SR

BENCHMARK
ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

December 22, 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
Supplemental Field Investigation & Sampling Report No. 2

Dear Mr. Radon:

Benchmark Environmental Engineering & Science, PLLC (Benchmark) has prepared this letter report to supplement the November 30, 2006 Summary Letter Report and to present the findings of supplemental investigation activities performed at the ISOCHEM Inc. Lockport Facility (Site) on November 24, 2006 related to sampling of new monitoring Well MW-7D.

A summary of the investigation activities performed, analytical results, and conclusions are presented below. A site plan is presented in Figure 1 for reference.

1.0 SUPPLEMENTAL GROUNDWATER SAMPLING OF MW-7D

As presented in our November 30, 2006 report, the newly installed monitoring well MW-7D was developed in accordance with Benchmark and NYSDEC protocol on November 20, 2006 and approximately 9 well volumes were removed during development activities. On November 24, 2006, monitoring well MW-7D was purged and sampled. The static water level was recorded and one standing well volume was calculated. Purging and sampling was accomplished using a dedicated polyethylene disposable bailer following conventional purge and sample collection procedures. Prior to sample collection, three well volumes were evacuated and field measurements for pH, specific conductance, temperature, Eh, turbidity, visual and olfactory observations, and water level were monitored for stabilization. Purging was considered complete when pH, specific conductivity, Eh, dissolved oxygen, and temperature stabilized (i.e., a variation between field measurements of 10 percent or less and no overall upward or downward trend in the measurements) and when the turbidity had stabilized above 50 NTU.

Upon stabilization of field parameters, groundwater samples were collected and analyzed for Target Compound List (TCL) volatile organic compounds (Method 8260 VOCs) and semi-volatile organic compounds (Method 8270 SVOCs) via USEPA SW-846 methodology. A discussion of the analytical results is presented in Section 2.0 of this report. The laboratory analytical report is presented in Attachment 1.

Prior to and immediately following collection of groundwater samples, field measurements for pH, specific conductance, temperature, turbidity, Eh, visual and olfactory observations and water level were recorded. A Groundwater Purge and Sample Collection Log was prepared and is presented in Attachment 2. All collected groundwater samples were placed in pre-cleaned, pre-preserved laboratory provided sample bottles, cooled to 4 °C in the field, and transported under chain-of-custody command to Severn Trent Laboratories, Inc. (STL), located in Amherst, New York for analysis. Analytical results for all groundwater samples collected during this supplemental investigation including well MW-7D are presented in the attached Table 1.

Non-aqueous phase liquid (NAPL) was not observed during purging or sampling activities conducted at well MW-7D.

2.0 Analytical Results

Laboratory analytical results for well MW-7D as well as the October 26, 2006 analytical results for wells MW-2D, MW-3D, MW-4D, and MW-5S (for comparison purposes) are presented in Table 1. The summarized analytical results are presented with associated NYSDEC regulatory groundwater quality standards for comparison. A discussion of the results is presented below.

As indicated on Table 1, five VOC compounds and one SVOC compound were detected at concentrations exceeding the NYSDEC Groundwater Quality Standards (GWQSs). As shown in the table, VOCs and SVOCs detected in well MW-7D groundwater are more consistent to those detected in cross-gradient wells MW-1D and MW-3D then to adjacent well MW-2D.

3.0 NAPL Assessment

On November 20, 2006 a passive NAPL (non-aqueous phase liquid) collection system was installed within well MW-2D to collect and assess the rate at which NAPL was generated and removed from the well. The passive collection attempted to recover both LNAPL (light or "floating" NAPL) and DNAPL (dense or "sinking" NAPL) and consisted of oleophillic absorption materials (i.e., an absorbent sock) installed within the well. On November 24, 2006, field observations of the absorption material after the first five days of insertion into well MW-2D indicated oily staining on the material suggesting nominal LNAPL recovery occurred, however the amount of recovered LNAPL was not measurable. The absorbent sock was replaced with a new one and checked again six days later. On December 1, 2006, the sock was removed and again, no measurable quantity of LNAPL could be recovered. Measurement of the depth to NAPL with an interface probe indicated no measurable LNAPL product remained within well MW-2D, however the DNAPL depth measured almost 9 feet (or approximately 3 gallons) in the well. Passive removal of DNAPL was not achieved based on these readings; the passive recovery system, therefore, was deemed ineffective for DNAPL removal.

4.0 CONCLUSIONS & PROPOSED SUPPLEMENTAL TASKS

The findings of this supplemental groundwater sampling event of well MW-7D located 7-feet west of well MW-2D confirms that the groundwater impacts identified in well MW-2D are localized to that well. As summarized in Table 1, well MW-7D groundwater quality exhibits impacts that correlate more closely with groundwater analytical results of cross-gradient wells MW-1D and MW-3D, rather than well MW-2D located only seven feet away. Groundwater analytical results of well MW-7D and the absence of NAPL indicate a significantly reduced and dissimilar impact to groundwater only 7-feet away compared to impacts identified in well MW-2D. This type of variability can be attributed to the fracture heterogeneity of the bedrock formation, which was observed during the rock coring associated with well MW-7D installation.

The final assessment of groundwater within well MW-2D indicates a two-phase impact to groundwater remains in the vicinity of well MW-2D (DNAPL and dissolved phase within the groundwater) which may be best addressed by focusing on active DNAPL removal alternatives at this time. The passive system implemented following the November sampling event has proved effective in removal of small quantities of LNAPL based on this assessment and will continue to be implemented upon identification of LNAPL in the future.

Therefore, ISOCHEM will be initiating an active DNAPL collection system at well MW-2D to collect and assess the rate at which DNAPL is generated and removed from the well. The active collection will attempt to recover DNAPL via a bottom filling compressed air-driven bladder pump installed within well MW-2D. Observation and manual operation of the active recovery system will initially be performed to characterize DNAPL flow rate and recovery into the well. When the DNAPL recovery rate is established, the active system will be operated automatically via a programmable timer, which will turn the pump on and off at regular intervals. Routine monitoring and documentation of recovery rates will be performed and adjustment of the pumping system will be made as needed. Results will be summarized and forwarded to the Department. Recovered DNAPL will be staged within 55-gallon drums adjacent to well MW-2D within secondary containment for proper disposal. Disposal shall be by incineration at one of ISOCHEM's approved hazardous waste incineration facilities.

Installation of the DNAPL collection system is expected to be in place by January 31, 2007. A report detailing the findings from the first 30 days of operation shall be submitted within 2 weeks following the 30-day period. Going forward, the active DNAPL system will continue to be monitored and operation and maintenance records will be maintained on-site and made available for Department review upon request.

As an additional measure of downgradient assessment, we will be conducting a thorough visual inspection of the slope face immediately south of well MW-2D. Any indications of surface staining, seepage or other observed impacts will be noted and reported to the Department. As this type of activity is weather dependent, the Department will be notified within at least two days prior to slope assessment.

Aside from the efforts to characterize the DNAPL recovery rate at MW-2D and the slope face inspection, Isochem Inc. does not plan to undertake any other investigatory activities at this time. If you have any questions regarding the activities performed to date, the planned investigatory activities or the implementation of the proposed DNAPL recovery system, 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

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1

GROUNDWATER ANALYTICAL SUMMARY

Groundwater Evaluation
Isochem, Inc.
Lockport, New York

Parameter [1]	GWQS [2]	Sample Location [4]				
		Groundwater				
		MW-1D	MW-2D	MW-3D	MW-5S	MW-7D
Volatiles (ug/L)						
Acetone	50*	< 25 ND	3.9 J	< 25 ND	2.8 J	< 25 ND
Benzene	1	< 5 ND	**2.3 J**	**1.1 J**	< 5 ND	< 5 ND
Carbon Disulfide	--	< 5 ND	1.7 J	< 5 ND	< 5 ND	< 5 ND
Carbon Tetrachloride	5	< 5 ND	< 5 ND	< 5 ND	< 5 ND	0.65 J
Chlorobenzene	5	2.3 J	< 5 ND	0.73 J	< 5 ND	< 5 ND
Chloroethane	5	< 5 ND	2.2 J	3.6 J	< 5 ND	4.3 J
Chloroform	7	< 5 ND	< 5 ND	< 5 ND	< 5 ND	2.8 J
Cyclohexane	--	1 J	< 5 ND	< 5 ND	< 5 ND	< 5 ND
1,4 -Dichlorobenzene	3	0.76 J	< 5 ND	< 5 ND	< 5 ND	< 5 ND
1,1-Dichloroethane	5	< 5 ND	2.3 J	**140 D**	< 5 ND	**40**
1,2-Dichloroethane	0.6	< 5 ND	**0.71 J**	**21**	< 5 ND	**0.77 J**
1,1-Dichloroethene	5	< 5 ND	< 5 ND	**50**	< 5 ND	**15**
cis-1,2-Dichloroethene	5	12	1.5 J	0.77 J	< 5 ND	1.1 J
1,2-Dichloropropane	1	< 5 ND	< 5 ND	1 J	< 5 ND	< 5 ND
Ethylbenzene	5	< 5 ND	**260 D**	< 5 ND	< 5 ND	3.1 J
Isopropylbenzene	5	0.52 J	**32**	< 5 ND	< 5 ND	0.48 J
Methylene Chloride	5	< 5 ND	< 5 ND	< 5 ND	< 5 ND	0.62 BJ
Methyl-t-Butyl Ether (MTBE)	10	< 5 ND	< 5 ND	0.6 J	< 5 ND	< 5 ND
Methylcyclohexane	--	0.54 J	0.74 J	< 5 ND	< 5 ND	< 5 ND
Toluene	5	< 5 ND	**40**	< 5 ND	< 5 ND	0.83 J
1,1,1-Trichloroethane	5	< 5 ND	< 5 ND	20	< 5 ND	18
Trichloroethene	5	0.62 J	1.1 J	1.3 J	< 5 ND	1.6 J
Vinyl chloride	2	**3 J**	0.72 J	**8.2**	< 5 ND	**3.6 J**
Xylenes, Total	5	ND	**590 D**	ND	< 15 ND	**5.8 J**
Semi-Volatiles (ug/L)						
Acenaphthene	20*	4 BJ	**89,000 BD**	8 BJ	0.5 BJ	15
Acenaphthylene	--	< 9 ND	730	< 10 ND	< 10 ND	< 10 ND
Anthracene	50*	< 9 ND	**16,000 DJ**	< 10 ND	0.8 J	< 10 ND
Benzo(a)anthracene	0.002*	< 9 ND	**4,300 DJ**	< 10 ND	**3 J**	< 10 ND
Benzo(a)pyrene	ND	< 9 ND	**640**	< 10 ND	**3 J**	< 10 ND
Benzo(b)fluoranthene	0.002*	**0.6 J**	**1000**	< 10 ND	**3 J**	< 10 ND

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

TABLE 1

GROUNDWATER ANALYTICAL SUMMARY

Groundwater Evaluation
Isochem, Inc.
Lockport, New York

Parameter [1]	GWQS [2]	Sample Location [4]				
		Groundwater				
		MW-1D	MW-2D	MW-3D	MW-5S	MW-7D
Benzo(g,h,i)perylene	--	< 9 ND	160	< 10 ND	2 J	< 10 ND
Benzo(k)fluoranthene	0.002*	**0.5 J**	**270**	< 10 ND	**1 J**	< 10 ND
Biphenyl	--	< 9 ND	35,000 D	< 10 ND	< 10 ND	4 J
Carbazole	--	< 9 ND	3,900 DJ	3 J	< 10 ND	5 J
Chrysene	0.002*	< 9 ND	**3,700 DJ**	< 10 ND	**4 J**	< 10 ND
Dibenz(a,h)anthracene	--	< 9 ND	49 J	< 10 ND	0.5 J	< 10 ND
Dibenzofuran	--	< 9 ND	85,000 BD	4 BJ	< 10 ND	8 J
Fluoranthene	50*	0.8 J	**45,000 D**	< 10 ND	4 J	< 10 ND
Fluorene	50*	< 9 ND	**71,000 D**	2 J	< 10 ND	4 J
Indeno(1,2,3-c,d)pyrene	0.002*	< 9 ND	**170**	< 10 ND	**2 J**	< 10 ND
2-Methylnaphthalene	--	1 BJ	130,000 BD	0.6 BJ	< 10 ND	7 J
Naphthalene	10*	4 BJ	**230,000 BD**	2 BJ	< 10 ND	**92**
Phenathrene	50*	0.6 J	**180,000 D**	1 J	2 J	4 J
Pyrene	50*	0.7 J	**29,000 D**	< 10 ND	6 J	< 10 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 (RL); RL is the value reported with a qualifier of not detected (ND).
10. " * " = The Guidance Value was used where a Standard has not been established.

FIGURES

ATTACHMENT 1

WELL SAMPLING FIELD FORMS

BENCHMARK 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: 11/24/06

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	0.34 19.5 102 799	NA
[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 ____ 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:** 11/24/06

BENCHMARK ENVIRONMENTAL ENGINEERING & SCIENCE, PLLC

GROUNDWATER WELL PURGE & SAMPLE COLLECTION LOG

Project Name: Groundwater Sampling
WELL NUMBER: **MW-7D**
Project Number: 0049-007-100
Sample Matrix: groundwater
Client: Isochem (formerly VanDeMark Chemicals)
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:	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): $V = 0.0408 [(B)^2 \times \{ (A) - (C) \}]$	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-E085

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

12/08/2006

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
A6E08501	MW-7D	GW	11/24/2006	10:03	11/24/2006	11:50

METHODS SUMMARY

Job#: A06-E085

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-E085

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-E085
Sample Cooler(s) were received at the following temperature(s); 6.0 °C
Lab please note: Strong petro odor observed

GC/MS Volatile Data

No deviations from protocol were encountered during the analytical procedures.

GC/MS Semivolatile Data

No deviations from protocol were encountered during the analytical procedures.

****

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.

Date: 12/08/2006
Time: 11:45:22

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

Rept: AN0326

Client ID		MW-7D							
Job No	Lab ID	A06-E085	A6E08501						
Sample Date		11/24/2006							
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	0.65 J	5.0	NA		NA		NA	
Chlorobenzene	UG/L	ND	5.0	NA		NA		NA	
Chloroethane	UG/L	4.3 J	5.0	NA		NA		NA	
Chloroform	UG/L	2.8 J	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	40	5.0	NA		NA		NA	
1,2-Dichloroethane	UG/L	0.77 J	5.0	NA		NA		NA	
1,1-Dichloroethene	UG/L	15	5.0	NA		NA		NA	
cis-1,2-Dichloroethene	UG/L	1.1 J	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	3.1 J	5.0	NA		NA		NA	
2-Hexanone	UG/L	ND	25	NA		NA		NA	
Isopropylbenzene	UG/L	0.48 J	5.0	NA		NA		NA	
Methyl acetate	UG/L	ND	5.0	NA		NA		NA	
Methylene chloride	UG/L	0.62 BJ	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	0.83 J	5.0	NA		NA		NA	
1,2,4-Trichlorobenzene	UG/L	ND	5.0	NA		NA		NA	
1,1,1-Trichloroethane	UG/L	18	5.0	NA		NA		NA	
1,1,2-Trichloroethane	UG/L	ND	5.0	NA		NA		NA	

7/28

NA = Not Applicable ND = Not Detected

STL Buffalo

Client ID		MW-7D							
Job No	Lab ID	A06-E085	A6E08501						
Sample Date		11/24/2006							
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	1.6 J	5.0	NA		NA		NA	
Trichlorofluoromethane	UG/L	ND	5.0	NA		NA		NA	
Vinyl chloride	UG/L	3.6 J	5.0	NA		NA		NA	
Total Xylenes	UG/L	5.8 J	15	NA		NA		NA	
IS/SURROGATE(S)									
Chlorobenzene-D5	%	89	50-200	NA		NA		NA	
1,4-Difluorobenzene	%	92	50-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	89	50-200	NA		NA		NA	
Toluene-D8	%	104	76-122	NA		NA		NA	
p-Bromofluorobenzene	%	97	73-120	NA		NA		NA	
1,2-Dichloroethane-D4	%	114	72-143	NA		NA		NA	

8/28

Client ID		MW-7D							
Job No	Lab ID	A06-E085	A6E08501						
Sample Date		11/24/2006							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/L	15	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	48	NA		NA		NA	
Biphenyl	UG/L	4 J	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	5 J	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	8 J	10	NA		NA		NA	
Di-n-butyl phthalate	UG/L	ND	10	NA		NA		NA	
3,3'-Dichlorobenzidine	UG/L	ND	19	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	4 J	10	NA		NA		NA	
Hexachlorobenzene	UG/L	ND	10	NA		NA		NA	
Hexachlorobutadiene	UG/L	ND	10	NA		NA		NA	
Hexachlorocyclopentadiene	UG/L	ND	43	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	7 J	10	NA		NA		NA	
Naphthalene	UG/L	92	10	NA		NA		NA	

9/28

NA = Not Applicable ND = Not Detected

Client ID		MW-7D							
Job No	Lab ID	A06-E085	A6E08501						
Sample Date		11/24/2006							
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
2-Nitroaniline	UG/L	ND	48	NA		NA		NA	
3-Nitroaniline	UG/L	ND	48	NA		NA		NA	
4-Nitroaniline	UG/L	ND	48	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	4 J	10	NA		NA		NA	
Pyrene	UG/L	ND	10	NA		NA		NA	
IS/SURROGATE(S)									
1,4-Dichlorobenzene-D4	%	92	50-200	NA		NA		NA	
Naphthalene-D8	%	97	50-200	NA		NA		NA	
Acenaphthene-D10	%	96	50-200	NA		NA		NA	
Phenanthrene-D10	%	93	50-200	NA		NA		NA	
Chrysene-D12	%	90	50-200	NA		NA		NA	
Perylene-D12	%	95	50-200	NA		NA		NA	
Nitrobenzene-D5	%	79	46-120	NA		NA		NA	
2-Fluorobiphenyl	%	88	44-120	NA		NA		NA	
p-Terphenyl-d14	%	90	23-143	NA		NA		NA	
Phenol-D5	%	32	10-120	NA		NA		NA	
2-Fluorophenol	%	45	20-120	NA		NA		NA	
2,4,6-Tribromophenol	%	99	59-136	NA		NA		NA	

10/28

Chronology and QC Summary Package

Client ID		VBLK08							
Job No	Lab ID	A06-E085	A6B3142204						
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	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	0.54 J	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

Client ID		VBLK08							
Job No	Lab ID	A06-E085	A6B3142204						
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	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	%	92	50-200	NA		NA		NA	
1,4-Difluorobenzene	%	95	50-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	82	50-200	NA		NA		NA	
Toluene-D8	%	104	76-122	NA		NA		NA	
p-Bromofluorobenzene	%	93	73-120	NA		NA		NA	
1,2-Dichloroethane-D4	%	110	72-143	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Client ID	MSB08							
Job No / Lab ID	A06-E085	A6B3142203						
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	NA		NA		NA	
Benzene	UG/L	25	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	24	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	29	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	0.70 BJ	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	25	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

Client ID		MSB08							
Job No	Lab ID	A06-E085	A6B3142203						
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	NA		NA		NA	
Trichloroethene	UG/L	25	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	%	95	50-200	NA		NA		NA	
1,4-Difluorobenzene	%	100	50-200	NA		NA		NA	
1,4-Dichlorobenzene-D4	%	86	50-200	NA		NA		NA	
Toluene-D8	%	104	76-122	NA		NA		NA	
p-Bromofluorobenzene	%	95	73-120	NA		NA		NA	
1,2-Dichloroethane-D4	%	107	72-143	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Client ID		Method Blank							
Job No	Lab ID	A06-E085	A6B3093803						
Sample Date									
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/L	ND	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	ND	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	ND	10	NA		NA		NA	
Naphthalene	UG/L	ND	10	NA		NA		NA	

IA = Not Applicable ND = Not Detected

Client ID		Method Blank							
Job No	Lab ID	A06-E085	A6B3093803						
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	%	96	50-200	NA		NA		NA	
Naphthalene-D8	%	98	50-200	NA		NA		NA	
Acenaphthene-D10	%	95	50-200	NA		NA		NA	
Phenanthrene-D10	%	95	50-200	NA		NA		NA	
Chrysene-D12	%	90	50-200	NA		NA		NA	
Perylene-D12	%	99	50-200	NA		NA		NA	
Nitrobenzene-D5	%	79	46-120	NA		NA		NA	
2-Fluorobiphenyl	%	90	44-120	NA		NA		NA	
p-Terphenyl-d14	%	108	23-143	NA		NA		NA	
Phenol-D5	%	32	10-120	NA		NA		NA	
2-Fluorophenol	%	43	20-120	NA		NA		NA	
2,4,6-Tribromophenol	%	102	59-136	NA		NA		NA	

NA = Not Applicable ND = Not Detected

Client ID Job No Lab ID Sample Date		Matrix Spike Blank A06-E085 A6B3093801		Matrix Spike Blk Dup A06-E085 A6B3093802					
Analyte	Units	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
Acenaphthene	UG/L	98	10	100	10	NA		NA	
Acenaphthylene	UG/L	ND	10	ND	10	NA		NA	
Acetophenone	UG/L	ND	10	ND	10	NA		NA	
Anthracene	UG/L	ND	10	ND	10	NA		NA	
Atrazine	UG/L	ND	10	ND	10	NA		NA	
Benzo(a)anthracene	UG/L	ND	10	ND	10	NA		NA	
Benzo(b)fluoranthene	UG/L	ND	10	ND	10	NA		NA	
Benzo(k)fluoranthene	UG/L	ND	10	ND	10	NA		NA	
Benzo(ghi)perylene	UG/L	ND	10	ND	10	NA		NA	
Benzo(a)pyrene	UG/L	ND	10	ND	10	NA		NA	
Benzaldehyde	UG/L	ND	50	ND	50	NA		NA	
Biphenyl	UG/L	ND	10	ND	10	NA		NA	
Bis(2-chloroethoxy) methane	UG/L	ND	10	ND	10	NA		NA	
Bis(2-chloroethyl) ether	UG/L	ND	10	ND	10	NA		NA	
2,2'-Oxybis(1-Chloropropane)	UG/L	ND	10	ND	10	NA		NA	
Bis(2-ethylhexyl) phthalate	UG/L	ND	10	ND	10	NA		NA	
4-Bromophenyl phenyl ether	UG/L	ND	10	ND	10	NA		NA	
Butyl benzyl phthalate	UG/L	ND	10	ND	10	NA		NA	
Caprolactam	UG/L	ND	10	ND	10	NA		NA	
Carbazole	UG/L	ND	10	ND	10	NA		NA	
4-Chloroaniline	UG/L	ND	10	ND	10	NA		NA	
2-Chloronaphthalene	UG/L	ND	10	ND	10	NA		NA	
4-Chlorophenyl phenyl ether	UG/L	ND	10	ND	10	NA		NA	
Chrysene	UG/L	ND	10	ND	10	NA		NA	
Dibenzo(a,h)anthracene	UG/L	ND	10	ND	10	NA		NA	
Dibenzofuran	UG/L	ND	10	ND	10	NA		NA	
Di-n-butyl phthalate	UG/L	ND	10	ND	10	NA		NA	
3,3'-Dichlorobenzidine	UG/L	ND	20	ND	20	NA		NA	
Diethyl phthalate	UG/L	ND	10	ND	10	NA		NA	
Dimethyl phthalate	UG/L	ND	10	ND	10	NA		NA	
2,4-Dinitrotoluene	UG/L	96	10	100	10	NA		NA	
2,6-Dinitrotoluene	UG/L	ND	10	ND	10	NA		NA	
Di-n-octyl phthalate	UG/L	ND	10	ND	10	NA		NA	
Fluoranthene	UG/L	ND	10	ND	10	NA		NA	
Fluorene	UG/L	ND	10	ND	10	NA		NA	
Hexachlorobenzene	UG/L	ND	10	ND	10	NA		NA	
Hexachlorobutadiene	UG/L	ND	10	ND	10	NA		NA	
Hexachlorocyclopentadiene	UG/L	ND	45	ND	45	NA		NA	
Hexachloroethane	UG/L	ND	10	ND	10	NA		NA	
Indeno(1,2,3-cd)pyrene	UG/L	ND	10	ND	10	NA		NA	
Isophorone	UG/L	ND	10	ND	10	NA		NA	
2-Methylnaphthalene	UG/L	ND	10	ND	10	NA		NA	
Naphthalene	UG/L	ND	10	ND	10	NA		NA	

NA = Not Applicable ND = Not Detected

Client ID		Matrix Spike Blank		Matrix Spike Blk Dup					
Job No	Lab ID	A06-E085	A6B3093801	A06-E085	A6B3093802				
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	ND	50	NA		NA	
3-Nitroaniline	UG/L	ND	50	ND	50	NA		NA	
4-Nitroaniline	UG/L	ND	50	ND	50	NA		NA	
Nitrobenzene	UG/L	ND	10	ND	10	NA		NA	
N-nitrosodiphenylamine	UG/L	ND	10	ND	10	NA		NA	
N-Nitroso-Di-n-propylamine	UG/L	90	10	86	10	NA		NA	
Phenanthrene	UG/L	ND	10	ND	10	NA		NA	
Pyrene	UG/L	110	10	120	10	NA		NA	
==========IS/SURROGATE(S)==========									
1,4-Dichlorobenzene-D4	%	92	50-200	96	50-200	NA		NA	
Naphthalene-D8	%	97	50-200	96	50-200	NA		NA	
Acenaphthene-D10	%	95	50-200	94	50-200	NA		NA	
Phenanthrene-D10	%	96	50-200	96	50-200	NA		NA	
Chrysene-D12	%	90	50-200	88	50-200	NA		NA	
Perylene-D12	%	97	50-200	95	50-200	NA		NA	
Nitrobenzene-D5	%	75	46-120	77	46-120	NA		NA	
2-Fluorobiphenyl	%	85	44-120	90	44-120	NA		NA	
p-Terphenyl-d14	%	102	23-143	106	23-143	NA		NA	
Phenol-D5	%	31	10-120	31	10-120	NA		NA	
2-Fluorophenol	%	42	20-120	41	20-120	NA		NA	
2,4,6-Tribromophenol	%	93	59-136	97	59-136	NA		NA	

NA = Not Applicable ND = Not Detected

Client Sample ID: VBLK08 MSB08
Lab Sample ID: A6B3142204 A6B3142203

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	28.8	25.0	115	65-142
Trichloroethene	UG/L	24.9	25.0	100	71-120
Benzene	UG/L	24.9	25.0	100	67-126
Toluene	UG/L	25.0	25.0	100	69-120
Chlorobenzene	UG/L	24.5	25.0	98	73-120

* 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: A6B3093803 | A6B3093801 | A6B3093802

Analyte	Units of Measure	Concentration		Spike Amount		% Recovery			%	QC LIMITS	
		Spike Blank	Spike Blank Dup	SB	SBD	SB	SBD	Avg	RPD	RPD	REC.
BENCHMARK-W-SW8463 8270- BASE/NEUTRAL ON											
N-Nitroso-Di-n-propylamine	UG/L	89.9	86.5	100	100	90	86	88	4	38.0	56-120
Acenaphthene	UG/L	97.5	100	100	100	98	101	100	3	23.0	57-120
2,4-Dinitrotoluene	UG/L	95.6	100	100	100	96	100	98	4	20.0	58-121
Pyrene	UG/L	111	117	100	100	111	117	114	5	25.0	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-7D A06-E085 A6E08501				
Sample Date	11/24/2006 10:03				
Received Date	11/24/2006 11:50				
Extraction Date					
Analysis Date	12/05/2006 03:46				
Extraction HT Met?	-				
Analytical HT Met?	YES				
Sample Matrix	GW				
Dilution Factor	1.0				
Sample wt/vol	0.005 LITERS				
% Dry					

NA = Not Applicable

AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID	MSB08				
Job No & Lab Sample ID	A06-E085 A6B3142203				
Sample Date					
Received Date					
Extraction Date					
Analysis Date	12/04/2006 21:34				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	WATER				
Dilution Factor	1.0				
Sample wt/vol	0.005 LITERS				
% Dry					

23/28

NA = Not Applicable

AQUEOUS-METHOD 8260 - TCL VOLATILE ORGANICS

Client Sample ID Job No & Lab Sample ID	VBLK08 A06-E085 A6B3142204				
Sample Date					
Received Date					
Extraction Date					
Analysis Date	12/04/2006 22:03				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	WATER				
Dilution Factor	1.0				
Sample wt/vol	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-7D A06-E085 A6E08501				
Sample Date	11/24/2006 10:03				
Received Date	11/24/2006 11:50				
Extraction Date	11/28/2006 08:00				
Analysis Date	11/29/2006 18:23				
Extraction HT Met?	YES				
Analytical HT Met?	YES				
Sample Matrix	GW				
Dilution Factor	1.0				
Sample wt/vol	1.05 LITERS				
% Dry					

NA = Not Applicable

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

Client Sample ID Job No & Lab Sample ID	Matrix Spike Blank A06-E085 A6B3093801	Matrix Spike Blk Dup A06-E085 A6B3093802			
Sample Date					
Received Date					
Extraction Date	11/28/2006 08:00	11/28/2006 08:00			
Analysis Date	11/29/2006 16:45	11/29/2006 17:09			
Extraction HT Met?	-	-			
Analytical HT Met?	-	-			
Sample Matrix	WATER	WATER			
Dilution Factor	1.0	1.0			
Sample wt/vol	1.0 LITERS	1.0 LITERS			
% Dry					

26/28

NA = Not Applicable

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

Client Sample ID Job No & Lab Sample ID	Method Blank A06-E085 A6B3093803				
Sample Date					
Received Date					
Extraction Date	11/28/2006 08:00				
Analysis Date	11/29/2006 17:34				
Extraction HT Met?	-				
Analytical HT Met?	-				
Sample Matrix	WATER				
Dilution Factor	1.0				
Sample wt/vol	1.0 LITERS				
% Dry					

27/28

NA = Not Applicable

Chain of Custody Record

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client: Benchmark EES, PLLC	Project Manager: Pat Martin	Date: 11/24/06	Chain of Custody Number: 299486
Address: 726 Exchange St., Suite 824	Telephone Number (Area Code)/Fax Number: 856-0599 / 856-0583	Lab Number:	Page 1 of 1
City: Buffalo / State: NY / Zip Code: 14210	Site Contact: B. Hann	Lab Contact: B. Fischer	
Project Name and Location (State): Isochem - GW Sampling	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: TCL VOCs (8260)	TCL SVOCs (8270) BN only	Special Instructions/ Conditions of Receipt
MW-7D	11/24/06	10:03		X			2			3			3	2	strong petro odor observed

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)

	Date	Time		Date	Time
1. Relinquished By: Bryan C. Hann	11/24/06	1150	1. Received By:	11/24/06	1150
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

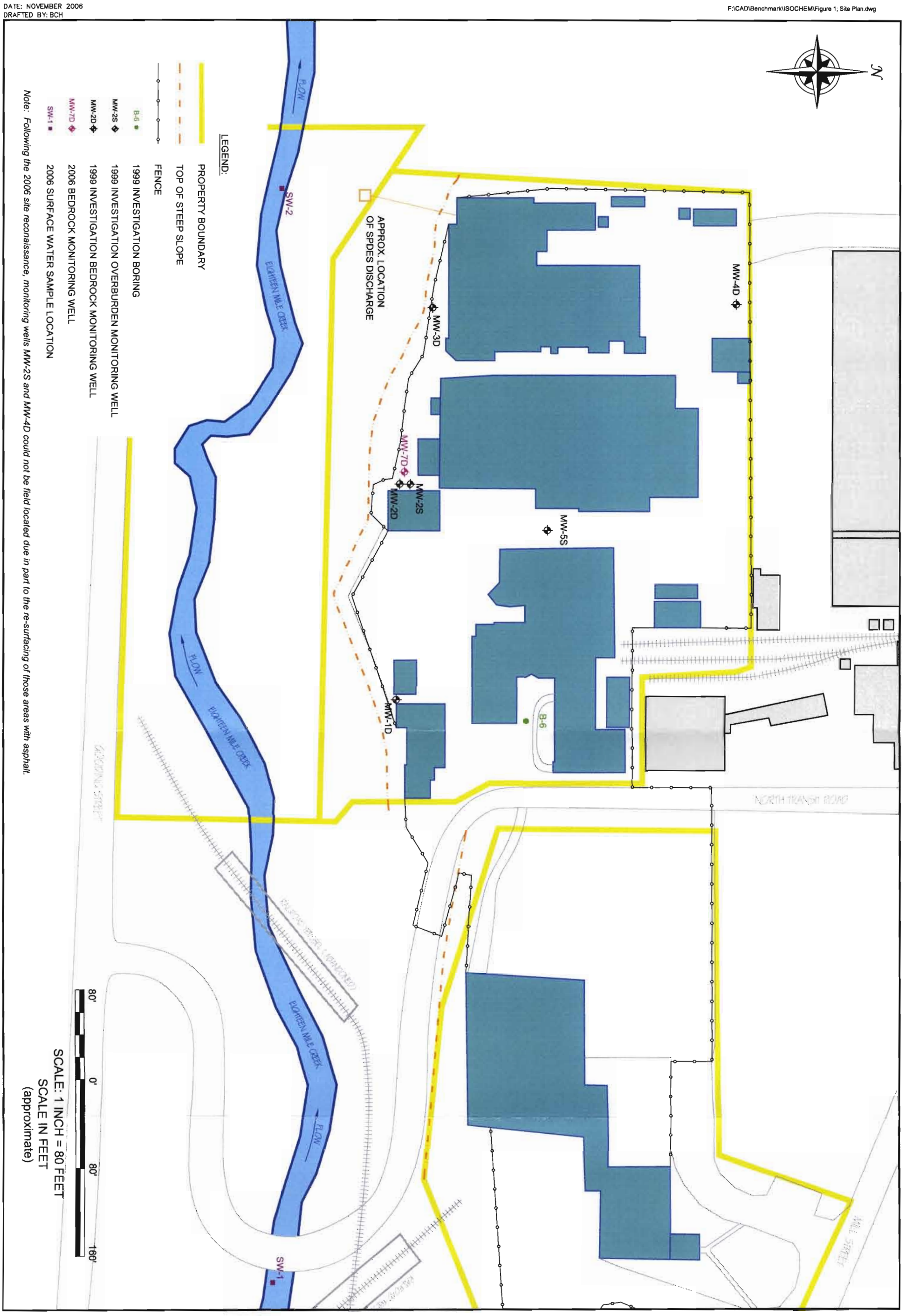
Comments: 6.0°C

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

28/28

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