TechCity Properties
Kingston, NY

Groundwater Sampling
SWMU AE Building 202
DEC # 35154-000067-00090

Prepared For:

TechCity Properties, Inc.
300 Enterprise Drive
Kingston, NY 12401

October 2006

Tighe&Bond

Tighe&Bond
Consulting Engineers
Environmental Specialists

October 3, 2006

Michael D. Merriman

Deputy Regional Permit Administrator

Division of Environmental Permits

New York State Department of Environmental Conservation

21 South Putt Corners

New Paltz, New York 12561-1696

Re: Groundwater Sampling
SWMU AE Building 202
DEC # 35154-00067-00090
TechCity Properties, Inc.
300 Enterprise Drive
Kingston, NY 12401

Dear Mr. Merriman:

Tighe & Bond, Inc. (Tighe & Bond) has prepared this report to document supplemental groundwater results for solid waste management unit (SWMU) AE at the former IBM-Kingston facility. SWMU AE was identified by International Business Machines Corporation (IBM) and reported to the New York State Department of Environmental Conservation (NYSDEC) on July 29, 1996. The purpose of this investigation was to provide current groundwater flow and polychlorinated biphenyl (PCB) concentrations for three wells installed to investigate this SWMU.

Background

The former IBM-Kingston facility, now owned by TechCity Properties, Inc., is located at 300 Enterprise Drive in Kingston, New York (Figure 1). Building 202 is located to the west of Enterprise Drive (Figure 2). The building is currently occupied by the Bank of America Corporation (BOA).

Building 202 was built in 1970 and contains three elevators in the center of the building. A single, non-telescoping, hydraulic piston located in a subsurface boring control the movement of the elevators in the four-story building. Figure 3 provides a schematic of the elevator shaft boring created by Gary Casper of the NYSDEC.

In May 1996, Schindler Elevator personnel reported to IBM that the Building 202 Number 2 elevator had required the addition of 15 gallons of hydraulic fluid since January 1996. IBM hired Groundwater Sciences Corporation (GSC) to determine if a release had occurred. As part of GSC's investigation, a monitoring well was installed in the mechanical room adjacent to the elevator shaft and is approximately ten feet to the northwest of the elevator shaft. Soil and groundwater samples were collected from monitoring well locations.

Total petroleum hydrocarbons (TPH) and PCBs were detected in both mediums. Two additional monitoring wells (202-2S and 202-3S) were installed in down gradient locations with respect to elevator Number 2. TPH was detected at relatively low concentrations in the soil and groundwater. Only groundwater was analyzed for PCBs with no detections above the reporting limits. On July 10, 1996 confirmation samples were collected from monitoring well 202-IR/S that confirmed the presence of PCB Aroclor-1254 at concentrations ranging from 2μg/L to 10.2μg/L. The groundwater results provided in this report represent the first groundwater sampling data collected from these wells since the original investigation in 1996.

Field Investigations

On September 13, 2006 Tighe & Bond personnel mobilized to the site. Sampling activities were performed in general accordance with the procedures outlined in GSC's NYSDEC approved Groundwater Monitoring Plan dated January 30, 1997 and revised March 9, 1998. GSC personnel observed Tighe and Bond sampling activities, and collected split samples during this investigation. Attachment 1 provides the field sampling data recorded during the sampling activities.

Groundwater level measurements

Tighe & Bond measured water levels and for the presence of light non-aqueous phase liquid (LNAPL) at monitoring wells 202-1R/S, 202-2S, and 202-3S prior to well purging. Static water level measurements were conducted using a Heron© electronic interphase meter capable of measuring the depth to water to within 0.01 feet. LNAPL measurements were made through the use of an oil/water interface probe and a 2-inch polyethylene bailer. The water level measurement data for the site are summarized in Table 1. No LNAPL was observed or measured in any of the three wells. Previously recorded survey data were used in conjunction with the water level data to calculate groundwater elevations. The calculated elevations were subsequently used to create a water table contour map. Groundwater elevations and inferred flow directions are illustrated on Figure 2. It should be noted that 202-2S and 202-3S are both screened entirely in the overburden groundwater table. However, 202-1R/S, is screened 5.4 feet in overburden groundwater and in 14.6 feet in bedrock groundwater. Therefore, the groundwater contour map represents groundwater elevations screened in two strata.

Well Purging

All three wells were purged of stagnant water by evacuating three well volumes of water. The water was purged using a dedicated (single-use) polyvinyl chloride (PVC) bailer. The purged water was emptied into a drum that was subsequently transferred to an on-site storage facility.

The appropriate purge volume for each well was calculated based on water level measurement, well depth measurement, and well diameter. The depth to bottom of the well was sounded and the purge volume was calculated using the following formula:

$$V = 0.16 \text{ gal } x \text{ (DTB-DTW) } x \text{ 3}$$

V = Volume to be purged
n = number of gallons per foot
DTB= referenced Depth To Bottom
DTW= Depth To Water, prior to purge

Confirmation of the removal of all stagnant water was accomplished by verifying the drawdown of any pump used for purging or by bailing from the top of the column. The volume of purged water is provided on the field data sheets at Appendix A.

Well Sampling

All three wells were sampled using dedicated bailers. The bailers were lowered slowly into the water column so as to minimize agitation of the water column. After the sample was brought to the surface, it was emptied into the sample container using the bottom emptying device. Two 1-liter amber jars were filled for each monitoring well and analyzed for PCBs via method U.S. Environmental Protection Agency (USEPA) SW-846 Method 8080. One duplicate groundwater sample was collected from monitoring well 202 1/4S and labeled 202 1/5S. All samples were immediately placed on ice in a secure cooler and transported to Severn Trent Laboratories, Westfield Massachusetts for analysis.

Results

Figure 2 provides the inferred groundwater flow direction derived from the three monitoring wells. The inferred groundwater flow direction is in a northwesterly direction towards Esopus Creek. The groundwater flow direction suggests that the groundwater near the Elevator 2 heads in the direction of monitoring well 202-2S. Site plans containing pre-construction boring information were reviewed as part of this report. The depth to bedrock increases dramatically to the west consistent with the inferred groundwater flow direction. In particular, borings installed at the eastern extent of Building 202 measured bedrock at 11 feet below grade compared to borings installed on the western extent with bedrock measured at 29 feet. The borings also indicate that the depth to groundwater has increased substantially from pre-building construction to present day. A boring installed near the location of 202 1R/S had a depth to groundwater measured at 2.5 feet compared to 12.85 feet measured during this investigation. The variation in groundwater depth could be attributed to manipulation of site elevation and/or reduced infiltration due to building cover.

The field data sheets provide the conditions of the monitoring wells and observations made during sampling activities. All three wells were in excellent condition with no signs of damage to the casing or standpipes. All three of the wells were turbid with a slight to moderate sulfur odor. The interior well, 202-1R/S, also contained a slight odor of petroleum. No sheens or LNAPL were noted in any of the samples. The yield of all of the wells was moderate to high.

Table 2 provides the results of the groundwater analysis. Appendix B provides the actual laboratory analytical reports. Monitoring well 202 1R/S contained the PCB Aroclor 1254 in both the sample and duplicate sample at concentrations, 4.8 and 13μg/L, respectively. Both of these detections exceed the NYSDEC limit for PCBs in groundwater established at 0.1μg/L. None of the other aroclors were detected above the minimum reporting limit. No detections of PCBs were reported in either of the two exterior wells, 202-2S or 202-3S, above the minimum reporting limit of 0.061μg/L.

Two additional analytical tests were performed on the samples collected from 202 1R/S. The first analysis consisted of a laboratory filter of the sample by Severn Trent Laboratories using a 0.45-micron filter. Upon reanalysis, using Method EPA Method 8082, no detections of PCBs were reported above the minimum reporting limit of 0.061μg/L. The second test, EPA Method 8015B, employed gas chromatography to identify diesel and gasoline range organics present in the sample. The results provided on Table 2 yielded a chromatograph consistent with hydraulic oil. Additional co-mingled petroleum products, listed in Table 2, were not identified in the test. The quantity of hydraulic oil was detected at 45 mg/L.

Summary

The results of the investigation suggest that the groundwater below Building 202 contains PCB Aroclor 1254 in exceedence of NYSDEC standards. The inferred groundwater flow direction from MW 202 IR/S appears to be in a northwesterly direction towards monitoring well 202-2S. However, no PCBs were detected above reporting limits in groundwater from this well or monitoring well 202-3S.

The filtered groundwater sample did not contain PCBs at a concentration above minimum reporting limits. The filtering separates dissolved material from particulates contained in the sample. The absence of any PCBs in the filtered sample may indicate that the contaminant is in the sediment or in an emulsified oil product. The identification of hydraulic fluid in the groundwater provides a potential PCB source.

Please feel free to contact Jim Olsen at (860) 704-4761 or Brian Conte at (860) 704-4763 if you should have any questions, comments, or require additional information.

Very Truly Yours,

TIGHE & BOND, INC.

James T. Olsen, LEP
Senior Hydrogeologist/Office Manager

Brian C. Conte
Environmental Scientist

cc: Alan Ginsberg, - TechCity Properties, Inc.

Thomas Kacandes – TechCity Properties, Inc.

Michael S. Ahern, P.E. Divney Tung Schwalbe, LLP

Gary D. Casper, NYSDEC

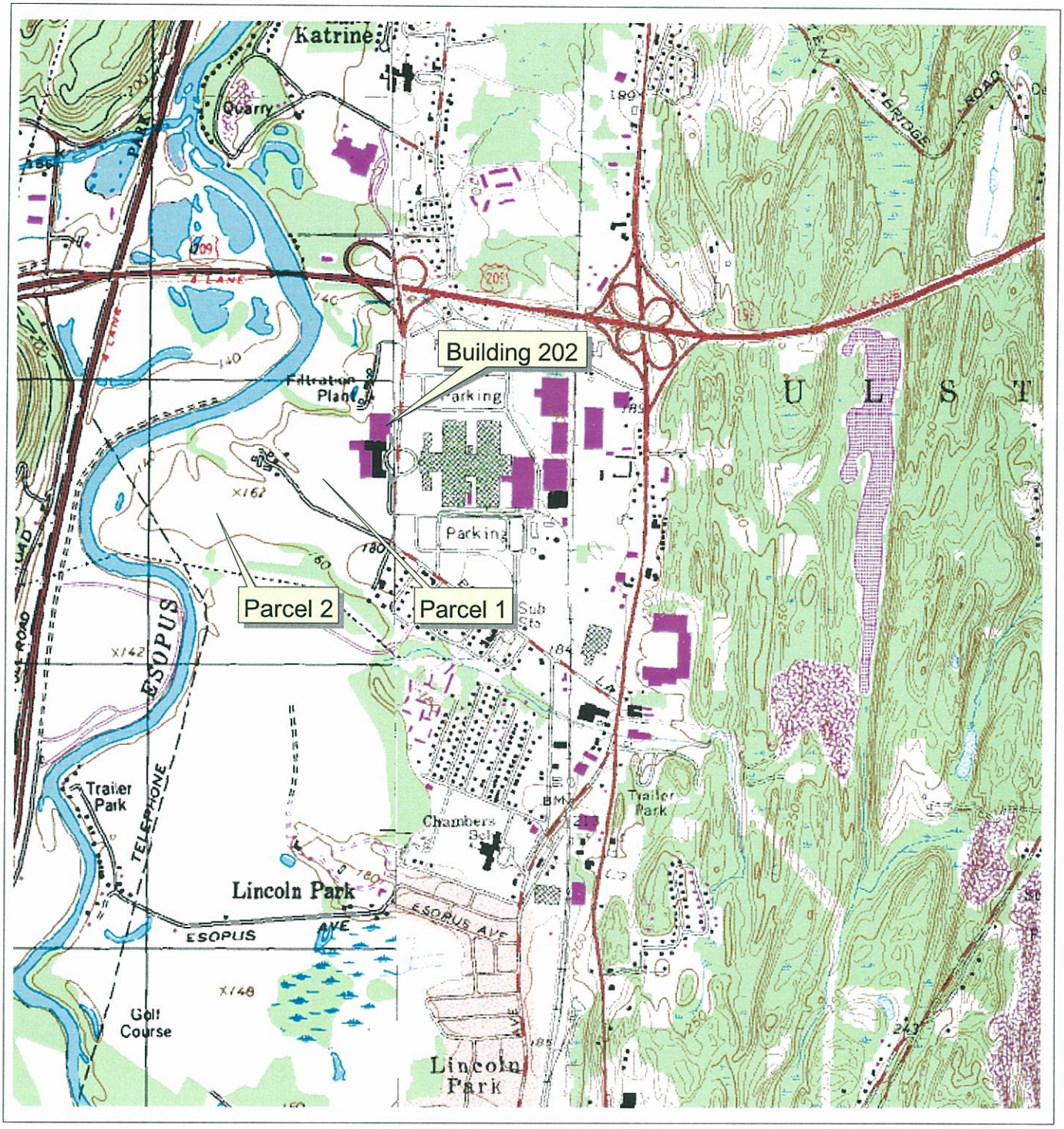
Wayne Mizerak, NYSDEC/DER

Bridget Callaghan, New York State Dept of Health

Dean Chartrand, IBM Corporation

Douglas H. Zamelis, Green & Seifter Attorneys, PLLC

Angela T. Anastas, Bank of America



0 0.5 1 1.5 Miles

0 2000 4000 6000 Feet

Base map is a portion of the following U.S.G.S. Quadrangles: Kingston East 1980

N W E S

Site Location Map

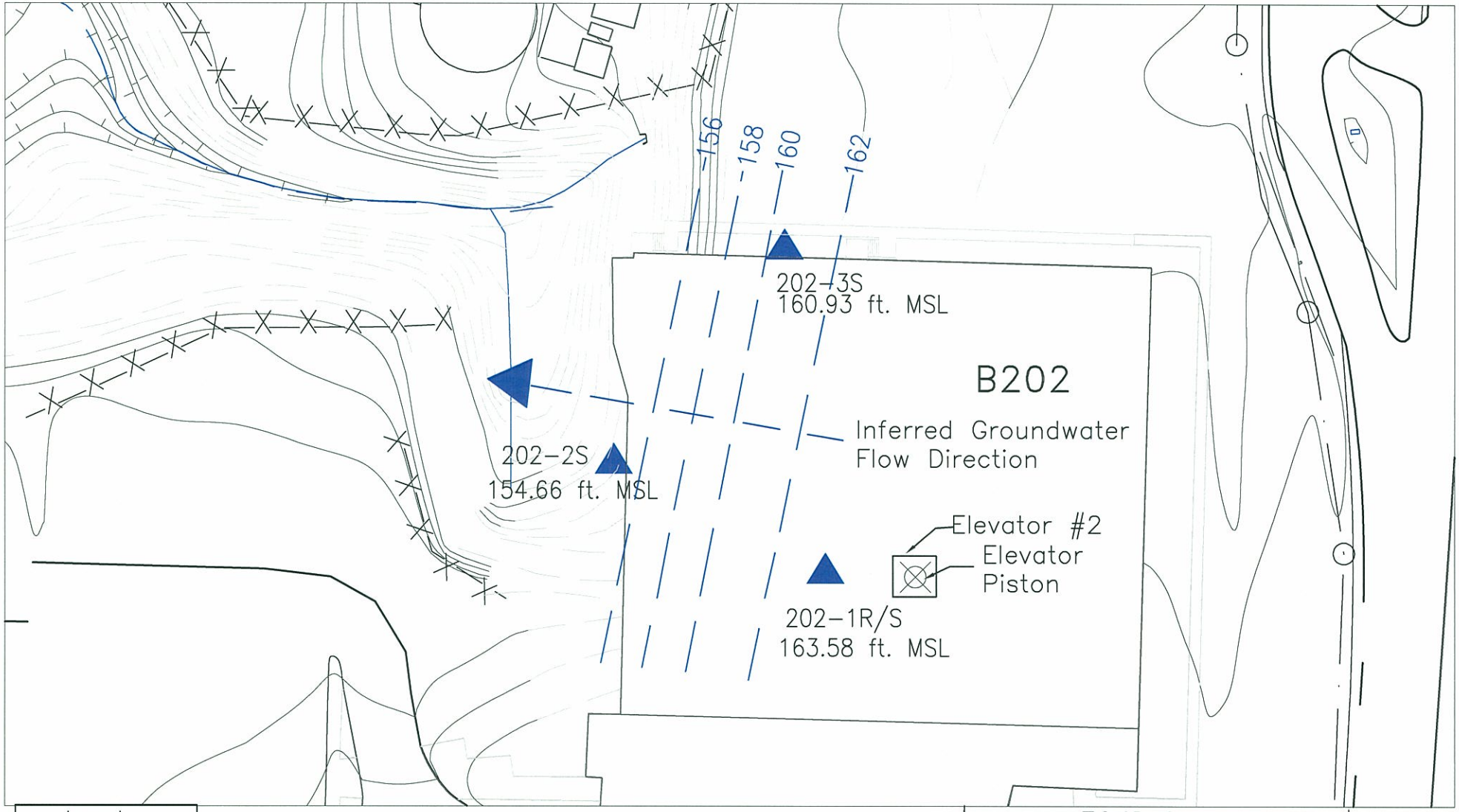
TechCity
Parcel1 and 2
300 Enterprise Drive
Kingston, New York

Tighe&Bond, Inc.
Consulting Engineers
213 Court Street, Suite 900 - Middletown, CT 06457

Job No.	Drawn By:	Date:
126252	BCC	Sept. 2006

File: 126223/Figures/Figure 1

Figure 1



Legend

- Monitoring Well Groundwater Elevation (feet)
- Groundwater Equipotentials (feet above MSL)

Tighe&Bond Tighe & Bond – Consulting Engineers
213 Court Street – Suite 900 Middletown, Connecticut 06457 Ph:860-704-4780

TECH-CITY
Groundwater Contour Map
Groundwater Sampling 9/13/2006
Kingston, NY

No.	By:	Date:

Job.No.	Designed By:	Checked By:	Scale:
12-8252	BCC	JTO	1" = 230'
Cad File: 12-8252/figures/site drawing.dwg	Drawn By: BCC	Date: 9/20/06	Figure 2

IBM - Kingston

SWMU AE Schematic

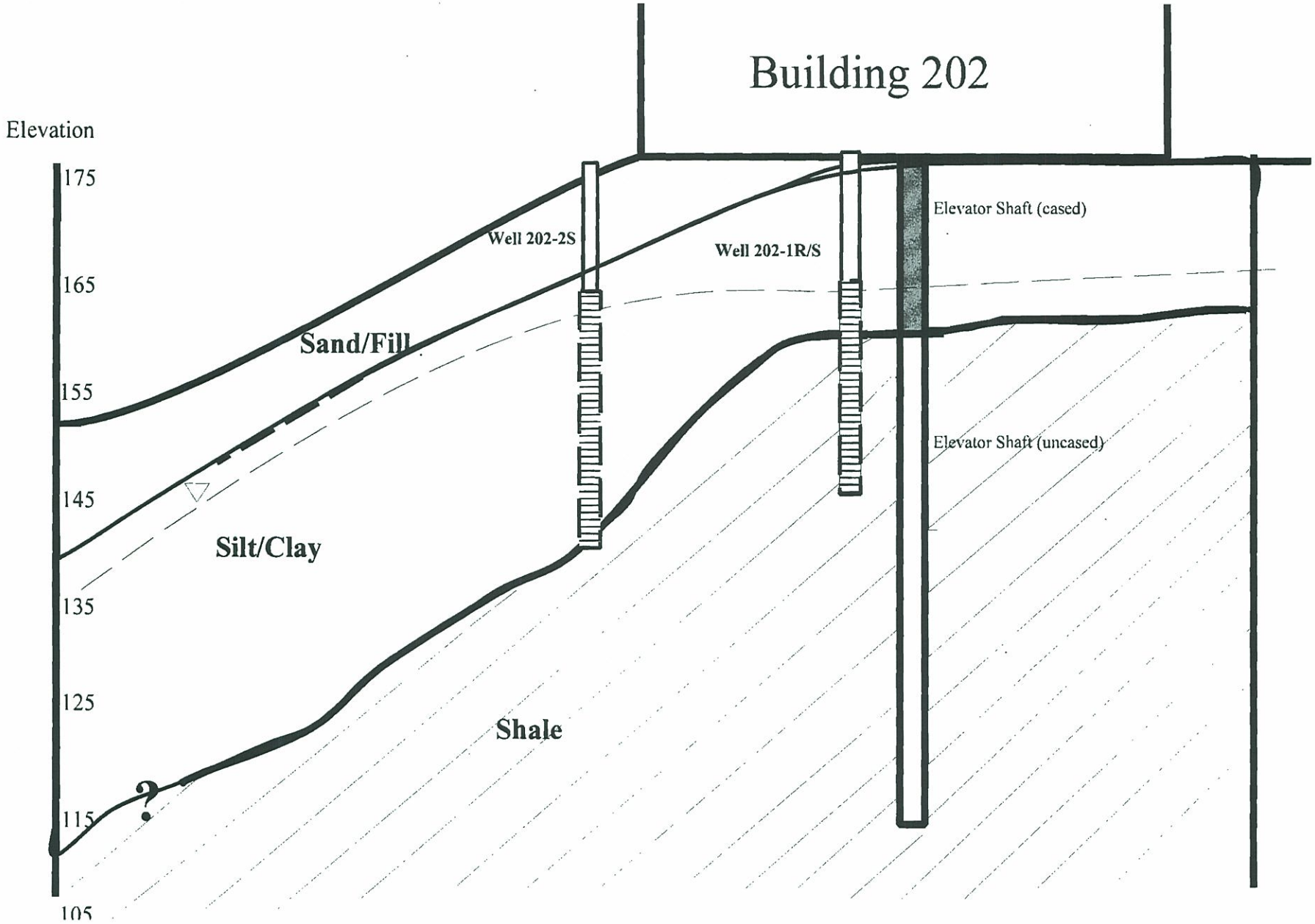


Table 1
Groundwater Elevation Data
SWMU AE Building 202
TechCity Properties, Inc.
Kingston, New York

Well Number	Top of Casing Elevation (ft.-NGVD)*	Depth to Bottom of Well	Depth to Water (feet)	Elevation (ft.-NGVD)	Screened Interval (feet)*	Geologic Unit*
202 - 2S	175.51	36.58	20.85	154.66	12-34.5	Silt and Clay
202 - 3S	175.42	21.14	14.49	160.93	6.5-19	Silt and Clay with some layers with sand and/or gravel
202 -1R/S	176.43	31.92	12.85	163.58	12-32	Top 5.4':Silt and Clay Bottom 14.6': Shale Bedrock

Notes:
Water level measurements collected on September 13,2006.
ft.-NGVD - Feet above National Geodetic Vertical Datum of 1929
** Data provided by Groundwater Sciences Corporation*

Table 2
Summary of Groundwater Analytical Data
SWMU AE Building 202
TechCity Properties, Inc.
Kingston, New York

Parameter	NYSDEC Standard	ID Date	202 2S 9/1/3/06	202 3S 9/1/3/06	202 1/RS 9/1/3/06	202 1/RS Duplicate	202 1/RS Lab Filtered
Polychlorinate Biphenyls (PCBs)(µg/L)							
PCB - Aroclor 1254	**0.1**		ND<0.061	ND<0.061	**4.8**	**13**	ND<0.061
Hydrocarbon Product Identification (mg/L)							
Creosote	No Standard		NT	NT	ND<1.0	NT	NT
Hydraulic Fluid	No Standard		NT	NT	45	NT	NT
Jet Fuel	No Standard		NT	NT	ND<1.0	NT	NT
Mineral Spirits	No Standard		NT	NT	ND<1.0	NT	NT
Motor Oil	No Standard		NT	NT	ND<1.0	NT	NT
Unmatched Hydrocarbons	No Standard		NT	NT	ND<1.0	NT	NT
MODF (C14-C28)	No Standard		NT	NT	ND<1.0	NT	NT
#4 Fuel (C9-C36)	No Standard		NT	NT	ND<1.0	NT	NT
#6 Fuel (C9-C36)	No Standard		NT	NT	ND<1.0	NT	NT

Notes:
Highlighted text - Concentration exceeds at least one indicated RSR criteria.
Only detected Constituents of Concern (COC) are included in the table.
NYSDEC - New York State Department of Environmental Conservation
ND - Not Detected to the indicated limit.
µg/L - micrograms per liter
NT - Not Tested
No Standard - No standard established by NYSDEC

Field Sampling Data Sheet

GENERAL INFORMATION:

Well No: 202 IRIS Date: 9 / 13 / 06 Personnel: TBCC

PURGING:

Reference Depth to Bottom (DTBr) NA ft.	Start: 15:45 Stop: 16:10
Measured Depth to Bottom (DTBm) 31.9 ft.	*Note: Use Reference Depth to Bottom for calculations*
Depth to Water (DTW): 12.85 ft.	Well Yields: ☒ Yes ☐ No
Target Volume: 9 gal.	Water Contained: ☒ Yes ☐ No
Actual Volume: 10 gal.	DTW After Purge: ft. 15.26

PURGE METHOD:

- ☑ Bailer
- ☐ Peristaltic Pump
- ☐ Well Wizard
- ☐ American Sigma
- ☐ Bladder Pump
- ☐ Submersible

SAMPLING:

Sample ID:

Sample Time: Start: 16:12 Stop: 16:20

Duplicate ID:

Sampling Method:

- ☑ Bailer
- ☐ Submersible
- ☐ Peristaltic Pump
- ☐ Bladder Pump

COMMENTS: Strong sulfer odor, no sheen, moderate turbidity

Signature: [signature] Date: 9/13/06 QA/QC Review: _____ Date: _____

Field Sampling Data Sheet

GENERAL INFORMATION:

Well No: 202 2 (5) Date: 9 / 13 / 06 Personnel: BCC

PURGING:

Reference Depth to Bottom (DTBr) NA ft.		Start: 13:52	Stop: 14:26
Measured Depth to Bottom (DTBm) 36.5 ft.		*Note: Use Reference Depth to Bottom for calculations*	
Depth to Water (DTW): 20.58 ft.		Well Yields: ☒ Yes ☐ No	
Target Volume: 5 gal.		Water Contained: ☒ Yes ☐ No	
Actual Volume: 6 gal.		DTW After Purge: ft. 30.63	

1> Took well some time to rec

PURGE METHOD:

☒ Bailer
☐ Peristaltic Pump
☐ Well Wizard
☐ American Sigma
☐ Bladder Pump
☐ Submersible

SAMPLING:

Sample Time: Start: 14:30 Stop: 14:31

Duplicate ID:

Sampling Method:

☒ Bailer ☐ Submersible

☐ Peristaltic Pump ☐ Bladder Pump

COMMENTS: Strong sulfer odor no sheen, moderate turbidity

Signature: [signature] Date: 9/13/06 QA/QC Review: _____ Date: _____

Field Sampling Data Sheet

GENERAL INFORMATION:

Well No: 202 3(s) Date: 9 / 13 / 05 Personnel: BCC

PURGING:

Reference Depth to Bottom (DTBr) NA ft.		Start: 14:30	Stop: 14:58
Measured Depth to Bottom (DTBm) 21.14 ft.		*Note: Use Reference Depth to Bottom for calculations*	
Depth to Water (DTW): 14.49 ft.		Well Yields: ☒ Yes ☐ No	
Target Volume: 4 gal.		Water Contained: ☒ Yes ☐ No	
Actual Volume: 4 gal.		DTW After Purge: ft.	

PURGE METHOD:

☒ Bailer
☐ Peristaltic Pump
☐ Well Wizard
☐ American Sigma
☐ Bladder Pump
☐ Submersible

SAMPLING:

Sample Time: Start: 14:58 Stop: 15:06

Duplicate ID:

Sampling Method:

☐ Bailer ☐ Submersible

☐ Peristaltic Pump ☐ Bladder Pump

COMMENTS: Very turbid, strong sulfur odor, slight petroleum odor

Signature: Ben Cole Date: 9/13/05 QA/QC Review: _____ Date: _____

SEVERN TRENT STL

ANALYTICAL REPORT

Job Number: 360-5790-1

Job Description: 126252

For:
Tighe & Bond
213 Court Street
Middletown, CT 06457

Attention: Jim Olsen

Joseph A. Chimi

Joe Chimi
Report Production Representative
jchimi@stl-inc.com
09/21/2006
Revision: 1

Project Manager: Becky Mason

The test results in this report meet all NELAP requirements for accredited parameters. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced except in full, and with written approval from the laboratory. STL Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 253903-A, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY DOH 10843.

Severn Trent Laboratories, Inc.
STL Westfield Westfield Executive Park 53 Southampton Road,
Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.stl-inc.com

ACCREDITED IN ACCORDANCE WITH nelac

CASE NARRATIVE FOR REPORT NUMBER: 360-5790

Client Name : Tighe & Bond

Project Name : 126252

Date : 9/21/06

REVISION

This revision makes the requested change to the Job Description.

360-5790-(3-4) For method 8082, the samples were analyzed at dilutions (10x and 50x, respectively) due to high target concentration. Consequently, the extraction surrogates were diluted outside method control limits.

METHOD SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	STL WFD	SW846 8082	
Separatory Funnel Liquid-Liquid Extraction	STL WFD		SW846 3510C

LAB REFERENCES:

STL WFD = STL Westfield

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-1

Method	Analyst	Analyst ID
SW846 8082	Sullivan, Pat	PS

SAMPLE SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-5790-1	202 2S	Water	09/13/2006 1400	09/14/2006 1120
360-5790-2	202 3S	Water	09/13/2006 1447	09/14/2006 1120
360-5790-3	202 2/4S	Water	09/13/2006 1549	09/14/2006 1120
360-5790-4	202 2/5S	Water	09/13/2006 1550	09/14/2006 1120

SAMPLE RESULTS

Client: Tighe & Bond

Job Number: 360-5790-1

Client Sample ID: **202 2S**

Lab Sample ID: 360-5790-1
Client Matrix: Water

Date Sampled: 09/13/2006 1400
Date Received: 09/14/2006 1120

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 09/15/2006 2050
Date Prepared: 09/15/2006 0854

Analysis Batch: 360-10528
Prep Batch: 360-10472

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5869.D
Initial Weight/Volume: 990 mL
Final Weight/Volume: 1.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
PCB-1016	ND		0.061	0.061
PCB-1221	ND		0.061	0.061
PCB-1232	ND		0.061	0.061
PCB-1242	ND		0.061	0.061
PCB-1248	ND		0.061	0.061
PCB-1254	ND		0.061	0.061
PCB-1260	ND		0.061	0.061
PCB-1262	ND		0.061	0.061
PCB-1268	ND		0.061	0.061

Surrogate	%Rec	Acceptance Limits
DCB Decachlorobiphenyl	40	30 - 150
Tetrachloro-m-xylene	61	30 - 150

Client: Tighe & Bond

Job Number: 360-5790-1

Client Sample ID: **202 3S**

Lab Sample ID: 360-5790-2
Client Matrix: Water

Date Sampled: 09/13/2006 1447
Date Received: 09/14/2006 1120

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 09/15/2006 2111
Date Prepared: 09/15/2006 0854

Analysis Batch: 360-10528
Prep Batch: 360-10472

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5870.D
Initial Weight/Volume: 990 mL
Final Weight/Volume: 1.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
PCB-1016	ND		0.061	0.061
PCB-1221	ND		0.061	0.061
PCB-1232	ND		0.061	0.061
PCB-1242	ND		0.061	0.061
PCB-1248	ND		0.061	0.061
PCB-1254	ND		0.061	0.061
PCB-1260	ND		0.061	0.061
PCB-1262	ND		0.061	0.061
PCB-1268	ND		0.061	0.061

Surrogate	%Rec	Acceptance Limits
DCB Decachlorobiphenyl	42	30 - 150
Tetrachloro-m-xylene	65	30 - 150

Client: Tighe & Bond

Job Number: 360-5790-1

Client Sample ID: **202 2/4S**

Lab Sample ID: 360-5790-3
Client Matrix: Water

Date Sampled: 09/13/2006 1549
Date Received: 09/14/2006 1120

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082
Preparation: 3510C
Dilution: 10
Date Analyzed: 09/18/2006 1111
Date Prepared: 09/15/2006 0854

Analysis Batch: 360-10528
Prep Batch: 360-10472

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5894.D
Initial Weight/Volume: 990 mL
Final Weight/Volume: 1.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
PCB-1016	ND		0.61	0.61
PCB-1221	ND		0.61	0.61
PCB-1232	ND		0.61	0.61
PCB-1242	ND		0.61	0.61
PCB-1248	ND		0.61	0.61
PCB-1254	4.8		0.61	0.61
PCB-1260	ND		0.61	0.61
PCB-1262	ND		0.61	0.61
PCB-1268	ND		0.61	0.61

Surrogate	%Rec		Acceptance Limits
DCB Decachlorobiphenyl	0	D X	30 - 150
Tetrachloro-m-xylene	0	D X	30 - 150

Client: Tighe & Bond

Job Number: 360-5790-1

Client Sample ID: 202 2/5S

Lab Sample ID: 360-5790-4
Client Matrix: Water

Date Sampled: 09/13/2006 1550
Date Received: 09/14/2006 1120

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082
Preparation: 3510C
Dilution: 50
Date Analyzed: 09/18/2006 1132
Date Prepared: 09/15/2006 0854

Analysis Batch: 360-10528
Prep Batch: 360-10472

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5895.D
Initial Weight/Volume: 990 mL
Final Weight/Volume: 1.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
PCB-1016	ND		3.0	3.0
PCB-1221	ND		3.0	3.0
PCB-1232	ND		3.0	3.0
PCB-1242	ND		3.0	3.0
PCB-1248	ND		3.0	3.0
PCB-1254	13		3.0	3.0
PCB-1260	ND		3.0	3.0
PCB-1262	ND		3.0	3.0
PCB-1268	ND		3.0	3.0

Surrogate	%Rec		Acceptance Limits
DCB Decachlorobiphenyl	0	D X	30 - 150
Tetrachloro-m-xylene	0	D X	30 - 150

DATA REPORTING QUALIFIERS

Client: Tighe & Bond

Job Number: 360-5790-1

Lab Section	Qualifier	Description
GC Semi VOA		
	X	Surrogate exceeds the control limits
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

QUALITY CONTROL RESULTS

Client: Tighe & Bond

Job Number: 360-5790-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 360-10472					
LCS 360-10472/2-A	Lab Control Spike	T	Water	3510C	
LCSD 360-10472/3-A	Lab Control Spike Duplicate	T	Water	3510C	
MB 360-10472/1-A	Method Blank	T	Water	3510C	
360-5790-1	202 2S	T	Water	3510C	
360-5790-2	202 3S	T	Water	3510C	
360-5790-3	202 2/4S	T	Water	3510C	
360-5790-4	202 2/5S	T	Water	3510C	
Analysis Batch:360-10528					
LCS 360-10472/2-A	Lab Control Spike	T	Water	8082	360-10472
LCSD 360-10472/3-A	Lab Control Spike Duplicate	T	Water	8082	360-10472
MB 360-10472/1-A	Method Blank	T	Water	8082	360-10472
360-5790-1	202 2S	T	Water	8082	360-10472
360-5790-2	202 3S	T	Water	8082	360-10472
360-5790-3	202 2/4S	T	Water	8082	360-10472
360-5790-4	202 2/5S	T	Water	8082	360-10472

Report Basis
T = Total

Client: Tighe & Bond

Job Number: 360-5790-1

Method Blank - Batch: 360-10472

Method: 8082
Preparation: 3510C

Lab Sample ID: MB 360-10472/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/15/2006 1947
Date Prepared: 09/15/2006 0854

Analysis Batch: 360-10528
Prep Batch: 360-10472
Units: ug/L

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5866.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	RL	RL
PCB-1016	ND		0.060	0.060
PCB-1221	ND		0.060	0.060
PCB-1232	ND		0.060	0.060
PCB-1242	ND		0.060	0.060
PCB-1248	ND		0.060	0.060
PCB-1254	ND		0.060	0.060
PCB-1260	ND		0.060	0.060
PCB-1262	ND		0.060	0.060
PCB-1268	ND		0.060	0.060

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	64	30 - 150
Tetrachloro-m-xylene	59	30 - 150

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Tighe & Bond

Job Number: 360-5790-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 360-10472

Method: 8082
Preparation: 3510C

LCS Lab Sample ID: LCS 360-10472/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/15/2006 2008
Date Prepared: 09/15/2006 0854

Analysis Batch: 360-10528
Prep Batch: 360-10472
Units: ug/L

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5867.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5.0 mL
Injection Volume:
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 360-10472/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/15/2006 2029
Date Prepared: 09/15/2006 0854

Analysis Batch: 360-10528
Prep Batch: 360-10472
Units: ug/L

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5868.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	70	68	40 - 140	2	20		
PCB-1260	72	73	40 - 140	1	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	51	50	30 - 150
Tetrachloro-m-xylene	56	56	30 - 150

Calculations are performed before rounding to avoid round-off errors in calculated results.

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Tighe & Bond

Job Number: 360-5790-1

Login Number: 5790

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	6.2 C
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Severn Trent Laboratories, Inc.
Chain of Custody Form

SEVERN TRENT STL

26704

•53 Southampton Road
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707
STL Westfield

•149 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871
STL Billerica / Service Center

Client: Tighe + Bond
Address: Middletown, CT
Phone: 860 704 4760 Fax:

Project #: 126253
Project Manager: James Olsen
Work ID:
Contact: Brian Cole

Job#: 3/0 5790 Quote# PO#

Requested Turnaround Time (PLEASE SPECIFY)
STANDARD ____ RUSH ✓ (Lab Approval Required)

Regulatory Classification
NPDES ____ Drinking Water ____
RCRA ____ MCP GW1/S1 ____
Other ____

Special Report Format
QA/QC Report ✓
DQE (MCP) Rpt ____
DEP Form(s) ____

Shaded areas for office use

Analysis Requested
Check analysis and specify method and analytes in comments section.
For example:
500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Comments (Special Instructions)

Please print legibility. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Sample Type Codes
WW-Wastewater DW-Drinking water SW-Surface water
LW-Lab water GW-Groundwater A-Air
S-Solid / Soil SL-Sludge O-Oil Z-Other

Sample ID	Sample Type	Sampler's Initials	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Preservative: NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	Volatiles 524 /624 /8260	Volatiles 601 /602 /8021	Semivoa 525 /625 /8270	(PCB) Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals 6010 / 200.7	Mercury 245.1 / 7470-71	General Chemistry	Bacteriological	Toxicity	Oil & Grease / TOC	Radchem / Other
202 25	W	BCC	9/13 14:00											✓				✓								
202 35	W	BCC	9/13 14:47											✓				✓								
202 2/45	W	BCC	9/13 15:49											✓				✓								
202 2/55	W	BCC	9/13 15:50											✓				✓								

Analyze for PCBs as discussed with Becky Mason

KRT 9/14/06

Sampled by (print): Brian Cole Signature: Brian Cole

Relinquished by: Brian Cole	Date: 9/13	Time: 17:56	Received by: Fedex	Date: 9/13	Time: 17:55
Relinquished by: Carly Hubbard	Date: 9/14	Time: 9:30	Received by: Victor Ryan	Date: 9/14/06	Time: 09:30
Relinquished by: Victor Ryan	Date: 9/14/06	Time: 11:20	Received by: UPS	Date: 9/14/06	Time: 1120

Cooler? (Y) / N MADEP Requirement Samples Iced? (Y) / N
Temp @ receipt: 6.2 °C
Preservation / pH checked? (Y) / N
By: KRT Date: 9/14/06

STL WESTFIELD

White = Lab file Yellow = Report copy Pink = Customer copy

STL-8245 (1000)

SEVERN TRENT STL

ANALYTICAL REPORT

Job Number: 360-5790-2

Job Description: 126252

For:
Tighe & Bond
213 Court Street
Middletown, CT 06457

Attention: Jim Olsen

Joseph A. Chimi

Joe Chimi
Report Production Representative
jchimi@stl-inc.com
09/21/2006
Revision: 1

Project Manager: Becky Mason

The test results in this report meet all NELAP requirements for accredited parameters. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced except in full, and with written approval from the laboratory. STL Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 253903-A, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY DOH 10843.

ACCREDITED IN ACCORDANCE WITH nelac

CASE NARRATIVE FOR REPORT NUMBER: 360-5790-2

Client Name : Tighe & Bond

Project Name : 126253

Date : 9/21/06

REVISION

This revision makes the requested change to the Job Description.

360-5790-4 For method 8082, the samples were filtered at the laboratory prior to analysis.

METHOD SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-2

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	STL WFD	SW846 8082	
Separatory Funnel Liquid-Liquid Extraction	STL WFD		SW846 3510C

LAB REFERENCES:

STL WFD = STL Westfield

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-2

Method	Analyst	Analyst ID
SW846 8082	Sullivan, Pat	PS

SAMPLE SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-5790-4	202 2/5S	Water	09/13/2006 1550	09/14/2006 1120

SAMPLE RESULTS

Client: Tighe & Bond

Job Number: 360-5790-2

Client Sample ID: **202 2/5S**

Lab Sample ID: 360-5790-4
Client Matrix: Water

Date Sampled: 09/13/2006 1550
Date Received: 09/14/2006 1120

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082
Preparation: 3510C
Dilution: 1.0
Date Analyzed: 09/20/2006 2252
Date Prepared: 09/20/2006 1212

Analysis Batch: 360-10686
Prep Batch: 360-10631

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P6004.D
Initial Weight/Volume: 990 mL
Final Weight/Volume: 1.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
PCB-1016	ND		0.061	0.061
PCB-1221	ND		0.061	0.061
PCB-1232	ND		0.061	0.061
PCB-1242	ND		0.061	0.061
PCB-1248	ND		0.061	0.061
PCB-1254	ND		0.061	0.061
PCB-1260	ND		0.032	0.061
PCB-1262	ND		0.061	0.061
PCB-1268	ND		0.061	0.061

Surrogate	%Rec	Acceptance Limits
DCB Decachlorobiphenyl	62	30 - 150
Tetrachloro-m-xylene	53	30 - 150

QUALITY CONTROL RESULTS

Client: Tighe & Bond

Job Number: 360-5790-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 360-10631					
LCS 360-10631/2-A	Lab Control Spike	T	Water	3510C	
LCSD 360-10631/3-A	Lab Control Spike Duplicate	T	Water	3510C	
MB 360-10631/1-A	Method Blank	T	Water	3510C	
360-5790-4	202 2/5S	T	Water	3510C	
Analysis Batch:360-10686					
LCS 360-10631/2-A	Lab Control Spike	T	Water	8082	360-10631
LCSD 360-10631/3-A	Lab Control Spike Duplicate	T	Water	8082	360-10631
MB 360-10631/1-A	Method Blank	T	Water	8082	360-10631
360-5790-4	202 2/5S	T	Water	8082	360-10631

Report Basis
T = Total

Client: Tighe & Bond

Job Number: 360-5790-2

Method Blank - Batch: 360-10631

Method: 8082
Preparation: 3510C

Lab Sample ID: MB 360-10631/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/20/2006 2005
Date Prepared: 09/20/2006 1212

Analysis Batch: 360-10686
Prep Batch: 360-10631
Units: ug/L

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5996.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
PCB-1016	ND		0.060	0.060
PCB-1221	ND		0.060	0.060
PCB-1232	ND		0.060	0.060
PCB-1242	ND		0.060	0.060
PCB-1248	ND		0.060	0.060
PCB-1254	ND		0.060	0.060
PCB-1260	ND		0.032	0.060
PCB-1262	ND		0.060	0.060
PCB-1268	ND		0.060	0.060

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	58	30 - 150
Tetrachloro-m-xylene	64	30 - 150

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Tighe & Bond

Job Number: 360-5790-2

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 360-10631

Method: 8082
Preparation: 3510C

LCS Lab Sample ID: LCS 360-10631/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/20/2006 2026
Date Prepared: 09/20/2006 1212

Analysis Batch: 360-10686
Prep Batch: 360-10631
Units: ug/L

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5997.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5.0 mL
Injection Volume:
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 360-10631/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/20/2006 2047
Date Prepared: 09/20/2006 1212

Analysis Batch: 360-10686
Prep Batch: 360-10631
Units: ug/L

Instrument ID: 5890II GC w/ dual ECDs
Lab File ID: P5998.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 5.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	65	61	40 - 140	6	20		
PCB-1260	75	71	40 - 140	5	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
DCB Decachlorobiphenyl	62	58	30 - 150
Tetrachloro-m-xylene	64	57	30 - 150

Calculations are performed before rounding to avoid round-off errors in calculated results.

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Tighe & Bond

Job Number: 360-5790-2

Login Number: 5790

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	6.2 C
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Severn Trent Laboratories, Inc.
Chain of Custody Form

SEVERN TRENT STL

26704

•53 Southampton Road
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707
STL Westfield

•149 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871
STL Billerica / Service Center

Client: Tighe + Bond
Address: Middletown, CT
Phone: 860 7044760 Fax:

Project #: 126253
Project Manager: James Olsen
Work ID:
Contact: Brian Cote

Job #: 360-5792 Quote #: PO #:
Shaded areas for office use

Requested Turnaround Time (PLEASE SPECIFY) ✓
STANDARD ______ RUSH ✓ (Lab Approval Required)

Regulatory Classification: NPDES ___ RCRA ___ Other ___ Drinking Water ___ MCP GW1/S1 ___

Special Report Format: QA/QC Report ✓ DQE (MCP) Rpt ___ DEP Form(s) ___

Analysis Requested
Check analysis and specify method and analytes in comments section.
For example:
500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Comments (Special Instructions)
Please print legibility. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Sample Type Codes
WW-Wastewater DW-Drinking water SW-Surface water
LW-Lab water GW-Groundwater A-Air
S-Solid / Soil SL-Sludge O-Oil Z-Other

Sample ID	Sample Type	Sampler's Initials	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	Volatiles 524 /624 /8260	Volatiles 601 /802 /8021	Semivoa 525 /625 /8270	(PCB) / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals 6010 / 200.7	Mercury 245.1 / 7470-71	General Chemistry	Bacteriological	Toxicity	Oil & Grease / TOC	Radchem / Other
202 2S	W	BCC	9/13 14:08											✓				✓									
202 3S	W	BCC	9/13 14:47											✓				✓									
202 2/4S	W	BCC	9/13 14:49											✓				✓									
202 2/5S	W	BCC	9/13 14:50											✓				✓									

KCT 9/14/06

Analyze for PCBs as discussed with Becky Mason

Per Brian Cote Run 202 2/5S for PCB but filter the sample first
Ran 9/19/06

Sampled by (print): Brian Cote
Signature: Brian Cote

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Brian Cote	9/13	17:56	Refrig	9/13	17:56
Carly Hibbard	9/14	9:30	[illegible]	9/14/06	0930
[illegible]	9/14/06	11:20	[illegible]	9/14/06	1120

Cooler: Y N MADEP Requirement Sample Accepted: Y N
Temp @ receipt:
Preservation pH checked? Y N
By: KCT Date: 9/14/06

STL WESTFIELD

Page 1 of 1

White = Lab file Yellow = Report copy Pink = Customer copy
STL-8245 (1000)

SEVERN TRENT STL

ANALYTICAL REPORT

Job Number: 360-5790-3

Job Description: 126252

For:
Tighe & Bond
213 Court Street
Middletown, CT 06457

Attention: Jim Olsen

Joseph A. Chimi

Joe Chimi
Report Production Representative
jchimi@stl-inc.com
09/26/2006

Project Manager: Becky Mason

The test results in this report meet all NELAP requirements for accredited parameters. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced except in full, and with written approval from the laboratory. STL Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 253903-A, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY DOH 10843.

METHOD SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-3

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Hydrocarbon Product Identification	STL WFD	SW846 8015B	
Separatory Funnel Liquid-Liquid Extraction	STL WFD		SW846 3510C

LAB REFERENCES:

STL WFD = STL Westfield

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-3

Method	Analyst	Analyst ID
SW846 8015B	Tester, Carla	CT

SAMPLE SUMMARY

Client: Tighe & Bond

Job Number: 360-5790-3

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-5790-3	202 2/4S	Water	09/13/2006 1549	09/14/2006 1120

SAMPLE RESULTS

Client: Tighe & Bond

Job Number: 360-5790-3

Client Sample ID: **202 2/4S**

Lab Sample ID: 360-5790-3
Client Matrix: Water

Date Sampled: 09/13/2006 1549
Date Received: 09/14/2006 1120

8015B Hydrocarbon Product Identification

Method: 8015B
Preparation: 3510C
Dilution: 10
Date Analyzed: 09/23/2006 0132
Date Prepared: 09/20/2006 1603

Analysis Batch: 360-10868
Prep Batch: 360-10653

Instrument ID: HP 5890II GC w/ FID
Lab File ID: C4231.D
Initial Weight/Volume: 990 mL
Final Weight/Volume: 1.0 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result (mg/L)	Qualifier	RL	RL
Creosote	ND		1.0	1.0
Hydraulic Fluid	45		1.0	1.0
Jet fuel	ND		1.0	1.0
Mineral Spirits	ND		1.0	1.0
Motor Oil	ND		1.0	1.0
Unmatched Hydrocarbons	ND		1.0	1.0
MODF (C14-C28)	ND		1.0	1.0
#4 Fuel, C9-C36	ND		1.0	1.0
C9-C36 (#6 Fuel)	ND		1.0	1.0

Surrogate	%Rec	Acceptance Limits
o-Terphenyl	101	40 - 140

QUALITY CONTROL RESULTS

Client: Tighe & Bond

Job Number: 360-5790-3

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 360-10653					
LCS 360-10653/2-A	Lab Control Spike	T	Water	3510C	
LCSD 360-10653/3-A	Lab Control Spike Duplicate	T	Water	3510C	
MB 360-10653/1-A	Method Blank	T	Water	3510C	
360-5790-3	202 2/4S	T	Water	3510C	
Analysis Batch:360-10868					
LCS 360-10653/2-A	Lab Control Spike	T	Water	8015B	360-10653
LCSD 360-10653/3-A	Lab Control Spike Duplicate	T	Water	8015B	360-10653
MB 360-10653/1-A	Method Blank	T	Water	8015B	360-10653
360-5790-3	202 2/4S	T	Water	8015B	360-10653

Report Basis
T = Total

Client: Tighe & Bond

Job Number: 360-5790-3

Method Blank - Batch: 360-10653

Method: 8015B
Preparation: 3510C

Lab Sample ID: MB 360-10653/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/20/2006 2056
Date Prepared: 09/20/2006 1603

Analysis Batch: 360-10868
Prep Batch: 360-10653
Units: mg/L

Instrument ID: HP 5890II GC w/ FID
Lab File ID: C4171.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1.0 mL
Injection Volume:

Analyte	Result	Qual	RL	RL
Creosote	ND		0.10	0.10
Hydraulic Fluid	ND		0.10	0.10
Jet fuel	ND		0.10	0.10
Mineral Spirits	ND		0.10	0.10
Motor Oil	ND		0.10	0.10
Unmatched Hydrocarbons	ND		0.10	0.10
MODF (C14-C28)	ND		0.10	0.10
#4 Fuel, C9-C36	ND		0.10	0.10
C9-C36 (#6 Fuel)	ND		0.10	0.10

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	105	40 - 140

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 360-10653

Method: 8015B
Preparation: 3510C

LCS Lab Sample ID: LCS 360-10653/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/20/2006 2348
Date Prepared: 09/20/2006 1603

Analysis Batch: 360-10868
Prep Batch: 360-10653
Units: mg/L

Instrument ID: HP 5890II GC w/ FID
Lab File ID: C4175.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1.0 mL
Injection Volume:

LCSD Lab Sample ID: LCSD 360-10653/3-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/21/2006 0031
Date Prepared: 09/20/2006 1603

Analysis Batch: 360-10868
Prep Batch: 360-10653
Units: mg/L

Instrument ID: HP 5890II GC w/ FID
Lab File ID: C4176.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1.0 mL
Injection Volume:

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
#4 Fuel, C9-C36	86	84	60 - 140	3	50		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
o-Terphenyl	132	128	40 - 140

Calculations are performed before rounding to avoid round-off errors in calculated results.

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Tighe & Bond

Job Number: 360-5790-3

Login Number: 5790

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	6.2 C
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Severn Trent Laboratories, Inc.
Chain of Custody Form

SEVERN TRENT STL

26704

•53 Southampton Road
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707
STL Westfield

•149 Rangeway Road
N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871
STL Billerica / Service Center

Client: Tyle + Bond
Address: Middletown, CT
Phone: 860 704 4476 Fax:

Project #: 126253
Project Manager: James Olsen
Work ID:
Contact: Brian Cole

Job: 210-5749 Quote: PO#:

Requested Turnaround Time (PLEASE SPECIFY)
STANDARD 5 Day Per Brian Cole
RUSH (Lab Approval Required)

Regulatory Classification
NPDES ____ Drinking Water ____
RCRA ____ MCP GW1/S1 ____
Other ____

Special Report Format
QA/QC Report ✓
DQE (MCP) Rpt ____
DEP Form(s) ____

Shaded areas for office use

Analysis Requested
Check analysis and specify method and analytes in comments section.
For example:
500-series for drinking water
600-series for waste water, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Comments (Special Instructions)

Please print legibility. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Sample Type Codes
WW-Wastewater DW-Drinking water SW-Surface water
LW-Lab water GW-Groundwater A-Air
S-Solid / Soil SL-Sludge O-Oil Z-Other

Sample ID	Sample Type	Sampler's Initials	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Preservative: NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	Volatiles 524 /624 /8260	Volatiles 601 /602 /8021	Semivoa 525 /625 /8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals 6010 / 200.7	Mercury 245.1 / 7470-71	General Chemistry	Bacteriological	Toxicity	Oil & Grease / TOC	Radchem / Other
202 2S	W	BCC	9/13 14:08											✓				✓									
202 3S	W	BCC	9/13 14:47											✓				✓									
202 2/4S	W	BCC	9/13 14:49											✓				✓									
202 2/5S	W	BCC	9/13 14:50											✓				✓									

Analyze for PCBs as discussed with Becky Mason. Per 9/20/06

Run DRO Finger Print on 202 2/4S Per Brian Cole 9/20/06

Sampled by (print): Brian Cole Signature: Brian Cole

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Brian Cole	9/13	17:56	Petra	9/13	17:55
Carly Hubbard	9/14	9:30		9/14/06	0930
	9/14/06	11:20	UPS	9/14/06	1120

Cooler? (Y) N | Matrix Broken? Y (N)
Temp. @ receipt ____ °C
Preservation pH checked? (Y) N
By: KR Date: 9/14/06

STL WESTFIELD

Page 1 of 1

White = Lab file Yellow = Report copy Pink = Customer copy
STL-8245 (1000)

Tighe&Bond

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