7.9E+02	7.1E+03
12/2012	0.8 U	1 U	2.6 J	0.8 U	0.8 U	13	190	20	15000	0.8 U	1.2 J	1 U	32.5	1.9 J	6.52	1.2	6.38	3.0E+02	4.6E+01	6.1E+03	3.6E+02	1.4E+02
04/2013	0.8 U	1 U	72	2.6 J	0.8 U	230	380	400	28000 J	0.8 U	1 U	1.6 J	12.8	276	11.5	1.7	6.68	1.3E+04	3.4E+02	1.1E+05	5.9E+03	8.7E+02
07/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1.6 J	350	10	15000	0.8 U	1.4 J	1.4 J	20.6	3 J	3.19	3.6	6.5	1.8E+03	1.4E+02	1.8E+04	2.0E+03	3.1E+03
10/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	130	1.7 J	16000	0.8 U	1.6 J	1 U	21.7	1.5 U	7.77	1.7	6.16	2.0E+03	5.9E+02	3.2E+04	4.3E+03	6.0E+02
12/2013	0.8 U	1 U	1.3 J	0.8 U	0.8 U	2.3 J	180	6.6	16000	0.8 U	1.2 J	1 J	29.8	9.4	10.7	1.1	6.15	1.6E+03	7.9E+01	4.4E+03	8.0E+02	3.3E+02

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR- 6SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	4 UJ	10 J	4500 J	62 J	8.2 J	530 J	3.4 J	11 J	810 J	4 UJ	22 J	5 UJ	1420	263	97.7	1.2	5.46					
08/2011	25 U	25 U	2500	34	25 U	430	5 U	12	6600	25 U	7.3 J	10 J	1730	6.3	143	0.49	6.26					
11/2011	5 U	5 U	78	52	5 U	130	6.8	250	7000	5 U	5.2	16	982	4.7 J	97.7	0.9	6.73	1.1E+05	1.3E+04	5.5E+05	8.5E+04	1.6E+06
03/2012	50 UJ	50 UJ	530 J	56 J	50 UJ	420 J	49	140	13000	50 UJ	50 UJ	50 UJ	336	45	62.9	0.91	6.26	5.6E+04	1.0E+04	8.8E+05	2.8E+04	8.5E+05
06/2012	8 UJ	10 UJ	950 J	110 J	8 UJ	420 J	94 J	180 J	8000	8 UJ	10 UJ	19 J	243	6.5 J	45.4	3.4	6.43	2.6E+04	3.2E+03	8.5E+05	8.8E+03	6.3E+05
09/2012	0.8 U	1 U	3.8 J	12	0.8 U	4.4 J	42	1 U	8600	0.8 U	1 U	3.9 J	150	1.5 UJ	45.6	0.31	6.55	8.9E+02	5.0E+02	1.5E+04	7.1E+02	5.4E+04
12/2012	0.8 U	1 U	81	13	0.8 U	74	71	20	13000	0.8 U	1 U	2.7 J	91	53.6	38	1.4	6.5	1.0E+03	4.8E+02	2.9E+04	4.5E+02	3.0E+03
04/2013	0.8 U	3.6 J	8900	260	7.3	3000	1000	660	10000 J	3.6 J	12	1 U	64.9	254	15.2	18.4	6.8	3.8E+03	1.8E+03	5.1E+05	1.3E+04	4.9E+03
07/2013	2 U	9.3 J	10000	330	6.7 J	3100	900	670	9000	2 U	14	13	85	90.2	7.15	31.6	6.78	1.4E+03	1.8E+02	2.5E+04	7.0E+03	7.4E+03
10/2013	8 U	10 U	120	36 J	8 U	77	130 J	240 J	9500 J	8 U	10 U	10 U	88.3	4 J	7.04	10	6.52	1.4E+03	4.7E+02	1.1E+05	3.8E+04	1.3E+03
12/2013	0.8 U	1 U	800	32	0.8 U	180	88	74	12000	0.8 U	2.3 J	3.1 J	62.9	43.5	7.06	6.3	6.47	3.2E+03	3.2E+02	5.6E+04	4.6E+04	1.1E+04

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR- 9SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	1.6 U	6.6 J	870	22	1.6 U	190	2.8 J	6.1	1700	1.6 U	2 U	2 U	830	24.6 J	9.48	18.6	5.8					
08/2011	25 U	95	8400	38	43	1100	2.7 J	58	4200	320	230	27	1290	66.5	35.7	6.4	5.71					
11/2011	5 U	5 U	26	10	5 U	18	16	78	11000	5.3	44	74	384	6.5	7.49	11.7	6.54					
03/2012	5 U	1.1 J	38	3.9 J	5 U	23	35	30	17000	4.4 J	6.5	13	56.4	48.6	0.0153 J	99.7	6.77					
06/2012	8 U	16 J	4000	19 J	12 J	910	14	170	13000	73	25 J	20 J	172	115 J	0.195 J	34.2	6.44					
09/2012	0.8 UJ	1.1 J	300	5.2	2 J	150	8	46	12000	9.9	7.4	14	67.1	30.6 J	0.164 J	25.8	6.22					
12/2012	0.8 U	1.7 J	350	3.3 J	2.2 J	130	6.6	29	14000	17	7.1	14	26.6	82.4	0.0333 U	42.7	6.42					
04/2013	0.8 U	1.5 J	530	3.8 J	2.3 J	290	50	160	16000 J	13	6.7	4 J	13.9	172	0.0333 U	104	7.07					
07/2013	0.8 U	4 J	1800	10	7.8	540	10	73	18000	27	12	4.7 J	19.3	104	0.043 U	60.9	6.67					
10/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1.6 J	8.1	6.8	13000	0.8 U	1 U	2.6 J	13.9	30.8	0.462	28.3	6.5					
12/2013	0.8 U	1 U	2.1 J	0.8 U	0.8 U	5.3	25	9.8	22000	0.8 U	1 U	1.6 J	10.1	32.2	0.043 U	37.6	6.84					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR-10SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	0.8 UJ	3.1 J	270 J	3.6 J	2.6 J	37 J	1.5 J	3.5 J	690 J	14 J	42 J	1.9 J	1650	287 J	98.2	1.7	6.08					
08/2011	50 U	50 U	940	11 J	50 U	210	1.2 J	13	5200	28 J	73	15 J	1690	17.6	113	0.62	4.79					
11/2011	5 U	5 U	3.2 J	5.9	5 U	5.1	11	18	13000	5 U	9.5	39	616	4 J	62.6	0.14 J	6.86					
03/2012	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	9.5	5 U	9500	50 UJ	50 UJ	28 J	154	38.5	25.8	1.2	6.32					
06/2012	0.8 UJ	1 UJ	0.8 UJ	2.5 J	0.8 UJ	1 UJ	6.3 J	1 UJ	11000	0.8 UJ	1 UJ	12 J	102	27.8 J	14.6	3.1	6.9					
09/2012	0.8 UJ	1 U	0.8 U	2.8 J	0.8 U	1 U	14	1 U	7000	0.8 U	1 U	15	83.8	1.5 UJ	12	1	6.93					
12/2012	0.8 U	1 U	3.5 J	0.8 U	0.8 U	13	6.6	8.4 J	13000	0.8 U	1 U	5.9 J	36.4	33.9	8.64	1.6	6.47					
04/2013	0.8 U	1 U	0.8 U	0.84 J	0.8 U	1 U	30	1.2 J	18000 J	0.8 U	1 U	12	31.2	226	4	13.5	6.48					
07/2013	0.8 U	1 U	0.8 U	0.84 J	0.8 U	1 U	11	1 U	10000	0.8 U	1.1 J	5.5	33.7	107	1.96	25.6	6.66					
10/2013	8 U	10 U	55	8 U	8 U	170	19	130	16000	8 U	10 U	10 U	30.8	16.1	1.94	16.9	6.5					
12/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	15	1 U	17000	0.8 U	1 U	2.5 J	28.1	73.3	4.63	6.7	6.56					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR-13SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	1.6 U	14	900	10	7.8 J	210	1.7 J	12	240	35	150	2.8 J	1710	357 J	121	1.4 J	5.49					
08/2011	50 U	50 U	460	8.6 J	50 U	160	5 U	23	4500	50 U	95	47 J	1830	17	135	0.67	6.27					
11/2011	25 U	25 U	66	6.3 J	25 U	59	1.3 J	23	8300	25 U	25	43	1020	2.5 J	102	0.42	6.7	1.5E+02	1.2E+03	4.3E+04	9.2E+04	6.4E+04
03/2012	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	8.6	21	6800	50 UJ	50 UJ	62 J	233	19	70.6	1.3	6.27	3.6E+02	7.6E+03	7.0E+05	4.9E+04	3.2E+05
06/2012	0.8 U	1 U	0.91 J	11	0.8 U	1 U	7.4	6.8	7700	0.8 UJ	6.9	44	192	14.2 J	51	0.63	6.49	1.4E+02	3.0E+03	1.0E+05	7.1E+03	8.0E+04
09/2012	4 U	5 U	4 U	4 U	4 U	5 U	3.3 J	1 U	6800	4 U	5 U	18 J	146	1.5 U	53.3	0.21	6.39	2.0E+01	6.4E+02	1.2E+04	1.4E+03	1.3E+04
12/2012	0.8 U	1 U	0.8 U	2.2 J	0.8 U	1 U	4.3 J	1 U	13000	0.8 U	1 U	16	95.4	14.6	37	0.79	6.93	7.0E+00	1.2E+02	1.1E+03	5.2E+01	8.2E+00
04/2013	0.8 U	1 U	0.8 U	1.8 J	0.8 U	1 U	7.7	5.2	15000	0.8 U	1.9 J	17	54.9	50	25.5	11.4	6.58	2.5E+01	1.6E+03	6.1E+03	7.0E+02	1.6E+01
07/2013	0.8 U	1.2 J	0.8 U	1.1 J	0.8 U	1 U	1.9 J	1.1 J	8200	0.8 U	1 U	13	54.8	3.5 J	18.7	6	6.6	1.4E+02	3.7E+02	1.3E+02	4.7E+01	5.9E+00
10/2013	8 U	10 U	8 U	8 U	8 U	10 U	2.7 J	1.9 J	12000	8 U	10 U	10 U	51.3	13.4	20.1	4.5	6.4	5.7E+00	1.0E+03	1.1E+03	2.8E+02	8.2E+00
12/2013	4 U	5 U	4 U	4 U	4 U	5 U	3.1 J	1 U	12000	4 U	5 U	6.7 J	56.9	2.5 J	23.1	1.6	6.58	1.4E+00	3.0E+02	5.3E+02	2.2E+01	4.3E+01

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR-14SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	1.6 U	2 U	450	2.9 J	1.6 U	17	1.5 J	2.4 J	6300	1.6 U	2 U	2 U	2030 J	11 J	136	0.52 J	5.28					
08/2011	50 U	50 U	350	50 U	50 U	50 U	5 UJ	5 UJ	5500 J	50 U	50 U	50 U	1870	2.1 J	122	0.15 J	6.43					
11/2011	25 U	25 U	25 U	25 U	25 U	25 U	5 UJ	1.9 J	9300	25 U	25 U	25 U	426	3.1 J	76.5	0.12 J	6.97	5.3E+02	2.4E+03	5.0E+04	1.4E+04	2.0E+05
03/2012	50 U	50 U	50 U	50 U	50 U	50 U	5 U	5 U	9300	50 U	50 U	50 U	202	33.3 J	69.3	0.11 J	6.07	1.1E+03	1.5E+04	1.8E+05	2.6E+04	3.1E+05
06/2012	8 UJ	10 UJ	8 UJ	8 UJ	8 UJ	10 UJ	3.6 J	2.1 J	11000	8 UJ	10 UJ	10 UJ	179	217	51	1.4	6.67	4.1E+01	1.9E+03	1.7E+04	9.9E+02	3.0E+04
09/2012	0.8 U	1 U	0.8 U	0.97 J	0.8 U	1 U	2.6 J	1 U	7700	0.8 U	1 U	1 U	162	51.9	40.1	2.7	6.8	1.1E+01	5.0E+02	3.9E+03	2.5E+02	4.3E+03
12/2012	4 U	5 U	4 U	4 U	4 U	5 U	4.9 J	3.8 J	12000	4 U	5 U	5 U	146	196	38.6	4.8	6.24	9.7E+01	2.7E+02	2.5E+03	2.6E+02	1.7E+03
04/2013	0.8 U	1 U	0.8 U	0.85 J	0.8 U	1 U	5.7	4.9 J	14000	0.8 U	1 U	1 U	99.7	233	17.4	7.4	6.6	7.4E+01	2.1E+03	1.1E+04	9.9E+02	5.1E+01
07/2013	0.8 U	1 U	0.8 U	0.8 J	0.8 U	1 U	6	6.9	11000	0.8 UJ	1 U	1 U	99.1	319	9.61	13.4	6.68	1.4E+02	5.3E+02	1.7E+03	1.4E+02	1.3E+02
10/2013	8 UJ	10 UJ	8 UJ	8 UJ	8 UJ	10 UJ	14 J	14 J	12000 J	8 UJ	10 UJ	10 UJ	79.8	19.6	5.14	8.4	6.58	3.3E+02	1.2E+03	6.2E+03	6.6E+02	1.0E+02
12/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1.9 J	8.4	7.5	11000	0.8 U	1 U	1 U	82.6	273 J	3.49	33.5	6.61	1.6E+03	9.2E+02	7.8E+03	2.0E+02	1.4E+03

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR-15SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	0.8 U	4.6 J	120	2.4 J	0.8 U	50	3 J	7.2 J	1900 J	0.8 U	1 U	1 U	2190	11 J	167	0.5	6.5					
08/2011	50 U	50 U	180	50 U	50 U	58	5 UJ	2.2 J	7200 J	50 U	50 U	50 U	2060	1.9 J	167	0.12 J	5.15					
11/2011	25 U	25 U	25 U	4.3 J	25 U	25 U	2.5 J	8.2 J	9000	25 U	25 U	25 U	682	5 U	106	0.16 U	6.75					
03/2012	50 U	50 U	50 U	50 U	50 U	50 U	3.6 J	5 U	8200	50 U	50 U	50 U	270	2.2 J	95.7	0.071 J	6.51					
06/2012	0.8 U	1 U	0.8 U	2 J	0.8 U	1 U	1.7 J	1 U	8300	0.8 U	1 U	1 U	267	1.5 U	67.3	0.054 U	6.64					
09/2012	0.8 UJ	1 U	0.8 U	0.8 U	0.8 U	1 U	2.3 J	1 U	11000	0.8 U	1 U	1 U	237	1.5 UJ	68.8	0.054 U	6.98					
12/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	1.8 J	1 U	11000 J	0.8 U	1 U	1 U	250	1.5 U	76.3	0.054 U	6.98					
04/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	1 U	2.3 J	1 U	17000	0.8 U	1 U	1 U	177	1.5 U	78.6	0.054 U	6.79					
07/2013	8 U	10 U	8 U	8 U	8 U	10 U	1.4 J	1 U	10000	8 U	10 U	10 U	173	1.5 U	71.4	0.055 J	6.54					
10/2013	40 UJ	50 UJ	40 UJ	40 UJ	40 UJ	50 UJ	1.1 J	1 U	14000	40 UJ	50 UJ	50 UJ	171	1.5 U	71.3	0.054 U	6.51					
12/2013	8 U	10 U	8 U	8 U	8 U	10 U	2.2 J	1 U	11000	8 U	10 U	10 U	170	1.5 U	72.7	0.054 U	6.75					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **OR-18SM**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	0.8 U	2.3 J	370	6.6	0.8 U	180	5.5	20	2800	0.8 U	1.3 J	1 U	549	968 J	21.2	27	6.84					
08/2011	50 U	50 U	390	50 U	50 U	150	2.2 J	14	7800	50 U	50 U	50 U	485	600	0.767	89.4	6.27					
11/2011	5 U	5 U	17	2.1 J	5 U	29	3.7 J	26	15000	5 U	5 U	5 U	62.1	581 J	0.0159 J	92.8	6.69					
03/2012	5 U	5 U	3.4 J	3.3 J	5 U	13	8.8	28	12000	5 U	5 U	5 U	64.9	348 J	0.0529 J	44.3	6.15					
06/2012	0.8 U	1 U	9.4	3.7 J	0.8 U	22	14	38	17000	0.8 U	1 U	1 U	105	280	0.0597 J		6.49					
09/2012	0.8 UJ	1 U	9.3	4.1 J	0.8 U	30	18	190	7900	0.8 U	1 U	1 U	88.1	255 J	0.0333 U	81	6.26					
12/2012	0.8 U	1 U	160	7	0.8 U	210	12	340	14000 J	0.8 U	1 U	1 U	27.4	257	0.0333 U	68.8	6.89					
04/2013	0.8 U	1 U	16	2.3 J	0.8 U	22	23	27	16000	0.8 U	1 U	1 U	22.3	226	0.0333 U	29.6	6.9					
07/2013	0.8 U	1 U	5.7	1.4 J	0.8 U	14	18	26	11000	0.8 U	1 U	1 U	5.7	398	0.043 U	32.6	6.75					
10/2013	0.8 U	1 U	79	2.7 J	0.8 U	82	16	110	13000	0.8 U	1 U	1 U	14.9	210	0.043 U	67.5	6.42					
12/2013	0.8 U	1 U	16	1.5 J	0.8 U	33	15	52	17000	0.8 U	1 U	1 U	21.2 J	121	0.043 U	70.8	6.44					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 1D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	930 J	180000	36000	5000 U	5000 U	2100	5.1	19	120	5000 U	5000 U	5000 U	11.8	1460								
07/2008	280 J	17000 J	82000 J	200 J	260 J	3900 J	3.8 J	16 J	68 J	2500 UJ	2500 UJ	2500 UJ	22.4 J	2200 J								
10/2008	5000 U	38000	110000	1900 J	310 J	2200	14	23	230	5000 U	5000 U	5000 U	33.1	1210								
12/2008	2500 U	14000	130000 J	1500 J	280 J	4800	18	25	200	2500 U	2500 U	2500 U	44.5	1530								
06/2009	5000 U	53000	97000	5000 U	5000 U	3400	18	23	190	5000 U	5000 U	5000 U	49.3	1380	0.0661 J	63.9						
10/2009	5000 U	64000	100000	5000 U	5000 U	5200	23	30	210	5000 U	5000 U	5000 U	22.9	1350	0.0317 U	56.3						
07/2010	80 U	8800	78000	110 J	180 J	8800	26	54	170	80 U	100 U	100 U	10.4	1820 J	0.0522 U	20.4						
06/2011	150 J	22000	42000	80 U	130 J	1900	5 J	26	64	230 J	100 U	100 U	7.9	1580	0.606	2.5	7.1					
08/2011	250 U	1100	49000	85 J	130 J	3300	10	80	890	55 J	250 U	250 U	26	1470 J	0.086 J	68.9	7.45					
11/2011	45 J	25000	22000	250 U	58 J	550	5	28	83	120 J	250 U	250 U	36.5	664	0.157 J	44.7	6.86					
03/2012	100 U	2100	19000	36 J	49 J	1200	3.9 J	34	160	150	48 J	100 U	6.2	900	0.2 U	36.9	6.95					
06/2012	16 U	1900	26000	60 J	71 J	2100	4.9 J	61	2200	240	43 J	20 U	6.2	1150	0.0333 U	29	6.97					
09/2012	8 U	860	17000	36 J	41 J	2200	8.2 J	57 J	1100	200	43 J	10 U	6.4	700 J	0.036 J	21.2	7.02					
12/2012	16 U	180	36000	190	26 J	840	10	49	250	18 J	20 U	20 U	1550	6.8	240	3	5.75					
04/2013	40 U	230 J	43000	180 J	40 U	3100	36	140	2600	40 U	50 U	50 U	1380	5.5 J	180	14.4	5.89					
07/2013	0.86 J	12	750	4.7 J	0.93 J	60	1.5 J	20	3000	0.95 J	1 U	1 U	73.6	4.8 J	1.29	7.7	7.15					
10/2013	8 U	10 U	9500	18 J	8 U	3400	27	1500	11000	8 U	10 U	10 U	316	1.5 U	36.4	1.8	6.09					
12/2013	2 U	4.9 J	3300	15	6.2 J	3100	21	1500	8200	2.2 J	7.3 J	2.5 U	146	12.7	11.8	1.2	6.17					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 1S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	8 U	13 J	6700	38 J	11 J	400	1.2 J	11	34	8 U	10 U	10 U	196	133	0.305	63.8	6.59					
08/2011	25 U	25 U	4800	94	5.1 J	2600	8.6	690	3500	25 U	25 U	25 U	503	5 U	21.6	2	6.23					
11/2011	5 U	5 U	150	81	5 U	320	270	2100	8100	5 U	2.9 J	1.8 J	561	3.1 J	30.6	2	6.3	7.3E+03	5.1E+02	3.1E+04	2.1E+04	3.4E+04
03/2012	5 U	5 U	390	74	4 J	660	1000	590	22000	5 U	2.6 J	2 J	88.3	4.9 J	5.24	1.6	6.51	2.3E+04	3.0E+03	1.8E+06	8.0E+04	1.4E+06
06/2012	0.8 U	1.4 J	200	27	1.1 J	160	1700	500	20000	0.8 U	1.1 J	1 U	29.3	14.7	1.63	8.9	6.57	4.4E+03	1.3E+03	7.9E+05	2.3E+04	6.0E+05
09/2012	0.8 U	1.9 J	290	8.7	1.7 J	310	1600	1000	15000	0.8 U	1.3 J	1 U	15.6	51.7 J	1.64	4.8	6.58	7.0E+04	1.7E+03	4.9E+04	5.3E+01	1.8E+02
12/2012	0.8 U	1.7 J	420	11	1.3 J	410	410	420	9600	0.8 U	1.4 J	1 U	7.2	95.9	0.414	2.4	7.23	6.5E+03	4.9E+01	1.3E+05	4.5E+03	8.0E+04
04/2013	1.3 J	110	710	16	3.5 J	380	240	340	15000 J	0.8 U	5.5	1 U	20.3	136	1.65	9.1	6.79	6.8E+03	1.2E+03	3.0E+05	1.7E+04	1.1E+03
07/2013	0.8 U	4.8 J	320	16	1.2 J	270	220	360	4500	0.8 U	7.1	1 U	37	46.4	0.043 U	20.1	7.41	3.4E+03	2.7E+01	3.6E+05	9.8E+03	3.4E+04
10/2013	0.8 U	2.1 J	1300	27	8.6	820	900	350	14000	0.8 U	7.4	1 U	33.4	10.8	0.0631 J	17.1	6.9	1.5E+03	1.1E+03	1.2E+05	5.4E+03	9.8E+03
12/2013	0.8 U	4.4 J	720	27	5.8	650	1000	500	20000	0.8 U	6.2	3.7 J	6	8.3	0.206 J	9.3		2.4E+05	7.8E+03	6.0E+06	4.4E+05	9.0E+05

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 2D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	910 J	110000	27000	5000 U	5000 U	1600 J	6.9	19	87	5000 U	5000 U	5000 U	7.62	1410								
07/2008	5000 U	1100 J	150000	580 J	380 J	1800 J	7.6	34	110	5000 U	5000 U	5000 U	1020	1250								
09/2008	5000 U	3200 J	120000	680 J	210 J	2600	5.8	16	89	5000 U	5000 U	5000 U	748	843								
12/2008	1000 U	2300	76000	260 J	88 J	1600	6.6	9.3	39	1000 U	40 J	1000 U	194	270								
06/2009	2500 U	3600	61000	2500 U	2500 U	1400	14	50	390	2500 U	2500 U	2500 U	723	71.8	7.91							
10/2009	2500 U	3700	63000	140 J	2500 U	1400	9.3	26	110	2500 U	2500 U	2500 U	782	111	0.986	109						
07/2010	40 U	6900	100000	220 J	110 J	5000	11	200	660	40 U	63 J	50 U	442	69.6 J	0.105 J	165						
06/2011	160 U	12000	97000	270 J	160 U	1700	5.4	180	750	160 U	200 U	200 U	462	28.2 J	0.0272 J	210	5.83					
08/2011	500 U	15000	93000	250 J	140 J	2300	7.9	200	260	500 U	500 U	500 U	471	241 J	0.0279 J	207	6.77					
11/2011	1000 U	30000	130000	250 J	1000 U	3000	4.3 J	98	330	1000 U	1000 U	1000 U	356	76	1.21	165	6.5	1.6E+04	1.4E+04	1.6E+05	9.1E+03	8.0E+03
03/2012	310 J	49000	120000	210 J	180 J	2700	7.4	170	2000	500 U	500 U	500 U	137	665 J	0.0358 J	209	6.39	1.0E+04	2.2E+03	7.3E+03	4.0E+02	4.4E+03
06/2012	160	27000	80000	160	130	1700	19	180	2600	40 J	34 J	10 U	148	202 J	0.0141 U	150	6.68	8.2E+02	4.8E+02	4.8E+03	2.5E+02	4.3E+03
09/2012	73 J	16000	91000	190 J	160 J	2100	21	200	2200	40 U	50 U	50 U	215	118	0.0333 U	171	6.31	2.5E+03	3.0E+03	2.7E+04	8.1E+02	2.1E+03
12/2012	80 U	9500	150000	220 J	190 J	2500	14	160	2000	80 U	100 U	100 U	790	99.5	0.0569 J	106	6.3	6.5E+03	2.3E+03	1.2E+04	8.0E+03	9.6E+02
04/2013	40 U	700	130000	160 J	71 J	1500	15	140	2900	40 U	56 J	50 U	821	41.6	0.0333 U	206		1.8E+04	1.2E+04	4.6E+04	2.0E+03	9.2E+01
07/2013	40 U	1100	76000	94 J	52 J	2300	5 J	120	1800	40 UJ	50 U	50 U	288	180	0.043 U	193	6.68	2.5E+03	7.3E+03	1.8E+03	6.8E+02	1.3E+02
10/2013	160 U	9000	150000	230 J	160 J	3600	10	170	4700	160 U	200 U	200 U	485	81.6	0.043 U	223		4.6E+02	3.8E+02	8.9E+02	7.6E+02	1.7E+01
12/2013	140 J	22000	110000	180 J	140 J	4600	12	240	2800	80 U	100 U	100 U	286	300	0.043 U	159	6.64	2.6E+04	1.8E+03	3.9E+04	1.4E+04	2.9E+03

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 2S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	8 U	17 J	6000	66	9.2 J	710	2.5 J	19	370	8 U	10 U	10 U	292	87.2	1.54	45.8	6.18					
08/2011	25 U	25 U	2800	100	25 U	1400	9.5	1200	5900	25 U	25 U	25 U	447	5 U	10.4	9.1	6.19					
11/2011	5 U	5 U	630	88	1 J	680	150	1300	13000	5 U	2.8 J	5 U	437	2.6 J	23.9	1.7	6.12	1.5E+04	7.5E+02	5.3E+04	1.7E+04	1.4E+05
03/2012	10 U	10 U	1700	92	3.1 J	1300	300	390	14000	10 U	2.9 J	10 U	260	22.3	19.7	1.1	5.99	2.1E+05	7.3E+02	1.7E+06	8.8E+04	1.2E+06
06/2012	0.8 U	2.8 J	390	63	1.6 J	350	190	220	13000	0.8 UJ	2 J	1 U	234	1.8 J	21.6	1.1	6.54	1.2E+04	1.2E+03	4.2E+05	1.3E+04	3.5E+05
09/2012	1.6 U	2.7 J	550	31	1.6 U	490	220	130	14000	1.6 U	2 U	2 U	44.7	7.6	6.87	2.2	6.41	6.9E+03	1.2E+03	3.0E+05	2.9E+04	6.6E+04
12/2012	0.8 U	88	270	13	0.8 U	220	300	110	13000	0.8 U	1.1 J	1 U	19.4	34.1	5.73	0.89	6.58	5.1E+03	2.0E+02	1.0E+05	2.6E+03	6.6E+03
04/2013	0.8 U	1.5 J	180	7.1	0.8 U	130	340	74	20000 J	0.8 U	1.2 J	1 U	6.6	319	1.61	4.9	6.72	6.9E+03	4.1E+03	2.1E+05	1.1E+04	1.5E+03
07/2013	0.8 U	1 J	39	6	0.8 U	37	230	100	19000	0.8 UJ	1.8 J	1 U	21.4	5.3	0.671	10.3	6.51	2.6E+03	1.6E+02	2.4E+04	9.0E-01	8.6E+02
10/2013	0.8 U	1 U	100	9.1	0.8 U	130	380	300	16000	0.8 U	3.1 J	1 U	20.2	2.5 J	1.28	6.4	6.3	3.6E+03	5.9E+02	2.4E+05	1.2E+04	4.7E+03
12/2013	0.8 U	1 U	220	13	0.8 U	190	420	240	16000	0.8 U	2.8 J	1.3 J	26.1	1.6 J	5.6	1.5		8.2E+03	2.3E+02	5.1E+04	4.1E+03	7.2E+03

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 3D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	1400 J	240000	31000	5000 U	5000 U	640 J	9.6	20	82	5000 U	5000 U	5000 U	11	987								
07/2008	2500 U	540 J	83000	210 J	2500 U	760 J	16	24	120	2500 U	2500 U	2500 U	1800	1170								
09/2008	13 J	1000	9000	50 J	15 J	99 J	35	4.7	160	16 J	250 U	250 U	558	1010								
12/2008	250 U	550	5600	26 J	250 U	130 J	6.4	8.7	36	250 U	250 U	250 U	204	750								
06/2009	250 U	1200	9900	29 J	250 U	250	27	34	580	250 U	250 U	250 U	240	817	0.0562 J	166						
10/2009	250 U	2100	11000	32 J	30 J	150	25	15	250	250 U	11 J	250 U	141	858	0.0317 U	184						
07/2010	33 J	12000	29000	53 J	51 J	240	20	23	880	20 U	25 U	25 U	153	972 J	0.0522 U	156						
06/2011	57 J	19000	20000	46 J	55 J	540	16 J	13 J	2400 J	21 J	24 J	20 U	71.4	1060	0.0141 U	182	7.14					
08/2011	7.7 J	2600	4300	9.3 J	9.6 J	63	35	26	3300	25 U	6.7 J	25 U	107	731	0.2 U	211	7.17					
11/2011	50 J	11000	15000	26 J	31 J	430	22	50	2900	100 U	100 U	100 U	44.1	987	0.2 U	207	6.95					
03/2012	13 J	3300	6600	14 J	17 J	150	18	19	5800	25 U	15 J	25 U	132	482 J	0.2 U	224	6.83					
06/2012	20 J	5000	8900	18 J	20 J	210	5.3	14	1900	22 J	27 J	10 U	167	505 J	0.0333 U	173	6.67					
09/2012	38 J	5600	13000	25 J	31 J	290	29	58	4200	33 J	33 J	10 U	148	601	0.0333 U	173	6.87					
12/2012	30	3000	16000	20 J	22 J	270	14	18	3200	11 J	26	5 U	345	752	0.0333 U	323	6.36					
04/2013	40 U	1700	25000	40 U	40 U	350	12	28	5500	40 U	50 U	50 U	323	309 J	0.342	279	6.85					
07/2013	43 J	7400	66000	85 J	70 J	1100	15	72	5400	17 J	83 J	20 U	418	203	0.043 U	201	6.37					
10/2013	80 U	11000	57000	80 U	80 U	920	27	98	3300	80 U	100 U	100 U	351	326	0.043 U	252	6.45					
12/2013	40 U	6300	40000	56 J	51 J	630	26	76	2200	40 U	50 U	50 U	189	617	0.043 U	216	6.44					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 3S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	40 U	50 U	45000	610	76 J	6800	22	100	720	40 U	50 U	50 U	212	332	1.33	46.3	5.9					
08/2011	12 J	84	61000	1100	110	12000	32	810	4700	50 U	33 J	50 U	238	404 J	1.72	17.3	5.08					
11/2011	250 U	250 U	43000	960	65 J	27000	99	1700	9400	250 U	250 U	250 U	229	444	5.66	3.9	6.51	9.0E+04	1.7E+03	1.8E+05	2.5E+04	3.6E+05
03/2012	500 U	610	99000	1600	190 J	19000	260	1300	9400	500 U	500 U	500 U	78.3	849	2.64	8.7		2.0E+05	8.3E+02	7.7E+05	1.9E+04	6.0E+05
06/2012	80 U	660	65000	1200	150 J	13000	280	930	10000	80 U	100 U	100 U	84.8	1010	4.3	3.2	6.25	2.2E+05	9.3E+02	1.1E+06	1.1E+04	2.0E+05
09/2012	40 U	210 J	39000	760	60 J	8500	320	800	11000	40 U	50 U	50 U	31.2	228	3.4 J	2.5	6.2	2.9E+05	2.6E+02	4.8E+05	2.5E+04	8.7E+04
12/2012	40 U	600	85000	1300	150 J	13000	290	430	12000	40 U	50 U	50 U	12.8	883	4.56	0.37	6.08	6.6E+04	1.2E+01	1.2E+05	2.2E+03	1.5E+04
04/2013	23 J	330	29000	510	44 J	4900	660	1500	17000 J	16 U	24 J	20 U	13.7	950	0.502	17.2	6.56	1.7E+05	8.5E+02	1.4E+06	8.6E+04	1.9E+04
07/2013	80 U	310 J	45000	810	83 J	7600 J	260	1300	12000	80 UJ	100 U	100 U	15.9	648	0.628	21.2	6.56	3.6E+04	1.0E+02	6.1E+04	3.6E+03	7.6E+03
10/2013	40 U	200 J	30000	610	59 J	5100	400	2100	9900	40 U	50 U	50 U	30.6	552	0.847	16.9	6.4	1.7E+04	2.3E+02	2.5E+04	1.2E+04	3.0E+03
12/2013	5 J	86	13000	290	25 J	3100	310	900	9800	4 U	11 J	5 U	22.3	670	0.301 J	18.3		8.9E+04	3.1E+02	4.1E+05	1.4E+05	4.4E+04

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 4D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	1100 J	220000	36000	5000 U	5000 U	690 J	10	17	94	5000 U	5000 U	5000 U	12.2	1080								
07/2008	5000 U	3500 J	160000	510 J	350 J	1100 J	12	38	110	5000 U	5000 U	5000 U	237	1520								
09/2008	1300 U	5900	91000	990 J	140 J	1400	9.1	10	77	1300 U	1300 U	1300 U	227	108								
10/2008																						
12/2008	1000 U	1000	22000	140 J	1000 U	680 J	17	14	120	1000 U	1000 U	1000 U	113	635								
06/2009	1000 U	11000	65000	180 J	1000 U	1100	11	30	150	1000 U	1000 U	1000 U	105	2000	0.0322 J	173						
10/2009	500 U	3200	16000	59 J	39 J	550	20	19	250	500 U	23 J	500 U	63.2	1240	0.0317 U	232						
07/2010	40 U	3500	22000	66 J	40 U	620	20	24	1600	40 U	50 U	50 U	89.1	1230 J	0.0522 U	191						
06/2011	91 J	73000	69000	210 J	180 J	1300	11	48	2000	80 U	100 U	100 U	128	922	0.0141 U	177	7.53					
08/2011	100 U	16000	21000	56 J	45 J	510	31	95	3900	100 U	22 J	100 U	113	652 J	0.2 U	175	7.3					
11/2011	31 J	13000	20000	58 J	49 J	640	16	120	3900	100 U	29 J	100 U	95.5	460 J	0.0183 J	224	6.39					
03/2012	9.9 J	4600	14000	50	47	730	17	160	3900	9.6 J	29	25 U	133	450 J	0.2 U	224	6.79					
06/2012	13	1900	1800	9.2 J	9.1 J	83	31	61	4200	7 J	4.3 J	2 U	144	203 J	0.0333 J	187	6.87					
09/2012	150	15000	30000	64 J	78 J	960	15	150	3800	130	71 J	20 U	120	256 J	0.0333 U	215	6.77					
12/2012	24 J	930	51000	54 J	31 J	700	14	110	5000	61 J	96 J	20 U	1020	283	0.0333 U	247	6.67					
04/2013	78 J	730	24000	90 J	45 J	2500	37	620	7700	40 U	61 J	50 U	85.5	895	0.0333 U	157	6.69					
07/2013	18 J	470	39000	74 J	30 J	1200	16	210	6100	16 U	94 J	20 U	253	151	0.043 U	375	6.88					
10/2013	80 U	1100	53000	97 J	80 U	1400	28	360	5600	80 U	110 J	100 U	261	300	0.043 U	305	6.62					
12/2013	160 U	730 J	74000	160 U	160 U	2100	27	360	6600	160 U	200 U	200 U	301 J	284	0.043 U	230	6.87					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 4S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	4 U	78	2000	63	4 U	68	16	2.2 J	47	4 U	5 U	5 U	12.5	467 J	0.0141 U	0.054 U	7.38					
08/2011	4.4 J	130	3900	120	7.9 J	300	21	17	86	13 U	4.6 J	13 U	16.2	604	0.0149 J	0.16 U	6.77					
11/2011	50 U	250	8600	240	15 J	460	17	19	170	50 U	10 J	50 U	6.5	1310	0.145 J	0.16 U	6.39					
03/2012	9.7 J	340	14000	310	24 J	840	43	44	1600	50 U	14 J	50 U	3.5	1970	0.151 J	0.16 U	6.83					
06/2012	7.6 J	270	11000	280	20 J	660	38	110	2000	4.5 J	14 J	5 U	3.8	1400	0.0155 J	0.054 U	6.66					
09/2012	8 U	230	11000	270	20 J	1300	53	180	2500	8 U	12 J	10 U	5.8	1510	2.24 J	0.054 U	6.54					
12/2012	16 U	230	14000	350	22 J	860	68	53	6900 J	16 U	20 U	20 U	3.7	1980	0.991	0.054 U	6.65					
04/2013	3.2 J	270	13000	400	33	1100	110	48	11000	0.8 U	19	1 U	2.7	1770	0.386	0.054 U	6.64					
07/2013	8 U	180	12000	350	26 J	830	73	31	8200	8 U	14 J	10 U	3.4	1770	1.69	0.054 U	6.62					
10/2013	16 U	100	8500	240	17 J	560	220	49	9200	16 U	20 U	20 U	6.7	921	1.83	0.054 U	6.53					
12/2013	8 U	140	12000	320	25 J	750	130	48	7200	8 U	14 J	10 U	8.4	1530	1.07	0.054 U	6.18					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 5D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	1700 J	91000	11000	2500 U	2500 U	420 J	5.9	19	60	750 J	2500 U	2500 U	4.8	710								
07/2008	5000 U	950 J	100000	430 J	5000 U	1800 J	10	72	120	5000 U	5000 U	5000 U	332	982								
09/2008	2500 U	4800	92000	500 J	200 J	2400	8.8	18	85	2500 U	2500 U	2500 U	383	730								
12/2008	2500 U	6900	71000	540 J	110 J	1300 J	15	21	100	2500 U	100 J	2500 U	196	352								
06/2009	1000 U	2100	27000	1000 U	1000 U	760	29	40	180	1000 U	1000 U	1000 U	306	179	0.0751 J	176						
10/2009	90 J	13000	73000	210 J	210 J	1900	20	35	200	1000 U	130 J	1000 U	351	490	0.0320 J	237						
07/2010	160 U	10000	94000	160 U	160 U	2300	17	130	290	160 U	200 U	200 U	334	171	0.0522 U	193						
08/2011	700	67000	69000	96 J	160 J	650	7.3	19	280	350	110 J	250 U	441	152	0.0212 J	241						
03/2012	500	47000	45000	56	120	580	24	140	1800	140	86	50 U	45.6	995	0.2 U	130						
06/2012	88 J	6800	8600	16 U	37 J	63 J	12	85	2400	44 J	20 U	20 U	57	246 J	0.0333 U	146						
09/2012	680	34000	34000	59 J	94 J	3700	14	150	4200	410	68 J	25 U	111	107 J	0.0333 U	146						
12/2012	80 J	1900	62000	40 U	40 U	1200	19	200 J	2900	140 J	100 J	50 U	1010	622	0.329	163						
04/2013	20 J	1200	45000	46	40	560	15	77	1500	99	85	5 U	455	97.7	0.0601 J	182						
07/2013	80 U	2700	52000	80 U	80 U	640	9.7	100	1300	80 U	100 U	100 U	293	83.3	0.043 U	188						
10/2013	90 J	8900	73000	91 J	81 J	2900	21	450	4600	44 J	97 J	50 U	254	326	0.043 U	184						
12/2013	250 J	21000	140000	150 J	210 J	4900	30	500	2600	80 UJ	140 J	100 U	307	150	0.043 U	161						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 5S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	80 U	2400	62000	1000	120 J	13000	42	250	300	81 J	100 U	100 U	6.7	1650 J	7.2	0.054 U	6.6					
08/2011	250 U	3000	56000	830	110 J	12000	54	320	670	250 U	250 U	250 U	5.5	1960	0.48	0.16 U	6.64					
11/2011	500 U	2600	59000	810	110 J	9300	31	200	250	500 U	500 U	500 U	5.8	1630	0.278	0.16 U	6.73					
03/2012	250 U	3000	48000	940	90 J	7800	53	230	680	250 U	250 U	250 U	6.6	1540	0.0387 J	0.16 U	6.83					
06/2012	8 U	3100	57000	1000	100	9800	68	450	800	8 UJ	16 J	10 U	5.8	1530	0.0551 J	0.054 U	6.61					
09/2012	1.6 U	2400	56000	710	82	10000	51	360	810	9.3 J	13	2 U	5.3	1310	0.623	0.054 U	6.83					
12/2012	16 U	1600	29000	550	47 J	4900	33	180	930 J	16 U	20 U	20 U	10.3	1000	0.0851 J	0.054 U	6.7					
04/2013	4 U	2300	39000	720	69	7800	58	350	2100 J	4 U	11 J	5 U	5.9	1390	0.258	0.054 U						
07/2013	8 U	1900	37000	710	68	7200	39	230	2700	8 U	11 J	10 U	8	1440	0.205	0.054 U	6.89					
10/2013	40 U	2300	37000	790	76 J	7800	56	370	2600	40 U	50 U	50 U	6.9	1390	0.17 J	0.054 U						
12/2013	16 U	1700	27000	580	56 J	5100	45	250	3100	16 U	20 U	20 U	8.2	1120	0.0705 J	0.054 U	6.39					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 6D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	1000 J	100000	17000	5000 U	5000 U	820 J	6.5	16	62	500 J	5000 U	5000 U	6.68	1030								
07/2008	5000 U	2200 J	140000	380 J	5000 U	1200 J	11	37	100	5000 U	5000 U	5000 U	627	1220								
09/2008	2500 U	2800	92000	540 J	160 J	1900 J	12	14	71	2500 U	2500 U	2500 U	565	610								
12/2008	500 U	310 J	17000	230 J	29 J	170 J	3.6	12	56	41 J	500 U	500 U	266	4.02								
06/2009	500 U	110 J	11000	53 J	500 U	650 J	8.9	53 J	23	34 J	500 U	500 U	199	12.9	0.0619 J	40.5						
10/2009	250 U	42 J	8200	57 J	250 U	2800	21	710	1900	30 J	14 J	250 U	701	36.7	1.59	43.8						
07/2010	16 U	300	8100	54 J	19 J	4000	33	650	4500	16 U	36 J	20 U	870	3.2 J	0.079 J	92						
06/2011	7.9	400	610	59	8.3	2000	16	1800	9400	8	59	1 U	989	4.3 J	0.0369 J	113	6.4					
08/2011	6.2 J	510	2100	48	13	1900	60	1800	8000	4.3 J	50	10 U	817	6.8 J	0.016 J	147	6.83					
11/2011	4.1 J	100	89	4.7 J	1.4 J	35	1.8 J	63	1700	0.86 J	2.5 J	5 U	28.8	21.6	0.0203 J	6.3	11.77	4.4E+01	1.4E+01	3.0E+02	5.0E-01	9.8E+02
03/2012	5 U	40	200	41	5 U	68	35	2800	17000	5 U	36	5 U	443 J	12.5	0.2 U	81.6	6.88	6.8E+04	1.6E+04	3.2E+06	6.1E+02	2.4E+06
06/2012	8.6 J	2200	21000	83	26	1600	24	980	8000	4 UJ	75	5 U	578	1050 J	0.0336 J	84.4	6.99	2.1E+04	7.0E+03	1.9E+06	2.4E+02	1.2E+06
09/2012	2.1 J	660	5100	54	9.7	2100	7.2 J	1300 J	7200 J	3.8 J	46	1 U	563	2.1 J	0.0333 U	111	6.79	1.3E+04	1.2E+03	2.2E+06	8.7E+04	1.1E+06
12/2012	16 U	850	38000	78 J	38 J	1800	20	330	8100	16 U	74 J	20 U	502	24.1	0.0333 U	149	6.9	6.3E+03	2.2E+02	1.2E+05	6.6E+03	3.1E+04
04/2013	40 U	2400	44000	92 J	40 U	1000	9.7	99	2800	40 U	83 J	50 U	466	428 J	0.0333 U	152		3.0E+04	5.2E+02	2.0E+05	1.7E+04	6.8E+03
07/2013	16 U	460	14000	42 J	16 U	480	21	210	2600	16 U	30 J	20 U	366	401	0.043 U	167	7	1.7E+04	1.4E+03	1.6E+05	1.2E+04	1.5E+02
10/2013	8 U	100	9000	28 J	11 J	280	9.7	300	3700	8 U	19 J	10 U	108	8.1	0.0858 J	3	7.13	4.1E+04	7.5E+03	1.0E+06	4.4E+05	7.5E+04
12/2013	4.6 J	3600	30000 J	70	40	1900	29	1000	4000	2.6 J	60	2 U	271	254	0.043 U	132		1.2E+05	1.4E+03	9.7E+05	6.4E+05	1.4E+05

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 6S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	16 U	28 J	10000	170	16 J	1400	13	59	1200	16 U	20 U	20 U	1400	244	104	1.3	5.59					
08/2011	25 U	22 J	8000	340	8.4 J	11000	30	630	4600	25 U	16 J	25 U	385	122	0.719	36.9	6.6					
11/2011	25 U	9.7 J	2700	270	25 U	3400	77	3900	8000	25 U	15 J	25 U	177	190	4.63	13.4	6.66					
03/2012	25 U	25 U	4300	220	8.2 J	3800	77	920	8700	25 U	8.4 J	25 U	48.3	372	29.6	0.35	6.58					
06/2012	8 U	10 U	3900	200	8 U	3100	78	510	11000	8 UJ	10 U	10 U	47.9	173 J	38.5	0.31	6.18					
09/2012	8 U	10 U	1500	88	8 U	2700	74	320	7900	8 U	10 U	10 U	56.3	140 J	35.7	0.26	6.76					
12/2012	1.6 UJ	4.1 J	3300	94	6.5 J	2400	68	360	10000	1.6 U	6.3 J	2 UJ	48.2	209	29.1	0.35	6.49					
04/2013	8 U	10 U	3300	110	8 U	1900	45	450	11000	8 U	10 U	10 U	39.8	184 J	27.8	0.68	6.38					
07/2013	0.8 U	2.1 J	1600	110	4 J	1600	22	220	6800	0.8 U	3.7 J	1 U	50.5	85.5	36.9	0.22	6.8					
10/2013	1.6 U	2 U	1000	57	1.9 J	1100	15	110	7400	1.6 U	2 U	2 U	55.8	88.2	32.3	0.25	6.37					
12/2013	1.6 U	4.5 J	2400	82	6.6 J	990	72	370	11000	1.6 U	4.1 J	2 U	45.7	137	27.5	0.32						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 7D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	950 J	160000	27000	5000 U	5000 U	860 J	7.2	18	80	5000 U	5000 U	5000 U	8.94	1170								
07/2008	5000 UJ	5000 UJ	120000 J	5000 UJ	5000 UJ	940 J	7.4 J	37 J	76 J	5000 UJ	5000 UJ	5000 UJ	417 J	984 J								
09/2008	5000 U	2300 J	100000	840 J	280 J	1700 J	7.5	13	59	5000 U	5000 U	5000 U	531	724								
10/2008																						
12/2008	1000 U	2400	84000	400 J	110 J	2600	7.8 J	6.3 J	230 J	1000 U	66 J	1000 U	476	72.3								
06/2009	2500 U	2600	50000	2500 U	2500 U	6300 J	9.9	120	2900	2500 U	2500 U	2500 U	483	42.4	0.0703 J	268						
10/2009	57 J	4500 J	58000	180 J	140 J	3900	10 U	420	4600 J	500 U	150 J	500 U	506	86.2	0.0461 J	178						
07/2010	24 J	1600	27000	63	66	790	33 U	150	7200	8 U	75	10 U	255	413	0.0522 U	195						
06/2011	270 J	45000	57000	120 J	150 J	1500	6.2 J	28 J	1600 J	89 J	100 U	100 U	58.1	1640	0.0354 J	155	6.8					
08/2011	150	19000	26000	48 J	61 J	530	15	57	1300	25 J	36 J	100 U	79.9	1890 J	0.0629 J	214	7.56					
11/2011	290	25000	32000	72 J	83 J	1400	11	160	4200	46 J	54 J	250 U	118	842 J	0.0461 J	168	5.99					
03/2012	180	15000	19000	42 J	43 J	890	17	270	4000	60 J	42 J	100 U	29.4	1020 J	0.0203 J	284	7.17					
06/2012	350	25000	31000	52 J	91 J	520	11	87	2600	270	77 J	50 UJ	25.5	950	0.0333 U	184	7.31					
09/2012	460	27000	32000	51 J	85 J	900	20	170	2900	260	81 J	25 U	29.1	358 J	0.0333 U	73.2	6.88					
12/2012	49 J	1200	51000	56 J	40 U	650	15	280	3900	78 J	120 J	50 UJ	689	965	0.13 J	293	5.95					
04/2013	68	840	28000	58	35 J	1000	32	430	4400	140	190	10 U	60.5	1300	0.0333 U	249	7.41					
07/2013	63 J	1400	21000	70 J	40 U	1300	34	340	4700	49 J	100 J	50 U	36.7	1150	0.043 U	220	7.34					
10/2013	86 J	830	31000	76 J	40 U	1800	30	400	8400	58 J	93 J	50 U	63.6	293	0.043 U	219	6.76					
12/2013	42 J	490	40000	66	49 J	1100	27	300	6200	89	270	10 U	72.9	927	0.043 U	228	6.99					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 7D PUMP**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2009	2500 U	3500	86000	220 J	2500 U	6600	10 UJ	30 J	640 J	2500 U	180 J	2500 U										

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 7D SNAP**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2009	2500 U	3600	73000	190 J	2500 U	3000	10 UJ	29 J	590 J	2500 U	130 J	2500 U										

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 7S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
07/2011	0.8 U	1 U	2 J	0.8 U	0.8 U	14	1.2 J	2.8 J	52 J	0.8 U	9.2	1 U	6.9	4820	3.14	0.054 U	6.53					
08/2011	5 U	5 U	13	5 U	5 U	11	5 U	1.2 J	18	5 U	140	5 U	7.6	4530	0.45	0.16 U	5.68					
11/2011	5 U	5 U	3 J	5 U	5 U	14	2 J	4.7 J	85	5 U	41	5 U	6	3840	3.17	0.16 U	6.66					
03/2012	5 U	5 U	11	5 U	5 U	1.7 J	5 U	5 U	7.4 J	5 U	84	5 U	6.3	3990	0.0784 J	0.16 U	0					
06/2012	0.8 U	1 U	3.7 J	0.8 U	0.8 U	2.8 J	1 U	1 U	10 J	0.8 UJ	54	1 U	6.3	4090 J	0.473	0.054 U	6.46					
09/2012	0.8 U	1 U	3.7 J	0.8 U	0.8 U	11	1 J	1 U	47	0.8 U	60	1 U	5.1	3900	0.607	0.054 U	6.77					
12/2012	0.8 U	1 U	9.8	0.8 U	0.8 U	1 U	1 U	1 U	4.9 J	0.8 U	150	1 U	3.5	2620	0.306	0.054 U	6.47					
04/2013	0.8 U	1 U	3.7 J	0.8 U	0.8 U	4.3 J	1 U	1.7 J	24 J	0.8 U	49	1 U	4	3300	0.621	0.054 U						
07/2013	0.8 U	1 U	5	0.8 U	0.8 U	1.3 J	1 U	1 U	6.9	0.8 U	78	1 U	4.5	3060	1.36	0.054 U	6.81					
10/2013	0.8 U	1 U	6.6	0.8 U	0.8 U	1.8 J	1 U	1 U	9.1	0.8 U	99	1 U	4.3	2900	0.594	0.054 U	6.55					
12/2013	0.8 U	1 U	4.9 J	0.8 U	0.8 U	1.2 J	1 U	1 U	3.9 J	0.8 U	83	1 U	5.3	2120	2.76	0.054 U						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 8D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	1200 J	240000	28000	5000 U	5000 U	1100 J	5.1	17	78	5000 U	5000 U	5000 U	10.6	1590								
07/2008	1000 U	2900 J	110000	300 J	240 J	1500 J	7.2	29	100	1000 U	1000 U	1000 U	551	1810								
09/2008	240 J	34000	76000	420 J	200 J	2100	5.9	16	92	2500 U	2500 U	2500 U	190	2410								
12/2008	600 J	66000	48000	310 J	95 J	2300	6.2	2.0	4.6	1300 U	1300 U	1300 U	263	1210								
06/2009	400 J	26000	21000	1000 U	1000 U	1200	8.0	39	400	1000 U	1000 U	1000 U	166	1810	0.0567 J	191						
10/2009	260 J	35000	54000 J	150 J	130 J	1900	6.1	32	100	1000 U	1000 U	1000 U	101	2110	0.0317 U	132						
07/2010	200	45000	48000	120	98 J	1500	7.1	89	74	16 U	32 J	20 U	105	2300 J	0.0522 U	170						
08/2011	170	27000	31000	82 J	77 J	2000	5.1	37	180	17 J	23 J	100 U	70.7	1720	0.2 U	249	7.03					
03/2012	400 J	24000	20000	73	74	1800 J	8.9	93	1800	110	45	5 U	57.1	1740	0.2 U	186	6.86					
06/2012	240	18000	15000	46 J	45 J	1000	6.6	82	1400	470 J	39 J	20 U	28.4	1700 J	0.0333 U	131	6.95					
09/2012	170	12000	19000	67	63	1900	17	210	2100	120	30 J	10 U	38.4	1650	0.0333 U	148	6.97					
12/2012	52 J	1600	15000	51 J	40 J	1900	9.4	190	2800	16 U	20 U	20 U	299	1480	0.0333 U	258	6.06					
04/2013	33	3400	31000	73	43	1800	6	97	2700	18	34	2 U	209	1510	0.0333 U	247	6.93					
07/2013	40 U	4600	33000	79 J	40 U	2300	8.3	130	1800	40 U	50 U	50 U	117	1790	0.043 U	157	6.65					
10/2013	52 J	9900	44000	40 U	40 U	3000	19	350	3000	40 U	50 U	50 U	129	1230	0.043 U	190	6.23					
12/2013	80 J	19000	50000	95 J	72 J	2700	24	310	3700	40 U	50 U	50 U	194	1340	0.043 U	126	6.65					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 8S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	4 U	21 J	1800	13 J	18 J	140	2.3 J	6.6	86	260	110	5 U	608	1330 J	19.1	2.5	6.42					
08/2011	2.3 J	67	3500	18	16	380	2.6 J	23	310	240	89	13 U	291	1480 J	0.379	74.2	6.7					
11/2011	5 U	9.7	870	14	4.6 J	320	8.3	300	2300	83	67	4.8 J	41.3	1080	0.158 J	24.8	6.25					
03/2012	5 U	3.6 J	93	6.6	5 U	85	17	210	3300	24	27	3.2 J	16.7	1770	0.986	21.7	6.82					
06/2012	0.8 U	1 U	45	6.7	0.8 U	48	11	280	2500	25 J	29	1.5 J	16.6	2210 J	0.652	15.1	6.43					
09/2012	0.8 U	1.2 J	28	6.6	0.8 U	52	19	340	4100	24	30	14	52.4	823	0.68	22.9	6.76					
12/2012	0.8 U	4.4 J	310	4.5 J	1.6 J	210	13	160	5800	26	22	2.2 J	11	1460	3.6	8.6	6.56					
04/2013	0.8 U	2 J	63	1.6 J	0.8 U	150	18	280	4000 J	14	13	4.9 J	7.8	1670	3.5	13.6	6.61					
07/2013	0.8 U	3.3 J	150	2.2 J	0.8 U	200	17	320	5200	9.2	12	1.4 J	9.6	1790	1.7	15.6	6.8					
10/2013	0.8 U	2.6 J	60	2.7 J	0.8 U	89	11	130	11000	8.3	12	2.6 J	10.4	1110	2	17	6.59					
12/2013	0.8 U	4.1 J	39	3.8 J	0.8 U	50	24	310	12000	15	14	1.7 J	16.3	1100	0.953	16.5	6.78					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 9**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	2100	370000	59000	80 U		450 J	5.1	7.8	42	370 J	100 U	100 U		1020	0.187 J							

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 9D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	2500	360000	57000	80 U	120 J	440 J	5.7	8.7	50	400 J	100 U	100 U	15.2	1070	0.184 J	4.5	7.08					
08/2011	1900	80000	130000	360 J	270 J	280 J	5.3	5.8	37	1600	500 U	500 U	1170	518 J	1.08	21.3	6.38					
11/2011	1900 J	190000	200000	2500 U	440 J	530 J	4.6 J	14	120	1200 J	2500 U	2500 U	281	249	0.165 J	127	6.41					
03/2012	900 J	150000	170000	220 J	330 J	650 J	8.9	87	850	400 J	1000 U	1000 U	118	361	0.2 U	99.1	6.41					
06/2012	600	77000	86000	120 J	170 J	610	23	110	3500	790 J	100 U	100 U	61.7	267 J	0.0333 U	124	6.8					
09/2012	450 J	67000	120000	200 J	330 J	3500	29	120	1700	120 J	100 U	100 U	109	5.1	0.0333 U	130	6.7					
12/2012	1900	73000	170000	290 J	190 J	810	64	100	820	200 J	100 U	100 UJ	4420	15.8	5.94	87.2	5.91					
04/2013	1000	52000	200000	330	160	1300	45	340	1200	16 U	51 J	20 U	2110	43.3	116	6	6.09					
07/2013	680	51000	190000	180 J	240 J	1700	70	1200	5700	40 U	50 U	50 U	1040	46.4	113	2.6	6.44					
10/2013	400 U	7700	170000	400 U	500 J	18000	70	1600	4900	1500 J	500 U	500 U	830	26.8	153	0.82	6.16					
12/2013	650	75000	160000	210 J	420 J	31000	62	1900	4400	80 UJ	100 U	100 U	381	102	30.9	8.1	6.59					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW- 9S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	2 U	2000	1200	10 J	5.8 J	84	13	12	130	2 U	2.5 U	2.7 J	4.6 J	3070 J	0.0141 U	0.054 U	6.55					
08/2011	10 U	2900	1700	14	9.7 J	91	14	9.6	120 J	10 U	10 U	5.7 J	4.9	3450 J	0.0324 J	0.16 U	7.4					
11/2011	25 U	2800	1800	17 J	9.5 J	66	5.4	2.8 J	30	25 U	25 U	9.1 J	3.4	5 U	0.0898 J	0.16 U	6.51	4.0E-01	1.0E+04	2.0E+01	4.0E-01	1.0E-01
03/2012	25 U	3400	3000	32	11 J	81	4.9 J	2.4 J	26	25 U	25 U	10 J	3.9	3780	0.2 U	0.16 U	6.51	6.8E+00	3.2E+03	1.5E+02	1.1E+01	3.0E-01
06/2012	0.8 U	5100	2700	32	14	93	8.8	7.1	91	1.5 J	1 U	8.4	3.4	3010 J	0.033 J	0.054 U	6.75	1.0E+00	1.2E+02	4.1E+02	3.9E+01	1.8E+00
09/2012	1.6 U	2400	1300	15	5.3 J	49	6	10	88	1.6 U	2 U	2 U	4.7	3380	0.262	0.054 U	6.48	7.0E-01	5.0E-01	7.0E-01	7.0E-01	7.0E-01
12/2012	8 U	4100	6500	62	12 J	12 J	2 J	1 U	3 U	8 U	10 U	10 U	4.6	3420	0.0839 J	0.054 U	7.07	5.0E-01	3.2E+01	2.8E+00	5.0E-01	5.0E-01
04/2013	0.8 U	4700	2500	27	11	49	3.8 J	2.7 J	51	1.6 J	1 U	5.2	2.7	2930	0.0333 U	0.054 U	6.81	1.6E+00	4.9E+01	2.6E+00	4.3E+00	5.0E-01
07/2013	4 U	5400	2500	21 J	8.9 J	40	3.1 J	2.3 J	53	4 UJ	5 U	5 U	2.7	3310	0.043 U	0.054 U	6.87	5.0E-01	8.1E+01	5.4E+00	4.7E+00	5.0E-01
10/2013	4 U	5700	3800	32	9.9 J	42	4.8 J	3.1 J	79	4 U	5 U	5 U	3.2	2870	0.043 U	0.054 U	6.63	5.0E-01	2.4E+01	2.3E+00	9.0E-01	5.0E-01
12/2013	8 U	3900	2100	18 J	8 U	30 J	3.5 J	1.7 J	43	8 U	10 U	10 U	5	1990 J	0.0943 J	0.054 U	6.84	1.1E+02	3.8E+01	3.3E+02	3.0E+02	1.1E+00

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-10D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	170	5400	7300	15 J	82	260 J	1.3 J	12	48	1500	94	10 U	6.8	913	0.434	0.74	7.43					
08/2011	670	38000 J	12000	250 U	47 J	70 J	8.8	3.8 J	40	3300	250 U	250 U	7190	333 J	6.52	43.4	5.93					
11/2011	59	5700	14000	28 J	39 J	100	18	16	45	1700	120	50 U	637	42.3	12.2	110	6.2					
03/2012	68	12000	28000	47 J	53	220	33	75	170	410	190	50 U	648	44	52.1	30.9	5.87					
06/2012	40 U	750	30000	42 J	83 J	210 J	27	120	810	250	240 J	50 UJ	450	53.8	69.5	4.8	6.09					
09/2012	18 J	1200	22000	26 J	49 J	330	24	91	2000	170	180	20 U	310	28.6	51.4 J	2.8	6.39					
12/2012	350 J	52000	190000	160 U	160 U	520 J	9.1	35	980	370 J	200 U	200 UJ	878	6.7	42.4	4.7	5.79					
04/2013	170 J	7600	140000	160 U	210 J	3300	15	280	1200	380 J	260 J	200 U	652	22.9	124	7.9	5.98					
07/2013	21 J	860	91000	90 J	120	3400	12	360	2800	220	210	20 U	414	4.1 J	50.4	13.3	6.42					
10/2013	160 U	740 J	99000	160 U	190 J	23000	24	1700	7700	160 U	230 J	200 U	520	2.3 J	141	3.5	6.02					
12/2013	80 U	3100	87000	91 J	170 J	17000	18	2000	5600	160 J	240 J	100 U	452	19.1	63.2	11	6.21					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-10S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	0.8 U	1 U	1.5 J	0.8 U	0.8 U	23	1.8 J	1.1 J	19	0.8 U	1 U	1 U	6.2 J	2980 J	0.0776 J	0.054 U	6.06					
08/2011	5 U	5 U	5 U	5 U	5 U	1.9 J	5 U	5 U	6 J	5 U	5 U	5 U	5.5	3550 J	0.152 J	0.16 U	6.73					
11/2011	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	6.4 J	5 U	5 U	5 U	2.7	3080	0.245	0.16 U	7.04	7.0E-01	1.2E+02	7.0E-01	7.0E-01	7.0E-01
03/2012	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 J	5 U	5 U	5 U	2.5	3150	0.2 U	0.16 U	6.94	5.8E+00	4.2E+01	1.6E+01	5.0E-01	5.0E+00
06/2012	0.8 U	1 U	0.8 U	0.8 U	0.8 U	2.7 J	1 U	1 U	13 J	0.8 U	1 U	1 U	2.4	2820	0.0333 U	0.054 U	6.87	5.0E-01	3.8E+01	1.9E+00	5.0E-01	2.0E-01
09/2012	0.8 U	2.6 J	1.7 J	0.8 U	0.8 U	1 U	1 U	1 U	6.8 J	0.8 U	1 U	1 U	2.8	2980	0.0333 U	0.054 U		5.0E-01	1.6E+01	3.3E+00	1.0E+00	5.0E-01
12/2012	0.8 U	1.4 J	0.8 U	0.8 U	0.8 U	1 U	1 U	1 U	3 U	0.8 U	1 U	1 U	2.6	2930	0.0333 U	0.054 U	7.15	5.0E-01	3.3E+00	5.0E-01	5.0E-01	5.0E-01
04/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	3.2 J	1 J	1 U	44	0.8 U	1 U	1 U	2	2770	0.0333 U	0.054 U		5.0E-01	1.9E+02	4.1E+00	5.0E-01	5.0E-01
07/2013	0.8 U	7.6	0.96 J	0.8 U	0.8 U	1.3 J	1 U	1 U	7.6	0.8 UJ	1 U	1 U	1.9	2840	0.043 U	0.054 U	7	5.0E-01	2.4E+00	4.5E+00	4.2E+00	5.0E-01
10/2013	0.8 U	1.3 J	0.8 U	0.8 U	0.8 U	4.3 J	1.4 J	1 U	72	0.8 U	1 U	1 U	2.8	2710	0.043 U	0.054 U		5.0E-01	1.1E+01	2.6E+00	8.0E-01	5.0E-01
12/2013	0.8 U	1 U	0.8 U	0.8 U	0.8 U	4.2 J	1.3 J	1 U	50	0.8 U	1 U	1 U	5.3	2550 J	0.043 U	0.054 U		8.0E-01	4.0E+00	6.3E+00	4.7E+00	1.0E-01

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-11D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	560	11000	2200	40 U	1000	78 J	2.3 J	2.5 J	16	78000	680	50 U	3.5	797 J	0.445	0.67	6.67					
08/2011	500	7600	2400	250 U	490	250 U	5 U	5 U	8.3 J	48000	270	250 U	11	833 J	0.495	10	5.36					
11/2011	46 J	570	1800	50 U	45 J	56	9	1.7 J	25	6600	110	50 U	129	425	0.562	39.1	6.65	1.1E+02	3.9E+03	5.7E+02	4.2E+02	2.6E+02
03/2012	200 J	4000	7200	250 U	400	64 J	47	7.8	79	46000	680	250 U	115	583 J	12.9	11.7	5.45	2.8E+02	2.0E+03	1.5E+03	1.2E+02	1.1E+03
06/2012	330	3200	6700	23 J	620	29	21	2.9 J	19	74000 J	520	5 U	26	896 J	3.62	12	6.31	8.6E+01	1.6E+03	7.1E+02	2.0E+01	2.2E+03
09/2012	440	2400	3600	15	310	11	7.4	1 U	9.3 J	43000	310	2 U	8.6	542	0.692	5.2	6.72	5.3E+00	1.7E+02	3.1E+01	2.1E+00	3.0E+01
12/2012	81 J	1300	7100	22 J	960	64 J	19	3.8 J	35	29000	460	20 U	268	309	0.26	73.9	6.3	4.8E+00	1.1E+01	1.1E+02	1.3E+02	1.5E+01
04/2013	120	670	5800	31	1900	240	4.1 J	18	190	32000	470	5 U	32.6	520	0.753	34.9	6.73	1.9E+03	1.6E+03	3.3E+02	1.9E+02	2.5E+01
07/2013	110	760	8200	31 J	370	1000	15	48	470	30000	800	10 U	21.6	409	0.215	63.6	7.12	7.1E+02	2.3E+02	1.3E+03	7.0E+02	7.7E+02
10/2013	83 J	480	5600	20 J	240	700	6.7	25	260	22000	480	20 U	9.9	492	0.254 J	33.2	6.65	4.3E+04	1.8E+03	9.9E+04	4.2E+04	5.5E+01
12/2013	130 J	650	3300	40 U	170 J	370	5.5	16	190	15000	360	50 U	11.6	532 J	0.163 J	22.1	7.2	1.1E+05	1.7E+03	2.8E+05	2.8E+05	2.0E+03

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-11S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	0.8 U	320	11000	210	31	2300 J	19	110	150	1.7 J	42	1 U	5.2	2230	0.0568 J	0.054 U	6.94					
08/2011	50 U	270	17000	210	38 J	3600	29	140	280	50 U	38 J	50 U	4.9	2110	0.356	0.16 U	6.66					
11/2011	50 U	170	8600	140	18 J	760	21	59	160	50 U	32 J	50 U	2.3	2330	0.0367 J	0.16 U	6.77					
03/2012	100 U	170	9100	170	27 J	2000	25	100	1900	100 U	41 J	100 U	2.2	1800 J	0.11 J	0.16 U	6.32					
06/2012	4 U	320	13000	230	32	2600	32	170	1800	4 UJ	47	5 U	2.1	1880	0.27	0.054 U	6.95					
09/2012	16 U	390	17000	270	42 J	3600	40	300	1100	16 U	46 J	20 U	1.9	1960 J	0.814	0.054 U	6.84					
12/2012	8 U	340	16000	220	31 J	2400	27	180	1200	8 U	43 J	10 U	2	1960	0.552	0.054 U	6.67					
04/2013	4 U	310	15000	220	33	3100	40	390	5000	4 U	42	5 U	2.5	1650	0.714	0.054 U	7.01					
07/2013	8 U	230	12000	200	25 J	2200	26	220	5700	8 U	36 J	10 U	2.7	1470	0.593	0.054 U	6.63					
10/2013	20 U	250	16000	210	33 J	3000	43	400	2500	20 U	42 J	25 U	2.7	1690	1.08	0.054 U	6.51					
12/2013	8 U	170	12000	180	27 J	2100	30	210	3500	8 U	38 J	10 U	4.3	1850	0.768	0.054 U	6.48					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-12D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	2900	29000	19000	160 U	460 J	740 J	9.7	41	85	660 J	200 U	200 U	47.7	792	2.25	16.2	7.6					
08/2011	6000	270000	95000	120 J	260 J	950	140 J	1900 J	180 J	140 J	500 U	500 U	818	645	22.7	1.8	6.6					
11/2011	1800 J	140000	250000	2500 U	570 J	910 J	100	1100	180	2500 U	2500 U	2500 U	242	780	26.1	3.6	6.88					
03/2012	2500 U	2500 U	370000	2500 U	1100 J	2500 U	49	210	86	2500 U	2500 U	2500 U	221	459 J	85.1	0.079 J	7.04					
06/2012	160 U	850 J	350000	160 U	910 J	210 J	38	140	110	160 U	200 U	200 U	169	291	59.8	0.054 U	7.17					
09/2012	190 J	5600	250000	160 U	600 J	280 J	36	120	120	200 J	200 U	200 U	87.8	6.5 J	1.65	16.2	7.67					
12/2012	380	1100	98000	140 J	92 J	460	28	77	210	76 J	90 J	50 UJ	3900	3.9 J	120	6.3	5.18					
04/2013	35	1300	19000	53 J	14	120	6.9	8.9	21	8.6 J	16	2.7 J	92.3	4.9 J	17.6	0.054 U	5.91					
07/2013	160 U	1600	230000	160 U	340 J	4800	46	440	2100	160 U	200 U	200 U	1150	9.4	166	3	6.31					
10/2013	160 U	6600	160000	160 U	300 J	33000	33	1200	1900	160 U	200 J	200 U	1200	16.1	278	0.53	5.79					
12/2013	80 U	5100	200000	160 J	470 J	40000	35	2200	2700	80 U	160 J	100 U	799	14.1	158	2.3	6.6					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-13D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	950 J	100000	18000	160 U	160 U	500 J	1.5 J	17	66	1100	200 U	200 U	8.9	959	1.11	5.7	7.08					
08/2011	85 J	5700	45000	81 J	98 J	110 J	4.8 J	7.9	40	1300	81 J	250 U	953	143	2.45	127	6.02					
11/2011	2100	170000	73000	110 J	250 J	240 J	24	19	29	750	120 J	500 U	4320	139	157	20.8	5.56					
03/2012	1100	190000	99000	140 J	270 J	180 J	15	43	46	470 J	140 J	500 U	360	179 J	8.13	115	5.48					
06/2012	370	38000	30000	60 J	150 J	100 J	37	230	37	350	99 J	50 U	618	104	69.5	10.6	6.12					
09/2012	570	66000	110000	80 U	480 J	350 J	49	380	80	80 U	120 J	100 U	367	87.3 J	20.1	35.1	6.13					
12/2012	3200	280000	120000	80 U	240 J	340 J	14	33	120	280 J	160 J	100 UJ	12.5 U	93	7.17	69.3	5.78					
04/2013	590 J	85000	120000	400 U	400 U	520 J	40	200	160	400 U	500 U	500 U	1500	46.4 J	266	2.7	6.21					
07/2013	720 J	90000	210000	160 U	440 J	2800	55	330	950	160 U	290 J	200 U	1020	45.3	238	1.6	6.31					
10/2013	780 J	98000	250000	400 U	760 J	6400	69	560	1000	400 U	500 U	500 U	715	59.1	134	6.4	5.87					
12/2013	850	130000	230000	100 J	700	25000	57	640	1600	210 J	400 J	100 U	578	73.9	49.5	23.5	6.17					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-14D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	190	7900	12000	16 J	120	240 J	4.2 J	14	57	3300	150	5 U	4.7	885	2.93	0.43	8.02					
08/2011	72	1800	13000	36 J	22 J	64	6.7	5 U	23	2000	80	50 U	826	227	1.37	124	6.15					
11/2011	670	5400	29000	99 J	170	540	76	12	30	3500	340	100 U	2950	40.7 J	1.85	134	5.35					
03/2012	40 J	4700 J	25000 J	39 J	62 J	530 J	38 J	170 J	91 J	560 J	310 J	25 UJ	1740	26.6 J	77.5	50.1	5.54					
06/2012	80 U	19000	57000	80 U	110 J	580	29	140	94	270 J	440 J	100 U	987	55.3 J	55.6	30.3	5.63					
09/2012	85 J	23000	65000	82 J	180 J	800	34	310	160	240 J	480	50 U	826	21.8	52.3	65.4	5.57					
11/2012													556									
12/2012	130 J	14000	74000	72 J	89 J	570	7.8	83	230 J	500	420	50 U	1470	76.9	6.84	79.9	5.9					
04/2013	99 J	2100	95000	80 U	130 J	1100	14	460	1700	740	770	100 U	765	11.7 J	16.6	72.7	5.95					
07/2013	80 U	1000	74000	80 U	80 U	1100	12	300	4400	300 J	730	100 U	838	2.7 J	43	88.6	5.88					
10/2013	80 U	670	75000	80 U	120 J	1500	22	830	7700	1300	1100	100 U	719	1.7 J	73.1	23.7	5.93					
12/2013	80 U	2500	57000	87 J	140 J	9100	37	4100	22000	2100	1300	100 U	600	8.7	38.3	24.5	6.08					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-15D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	69	2200	7900	17 J	69	210	3.1 J	9.8	59	2400	100	10 U	3.3 J	823 J	1.32 J	0.25 J						
08/2011	48 J	780	17000	43 J	90 J	370	6.4	6.6	32	4600	530	100 U	563	281	1.08	84.5	5.93					
11/2011	44 J	1900	15000	47 J	140	510	24	9	44	11000	990	100 U	303	56	21	103	6.27	1.6E+03	1.2E+04	1.3E+03	8.0E+01	5.1E+02
03/2012	12 J	760	5100	30	79	5100	54	45	1300	5000	1100	25 U	307	26.4	11.4	15.8	6.23					
06/2012	48	2900	10000	44	320	1500	19	66	900	49000 J	3000	5 U	134	133 J	0.0574 J	127	6.94	3.6E+05	3.3E+04	1.5E+06	8.1E+03	4.4E+04
09/2012	67	2900	14000	50	530	970	12	22	260	58000	3800	2 U	108	106	0.137 J	153	6.94	5.3E+04	7.4E+03	3.7E+05	2.9E+04	1.5E+05
11/2012													2090									
12/2012	18 J	540	19000	33 J	210	550	3.8 J	10	76	7700	1600	20 U	739	44.3	0.15 J	238	6.24	1.7E+01	2.5E+02	1.1E+02	7.9E+01	1.1E+01
04/2013	60 J	3200	14000	27 J	620	370	17	19	270	48000	3100	20 U	421	139	0.85	125	6.34	3.1E+04	3.8E+04	1.6E+04	4.6E+04	7.8E+02
07/2013	22 J	1100	10000	33	480	4100	280	140	1600	16000	7400	17 J	480	3.2 J	40.8	84.6	7.29	1.2E+05	1.6E+05	7.5E+04	3.6E+05	1.0E+02
10/2013	71	1400	2200	59	200	11000	380	210	1100	10000	9200	29 J	319	3.1 J	33.3	0.58	6.22	3.2E+05	1.7E+04	1.1E+06	9.2E+05	2.4E+01
12/2013	140	840	1800	73 J	150	9700	980	260	820	3400	13000	100	223	3.7 J	1.27	124	6.88	6.8E+04	8.7E+04	2.3E+05	2.1E+05	4.4E+02

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-15S**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
03/2012																		8.7E+05	7.8E+03	3.3E+06	7.2E+02	1.4E+04

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-16D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	610	41000	24000	40 U	140 J	390	1.4 J	13	53	1800	120 J	50 U	7.1	801	0.661	3.4	7.36					
08/2011	70	5200	2100	7.5 J	4.4 J	13 J	2.8 J	5 U	13 J	15 J	25 U	25 U	33.8	39.4	0.054 J	1.1	12.19					
11/2011	110	9900	5700	14 J	13 J	43 J	7.5	1.2 J	27	59	18 J	50 U	80.5	91.5 J	0.0976 J	7.2	12.65					
03/2012	13	110	110	5 U	5 U	3.3 J	5 U	5 U	15	5 U	5 U	5 U	2.5	30.3	0.2 U	0.16 U	10.48					
06/2012	30	1200	3000	9.8 J	7.1 J	530	3 J	7.1	57	39	17 J	5 U	20.9	44.4 J	0.244	2.6	11.59					
09/2012	16	240	220	0.81 J	0.8 U	56	1 U	1 U	10 J	4.8 J	1.2 J	1 U	7.3	27.4 J	0.0333 U	0.28	11.14					
12/2012	130 J	5500	67000	47 J	56 J	470	5.6	45	330 J	770	430	50 U	728	219	0.107 J	182	6.14					
04/2013	160 J	5300	47000	41 J	92 J	1500	11	730	1500	1500	950	50 U	370	28.7	0.988	103	6.29					
07/2013	330 J	12000	64000	80 U	220 J	1000	6.8	170	940	8900	2000	100 U	294	16.5	0.111 J	172	6.34					
10/2013	380	12000	40000	42 J	300	640	5.7	59	290	18000	2000	50 U	183	91.1	0.043 U	191	6.16					
12/2013	430	15000	52000	60 J	320	810	9.9	140	700	15000	1900	20 U	214	32.7	0.043 U	182	6.27					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **PMW-17D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2011	330	18000	15000	16 U	80 J	210	1.6 J	11	50	1600	100	20 U	3.7 J	775 J	0.445	1.3	6.25					
08/2011	40 J	780	18000	34 J	110	100	3.4 J	2.2 J	27	7300	130	50 U	193	551 J	0.657	96.9	5.24					
11/2011	42 J	890	16000	39 J	66 J	130	19	6	53	6900	240	100 U	501	193	9.03	96.9	6.21	2.7E+02	1.9E+03	6.4E+02	3.4E+02	1.8E+02
03/2012	11 J	720	13000	37 J	26 J	120	28	7.5	75	450	330	50 U	335	62.7	22.9	35.4		7.6E+00	2.5E+02	2.8E+01	7.4E+01	2.9E+00
06/2012	190	11000	13000	26	63	140	11	4.7 J	79	3900 J	610	5 U	94.5	201	0.216	157	6.55	7.8E+02	1.6E+03	2.6E+03	2.6E+02	1.6E+03
09/2012	200	6400	6700	17	65	190	9.8	7.6	380	3000	420	1 U	43.8	210	0.0686 J	137	6.89	6.5E+02	2.8E+02	5.3E+03	2.5E+02	2.8E+03
12/2012	97 J	5100	23000	23 J	54 J	280	5.6	6	120	1300	520	20 U	547	21.2	0.178 J	235	6.22	1.5E+01	3.8E+01	4.4E+02	2.7E+02	8.0E+00
04/2013	22 J	370	10000	16 J	93	360	9.1	10	6400	5600	860	10 U	230	21 J	2.43	47.3	6.35	3.4E+04	2.4E+03	1.3E+04	6.8E+04	2.8E+01
07/2013	65	1500	15000	30 J	380	790	12	140	1300	29000	2300	10 U	181	40.4	0.043 U	71	7.86	4.9E+04	4.9E+02	9.3E+04	1.8E+05	2.3E+03
10/2013	5.1	30	100	5.6	6	510	23	40	3900	470	160	1 U	57.5	3.5 J	0.0954 J	212	7.46	2.5E+04	1.7E+03	5.3E+04	8.8E+04	7.7E+02
12/2013	78	1100	10000	26 J	180	370	12	35	600	15000	1500	10 U	103	49.1	0.043 U	200	6.86	4.5E+04	7.4E+02	8.1E+04	4.4E+04	1.4E+03

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **RMW- 1D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	0.8 U	1 U	0.98 J	0.8 U	0.8 U	1 U	19	1 U	73	0.8 U	1 U		2.5	738 J	0.46							
06/2009	5.0 U	3.2 J	7.4	5.0 U	5.0 U	0.86 J	15	1.0 U	63	5.0 U	5.0 U	5.0 U	3.3	758	0.660	1.69						
07/2010	0.8 U	1 U	0.96 J	0.8 U	0.8 U	1 U	49	1 U	160	0.8 U	1 U	1 U	2.6	1070	0.332	13.3						
09/2011	3.8 J	100	290	1.3 J	5.2	8.8	15	5 U	65	270	6.4	5 U	3.2	1070 J	0.316	8.2						
03/2012	3.4 J	69	340	1.4 J	7.2	2.9 J	11	5 U	49	390	8.2	5 U	2	1560	0.263	4.5						
06/2012	2.2 J	24	380	1.4 J	6.1	5.8	12	1 U	54	500 J	9.4	1 U	1.9	934	0.273	5.2						
09/2012	0.8 U	4.9 J	300	1 J	4.8 J	2.9 J	16	1 U	61	290	6.2	1 U	1.4	867	0.27	6.3						
12/2012	5.6	61	370	1.3 J	8.1	4 J	3.2 J	1 U	26	850	11	1 UJ	2.4	601	0.264	0.44						
04/2013	1.3 J	10	330	1 J	6.5	5.5	14	1 U	58	440	8.3	1 U	1.7	759	0.21	4.4						
07/2013	0.8 U	6.5	290	0.95 J	3.4 J	7	14	1 U	63	280 J	7	1 U	1.9	844	0.246	6.4						
10/2013	0.8 U	12	280	0.98 J	4.3 J	7.6	17	1 U	76	270	6.4	1 U	1.6	780	0.26 J	7.6						
12/2013	0.8 U	11	270	1 J	3.4 J	5.7	12	1 U	64	230	6.8	1 U	2.6 J	716	0.299 J	4.7						

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **RMW- 2D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
05/2008	1100	140000	21000	80 U	110 J	1500	22	86	160	300 J	100 J		6	1120	0.182 J							
06/2009	1600 J	180000	49000	5000 U	5000 U	2000 U	83	12	390	5000 U	5000 U	5000 U	29.7	1190	0.0416 J	53.8						
07/2010	780	99000	52000	80 U	110 J	200 J	89	5.1	340	80 U	100 U	100 U	15.1	1480 J	0.0522 U	51.7						
06/2011	920 J	210000	36000	160 U	160 J	310 J	11	8.2	63	1200	200 U	200 U	12.1	969 J	0.269	4.8	6.26					
08/2011	680 J	56000	110000	1000 U	430 J	1000 U	28	5.3	89	1100	1000 U	1000 U	377	759 J	0.162 J	58.4						
11/2011	1100	110000	110000	85 J	390 J	110 J	32 J	3.3 J	120 J	600	500 U	500 U	267	466	0.0368 J	125	6.78	2.0E+02	3.1E+04	1.1E+03	1.1E+03	1.5E+03
03/2012	1300	140000	78000	500 U	230 J	500 U	60	5.1	210	320 J	100 J	500 U	129	813 J	0.0518 J	138	6.78	1.1E+03	4.9E+03	2.1E+03	2.5E+02	1.9E+02
06/2012	800	69000	16000	24 J	68 J	52 J	18	1.2 J	80	860 J	66 J	20 U	43.2	485	0.0141 U	94.9	6.82	6.1E+02	3.4E+03	1.6E+03	1.9E+01	9.8E+01
09/2012	1100	130000	39000	80 U	130 J	200 J	23	4.3 J	250	480 J	110 J	100 U	128	264 J	0.0333 U	141	6.7	3.5E+03	1.4E+03	3.2E+03	6.3E+01	1.7E+03
12/2012	3200	410000	62000	40 U	99 J	240 J	28	12	160	160 J	84 J	50 U	1620	395	39.5	27.2	6.25	6.8E+02	9.5E+02	7.2E+05	9.2E+05	5.4E+04
04/2013	1500	300000	150000	80 U	210 J	450 J	35	54	250	210 J	160 J	100 U	1170	266	58.2	6.8	6.46	1.1E+04	2.7E+03	8.6E+04	7.6E+04	4.6E+02
07/2013	1200 J	240000	170000	800 U	800 U	1000 U	23	240	290	800 U	1000 U	1000 U	758	217	46	6.2	6.4	2.4E+03	5.9E+02	4.5E+03	2.3E+03	1.8E+01
10/2013	1200 J	290000	250000	400 U	500 J	860 J	31	230	330	400 U	500 U	500 U	578	317	26.8	14.2	5.96	1.6E+04	8.3E+03	4.2E+04	3.5E+04	2.2E+03
12/2013	1500 J	320000	260000	400 U	610 J	1200 J	34	200	470	400 U	500 U	500 U	508 J	177	16.3	25.9	6.32	2.4E+04	5.3E+03	3.5E+05	9.8E+04	1.5E+04

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **RMW- 3D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2009	13 U	3.2 J	300	13 U	3.2 J	21	1.0 U	1.1	12	110	8.0 J	13 U	3.3	802	0.485	1.0 U						
07/2010	0.8 U	3.9 J	760	2.2 J	11	70 J	1 U	3 J	27	280	15	1 U	3	882	0.474	0.46						
06/2011	770 J	14000	1900	160 U	1200	200 U	2.7 J	1.1 J	19	96000	700 J	200 U	3.1	781	0.414	0.49	7.37					
08/2011	1400	14000	14000	73 J	1100	250 U	9.2	1.7 J	33	64000	620	250 U	10500	529	0.866	21.4	6.1					
11/2011	130 J	1500	9300	500 U	570	500 U	4 J	5 U	25	53000	340 J	500 U	7.4	614	0.0541 J		6.97					
03/2012	90 J	620	5900	250 U	260	250 U	4.7 J	5 U	26	33000	190 J	250 U	8.6	710	0.0326 J	36.4	6.88					
06/2012	100	460	3800	16 U	210	20 U	5.7	1 U	27	25000	130	20 U	9	978	0.0697 J	15.2	6.96					
09/2012	45 J	170	3100	16 U	160	27 J	3.6 J	1 UJ	22 J	18000	130	20 U	8.2	552 J	0.0954 J	19.4	7.09					
12/2012	39 J	200	4100	12 J	790	14 J	3.5 J	1 U	21	19000	150	10 U	23.6	435	0.063 J	48.6	6.91					
04/2013	19	99	3500	20	810	51	2.6 J	3.4 J	41	17000	210	2 U	21.2	471	0.0333 U	63	7.46					
07/2013	9.7 J	42 J	2800	12 J	750	61	2.4 J	2.8 J	38	17000	160	10 U	3.8	574	0.043 U	30	6.99					
10/2013	11 J	32 J	2600	8.1 J	140	59	1 J	3.9 J	36	10000	150	10 U	21.1	462	0.0701 J	22.7	6.97					
12/2013	16 U	45 J	1600	16 U	71 J	33 J	14	1.5 J	70	7000	96 J	20 U	5.8	590 J	0.0701 J	22.3	7.1					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **RMW- 4D**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
01/2008	570 J	130000	18000	5000 U	5000 U	430 J	19	14	110	5000 U	5000 U	5000 U	7.67	1340								
05/2008	600	67000	21000	80 U	80 U	610	16	12	95	80 U	100 U		4.9	1370 J	0.351							
07/2008	5000 UJ	450 J	100000 J	5000 UJ	5000 UJ	1100 J	15 J	46 J	110 J	5000 UJ	5000 UJ	5000 UJ	387 J	1060 J								
09/2008	1300 UJ	3700 J	38000 J	370 J	75 J	680 J	23	7.1	130	1300 UJ	1300 UJ	1300 UJ	294	810								
12/2008	250 U	660	5400	28 J	250 U	79 J	28	2.1	130	250 U	250 U	250 U	168	130								
06/2009	9.4 J	620	2800	12 J	100 U	95	32	7.0	510	12 J	100 U	100 U	160	572	0.0723 J	247						
10/2009	11 J	1100	3800	10 J	8.4 J	74	35	7.6	210	8.4 J	8.0 J	100 U	149	569	0.0317 U							
07/2010	6.1	380	900	6.9	2.8 J	73	36	160	3800	5.5	5.1	1 U	140	803	0.0522 U	189						
06/2011	130 J	54000	32000	81 J	89 J	880	19	52	1900	40 U	50 U	50 U	133	843	0.0141 U	173	7.41					
08/2011	50 J	26000	19000	42 J	42 J	470	39	97	4800	100 U	25 J	100 U	124	395 J	0.0153 J	172	7.11					
11/2011	68 J	20000	17000	36 J	38 J	510	39 J	230 J	3900	100 U	23 J	100 U	109	342 J	0.0208 J	157	7.29					
03/2012	50 U	800	1700	50 U	50 U	300	12	210	8800	50 U	50 U	50 U	80.1	94.9 J	0.0271 J	176	7.12					
06/2012	87 J	18000	24000	40 J	59 J	830	19	400	5600	180	49 J	25 U	55.9	241 J	0.0333 U	192	6.96					
09/2012	82	11000	18000	33 J	51	1000	21	350	6000	96	45 J	10 U	82.8	111 J	0.0333 U	209	6.7					
12/2012	50 J	4300	48000	55 J	32 J	950	22	360	5500	72 J	94 J	20 UJ	754	496	0.0681 J	247	5.85					
04/2013	19 J	2100	31000	57 J	38 J	1300	24	420	6500	22 J	66 J	20 U	197	1090	0.0333 U	209	6.62					
07/2013	40 U	3200	31000	62 J	40 U	1400	34	390	6500	40 U	71 J	50 U	368	51.7	0.043 U	241	6.85					
10/2013	80 U	8500	55000	97 J	80 U	1400	33	300	2800	80 U	100 U	100 U	390	189	0.043 U	276	6.46					
12/2013	20 J	2500	61000	87 J	75 J	1400	36	390	4100	21 J	120	20 U	208	313	0.043 U	250	6.73					

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **RMW- 4D PUMP**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2009	250 U	1300	4900	16 J	250 U	110	27	19 J	270	250 U	250 U	250 U										

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed

EKONOL FACILITY

Well Id: **RMW- 4D SNAP**

Date	(PCE) (ug/L)	(TCE) (ug/L)	Cis-1,2-DCE (ug/L)	Trans-1,2-DCE	1,1-DCE (ug/L)	Vinyl chloride (ug/L)	Ethane (ug/L)	Ethene (ug/L)	Methane (ug/L)	1,1,1-Trichloroethane (ug/L)	1,1-Dichloro-ethane (ug/L)	Chloroethane (ug/L)	TOC (mg/L)	Sulfate (mg/L)	Iron (mg/L)	Sulfide (mg/L)	pH (s.u.)	BVC (cells/ml)	DHBt (cells/ml)	DHC (cells/ml)	TCE (cells/ml)	VCR (cells/ml)
06/2009	250 U	1200	5200	16 J	250 U	82 J	31 J	9.7 J	240 J	250 U	250 U	250 U										

June 2008: Completion of Pilot Test Injections
April 2011: Completion of Bioreactor Trenches construction
July 2011: Remediation Injections completed
November 2012: Bedrock Injections completed