

SEP 3 1999

**Tighe & Bond**

*Consulting Engineers  
Environmental Specialists*

August 30, 1999

Ms. Maryalice Fischer  
U.S. Generating Co., New England, Inc.  
4 Park Street  
Concord, NH 03301

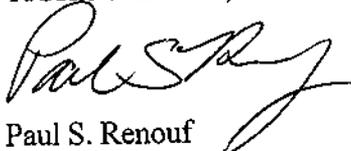
RE: Site Investigation Report  
U.S. Generating Co., New England, Inc./The Island Corporation Facility  
Bellows Falls, Vermont

Dear Ms. Fischer:

Enclosed please find the above-referenced document, which includes a description of soil excavation and soil sampling at the Bellows Falls site and recommendations regarding risks to sensitive receptors and site closure. If you have any questions or comments, please call us at (802) 463-2200.

Very truly yours,

TIGHE & BOND, INC.

  
Paul S. Renouf  
Environmental Services Manager



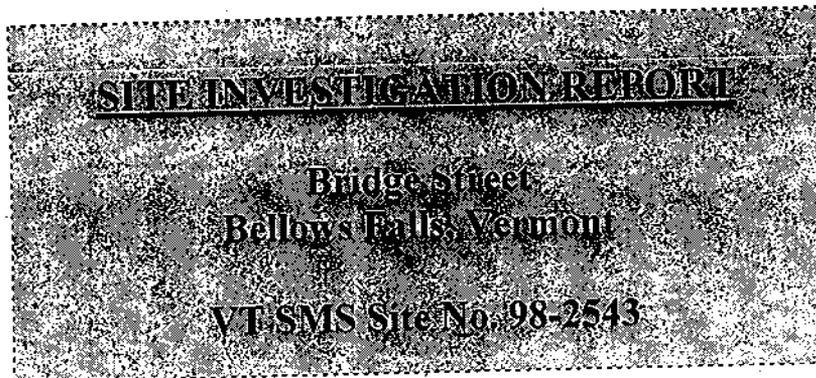
Michael A. Heidorn  
VT/NH Office Manager

Enclosure

CC: Chuck Schwer, VT DEC

311038/USGen-Coverltr.doc

Phase (check one)	Type (check one)
<input checked="" type="checkbox"/> Initial Site Investigation	<input type="checkbox"/> Work Scope
<input type="checkbox"/> Corrective Action Feasibility Investigation	<input checked="" type="checkbox"/> Technical Report
<input type="checkbox"/> Corrective Action Plan	<input type="checkbox"/> PCF Reimbursement Request
<input type="checkbox"/> Corrective Action Summary Report	<input type="checkbox"/> General Correspondence
<input type="checkbox"/> Operations & Monitoring Report	



*Prepared For:*

U.S. Generating Co., New England, Inc.  
4 Park Street  
Concord, NH 03301  
Contact: Maryalice Fischer  
(603)

*Prepared By:*

Tighe & Bond, Inc.  
P.O. Box 621  
25 Village Square  
Bellows Falls, VT 05101  
Contact: Michael Heidorn  
(802) 463-2200

August 30, 1999

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**SITE INVESTIGATION REPORT**

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**State of Vermont SMS Site No. 98-2543**  
**Bellows Falls, Vermont**

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*Prepared for:*  
*U.S. Generating Co., New England, Inc.*  
*4 Park Street*  
*Concord, New Hampshire 03301*

*August 30, 1999*

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**Tighe&Bond**  
*Consulting Engineers*  
*Environmental Specialists*

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## **EXECUTIVE SUMMARY**

Tighe & Bond has completed a site investigation in the vicinity of a U.S. Generating Co., New England, Inc. (USGenNE) transformer at their Bellows Falls, Vermont facility. The transformer pad area ("the site") is located approximately 400 feet south-southeast of the corner of Bridge Street and Island Street in Bellows Falls, Vermont.

The site abuts the northeast wall of a three-story industrial building (the former Moore & Thompson Paper Mill). The building is bordered to the north and east by scrub vegetation and to the south and west by power generating facilities. The building is currently used for storage. The building and vicinity are served by municipal water and sanitary sewer systems. The Connecticut River is located approximately 150 feet southeast of the building and transformer pad.

Four electrical transformers are currently located on the pad. The existing transformers range in age from approximately 2 months to 5 years old. Three former transformers that were removed from the pad were tested for polychlorinated biphenyl (PCB) content. All three were determined to be non-PCB (less than 50 parts per million PCBs) transformers.

As part of this investigation, potential receptors of contamination in the site vicinity were identified and the degree of risk posed by contamination to those receptors was assessed. The potential receptors included drinking water, groundwater, soil, indoor air and subsurface utilities.

Petroleum and PCB impacted soil was encountered during the October 1998 and May 1999 subsurface investigations. The May 1999 soil excavation removed approximately 21 tons of soil. Soil excavation was limited by the presence of underground utilities and utility poles and therefore, not all the soil that exceeded the field screening criteria was excavated. Soil samples collected from the extent of the excavation revealed TPH concentrations ranging from 130 ppm to 3,600 ppm and PCB concentrations ranging from non-detected to 1.2 ppm. However, based on current site usage and the location of the residual contaminated soil (greater than 1 foot bgs), direct contact with the residual contaminated soil is unlikely.

Water users within a 1,000-foot radius of the site are served by municipal water and sanitary sewer systems. Based on this information, it appears that the potential for site contaminants to negatively impact current drinking water supplies is negligible.

Laboratory results and the estimated depth to groundwater (>4 feet below grade) suggest a reduced likelihood that the contaminated soil was a significant source of impact to groundwater.

No on-site evidence of oily surface run-off to the Connecticut River was encountered. The estimated depth to groundwater relative to the location of the highest concentrations of contaminants suggests that the likelihood of groundwater impacting surface water is very low.

The structure abutting the transformer pad is an unoccupied industrial building. Based on the low level of organic vapors detected with a PID in soil samples (non-detected to 2.4 ppm) collected during the May 1999 excavation, it appears unlikely that the indoor air quality of the structure or off-site structures has been impacted by contamination related to the transformer pad.

Based on the absence of evidence of a significant impact to receptors other than the soil in the immediate vicinity of the transformer pad, Tighe & Bond does not recommend further assessment or remedial actions at this site. Rather, we recommend that the site be considered for DEC Site Management Activity Completed (SMAC) classification.

## **1.0 INTRODUCTION**

This report summarizes the findings of a site investigation conducted on property owned by U.S. Generating Co., New England, Inc. (USGenNE) and located near the corner of Bridge Street and Island Street in Bellows Falls, Vermont. The project included soil sampling, the excavation and disposal of contaminated soil, and research regarding potential impacts to receptors. The investigation was conducted in general accordance with a workscope prepared by Tighe & Bond dated January 18, 1999.

This project was specifically limited to an assessment of environmental conditions in the immediate vicinity of the concrete electrical transformer pad that abuts the northeastern wall of an industrial building (the former Moore & Thompson Paper Mill). The building and the transformer pad are owned by the Island Corporation of Bellows Falls, Vermont. The land on which the transformer pad is located ("the site") is owned by USGenNE. This report should not be considered an assessment of environmental conditions found elsewhere on either Island Corporation or USGenNE properties.

## **2.0 SITE DESCRIPTION & HISTORY**

**2.1 Site Description** - The site is located approximately 400 feet south-southeast of Bridge Street in Bellows Falls, Vermont. According to the Town of Rockingham's Tax Assessor's Cards, the 17.3 acre parcel (Map 24, Lot No. 6060019) contains power generation facilities and undeveloped land. A Site Locus is presented in Figure 1, showing the site at an elevation of approximately 282 feet above mean sea level. The site is located on an island bordered to the north, east and south by the Connecticut River and bordered to the west by a canal. The island has a maximum relief of 315 feet from hilltop to valley bottom, with topography generally higher to the north.

The transformer pad that is the subject of this investigation abuts the northeast wall of a three-story industrial building. The building is bordered to the north and east by scrub vegetation and to the south and west by power generating facilities. The building is currently used for storage. The site and vicinity are served by municipal water and sanitary sewer systems. The Connecticut River is located approximately 150 feet southeast of the transformer pad.

Four electrical transformers are currently located on the pad. According to a USGenNE representative, the existing transformers range in age from approximately 2 months to 5 years old. Three former transformers that were removed from the pad were tested for polychlorinated biphenyl (PCB) content. All three were determined to be non-PCB (less than 50 parts per million PCBs) transformers.

**2.2 Site History** - The site abuts the former Moore & Thompson Paper Mill. According to the Bellows Falls' town clerk's office, the site was owned by the Moore & Thompson Paper Mill in the mid-1880s. Since that time the site has been owned by several other paper mill companies until its purchase by the Island Corporation in 1979. The area surrounding the transformer pad is currently owned by USGenNE and consists of vacant land and an asphalt and gravel access road. A copy of the applicable portion of the Rockingham Tax Map No. 24 has been included as Figure 2 of this report.

The most recent (April 12, 1999) Vermont Hazardous Waste Sites List maintained by the Waste Management Division contains 17 other sites in Rockingham. Only one of those sites - Ross's Garage (SMS Site #95-1920) - appears to be within a one-half mile radius of the transformer pad. The garage is located on Bridge Street, Bellows Falls, Vermont, approximately 450 feet northwest, and topographically upgradient, of the site. A review of the DEC's file for Ross's Garage revealed that four underground storage tanks (USTs) were removed from the site (three gasoline and one fuel oil) in October 1995. The UST closure was overseen by Griffin International, Inc. of Williston, VT. A peak photoionization detector (PID) reading of 310 parts per million (ppm) was detected at 7 to 8 feet below grade in the tank bed. Groundwater was not encountered during the excavation. Approximately 30 cubic yards of gasoline-impacted soil was excavated from the release area and stockpiled off-site. The DEC requested that Ross's Garage initiate a Site Investigation, however the file did not contain a record of the Site Investigation being completed. No other information regarding Ross's Garage was reviewed during this investigation.

On October 23, 1998, Tighe & Bond advanced six soil borings adjacent to the transformer pad to depths ranging from 1.25 feet below ground surface (bgs) to 2.5 feet bgs. In general, soil borings were completed once auger refusal was encountered. Auger refusal was assumed to be the result of cobbles and debris rather than bedrock. Groundwater was not encountered during the advancement of soil borings. Black staining was observed in the majority of the soil samples collected at depths of up to 1.75 feet. Site activities were summarized in our report for USGenNE dated December 23, 1998. A site sketch showing sample locations and the corresponding TPH and PCB concentrations has been included with this report as Figure 3.

Each sample was screened in the field for total organic vapor concentrations using a Photovac 2020 photoionization detector (PID) calibrated to an isobutylene concentration standard of 101.6 parts per million (ppm) with a response factor of 1.0. An organic vapor concentration of 6 ppm was detected in a soil sample collected from a boring near the northeastern side of the transformer pad.

One soil sample from each of the six borings was analyzed in the field for total petroleum hydrocarbon (TPH) concentration using a Dexsil PetroFlag™ Analyzer (PFA). The Dexsil PFA analyses revealed TPH concentrations ranging from 227 ppm to >10,000 ppm.

Given the results of the field analysis, a total of three samples were submitted for laboratory analyses of PCB concentrations by EPA Method 8082. Given the elevated field TPH concentrations, it was determined that laboratory analysis of TPH was unnecessary. Two samples were collected from the transformer pad surface and one soil sample was collected from a depth of 0 to 0.5 feet below ground surface (bgs) in SB-4. The samples were submitted to Severn Trent Laboratories (STL) of Westfield, MA. PCB (Arochlor-1260) concentrations detected in the soil and transformer pad samples ranged from 4.4 ppm to 21 ppm.

### 3.0 SUBSURFACE EXPLORATIONS AND ANALYSES

**3.1 Soil Excavation** - Based on the analytical data described in Section 2.0, soil excavation was proposed for the site. On May 3, 1999 and May 4, 1999, Tighe & Bond supervised the cleaning of the transformer pad and the excavation of soil adjacent to the transformer pad. The cleaning of the transformer pad and the excavation were conducted by Tri-S, Inc. (Tri-S) of Ellington, Connecticut. Also present during these tasks was Ms. Maryalice Fischer, representing USGenNE.

On May 3, 1999, prior to the excavation, Tri-S encapsulated the area with polyethylene sheeting and power washed the pad. The waste sludge generated during the cleaning was collected and stored within an on-site roll-off container provided by Tri-S. During the soil excavation, the sludge was combined with the contaminated soil in the roll-off.

The objective of the excavation was to remove all accessible soil with TPH and PCB concentrations in excess of 1,000 ppm and 2.9 ppm, respectively. This objective was based on Vermont Department of Environmental Conservation (DEC) guidelines (*Agency Guidelines for Petroleum Contaminated Soil and Debris*, August 1996) and correspondence with the DEC dated January 5, 1999.

To determine the limits of the excavation, soil samples were collected and screened for:

- Organic vapors with a PID.
- Visual and olfactory evidence of oil contamination.
- TPH concentrations using a PFA.

All soil samples were visually classified by a Tighe & Bond representative and field screened for organic vapors with a Photovac 2020 PID calibrated to an isobutylene reference standard of 98.0 ppm with a response factor of 1.0. Prior to the screening of each soil sample, an ambient air reading was measured with the PID to assess background influences on PID readings. Background PID readings did not exceed 0.0 ppm during this sampling event. Soil samples from twelve locations were analyzed for TPH concentrations using a PFA. A site sketch with sampling locations and site features is provided in Figure 4 of this report.

All soil samples were collected from the excavation at depths greater than 0.75 foot bgs in order to avoid the significant volume of organic material generally encountered from the ground surface to 0.5 foot bgs. High organic content in the sampled soil may result in a positive interference with the PFA test.

As shown in Table 1, soil samples were collected at depths ranging from 1 foot to 4 feet below ground surface (bgs). PID readings of the soil samples ranged from non-detected to 2.4 ppm. TPH concentrations, as analyzed with a PFA, ranged from 104 ppm to over 1,000 ppm.

At sample locations S-1, S-4, S-6 and S-8, additional excavation was conducted to remove TPH-contaminated soil. Resampling at these locations, but at greater depths, (samples S-9, S-11, S-10 and S-12, respectively) showed that further excavation had successfully removed TPH-contaminated soil in the vicinity of the samples S-1 and S-6. The presence of a high voltage electrical conduit and two shallow-depth utility poles limited our ability to excavate further in the vicinity of samples S-4/S-11 and S-8/S-12.

Based on the field screening results, a total of approximately 21 tons of soil was excavated from the transformer pad area. The soil was contained within two roll-off containers to await acceptance from an appropriate disposal facility and DEC approval for the off-site disposal location. As noted, soil excavation was limited by the presence of underground utilities and utility poles and all accessible TPH-contaminated soil was removed. However, Tri-S was unable to excavate all soil that exceeded the field screening criteria summarized above. The on-site USGenNE representative notified the DEC of the limitations to the excavation and received verbal approval to stop excavation at that point.

A total of three confirmation soil samples (S-3, S-11 and Comp #1) were submitted to STL for laboratory analyses of TPH concentrations by EPA Method 8100M and polychlorinated biphenyl (PCB) concentrations by EPA Method 8082. S-3 was collected at a depth of 4 feet bgs near the southeastern end of the transformer pad. S-11 was collected at a depth of 3 feet bgs near the northeastern end of the transformer pad. Comp #1 was a composite sample that consisted of soil collected from approximately eight locations at the limits of the excavation. The results of the TPH screening and laboratory analyses are summarized below in Table 1. A copy of the laboratory report is included in Appendix 1.

**Table 1: TPH, PID and PCB Concentrations**

Sample ID	Sample Depth (feet)	TPH by PetroFlag (ppm)	Organic Vapors PID (ppm)	TPH by EPA Method 8100M (ppm)	PCBs by EPA Method 8082 Arochlor-1260 (ppm)
1	2.0	> 1,000	1.6	NS	NS
2	2.5	> 1,000	2.3	NS	NS
3	4.0	104	2.4	130	ND
4	2.0	> 1,000	ND	NS	NS
5	1.5	542	ND	NS	NS
6	1.0	> 1,000	ND	NS	NS
7	0.75	1,146	ND	NS	NS
8	0.75	> 1,000	ND	NS	NS
9	2.5	137	ND	NS	NS
10	2.0	304	ND	NS	NS
11	3.0	> 1,000	ND	3,600	1.2
12	2.0	> 1,000	ND	NS	NS
Comp #1	0.75 - 4.0	NS	NS	1,900	0.68
NS = not sampled      ND = not-detected      ppm = parts per million					

Following the excavation of the contaminated soil, USGenNE backfilled the excavated area with clean fill brought to the site by Bazin Brothers, Inc. of Westminster, VT. Following the

backfilling and grading of the excavation, a chain link fence was installed around the transformer pad by the Island Corporation for health-and-safety purposes.

On June 23, 1999, DEC provided approval for the off-site thermal treatment of the excavated soil by Environmental Soil Management, Inc. (ESMI) of Fort Edward, NY. Tri-S transported the soil to ESMI on June 29, 1999. A copy of the Bill of Lading and the destruction certificate will be included under a separate cover when available.

**3.2 Site Geology** - Surficial geology at the site is reported as pebbly glaciolacustrine sand and postglacial fluvial sand on the Surficial Geologic Map of Vermont (State of Vermont, 1969). This description is consistent with the types of overburden materials observed during the May 1999 soil excavation. Published mapping (Bedrock Geology of Vermont, State of Vermont, 1961) indicates bedrock at the site consists of the Partridge Formation (carbonaceous mica schist) and the Clough Formation (quartzite, quartz-conglomerate and mica schist). Bedrock was not encountered in any of the borings, however significant outcroppings of these formations were observed within 100 feet of the site.

**3.3 Site Hydrogeology** - Groundwater was not encountered during either the October 1998 advancement of soil borings or the May 1999 soil excavation. However, based on surficial topography and the proximity of the Connecticut River, the direction of groundwater flow was estimated to be to the southeast toward the Connecticut River.

#### 4.0 POTENTIAL RECEPTORS

As part of this investigation, potential receptors in the site vicinity were identified and the degree of risk posed by contamination to those receptors was assessed. The potential receptors included drinking water, groundwater, soil, indoor air and subsurface utilities.

**Drinking Water** - Water users within a 1,000-foot radius of the site are served by municipal water and sanitary sewer systems. A review of the DEC Water Supply Division's well data sheets for the Town of Rockingham showed that no private drinking water wells are located within a 1,000-foot radius of the site. Based on this information, it appears that the potential for site contaminants to negatively impact current drinking water supplies is negligible.

**Groundwater** - Groundwater was not encountered during either the October 1998 soil boring activities or the May 1999 soil excavation and no groundwater wells were installed during this investigation. Therefore, an assessment of the potential impact to groundwater from the soil contamination is limited to an evaluation of the distribution and leachability of residual soil contamination. Laboratory analysis of a soil sample (S-3) collected in the deepest portion of the excavation (and adjacent to the transformer pad) at 4 feet below grade revealed a TPH concentration of 130 ppm. PCBs were not detected in soil sample S-3. These laboratory results and the estimated depth to groundwater (>4 feet below grade) suggest a reduced likelihood that the contaminated soil is/was a significant source of impact to groundwater. X

**Surface Water** - During this investigation, no on-site evidence was encountered of oily surface run-off to the Connecticut River. The estimated depth to groundwater relative to the location of the highest concentrations of contaminants (see the discussion of groundwater above) suggests that the likelihood of groundwater adversely impacting surface water is very low.

**Soil** - Petroleum- and PCB-impacted soil was encountered during the October 1998 and May 1999 subsurface investigations. The May 1999 soil excavation removed approximately 20 tons of contaminated soil. Soil excavation was limited by the presence of underground utilities and utility poles and therefore, not all the soil that exceeded the field screening criteria was excavated. Soil samples collected from the extent of the excavation revealed TPH concentrations ranging from 130 ppm to 3,600 ppm and PCB concentrations ranging from non-detected to 1.2 ppm. Although the remaining soil has clearly been impacted by historic releases of transformer oil, the likelihood of direct contact with the soil is minimal. The likelihood of direct contact is limited by current site usage and the location of the residual contaminated soil (greater than 1 foot bgs).

**Indoor Air** - The structure abutting the transformer pad is an unoccupied industrial building. Based on the low level of organic vapors detected with a PID in soil samples (non-detected to 2.4 ppm) collected during the May 1999 excavation, it appears unlikely that the indoor air quality of the structure or off-site structures has been impacted by contamination related to the transformer pad.

**Subsurface Utilities** – The only known subsurface utilities in the vicinity of the transformer pad are the electrical conduit and former sewer main that were encountered during the excavation. These utilities were observed at depths ranging from 1 foot to 3 feet below grade. The depth to groundwater (> 4 feet below grade) and the lack of significant organic vapors in the vicinity of the known subsurface utilities suggest that subsurface utility corridors are unlikely to act as avenues for significant contaminant migration.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions and recommendations presented in this report are based solely on information obtained during the course of this investigation. Changes in site conditions, or information not available for review at the time of this investigation, may necessitate an update of these conclusions and recommendations.

### 5.1 Conclusions

- The site is located on land formerly associated with a paper mill. The land in the immediate vicinity of the transformer pad is vacant, except for the use of the former mill building for storage. A chain link fence has been installed around the transformer pad area to restrict unauthorized entry.
- PCB-impacted soil was encountered during the October 1998 and May 1999 subsurface investigations. The DEC requested that soil with PCB concentrations exceeding 2.9 ppm be excavated. Soil samples collected from the extent of the May 1999 excavation revealed PCB concentrations ranging from non-detected to 1.2 ppm.
- Petroleum-impacted soil was encountered during the October 1998 and May 1999 subsurface investigations. The DEC initially requested that soil with TPH concentrations exceeding 1,000 ppm be excavated. This was accomplished with the exception of areas where soil excavation was limited by the presence of underground utilities and utility poles.

Soil samples collected from the extent of the May 1999 excavation revealed TPH concentrations ranging from 130 ppm to 3,600 ppm. However, based on current site usage, the presence of a chain link fence securing the transformer area and the depth of the residual contaminated soil (greater than one foot bgs), direct contact with the residual contaminated soil is considered unlikely. On May 4, 1999, the DEC verbally approved the TPH concentrations remaining in the soil.

- Groundwater was not encountered during either the October 1998 soil boring activities or the May 1999 soil excavation and no groundwater wells were installed during this investigation. Laboratory results and the estimated depth to groundwater (>4 feet below grade) suggest a reduced likelihood that the soil is/was a significant source of impact to groundwater.
- Drinking water supplies, indoor air quality, surface water quality and subsurface utility corridors do not appear to have been impacted by historical releases at the site.

**5.2 Recommendations** - Based on the absence of evidence of a significant impact to receptors other than the soil in the immediate vicinity of the transformer pad, Tighe & Bond does not recommend further assessment or remedial actions at this site. We recommend that the site be considered for DEC Site Management Activity Completed (SMAC) classification.

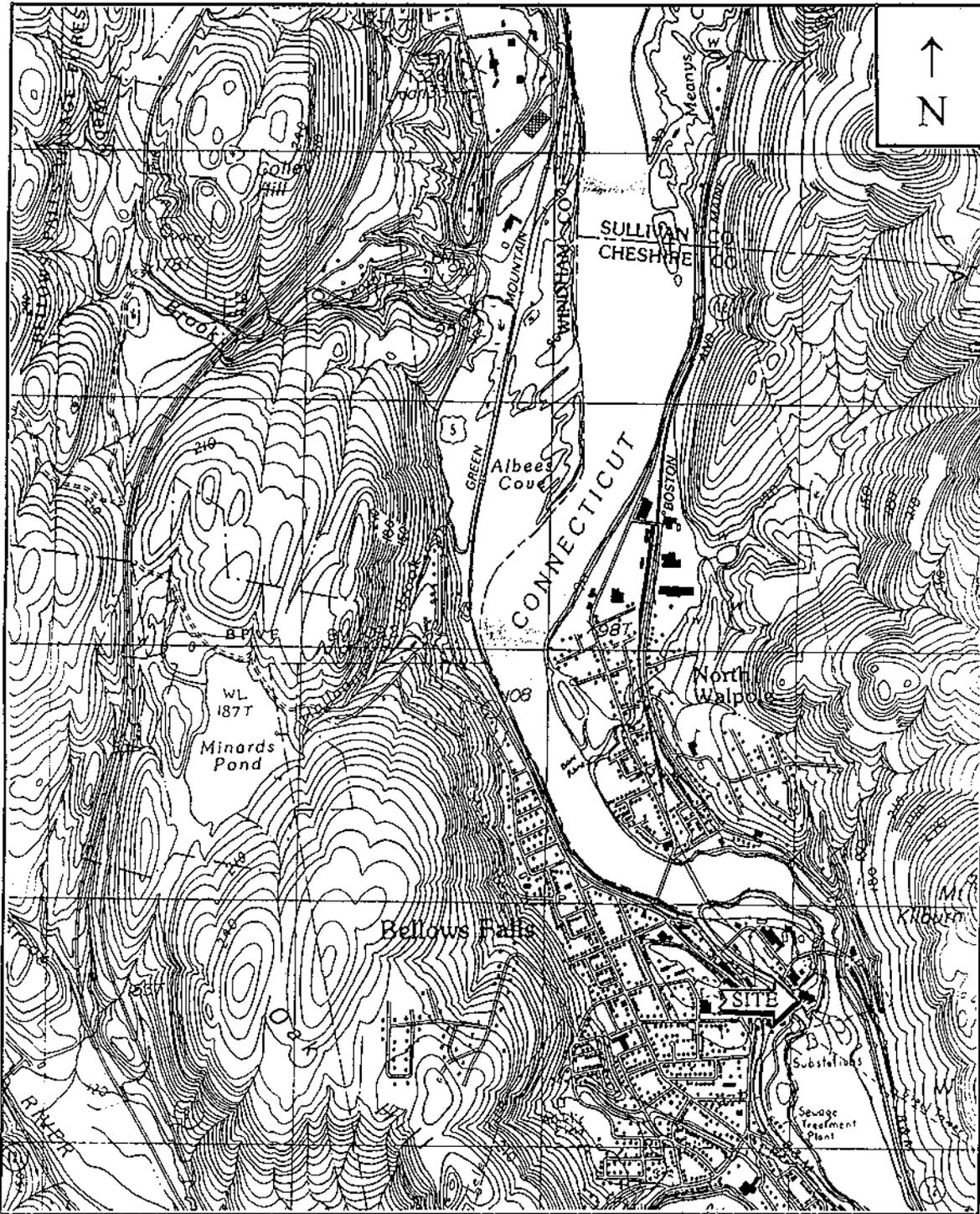
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**FIGURES**

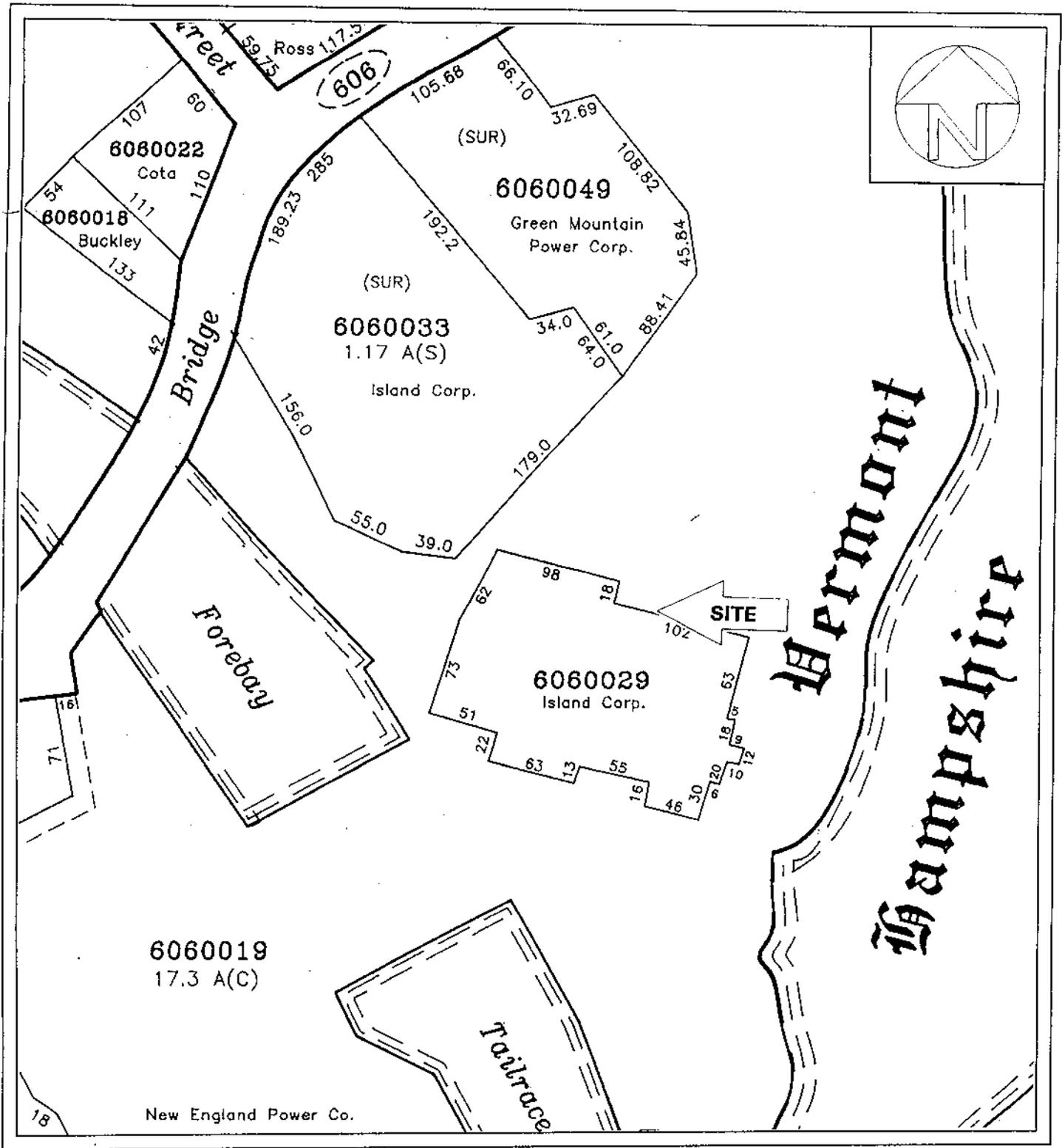
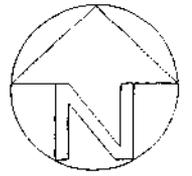
- Figure 1 - Site Locus
- Figure 2 - Rockingham Tax Map
- Figure 3 - 1998 Site Sketch
- Figure 4 - 1999 Site Sketch

# TIGHE & BOND

25 Village Square, P.O. Box 621 • Bellows Falls, Vermont 05101 • (802) 463-2200



Site Locus	USGS Topographical Map Bellows Falls, VT Quadrangle 1 : 25 000	The Island Cooperative Facility Bellows Falls, VT
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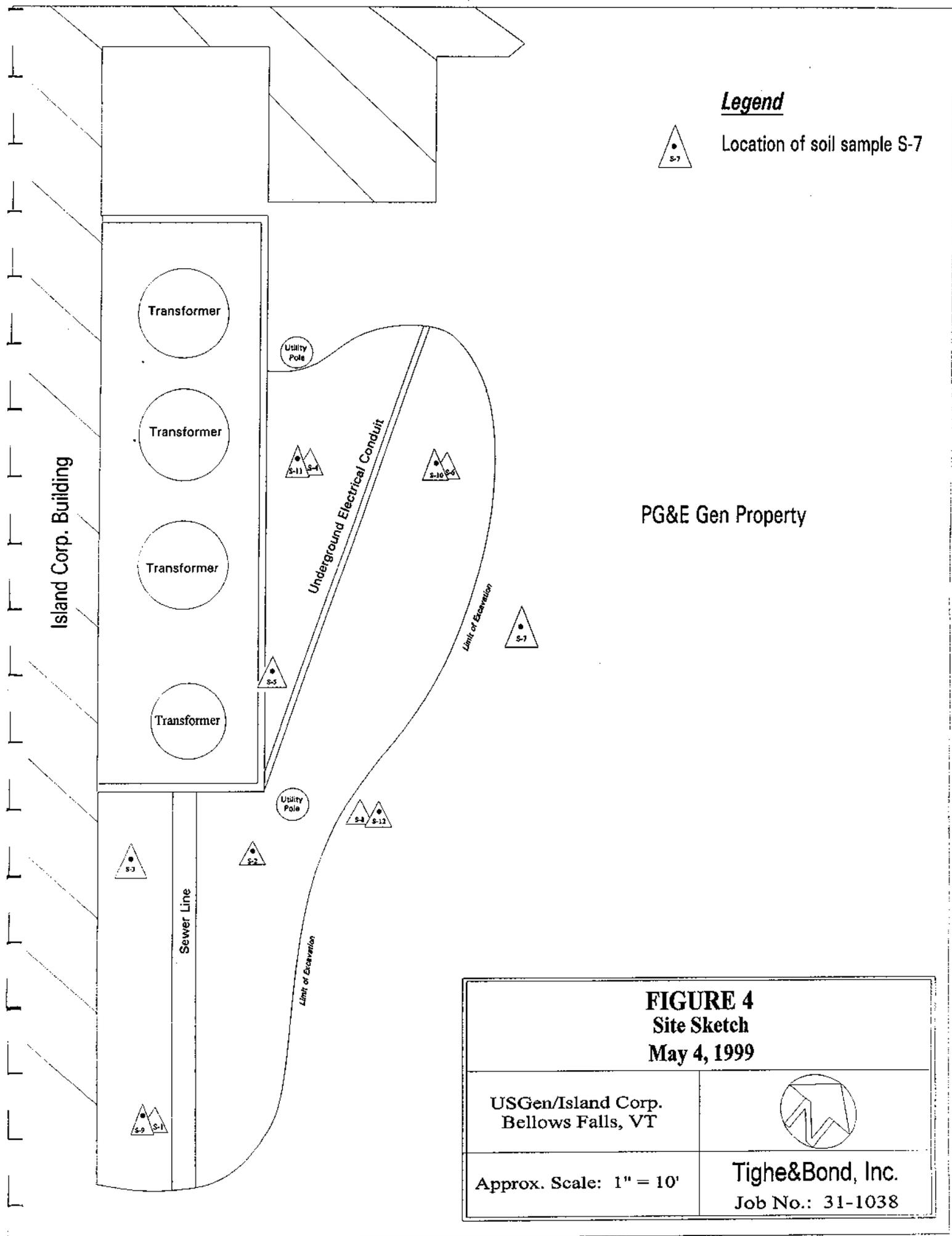


Tax Map

Town of Rockingham, Vermont  
Tax Map No. 24

Transformer Pad  
USGen/Island Corp. Property  
Bellows Falls, VT





**Legend**



Location of soil sample S-7

PG&E Gen Property

**FIGURE 4**  
**Site Sketch**  
**May 4, 1999**

USGen/Island Corp. Bellows Falls, VT	
Approx. Scale: 1" = 10'	<b>Tighe&amp;Bond, Inc.</b> Job No.: 31-1038

**APPENDICES**

Appendix A - Laboratory Reports



Severn Trent Laboratories  
Westfield Executive Park  
53 Southampton Road  
Westfield, MA 01085

Tel: (413) 572-4000  
Fax: (413) 572-3707

May 21, 1999

Mr. Mike Heidorn

Tighe & Bond, Inc. V1038  
25 Village Sq.  
Bellows Falls, VT. 05101

Report Number : 16495

Dear Mr. Heidorn,

The analysis of your sample(s) submitted on 5/6/99 is now complete and the appropriate analytical report is enclosed. The samples were prepared and analyzed according to EPA established methodologies and protocols. If you have any questions regarding the report or any part of our service, please do not hesitate to contact us. Thank you for using Severn Trent Laboratories, and we look forward to receiving your next samples.

SEVERN TRENT LABORATORIES

Michael F. Wheeler, Ph.D.

Laboratory Director

**Other Laboratory Locations:**

- Monroe, CT
- Pensacola, FL
- Billerica, MA
- Edison, NJ
- Whippany, NJ
- Newburgh, NY
- Houston, TX
- Colchester, VT

**Service Center Locations:**

- Mt. Laurel, NJ
- Glen Cove, NY
- Richardson, TX

**Sales Office Locations:**

- Irvine, CA
- Cantonment, FL
- New Orleans, LA
- Waterford, MI
- Blirstown, NJ
- Schenectady, NY
- Cleveland, OH

a part of

Severn Trent Services Inc.

Inorganics Analysis Data Sheet

Client ID : S-3	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123772
Project Name : USGEN	Date Collected : 5/4/99
Matrix Name : Soil	Date Received : 5/6/99

CAS NO	Analyte	Result	Units	Method	Date Analyzed	By
	Solids, percent	81.2	%	EPA 160.3	5/7/99	RLS

5/21/99 08:47 AM

Page 1 of 4



MADEP MA014  
RIDOH57

CTDPH 0494

NY DOH 10843

NH DES 2539

53 Southampton Road  
Westfield, MA 01085  
Tel: (413) 572-4000  
Fax: (413) 572-3707

Inorganics Analysis Data Sheet

Client ID : ROLLOFF	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123773
Project Name : USGEN	Date Collected : 5/4/99
Matrix Name : Soil	Date Received : 5/6/99

CAS NO	Analyte	Result	Units	Method	Date Analyzed	By
	Flashpoint	>200	degrees F	SW846 1010	5/7/99	RWE
	Solids, percent	79.4	%	EPA 160.3	5/7/99	RLS
7440-38-2	Arsenic	34	mg/kg dry	SW8466010A	5/10/99	KS
7440-39-3	Barium	210	mg/kg dry	SW8466010A	5/10/99	KS
7440-43-9	Cadmium	3.3	mg/kg dry	SW8466010A	5/13/99	KS
7440-47-3	Chromium	40	mg/kg dry	SW8466010A	5/10/99	KS
7439-92-1	Lead	480	mg/kg dry	SW8466010A	5/10/99	KS
7439-97-6	Mercury	0.04	mg/kg dry	SW846 7471	5/14/99	ks
7782-49-2	Selenium	1U	mg/kg dry	SW8466010A	5/10/99	KS
7440-22-4	Silver	3U	mg/kg dry	SW8466010A	5/10/99	KS

5/21/99 08:47 AM

Page 2 of 4



Inorganics Analysis Data Sheet

Client ID :S-11	Report No :	16495
Client Name :Tighe & Bond, Inc. V1038	STL Sample Number :	123774
Project Name :USGEN	Date Collected :	5/4/99
Matrix Name : Soil	Date Received :	5/6/99

CAS NO	Analyte	Result	Units	Method	Date Analyzed	By
	Solids, percent	91.0	%	EPA 160.3	5/7/99	RLS

5/21/99 08:47 AM



MADEP MA014  
RIDOH57

CTDPH 0494

NY DOH 10843

NH DES 2539

Inorganics Analysis Data Sheet

Client ID :COMP#1	Report No :	16495
Client Name :Tighe & Bond, Inc. V1038	STL Sample Number :	123775
Project Name :USGEN	Date Collected :	5/4/99
Matrix Name : Soil	Date Received :	5/6/99

CAS NO	Analyte	Result	Units	Method	Date Analyzed	By
	Solids, percent	81.3	%	EPA 160.3	5/7/99	RLS

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Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID : S-3	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123772
Project Name : USGEN	Lab File ID : H0714.D
Matrix : Soil	Date Collected : 5/4/99
Sample Wt/Vol : 9.90 g	Date Received : 5/6/99
% Solid : 81.20	Date Extracted : 5/6/19
GPC Clean up :	Date Analyzed : 5/12/99
Sulfur Clean up :	By : SM
Dilution Factor : 1	

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	120	U
11104-28-2	Arochlor-1221	120	U
11141-16-5	Arochlor-1232	120	U
53469-21-9	Arochlor-1242	120	U
12672-29-6	Arochlor-1248	120	U
11097-69-1	Arochlor-1254	120	U
11096-82-5	Arochlor-1260	120	U



Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID : ROLLOFF	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123773
Project Name : USGEN	Lab File ID : H0717.D
Matrix : Soil	Date Collected : 5/4/99
Sample Wt/Vol : 10.30 g	Date Received : 5/6/99
% Solid : 79.40	Date Extracted : 5/6/99
GPC Clean up :	Date Analyzed : 5/12/99
Sulfur Clean up :	By :
Dilution Factor : 1	

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	120	U
11104-28-2	Arochlor-1221	120	U
11141-16-5	Arochlor-1232	120	U
53469-21-9	Arochlor-1242	120	U
12672-29-6	Arochlor-1248	120	U
11097-69-1	Arochlor-1254	120	U
11096-82-5	Arochlor-1260	120	870



## Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :S-11	Report No : 16495
Client Name :Tighe & Bond, Inc. V1038	STL Sample Number : 123774
Project Name :USGEN	Lab File ID : H0718.D
Matrix : Soil	Date Collected : 5/4/99
Sample Wt/Vol : 10.00 g	Date Received : 5/6/99
% Solid :91.0	Date Extracted : 5/10/99
GPC Clean up :	Date Analyzed : 5/12/99
Sulfur Clean up :	By :
Dilution Factor : 1	

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	110	U
11104-28-2	Arochlor-1221	110	U
11141-16-5	Arochlor-1232	110	U
53469-21-9	Arochlor-1242	110	U
12672-29-6	Arochlor-1248	110	U
11097-69-1	Arochlor-1254	110	U
11096-82-5	Arochlor-1260	110	1200

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## Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID : COMP#1	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123775
Project Name : USGEN	Lab File ID : H0719.D
Matrix : Soil	Date Collected : 5/4/99
Sample Wt/Vol : 10.70 g	Date Received : 5/6/99
% Solid : 81.30	Date Extracted : 5/10/99
GPC Clean up :	Date Analyzed : 5/12/99
Sulfur Clean up :	By : SM
Dilution Factor : 1	

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	110	U
11104-28-2	Arochlor-1221	110	U
11141-16-5	Arochlor-1232	110	U
53469-21-9	Arochlor-1242	110	U
12672-29-6	Arochlor-1248	110	U
11097-69-1	Arochlor-1254	110	U
11096-82-5	Arochlor-1260	110	680

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Volatile Organics Analysis Data Sheet

SW8468260B

Client ID : ROLLOFF	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123773
Project Name : USGEN	Lab File ID : V12327.D
Matrix : Soil	Date Collected : 5/4/99
Sample Wt/Vol : 2.52g	Date Received : 5/6/99
% Solid : 79.4	Date Analyzed : 5/18/99
Dilution Factor : 2.5	By : MAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	250	U
108-86-1	Bromobenzene	12	U
71-43-2	Benzene	12	U
75-27-4	Bromodichloromethane	12	U
74-97-5	Bromochloromethane	12	U
75-25-2	Bromoform	12	U
74-83-9	Bromomethane	25	U
78-93-3	2-Butanone	250	U
56-23-5	Carbon tetrachloride	12	U
108-90-7	Chlorobenzene	12	U
124-48-1	Chlorodibromomethane	12	U
75-00-3	Chloroethane	25	U
67-66-3	Chloroform	12	U
74-87-3	Chloromethane	25	U
95-49-8	2-Chlorotoluene	12	U
106-43-4	4-Chlorotoluene	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
74-95-3	Dibromomethane	12	U
96-12-8	1,2-Dibromo-3-chloropropane	12	U
75-71-8	Dichlorodifluoromethane	12	U
95-50-1	1,2-Dichlorobenzene	12	U
541-73-1	1,3-Dichlorobenzene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
75-34-3	1,1-Dichloroethane	12	U
107-06-2	1,2-Dichloroethane	12	U
75-35-4	1,1-Dichloroethene	12	U
78-87-5	1,2-Dichloropropane	12	U
142-28-9	1,3-Dichloropropane	12	U
590-20-7	2,2-Dichloropropane	12	U
563-58-6	1,1-Dichloropropene	12	U

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SW8468260B

Client ID : ROLLOFF	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123773
Project Name : USGEN	Lab File ID : V12327.D
Matrix : Soil	Date Collected : 5/4/99
Sample Wt/Vol : 2.52g	Date Received : 5/6/99
% Solid : 79.4	Date Analyzed : 5/18/99
Dilution Factor : 2.5	By : MAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-01-5	cis-1,3-Dichloropropene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
100-41-4	Ethylbenzene	12	U
106-93-4	Ethylenedibromide	12	U
75-69-4	Fluorotrchloromethane	12	U
591-78-6	2-Hexanone	50	U
87-68-3	Hexachlorobutadiene	12	U
98-82-8	Isopropylbenzene	12	U
108-10-1	4-Methyl-2-pentanone	50	U
75-09-2	Methylene chloride	12	U
1634-04-4	Methyl-t-butylether	12	U
104-51-8	n-Butylbenzene	12	U
103-65-1	n-Propylbenzene	12	U
91-20-3	Naphthalene	120	U
108-38-3/106-42	m+p-Xylene	12	U
99-87-6	p-Isopropyltoluene	12	U
95-47-6	o-Xylene	12	U
135-98-8	sec-Butylbenzene	12	U
100-42-5	Styrene	12	U
98-06-6	tert-Butylbenzene	12	U
127-18-4	Tetrachloroethene	12	U
630-20-6	1,1,1,2-Tetrachloroethane	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
87-61-6	1,2,3-Trichlorobenzene	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U
71-55-6	1,1,1-Trichloroethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
79-01-6	Trichloroethene	12	U
96-18-4	1,2,3-Trichloropropane	12	U
95-63-6	1,2,4-Trimethylbenzene	12	U

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Volatile Organics Analysis Data Sheet

SW8468260B

Client ID : ROLLOFF	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123773
Project Name : USGEN	Lab File ID : V12327.D
Matrix : Soil	Date Collected : 5/4/99
Sample Wt/Vol : 2.52g	Date Received : 5/6/99
% Solid : 79.4	Date Analyzed : 5/18/99
Dilution Factor : 2.5	By : MAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
108-67-8	1,3,5-Trimethylbenzene	12	U
75-01-4	Vinyl chloride	25	U



Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :TRIP BLANK	Report No : 16495
Client Name :Tighe & Bond, Inc. V1038	STL Sample Number : 123776
Project Name :USGEN	Lab File ID : V12320.D
Matrix : Lab Water	Date Collected : 5/4/99
Sample Wt/Vol : 25mL	Date Received : 5/6/99
% Solid :	Date Analyzed : 5/18/99
Dilution Factor : 1	By : MAW

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
67-64-1	Acetone	10	U
108-86-1	Bromobenzene	1.0	U
71-43-2	Benzene	1.0	U
75-27-4	Bromodichloromethane	1.0	U
74-97-5	Bromochloromethane	1.0	U
75-25-2	Bromoform	1.0	U
74-83-9	Bromomethane	2.0	U
78-93-3	2-Butanone	10	U
56-23-5	Carbon tetrachloride	1.0	U
108-90-7	Chlorobenzene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
75-00-3	Chloroethane	2.0	U
67-66-3	Chloroform	1.0	U
74-87-3	Chloromethane	2.0	U
95-49-8	2-Chlorotoluene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
74-95-3	Dibromomethane	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
590-20-7	2,2-Dichloropropane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	0.5	U

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Volatile Organics Analysis Data Sheet

SW8468260B

Client ID : TRIP BLANK	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123776
Project Name : USGEN	Lab File ID : V12320.D
Matrix : Lab Water	Date Collected : 5/4/99
Sample Wt/Vol : 25mL	Date Received : 5/6/99
% Solid :	Date Analyzed : 5/18/99
Dilution Factor : 1	By : MAW

CAS NO	Compound	Quantitation Limit	Concentration
		ug/L	ug/L
10061-02-6	trans-1,3-Dichloropropene	0.5	U
100-41-4	Ethylbenzene	1.0	U
106-93-4	Ethylenedibromide	1.0	U
75-69-4	Fluorotrichloromethane	1.0	U
591-78-6	2-Hexanone	10	U
87-68-3	Hexachlorobutadiene	0.6	U
98-82-8	Isopropylbenzene	1.0	U
108-10-1	4-Methyl-2-pentanone	10	U
75-09-2	Methylene chloride	1.0	U
1634-04-4	Methyl-t-butylether	1.0	U
104-51-8	n-Butylbenzene	1.0	U
103-65-1	n-Propylbenzene	1.0	U
91-20-3	Naphthalene	5.0	U
108-38-3/106-42	m+p-Xylene	1.0	U
99-87-6	p-Isopropyltoluene	1.0	U
95-47-6	o-Xylene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
100-42-5	Styrene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
127-18-4	Tetrachloroethene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
108-88-3	Toluene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U



Volatile Organics Analysis Data Sheet

SW8468260B

Client ID : TRIP BLANK	Report No : 16495
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 123776
Project Name : USGEN	Lab File ID : V12320.D
Matrix : Lab Water	Date Collected : 5/4/99
Sample Wt/Vol : 25mL	Date Received : 5/6/99
% Solid :	Date Analyzed : 5/18/99
Dilution Factor : 1	By : MAW

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
75-01-4	Vinyl chloride	2.0	U

Analysis Report: EPA Method 8100-Modified  
Extractable (Total) Petroleum Hydrocarbons by GC/FID

Client ID: S-3 Client Name: Tighe & Bond, Inc. V1038 Project Name: USGEN Matrix: Soil Sample Wt/Vol: 30.5g % Solid: 81.2 By: LB	Report No: 16495 STL Sample Number: 123772 Lab File ID: C00620.D Date Collected: 5/4/99 Date Received: 5/6/99 Date Extracted: 5/13/99 Date Analyzed: 5/17/99 Dilution Factor: 1.2
---	--

Petroleum Product	Cn Range	Result mg/kg(dry)	Quantitation Limit mg/kg(dry)	Fingerprint Match Quality
Kerosene (C9-C22)	---	U	24	---
Fuel Oil #2 (C9-C25)	---	U	24	---
Fuel Oil #6 (C9-C38)	---	U	120	---
Motor Oil (C14-C38)	C18-C32	130	120	3

Match Quality Scale:

- 1 - Identical or nearly identical GC pattern.
- 2 - Similar GC pattern showing moderate differences.
- 3 - Significant difference in GC pattern.
- 4 - No agreement with GC patterns in target list. Quantitation based on petroleum product with similar Cn range.

Comments:

U = Analyzed for but not detected.  
 Results for Motor Oil based on chromatographable portions of petroleum product.  
 Cn range refers to the approximate chromatographic region covered by the specified petroleum product in straight-chain carbon units.  
 Dilution factor adjusted for moisture content of the sample.



Analysis Report: EPA Method 8100-Modified  
Extractable (Total) Petroleum Hydrocarbons by GC/FID

Client ID: ROLLOFF Client Name: Tighe & Bond, Inc. V1038 Project Name: USGEN Matrix: Soil Sample Wt/Vol: 30.0g % Solid: 79.4 By: LB	Report No: 16495 STL Sample Number: 123773 Lab File ID: C00681.D Date Collected: 5/4/99 Date Received: 5/6/99 Date Extracted: 5/17/99 Date Analyzed: 5/20/99 Dilution Factor: 13
---	---

Petroleum Product	Cn Range	Result mg/kg(dry)	Quantitation Limit mg/kg(dry)	Fingerprint Match Quality
Kerosene (C9-C22)	---	U	260	---
Fuel Oil #2 (C9-C25)	C14-C32	6500	260	4
Fuel Oil #6 (C9-C38)	---	U	1300	---
Motor Oil (C14-C38)	---	U	1300	---

Match Quality Scale:

- 1 - Identical or nearly identical GC pattern.
- 2 - Similar GC pattern showing moderate differences.
- 3 - Significant difference in GC pattern.
- 4 - No agreement with GC patterns in target list. Quantitation based on petroleum product with similar Cn range.

Comments:

U = Analyzed for but not detected.  
 Results for Motor Oil based on chromatographable portions of petroleum product.  
 Cn range refers to the approximate chromatographic region covered by the specified petroleum product in straight-chain carbon units.  
 Dilution factor adjusted for moisture content of the sample.



Analysis Report: EPA Method 8100-Modified  
Extractable (Total) Petroleum Hydrocarbons by GC/FID

Client ID: S-11 Client Name: Tighe & Bond, Inc. V1038 Project Name: USGEN Matrix: Soil Sample Wt/Vol: 30.2g % Solid: 91.0 By: LB	Report No: 16495 STL Sample Number: 123774 Lab File ID: C00682.D Date Collected: 5/4/99 Date Received: 5/6/99 Date Extracted: 5/17/99 Date Analyzed: 5/20/99 Dilution Factor: 11
--	---

Petroleum Product	Cn Range	Result mg/kg(dry)	Quantitation Limit mg/kg(dry)	Fingerprint Match Quality
Kerosene (C9-C22)	---	U	220	---
Fuel Oil #2 (C9-C25)	C14-C32	3600	220	4
Fuel Oil #6 (C9-C38)	---	U	1100	---
Motor Oil (C14-C38)	---	U	1100	---

Match Quality Scale:

- 1 - Identical or nearly identical GC pattern.
- 2 - Similar GC pattern showing moderate differences.
- 3 - Significant difference in GC pattern.
- 4 - No agreement with GC patterns in target list. Quantitation based on petroleum product with similar Cn range.

Comments:

U = Analyzed for but not detected.  
 Results for Motor Oil based on chromatographable portions of petroleum product.  
 Cn range refers to the approximate chromatographic region covered by the specified petroleum product in straight-chain carbon units.  
 Dilution factor adjusted for moisture content of the sample.



Analysis Report: EPA Method 8100-Modified  
Extractable (Total) Petroleum Hydrocarbons by GC/FID

Client ID: COMP#1	Report No: 16495
Client Name: Tighe & Bond, Inc. V1038	STL Sample Number: 123775
Project Name: USGEN	Lab File ID: C00623.D
Matrix: Soil	Date Collected: 5/4/99
Sample Wt/Vol: 30.3g	Date Received: 5/6/99
% Solid: 81.3	Date Extracted: 5/13/99
By: LB	Date Analyzed: 5/17/99
	Dilution Factor: 1.2

Petroleum Product	Cn Range	Result mg/kg(dry)	Quantitation Limit mg/kg(dry)	Fingerprint Match Quality
Kerosene (C9-C22)	---	U	24	---
Fuel Oil #2 (C9-C25)	C14-C30	1900	24	3
Fuel Oil #6 (C9-C38)	---	U	120	---
Motor Oil (C14-C38)	---	U	120	---

Match Quality Scale:

- 1 - Identical or nearly identical GC pattern.
- 2 - Similar GC pattern showing moderate differences.
- 3 - Significant difference in GC pattern.
- 4 - No agreement with GC patterns in target list. Quantitation based on petroleum product with similar Cn range.

Comments:

U = Analyzed for but not detected.  
Results for Motor Oil based on chromatographable portions of petroleum product.  
Cn range refers to the approximate chromatographic region covered by the specified petroleum product in straight-chain carbon units.  
Dilution factor adjusted for moisture content of the sample.



**SEVERN TRENT LABORATORIES (MA)**  
**DATA REPORTING QUALIFIERS AND TERMINOLOGY**

A number of data qualifiers are widely used within the environmental testing industry and may be utilized in our data reports. The following definitions of these qualifiers are included as a service to our clientele. The majority of the qualifiers have evolved from the EPA contract laboratory program (CLP).

**ORGANIC QUALIFIERS**

- U - Indicates that the compound was analyzed for but not detected. The sample detection limit is corrected for dilution and percent moisture. This detection limit is not necessarily the instrument detection limit.
- J - Indicates an estimated value. This qualifier is used when mass spectral data indicates the presence of a compound that meets the identification criteria and the result is less than the specified quantitation limit but no less than one-half the quantitation limit.
- B - Indicates that the analyte was found in both the sample and its associated laboratory blank. It indicates possible/probable blank contamination and warns the data user to use caution when applying the results of this analyte.
- E - This qualifier indicates compounds whose concentrations exceed the calibration range of the instrument for the specific analysis.
- D - Indicates all compounds identified in an analysis at a secondary dilution factor.
- RE - This suffix indicates a re-analyzed sample and is appended to the sample number on the result form.
- RR - This suffix indicates a re-extracted and re-analyzed sample and is appended to the sample number on the result form.

**INORGANICS**

- U - Indicates that the analyte was analyzed for but not detected.
- E - Indicates an estimated value because of the presence of interference.

05/27/99  
q:\qaqc\wpr\qualifiers.doc







Severn Trent Laboratories  
Westfield Executive Park  
53 Southampton Road  
Westfield, MA 01085

June 08, 1999

Mr. Mike Heidorn

Tighe & Bond, Inc. V1038  
25 Village Sq.  
Bellows Falls, VT. 05101

Report Number : 16864

Tel: (413) 572-4000  
Fax: (413) 572-3707

Dear Mr. Heidorn,

The analysis of your sample(s) submitted on 5/26/99 is now complete and the appropriate analytical report is enclosed. The samples were prepared and analyzed according to EPA established methodologies and protocols. If you have any questions regarding the report or any part of our service, please do not hesitate to contact us. Thank you for using Severn Trent Laboratories, and we look forward to receiving your next samples.

SEVERN TRENT LABORATORIES

Michael F. Wheeler, Ph.D.

Laboratory Director

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- Newburgh, NY
- Houston, TX
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CASE NARRATIVE FOR REPORT NUMBER 16864

Client Name : Tighe & Bond, Inc. V1038

Project Name : USGEN

Date : June 08, 1999

Sample Number	Comments
125323	TOX analysis was performed at STL Chicago, IL.

Inorganics Analysis Data Sheet

Client ID : ROLLOFF	Report No : 16864
Client Name : Tighe & Bond, Inc. V1038	STL Sample Number : 125323
Project Name : USGEN	Date Collected : 5/4/99
Matrix Name : Soil	Date Received : 5/26/99

CAS NO	Analyte	Result	Units	Method	Date Analyzed	By
	TCLP Extraction - Metals	Extracted		SW846 1311	5/27/99	KS
7439-92-1	TCLP Lead	1100	ug/L	SW8466010A	6/2/99	BG



Inorganics Analysis Data Sheet

Client ID: ROLLOFF  
Client Name: Tighe & Bond, Inc. V1038  
Project Name: USGEN  
Matrix: Soil

STL Report Number: 16864  
STL Sample Number: 125323  
Date Collected: 05/04/99  
Date Received: 06/03/99  
By: SUB

CAS No.	Analyte	Result	Units	Method	Date Analyzed
	Total Organic Halogen	34	mg/kg	SW846 9020B	6/3/99

**SEVERN TRENT LABORATORIES (MA)**  
**DATA REPORTING QUALIFIERS AND TERMINOLOGY**

A number of data qualifiers are widely used within the environmental testing industry and may be utilized in our data reports. The following definitions of these qualifiers are included as a service to our clientele. The majority of the qualifiers have evolved from the EPA contract laboratory program (CLP).

**ORGANIC QUALIFIERS**

- U - Indicates that the compound was analyzed for but not detected. The sample detection limit is corrected for dilution and percent moisture. This detection limit is not necessarily the instrument detection limit.
- J - Indicates an estimated value. This qualifier is used when mass spectral data indicates the presence of a compound that meets the identification criteria and the result is less than the specified quantitation limit but no less than one-half the quantitation limit.
- B - Indicates that the analyte was found in both the sample and its associated laboratory blank. It indicates possible/probable blank contamination and warns the data user to use caution when applying the results of this analyte.
- E - This qualifier indicates compounds whose concentrations exceed the calibration range of the instrument for the specific analysis.
- D - Indicates all compounds identified in an analysis at a secondary dilution factor.
- RE - This suffix indicates a re-analyzed sample and is appended to the sample number on the result form.
- RR - This suffix indicates a re-extracted and re-analyzed sample and is appended to the sample number on the result form.

**INORGANICS**

- U - Indicates that the analyte was analyzed for but not detected.
- E - Indicates an estimated value because of the presence of interference.

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