BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

November 30, 2006

Mr. Stan Radon
Engineering Geologist II
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203

Re: ISOCHEM Inc. – Lockport Facility
Summary of Supplemental Field Investigation and Sampling Activities

Dear Mr. Radon:

Benchmark Environmental Engineering & Science, PLLC (Benchmark) has prepared this letter to present the findings of supplemental investigation activities performed at the ISOCHEM Inc. Lockport Facility (Site) from October 26 through November 16, 2006.

The supplemental investigation included a new round of groundwater sampling data to obtain updated information on the groundwater and associated NAPL observed in monitoring well MW-2D. In addition, Benchmark concluded that due to the air rotary rock drilling technique that was utilized to install MW-2D, it was difficult to assess the depth at which NAPL impact initially was encountered. Therefore, it was also recommended that an additional overburden and rock boring adjacent to MW-2D be performed to better assess the overall stratigraphy and potentially identify with more precision the location of the NAPL impacts.

A summary of the investigation activities performed, analytical results, and conclusions are presented below.

1.0 SUPPLEMENTAL GROUNDWATER AND SURFACE WATER SAMPLING EVENT

Well Location/Redevelopment & Sampling:

Six wells were previously installed and sampled (MW-1D, MW-2D, MW-2S, MW-3D, MW-4D, and MW-5S) as shown in Figure 1. Benchmark, with assistance from ISOCHEM, was able to locate four of the six wells. The upgradient well MW-4D and shallow well MW-2S adjacent to MW-2D were not found during initial reconnaissance and it was surmised that the wells were damaged by snow plowing and paved over in the intervening years. As part of the re-sampling effort, all of the remaining wells were redeveloped on October 26, 2006 prior to sampling. Initially the depth to groundwater was measured and the well volume was calculated. Field parameters including pH, temperature, turbidity, and specific conductance were measured and recorded periodically (i.e., every well volume or as necessary) during development. Field measurements continued until they became relatively stable or as dictated by recoverable well volume. Well purging was performed with a dedicated

polyethylene disposable bailer and considered complete upon evacuation of a minimum of 3 well volumes or to dryness. The purge water was collected and containerized for treatment in the ISOCHEM wastewater pretreatment system. In the case of MW-2D, accumulated NAPL within the well column was identified, collected, and placed in a separate 5-gallon container for characterization and disposal. The presence of NAPL at this location is likely due to accumulation over the last 7 years since installation of the well. Monitoring wells generally act as a sump for accumulation of NAPL by displaying greater volumes or thicknesses of immiscible material than is actually present in the formation.

Detailed information for each well development is presented in the *Groundwater Well Purge & Sample Collection Logs* included in Attachment 1 of this report.

Well Sampling:

Following well redevelopment, the groundwater depth and water quality parameters were again measured and recorded. Groundwater samples from each of the monitoring wells were collected on October 26, 2006, using dedicated polyethylene disposable bailers and transferred to pre-cleaned, pre-preserved laboratory provided sample bottles. Groundwater samples were cooled to 4 °C in the field and transported under chain-of-custody command to Severn Trent Laboratories for analysis.

Samples were analyzed for Target Compound List (TCL) volatile organic compounds (Method 8260 VOCs) and semi-volatile organic compounds (Method 8270 SVOCs). In addition, the light and dense fractions of the NAPL collected from MW-2D were analyzed for petroleum products via Method 310.13. The dense NAPL (DNAPL) was also analyzed for VOCs and SVOCs since sufficient sample volume was available. All samples were analyzed in accordance with USEPA SW-846 methodology. A discussion of the analytical results is presented in this report. The laboratory analytical reports are presented in Attachment 2.

Eighteen-Mile Creek Samples:

On October 26, 2006, Benchmark personnel collected one upstream and one downstream surface water sample from Eighteen Mile Creek located south of the plant site at the locations shown on Figure 1. The upstream sample location represented a location that would be more or less adjacent to the eastern edge of the facility and the downstream sample location would be representative of the western boundary of the facility. These locations were selected based on the knowledge of plant personnel. Each sample was submitted for analysis of Target Compound List (TCL) volatile organic compounds (Method 8260 VOCs) and semi-volatile organic compounds (Method 8270 SVOCs).

2.0 MW-2D Vicinity Supplemental Boring Investigation

Boring & Rock Coring:

On November 14-16, 2006, Benchmark's designated drilling subcontractor, Earth Dimensions, mobilized a Dietrich D-50 rear-mounted drill rig to the site and advanced one boring, MW-7D, to approximately 50 feet below ground surface (fbgs). The boring was advanced approximately 7 feet west of existing monitoring well MW-2D (see Figure 1) through unconsolidated overburden materials using 2¼-inch hollow stem augers to competent bedrock (i.e., auger refusal) at a depth of approximately 14 fbgs. Continuous 2-inch diameter split-spoon samples were collected at 4-foot intervals through the overburden and described on a stratigraphic Field Borehole Log. Benchmark personnel described each recovered sample in accordance with USCS classification procedures and scanned each soil sample for total volatile organic vapors with a MiniRae 2000 photoionization detector (PID) equipped with a 10.6 eV lamp. PID, visual and olfactory observations were recorded on Field Borehole Logs presented in Attachment 3.

Upon auger refusal, the auger was seated into the bedrock and withdrawn and the borehole was fitted with the installation of a temporary 4-inch diameter flush joint overburden casing. The casing was seated and sealed at the overburden/bedrock interface with bentonite chips/pellets. The temporary casing prevented sloughing of the overburden soils as well as prevented hydraulic connection between overburden and bedrock groundwater during rock coring activities. Once the temporary overburden casing was seated into the bedrock, rock coring activities proceeded utilizing a double-tube, swivel-type core barrel to obtain an NQ core sample of the competent bedrock. A review of the monitoring well MW-2D borehole log indicated a naphthalene odor was observed from approximately 30 to 50 fbgs. It was anticipated, the test boring would be advanced to at least 40 fbgs and no more than 50 fbgs, which is the total depth of monitoring well MW-2D. When no observed impacts were noted at 40 fbgs, the coring was continued until completion at 50 fbgs. Recovered core samples were archived in field core boxes, described, and scanned with the PID. There was no evidence noted of visual and/or olfactory impact (i.e., NAPL) in any of the rock cores recovered.

Subsequent to boring completion, a 2-inch diameter flush-joint Schedule 40 PVC monitoring well was installed and designated as MW-7D. The well was constructed with 10-foot flush-joint Schedule 40 PVC, 0.010-inch machine slotted well screen. The well screen and attached riser were placed at the bottom of the borehole and a silica sand filter pack (00N) was installed from the base of the well to approximately 2 feet above the top of the screen. A bentonite chip seal was then installed and allowed to hydrate sufficiently to mitigate the potential for downhole grout contamination. The remaining borehole annulus was subsequently filled with hydrated bentonite chips to approximately one-foot below ground surface. The newly installed well was completed with a J-plug and an 8-inch diameter steel flush mounted road box. The well was completed at the surface and anchored within a 2-foot by 2-foot by 1-foot square concrete pad. A well completion summary of the newly

installed and existing monitoring wells at the site is presented in Table 1. The well construction log is presented in Attachment 3.

All soil and drilling fluids discharged at grade during borehole advancement were containerized in DOT-approved 55-gallon drums and staged in an area of the site designated by ISOCHEM. Potable water obtained from an on-site tap was used as the drilling fluid. Water return was monitored during bedrock drilling and zones of significant water loss to the formation were noted on the drilling logs. Approximately 1,700 gallons of drilling water were lost during rock coring activities conducted at MW-7D. Subsurface descriptions, PID, visual, and olfactory observations made during overburden and bedrock advancement were recorded on a Field Borehole Log (Attachment 3).

MW-7D Well Development

The newly installed monitoring well MW-7D was developed in accordance with Benchmark and NYSDEC protocol on November 20, 2006. Development of the newly installed monitoring well was accomplished with a pre-cleaned dedicated PVC bailer via surge and purge methodology. Field parameters including pH, temperature, turbidity, and specific conductance were measured periodically (i.e., every well volume or as necessary) during development. Field measurements continued until they became relatively stable or as dictated by recoverable well volume. Stability is defined as variation between measurements of 10 percent or less with no overall upward or downward trend in the measurements. A minimum of 9 well volumes were evacuated from the well. In addition, field personnel performed visual light and dense non-aqueous phase liquid (LNAPL and DNAPL) surveillance during development of the well and concluded that no free phase NAPL was present in the monitoring well during development, however a slight sheen and strong petroleum odor was observed. Data collected during well development including daily calibration was recorded on individual project field forms presented in Attachment 1.

MW-7D Sample Collection & Analysis

The newly installed monitoring well MW-7D was purged and sampled on November 24, 2006 in accordance with the protocol discussed in Section 1.0. Groundwater analytical results will be provided to the Department as soon as they become available.

3.0 ANALYTICAL RESULTS

Laboratory analytical results were summarized for all groundwater and NAPL samples collected during the October 26, 2006 sampling event and are presented in Tables 2 and 3. The summarized analytical results are presented with associated NYSDEC regulatory ground water and surface water quality standards for comparison. A discussion of the results is presented below.

As indicated on Table 2 and anticipated based on the presence of both light and dense NAPL in the well, a range of VOCs and SVOCs were detected above NYSDEC Groundwater Quality Standards (GWQSs) in well MW-2D groundwater. The reported SVOC concentrations were indicative of the solubility limits of many of these compounds and were difficult to quantify with precision due to the dilution requirements that the laboratory was required to employ.

In well MW-3D, several chlorinated VOCs were detected above the NYSDEC GWQS. In general, the compounds detected were consistent with historical results (i.e., 1999), although the concentrations were lower during the current monitoring event. The overall impact to groundwater quality appears to have decreased in this well since 1999. Furthermore, these compounds are consistent with the constituents historically detected in the upgradient well MW-4D, although at much lower concentrations, as expected in downgradient groundwater.

As shown in Table 2, there were no detected compounds in either the upstream or downstream surface water samples collected.

The analyses of the LNAPL and DNAPL samples collected from well MW-2D are presented in Table 3. The petroleum product characterization performed on both fractions indicates that they are not derived or have the characteristic footprint associated with standard petroleum products such as gasoline, kerosene, or fuel oils.

As previously noted, there was sufficient DNAPL sample volume to perform additional VOC and SVOC analyses. The presence of SVOC polynuclear aromatic hydrocarbons (PAHs) in the concentrations reported are indicative of a coal tar based compound.

4.0 CONCLUSIONS & PROPOSED SUPPLEMENTAL TASKS

The findings of the supplemental groundwater sampling event and the installation of well MW-7D 7-feet west of well MW-2D confirms that the groundwater impacts identified in well MW-2D are localized to that well. Groundwater analytical results of cross-gradient wells MW-1D and MW-3D do not indicate similar impacts to those identified in wells MW-2D , which further supports the observation that the dissolved phase impacts are primarily confined to the vicinity of MW-2D. The groundwater within well MW-2D does indicate a three phase impact to groundwater in the vicinity of well MW-2D; LNAPL, DNAPL, and dissolved phase within the groundwater and may be best addressed by focusing on NAPL removal alternatives at well MW-2D.

Therefore, ISOCHEM has initiated, as an interim measure, a passive NAPL collection system at well MW-2D to collect and assess the rate at which NAPL is generated and removed from the well. The passive collection will attempt to recover both LNAPL and DNAPL and initially will consist of oleophillic absorption materials installed within the well. Observation of the absorption material after the first five days of insertion into the well

indicate that little recovery occurred and no measurable quantity of NAPL could be extracted from the absorbent material.

In addition, a groundwater sample from the newly installed well MW-7D was collected on November 24 and will be analyzed for TCL volatiles and semi-volatiles to assess impacts at this adjacent location.

If you have any questions regarding the activities performed to date or the proposed additional tasks or require additional information, please contact us.

Sincerely,
Benchmark Environmental Engineering & Science, PLLC

Patrick Martin, P.E.
Project Manager

Attachments

cc: Matthew Barmasse, ISOCHEM

file: 0049-007-100

TABLES

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TABLE 1

WELL COMPLETION SUMMARY

Supplemental Field Investigation and Sampling Activities
Isochem, Inc.
Lockport, New York

Location	Depth to Bedrock (fbgs)	Bentonite Seal (fbgs)	Sand Pack Interval (fbgs)	Screened Interval (fbgs)
EXISTING WELLS:				
MW-1D	14.0	11.0 - 13.0	13.0 - 45.0	15.0 - 45.0
MW-2S	18.0	1.5 - 3.5	3.5 - 18.0	4.0 - 18.0
MW-2D	18.0	16.0 - 18.0	18.0 - 50.0	20.0 - 50.0
MW-3D	21.5	23.0 - 25.0	25.0 - 45.0	30.0 - 45.0
MW-4D	18.0	11.0 - 13.0	13.0 - 35.0	15.0 - 35.0
MW-5S	17.0	1.5 - 2.5	2.5 - 17.0	3.1 - 16.1
NEWLY INSTALLED WELLS:				
MW-7D	14.0	1.0 - 18.0	18.0 - 50.0	20.0 - 50.0

Notes:
1. fbgs = feet below ground surface.

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TABLE 2

GROUNDWATER & SURFACE WATER ANALYTICAL SUMMARY

Groundwater Evaluation
Isochem, Inc.
Lockport, New York

Parameter [1]	GWQS [2]	SWQS [3]	Sample Location [4]					
			Groundwater				Surface Water	
			MW-1D	MW-2D	MW-3D	MW-5S	SW-1	SW-2
Volatiles (ug/L)								
Acetone	50*	--	ND	3.9 J	ND	2.8 J	ND	ND
Benzene	1	10	ND	**2.3 J**	**1.1 J**	ND	ND	ND
Carbon Disulfide	--	--	ND	1.7 J	ND	ND	ND	ND
Chlorobenzene	5	400	2.3 J	ND	0.73 J	ND	ND	ND
Chloroethane	5	--	ND	2.2 J	3.6 J	ND	ND	ND
Cyclohexane	--	--	1 J	ND	ND	ND	ND	ND
p-Cymene	--	--	--	--	--	--	--	--
1,4 -Dichlorobenzene	3	50	0.76 J	ND	ND	ND	ND	ND
1,1-Dichloroethane	5	--	ND	2.3 J	**140 D**	ND	ND	ND
1,2-Dichloroethane	0.6	--	ND	**0.71 J**	**21**	ND	ND	ND
1,1-Dichloroethene	5	--	ND	ND	**50**	ND	ND	ND
cis-1,2-Dichloroethene	5	--	12	1.5 J	0.77 J	ND	ND	ND
1,2-Dichloropropane	1	--	ND	ND	1 J	ND	ND	ND
Ethylbenzene	5	--	ND	**260 D**	ND	ND	ND	ND
Isopropylbenzene	5	--	0.52 J	**32**	ND	ND	ND	ND
Methyl-t-Butyl Ether (MTBE)	10	--	ND	ND	0.6 J	ND	ND	ND
Methylcyclohexane	--	--	0.54 J	0.74 J	ND	ND	ND	ND
n-Propylbenzene	5	--	--	--	--	--	--	--
Toluene	5	6000	ND	**40**	ND	ND	ND	ND
1,1,1-Trichloroethane	5	--	ND	ND	20	ND	ND	ND
Trichloroethene	5	40	0.62 J	1.1 J	1.3 J	ND	ND	ND
1,2,4-Trimethylbenzene	5	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	5	--	--	--	--	--	--	--
Vinyl chloride	2	--	**3 J**	0.72 J	**8.2**	ND	ND	ND
Xylenes, Total	5	--	ND	**590 D**	ND	ND	ND	ND
Semi-Volatiles (ug/L)								
2-Methylnaphthalene	--	--	1 BJ	130,000 BD	0.6 BJ	ND	ND	ND
Acenaphthene	20*	--	4 BJ	**89,000 BD**	8 BJ	0.5 BJ	ND	ND
Acenaphthylene	--	--	ND	730	ND	ND	ND	ND
Anthracene	50*	--	ND	**16,000 DJ**	ND	0.8 J	ND	ND
Benzo(a)anthracene	0.002*	--	ND	**4,300 DJ**	ND	**3 J**	ND	ND
Benzo(a)pyrene	ND	0.0012*	ND	**640**	ND	**3 J**	ND	ND
Benzo(b)fluoranthene	0.002*	--	**0.6 J**	**1000**	ND	**3 J**	ND	ND
Benzo(g,h,i)perylene	--	--	ND	160	ND	2 J	ND	ND
Benzo(k)fluoranthene	0.002*	--	**0.5 J**	**270**	ND	**1 J**	ND	ND
Biphenyl	--	--	ND	35,000 D	ND	ND	ND	ND
Carbazole	--	--	ND	3,900 DJ	3 J	ND	ND	ND

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TABLE 2

GROUNDWATER & SURFACE WATER ANALYTICAL SUMMARY

Groundwater Evaluation
Isochem, Inc.
Lockport, New York

Parameter [1]	GWQS [2]	SWQS [3]	Sample Location [4]					
			Groundwater				Surface Water	
			MW-1D	MW-2D	MW-3D	MW-5S	SW-1	SW-2
Chrysene	0.002*	--	ND	**3,700 DJ**	ND	**4 J**	ND	ND
Dibenz(a,h)anthracene	--	--	ND	49 J	ND	0.5 J	ND	ND
Dibenzofuran	--	--	ND	85,000 BD	4 BJ	ND	ND	ND
Fluoranthene	50*	--	0.8 J	**45,000 D**	ND	4 J	ND	ND
Fluorene	50*	--	ND	**71,000 D**	2 J	ND	ND	ND
Indeno(1,2,3-c,d)pyrene	0.002*	--	ND	**170**	ND	**2 J**	ND	ND
Naphthalene	10*	--	4 BJ	**230,000 BD**	2 BJ	ND	ND	ND
Phenathrene	50*	--	0.6 J	**180,000 D**	1 J	2 J	ND	ND
Pyrene	50*	--	0.7 J	**29,000 D**	ND	6 J	ND	ND

Notes:

1. Only those compounds detected above the method detection limit at a minimum of one sample location are reported in this table.
2. NYSDEC Class "GA" Groundwater Quality Standards/Guidance Values (GWQS/GV) as per 6 NYCRR Part 703.
3. NYSDEC Class "D" H(FC) Surface Water Quality Standards (SWQS) protection for Human Consumption of Fish (fresh waters) as per 6 NYCRR Part 703.
4. Shaded values represent exceedances of the GWQS/GV. ##
5. " B " = Analyte found in the associated blank, as well as the sample.
6. " D " = analyzed at the secondary dilution factor.
7. " J " = Estimated Value
8. " NA " = Not available
9. " ND " indicates parameter was not detected above laboratory reporting limit and is reported herein as not detected (ND).
10. " * " = The Guidance Value was used where a Standard has not been established.

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TABLE 3

NON-AQUEOUS PHASE LIQUID ANALYSIS

Groundwater Evaluation
Isochem, Inc.
Lockport, New York

Parameter	Sample Location	
	LNAPL	DNAPL
Petroleum Products Characterization (mg/kg)		
Kerosene	ND	ND
Gasoline	ND	ND
Motor Oil	ND	ND
Fuel Oil #2	ND	ND
Fuel Oil #4	ND	ND
Fuel Oil #6	ND	ND
Other	1,100,000	1,400 J
Volatiles (ug/kg)		
Acetone	NA	ND
Benzene	NA	ND
Carbon Disulfide	NA	ND
Chlorobenzene	NA	ND
Chloroethane	NA	ND
Cyclohexane	NA	ND
p-Cymene	NA	51,000 J
1,4 -Dichlorobenzene	NA	ND
1,1-Dichloroethane	NA	ND
1,2-Dichloroethane	NA	ND
1,1-Dichloroethene	NA	ND
cis-1,2-Dichloroethene	NA	ND
1,2-Dichloropropane	NA	ND
Ethylbenzene	NA	500,000
Isopropylbenzene	NA	110,000
Methyl-t-Butyl Ether (MTBE)	NA	ND
Methylcyclohexane	NA	ND
n-Propylbenzene	NA	54,000 J
Toluene	NA	87,000 J
1,1,1-Trichloroethane	NA	ND
Trichloroethene	NA	ND
1,2,4-Trimethylbenzene	NA	1,200,000

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TABLE 3

NON-AQUEOUS PHASE LIQUID ANALYSIS

Groundwater Evaluation
Isochem, Inc.
Lockport, New York

Parameter	Sample Location	
	LNAPL	DNAPL
1,3,5-Trimethylbenzene	NA	520,000
Vinyl chloride	NA	ND
Xylenes, Total	NA	1,210,000 J
Semi-Volatiles (ug/kg)		
2-Methylnaphthalene	NA	52,000,000 D
Acenaphthene	NA	34,000,000 D
Acenaphthylene	NA	ND
Anthracene	NA	6,100,000 DJ
Benzo(a)anthracene	NA	1,700,000 DJ
Benzo(a)pyrene	NA	ND
Benzo(b)fluoranthene	NA	720,000 DJ
Benzo(g,h,i)perylene	NA	ND
Benzo(k)fluoranthene	NA	820,000 DJ
Biphenyl	NA	ND
Carbazole	NA	1,300,000 DJ
Chrysene	NA	1,300,000 DJ
Dibenz(a,h)anthracene	NA	ND
Dibenzofuran	NA	33,000,000 D
Fluoranthene	NA	18,000,000 D
Fluorene	NA	27,000,000 D
Indeno(1,2,3-c,d)pyrene	NA	73,000
Naphthalene	NA	88,000,000 D
Phenathrene	NA	66,000,000 D
Pyrene	NA	10,000,000 DJ

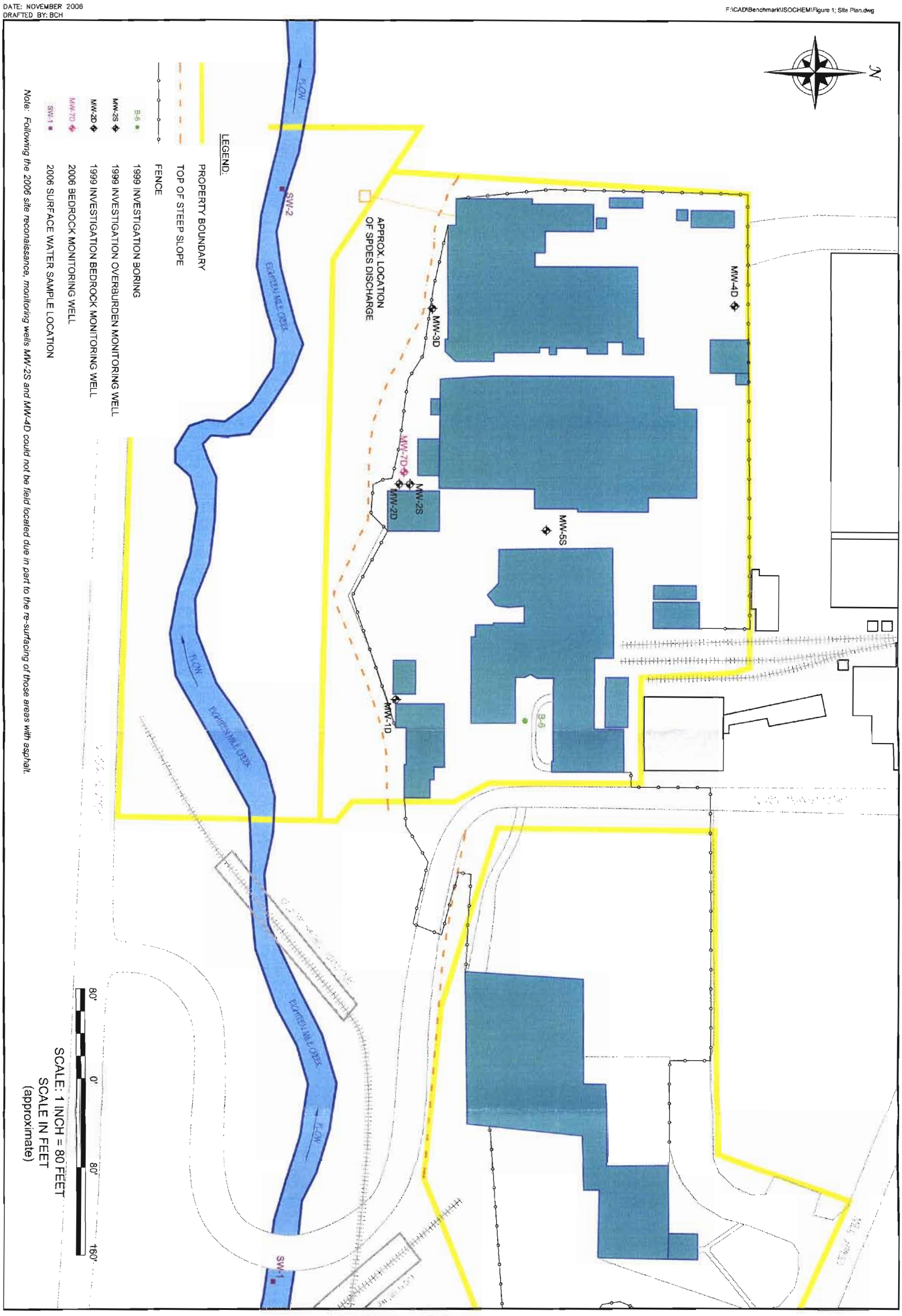
Notes:

1. Only those compounds detected above the method detection limit at a minimum of one sample location are reported in this table.
2. " D " = analyzed at the secondary dilution factor.
3. " J " = Estimated Value
4. " NA " = Due to insufficient sample volume, sample not analyzed for this parameter.
5. " ND " indicates parameter was not detected above laboratory reporting limit and is reported herein as not detected (ND).

FIGURES

DATE: NOVEMBER 2006
DRAFTED BY: BCH

F:\CAD\Benchmark\ISOCHEM\Figure 1; Site Plan.dwg



Note: Following the 2006 site reconaissance, monitoring wells MW-2S and MW-4D could not be field located due in part to the re-surfacing of those areas with asphalt.

FIGURE 1

SITE PLAN

SUPPLEMENTAL FIELD INVESTIGATION & SAMPLING ACTIVITIES

ISOCHEM LOCKPORT FACILITY
LOCKPORT, NEW YORK

PREPARED FOR
ISOCHEM, INC.

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC
726 EXCHANGE STREET
SUITE 624
BUFFALO, NEW YORK 14210
(716) 856-0599

JOB NO.: 0049-007-100

ATTACHMENT 1

WELL DEVELOPMENT & SAMPLING FIELD FORMS

BENCHMARK
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EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: Groundwater Well Development - MW-7D
Project No.: 0049-007-100
Client: Isochem, Inc.

Date: 10/26/06

Instrument Source: [X] BM [ ] Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	READING	SETTINGS
[X] pH meter	units	9:30	Myron L Company Ultra Meter 6P	606987	BCH	4.00	4.00	
						7.00	7.00	
						10.01	10.00	
[X] Turbidity meter	NTU	9:30	Hach 2100P Turbidimeter	970600014560	BCH	< 0.4	0.32	
						20	19.4	
						100	98.3	
						800	797	
[X] Sp. conductance meter	uS/mS	9:30	Myron L Company Ultra Meter 6P	606987	BCH	2080 mS @ 25 °C	2080	
[ ] PID	ppm		Photovac 2020 PID	ED GK 301		open air zero		MIBK response factor = 1.0
						____ ppm Iso. Gas		
[ ] Particulate meter	mg/m^3					zero air		
[ ] Oxygen	%					open air		
[ ] Hydrogen sulfide	ppm					open air		
[ ] Carbon monoxide	ppm					open air		
[ ] LEL	%					open air		
[ ] Radiation Meter	uR/H					background area		
[ ]								

ADDITIONAL REMARKS:

PREPARED BY: Bryan C. Hoffman **DATE:** 10/26/06

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE PLLC

GROUNDWATER WELL PURGE & SAMPLE COLLECTION LOG

Project Name: Groundwater Sampling | WELL NUMBER: **MW-1D**

Project Number: 0049-007-100 | Sample Matrix: groundwater

Client: Isochem (formerly VanDeMark Chemicals) | Weather: mostly cloudy, cool 45°F

WELL DATA:

DATE: 10/26/06 | TIME: 955

Casing Diameter (inches):	2.0	Casing Material:	Schedule 40 PVC
Screened interval (fbTOR):	15-40 fbTOR	Screen Material:	Schedule 40 PVC
Static Water Level (fbTOR):	14.25	Bottom Depth (fbTOR):	~~45.00~~ 40.26 ~~39.91~~ (sdH)
Elevation Top of Well Riser (fmsl):		Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):		Stick-up (feet):	flush-mount

PURGING DATA:

DATE: 10/26/06 | START TIME: 1015 | END TIME: 1101

Method:	disposable polyethylene bailer	Is purge equipement dedicated to sample location?	(yes) no
No. of Well Volumes Purged:	2+	Was well purged to dryness?	(yes) no
Standing Volume (gallons):	4.2	Was well purged below top of sand pack?	(yes) no
Volume Purged (gallons):	11 CAP TO DRYNESS	Condition of Well:	good, loose/broken surface completion
Purge Rate (gal/min):	0.31	Field Personnel:	BCH, PTM

VOLUME CALCULATION:

(A) Total Depth of Well (fbTOR):	39.91
(B) Casing Diameter (inches):	2
(C) Static Water Level (fbTOR):	14.25
One Well Volume (V, gallons): $V = 0.0408 [(B)^2 \times \{ (A) - (C) \}]$	4.2

* Use the table to the right to calculate one well volume by subtracting C from A, then multiplying by the volume calculation in the table per well diamter.

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	+/- 0.1 unit
SC	+/- 3%
Turbidity	+/- 10%
DO	+/- 0.3 mg/L
ORP	+/- 10 mV

EVACUATION STABILIZATION TEST DATA:

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1015	Initial	0.0	6.42	13.5	4277	71000	—	+20	red/brown
1031	24.85	5.0	6.56	12.5	4694	—	—	-31	" / "
1050	39.0	10.0	6.66	10.7	4795	—	—	-42	" / "
	DRY	11+							

SAMPLING DATA:

DATE: 10/26/06 | START TIME: 1525 | END TIME: 1534

Method:	Poly. dis. bailer	Is sampling equipement dedicated to sample location?	(yes) no
Initial Water Level (fbTOR):	*	Was well sampled to dryness?	yes (no)
Final Water Level (fbTOR):	*	Was well sampled below top of sand pack?	(yes) no
Air Temperature (°F):	50°F	Field Personnel:	BCH, PTM
Source and type of water used in the field for QC purposes:	NONE		

PHYSICAL & CHEMICAL DATA:

DESCRIPTION OF WATER SAMPLE		
Odor	None	
Color	pinkish grey	
NAPL	NONE	
Contains Sediment?	yes	no

WATER QUALITY MEASUREMENTS

Sample	Time	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
initial	1531	6.90	15.1	4914	167	—	144
final	1534	6.67	15.8	5101	944	—	136

REMARKS: * Due to NAPL impacts observed @ MW-2D, did not use it indicator in order to eliminate X contamination

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL PURGE & SAMPLE COLLECTION LOG

Project Name: Groundwater Sampling
WELL NUMBER: **MW-2D**
Project Number: 0049-007-100
Sample Matrix: groundwater
Client: Isochem (formerly VanDeMark Chemicals)
Weather: mostly sunny, cool 50°F

WELL DATA:

DATE: 10/26/06 TIME: 1410

Casing Diameter (inches):	2.0	Casing Material:	Schedule 40 PVC
Screened interval (fbTOR):	20 - 50 fbTOR	Screen Material:	Schedule 40 PVC
Static Water Level (fbTOR):	30.45	Bottom Depth (fbTOR):	~~50.00~~ 50.05
Elevation Top of Well Riser (fmsl):	—	Ground Surface Elevation (fmsl):	—
Elevation Top of Screen (fmsl):	—	Stick-up (feet):	flush-mount

PURGING DATA:

DATE: 10/26/06 START TIME: 1413 END TIME: 1451

Method:	disposable polyethylene bailer	Is purge equipement dedicated to sample location?	(yes) no
No. of Well Volumes Purged:	>3	Was well purged to dryness?	yes (no)
Standing Volume (gallons):	3.2	Was well purged below top of sand pack?	(yes) no
Volume Purged (gallons):	10.5	Condition of Well:	good, no road box
Purge Rate (gal/min):	0.28	Field Personnel:	BCH, PTM

VOLUME CALCULATION:

(A) Total Depth of Well (fbTOR):	50.05
(B) Casing Diameter (inches):	2
(C) Static Water Level (fbTOR):	30.45
One Well Volume (V, gallons): $V = 0.0408 [(B)^2 \times \{ (A) - (C) \}]$	3.19

* Use the table to the right to calculate one well volume by subtracting C from A, then multiplying by the volume calculation in the table per well diamter.

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	+/- 0.1 unit
SC	+/- 3%
Turbidity	+/- 10%
DO	+/- 0.3 mg/L
ORP	+/- 10 mV

EVACUATION STABILIZATION TEST DATA:

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperatura (degrees C)	Specific Conductance (µS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1413	Initial	0.0	6.80	14.8	5944	220	—	-121	sl. turbid, LNAPL
1427	—	3.5	6.95	14.6	5184	>1000	—	-75	" " strong pet. odor
1440	—	7.0	6.96	15.1	5254	489	—	-90	grey, strong odor
1451	—	10.0	6.93	14.6	5029	239	—	-49	" " LNAPL globules

SAMPLING DATA:

DATE: 10/6/06 START TIME: 10:52 END TIME: 1502

Method:	poly. disp. bailer	Is sampling equipement dedicated to sample location?	(yes) no
Initial Water Level (fbTOR):	*	Was well sampled to dryness?	yes (no)
Final Water Level (fbTOR):	*	Was well sampled below top of sand pack?	(yes) no
Air Temperature (°F):		Field Personnel:	BCH, PTM
Source and type of water used in the field for QC purposes:	None		

PHYSICAL & CHEMICAL DATA:

** collect DNAPL sample - TCL VOCs, BNPetro, PCBs
insufficient LNAPL for sample

DESCRIPTION OF WATER SAMPLE		
Odor	Strong Creosote	
Color	grey	
NAPL	LNAPL + DNAPL	
Contains Sediment?	(yes)	no

WATER QUALITY MEASUREMENTS

Sample	Time	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
initial	1458	7.00	15.4	4980	124	—	6
final	1502	6.97	15.2	5012	159	—	-38

REMARKS: Creosote odor + NAPL observed on WL tape, strong odor
Initial stab. sample - LNAPL + DNAPL observed.
* WL indicator not used due to presence of product

PREPARED BY: Bryan C. Hoffman

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL PURGE & SAMPLE COLLECTION LOG

Project Name: Groundwater Sampling
WELL NUMBER: **MW-3D**
Project Number: 0049-007-100
Sample Matrix: groundwater
Client: Isochem (formerly VanDeMark Chemicals)
Weather: cloudy, cool 45°F

WELL DATA:

DATE: 10/26/06 TIME: 1105

Casing Diameter (inches):	2.0	Casing Material:	Schedule 40 PVC
Screened interval (fbTOR):	30-45 fbTOR	Screen Material:	Schedule 40 PVC
Static Water Level (fbTOR):	38.24	Bottom Depth (fbTOR):	~~45.00~~ 45.03
Elevation Top of Well Riser (fmsl):		Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):		Stick-up (feet):	flush-mount

PURGING DATA:

DATE: 10/26/06 START TIME: 1117 END TIME: 1130

Method:	disposable polyethylene bailer	Is purge equipement dedicated to sample location?	(yes) no
No. of Well Volumes Purged:	>4	Was well purged to dryness?	yes (no)
Standing Volume (gallons):	1.1	Was well purged below top of sand pack?	(yes) no
Volume Purged (gallons):	5.0	Condition of Well:	good - broken surface comp.
Purge Rate (gal/min):	0.38	Field Personnel:	BCH, PTM

VOLUME CALCULATION:

(A) Total Depth of Well (fbTOR):	45.03
(B) Casing Diameter (inches):	2
(C) Static Water Level (fbTOR):	38.24
One Well Volume (V, gallons): $V = 0.0408 [(B)^2 \times \{ (A) - (C) \}]$	1.1

* Use the table to the right to calculate one well volume by subtracting C from A, then multiplying by the volume calculation in the table per well diamter.

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	+/- 0.1 unit
SC	+/- 3%
Turbidity	+/- 10%
DO	+/- 0.3 mg/L
ORP	+/- 10 mV

EVACUATION STABILIZATION TEST DATA:

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (µS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearence & Odor
1117	Initial	0.0	6.80	11.9	9840	670	—	-118	red/brown, strong sulfur
1122	40.55	1.5	6.79	12.2	9809	>1000	—	-102	" "
1125	41.11	3.0	6.80	12.3	9798	>1000	—	-73	" "
1130	41.55	5.0	6.82	12.3	9819	>1000	—	-71	" "

SAMPLING DATA:

DATE: 10/26/06 START TIME: 1138 END TIME: 1146

Method:	poly. disp. bailer	Is sampling equipement dedicated to sample location?	(yes) no
Initial Water Level (fbTOR):	38.66	Was well sampled to dryness?	yes (no)
Final Water Level (fbTOR):		Was well sampled below top of sand pack?	(yes) no
Air Temperature (°F):	45°F	Field Personnel:	BCH, PTM
Source and type of water used in the field for QC purposes:	None		

PHYSICAL & CHEMICAL DATA:

DESCRIPTION OF WATER SAMPLE		
Odor	strong sulfur	
Color	Reddish/brown	
NAPL	None	
Contains Sediment?	yes	(no)

WATER QUALITY MEASUREMENTS

Sample	Time	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
initial	1143	705	11.6	9757	340	—	-29
final	1146	6.88	12.2	9691	259	—	-24

REMARKS:

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL PURGE & SAMPLE COLLECTION LOG

Project Name: Groundwater Sampling | WELL NUMBER: **MW-5S**

Project Number: 0049-007-100 | Sample Matrix: groundwater

Client: Isochem (formerly VanDeMark Chemicals) | Weather: partly sunny, cool 50°F

WELL DATA:

DATE: 10/26/06 | TIME:

Casing Diameter (inches):	2.0	Casing Material:	Schedule 40 PVC
Screened interval (fbTOR):	3.1 - 16.1 fbTOR	Screen Material:	Schedule 40 PVC
Static Water Level (fbTOR):	4.24	Bottom Depth (fbTOR):	~~17.00~~ 14.60
Elevation Top of Well Riser (fmsl):	—	Ground Surface Elevation (fmsl):	—
Elevation Top of Screen (fmsl):	—	Stick-up (feet):	flush-mount

PURGING DATA:

DATE: 10/26/06 | START TIME: 1318 | END TIME: 1338

Method:	disposable polyethylene bailer	Is purge equipement dedicated to sample location?	(yes) no
No. of Well Volumes Purged:	>5	Was well purged to dryness?	yes (no)
Standing Volume (gallons):	1.6	Was well purged below top of sand pack?	(yes) no
Volume Purged (gallons):	8.5	Condition of Well:	good, no surface completion
Purge Rate (gal/min):	0.425	Field Personnel:	BCH, PTM

VOLUME CALCULATION:

(A) Total Depth of Well (fbTOR):	14.25
(B) Casing Diameter (inches):	2
(C) Static Water Level (fbTOR):	4.24
One Well Volume (V, gallons): $V = 0.0408 [(B)^2 \times \{ (A) - (C) \}]$	1.63

* Use the table to the right to calculate one well volume by subtracting C from A, then multiplying by the volume calculation in the table per well diamter.

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	+/- 0.1 unit
SC	+/- 3%
Turbidity	+/- 10%
DO	+/- 0.3 mg/L
ORP	+/- 10 mV

EVACUATION STABILIZATION TEST DATA:

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (µS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1318	Initial	0.0	7.55	15.1	7263	>1000	—	-104	orange/brown w/ sed.
1322	10.78	1.75	7.56	15.7	7196	>1000	—	-84	" " "
1326	12.81	3.00	7.53	16.3	7220	>1000	—	-98	" " "
1331	11.91	5.00	7.50	15.7	7175	>1000	—	-139	brown w/ Tr. sed.
1335	13.42	7.0	7.47	15.5	7210	>1000	—	-120	" "
1338	13.57	8.5	7.52	16.0	7195	>1000	—	-164	black " ", sl. sulfr

SAMPLING DATA:

DATE: 10/26/06 | START TIME: 1340 | END TIME: 1351

Method:	poly disp. bailer	Is sampling equipement dedicated to sample location?	(yes) no
Initial Water Level (fbTOR):	11.52	Was well sampled to dryness?	yes (no)
Final Water Level (fbTOR):	11.06	Was well sampled below top of sand pack?	(yes) no
Air Temperature (°F):	50°F	Field Personnel:	BCH, PTM
Source and type of water used in the field for QC purposes:	NONE		

PHYSICAL & CHEMICAL DATA:

DESCRIPTION OF WATER SAMPLE		
Odor	sl. sulfur	
Color	lt. orange / black	
NAPL	NONE	
Contains Sediment?	(yes) slight	no

WATER QUALITY MEASUREMENTS

Sample	Time	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
initial	13:42	7.60	14.6	7172	599	—	-112
final	13:51	7.40	15.9	7225	>1000	—	-104

REMARKS:

PREPARED BY:

BENCHMARK
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SCIENCE, PLLC

GROUNDWATER WELL
PURGE & SAMPLE COLLECTION LOG

Project Name:	Groundwater Sampling	WELL NUMBER:	
Project Number:	0049-007-100	Sample Matrix:	groundwater
Client:	Isochem (formerly VanDeMark Chemicals)	Weather:	

WELL DATA:

DATE: | TIME:

Casing Diameter (inches):	2.0	Casing Material:	Schedule 40 PVC
Screened interval (fbTOR):		Screen Material:	Schedule 40 PVC
Static Water Level (fbTOR):		Bottom Depth (fbTOR):	
Elevation Top of Well Riser (fmsl):		Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):		Stick-up (feet):	flush-mount

PURGING DATA:

DATE: | START TIME: | END TIME:

Method:	disposable polyethylene bailer	Is purge equipement dedicated to sample location?	yes no
No. of Well Volumes Purged:		Was well purged to dryness?	yes no
Standing Volume (gallons):		Was well purged below top of sand pack?	yes no
Volume Purged (gallons):		Condition of Well:	
Purge Rate (gal/min):		Field Personnel:	

VOLUME CALCULATION:

(A) Total Depth of Well (fbTOR):	
(B) Casing Diameter (inches):	
(C) Static Water Level (fbTOR):	
One Well Volume (V, gallons): $V = 0.0408 [(B)^2 \times \{ (A) - (C) \}]$	

* Use the table to the right to calculate one well volume by subtracting C from A, then multiplying by the volume calculation in the table per well diamter.

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	+/- 0.1 unit
SC	+/- 3%
Turbidity	+/- 10%
DO	+/- 0.3 mg/L
ORP	+/- 10 mV

EVACUATION STABILIZATION TEST DATA:

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
	Initial	0.0							

SAMPLING DATA:

DATE: | START TIME: | END TIME:

Method:		Is sampling equipement dedicated to sample location?	yes no
Initial Water Level (fbTOR):		Was well sampled to dryness?	yes no
Final Water Level (fbTOR):		Was well sampled below top of sand pack?	yes no
Air Temperature (°F):		Field Personnel:	
Source and type of water used in the field for QC purposes:			

PHYSICAL & CHEMICAL DATA:

DESCRIPTION OF WATER SAMPLE		
Odor		
Color		
NAPL		
Contains Sediment?	yes	no

WATER QUALITY MEASUREMENTS

Sample	Time	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
initial							
final							

REMARKS:

PREPARED BY:

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

WATER SAMPLE COLLECTION LOG

PROJECT INFORMATION

Project Name: Groundwater Sampling
Project No.: 0049-007-100
Client: Isochem (formerly VanDeMark Chemicals)
Location: upstream

SAMPLE DESCRIPTION

I.D.: **SW-1**
Matrix: ☑ SURFACE WATER ☐ STORM ☐ SEEP ☐ OTHER

SAMPLE INFORMATION

Date Collected: 10/26/06
Time Collected: 16:10
Date Shipped to Lab: 10/26/06
Collected By: BCH, PTM
Sample Type: ☐ POINT ☒ GRAB ☐ COMPOSITE
Sample Collection Method: ☑ DIRECT DIP ☐ SS / POLY. DIPPER ☐ PERISTALTIC PUMP ☐ POLY. DISP. BAILER ☐ ISCO SAMPLER ☐ OTHER

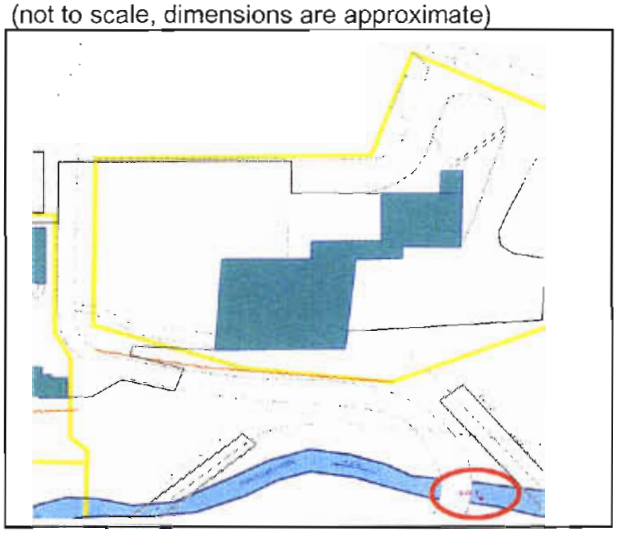
SAMPLING INFORMATION

Weather: Sunny, 50°F
Air Temperature: 50°F

Parameter	First	Last	Units
pH	7.41	NA	units
Temp.	7.8		°C
Cond.	444.8		~~mS~~ µS
Turbidity	61.0		NTU
Eh / ORP	+65		mV
D.O.	—		ppm
Odor	none		olfactory
Appearance	clear		visual

LOCATION SKETCH

(not to scale, dimensions are approximate)



EXACT LOCATION (if applicable)

Northing (ft)	Easting (ft)	Surface Elevation (fmsl)
—	—	—

SAMPLE DESCRIPTION (appearance, olfactory):

none

SAMPLE ANALYSIS (depth, laboratory analysis required):

TCL VOCs, TCL SVOCs (BN)

ADDITIONAL REMARKS:

PREPARED BY: Bryan C. Hahn **DATE:** 10/26/06

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

WATER SAMPLE COLLECTION LOG

PROJECT INFORMATION

Project Name: Groundwater Sampling
Project No.: 0049-007-100
Client: Isochem (formerly VanDeMark Chemicals)
Location: downstream

SAMPLE DESCRIPTION

I.D.: **SW-2**
Matrix: ☑ SURFACE WATER ☐ STORM ☐ SEEP ☐ OTHER

SAMPLE INFORMATION

Date Collected: 10/26/06
Time Collected: 16:25
Date Shipped to Lab: 10/26/06
Collected By: BCH, PTM
Sample Type: ☐ POINT ☒ GRAB ☐ COMPOSITE
Sample Collection Method: ☑ DIRECT DIP ☐ SS / POLY. DIPPER ☐ PERISTALTIC PUMP ☐ POLY. DISP. BAILER ☐ ISCO SAMPLER ☐ OTHER

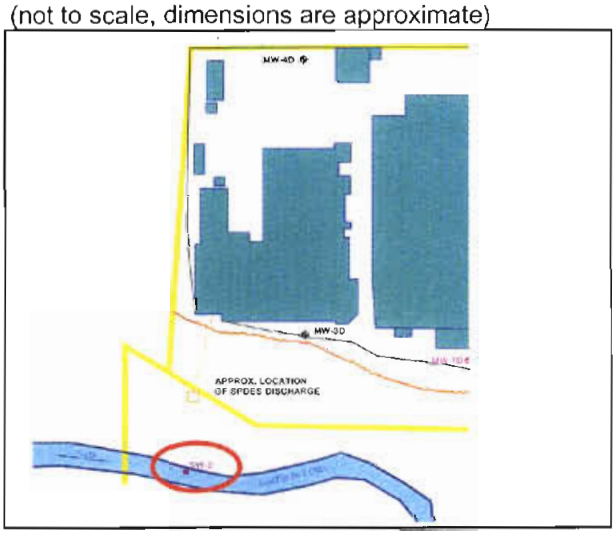
SAMPLING INFORMATION

Weather: Sunny
Air Temperature: 50°F

Parameter	First	Last	Units
pH	7.70	NA	units
Temp.	7.5	↓	°C
Cond.	447.5	↓	µ ~~m~~S
Turbidity	28.8	↓	NTU
Eh / ORP	+91	↓	mV
D.O.	—	↓	ppm
Odor	none	↓	olfactory
Appearance	Clear	↓	visual

LOCATION SKETCH

(not to scale, dimensions are approximate)



EXACT LOCATION (if applicable)

Northing (ft)	Easting (ft)	Surface Elevation (fmsl)
—	—	—

SAMPLE DESCRIPTION (appearance, olfactory):

none

SAMPLE ANALYSIS (depth, laboratory analysis required):

TCL VOCs, TCL SVOCs (BN)

ADDITIONAL REMARKS:

PREPARED BY: Bryan C. Hall **DATE:** 10/26/06

ECHMARK
ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: Groundwater Well Development - MW-7D
Project No.: 0049-007-100
Client: Isochem, Inc.

Date: 11/20/06

Instrument Source: [X] BM [ ] Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	READING	SETTINGS
[X] pH meter	units		Myron L Company Ultra Meter 6P	606987	BCH	4.00 7.00 10.00	4.00 7.00 10.00	NA
[X] Turbidity meter	NTU		Hach 2100P Turbidimeter	970600014560	BCH	< 0.4 20 100 800	0.37 19.8 101 799	NA
[X] Sp. conductance meter	uS/mS		Myron L Company Ultra Meter 6P	606987	BCH	1413 ~~mS~~ uS @ 25 °C	1413	
[ ] PID	ppm		Photovac 2020 PID	ED GK 301		open air zero ____ ppm Iso. Gas		MIBK response factor = 1.0
[ ] Particulate meter	mg/m^3					zero air		
[ ] Oxygen	%					open air		
[ ] Hydrogen sulfide	ppm					open air		
[ ] Carbon monoxide	ppm					open air		
[ ] LEL	%					open air		
[ ] Radiation Meter	uR/H					background area		
[ ]								

ADDITIONAL REMARKS:

PREPARED BY: BCH **DATE:** 11/20/06

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL DEVELOPMENT LOG

Project Name: Groundwater Well Development | WELL NUMBER: **MW-7D**

Project Number: 0049-007-100 | Sample Matrix: groundwater

Client: Isochem, Inc. | Weather: cloudy, cool 45°F

WELL DATA:

DATE: 11/20/06 | TIME: 1405

Casing Diameter (inches):	2.0	Casing Material:	2" Schedule 40 PVC
Screened interval (fbTOR):	20.0 - 50.0	Screen Material:	2" Schedule 40 PVC
Static Water Level (fbTOR):	30.56	Bottom Depth (fbTOR):	50.00
Elevation Top of Well Riser (fmsl):	NA	Datum Ground Surface:	Mean Sea Level
Elevation Top of Screen (fmsl):	NA	Stick-up (feet):	flush-mount

PURGING DATA:

DATE: 11/20/06 | START TIME: 1420 | END TIME: 1603

Method: ~~disposable polyethylene~~ dedicated PVC bailer		Is purge equipement dedicated to sample location?	(yes) no
No. of Well Volumes Purged:	8.75	Was well purged to dryness?	yes (no)
Standing Volume (gallons):	3.2	Was well purged below top of sand pack?	(yes) no
Volume Purged (gallons):	28.0	Condition of Well:	good
Purge Rate (gal/min):	0.3	Field Personnel:	BCH

VOLUME CALCULATION:

(A) Total Depth of Well (fbTOR):	50.00
(B) Casing Diameter (inches):	2"
(C) Static Water Level (fbTOR):	30.53
One Well Volume (V, gallons): $V = 0.0408 [(B)^2 \times \{ (A) - (C) \}]$	3.17

*Use the table to the right to calculate one well volume.

Field Personnel: BCH

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469
8"	2.611

Stabilization Criteria

Parameter	Criteria
DO	+/- 0.3 mg/L
Turbidity	+/- 10%
SC	+/- 3%
ORP	+/- 10 mV
pH	+/- 0.1 unit

EVACUATION STABILIZATION TEST DATA:

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance ~~(mS/cm)~~ µS	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
1428	30.56	0.0	6.26	10.7	7836	29.5	—	+46	clear, no odor
1440	34.05	3.5	6.59	11.4	6325	1777	—	-31	red/brown, sl. petro odor
1502	38.31	10.5	6.79	10.6	5310	276	—	-67	reddish, sl. petro odor
1526	34.39	17.5	6.89	10.2	5753	188	—	-69	" " sl. sheen
1541	36.62	21.0	6.92	10.8	5558	183	—	-74	pink, " "
1553	36.75	24.5	6.96	11.0	5350	155	—	-71	" " "
1603	37.25	28.0	6.95	11.3	5135	104	—	-75	" " "

REMARKS: MW-20 WL= 30.33 fbTOR, no (measurable) product in either well

PREPARED BY: BCH

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

EQUIPMENT CALIBRATION LOG

PROJECT INFORMATION:

Project Name: Groundwater Well Development - MW-7D
Date: 11/24/06
Project No.: 0049-007-100
Client: Isochem, Inc.
Instrument Source: [X] BM [ ] Rental

METER TYPE	UNITS	TIME	MAKE/MODEL	SERIAL NUMBER	CAL. BY	STANDARD	READING	SETTINGS
[X] pH meter	units		Myron L Company Ultra Meter 6P	606987	BCH	4.00	4.00	NA
						7.00	7.00	
						10.00	10.00	
[X] Turbidity meter	NTU		Hach 2100P Turbidimeter	970600014560	BCH	< 0.4	0.34	NA
						20	19.5	
						100	102	
						800	799	
[X] Sp. conductance meter	uS/mS		Myron L Company Ultra Meter 6P	606987	BCH	1413 ~~mS~~ uS @ 25 °C	1413	NA
[ ] PID	ppm		Photovac 2020 PID	ED GK 301		open air zero		MIBK response factor = 1.0
						____ ppm Iso. Gas		
[ ] Particulate meter	mg/m^3					zero air		
[ ] Oxygen	%					open air		
[ ] Hydrogen sulfide	ppm					open air		
[ ] Carbon monoxide	ppm					open air		
[ ] LEL	%					open air		
[ ] Radiation Meter	uR/H					background area		
[ ]								

ADDITIONAL REMARKS:

PREPARED BY: BCH **DATE:** 11/24/06

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL PURGE & SAMPLE COLLECTION LOG

Project Name: Groundwater Sampling
Project Number: 0049-007-100
Client: Isochem (formerly VanDeMark Chemicals)

WELL NUMBER: **MW-7D**
Sample Matrix: groundwater
Weather: sunny, cold, calm 29°F

WELL DATA:

DATE: 11/24/06 TIME: 9:01

Casing Diameter (inches):	2.0	Casing Material:	Schedule 40 PVC
Screened interval (fbTOR):	20.0 - 50.0	Screen Material:	Schedule 40 PVC
Static Water Level (fbTOR):	31.28	Bottom Depth (fbTOR):	50.00
Elevation Top of Well Riser (fmsl):		Ground Surface Elevation (fmsl):	
Elevation Top of Screen (fmsl):		Stick-up (feet):	flush-mount

PURGING DATA:

DATE: 11/24/06 START TIME: 9:02 END TIME: 9:38

Method: ~~disposable polyethylene~~ bailer, PVC dedicated		Is purge equipement dedicated to sample location?	(yes) no
No. of Well Volumes Purged:	7.3	Was well purged to dryness?	yes (no)
Standing Volume (gallons):	3.1	Was well purged below top of sand pack?	(yes) no
Volume Purged (gallons):	9.75	Condition of Well:	good
Purge Rate (gal/min):	0.27	Field Personnel:	BCH

VOLUME CALCULATION:

(A) Total Depth of Well (fbTOR):	50.00
(B) Casing Diameter (inches):	2"
(C) Static Water Level (fbTOR):	31.28
One Well Volume (V, gallons): V = 0.0408 [(B)^2 x { (A) - (C) }]	3.05

* Use the table to the right to calculate one well volume by subtracting C from A, then multiplying by the volume calculation in the table per well diamter.

Volume Calculation

Well Diameter	Volume gal/ft
1"	0.041
2"	0.163
3"	0.367
4"	0.653
5"	1.020
6"	1.469

Stabilization Criteria

Parameter	Criteria
pH	+/- 0.1 unit
SC	+/- 3%
Turbidity	+/- 10%
DO	+/- 0.3 mg/L
ORP	+/- 10 mV

EVACUATION STABILIZATION TEST DATA:

Time	Water Level (fbTOR)	Accumulated Volume (gallons)	pH (units)	Temperature (degrees C)	Specific Conductance ~~(mS/cm)~~ uS	Turbidity (NTU)	DO (mg/L)	ORP (mV)	Appearance & Odor
9:02	Initial	0.0	6.61	10.1	4895	19.9	—	+28	clear, petro odor
9:14	34.35	3.25	6.50	11.7	5319	194	—	0	" " "
9:27	35.98	6.5	6.54	11.8	5160	129	—	0	" " "
9:38	36.55	9.75	6.59	12.1	5067	91.0	—	-71	" " "

SAMPLING DATA:

DATE: 11/24/06 START TIME: 10:03 END TIME: 1013

Method:	dedicated PVC bailer	Is sampling equipement dedicated to sample location?	(yes) no
Initial Water Level (fbTOR):	31.52	Was well sampled to dryness?	yes (no)
Final Water Level (fbTOR):	32.18	Was well sampled below top of sand pack?	(yes) no
Air Temperature (°F):	40°F	Field Personnel:	BCH
Source and type of water used in the field for QC purposes:	NA		

PHYSICAL & CHEMICAL DATA:

DESCRIPTION OF WATER SAMPLE		
Odor	petroleum based	
Color	sl. turbid	
NAPL	none	
Contains Sediment?	yes	(no)

WATER QUALITY MEASUREMENTS

Sample	Time	pH (units)	TEMP. (°C)	SC (uS)	TURB. (NTU)	DO (ppm)	ORP (mV)
initial	10:08	6.91	12.3	4543	11.3	—	-33
final	10:13	6.93	13.4	4578	49.4	—	+517

REMARKS: TCL VOCs (8260) + TCL SVOCs (8270) (BN)

PREPARED BY: BCH

ATTACHMENT 2

LABORATORY ANALYTICAL DATA

SEVERN TRENT STL

STL Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228

Tel: 716 691 2600 Fax: 716 691 7991
www.stl-inc.com

ANALYTICAL REPORT

Job#: A06-C596

STL Project#: NY4A9217
Site Name: Benchmark
Task: Vandermark/Isochem

Mr. Bryan Hann
Benchmark Environmental
726 Exchange St., Ste 624
Buffalo, NY 14210

STL Buffalo

Brian J. Fischer
Project Manager

11/09/2006

STL Buffalo
Current Certifications

As of 9/28/2006

STATE	Program	Cert # / Lab ID
AFCEE	AFCEE	
Arkansas	SDWA, CWA, RCRA, SOIL	88-0686
California	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida	NELAP CWA, RCRA	E87672
Georgia	SDWA,NELAP CWA, RCRA	956
Illinois	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA,CWA, RCRA	036-999-337
New Hampshire	NELAP SDWA, CWA	233701
New Jersey	SDWA, CWA, RCRA, CLP	NY455
New York	NELAP, AIR, SDWA, CWA, RCRA,ASP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania	NELAP CWA,RCRA	68-00281
South Carolina	RCRA	91013
Tennessee	SDWA	02970
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington	CWA,RCRA	C1677
West Virginia	CWA,RCRA	252
Wisconsin	CWA, RCRA	998310390

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6C59601	MW-1D	WATER	10/26/2006	15:25	10/26/2006	17:18
A6C59602	MW-2D	WATER	10/26/2006	15:02	10/26/2006	17:18
A6C59603	MW-3D	WATER	10/26/2006	11:38	10/26/2006	17:18
A6C59604	MW-5S	WATER	10/26/2006	13:40	10/26/2006	17:18
A6C59605	SW-1	WATER	10/26/2006	16:10	10/26/2006	17:18
A6C59606	SW-2	WATER	10/26/2006	16:25	10/26/2006	17:18
A6C59607	TRIP BLANK	WATER	10/26/2006		10/26/2006	17:18

METHODS SUMMARY

Job#: A06-C596

STL Project#: NY4A9217
Site Name: Benchmark

PARAMETER	ANALYTICAL METHOD
AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS	SW8463 8260
BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ONLY(4.2)	SW8463 8270

References:

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

NON-CONFORMANCE SUMMARY

Job#: A06-C596

STL Project#: NY4A9217
Site Name: Benchmark

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-C596
Sample Cooler(s) were received at the following temperature(s); 9.2 °C
Samples were received at a temperature of 9.2°C. However, ice was present in the cooler and as the samples were collected the same day, it was not possible for the samples to cool to 4°C prior to receipt. There is no impact on the data.
MW-2D (Visible Product-Impacted)

GC/MS Volatile Data

No deviations from protocol were encountered during the analytical procedures.

GC/MS Semivolatile Data

All surrogate concentrations were diluted below the linear range of the calibration curve in sample MW-2D DL.

The surrogate recovery for Nitrobenzene-d5 was above the laboratory quality control limits for sample MW-2D. Based on US EPA CLP National Functional Guidelines for Data Review, one surrogate in either fraction (base/neutral or acid fraction) may have a recovery outside of the control limit. All analytes associated with that surrogate should be considered biased high.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Client Sample ID	Lab Sample ID	Parameter (Inorganic)/Method (Organic)	Dilution	Code
MW-2D DL	A6C59602DL	8260	4.00	008
MW-2D DL	A6C59602DL	8270	200.00	008
MW-3D	A6C59603DL	8260	2.00	008

Dilution Code Definition:

002 - sample matrix effects
003 - excessive foaming
004 - high levels of non-target compounds
005 - sample matrix resulted in method non-compliance for an Internal Standard
006 - sample matrix resulted in method non-compliance for Surrogate
007 - nature of the TCLP matrix
008 - high concentration of target analyte(s)
009 - sample turbidity
010 - sample color
011 - insufficient volume for lower dilution
012 - sample viscosity
013 - other

SEVERN TRENT STL

DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
A	This flag indicates that a TIC is a suspected aldol-condensation product.
[1]	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Indicates spike sample recovery is not within the quality control limits.
S	Indicates value determined by the Method of Standard Addition.
E	Indicates a value estimated or not reported due to the presence of interferences.
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
*	Indicates the spike or duplicate analysis is not within the quality control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

Client ID		MW-1D		MW-2D		MW-2D DL		MW-3D	
Job No	Lab ID	A06-C596	A6C59601	A06-C596	A6C59602	A06-C596	A6C59602DL	A06-C596	A6C59603
Sample Date		10/26/2006		10/26/2006		10/26/2006		10/26/2006	

Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/L	ND	25	3.9 J	25	ND	100	ND	25
Benzene	UG/L	ND	5.0	2.3 J	5.0	2.2 DJ	20	1.1 J	5.0
Bromodichloromethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Bromoform	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Bromomethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
2-Butanone	UG/L	ND	25	ND	25	ND	100	ND	25
Carbon Disulfide	UG/L	ND	5.0	1.7 J	5.0	ND	20	ND	5.0
Carbon Tetrachloride	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Chlorobenzene	UG/L	2.3 J	5.0	ND	5.0	ND	20	0.73 J	5.0
Chloroethane	UG/L	ND	5.0	2.2 J	5.0	ND	20	3.6 J	5.0
Chloroform	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Chloromethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Cyclohexane	UG/L	1.0 J	5.0	ND	5.0	ND	20	ND	5.0
1,2-Dibromo-3-chloropropane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Dibromochloromethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Dichlorodifluoromethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
1,2-Dibromoethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
1,2-Dichlorobenzene	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
1,3-Dichlorobenzene	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
1,4-Dichlorobenzene	UG/L	0.76 J	5.0	ND	5.0	ND	20	ND	5.0
1,1-Dichloroethane	UG/L	ND	5.0	2.3 J	5.0	2.4 DJ	20	130 E	5.0
1,2-Dichloroethane	UG/L	ND	5.0	0.71 J	5.0	ND	20	21	5.0
1,1-Dichloroethene	UG/L	ND	5.0	ND	5.0	ND	20	50	5.0
cis-1,2-Dichloroethene	UG/L	12	5.0	1.5 J	5.0	ND	20	0.77 J	5.0
trans-1,2-Dichloroethene	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
1,2-Dichloropropane	UG/L	ND	5.0	ND	5.0	ND	20	1.0 J	5.0
cis-1,3-Dichloropropene	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
trans-1,3-Dichloropropene	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Ethylbenzene	UG/L	ND	5.0	230 E	5.0	260 D	20	ND	5.0
2-Hexanone	UG/L	ND	25	ND	25	ND	100	ND	25
Isopropylbenzene	UG/L	0.52 J	5.0	32	5.0	34 D	20	ND	5.0
Methyl acetate	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Methylene chloride	UG/L	ND	5.0	ND	5.0	2.8 DJ	20	ND	5.0
Methyl-t-Butyl Ether (MTBE)	UG/L	ND	5.0	ND	5.0	ND	20	0.60 J	5.0
4-Methyl-2-pentanone	UG/L	ND	25	ND	25	ND	100	ND	25
Methylcyclohexane	UG/L	0.54 J	5.0	0.74 J	5.0	ND	20	ND	5.0
Styrene	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
1,1,2,2-Tetrachloroethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Tetrachloroethene	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Toluene	UG/L	ND	5.0	40	5.0	37 D	20	ND	5.0
1,2,4-Trichlorobenzene	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
1,1,1-Trichloroethane	UG/L	ND	5.0	ND	5.0	ND	20	20	5.0
1,1,2-Trichloroethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 11/09/2006
Time: 18:26:16

Benchmark
Vandermark/Isochem
AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Rept: AN0326

Client ID		MW-1D		MW-2D		MW-2D DL		MW-3D	
Job No	Lab ID	A06-C596	A6C59601	A06-C596	A6C59602	A06-C596	A6C59602DL	A06-C596	A6C59603
Sample Date		10/26/2006		10/26/2006		10/26/2006		10/26/2006	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
1,1,2-Trichloro-1,2,2-trifluor	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Trichloroethene	UG/L	0.62 J	5.0	1.1 J	5.0	ND	20	1.3 J	5.0
Trichlorofluoromethane	UG/L	ND	5.0	ND	5.0	ND	20	ND	5.0
Vinyl chloride	UG/L	3.0 J	5.0	0.72 J	5.0	ND	20	8.2	5.0
Total Xylenes	UG/L	ND	15	480 E	15	590 D	60	ND	15
IS/SURROGATE(S)									
Chlorobenzene-D5	%	83	50-200	80	50-200	81	50-200	92	50-200
1,4-Difluorobenzene	%	83	50-200	80	50-200	82	50-200	96	50-200
1,4-Dichlorobenzene-D4	%	79	50-200	79	50-200	84	50-200	91	50-200
Toluene-D8	%	97	76-122	99	76-122	98	76-122	96	76-122
p-Bromofluorobenzene	%	90	73-120	97	73-120	96	73-120	94	73-120
1,2-Dichloroethane-D4	%	87	72-143	90	72-143	89	72-143	80	72-143

NA = Not Applicable ND = Not Detected

Client ID	MW-3D		MW-5S		SW-1		SW-2	
Job No / Lab ID	A06-C596	A6C59603DL	A06-C596	A6C59604	A06-C596	A6C59605	A06-C596	A6C59606
Sample Date	10/26/2006		10/26/2006		10/26/2006		10/26/2006	

Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/L	ND	50	2.8 J	25	ND	25	ND	25
Benzene	UG/L	1.2 DJ	10	ND	5.0	ND	5.0	ND	5.0
Bromodichloromethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Bromoform	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Bromomethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
2-Butanone	UG/L	ND	50	ND	25	ND	25	ND	25
Carbon Disulfide	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Carbon Tetrachloride	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Chlorobenzene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Chloroethane	UG/L	4.3 DJ	10	ND	5.0	ND	5.0	ND	5.0
Chloroform	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Chloromethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Cyclohexane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,2-Dibromo-3-chloropropane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Dibromochloromethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Dichlorodifluoromethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,2-Dibromoethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,2-Dichlorobenzene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,3-Dichlorobenzene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,4-Dichlorobenzene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,1-Dichloroethane	UG/L	140 D	10	ND	5.0	ND	5.0	ND	5.0
1,2-Dichloroethane	UG/L	22 D	10	ND	5.0	ND	5.0	ND	5.0
1,1-Dichloroethene	UG/L	51 D	10	ND	5.0	ND	5.0	ND	5.0
cis-1,2-Dichloroethene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
trans-1,2-Dichloroethene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,2-Dichloropropane	UG/L	1.0 DJ	10	ND	5.0	ND	5.0	ND	5.0
cis-1,3-Dichloropropene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
trans-1,3-Dichloropropene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Ethylbenzene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
2-Hexanone	UG/L	ND	50	ND	25	ND	25	ND	25
Isopropylbenzene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Methyl acetate	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Methylene chloride	UG/L	1.8 DJ	10	ND	5.0	ND	5.0	ND	5.0
Methyl-t-Butyl Ether (MTBE)	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
4-Methyl-2-pentanone	UG/L	ND	50	ND	25	ND	25	ND	25
Methylcyclohexane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Styrene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,1,2,2-Tetrachloroethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Tetrachloroethene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Toluene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,2,4-Trichlorobenzene	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
1,1,1-Trichloroethane	UG/L	21 D	10	ND	5.0	ND	5.0	ND	5.0
1,1,2-Trichloroethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		MW-3D		MW-5S		SW-1		SW-2	
Job No	Lab ID	A06-C596	A6C59603DL	A06-C596	A6C59604	A06-C596	A6C59605	A06-C596	A6C59606
Sample Date		10/26/2006		10/26/2006		10/26/2006		10/26/2006	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
1,1,2-Trichloro-1,2,2-trifluor	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Trichloroethene	UG/L	1.4 DJ	10	ND	5.0	ND	5.0	ND	5.0
Trichlorofluoromethane	UG/L	ND	10	ND	5.0	ND	5.0	ND	5.0
Vinyl chloride	UG/L	9.0 DJ	10	ND	5.0	ND	5.0	ND	5.0
Total Xylenes	UG/L	ND	30	ND	15	ND	15	ND	15
IS/SURROGATE(S)									
Chlorobenzene-D5	%	88	50-200	91	50-200	94	50-200	92	50-200
1,4-Difluorobenzene	%	95	50-200	97	50-200	96	50-200	96	50-200
1,4-Dichlorobenzene-D4	%	88	50-200	91	50-200	92	50-200	91	50-200
Toluene-D8	%	98	76-122	95	76-122	96	76-122	96	76-122
p-Bromofluorobenzene	%	93	73-120	92	73-120	90	73-120	92	73-120
1,2-Dichloroethane-D4	%	82	72-143	80	72-143	81	72-143	81	72-143

NA = Not Applicable ND = Not Detected

Chronology and QC Summary Package

Date: 11/09/2006
Time: 18:26:16

Benchmark
Vandermark/Isochem
AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Rept: AN0326

Client ID		TRIP BLANK							
Job No	Lab ID	A06-C596	A6C59607						
Sample Date		10/26/2006							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/L	ND	25	NA		NA		NA	
Benzene	UG/L	ND	5.0	NA		NA		NA	
Bromodichloromethane	UG/L	ND	5.0	NA		NA		NA	
Bromoform	UG/L	ND	5.0	NA		NA		NA	
Bromomethane	UG/L	ND	5.0	NA		NA		NA	
2-Butanone	UG/L	ND	25	NA		NA		NA	
Carbon Disulfide	UG/L	ND	5.0	NA		NA		NA	
Carbon Tetrachloride	UG/L	ND	5.0	NA		NA		NA	
Chlorobenzene	UG/L	ND	5.0	NA		NA		NA	
Chloroethane	UG/L	ND	5.0	NA		NA		NA	
Chloroform	UG/L	ND	5.0	NA		NA		NA	
Chloromethane	UG/L	ND	5.0	NA		NA		NA	
Cyclohexane	UG/L	ND	5.0	NA		NA		NA	
1,2-Dibromo-3-chloropropane	UG/L	ND	5.0	NA		NA		NA	
Dibromochloromethane	UG/L	ND	5.0	NA		NA		NA	
Dichlorodifluoromethane	UG/L	ND	5.0	NA		NA		NA	
1,2-Dibromoethane	UG/L	ND	5.0	NA		NA		NA	
1,2-Dichlorobenzene	UG/L	ND	5.0	NA		NA		NA	
1,3-Dichlorobenzene	UG/L	ND	5.0	NA		NA		NA	
1,4-Dichlorobenzene	UG/L	ND	5.0	NA		NA		NA	
1,1-Dichloroethane	UG/L	ND	5.0	NA		NA		NA	
1,2-Dichloroethane	UG/L	ND	5.0	NA		NA		NA	
1,1-Dichloroethene	UG/L	ND	5.0	NA		NA		NA	
cis-1,2-Dichloroethene	UG/L	ND	5.0	NA		NA		NA	
trans-1,2-Dichloroethene	UG/L	ND	5.0	NA		NA		NA	
1,2-Dichloropropane	UG/L	ND	5.0	NA		NA		NA	
cis-1,3-Dichloropropene	UG/L	ND	5.0	NA		NA		NA	
trans-1,3-Dichloropropene	UG/L	ND	5.0	NA		NA		NA	
Ethylbenzene	UG/L	ND	5.0	NA		NA		NA	
2-Hexanone	UG/L	ND	25	NA		NA		NA	
Isopropylbenzene	UG/L	ND	5.0	NA		NA		NA	
Methyl acetate	UG/L	ND	5.0	NA		NA		NA	
Methylene chloride	UG/L	ND	5.0	NA		NA		NA	
Methyl-t-Butyl Ether (MTBE)	UG/L	ND	5.0	NA		NA		NA	
4-Methyl-2-pentanone	UG/L	ND	25	NA		NA		NA	
Methylcyclohexane	UG/L	ND	5.0	NA		NA		NA	
Styrene	UG/L	ND	5.0	NA		NA		NA	
1,1,2,2-Tetrachloroethane	UG/L	ND	5.0	NA		NA		NA	
Tetrachloroethene	UG/L	ND	5.0	NA		NA		NA	
Toluene	UG/L	ND	5.0	NA		NA		NA	
1,2,4-Trichlorobenzene	UG/L	ND	5.0	NA		NA		NA	
1,1,1-Trichloroethane	UG/L	ND	5.0	NA		NA		NA	
1,1,2-Trichloroethane	UG/L	ND	5.0	NA		NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		TRIP BLANK							
Job No	Lab ID	A06-C596	A6C59607						
Sample Date		10/26/2006							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
1,1,2-Trichloro-1,2,2-trifluor	UG/L	ND	5.0	NA		NA		NA	
Trichloroethene	UG/L	ND	5.0	NA		NA		NA	
Trichlorofluoromethane	UG/L	ND	5.0	NA		NA		NA	
Vinyl chloride	UG/L	ND	5.0	NA		NA		NA	
Total Xylenes	UG/L	ND	15	NA		NA		NA	
IS/SURROGATE(S)									
Chlorobenzene-D5	%	90	50-200	NA		NA		NA	
1,4-Difluorobenzene	%	90	50-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	84	50-200	NA		NA		NA	
Toluene-D8	%	97	76-122	NA		NA		NA	
p-Bromofluorobenzene	%	92	73-120	NA		NA		NA	
1,2-Dichloroethane-D4	%	87	72-143	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Date: 11/09/2006
Time: 18:26:29

Benchmark
Vandermark/Isochem
BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ONLY(4.2)

Rept: AN0326

Client ID	MW-1D		MW-2D		MW-2D DL		MW-3D	
Job No / Lab ID	A06-C596	A6C59601	A06-C596	A6C59602	A06-C596	A6C59602DL	A06-C596	A6C59603
Sample Date	10/26/2006		10/26/2006		10/26/2006		10/26/2006	

Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/L	4 BJ	9	26000 BE	96	89000 BD	19000	8 BJ	10
Acenaphthylene	UG/L	ND	9	730	96	1200 DJ	19000	ND	10
Acetophenone	UG/L	ND	9	ND	96	ND	19000	ND	10
Anthracene	UG/L	ND	9	4900 E	96	16000 DJ	19000	ND	10
Atrazine	UG/L	ND	9	ND	96	ND	19000	ND	10
Benzo(a)anthracene	UG/L	ND	9	3100 E	96	4300 DJ	19000	ND	10
Benzo(b)fluoranthene	UG/L	0.6 J	9	1000	96	1400 DJ	19000	ND	10
Benzo(k)fluoranthene	UG/L	0.5 J	9	270	96	ND	19000	ND	10
Benzo(ghi)perylene	UG/L	ND	9	160	96	ND	19000	ND	10
Benzo(a)pyrene	UG/L	ND	9	640	96	ND	19000	ND	10
Benzaldehyde	UG/L	ND	47	ND	480	ND	96000	ND	48
Biphenyl	UG/L	ND	9	46000 E	96	35000 D	19000	ND	10
Bis(2-chloroethoxy) methane	UG/L	ND	9	ND	96	ND	19000	ND	10
Bis(2-chloroethyl) ether	UG/L	ND	9	ND	96	ND	19000	ND	10
2,2'-Oxybis(1-Chloropropane)	UG/L	ND	9	ND	96	ND	19000	ND	10
Bis(2-ethylhexyl) phthalate	UG/L	ND	9	ND	96	ND	19000	ND	10
4-Bromophenyl phenyl ether	UG/L	ND	9	ND	96	ND	19000	ND	10
Butyl benzyl phthalate	UG/L	ND	9	ND	96	ND	19000	ND	10
Caprolactam	UG/L	ND	9	ND	96	ND	19000	ND	10
Carbazole	UG/L	ND	9	3500 E	96	3900 DJ	19000	3 J	10
4-Chloroaniline	UG/L	ND	9	ND	96	ND	19000	ND	10
2-Chloronaphthalene	UG/L	ND	9	ND	96	ND	19000	ND	10
4-Chlorophenyl phenyl ether	UG/L	ND	9	ND	96	ND	19000	ND	10
Chrysene	UG/L	ND	9	2600 E	96	3700 DJ	19000	ND	10
Dibenzo(a,h)anthracene	UG/L	ND	9	49 J	96	ND	19000	ND	10
Dibenzofuran	UG/L	ND	9	17000 BE	96	85000 BD	19000	4 BJ	10
Di-n-butyl phthalate	UG/L	ND	9	ND	96	ND	19000	ND	10
3,3'-Dichlorobenzidine	UG/L	ND	19	ND	190	ND	38000	ND	19
Diethyl phthalate	UG/L	ND	9	ND	96	ND	19000	ND	10
Dimethyl phthalate	UG/L	ND	9	ND	96	ND	19000	ND	10
2,4-Dinitrotoluene	UG/L	ND	9	ND	96	ND	19000	ND	10
2,6-Dinitrotoluene	UG/L	ND	9	ND	96	ND	19000	ND	10
Di-n-octyl phthalate	UG/L	ND	9	ND	96	ND	19000	ND	10
Fluoranthene	UG/L	0.8 J	9	14000 E	96	45000 D	19000	ND	10
Fluorene	UG/L	ND	9	20000 E	96	71000 D	19000	2 J	10
Hexachlorobenzene	UG/L	ND	9	ND	96	ND	19000	ND	10
Hexachlorobutadiene	UG/L	ND	9	ND	96	ND	19000	ND	10
Hexachlorocyclopentadiene	UG/L	ND	42	ND	430	ND	86000	ND	43
Hexachloroethane	UG/L	ND	9	ND	96	ND	19000	ND	10
Indeno(1,2,3-cd)pyrene	UG/L	ND	9	170	96	ND	19000	ND	10
Isophorone	UG/L	ND	9	ND	96	ND	19000	ND	10
2-Methylnaphthalene	UG/L	1 BJ	9	39000 BE	96	130000 BD	19000	0.6 BJ	10
Naphthalene	UG/L	4 BJ	9	33000 BE	96	230000 BD	19000	2 BJ	10

16/40

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		MW-1D		MW-2D		MW-2D DL		MW-3D	
Job No	Lab ID	A06-C596	A6C59601	A06-C596	A6C59602	A06-C596	A6C59602DL	A06-C596	A6C59603
Sample Date		10/26/2006		10/26/2006		10/26/2006		10/26/2006	
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
2-Nitroaniline	UG/L	ND	47	ND	480	ND	96000	ND	48
3-Nitroaniline	UG/L	ND	47	ND	480	ND	96000	ND	48
4-Nitroaniline	UG/L	ND	47	ND	480	ND	96000	ND	48
Nitrobenzene	UG/L	ND	9	ND	96	ND	19000	ND	10
N-nitrosodiphenylamine	UG/L	ND	9	ND	96	ND	19000	ND	10
N-Nitroso-Di-n-propylamine	UG/L	ND	9	ND	96	ND	19000	ND	10
Phenanthrene	UG/L	0.6 J	9	30000 E	96	180000 D	19000	1 J	10
Pyrene	UG/L	0.7 J	9	9200 E	96	29000 D	19000	ND	10
IS/SURROGATE(S)									
1,4-Dichlorobenzene-D4	%	97	50-200	99	50-200	101	50-200	100	50-200
Naphthalene-D8	%	93	50-200	89	50-200	102	50-200	95	50-200
Acenaphthene-D10	%	96	50-200	128	50-200	102	50-200	96	50-200
Phenanthrene-D10	%	100	50-200	94	50-200	102	50-200	97	50-200
Chrysene-D12	%	102	50-200	122	50-200	99	50-200	100	50-200
Perylene-D12	%	113	50-200	148	50-200	101	50-200	117	50-200
Nitrobenzene-D5	%	88	46-120	144 *	46-120	0 D	46-120	84	46-120
2-Fluorobiphenyl	%	95	44-120	91	44-120	0 D	44-120	91	44-120
p-Terphenyl-d14	%	94	23-143	128	23-143	0 D	23-143	91	23-143
Phenol-D5	%	30	10-120	32	10-120	0 D	10-120	28	10-120
2-Fluorophenol	%	38	20-120	40	20-120	0 D	20-120	45	20-120
2,4,6-Tribromophenol	%	109	59-136	127	59-136	0 D	59-136	105	59-136

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 11/09/2006
Time: 18:26:29

Benchmark
Vandermark/Isochem
BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ONLY(4.2)

Rept: AN0326

Client ID		MW-5S		SW-1		SW-2			
Job No	Lab ID	A06-C596	A6C59604	A06-C596	A6C59605	A06-C596	A6C59606		
Sample Date		10/26/2006		10/26/2006		10/26/2006			
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/L	0.5 BJ	10	ND	10	ND	10	NA	
Acenaphthylene	UG/L	ND	10	ND	10	ND	10	NA	
Acetophenone	UG/L	ND	10	ND	10	ND	10	NA	
Anthracene	UG/L	0.8 J	10	ND	10	ND	10	NA	
Atrazine	UG/L	ND	10	ND	10	ND	10	NA	
Benzo(a)anthracene	UG/L	3 J	10	ND	10	ND	10	NA	
Benzo(b)fluoranthene	UG/L	3 J	10	ND	10	ND	10	NA	
Benzo(k)fluoranthene	UG/L	1 J	10	ND	10	ND	10	NA	
Benzo(ghi)perylene	UG/L	2 J	10	ND	10	ND	10	NA	
Benzo(a)pyrene	UG/L	3 J	10	ND	10	ND	10	NA	
Benzaldehyde	UG/L	ND	48	ND	48	ND	48	NA	
Biphenyl	UG/L	ND	10	ND	10	ND	10	NA	
Bis(2-chloroethoxy) methane	UG/L	ND	10	ND	10	ND	10	NA	
Bis(2-chloroethyl) ether	UG/L	ND	10	ND	10	ND	10	NA	
2,2'-Oxybis(1-Chloropropane)	UG/L	ND	10	ND	10	ND	10	NA	
Bis(2-ethylhexyl) phthalate	UG/L	ND	10	ND	10	ND	10	NA	
4-Bromophenyl phenyl ether	UG/L	ND	10	ND	10	ND	10	NA	
Butyl benzyl phthalate	UG/L	ND	10	ND	10	ND	10	NA	
Caprolactam	UG/L	ND	10	ND	10	ND	10	NA	
Carbazole	UG/L	ND	10	ND	10	ND	10	NA	
4-Chloroaniline	UG/L	ND	10	ND	10	ND	10	NA	
2-Chloronaphthalene	UG/L	ND	10	ND	10	ND	10	NA	
4-Chlorophenyl phenyl ether	UG/L	ND	10	ND	10	ND	10	NA	
Chrysene	UG/L	4 J	10	ND	10	ND	10	NA	
Dibenzo(a,h)anthracene	UG/L	0.5 J	10	ND	10	ND	10	NA	
Dibenzofuran	UG/L	ND	10	ND	10	ND	10	NA	
Di-n-butyl phthalate	UG/L	ND	10	ND	10	ND	10	NA	
3,3'-Dichlorobenzidine	UG/L	ND	19	ND	19	ND	19	NA	
Diethyl phthalate	UG/L	ND	10	ND	10	ND	10	NA	
Dimethyl phthalate	UG/L	ND	10	ND	10	ND	10	NA	
2,4-Dinitrotoluene	UG/L	ND	10	ND	10	ND	10	NA	
2,6-Dinitrotoluene	UG/L	ND	10	ND	10	ND	10	NA	
Di-n-octyl phthalate	UG/L	ND	10	ND	10	ND	10	NA	
Fluoranthene	UG/L	4 J	10	ND	10	ND	10	NA	
Fluorene	UG/L	ND	10	ND	10	ND	10	NA	
Hexachlorobenzene	UG/L	ND	10	ND	10	ND	10	NA	
Hexachlorobutadiene	UG/L	ND	10	ND	10	ND	10	NA	
Hexachlorocyclopentadiene	UG/L	ND	43	ND	43	ND	44	NA	
Hexachloroethane	UG/L	ND	10	ND	10	ND	10	NA	
Indeno(1,2,3-cd)pyrene	UG/L	2 J	10	ND	10	ND	10	NA	
Isophorone	UG/L	ND	10	ND	10	ND	10	NA	
2-Methylnaphthalene	UG/L	ND	10	ND	10	ND	10	NA	
Naphthalene	UG/L	ND	10	ND	10	ND	10	NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		MW-5S		SW-1		SW-2			
Job No	Lab ID	A06-C596	A6C59604	A06-C596	A6C59605	A06-C596	A6C59606		
Sample Date		10/26/2006		10/26/2006		10/26/2006			
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
2-Nitroaniline	UG/L	ND	48	ND	48	ND	48	NA	
3-Nitroaniline	UG/L	ND	48	ND	48	ND	48	NA	
4-Nitroaniline	UG/L	ND	48	ND	48	ND	48	NA	
Nitrobenzene	UG/L	ND	10	ND	10	ND	10	NA	
N-nitrosodiphenylamine	UG/L	ND	10	ND	10	ND	10	NA	
N-Nitroso-Di-n-propylamine	UG/L	ND	10	ND	10	ND	10	NA	
Phenanthrene	UG/L	2 J	10	ND	10	ND	10	NA	
Pyrene	UG/L	6 J	10	ND	10	ND	10	NA	
IS/SURROGATE(S)									
1,4-Dichlorobenzene-D4	%	103	50-200	91	50-200	100	50-200	NA	
Naphthalene-D8	%	101	50-200	88	50-200	98	50-200	NA	
Acenaphthene-D10	%	102	50-200	90	50-200	98	50-200	NA	
Phenanthrene-D10	%	103	50-200	93	50-200	103	50-200	NA	
Chrysene-D12	%	108	50-200	95	50-200	108	50-200	NA	
Perylene-D12	%	131	50-200	116	50-200	130	50-200	NA	
Nitrobenzene-D5	%	93	46-120	82	46-120	69	46-120	NA	
2-Fluorobiphenyl	%	101	44-120	89	44-120	77	44-120	NA	
p-Terphenyl-d14	%	103	23-143	103	23-143	94	23-143	NA	
Phenol-D5	%	34	10-120	28	10-120	25	10-120	NA	
2-Fluorophenol	%	45	20-120	38	20-120	33	20-120	NA	
2,4,6-Tribromophenol	%	113	59-136	108	59-136	97	59-136	NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Date: 11/09/2006
Time: 18:26:44

Benchmark
Vandermark/Isochem
AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Rept: AN0326

Client ID		VBLK07		vblk06					
Job No	Lab ID	A06-C596	A6B2968802	A06-C596	A6B2965302				
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/L	ND	25	ND	25	NA		NA	
Benzene	UG/L	ND	5.0	ND	5.0	NA		NA	
Bromodichloromethane	UG/L	ND	5.0	ND	5.0	NA		NA	
Bromoform	UG/L	ND	5.0	ND	5.0	NA		NA	
Bromomethane	UG/L	ND	5.0	ND	5.0	NA		NA	
2-Butanone	UG/L	ND	25	ND	25	NA		NA	
Carbon Disulfide	UG/L	ND	5.0	ND	5.0	NA		NA	
Carbon Tetrachloride	UG/L	ND	5.0	ND	5.0	NA		NA	
Chlorobenzene	UG/L	ND	5.0	ND	5.0	NA		NA	
Chloroethane	UG/L	ND	5.0	ND	5.0	NA		NA	
Chloroform	UG/L	ND	5.0	ND	5.0	NA		NA	
Chloromethane	UG/L	ND	5.0	ND	5.0	NA		NA	
Cyclohexane	UG/L	ND	5.0	ND	5.0	NA		NA	
1,2-Dibromo-3-chloropropane	UG/L	ND	5.0	ND	5.0	NA		NA	
Dibromochloromethane	UG/L	ND	5.0	ND	5.0	NA		NA	
Dichlorodifluoromethane	UG/L	ND	5.0	ND	5.0	NA		NA	
1,2-Dibromoethane	UG/L	ND	5.0	ND	5.0	NA		NA	
1,2-Dichlorobenzene	UG/L	ND	5.0	ND	5.0	NA		NA	
1,3-Dichlorobenzene	UG/L	ND	5.0	ND	5.0	NA		NA	
1,4-Dichlorobenzene	UG/L	ND	5.0	ND	5.0	NA		NA	
1,1-Dichloroethane	UG/L	ND	5.0	ND	5.0	NA		NA	
1,2-Dichloroethane	UG/L	ND	5.0	ND	5.0	NA		NA	
1,1-Dichloroethene	UG/L	ND	5.0	ND	5.0	NA		NA	
cis-1,2-Dichloroethene	UG/L	ND	5.0	ND	5.0	NA		NA	
trans-1,2-Dichloroethene	UG/L	ND	5.0	ND	5.0	NA		NA	
1,2-Dichloropropane	UG/L	ND	5.0	ND	5.0	NA		NA	
cis-1,3-Dichloropropene	UG/L	ND	5.0	ND	5.0	NA		NA	
trans-1,3-Dichloropropene	UG/L	ND	5.0	ND	5.0	NA		NA	
Ethylbenzene	UG/L	ND	5.0	ND	5.0	NA		NA	
2-Hexanone	UG/L	ND	25	ND	25	NA		NA	
Isopropylbenzene	UG/L	ND	5.0	ND	5.0	NA		NA	
Methyl acetate	UG/L	ND	5.0	ND	5.0	NA		NA	
Methylene chloride	UG/L	ND	5.0	ND	5.0	NA		NA	
Methyl-t-Butyl Ether (MTBE)	UG/L	ND	5.0	ND	5.0	NA		NA	
4-Methyl-2-pentanone	UG/L	ND	25	ND	25	NA		NA	
Methylcyclohexane	UG/L	ND	5.0	ND	5.0	NA		NA	
Styrene	UG/L	ND	5.0	ND	5.0	NA		NA	
1,1,2,2-Tetrachloroethane	UG/L	ND	5.0	ND	5.0	NA		NA	
Tetrachloroethene	UG/L	ND	5.0	ND	5.0	NA		NA	
Toluene	UG/L	ND	5.0	ND	5.0	NA		NA	
1,2,4-Trichlorobenzene	UG/L	ND	5.0	ND	5.0	NA		NA	
1,1,1-Trichloroethane	UG/L	ND	5.0	ND	5.0	NA		NA	
1,1,2-Trichloroethane	UG/L	ND	5.0	ND	5.0	NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		VBLK07		vblk06					
Job No	Lab ID	A06-C596	A6B2968802	A06-C596	A6B2965302				
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
1,1,2-Trichloro-1,2,2-trifluor	UG/L	ND	5.0	ND	5.0	NA		NA	
Trichloroethene	UG/L	ND	5.0	ND	5.0	NA		NA	
Trichlorofluoromethane	UG/L	ND	5.0	ND	5.0	NA		NA	
Vinyl chloride	UG/L	ND	5.0	ND	5.0	NA		NA	
Total Xylenes	UG/L	ND	15	ND	15	NA		NA	
IS/SURROGATE(S)									
Chlorobenzene-D5	%	197	50-200	93	50-200	NA		NA	
1,4-Difluorobenzene	%	103	50-200	95	50-200	NA		NA	
1,4-Dichlorobenzene-D4	%	91	50-200	87	50-200	NA		NA	
Toluene-D8	%	97	76-122	97	76-122	NA		NA	
p-Bromofluorobenzene	%	91	73-120	91	73-120	NA		NA	
1,2-Dichloroethane-D4	%	84	72-143	80	72-143	NA		NA	

NA = Not Applicable ND = Not Detected

Client ID		MSB07		msb06					
Job No	Lab ID	A06-C596	A6B2968801	A06-C596	A6B2965301				
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/L	110	25	ND	25	NA		NA	
Benzene	UG/L	25	5.0	24	5.0	NA		NA	
Bromodichloromethane	UG/L	24	5.0	ND	5.0	NA		NA	
Bromoform	UG/L	26	5.0	ND	5.0	NA		NA	
Bromomethane	UG/L	20	5.0	ND	5.0	NA		NA	
2-Butanone	UG/L	120	25	ND	25	NA		NA	
Carbon Disulfide	UG/L	24	5.0	ND	5.0	NA		NA	
Carbon Tetrachloride	UG/L	24	5.0	ND	5.0	NA		NA	
Chlorobenzene	UG/L	26	5.0	24	5.0	NA		NA	
Chloroethane	UG/L	22	5.0	ND	5.0	NA		NA	
Chloroform	UG/L	24	5.0	ND	5.0	NA		NA	
Chloromethane	UG/L	23	5.0	ND	5.0	NA		NA	
Cyclohexane	UG/L	24	5.0	ND	5.0	NA		NA	
1,2-Dibromo-3-chloropropane	UG/L	24	5.0	ND	5.0	NA		NA	
Dibromochloromethane	UG/L	26	5.0	ND	5.0	NA		NA	
Dichlorodifluoromethane	UG/L	18	5.0	ND	5.0	NA		NA	
1,2-Dibromoethane	UG/L	26	5.0	ND	5.0	NA		NA	
1,2-Dichlorobenzene	UG/L	25	5.0	ND	5.0	NA		NA	
1,3-Dichlorobenzene	UG/L	25	5.0	ND	5.0	NA		NA	
1,4-Dichlorobenzene	UG/L	25	5.0	ND	5.0	NA		NA	
1,1-Dichloroethane	UG/L	24	5.0	ND	5.0	NA		NA	
1,2-Dichloroethane	UG/L	22	5.0	ND	5.0	NA		NA	
1,1-Dichloroethene	UG/L	25	5.0	23	5.0	NA		NA	
cis-1,2-Dichloroethene	UG/L	25	5.0	ND	5.0	NA		NA	
trans-1,2-Dichloroethene	UG/L	24	5.0	ND	5.0	NA		NA	
1,2-Dichloropropane	UG/L	25	5.0	ND	5.0	NA		NA	
cis-1,3-Dichloropropene	UG/L	26	5.0	ND	5.0	NA		NA	
trans-1,3-Dichloropropene	UG/L	26	5.0	ND	5.0	NA		NA	
Ethylbenzene	UG/L	25	5.0	ND	5.0	NA		NA	
2-Hexanone	UG/L	130	25	ND	25	NA		NA	
Isopropylbenzene	UG/L	26	5.0	ND	5.0	NA		NA	
Methyl acetate	UG/L	21	5.0	ND	5.0	NA		NA	
Methylene chloride	UG/L	20	5.0	0.96 J	5.0	NA		NA	
Methyl-t-Butyl Ether (MTBE)	UG/L	22	5.0	ND	5.0	NA		NA	
4-Methyl-2-pentanone	UG/L	130	25	ND	25	NA		NA	
Methylcyclohexane	UG/L	24	5.0	ND	5.0	NA		NA	
Styrene	UG/L	26	5.0	ND	5.0	NA		NA	
1,1,2,2-Tetrachloroethane	UG/L	26	5.0	ND	5.0	NA		NA	
Tetrachloroethene	UG/L	26	5.0	ND	5.0	NA		NA	
Toluene	UG/L	26	5.0	24	5.0	NA		NA	
1,2,4-Trichlorobenzene	UG/L	25	5.0	1.0 J	5.0	NA		NA	
1,1,1-Trichloroethane	UG/L	24	5.0	ND	5.0	NA		NA	
1,1,2-Trichloroethane	UG/L	26	5.0	ND	5.0	NA		NA	

NA = Not Applicable ND = Not Detected

Client ID		MSB07		msb06					
Job No	Lab ID	A06-C596	A6B2968801	A06-C596	A6B2965301				
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
1,1,2-Trichloro-1,2,2-trifluor	UG/L	23	5.0	ND	5.0	NA		NA	
Trichloroethene	UG/L	25	5.0	23	5.0	NA		NA	
Trichlorofluoromethane	UG/L	22	5.0	ND	5.0	NA		NA	
Vinyl chloride	UG/L	22	5.0	ND	5.0	NA		NA	
Total Xylenes	UG/L	ND	15	ND	15	NA		NA	
IS/SURROGATE(S)									
Chlorobenzene-D5	%	100	50-200	96	50-200	NA		NA	
1,4-Difluorobenzene	%	104	50-200	97	50-200	NA		NA	
1,4-Dichlorobenzene-D4	%	102	50-200	91	50-200	NA		NA	
Toluene-D8	%	97	76-122	95	76-122	NA		NA	
p-Bromofluorobenzene	%	94	73-120	90	73-120	NA		NA	
1,2-Dichloroethane-D4	%	82	72-143	82	72-143	NA		NA	

NA = Not Applicable ND = Not Detected

Client ID		SBLK							
Job No	Lab ID	AG6-C596	A6B2894902						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/L	0.9 J	10	NA		NA		NA	
Acenaphthylene	UG/L	ND	10	NA		NA		NA	
Acetophenone	UG/L	ND	10	NA		NA		NA	
Anthracene	UG/L	ND	10	NA		NA		NA	
Atrazine	UG/L	ND	10	NA		NA		NA	
Benzo(a)anthracene	UG/L	ND	10	NA		NA		NA	
Benzo(b)fluoranthene	UG/L	ND	10	NA		NA		NA	
Benzo(k)fluoranthene	UG/L	ND	10	NA		NA		NA	
Benzo(ghi)perylene	UG/L	ND	10	NA		NA		NA	
Benzo(a)pyrene	UG/L	ND	10	NA		NA		NA	
Benzaldehyde	UG/L	ND	50	NA		NA		NA	
Biphenyl	UG/L	ND	10	NA		NA		NA	
Bis(2-chloroethoxy) methane	UG/L	ND	10	NA		NA		NA	
Bis(2-chloroethyl) ether	UG/L	ND	10	NA		NA		NA	
2,2'-Oxybis(1-Chloropropane)	UG/L	ND	10	NA		NA		NA	
Bis(2-ethylhexyl) phthalate	UG/L	ND	10	NA		NA		NA	
4-Bromophenyl phenyl ether	UG/L	ND	10	NA		NA		NA	
Butyl benzyl phthalate	UG/L	ND	10	NA		NA		NA	
Caprolactam	UG/L	ND	10	NA		NA		NA	
Carbazole	UG/L	ND	10	NA		NA		NA	
4-Chloroaniline	UG/L	ND	10	NA		NA		NA	
2-Chloronaphthalene	UG/L	ND	10	NA		NA		NA	
4-Chlorophenyl phenyl ether	UG/L	ND	10	NA		NA		NA	
Chrysene	UG/L	ND	10	NA		NA		NA	
Dibenzo(a,h)anthracene	UG/L	ND	10	NA		NA		NA	
Dibenzofuran	UG/L	0.7 J	10	NA		NA		NA	
Di-n-butyl phthalate	UG/L	ND	10	NA		NA		NA	
3,3'-Dichlorobenzidine	UG/L	ND	20	NA		NA		NA	
Diethyl phthalate	UG/L	ND	10	NA		NA		NA	
Dimethyl phthalate	UG/L	ND	10	NA		NA		NA	
2,4-Dinitrotoluene	UG/L	ND	10	NA		NA		NA	
2,6-Dinitrotoluene	UG/L	ND	10	NA		NA		NA	
Di-n-octyl phthalate	UG/L	ND	10	NA		NA		NA	
Fluoranthene	UG/L	ND	10	NA		NA		NA	
Fluorene	UG/L	ND	10	NA		NA		NA	
Hexachlorobenzene	UG/L	ND	10	NA		NA		NA	
Hexachlorobutadiene	UG/L	ND	10	NA		NA		NA	
Hexachlorocyclopentadiene	UG/L	ND	45	NA		NA		NA	
Hexachloroethane	UG/L	ND	10	NA		NA		NA	
Indeno(1,2,3-cd)pyrene	UG/L	ND	10	NA		NA		NA	
Isophorone	UG/L	ND	10	NA		NA		NA	
2-Methylnaphthalene	UG/L	3 J	10	NA		NA		NA	
Naphthalene	UG/L	8 J	10	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Client ID		SBLK							
Job No	Lab ID	A06-C596	A6B2894902						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
2-Nitroaniline	UG/L	ND	50	NA		NA		NA	
3-Nitroaniline	UG/L	ND	50	NA		NA		NA	
4-Nitroaniline	UG/L	ND	50	NA		NA		NA	
Nitrobenzene	UG/L	ND	10	NA		NA		NA	
N-nitrosodiphenylamine	UG/L	ND	10	NA		NA		NA	
N-Nitroso-Di-n-propylamine	UG/L	ND	10	NA		NA		NA	
Phenanthrene	UG/L	ND	10	NA		NA		NA	
Pyrene	UG/L	ND	10	NA		NA		NA	
==========IS/SURROGATE(S)==========									
1,4-Dichlorobenzene-D4	%	97	50-200	NA		NA		NA	
Naphthalene-D8	%	93	50-200	NA		NA		NA	
Acenaphthene-D10	%	95	50-200	NA		NA		NA	
Phenanthrene-D10	%	96	50-200	NA		NA		NA	
Chrysene-D12	%	94	50-200	NA		NA		NA	
Perylene-D12	%	110	50-200	NA		NA		NA	
Nitrobenzene-D5	%	80	46-120	NA		NA		NA	
2-Fluorobiphenyl	%	88	44-120	NA		NA		NA	
p-Terphenyl-d14	%	122	23-143	NA		NA		NA	
Phenol-D5	%	31	10-120	NA		NA		NA	
2-Fluorophenol	%	39	20-120	NA		NA		NA	
2,4,6-Tribromophenol	%	109	59-136	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Date: 11/09/2006
Time: 18:26:56

Benchmark
Vandermark/Isochem
BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ONLY(4.2)

Rept: AN0326

Client ID	MW-1D		MW-1D		Matrix Spike Blank			
Job No Lab ID	A06-C596 A6C59601MS		A06-C596 A6C59601SD		A06-C596 A6B2894901			
Sample Date	10/26/2006		10/26/2006					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/L	170 B	19	200 B	19	86 B	10	NA	
Acenaphthylene	UG/L	ND	19	ND	19	ND	10	NA	
Acetophenone	UG/L	ND	19	ND	19	ND	10	NA	
Anthracene	UG/L	ND	19	ND	19	ND	10	NA	
Atrazine	UG/L	ND	19	ND	19	ND	10	NA	
Benzo(a)anthracene	UG/L	ND	19	ND	19	ND	10	NA	
Benzo(b)fluoranthene	UG/L	ND	19	ND	19	ND	10	NA	
Benzo(k)fluoranthene	UG/L	ND	19	ND	19	ND	10	NA	
Benzo(ghi)perylene	UG/L	ND	19	ND	19	ND	10	NA	
Benzo(a)pyrene	UG/L	ND	19	ND	19	ND	10	NA	
Benzaldehyde	UG/L	ND	94	ND	94	ND	50	NA	
Biphenyl	UG/L	2 J	19	ND	19	ND	10	NA	
Bis(2-chloroethoxy) methane	UG/L	ND	19	ND	19	ND	10	NA	
Bis(2-chloroethyl) ether	UG/L	ND	19	ND	19	ND	10	NA	
2,2'-Oxybis(1-Chloropropane)	UG/L	ND	19	ND	19	ND	10	NA	
Bis(2-ethylhexyl) phthalate	UG/L	ND	19	ND	19	ND	10	NA	
4-Bromophenyl phenyl ether	UG/L	ND	19	ND	19	ND	10	NA	
Butyl benzyl phthalate	UG/L	ND	19	ND	19	ND	10	NA	
Caprolactam	UG/L	ND	19	ND	19	ND	10	NA	
Carbazole	UG/L	ND	19	ND	19	ND	10	NA	
4-Chloroaniline	UG/L	ND	19	ND	19	ND	10	NA	
2-Chloronaphthalene	UG/L	ND	19	ND	19	ND	10	NA	
4-Chlorophenyl phenyl ether	UG/L	ND	19	ND	19	ND	10	NA	
Chrysene	UG/L	ND	19	ND	19	ND	10	NA	
Dibenzo(a,h)anthracene	UG/L	ND	19	ND	19	ND	10	NA	
Dibenzofuran	UG/L	ND	19	3 BJ	19	ND	10	NA	
Di-n-butyl phthalate	UG/L	ND	19	ND	19	ND	10	NA	
3,3'-Dichlorobenzidine	UG/L	ND	38	ND	38	ND	20	NA	
Diethyl phthalate	UG/L	ND	19	ND	19	ND	10	NA	
Dimethyl phthalate	UG/L	ND	19	ND	19	ND	10	NA	
2,4-Dinitrotoluene	UG/L	180	19	200	19	94	10	NA	
2,6-Dinitrotoluene	UG/L	ND	19	ND	19	ND	10	NA	
Di-n-octyl phthalate	UG/L	ND	19	ND	19	ND	10	NA	
Fluoranthene	UG/L	ND	19	2 J	19	ND	10	NA	
Fluorene	UG/L	ND	19	2 J	19	ND	10	NA	
Hexachlorobenzene	UG/L	ND	19	ND	19	ND	10	NA	
Hexachlorobutadiene	UG/L	ND	19	ND	19	ND	10	NA	
Hexachlorocyclopentadiene	UG/L	ND	85	ND	85	ND	45	NA	
Hexachloroethane	UG/L	ND	19	ND	19	ND	10	NA	
Indeno(1,2,3-cd)pyrene	UG/L	ND	19	ND	19	ND	10	NA	
Isophorone	UG/L	ND	19	ND	19	ND	10	NA	
2-Methylnaphthalene	UG/L	ND	19	9 BJ	19	ND	10	NA	
Naphthalene	UG/L	1 BJ	19	24 B	19	0.8 BJ	10	NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		MW-1D		MW-1D		Matrix Spike Blank			
Job No	Lab ID	A06-C596	A6C59601MS	A06-C596	A6C59601SD	A06-C596	A6B2894901		
Sample Date		10/26/2006		10/26/2006					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
2-Nitroaniline	UG/L	ND	94	ND	94	ND	50	NA	
3-Nitroaniline	UG/L	ND	94	ND	94	ND	50	NA	
4-Nitroaniline	UG/L	ND	94	ND	94	ND	50	NA	
Nitrobenzene	UG/L	ND	19	ND	19	ND	10	NA	
N-nitrosodiphenylamine	UG/L	ND	19	ND	19	ND	10	NA	
N-Nitroso-Di-n-propylamine	UG/L	150	19	180	19	73	10	NA	
Phenanthrene	UG/L	ND	19	2 J	19	ND	10	NA	
Pyrene	UG/L	200	19	230	19	100	10	NA	
==========IS/SURROGATE(S)==========									
1,4-Dichlorobenzene-D4	%	100	50-200	96	50-200	106	50-200	NA	
Naphthalene-D8	%	97	50-200	95	50-200	104	50-200	NA	
Acenaphthene-D10	%	99	50-200	97	50-200	106	50-200	NA	
Phenanthrene-D10	%	102	50-200	101	50-200	108	50-200	NA	
Chrysene-D12	%	104	50-200	102	50-200	110	50-200	NA	
Perylene-D12	%	115	50-200	111	50-200	129	50-200	NA	
Nitrobenzene-D5	%	76	46-120	88	46-120	67	46-120	NA	
2-Fluorobiphenyl	%	83	44-120	99	44-120	76	44-120	NA	
p-Terphenyl-d14	%	104	23-143	112	23-143	114	23-143	NA	
Phenol-D5	%	42	10-120	49	10-120	25	10-120	NA	
2-Fluorophenol	%	44	20-120	53	20-120	31	20-120	NA	
2,4,6-Tribromophenol	%	102	59-136	113	59-136	103	59-136	NA	

NA = Not Applicable ND = Not Detected

Date : 11/09/2006 18:27:05 Rept: AN0364

Client Sample ID: VBLK07 MSB07
Lab Sample ID: A6B2968802 A6B2968801

Analyte	Units of Measure	Concentration Blank Spike	Spike Amount	% Recovery Blank Spike	QC LIMITS
AQUEOUS-METHOD 8260 - TCL VOLATILE ORGAN					
1,1-Dichloroethene	UG/L	24.8	25.0	99	65-142
Trichloroethene	UG/L	24.7	25.0	99	71-120
Benzene	UG/L	25.1	25.0	100	67-126
Toluene	UG/L	25.5	25.0	102	69-120
Chlorobenzene	UG/L	25.7	25.0	103	73-120

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: vblk06 msb06
Lab Sample ID: A6B2965302 A6B2965301

Analyte	Units of Measure	Concentration Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
AQUEOUS-METHOD 8260 - TCL VOLATILE ORGAN					
1,1-Dichloroethene	UG/L	23.1	25.0	92	65-142
Trichloroethene	UG/L	23.3	25.0	93	71-120
Benzene	UG/L	23.5	25.0	94	67-126
Toluene	UG/L	23.8	25.0	95	69-120
Chlorobenzene	UG/L	24.3	25.0	98	73-120

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Date : 11/09/2006 18:27:11 Rept: AN0364

SAMPLE DATE 10/26/2006

Client Sample ID: MW-1D MW-1D MW-1D
Lab Sample ID: A6C59601 A6C59601MS A6C59601SD

Analyte	Units of Measure	Concentration			Spike Amount		% Recovery			% RPD	QC LIMITS RPD	QC LIMITS REC.
		Sample	Matrix Spike	Spike Duplicate	MS	MSD	MS	MSD	Avg			
BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ON												
N-Nitroso-Di-n-propylamine	UG/L	0	149	175	188	188	79	93	86	16	38.0	56-120
Acenaphthene	UG/L	3.7	172	202	188	188	90	105	98	15	23.0	57-120
2,4-Dinitrotoluene	UG/L	0	184	200	188	188	98	106	102	8	20.0	58-121
Pyrene	UG/L	0.67	204	227	188	188	108	120	114	10	25.0	58-136

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: SBLK Matrix Spike Blank
Lab Sample ID: A6B2894902 A6B2894901

Analyte	Units of Measure	Concentration Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ON					
N-Nitroso-Di-n-propylamine	UG/L	72.9	100	73	56-120
Acenaphthene	UG/L	85.5	100	84	57-120
2,4-Dinitrotoluene	UG/L	94.3	100	94	58-121
Pyrene	UG/L	105	100	106	58-136

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	MW-1D A06-C596 A6C59601	MW-2D A06-C596 A6C59602	MW-2D DL A06-C596 A6C59602DL	MW-3D A06-C596 A6C59603	MW-3D A06-C596 A6C59603DL
Sample Date	10/26/2006 15:25	10/26/2006 15:02	10/26/2006 15:02	10/26/2006 11:38	10/26/2006 11:38
Received Date	10/26/2006 17:18	10/26/2006 17:18	10/26/2006 17:18	10/26/2006 17:18	10/26/2006 17:18
Extraction Date					
Analysis Date	11/07/2006 05:45	11/07/2006 06:08	11/07/2006 20:39	11/07/2006 06:30	11/07/2006 21:02
Extraction HT Met?	-	-	-	-	-
Analytical HT Met?	YES	YES	YES	YES	YES
Sample Matrix	WATER	WATER	WATER	WATER	WATER
Dilution Factor	1.0	1.0	4.0	1.0	2.0
Sample wt/vol	0.005 LITERS	0.005 LITERS	0.005 LITERS	0.005 LITERS	0.005 LITERS
% Dry					

NA = Not Applicable

AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	MW-5S A06-C596 A6C59604	SW-1 A06-C596 A6C59605	SW-2 A06-C596 A6C59606	TRIP BLANK A06-C596 A6C59607	
Sample Date	10/26/2006 13:40	10/26/2006 16:10	10/26/2006 16:25	10/26/2006	
Received Date	10/26/2006 17:18	10/26/2006 17:18	10/26/2006 17:18	10/26/2006 17:18	
Extraction Date					
Analysis Date	11/07/2006 06:53	11/07/2006 07:15	11/07/2006 07:38	11/07/2006 00:27	
Extraction HT Met?	-	-	-	-	
Analytical HT Met?	YES	YES	YES	YES	
Sample Matrix	WATER	WATER	WATER	WATER	
Dilution Factor	1.0	1.0	1.0	1.0	
Sample wt/vol	0.005 LITERS	0.005 LITERS	0.005 LITERS	0.005 LITERS	
% Dry					

NA = Not Applicable

AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	MSB07 A06-C596 A6B2968801	msb06 A06-C596 A6B2965301			
Sample Date					
Received Date					
Extraction Date					
Analysis Date	11/07/2006 11:12	11/06/2006 23:08			
Extraction HT Met?	-	-			
Analytical HT Met?	-	-			
Sample Matrix	WATER	WATER			
Dilution Factor	1.0	1.0			
Sample wt/vol	0.005 LITERS	0.005 LITERS			
% Dry					

NA = Not Applicable

AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	VBLK07 A06-C596 A6B2968802	vblk06 A06-C596 A6B2965302			
Sample Date					
Received Date					
Extraction Date					
Analysis Date	11/07/2006 12:33	11/06/2006 23:53			
Extraction HT Met?	-	-			
Analytical HT Met?	-	-			
Sample Matrix	WATER	WATER			
Dilution Factor	1.0	1.0			
Sample wt/vol	0.005 LITERS	0.005 LITERS			
% Dry					

NA = Not Applicable

BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ONLY(4.2)

Client Sample ID Job No & Lab Sample ID	MW-1D A06-C596 A6C59601	MW-2D A06-C596 A6C59602	MW-2D DL A06-C596 A6C59602DL	MW-3D A06-C596 A6C59603	MW-5S A06-C596 A6C59604
Sample Date	10/26/2006 15:25	10/26/2006 15:02	10/26/2006 15:02	10/26/2006 11:38	10/26/2006 13:40
Received Date	10/26/2006 17:18	10/26/2006 17:18	10/26/2006 17:18	10/26/2006 17:18	10/26/2006 17:18
Extraction Date	10/27/2006 14:00	10/27/2006 14:00	10/27/2006 14:00	10/27/2006 14:00	10/27/2006 14:00
Analysis Date	10/29/2006 18:29	10/29/2006 19:43	10/30/2006 14:09	10/29/2006 20:08	10/29/2006 20:33
Extraction HT Met?	YES	YES	YES	YES	YES
Analytical HT Met?	YES	YES	YES	YES	YES
Sample Matrix	WATER	WATER	WATER	WATER	WATER
Dilution Factor	1.0	1.0	200.0	1.0	1.0
Sample wt/vol	1.06 LITERS	1.045 LITERS	1.045 LITERS	1.05 LITERS	1.05 LITERS
% Dry					

NA = Not Applicable

BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ONLY(4.2)

Client Sample ID Job No & Lab Sample ID	SW-1 A06-C596 A6C59605	SW-2 A06-C596 A6C59606			
Sample Date	10/26/2006 16:10	10/26/2006 16:25			
Received Date	10/26/2006 17:18	10/26/2006 17:18			
Extraction Date	10/27/2006 14:00	10/27/2006 14:00			
Analysis Date	10/29/2006 20:58	10/29/2006 21:22			
Extraction HT Met?	YES	YES			
Analytical HT Met?	YES	YES			
Sample Matrix	WATER	WATER			
Dilution Factor	1.0	1.0			
Sample wt/vol	1.05 LITERS	1.03 LITERS			
% Dry					

NA = Not Applicable

BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ONLY(4.2)

Client Sample ID Job No & Lab Sample ID	MW-1D A06-C596 A6C59601MS	MW-1D A06-C596 A6C59601SD	Matrix Spike Blank A06-C596 A6B2894901		
Sample Date	10/26/2006 15:25	10/26/2006 15:25			
Received Date	10/26/2006 17:18	10/26/2006 17:18			
Extraction Date	10/27/2006 14:00	10/27/2006 14:00	10/27/2006 14:00		
Analysis Date	10/29/2006 18:54	10/29/2006 19:19	10/29/2006 17:40		
Extraction HT Met?	YES	YES	-		
Analytical HT Met?	YES	YES	-		
Sample Matrix	WATER	WATER	WATER		
Dilution Factor	1.0	1.0	1.0		
Sample wt/vol	0.53 LITERS	0.53 LITERS	1.0 LITERS		
% Dry					

NA = Not Applicable

BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ONLY(4.2)

Client Sample ID Job No & Lab Sample ID	SBLK A06-C596 A682894902				
Sample Date					
Received Date					
Extraction Date	10/27/2006 14:00				
Analysis Date	10/29/2006 18:04				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	WATER				
Dilution Factor	1.0				
Sample wt/vol	1.0 LITERS				
% Dry					

NA = Not Applicable

Chain of Custody Record

SEVERN TRENT STL®

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
BENCHMARK ENV. ENGINEERING	PATRICK MARTIN	10/26/06	284918
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page ____ of ____**
726 EXCHANGE ST. STE 624			
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	**Analysis (Attach list if more space is needed)**
BUFFALO / NY / 14210		B. FISHER	
Project Name and Location (State)	**Carrier/Waybill Number**		
ISOCHEM LOCKPORT, NY			
Contract/Purchase Order/Quote No.			
STCNY4A9217			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	NAPL	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	TCL VOA's	TCL SVOA's (BNA's)	Petro Prods.	Special Instructions/ Conditions of Receipt
MW-1D	10/26/06	1525		X				X			X			3	2		
MW-2D	10/26/06	1502		X				X			X			3	2		VISIBLE PRODUCT - IMPACTED
MW-3D	10/26/06	1138		X				X			X			3	2		
MW-5S	10/26/06	1340		X				X			X			3	2		
SW-1	10/26/06	1610		X				X			X			3	2		
SW-2	10/26/06	1625		X				X			X			3	2		
MW-2D (NAPL PRODUCT)	10/26/06	1502					X	X								1	PLEASE ANALYZE BOTH PHASES (FILTER/SINK) METHOD 310.13

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☒ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other ____

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
Patrick T. Martin	10/26/06	5:15		10/26/06	1715
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report. CANARY - Stays with the Sample. PINK - Field Copy

40/40

SEVERN TRENT STL

STL Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228

Tel: 716 691 2600 Fax: 716 691 7991
www.stl-inc.com

ANALYTICAL REPORT

Job#: A06-C594

STL Project#: NY4A9217
Site Name: Benchmark
Task: Vandermark/Isochem

Mr. Bryan Hann
Benchmark Environmental
726 Exchange St., Ste 624
Buffalo, NY 14210

STL Buffalo

Brian J. Fischer
Project Manager

11/09/2006

STL Buffalo
Current Certifications

As of 9/28/2006

STATE	Program	Cert # / Lab ID
AFCEE	AFCEE	
Arkansas	SDWA, CWA, RCRA, SOIL	88-0686
California	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida	NELAP CWA, RCRA	E87672
Georgia	SDWA,NELAP CWA, RCRA	956
Illinois	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA,CWA, RCRA	036-999-337
New Hampshire	NELAP SDWA, CWA	233701
New Jersey	SDWA, CWA, RCRA, CLP	NY455
New York	NELAP, AIR, SDWA, CWA, RCRA,ASP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania	NELAP CWA,RCRA	68-00281
South Carolina	RCRA	91013
Tennessee	SDWA	02970
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington	CWA,RCRA	C1677
West Virginia	CWA,RCRA	252
Wisconsin	CWA, RCRA	998310390

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6C59402	MW-2D DNAPL/lower	NAPL	10/26/2006	15:02	10/26/2006	17:18
A6C59401	MW-2D LNAPL/upper	NAPL	10/26/2006	15:02	10/26/2006	17:18

METHODS SUMMARY

Job#: A06-C594

STL Project#: NY4A9217
Site Name: Benchmark

PARAMETER	ANALYTICAL METHOD
BENCH - METHOD 8260 - TCL VOLATILE ORGANICS+STARS	SW8463 8260
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS	SW8463 8270
METHOD 310.13 - PETROLEUM PRODUCTS	NYSDOH 31013

References:

NYSDOH "Compendium of Methods", New York State Department of Health, Wadsworth Center for Laboratories and Research.

SW8463 "Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846), Third Edition, 9/86; Update I, 7/92; Update IIA, 8/93; Update II, 9/94; Update IIB, 1/95; Update III, 12/96.

NON-CONFORMANCE SUMMARY

Job#: A06-C594

STL Project#: NY4A9217
Site Name: Benchmark

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-C594
Sample Cooler(s) were received at the following temperature(s); 9.2 °C
All samples were received in good condition.

GC/MS Volatile Data

The analytes acetone, methylene chloride and methyl acetate was detected in the Extractor Blank at a level above the project established reporting limit. All samples were non-detect for this analyte, therefore, no corrective action was necessary.

GC/MS Semivolatile Data

All surrogate concentrations were diluted below the linear range of the calibration curve in sample MW-2D DNAPL/lower DL.

The surrogate recovery for p-Terphenyl-d14 was below the laboratory quality control limits for samples Matrix Spike Blank A6B2914701 and Matrix Spike Blank Duplicate A6B2914702. Based on US EPA CLP National Functional Guidelines for Data Review, one surrogate in either fraction (base/neutral or acid fraction) may have a recovery outside of the control limit. All analytes associated with that surrogate should be considered biased low.

The surrogate recovery for Nitrobenzene-D5 was above the laboratory quality control limits for sample MW-2D DNAPL/lower. Based on US EPA CLP National Functional Guidelines for Data Review, one surrogate in either fraction (base/neutral or acid fraction) may have a recovery outside of the control limit. All analytes associated with that surrogate should be considered biased high.

The percent difference for Pentachlorophenol was above method defined limits in the Continuing Calibration Verification A6C0006676. Since the sample associated with this CCV was diluted and analyzed for Naphthalene, 2-Methylnaphthalene, Acenaphthene, Dibenzofuran, Fluorene, Phenanthrene, Anthracene, Benzo(a)anthracene, and 1,1'-Biphenyl, the data is not affected.

GC Extractable Data

No deviations from protocol were encountered during the analytical procedures.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Client Sample ID	Lab Sample ID	Parameter (Inorganic)/Method (Organic)	Dilution	Code
MW-2D DNAPL/lower	A6C59402	31013	50.00	002
MW-2D DNAPL/lower	A6C59402	8260	800.00	004
MW-2D DNAPL/lower DL	A6C59402DL	8270	200.00	008

Dilution Code Definition:

002 - sample matrix effects
003 - excessive foaming
004 - high levels of non-target compounds
005 - sample matrix resulted in method non-compliance for an Internal Standard
006 - sample matrix resulted in method non-compliance for Surrogate
007 - nature of the TCLP matrix
008 - high concentration of target analyte(s)
009 - sample turbidity
010 - sample color
011 - insufficient volume for lower dilution
012 - sample viscosity
013 - other

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DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
A	This flag indicates that a TIC is a suspected aldol-condensation product.
[1]	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Indicates spike sample recovery is not within the quality control limits.
S	Indicates value determined by the Method of Standard Addition.
E	Indicates a value estimated or not reported due to the presence of interferences.
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
*	Indicates the spike or duplicate analysis is not within the quality control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

Client ID		MW-2D DNAPL/lower							
Job No	Lab ID	A06-C594	A6C59402						
Sample Date		10/26/2006							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/KG	ND	500000	NA		NA		NA	
Benzene	UG/KG	ND	100000	NA		NA		NA	
Bromodichloromethane	UG/KG	ND	100000	NA		NA		NA	
Bromoform	UG/KG	ND	100000	NA		NA		NA	
Bromomethane	UG/KG	ND	100000	NA		NA		NA	
2-Butanone	UG/KG	ND	500000	NA		NA		NA	
Carbon Disulfide	UG/KG	ND	100000	NA		NA		NA	
Carbon Tetrachloride	UG/KG	ND	100000	NA		NA		NA	
Chlorobenzene	UG/KG	ND	100000	NA		NA		NA	
Chloroethane	UG/KG	ND	100000	NA		NA		NA	
Chloroform	UG/KG	ND	100000	NA		NA		NA	
Chloromethane	UG/KG	ND	100000	NA		NA		NA	
Dibromochloromethane	UG/KG	ND	100000	NA		NA		NA	
1,1-Dichloroethane	UG/KG	ND	100000	NA		NA		NA	
1,2-Dichloroethane	UG/KG	ND	100000	NA		NA		NA	
1,1-Dichloroethene	UG/KG	ND	100000	NA		NA		NA	
1,2-Dichloropropane	UG/KG	ND	100000	NA		NA		NA	
cis-1,3-Dichloropropene	UG/KG	ND	100000	NA		NA		NA	
trans-1,3-Dichloropropene	UG/KG	ND	100000	NA		NA		NA	
Ethylbenzene	UG/KG	500000	100000	NA		NA		NA	
2-Hexanone	UG/KG	ND	500000	NA		NA		NA	
Methylene chloride	UG/KG	ND	100000	NA		NA		NA	
4-Methyl-2-pentanone	UG/KG	ND	500000	NA		NA		NA	
Styrene	UG/KG	ND	100000	NA		NA		NA	
1,1,2,2-Tetrachloroethane	UG/KG	ND	100000	NA		NA		NA	
Tetrachloroethene	UG/KG	ND	100000	NA		NA		NA	
Toluene	UG/KG	87000 J	100000	NA		NA		NA	
1,1,1-Trichloroethane	UG/KG	ND	100000	NA		NA		NA	
1,1,2-Trichloroethane	UG/KG	ND	100000	NA		NA		NA	
Trichloroethene	UG/KG	ND	100000	NA		NA		NA	
Vinyl chloride	UG/KG	ND	200000	NA		NA		NA	
m/p-Xylenes	UG/KG	830000	200000	NA		NA		NA	
o-Xylene	UG/KG	380000	100000	NA		NA		NA	
Total Xylenes	UG/KG	1200000	300000	NA		NA		NA	
1,1,2-Trichloro-1,2,2-trifluor	UG/KG	ND	100000	NA		NA		NA	
1,2,4-Trimethylbenzene	UG/KG	1200000	100000	NA		NA		NA	
1,3,5-Trimethylbenzene	UG/KG	520000	100000	NA		NA		NA	
1,2-Dichlorobenzene	UG/KG	ND	100000	NA		NA		NA	
1,3-Dichlorobenzene	UG/KG	ND	100000	NA		NA		NA	
1,4-Dichlorobenzene	UG/KG	ND	100000	NA		NA		NA	
cis-1,2-Dichloroethene	UG/KG	ND	100000	NA		NA		NA	
trans-1,2-Dichloroethene	UG/KG	ND	100000	NA		NA		NA	
Dichlorodifluoromethane	UG/KG	ND	100000	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Client ID		MW-2D DNAPL/lower							
Job No / Lab ID		A06-C594	A6C59402						
Sample Date		10/26/2006							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Trichlorofluoromethane	UG/KG	ND	100000	NA		NA		NA	
Methyl acetate	UG/KG	ND	100000	NA		NA		NA	
Methyl-t-Butyl Ether (MTBE)	UG/KG	ND	100000	NA		NA		NA	
Cyclohexane	UG/KG	ND	100000	NA		NA		NA	
Methylcyclohexane	UG/KG	ND	100000	NA		NA		NA	
1,2-Dibromoethane	UG/KG	ND	100000	NA		NA		NA	
Isopropylbenzene	UG/KG	110000	100000	NA		NA		NA	
1,2-Dibromo-3-chloropropane	UG/KG	ND	100000	NA		NA		NA	
1,2,4-Trichlorobenzene	UG/KG	ND	100000	NA		NA		NA	
n-Propylbenzene	UG/KG	54000 J	100000	NA		NA		NA	
p-Cymene	UG/KG	51000 J	100000	NA		NA		NA	
n-Butylbenzene	UG/KG	ND	100000	NA		NA		NA	
sec-Butylbenzene	UG/KG	ND	100000	NA		NA		NA	
==========IS/SURROGATE(S)==========									
Chlorobenzene-D5	%	108	50-200	NA		NA		NA	
1,4-Difluorobenzene	%	107	50-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	108	50-200	NA		NA		NA	
Toluene-D8	%	97	71-125	NA		NA		NA	
p-Bromofluorobenzene	%	96	68-124	NA		NA		NA	
1,2-Dichloroethane-D4	%	101	61-136	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Date: 11/09/2006
Time: 15:05:26

Benchmark
Vandermark/Isochem
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Rept: AN0326

Client ID		MW-2D DNAPL/lower		MW-2D DNAPL/lower DL					
Job No	Lab ID	A06-C594	A6C59402	A06-C594	A6C59402DL				
Sample Date		10/26/2006		10/26/2006					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/KG	15000000 E	58000	34000000 D	12000000	NA		NA	
Acenaphthylene	UG/KG	330000	58000	ND	12000000	NA		NA	
Acetophenone	UG/KG	ND	58000	ND	12000000	NA		NA	
Anthracene	UG/KG	4300000 E	58000	6100000 DJ	12000000	NA		NA	
Atrazine	UG/KG	ND	58000	ND	12000000	NA		NA	
Benzaldehyde	UG/KG	ND	58000	ND	12000000	NA		NA	
Benzo(a)anthracene	UG/KG	1000000 E	58000	1700000 DJ	12000000	NA		NA	
Benzo(b)fluoranthene	UG/KG	450000	58000	720000 DJ	12000000	NA		NA	
Benzo(k)fluoranthene	UG/KG	520000	58000	820000 DJ	12000000	NA		NA	
Benzo(ghi)perylene	UG/KG	74000	58000	ND	12000000	NA		NA	
Benzo(a)pyrene	UG/KG	230000	58000	ND	12000000	NA		NA	
Biphenyl	UG/KG	6600000 E	58000	ND	12000000	NA		NA	
Bis(2-chloroethoxy) methane	UG/KG	ND	58000	ND	12000000	NA		NA	
Bis(2-chloroethyl) ether	UG/KG	ND	58000	ND	12000000	NA		NA	
2,2'-Oxybis(1-Chloropropane)	UG/KG	ND	58000	ND	12000000	NA		NA	
Bis(2-ethylhexyl) phthalate	UG/KG	ND	58000	ND	12000000	NA		NA	
4-Bromophenyl phenyl ether	UG/KG	ND	58000	ND	12000000	NA		NA	
Butyl benzyl phthalate	UG/KG	ND	58000	ND	12000000	NA		NA	
Caprolactam	UG/KG	ND	58000	ND	12000000	NA		NA	
4-Chloroaniline	UG/KG	ND	58000	ND	12000000	NA		NA	
4-Chloro-3-methylphenol	UG/KG	ND	58000	ND	12000000	NA		NA	
2-Chloronaphthalene	UG/KG	ND	58000	ND	12000000	NA		NA	
2-Chlorophenol	UG/KG	ND	58000	ND	12000000	NA		NA	
4-Chlorophenyl phenyl ether	UG/KG	ND	58000	ND	12000000	NA		NA	
Carbazole	UG/KG	1300000 E	58000	1300000 DJ	12000000	NA		NA	
Chrysene	UG/KG	910000	58000	1300000 DJ	12000000	NA		NA	
Dibenzo(a,h)anthracene	UG/KG	23000 J	58000	ND	12000000	NA		NA	
Dibenzofuran	UG/KG	14000000 E	58000	33000000 D	12000000	NA		NA	
Di-n-butyl phthalate	UG/KG	ND	58000	ND	12000000	NA		NA	
3,3'-Dichlorobenzidine	UG/KG	ND	280000	ND	56000000	NA		NA	
2,4-Dichlorophenol	UG/KG	ND	58000	ND	12000000	NA		NA	
Diethyl phthalate	UG/KG	ND	58000	ND	12000000	NA		NA	
2,4-Dimethylphenol	UG/KG	ND	58000	ND	12000000	NA		NA	
Dimethyl phthalate	UG/KG	ND	58000	ND	12000000	NA		NA	
4,6-Dinitro-2-methylphenol	UG/KG	ND	280000	ND	56000000	NA		NA	
2,4-Dinitrophenol	UG/KG	ND	280000	ND	56000000	NA		NA	
2,4-Dinitrotoluene	UG/KG	ND	58000	ND	12000000	NA		NA	
2,6-Dinitrotoluene	UG/KG	ND	58000	ND	12000000	NA		NA	
Di-n-octyl phthalate	UG/KG	ND	58000	ND	12000000	NA		NA	
Fluoranthene	UG/KG	11000000 E	58000	18000000 D	12000000	NA		NA	
Fluorene	UG/KG	12000000 E	58000	27000000 D	12000000	NA		NA	
Hexachlorobenzene	UG/KG	ND	58000	ND	12000000	NA		NA	
Hexachlorobutadiene	UG/KG	ND	58000	ND	12000000	NA		NA	

11/37

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		MW-2D DNAPL/lower		MW-2D DNAPL/lower DL					
Job No	Lab ID	A06-C594	A6C59402	A06-C594	A6C59402DL				
Sample Date		10/26/2006		10/26/2006					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexachlorocyclopentadiene	UG/KG	ND	58000	ND	12000000	NA		NA	
Hexachloroethane	UG/KG	ND	58000	ND	12000000	NA		NA	
Indeno(1,2,3-cd)pyrene	UG/KG	73000	58000	ND	12000000	NA		NA	
Isophorone	UG/KG	ND	58000	ND	12000000	NA		NA	
2-Methylnaphthalene	UG/KG	26000000 E	58000	52000000 D	12000000	NA		NA	
2-Methylphenol	UG/KG	ND	58000	ND	12000000	NA		NA	
4-Methylphenol	UG/KG	ND	58000	ND	12000000	NA		NA	
Naphthalene	UG/KG	38000000 E	58000	88000000 D	12000000	NA		NA	
2-Nitroaniline	UG/KG	ND	280000	ND	56000000	NA		NA	
3-Nitroaniline	UG/KG	ND	280000	ND	56000000	NA		NA	
4-Nitroaniline	UG/KG	ND	280000	ND	56000000	NA		NA	
Nitrobenzene	UG/KG	ND	58000	ND	12000000	NA		NA	
2-Nitrophenol	UG/KG	ND	58000	ND	12000000	NA		NA	
4-Nitrophenol	UG/KG	ND	280000	ND	56000000	NA		NA	
N-nitrosodiphenylamine	UG/KG	ND	58000	ND	12000000	NA		NA	
N-Nitroso-Di-n-propylamine	UG/KG	ND	58000	ND	12000000	NA		NA	
Pentachlorophenol	UG/KG	ND	280000	ND	56000000	NA		NA	
Phenanthrene	UG/KG	30000000 E	58000	66000000 D	12000000	NA		NA	
Phenol	UG/KG	ND	58000	ND	12000000	NA		NA	
Pyrene	UG/KG	5200000 E	58000	10000000 DJ	12000000	NA		NA	
2,4,5-Trichlorophenol	UG/KG	ND	140000	ND	28000000	NA		NA	
2,4,6-Trichlorophenol	UG/KG	ND	58000	ND	12000000	NA		NA	
==========IS/SURROGATE(S)==========									
1,4-Dichlorobenzene-D4	%	104	50-200	93	50-200	NA		NA	
Naphthalene-D8	%	78	50-200	91	50-200	NA		NA	
Acenaphthene-D10	%	97	50-200	87	50-200	NA		NA	
Phenanthrene-D10	%	73	50-200	85	50-200	NA		NA	
Chrysene-D12	%	97	50-200	90	50-200	NA		NA	
Perylene-D12	%	117	50-200	90	50-200	NA		NA	
Nitrobenzene-D5	%	127 *	35-120	0 D	35-120	NA		NA	
2-Fluorobiphenyl	%	100	45-120	138 D	45-120	NA		NA	
p-Terphenyl-d14	%	98	54-135	136 D	54-135	NA		NA	
Phenol-D5	%	88	40-120	85	40-120	NA		NA	
2-Fluorophenol	%	84	30-120	89	30-120	NA		NA	
2,4,6-Tribromophenol	%	111	46-129	0 D	46-129	NA		NA	

NA = Not Applicable ND = Not Detected

Date: 11/09/2006
Time: 15:05:30

Benchmark
Vandermark/Isochem
METHOD 310.13 - PETROLEUM PRODUCTS

Rept: AN0326

Client ID		MW-2D DNAPL/lower		MW-2D LNAPL/upper					
Job No	Lab ID	A06-C594	A6C59402	A06-C594	A6C59401				
Sample Date		10/26/2006		10/26/2006					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Kerosene	MG/KG	ND	83000	ND	1900	NA		NA	
Gasoline	MG/KG	ND	83000	ND	1900	NA		NA	
Motor Oil	MG/KG	ND	83000	ND	1900	NA		NA	
Fuel Oil #2	MG/KG	ND	83000	ND	1900	NA		NA	
Fuel Oil #4	MG/KG	ND	83000	ND	1900	NA		NA	
Fuel Oil #6	MG/KG	ND	83000	ND	1900	NA		NA	
Other-1	MG/KG	1100000	830000	1400 J	19000	NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Chronology and QC Summary Package

Date: 11/09/2006
Time: 15:05:41

Benchmark
Vandermark/Isochem
BENCH - METHOD 8260 - TCL VOLATILE ORGANICS+STARS

Rept: AN0326

Client ID		eblk 11/6		vblk57					
Job No	Lab ID	A06-C594	A6C59403	A06-C594	A6B2964704				
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/KG	2900	620	ND	620	NA		NA	
Benzene	UG/KG	ND	120	ND	120	NA		NA	
Bromodichloromethane	UG/KG	ND	120	ND	120	NA		NA	
Bromoform	UG/KG	ND	120	ND	120	NA		NA	
Bromomethane	UG/KG	ND	120	ND	120	NA		NA	
2-Butanone	UG/KG	ND	620	ND	620	NA		NA	
Carbon Disulfide	UG/KG	ND	120	ND	120	NA		NA	
Carbon Tetrachloride	UG/KG	ND	120	ND	120	NA		NA	
Chlorobenzene	UG/KG	ND	120	ND	120	NA		NA	
Chloroethane	UG/KG	ND	120	ND	120	NA		NA	
Chloroform	UG/KG	ND	120	ND	120	NA		NA	
Chloromethane	UG/KG	ND	120	ND	120	NA		NA	
Dibromochloromethane	UG/KG	ND	120	ND	120	NA		NA	
1,1-Dichloroethane	UG/KG	ND	120	ND	120	NA		NA	
1,2-Dichloroethane	UG/KG	ND	120	ND	120	NA		NA	
1,1-Dichloroethene	UG/KG	ND	120	ND	120	NA		NA	
1,2-Dichloropropane	UG/KG	ND	120	ND	120	NA		NA	
cis-1,3-Dichloropropene	UG/KG	ND	120	ND	120	NA		NA	
trans-1,3-Dichloropropene	UG/KG	ND	120	ND	120	NA		NA	
Ethylbenzene	UG/KG	ND	120	ND	120	NA		NA	
2-Hexanone	UG/KG	ND	620	ND	620	NA		NA	
Methylene chloride	UG/KG	130	120	ND	120	NA		NA	
4-Methyl-2-pentanone	UG/KG	ND	620	ND	620	NA		NA	
Styrene	UG/KG	ND	120	ND	120	NA		NA	
1,1,2,2-Tetrachloroethane	UG/KG	ND	120	ND	120	NA		NA	
Tetrachloroethene	UG/KG	ND	120	ND	120	NA		NA	
Toluene	UG/KG	ND	120	ND	120	NA		NA	
1,1,1-Trichloroethane	UG/KG	ND	120	ND	120	NA		NA	
1,1,2-Trichloroethane	UG/KG	ND	120	ND	120	NA		NA	
Trichloroethene	UG/KG	ND	120	ND	120	NA		NA	
Vinyl chloride	UG/KG	ND	250	ND	250	NA		NA	
m/p-Xylenes	UG/KG	ND	250	ND	250	NA		NA	
o-Xylene	UG/KG	ND	120	ND	120	NA		NA	
Total Xylenes	UG/KG	ND	370	ND	380	NA		NA	
1,1,2-Trichloro-1,2,2-trifluor	UG/KG	ND	120	ND	120	NA		NA	
1,2,4-Trimethylbenzene	UG/KG	ND	120	ND	120	NA		NA	
1,3,5-Trimethylbenzene	UG/KG	ND	120	ND	120	NA		NA	
1,2-Dichlorobenzene	UG/KG	ND	120	ND	120	NA		NA	
1,3-Dichlorobenzene	UG/KG	ND	120	ND	120	NA		NA	
1,4-Dichlorobenzene	UG/KG	ND	120	ND	120	NA		NA	
cis-1,2-Dichloroethene	UG/KG	ND	120	ND	120	NA		NA	
trans-1,2-Dichloroethene	UG/KG	ND	120	ND	120	NA		NA	
Dichlorodifluoromethane	UG/KG	ND	120	ND	120	NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		eblk 11/6		vblk57					
Job No	Lab ID	A06-C594	A6C59403	A06-C594	A6B2964704				
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Trichlorofluoromethane	UG/KG	ND	120	ND	120	NA		NA	
Methyl acetate	UG/KG	860	120	ND	120	NA		NA	
Methyl-t-Butyl Ether (MTBE)	UG/KG	ND	120	ND	120	NA		NA	
Cyclohexane	UG/KG	ND	120	ND	120	NA		NA	
Methylcyclohexane	UG/KG	ND	120	ND	120	NA		NA	
1,2-Dibromoethane	UG/KG	ND	120	ND	120	NA		NA	
Isopropylbenzene	UG/KG	ND	120	ND	120	NA		NA	
1,2-Dibromo-3-chloropropane	UG/KG	ND	120	ND	120	NA		NA	
1,2,4-Trichlorobenzene	UG/KG	ND	120	ND	120	NA		NA	
n-Propylbenzene	UG/KG	ND	120	ND	120	NA		NA	
p-Cymene	UG/KG	ND	120	ND	120	NA		NA	
n-Butylbenzene	UG/KG	ND	120	ND	120	NA		NA	
sec-Butylbenzene	UG/KG	ND	120	ND	120	NA		NA	
====IS/SURROGATE(S)====									
Chlorobenzene-D5	%	94	50-200	98	50-200	NA		NA	
1,4-Difluorobenzene	%	92	50-200	98	50-200	NA		NA	
1,4-Dichlorobenzene-D4	%	95	50-200	94	50-200	NA		NA	
Toluene-D8	%	102	71-125	101	71-125	NA		NA	
p-Bromofluorobenzene	%	104	68-124	100	68-124	NA		NA	
1,2-Dichloroethane-D4	%	108	61-136	108	61-136	NA		NA	

NA = Not Applicable ND = Not Detected

Date: 11/09/2006
Time: 15:05:41

Benchmark
Vandermark/Isochem
BENCH - METHOD 8260 - TCL VOLATILE ORGANICS+STARS

Rept: AN0326

Client ID		msb57							
Job No	Lab ID	A06-c594	A6B2964703						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acetone	UG/KG	ND	620	NA		NA		NA	
Benzene	UG/KG	3200	120	NA		NA		NA	
Bromodichloromethane	UG/KG	ND	120	NA		NA		NA	
Bromoform	UG/KG	ND	120	NA		NA		NA	
Bromomethane	UG/KG	ND	120	NA		NA		NA	
2-Butanone	UG/KG	ND	620	NA		NA		NA	
Carbon Disulfide	UG/KG	ND	120	NA		NA		NA	
Carbon Tetrachloride	UG/KG	ND	120	NA		NA		NA	
Chlorobenzene	UG/KG	3000	120	NA		NA		NA	
Chloroethane	UG/KG	ND	120	NA		NA		NA	
Chloroform	UG/KG	ND	120	NA		NA		NA	
Chloromethane	UG/KG	ND	120	NA		NA		NA	
Dibromochloromethane	UG/KG	ND	120	NA		NA		NA	
1,1-Dichloroethane	UG/KG	ND	120	NA		NA		NA	
1,2-Dichloroethane	UG/KG	ND	120	NA		NA		NA	
1,1-Dichloroethene	UG/KG	3200	120	NA		NA		NA	
1,2-Dichloropropane	UG/KG	ND	120	NA		NA		NA	
cis-1,3-Dichloropropene	UG/KG	ND	120	NA		NA		NA	
trans-1,3-Dichloropropene	UG/KG	ND	120	NA		NA		NA	
Ethylbenzene	UG/KG	ND	120	NA		NA		NA	
2-Hexanone	UG/KG	ND	620	NA		NA		NA	
Methylene chloride	UG/KG	150	120	NA		NA		NA	
4-Methyl-2-pentanone	UG/KG	ND	620	NA		NA		NA	
Styrene	UG/KG	ND	120	NA		NA		NA	
1,1,2,2-Tetrachloroethane	UG/KG	ND	120	NA		NA		NA	
Tetrachloroethene	UG/KG	ND	120	NA		NA		NA	
Toluene	UG/KG	3000	120	NA		NA		NA	
1,1,1-Trichloroethane	UG/KG	ND	120	NA		NA		NA	
1,1,2-Trichloroethane	UG/KG	ND	120	NA		NA		NA	
Trichloroethene	UG/KG	3100	120	NA		NA		NA	
Vinyl chloride	UG/KG	ND	250	NA		NA		NA	
m/p-Xylenes	UG/KG	ND	250	NA		NA		NA	
o-Xylene	UG/KG	ND	120	NA		NA		NA	
Total Xylenes	UG/KG	ND	380	NA		NA		NA	
1,1,2-Trichloro-1,2,2-trifluor	UG/KG	ND	120	NA		NA		NA	
1,2,4-Trimethylbenzene	UG/KG	ND	120	NA		NA		NA	
1,3,5-Trimethylbenzene	UG/KG	ND	120	NA		NA		NA	
1,2-Dichlorobenzene	UG/KG	ND	120	NA		NA		NA	
1,3-Dichlorobenzene	UG/KG	ND	120	NA		NA		NA	
1,4-Dichlorobenzene	UG/KG	ND	120	NA		NA		NA	
cis-1,2-Dichloroethene	UG/KG	ND	120	NA		NA		NA	
trans-1,2-Dichloroethene	UG/KG	ND	120	NA		NA		NA	
Dichlorodifluoromethane	UG/KG	ND	120	NA		NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		msb57							
Job No	Lab ID	A06-C594	A6B2964703						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Trichlorofluoromethane	UG/KG	ND	120	NA		NA		NA	
Methyl acetate	UG/KG	ND	120	NA		NA		NA	
Methyl-t-Butyl Ether (MTBE)	UG/KG	ND	120	NA		NA		NA	
Cyclohexane	UG/KG	ND	120	NA		NA		NA	
Methylcyclohexane	UG/KG	ND	120	NA		NA		NA	
1,2-Dibromoethane	UG/KG	ND	120	NA		NA		NA	
Isopropylbenzene	UG/KG	ND	120	NA		NA		NA	
1,2-Dibromo-3-chloropropane	UG/KG	ND	120	NA		NA		NA	
1,2,4-Trichlorobenzene	UG/KG	ND	120	NA		NA		NA	
n-Propylbenzene	UG/KG	ND	120	NA		NA		NA	
p-Cymene	UG/KG	ND	120	NA		NA		NA	
n-Butylbenzene	UG/KG	ND	120	NA		NA		NA	
sec-Butylbenzene	UG/KG	ND	120	NA		NA		NA	
========IS/SURROGATE(S)==========									
Chlorobenzene-D5	%	96	50-200	NA		NA		NA	
1,4-Difluorobenzene	%	96	50-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	91	50-200	NA		NA		NA	
Toluene-D8	%	101	71-125	NA		NA		NA	
p-Bromofluorobenzene	%	101	68-124	NA		NA		NA	
1,2-Dichloroethane-D4	%	107	61-136	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Date: 11/09/2006
Time: 15:05:52

Benchmark
Vandermark/Isochem
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Rept: AN0326

Client ID		SBLK							
Job No	Lab ID	A06-C594	A6B2914703						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/KG	ND	99000	NA		NA		NA	
Acenaphthylene	UG/KG	ND	99000	NA		NA		NA	
Acetophenone	UG/KG	ND	99000	NA		NA		NA	
Anthracene	UG/KG	ND	99000	NA		NA		NA	
Atrazine	UG/KG	ND	99000	NA		NA		NA	
Benzaldehyde	UG/KG	ND	99000	NA		NA		NA	
Benzo(a)anthracene	UG/KG	ND	99000	NA		NA		NA	
Benzo(b)fluoranthene	UG/KG	ND	99000	NA		NA		NA	
Benzo(k)fluoranthene	UG/KG	ND	99000	NA		NA		NA	
Benzo(ghi)perylene	UG/KG	ND	99000	NA		NA		NA	
Benzo(a)pyrene	UG/KG	ND	99000	NA		NA		NA	
Biphenyl	UG/KG	ND	99000	NA		NA		NA	
Bis(2-chloroethoxy) methane	UG/KG	ND	99000	NA		NA		NA	
Bis(2-chloroethyl) ether	UG/KG	ND	99000	NA		NA		NA	
2,2'-Oxybis(1-Chloropropane)	UG/KG	ND	99000	NA		NA		NA	
Bis(2-ethylhexyl) phthalate	UG/KG	ND	99000	NA		NA		NA	
4-Bromophenyl phenyl ether	UG/KG	ND	99000	NA		NA		NA	
Butyl benzyl phthalate	UG/KG	ND	99000	NA		NA		NA	
Caprolactam	UG/KG	ND	99000	NA		NA		NA	
4-Chloroaniline	UG/KG	ND	99000	NA		NA		NA	
4-Chloro-3-methylphenol	UG/KG	ND	99000	NA		NA		NA	
2-Chloronaphthalene	UG/KG	ND	99000	NA		NA		NA	
2-Chlorophenol	UG/KG	ND	99000	NA		NA		NA	
4-Chlorophenyl phenyl ether	UG/KG	ND	99000	NA		NA		NA	
Carbazole	UG/KG	ND	99000	NA		NA		NA	
Chrysene	UG/KG	ND	99000	NA		NA		NA	
Dibenzo(a,h)anthracene	UG/KG	ND	99000	NA		NA		NA	
Dibenzofuran	UG/KG	ND	99000	NA		NA		NA	
Di-n-butyl phthalate	UG/KG	ND	99000	NA		NA		NA	
3,3'-Dichlorobenzidine	UG/KG	ND	480000	NA		NA		NA	
2,4-Dichlorophenol	UG/KG	ND	99000	NA		NA		NA	
Diethyl phthalate	UG/KG	ND	99000	NA		NA		NA	
2,4-Dimethylphenol	UG/KG	ND	99000	NA		NA		NA	
Dimethyl phthalate	UG/KG	ND	99000	NA		NA		NA	
4,6-Dinitro-2-methylphenol	UG/KG	ND	480000	NA		NA		NA	
2,4-Dinitrophenol	UG/KG	ND	480000	NA		NA		NA	
2,4-Dinitrotoluene	UG/KG	ND	99000	NA		NA		NA	
2,6-Dinitrotoluene	UG/KG	ND	99000	NA		NA		NA	
Di-n-octyl phthalate	UG/KG	ND	99000	NA		NA		NA	
Fluoranthene	UG/KG	ND	99000	NA		NA		NA	
Fluorene	UG/KG	ND	99000	NA		NA		NA	
Hexachlorobenzene	UG/KG	ND	99000	NA		NA		NA	
Hexachlorobutadiene	UG/KG	ND	99000	NA		NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID	SBLK							
Job No Lab ID	A06-C594	A6B2914703						
Sample Date								
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexachlorocyclopentadiene	UG/KG	ND	99000	NA		NA		NA	
Hexachloroethane	UG/KG	ND	99000	NA		NA		NA	
Indeno(1,2,3-cd)pyrene	UG/KG	ND	99000	NA		NA		NA	
Isophorone	UG/KG	ND	99000	NA		NA		NA	
2-Methylnaphthalene	UG/KG	ND	99000	NA		NA		NA	
2-Methylphenol	UG/KG	ND	99000	NA		NA		NA	
4-Methylphenol	UG/KG	ND	99000	NA		NA		NA	
Naphthalene	UG/KG	ND	99000	NA		NA		NA	
2-Nitroaniline	UG/KG	ND	480000	NA		NA		NA	
3-Nitroaniline	UG/KG	ND	480000	NA		NA		NA	
4-Nitroaniline	UG/KG	ND	480000	NA		NA		NA	
Nitrobenzene	UG/KG	ND	99000	NA		NA		NA	
2-Nitrophenol	UG/KG	ND	99000	NA		NA		NA	
4-Nitrophenol	UG/KG	ND	480000	NA		NA		NA	
N-nitrosodiphenylamine	UG/KG	ND	99000	NA		NA		NA	
N-Nitroso-Di-n-propylamine	UG/KG	ND	99000	NA		NA		NA	
Pentachlorophenol	UG/KG	ND	480000	NA		NA		NA	
Phenanthrene	UG/KG	ND	99000	NA		NA		NA	
Phenol	UG/KG	ND	99000	NA		NA		NA	
Pyrene	UG/KG	ND	99000	NA		NA		NA	
2,4,5-Trichlorophenol	UG/KG	ND	240000	NA		NA		NA	
2,4,6-Trichlorophenol	UG/KG	ND	99000	NA		NA		NA	
IS/SURROGATE(S)									
1,4-Dichlorobenzene-D4	%	107	50-200	NA		NA		NA	
Naphthalene-D8	%	106	50-200	NA		NA		NA	
Acenaphthene-D10	%	103	50-200	NA		NA		NA	
Phenanthrene-D10	%	103	50-200	NA		NA		NA	
Chrysene-D12	%	108	50-200	NA		NA		NA	
Perylene-D12	%	112	50-200	NA		NA		NA	
Nitrobenzene-D5	%	96	35-120	NA		NA		NA	
2-Fluorobiphenyl	%	96	45-120	NA		NA		NA	
p-Terphenyl-d14	%	85	54-135	NA		NA		NA	
Phenol-D5	%	97	40-120	NA		NA		NA	
2-Fluorophenol	%	94	30-120	NA		NA		NA	
2,4,6-Tribromophenol	%	93	46-129	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Date: 11/09/2006
Time: 15:05:52

Benchmark
Vandermark/Isochem
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Rept: AN0326

Client ID		Matrix Spike Blank		Matrix Spike Blk Dup					
Job No	Lab ID	A06-C594	A6B2914701	A06-C594	A6B2914702				
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/KG	600000	99000	540000	99000	NA		NA	
Acenaphthylene	UG/KG	ND	99000	ND	99000	NA		NA	
Acetophenone	UG/KG	ND	99000	ND	99000	NA		NA	
Anthracene	UG/KG	ND	99000	ND	99000	NA		NA	
Atrazine	UG/KG	ND	99000	ND	99000	NA		NA	
Benzaldehyde	UG/KG	ND	99000	ND	99000	NA		NA	
Benzo(a)anthracene	UG/KG	ND	99000	ND	99000	NA		NA	
Benzo(b)fluoranthene	UG/KG	ND	99000	ND	99000	NA		NA	
Benzo(k)fluoranthene	UG/KG	ND	99000	ND	99000	NA		NA	
Benzo(ghi)perylene	UG/KG	ND	99000	ND	99000	NA		NA	
Benzo(a)pyrene	UG/KG	ND	99000	ND	99000	NA		NA	
Biphenyl	UG/KG	ND	99000	ND	99000	NA		NA	
Bis(2-chloroethoxy) methane	UG/KG	ND	99000	ND	99000	NA		NA	
Bis(2-chloroethyl) ether	UG/KG	ND	99000	ND	99000	NA		NA	
2,2'-Oxybis(1-Chloropropane)	UG/KG	ND	99000	ND	99000	NA		NA	
Bis(2-ethylhexyl) phthalate	UG/KG	ND	99000	ND	99000	NA		NA	
4-Bromophenyl phenyl ether	UG/KG	ND	99000	ND	99000	NA		NA	
Butyl benzyl phthalate	UG/KG	ND	99000	ND	99000	NA		NA	
Caprolactam	UG/KG	ND	99000	ND	99000	NA		NA	
4-Chloroaniline	UG/KG	ND	99000	ND	99000	NA		NA	
4-Chloro-3-methylphenol	UG/KG	600000	99000	520000	99000	NA		NA	
2-Chloronaphthalene	UG/KG	ND	99000	ND	99000	NA		NA	
2-Chlorophenol	UG/KG	610000	99000	530000	99000	NA		NA	
4-Chlorophenyl phenyl ether	UG/KG	ND	99000	ND	99000	NA		NA	
Carbazole	UG/KG	ND	99000	ND	99000	NA		NA	
Chrysene	UG/KG	ND	99000	ND	99000	NA		NA	
Dibenzo(a,h)anthracene	UG/KG	ND	99000	ND	99000	NA		NA	
Dibenzofuran	UG/KG	ND	99000	ND	99000	NA		NA	
Di-n-butyl phthalate	UG/KG	ND	99000	ND	99000	NA		NA	
3,3'-Dichlorobenzidine	UG/KG	ND	480000	ND	480000	NA		NA	
2,4-Dichlorophenol	UG/KG	ND	99000	ND	99000	NA		NA	
Diethyl phthalate	UG/KG	ND	99000	ND	99000	NA		NA	
2,4-Dimethylphenol	UG/KG	ND	99000	ND	99000	NA		NA	
Dimethyl phthalate	UG/KG	ND	99000	ND	99000	NA		NA	
4,6-Dinitro-2-methylphenol	UG/KG	ND	480000	ND	480000	NA		NA	
2,4-Dinitrophenol	UG/KG	ND	480000	ND	480000	NA		NA	
2,4-Dinitrotoluene	UG/KG	550000	99000	490000	99000	NA		NA	
2,6-Dinitrotoluene	UG/KG	ND	99000	ND	99000	NA		NA	
Di-n-octyl phthalate	UG/KG	ND	99000	ND	99000	NA		NA	
Fluoranthene	UG/KG	ND	99000	ND	99000	NA		NA	
Fluorene	UG/KG	ND	99000	ND	99000	NA		NA	
Hexachlorobenzene	UG/KG	ND	99000	ND	99000	NA		NA	
Hexachlorobutadiene	UG/KG	ND	99000	ND	99000	NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		Matrix Spike Blank		Matrix Spike Blk Dup					
Job No / Lab ID		A06-C594	A6B2914701	A06-C594	A6B2914702				
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Hexachlorocyclopentadiene	UG/KG	ND	99000	ND	99000	NA		NA	
Hexachloroethane	UG/KG	ND	99000	ND	99000	NA		NA	
Indeno(1,2,3-cd)pyrene	UG/KG	ND	99000	ND	99000	NA		NA	
Isophorone	UG/KG	ND	99000	ND	99000	NA		NA	
2-Methylnaphthalene	UG/KG	ND	99000	ND	99000	NA		NA	
2-Methylphenol	UG/KG	ND	99000	ND	99000	NA		NA	
4-Methylphenol	UG/KG	ND	99000	ND	99000	NA		NA	
Naphthalene	UG/KG	ND	99000	ND	99000	NA		NA	
2-Nitroaniline	UG/KG	ND	480000	ND	480000	NA		NA	
3-Nitroaniline	UG/KG	ND	480000	ND	480000	NA		NA	
4-Nitroaniline	UG/KG	ND	480000	ND	480000	NA		NA	
Nitrobenzene	UG/KG	ND	99000	ND	99000	NA		NA	
2-Nitrophenol	UG/KG	ND	99000	ND	99000	NA		NA	
4-Nitrophenol	UG/KG	530000	480000	460000 J	480000	NA		NA	
N-nitrosodiphenylamine	UG/KG	ND	99000	ND	99000	NA		NA	
N-Nitroso-Di-n-propylamine	UG/KG	600000	99000	520000	99000	NA		NA	
Pentachlorophenol	UG/KG	520000	480000	430000 J	480000	NA		NA	
Phenanthrene	UG/KG	ND	99000	ND	99000	NA		NA	
Phenol	UG/KG	570000	99000	490000	99000	NA		NA	
Pyrene	UG/KG	620000	99000	540000	99000	NA		NA	
2,4,5-Trichlorophenol	UG/KG	ND	240000	ND	240000	NA		NA	
2,4,6-Trichlorophenol	UG/KG	ND	99000	ND	99000	NA		NA	
======IS/SURROGATE(S)=									
1,4-Dichlorobenzene-D4	%	98	50-200	103	50-200	NA		NA	
Naphthalene-D8	%	99	50-200	103	50-200	NA		NA	
Acenaphthene-D10	%	97	50-200	101	50-200	NA		NA	
Phenanthrene-D10	%	95	50-200	98	50-200	NA		NA	
Chrysene-D12	%	95	50-200	97	50-200	NA		NA	
Perylene-D12	%	93	50-200	96	50-200	NA		NA	
Nitrobenzene-D5	%	55	35-120	49	35-120	NA		NA	
2-Fluorobiphenyl	%	56	45-120	50	45-120	NA		NA	
p-Terphenyl-d14	%	53 *	54-135	46 *	54-135	NA		NA	
Phenol-D5	%	60	40-120	51	40-120	NA		NA	
2-Fluorophenol	%	57	30-120	50	30-120	NA		NA	
2,4,6-Tribromophenol	%	56	46-129	49	46-129	NA		NA	

NA = Not Applicable ND = Not Detected

Client ID		Method Blank							
Job No	Lab ID	A06-C594	A6B2904803						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Kerosene	MG/KG	ND	3000	NA		NA		NA	
Gasoline	MG/KG	ND	3000	NA		NA		NA	
Motor Oil	MG/KG	ND	3000	NA		NA		NA	
Fuel Oil #2	MG/KG	ND	3000	NA		NA		NA	
Fuel Oil #4	MG/KG	ND	3000	NA		NA		NA	
Fuel Oil #6	MG/KG	ND	3000	NA		NA		NA	
Other-1	MG/KG	ND	30000	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Date: 11/09/2006
Time: 15:05:57

Benchmark
Vandermark/Isochem
METHOD 310.13 - PETROLEUM PRODUCTS

Rept: AN0326

Client ID Job No Lab ID Sample Date		Matrix Spike Blank A06-C594 A6B2904801		Matrix Spike Blk Dup A06-C594 A6B2904802					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Kerosene	MG/KG	ND	3000	ND	3000	NA		NA	
Gasoline	MG/KG	ND	3000	ND	3000	NA		NA	
Motor Oil	MG/KG	ND	3000	ND	3000	NA		NA	
Fuel Oil #2	MG/KG	16000	3000	16000	3000	NA		NA	
Fuel Oil #4	MG/KG	ND	3000	ND	3000	NA		NA	
Fuel Oil #6	MG/KG	ND	3000	ND	3000	NA		NA	
Other-1	MG/KG	ND	30000	ND	30000	NA		NA	

NA = Not Applicable ND = Not Detected

STL Buffalo

Client Sample ID: vblk57 msb57
Lab Sample ID: A6B2964704 A6B2964703

Analyte	Units of Measure	Concentration Blank Spike	Concentration Spike Amount	% Recovery Blank Spike	QC LIMITS
BENCH - METHOD 8260 - TCL VOLATILE ORGAN					
1,1-Dichloroethene	UG/KG	3192	3125	102	65-146
Trichloroethene	UG/KG	3122	3125	100	74-127
Benzene	UG/KG	3220	3125	103	74-128
Toluene	UG/KG	2974	3125	95	74-123
Chlorobenzene	UG/KG	3029	3125	97	76-124

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: SBLK Matrix Spike Blank Matrix Spike Blk Dup
Lab Sample ID: A6B2914703 A6B2914701 A6B2914702

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			% RPD	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg		RPD	REC.
METHOD 8270 - TCL SEMI-VOLATILE ORGANICS											
Phenol	UG/KG	569408	492038	1000000	1000000	57	49	53	15	25.0	34-120
2-Chlorophenol	UG/KG	608428	526939	1000000	1000000	61	53	57	14	26.0	37-120
N-Nitroso-Di-n-propylamine	UG/KG	604093	521822	1000000	1000000	60	52	56	14	20.0	46-120
4-Chloro-3-methylphenol	UG/KG	598029	520236	1000000	1000000	60	52	56	14	20.0	50-120
Acenaphthene	UG/KG	600290	537247	1000000	1000000	60	54	57	10	16.0	48-120
4-Nitrophenol	UG/KG	527491	456119	1000000	1000000	53	46	50	14	25.0	35-132
2,4-Dinitrotoluene	UG/KG	554261	486226	1000000	1000000	55	49	52	12	19.0	38-122
Pentachlorophenol	UG/KG	521953	433100	1000000	1000000	52	43	48	19	27.0	40-128
Pyrene	UG/KG	615159	543643	1000000	1000000	62	54	58	14	25.0	41-138

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

Client Sample ID: Method Blank | Matrix Spike Blank | Matrix Spike Blk Dup
Lab Sample ID: A6B2904803 | A6B2904801 | A6B2904802

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			% RPD	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg		RPD	REC.
METHOD 310.13 - PETROLEUM PRODUCTS Fuel Oil #2	MG/KG	15926	15883	15000	15000	106	106	106	0	35.0	50-150

* Indicates Result is outside QC Limits
NC = Not Calculated ND = Not Detected

BENCH - METHOD 8260 - TCL VOLATILE ORGANICS+STARS

Client Sample ID Job No & Lab Sample ID	MW-2D DNAPL/lower A06-C594 A6C59402				
Sample Date	10/26/2006 15:02				
Received Date	10/26/2006 17:18				
Extraction Date					
Analysis Date	11/07/2006 09:20				
Extraction HT Met?	-				
Analytical HT Met?	YES				
Sample Matrix	NAPL				
Dilution Factor	800.0				
Sample wt/vol	4.01 GRAMS				
% Dry	100.00				

NA = Not Applicable

BENCH - METHOD 8260 - TCL VOLATILE ORGANICS+STARS

Client Sample ID Job No & Lab Sample ID	msb57 A06-C594 A6B2964703				
Sample Date					
Received Date					
Extraction Date					
Analysis Date	11/06/2006 23:07				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	SOIL MED				
Dilution Factor	1.0				
Sample wt/vol	4.0 GRAMS				
% Dry	100.00				

NA = Not Applicable

BENCH - METHOD 8260 - TCL VOLATILE ORGANICS+STARS

Client Sample ID Job No & Lab Sample ID	eblk 11/6 A06-C594 A6C59403	vblk57 A06-C594 A6B2964704			
Sample Date					
Received Date					
Extraction Date					
Analysis Date	11/07/2006 00:44	11/06/2006 23:48			
Extraction HT Met?	-	-			
Analytical HT Met?	-	-			
Sample Matrix	SOIL MED	SOIL MED			
Dilution Factor	1.0	1.0			
Sample wt/vol	4.01 GRAMS	4.0 GRAMS			
% Dry	100.00	100.00			

NA = Not Applicable

METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	MW-2D DNAPL/lower A06-C594 A6C59402	MW-2D DNAPL/lower DL A06-C594 A6C59402DL			
Sample Date	10/26/2006 15:02	10/26/2006 15:02			
Received Date	10/26/2006 17:18	10/26/2006 17:18			
Extraction Date	10/31/2006 07:00	10/31/2006 07:00			
Analysis Date	10/31/2006 15:46	11/02/2006 15:07			
Extraction HT Met?	YES	YES			
Analytical HT Met?	YES	YES			
Sample Matrix	NAPL	NAPL			
Dilution Factor	1.0	200.0			
Sample wt/vol	0.17 GRAMS	0.17 GRAMS			
% Dry	100.00	100.00			

NA = Not Applicable

METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A06-C594 A6B2914701	Matrix Spike Blk Dup A06-C594 A6B2914702			
Sample Date					
Received Date					
Extraction Date	10/31/2006 07:00	10/31/2006 07:00			
Analysis Date	10/31/2006 14:32	10/31/2006 14:56			
Extraction HT Met?	-	-			
Analytical HT Met?	-	-			
Sample Matrix	OIL	OIL			
Dilution Factor	1.0	1.0			
Sample wt/vol	0.1 GRAMS	0.1 GRAMS			
% Dry	100.00	100.00			

NA = Not Applicable

METHOD 8270 - TCL SEMI-VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	SBLK A06-C594 A6B2914703				
Sample Date					
Received Date					
Extraction Date	10/31/2006 07:00				
Analysis Date	10/31/2006 15:21				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	OIL				
Dilution Factor	1.0				
Sample wt/vol	0.1 GRAMS				
% Dry	100.00				

NA = Not Applicable

METHOD 310.13 - PETROLEUM PRODUCTS

Client Sample ID Job No & Lab Sample ID	MW-2D DNAPL/lower A06-C594 A6C59402	MW-2D LNAPL/upper A06-C594 A6C59401			
Sample Date	10/26/2006 15:02	10/26/2006 15:02			
Received Date	10/26/2006 17:18	10/26/2006 17:18			
Extraction Date	10/30/2006 07:00	10/30/2006 07:00			
Analysis Date	10/31/2006 23:16	10/31/2006 21:34			
Extraction HT Met?	YES	YES			
Analytical HT Met?	YES	YES			
Sample Matrix	NAPL	NAPL			
Dilution Factor	50.0	1.0			
Sample wt/vol	0.18 GRAMS	0.16 GRAMS			
% Dry	100.00	100.00			

NA = Not Applicable

METHOD 310.13 - PETROLEUM PRODUCTS

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A06-C594 A6B2904801	Matrix Spike Blk Dup A06-C594 A6B2904802			
Sample Date					
Received Date					
Extraction Date	10/30/2006 07:00	10/30/2006 07:00			
Analysis Date	10/31/2006 19:52	10/31/2006 20:26			
Extraction HT Met?	-	-			
Analytical HT Met?	-	-			
Sample Matrix	OIL	OIL			
Dilution Factor	1.0	1.0			
Sample wt/vol	0.1 GRAMS	0.1 GRAMS			
% Dry	100.00	100.00			

NA = Not Applicable

METHOD 310.13 - PETROLEUM PRODUCTS

Client Sample ID Job No & Lab Sample ID	Method Blank A06-C594 A6B2904803				
Sample Date					
Received Date					
Extraction Date	10/30/2006 07:00				
Analysis Date	10/31/2006 21:00				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	OIL				
Dilution Factor	1.0				
Sample wt/vol	0.1 GRAMS				
% Dry	100.00				

NA = Not Applicable

Chain of Custody Record

SEVERN TRENT STL®

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
BENCHMARK ENV. ENGINEERING	PATRICK MARTIN	10/26/06	284918
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page ____ of ____**
726 EXCHANGE ST. STE 624			
City	**State**	**Zip Code**	**Site Contact**	**Lab Contact**
BUFFALO	NY	14210		B. FISHER
Project Name and Location (State)	**Carrier/Waybill Number**	
ISOCHEM LOCKPORT, NY		
Contract/Purchase Order/Quote No.		
STL*NY4A9217		

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Oil	Containers & Preservatives: Unpres.	H_2SO_4	HNO_3	HCl	NaOH	ZnAc/NaOH	Analysis: TCL VOAs	TCL SVOAs (GC/MS)	TCL pesticides/PCBs	Special Instructions/ Conditions of Receipt
MW-1D	10/26/06	1525		X				X			X			3	2		
MW-2D	10/26/06	1502		X				X			X			3	2		VISIBLE PRODUCT - IMPACTED
MW-3D	10/26/06	1138		X				X			X			3	2		
MW-5S	10/26/06	1340		X				X			X			3	2		
SW-1	10/26/06	1610		X				X			X			3	2		
SW-2	10/26/06	1625		X				X			X			3	2		
MW-2D (NAPL PRODUCT)	10/26/06	1502					X	X								1	PLEASE ANALYZE BOTH PHASES (FLOATING/SINKING) METHOD 310.13

+ VOA & SVOA FOR DNAPL PER PM ON 10/27/06 (BJF 10/27/06)

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☒ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Relinquished By	Date	Time	Received By	Date	Time
1.	Patrick J. Martin	10/26/06	5:15		10/26/06	1715
2.						
3.						

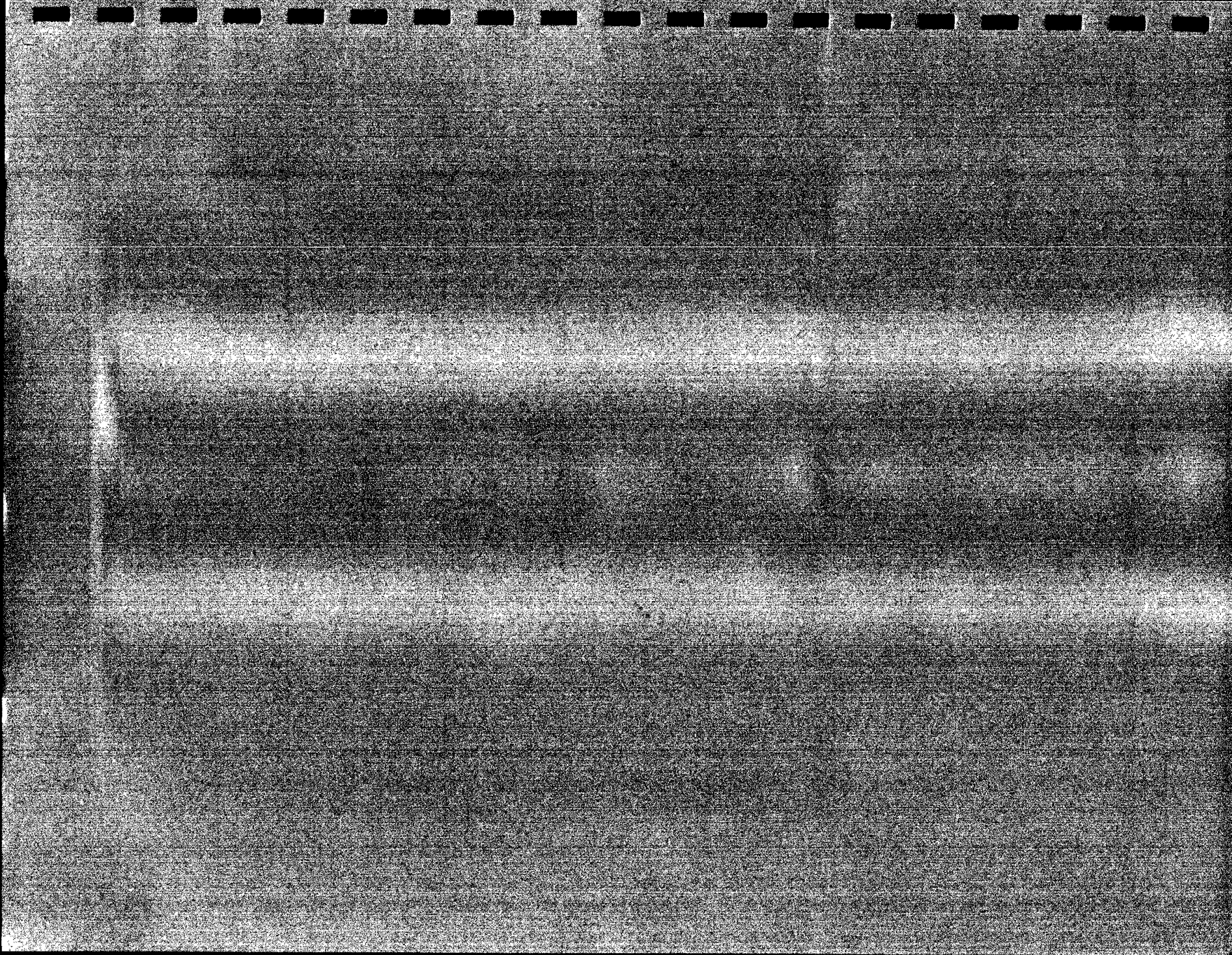
Comments

37/37

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

ATTACHMENT 3

FIELD BOREHOLE LOG & WELL COMPLETION DIAGRAM FOR MW-7



BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name: Supplemental Investigation
BORING NUMBER: MW-7D
Project Number: 0049-007-100
Location: Isochem Lockport Facility
Client: Isochem, Inc.
Start Date/Time: 11/14/06 / 10:00 AM
Drilling Company: Earth Dimensions
End Date/Time: 11/16/06 / 09:15 AM
Driller: Phil Bence
Logged By: BCH
Helper: Harold Kleever
Drilling Method: 2.25" HSA with 4' macro-core / NQ Core
Rig Type: Dietrich D-50
Weather: cloudy, rain, 40 - 55 °F

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery (feet)	SAMPLE DESCRIPTION (USCS Classification: Color, Moisture Condition, Primary Soil Type, Secondary Soil Type (<5% Trace, 10-15% Little, 15-30% Few, 35-45% Some), Structure (varved, stratified, thinly bedded, bedded, thickly bedded, laminated, fissured, blocky, lensed, massive), Consistency/Density (Standard Penetration Test, SPT), Weathering/Fracturing, Odor, Fill Materials (if present), Other)	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Samples (y/n)	Penetrometer (tons/SF)	Well Construction Details
0	0	S1	-- -- -- --	0	1.8	0.0 - 0.6: Asphalt subbase, run-of-crush gravel 0.6 - 1.8: Black, moist, FILL, cindery non-plastic fines with brick and concrete fragments	Asphalt FILL	0.0	na	no	na	flush
-2	2	S2	-- -- -- --	0								
-4	4	S3	-- -- -- --	0	1.5	Dark red/brown, moist to wet (~4.5 fbgs), SILTY CLAY with Few FINE GRAVEL, medium plasticity	CL	0.0	na	no	na	bentonite seal
-6	6	S4	-- -- -- --	0								2" Sch. 40 PVC riser
-8	8	S5	-- -- -- --	0	1.6	SILTY CLAY as above, wet	CL	0.0	na	no	na	
-10	10	S6	-- -- -- --	0								
-12	12	S7	-- -- -- --	0	0.4	Dark red/brown, wet, SANDY CLAY, medium plasticity, very soft *Top of Bedrock @ 14.0 fbgs*	CL	0.0	na	no	na	
-14	14	na	-- -- -- --	0		**Run 1:** 14.0 - 16.8 fbgs Dark red/brown with light grey banded GRIMSBY SANDSTONE, occ. clay filled horizontal fractures, color banding is horizontal, occ. healed angular fractures, moderate strength, fine-grained, thinly bedded, slightly to moderately decomposed, intensely fractured, fractures - extremely to very narrow, partly healed Recovery - 0.7' / 2.8' RQD: 0.4' / 2.8' = 25%, very poor	SS	0.0	na	no	na	
-16	16	na	-- -- -- --	0								
-18	18					**Run 2:** 16.8 - 17.3 fbgs, GRIMSBY SANDSTONE as above Recovery - 0.5' / 0.5', RQD: 0.4' / 0.5' = 80%, good	SS	0.0	na	no	na	

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name: Supplemental Investigation
BORING NUMBER: MW-7D
Project Number: 0049-007-100
Location: Isochem Lockport Facility

CONTINUED:

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery (feet)	SAMPLE DESCRIPTION	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Samples (y/n)	Penetrometer (tons/SF)	Well Construction Details
-18	18	na	--	0		**Run 3:** 17.3 - 19.8 fbgs, GRIMSBY SANDSTONE as above Recovery - 1.7' / 2.5' RQD: 0.0' / 2.5' = 80%, very poor	SS	0.0	na	no	na	bent. seal; riser
-20	20	na	--	0		**Run 4:** 19.8 - 28.1 fbgs, GRIMSBY SANDSTONE as above Recovery - 8.0' / 8.3' RQD: 3.9' / 8.3' = 47%, poor						
-22	22	na	--	0								
-24	24	na	--	0			SS	0.0	na	no	na	
-26	26	na	--	0								
-28	28	na	--	0		**Run 5:** 28.1 - 35.9 fbgs, GRIMSBY SANDSTONE as above, iron stained fractures ~ 30 fbgs (wet) 28.1 - 30.1 fbgs: dark red/brown and grey banding 30.1 - 35.9 fbgs: medium grey with thin dark grey horizontal veins, chert nodules Recovery - 7.6' / 7.8' RQD: 5.5' / 7.8' = 71%, fair						00N sand pack; 2" Sch. 40 PVC, 0.010-slot screen
-30	30	na	--	0								
-32	32	na	--	0			SS	0.0	na	no	na	
-34	34	na	--	0								
-36	36	na	--	0								

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE PLLC

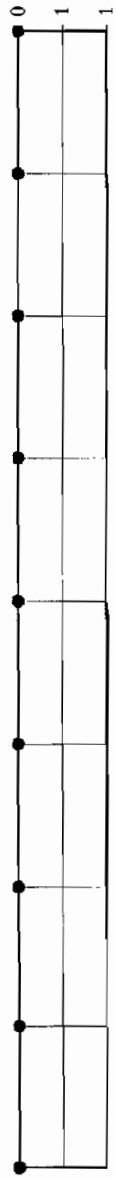
FIELD BOREHOLE/MONITORING INSTALLATION LOG

Project Name: Supplemental Investigation **BORING NUMBER:** **MW-7D**

Project Number: 0049-007-100 **Location:** Isochem Lockport Facility

CONTINUED:

Elevation (fmsl)	Depth (fbgs)	Sample No.	Blows (per 6")	SPT N-Value	Recovery (feet)	SAMPLE DESCRIPTION	USCS Code	PID Scan (ppm)	PID HDSP (ppm)	Samples (y/n)	Penetrometer (tons/SF)	Well Construction Details
-36	36	na	--	0		**Run 6:** 35.9 - 40.8 fbgs, GRIMSBY SANDSTONE as above, iron-stained fractures (wet) 35.9 - 37.0 fbgs: medium grey with thin dark grey horizontal veins as above, chert nodules 37.0 - 40.8 fbgs: dark red/brown and grey banding as above Recovery - 4.3' / 4.9' RQD: 0.3' / 4.9' = 6%, very poor	SS	0.0	na	no	na	00N sand pack 2" Sch. 40 PVC, 0.010-slot screen
-38	38	na	--	0								
-40	40	na	--	0								
-42	42	na	--	0		**Run 7:** 40.8 - 41.0 fbgs, GRIMSBY SANDSTONE as above, dark red/brown & grey, Recovery - 0.2' / 0.2', RQD: 0.0' / 0.2' = 0%, v. poor	SS	0.0	na	no	na	
-44	44	na	--	0		**Run 8:** 41.0 - 50.0 fbgs 41.0 - 45.0: GRIMSBY SANDSTONE as above, dark red/brown with grey banding, iron-stained fractures (wet) 45.0 - 50.0: POWER GLEN SHALE, Dark grey with light to medium grey bands, horizontal bedding, very hard, silty clay filled horizontal fractures Recovery - 8.75' / 9.0' RQD: 2.7' / 9.0' = 30%, poor	SS	0.0	na	no	na	
-46	46	na	--	0								
-48	48	na	--	0			SH	0.0	na	no	na	
-50	50					EOB @ 50.0 fbgs, installed 2" Schedule 40 PVC screen and riser						
-52	52											
-54	54											



MONITORING WELL GROUTING: *NOT APPLICABLE - no grout was used during well construction, bentonite chips only*

Volume of cement/bentonite grout required:	$V = \pi r^2 \times 7.48$: 0.0 gallons	borehole depth =
Volume of cement/bentonite grout installed:		borehole diameter =
Has bridging of grout occurred? ☐ yes ☐ no		borehole radius = 0.00 feet
If yes, explain resolution:		
Method of installation:	tremie grouted from bottom to top of borehole	

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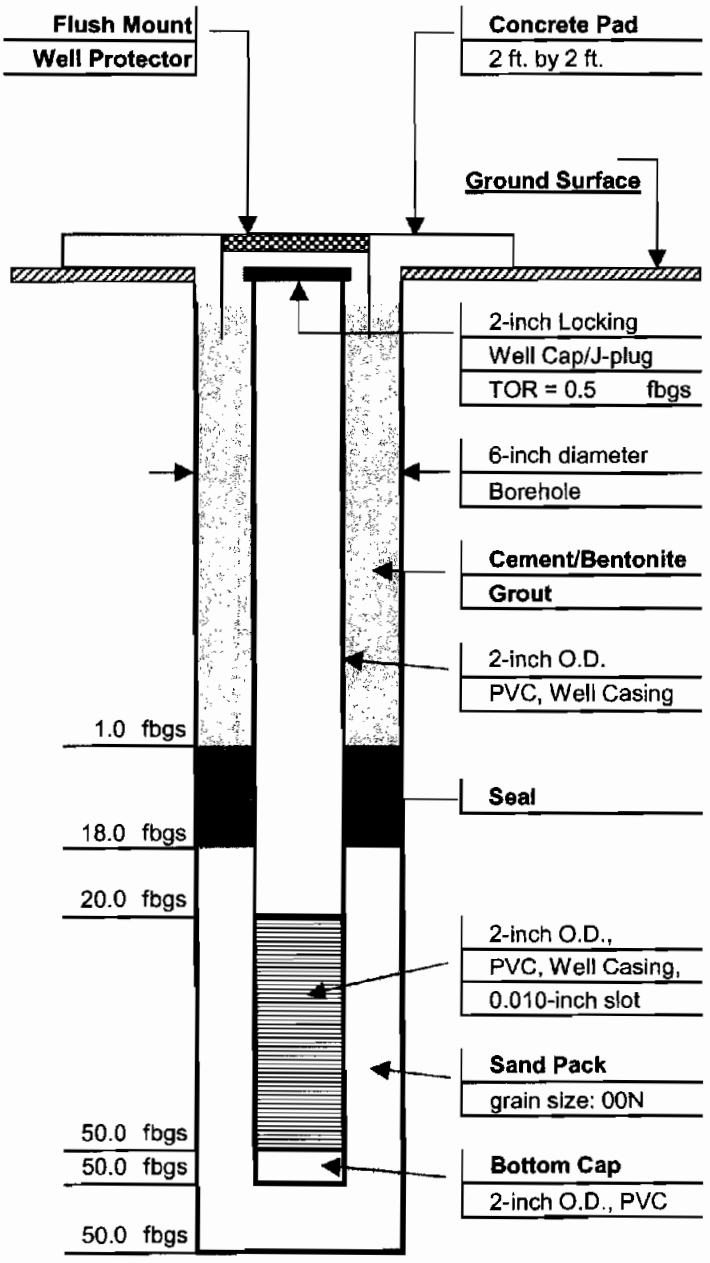
FLUSHMOUNT WELL/PIEZOMETER COMPLETION DETAIL

Project Name:	Supplemental Investigation	WELL NUMBER:	**MW-7D**
Client:	Isochem, Inc.	Date Installed:	11/16/06
Boring Location:	Isochem Lockport Facility	Project Number:	0049-007-100



Driller Information

Company:	Earth Dimensions, Inc.
Driller:	Phil Bence
Helper:	Harold Kleever
Permit Number:	*NA*
Drill Rig Type:	Deitrich D-50

Well Information

Land Surface Elevation:	*NA*	fmsl (approximate)
Drilling Method:	2.25" HSA and NQ coring	
Soil Sample Collection Method:	4' macro-core	
Drilling Fluid:	potable water from on-site source	
Fluid Loss During Drilling:	~1,700	gallons (approximate)

Material of Well Construction

Casing:	2" Schedule PVC
Screen:	2" Schedule PVC, 0.010-inch machine slotted
Sump:	none
Sand Pack:	*00N*
Annular Seal:	bentonite chips (medium) to ~1.0 fbgs

Well Development

Well Purpose:	groundwater monitoring	
Techneque(s):	PVC bailer purge & surge	
Date Completed:	11/20/06	
BM Personnel:	BCH	
Total Volume Purge:	28.0	gallons
Static Water Level:	30.53	fbTOR
Pump Depth:	NA	
Purge Duration:	95	minutes
Yeild:	0.29	gpm
Specific Capacity:	0.015	gpm/ft

Comments:

PREAPRED BY: *Bryan C. Hann* DATE: 11/16/06