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Site Investigation Report

T-1 Transformer
Pulp & Paper of America
Burgess Pulp Mill
Berlin, New Hampshire

Superfund Records Center
SITE:
BREAK:
OTHER:

Prepared for:

Pulp & Paper of America
Berlin, New Hampshire

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Superfund Records Center
SITE: Chlor Alkali
BREAK: 21.3
OTHER: 557858

Prepared by:

Tighe&Bond

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SECTION 1

1.1 PURPOSE OF INVESTIGATION

This report was prepared for Pulp & Paper of America (PPA) to summarize the additional assessment activities conducted at the T-1 transformer yard (the site) since February 24, 2000. The purpose of the additional investigation was to further delineate the horizontal and vertical extent of polychlorinated biphenyl (PCB) contamination in the soil and groundwater, as required by 40 CFR 761. The data was also collected to facilitate a Human Health Risk Assessment in accordance with the *Risk Assessment Guidance for Superfund* (RAGS) at the request of the United States Environmental Protection Agency (EPA). A Site Locus including the Berlin, New Hampshire Quadrangle map, published in 1970 by the U.S.G.S., is provided as Figure 1 in Appendix D.

1.2 EPA REVIEW OF SCOPE

The scope of the assessment activities was developed based on information from the February 24, 2000 letter report entitled *Summary of Site Investigations and Removal Actions* (submitted to the EPA) and discussions in a March 23, 2000 meeting with staff from PPA, EPA, American Tissue Corporation (ATC), and Tighe & Bond. The scope was submitted to the EPA on May 17, 2000 (Appendix A) for their review and approval. PPA received comments on the scope from Kimberly Tisa, PCB Coordinator at EPA in a May 23, 2000 letter (Appendix B). The scope was subsequently revised as outlined in a May 24, 2000 response letter (Appendix C). In a May 26, 2000 phone conversation between Richard Geisler of Tighe & Bond and Doug Heath of the EPA, EPA verbally agreed to the revised scope and requested that slug testing of the bedrock wells not be conducted as it would not provide accurate data for that aquifer.

SECTION 2

2.1 SUMMARY AND HISTORY OF T-1 SITE

The T-1 transformer yard occupies approximately 2,650 square feet and includes a one-story cinder block building located in the southeast corner of the yard measuring approximately eighteen feet long and fourteen feet wide. This building is identified as the control house on the Site Plan (Figure 2 in Appendix D) and houses electrical switching gear. Two small pad-mounted transformers and one large pad-mounted transformer (Transformer T-1) are located to the west and north of the control house, respectively. Towers directing electrical cables to Transformer T-1 are located to the west of that unit. A seven-foot tall chain link fence surrounds the transformer yard and the ground of the transformer yard is covered by approximately six inches of crushed stone.

The T-1 transformer yard is located in the southwest corner of the PPA Burgess Mill. The area surrounding the yard includes the Androscoggin River, located approximately eighty feet to the west; mill buildings, located approximately one hundred and ninety feet to the east and a large spill tank, located approximately seventy feet to the south. The entire area surrounding the yard is paved with bituminous concrete. A three-foot tall concrete berm is located approximately fifteen feet to the west of the yard, between the yard and the Androscoggin River. A steep vegetated hill exists between the berm and the river.

Based on a review of historical photographs, it appears that the site was used as an electrical substation since before 1926. Various photographs show that the area was built-up with fill as the surrounding area was developed and no facility buildings were located in this area. There was no known or reported use of PCBs in this area other than the possible use in the transformers.

2.2 CLEAN-UP STANDARDS

According to the *PCB Manufacturing, Processing, Distributing in Commerce and Use Prohibitions* at 40 CFR 761.125(c)(2)(ii) (PCB Mega-Rule), spills which occur in outdoor electrical substations (as defined in 40 CFR 761.123) shall be decontaminated to either 25 milligrams per kilogram (mg/kg) or 50 mg/kg by the responsible party provided that a label or notice is visibly placed in the area. Also, if decontamination to these levels will jeopardize the electrical equipment at the substation, the EPA regional office may establish an alternative cleanup level. One goal of the investigation project is to obtain additional data to further delineate the lateral and vertical extent of contamination at the T-1 site so that a human health risk assessment can be completed to determine a site specific PCB cleanup level.

In the State of New Hampshire, groundwater and soil at disposal sites are categorized for risk assessment purposes based upon the location and uses of the site and the site groundwater. Specific Method 1 standards have been developed for both soil and groundwater based upon these uses and the potential for human or environmental exposure. Within an individual site, several applicable categories may be present, including one or more soil categories and groundwater categories. Groundwater and soil category classification criteria are set forth in the New Hampshire Department of Environmental Services (NHDES) Risk Characterization and Management Policy (RCMP), Section 7.0 (January 1998).

For the purpose of evaluating the data in this report, the soil and groundwater laboratory results were compared to the Method 1 RCMP criteria. All three soil classification criteria (i.e., S-1, S-2, and S-3) and two groundwater classification criteria (GW-1 and GW-2) are included in the comparison tables. The RCMP soil clean-up standard for PCBs is 1 mg/kg, as regulated by the S-1 and S-2 standards, and 2 mg/kg as regulated by the S-3 standard. The RCMP upper concentration limit (UCL) for PCB is 20 mg/kg.. The PCB GW-1 standard of 0.5 micrograms per liter (μg/l) was used to assess the groundwater data. There is no listed GW-2 standard for PCBs in the RCMP. A final determination of the applicable criteria and risk assessment approach has not been made, so the RCMP limits listed in the data tables are presented for comparison purposes only.

2.3 REVIEW OF PREVIOUS INVESTIGATION RESULTS

On April 7, 1999, as part of a due diligence site investigation of the Burgess Mill, Tighe & Bond personnel collected a soil sample (identified as T-1 Trans) from the west side of a concrete pad located in the southwest corner of the T-1 transformer yard. The sample contained 10 mg/kg of PCBs (Arochlor-1260) which exceeded the RCMP soil clean-up standards of 1 mg/kg as regulated by the S-1 and S-2 standards and 2 mg/kg as regulated by the S-3 standard.

In response to the identification of elevated concentrations of PCBs in the soil, PPA conducted voluntary site investigation activities and remedial actions at the site from April 1999 through December 1999. The following activities were conducted at the site:

- Initial soil sample collection and analysis;
- Excavation of PCB contaminated soil and debris;
- Confirmatory soil sample collection and analysis;
- Disposal of PCB contaminated soil and debris;
- Advancement of six soil borings surrounding the area (B-1 through B-6);
- Installation of three groundwater monitoring wells (MW-1 through MW-3);

- Calculation of groundwater gradient and direction of flow; and
- Groundwater sample collection and analysis.

In summary, approximately eighty-seven tons (57 cubic yards) of PCB contaminated soil and debris were excavated and removed from the T-1 transformer yard site for off-site disposal. The soils that were removed contained PCBs concentrations in the range of 2,000 mg/kg to 66,000 mg/kg and the area was excavated to bedrock. The excavated material was heavily stained with what appered to be a dark (black) oily material. PCBs remain in the soil and groundwater at the site above the RCMP S-1, S-2 and S-3 soil standards and the RCMP GW-1 groundwater standard. Also, PCBs remain in the soil at several locations above the RCMP UCL of 20 mg/kg. Those results that exceeded the RCMP criteria are summarized in Section 4.1 of this report along with the additional investigation data.

The details of the above investigations were presented in a February 24, 2000 letter report entitled *Summary of Site Investigations and Removal Actions* prepared by Tighe & Bond on behalf of PPA. Historic soil and groundwater sampling locations are shown on the Site Plan (Figure 2) in Appendix D of this report.

SECTION 3

3.1 OVERVIEW

As outlined in the Scope of Work submitted to the EPA (Appendix A and Appendix C), additional site investigation activities were conducted to delineate the horizontal and vertical extent of PCB contamination in soil and groundwater at the T-1 transformer site. The major tasks included:

- Advancing additional soil borings inside the transformer yard;
- Advancing additional soil borings between the river and the concrete wall located along the west side of the yard (bank area);
- Installing additional overburden (shallow) monitoring wells and a series of bedrock (deep) monitoring wells at the site;
- Completing a study of bedrock fractures at the site;
- Completing hydraulic conductivity testing of groundwater at the site;
- Collecting soil and groundwater samples from the site for PCB and VOC analyses; and,
- Submitting selected soil and groundwater samples to Phillips Analytical for PCB congener analysis.

The details of the investigation tasks are presented in this section.

3.2 SOIL BORING ADVANCEMENT INSIDE T-1 AREA

The EPA requested that soil borings be advanced within the substation yard to delineate PCB contamination in soils to the north of the control house. To accomplish this task, American Drilling Services, Inc. (ADS) of Westminster, Massachusetts advanced four additional soil borings (B-7 through B-10 on Figure 2) within the substation yard, using handheld Geoprobe direct push technology. The boring logs are attached in Appendix E.

The area to the north of the control house was previously excavated to approximately two to four feet below grade and the area was filled with clean fill material. Soil samples were collected in two-foot increments at five-foot intervals starting at five feet below grade (below the clean fill area) until drilling refusal was encountered. Up to two samples were collected from each boring. Soil samples were screened in the field for total volatile organic vapors (TVOVs) using a photoionization detector (PID) utilizing a 10.6 eV ultra violet (UV) lamp.

The soil samples collected from each soil boring were submitted to Severn Trent Laboratories (STL) for PCB analysis via EPA Method 8082 (total of six samples). In addition, Tighe & Bond personnel selected soil sample from each soil boring (the sample that reported the highest PID reading or, if not detected, randomly selected) for VOC analysis via EPA Method 8260 (total of four samples). Samples from this area were not

submitted to Phillips Analytical for PCB congener analysis via EPA Method 680 because of the initial low PCB results (see Section 3.4 for those samples that were submitted for congener analysis). The results of the soil sample analysis are summarized in Table 1 in Appendix F. All of the raw analytical reports are attached in Appendix G.

3.3 SOIL BORING ADVANCEMENT ALONG RIVER BANK

As described in the February 24, 2000 *Summary of Site Investigations and Removal Actions* report prepared for the site, one soil sample (T-1 Bank) was collected from a location approximately twenty feet west of the edge of the concrete berm to the west of the transformer yard at approximately 1.5 feet below grade. This soil sample exhibited a PCB concentration of 1.10 mg/kg exceeding the applicable soil standards.

To delineate the horizontal and vertical extent of PCB contamination at T-1 Bank, four soil borings (B-11 through B-14 on Figure 2) were advanced around the T-1 Bank sample location using handheld Geoprobe direct push technology. The final locations of soil borings B-11 through B-14 were determined based primarily on field conditions. As feasible, locations were identified where the possibility of PCB/groundwater seepage from the bedrock to overlying soils or the atmosphere is the greatest. Soil samples were collected at each location from surfical soil (zero to two feet below grade) and at B-11 and B-13 from soil at approximately four feet below grade. Refusal was hit at approximately two feet at borings B-12 and B-14. Each soil sample was screened in the field for TVOVs using a PID. The boring logs are in Appendix E.

The soil samples collected from soil borings B-11 through B-14 were submitted to STL for PCB analysis via EPA Method 8082 (total of 6 samples). In addition, one soil sample from each soil boring was submitted for VOC analysis via EPA Method 8260 (total of four samples). Samples from this area were not submitted to Phillips Analytical for PCB congener analysis via EPA Method 680 because of the initial low PCB results (see Section 3.4 for those samples that were submitted for congener analysis). The sample results are summarized in Table 1 in Appendix F.

3.4 SOIL BORING ADVANCEMENT DURING WELL INSTALLATION

As requested by EPA, four additional overburden wells (shallow wells MW-4S, MW-5S, MW-7S) and a series of five bedrock monitoring wells (deep wells MW-1D, MW-2D, MW-3D, MW-5D, MW-6D) were drilled around the perimeter of the T-1 transformer yard. The purpose was to assess PCB contamination in groundwater within both the unconsolidated zone (overburden soil above the bedrock) and bedrock. Where feasible, a deep well was coupled with a shallow well in order to determine the hydraulic gradient of groundwater at the site. The following summarizes the locations of each monitoring well.

The monitoring well locations are identified on Figure 2 in Appendix D and in the following table. The boring logs are included in Appendix E.

Monitoring Well Locations T-1 Transformer Yard Burgess Mill Berlin, New Hampshire		
Well ID	**Well Type (Deep or Shallow)**	**Description of Well Location**
MW-1D	Deep Well	Adjacent to MW-1
MW-2D	Deep Well	Adjacent to MW-2
MW-3D	Deep Well	Adjacent to MW-3
MW-4S	Shallow Well	Near soil borings B-3 and B-4
MW-5S	Shallow Well	Between MW-1 and soil boring B-3
MW-5D	Deep Well	Between MW-1 and soil boring B-3
MW-6S	Shallow Well	Upgradient of the site; east of the control house
MW-6D	Deep Well	Upgradient of the site; east of the control house
MW-7S	Shallow Well	South of MW-3
Deep Well indicates a monitoring well installed into bedrock. Shallow Well indicates a monitoring well installed into the overburden soils (above bedrock). Monitoring well locations are identified on Figure 2 in Appendix D.		

Soil borings for monitoring well installation were advanced using hollow-stem auger drilling methods through the overburden materials. While the borings for the monitoring wells were being advanced, soil samples were collected from MW-1D, MW-2D, MW-3D, MW-4S, MW-5S, MW-6D, and MW-7S at 5-foot intervals using a split-spoon sampling device. The approach was to collect soil samples from one boring (deep or shallow) from each pair of well borings drilled. Representative soil samples were collected from each of the borings and screened for TVOVs.

Soil samples collected from the installation of each well were submitted to STL for PCB analysis via EPA Method 8082 (total of twenty-two samples). In addition, Tighe & Bond personnel selected one soil sample from each well for VOC analysis via EPA Method 8260 (estimated total of seven samples). The soil sampling results are summarized in Table 2 in Appendix F.

Selected soil samples were also submitted to Phillips Analytical for PCB congener analysis via EPA Method 680. The samples were selected from areas where the maximum PCB concentrations were detected in previous investigations - MW-1D (S-4), MW-2D (S-1), and MW-4S (S-2). These results are summarized in Table 3 in Appendix F.

3.5 BEDROCK CORING

As directed by the EPA, bedrock coring was completed at each location proposed for bedrock monitoring well installation. The purpose of collecting bedrock cores from the site was to assess the type and quality (extent of weathering and fractures) of bedrock beneath the site.

Subsequent to the installation of the soil boring at each deep well location (as described above), four-inch inside diameter (I.D.) flush threaded steel casing was advanced (by spinning) through the overburden materials and seated approximately two feet into competent bedrock. Once the four-inch casing was seated into bedrock, a four-inch diameter roller-bit was advanced through the center of the casing to the depth of the bottom of the casing to wash out any overburden materials.

For rock drilling, a minimum three-inch (NX) diamond core bit was run through the four-inch casing and into bedrock. The rock was drilled and core barrel samples examined at five-foot intervals. The core bit was advanced to the desired depth. Subsequent to the completion of the rock coring, a four-inch diameter roller-bit was advanced through the cored section of rock in preparation for the installation of a two-inch diameter bedrock monitoring well (as described above).

As a means of quantitatively assessing the concentration of bedrock fractures at each location, Rock Quality Determination (RQD) values were calculated in the field for each core segment obtained during this investigation. RQD values were determined using the following equation:

$$RQD = (L/(R-C))*100$$

L = Sum of the total length of core pieces greater than 4 inches in length;

R = Length of the total core run; and

C = Length of core left in the borehole.

Generally, RQD values greater than 90% are representative of excellent rock quality. RQD values between 75-90% are indicative of good rock quality and values less than 75% are representative of fair to poor rock quality. Coring was completed at each location until RQD values exceed 90% or until fifteen feet of bedrock has been cored.

As part of the RQD evaluations, each fracture was inspected for staining (iron or other) or product. In addition, each core was photographed. An attempt to measure fracture orientation was made by comparing the frequency and depth of fractions from each boring location. Each core was placed inside a box for storage purposes. The cores will be saved for the duration of the project.

The details of the boring were recorded on a boring log, including the following information (at a minimum):

- Name and address of the drilling firm;
- Dates and times of starting, stopping and completion of the boring;
- Name of the driller;
- Diameter and depth of boring and record of casing;
- Make and type of equipment used, including drilling methods;
- Description of all soil and rock strata encountered with the driller's best estimate of the depths at which changes in material occur;
- Descriptions of water levels and drilling fluid behavior;
- Descriptions of water bearing zones, including depth, thickness and estimated yield;
- Coring time per foot of advancement; and,
- Observations of the rock core inspection.

Rock Quality Designation (RQD) values calculated on rock cores ranged from 49% in MW-1D C-2 and 97% in MW-3D C-1. RQD values at each location met or exceeded 90% at each location between seventeen feet and thirty feet below grade. The rock fractions in wells MW-1D (at 16.5 feet, between 20 and 20.8 feet and 22.4 feet), MW-2D (at 15.7 feet) and MW-3D (at 14 feet) contained anomalous dark (black) staining. The calculated RQDs and log information are included on the boring logs in Appendix E.

3.6 MONITORING WELL INSTALLATION

Monitoring wells were constructed of two-inch inside diameter (I.D.) flush-threaded Schedule 40 polyvinyl chloride (PVC) well materials. No glues or solvents were used in the installation of the wells. Shallow wells were constructed with ten-foot sections of 0.010-inch slotted screens bisecting the apparent groundwater table. Deep wells were constructed with five-foot sections of 0.010-inch slotted screens and set at a depth determined in the field by a Tighe & Bond hydrogeologist. The bottom of each well was fitted with a threaded cap or well point.

The annular space surrounding each well screen was filled with No.1 filter sand, or other graded sand selected by the drilling inspector, based upon field observations. The sand pack extends one to two feet above the top of the screen to allow for settlement after installation. A two-foot seal of bentonite pellets or chips was placed above the sand pack in each well. The remaining annular space above the bentonite seal was backfilled with a cement/bentonite (95%/5%) grout to within approximately two feet of the surface. A layer of drainage sand was placed above the top of the grout.

A locking expansion cap was placed in the riser pipe of each well. The wells were completed at the surface with flush-mounted protective casings cemented in place.

Protective casings were fitted with gaskets to minimize leakage. A sand drainage layer was placed beneath the cement surface seal at the depth at which the bottom protective casing was installed to allow condensation to drain from the casing.

Following completion of the wells, each well was developed by surging or pumping to remove fine materials from the formation surrounding the screen. Water removed during development was screened using the PID and containerized in 55-gallon drums. The water removed from the wells during this process was stored on site. The disposal method for the development water was determined based upon analytical data for samples collected from the monitoring wells (see Section 3.11).

3.7 GROUNDWATER SAMPLING

Prior to groundwater sample collection at the site, the newly installed groundwater monitoring wells were given a minimum of two weeks to equilibrate. Tighe & Bond personnel sampled each of the twelve wells (seven shallow and five deep) via low flow sampling. Low-flow groundwater samples were collected pursuant to the *United States Environmental Protection Agency (EPA) Region I Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells,* July 30, 1996 publication. During low flow sampling, measurements for pH, Eh, dissolved oxygen, turbidity, specific conductance and temperature will be collected from the purged water. Low-flow groundwater sampling data sheets for each well sampled are included as Appendix H.

The groundwater samples were submitted to STL for VOCs and PCBs analyses via EPA Method 8260 and 8082, respectively. The results are summarized in Table 4 in Appendix F.

Three groundwater samples were also selected and submitted to Phillips Analytical for PCB congener analysis via EPA Method 680. The results of the congener analysis of the groundwater samples are summarized in Table 5 in Appendix F.

3.8 HYDRAULIC CONDUCTIVITY TESTING

To determine the groundwater flow velocity, a series of hydraulic conductivity tests were performed to determine the hydraulic conductivity of the subsurface soils at the site. The tests were performed by placing a Troll 4000 data logger pressure transducer at the bottom of each well. The transducer measures the pressure of the water above it and translates that pressure reading into a length of water column above the transducer. A small diameter PVC "slug" was then placed into the well and the water level allowed to equilibrate. Once the water level equilibrates, the data logger was engaged and the slug was quickly removed. The data logger then measured the rate at which the water level re-equilibrated. Data was collected until the water level indicated on the pressure

transducer in the well recovered to within 0.05 feet of the original static water level reading or for an interval of about 30 minutes, whichever was reached first. Testing was conducted at well MW-6 and the data sheets are attached in Appendix I. Due to the length of water column in the well (i.e., less than three feet), hydraulic conductivity tests could not be completed at this location.

3.9 SITE SURVEY

Tighe & Bond performed a site survey at the completion of field activities to tie the monitoring wells and soil boring locations into the previous survey data collected on December 23, 1999 by York Surveyors of Berlin, New Hampshire. The site maps with boring and well locations are in Appendix D.

3.10 GROUNDWATER AND BEDROCK ELEVATIONS

Groundwater elevation data was also collected during the sampling event. On June 12, 2000, groundwater in the shallow wells was measured between 4.44 feet (MW-6S) and 12.28 feet (MW-1S) below grade across the site. Groundwater was not encountered in MW-5S. On June 12, 2000, groundwater in the deep wells was measured between 4.57 feet (MW-6D) and 22.7 feet (MW-2D) below grade across the site. Table 6 in Appendix F is a summary of the groundwater elevation.

Auger refusal (top of bedrock) was encountered between 10.9 feet (MW-6D) and 14.9 feet (MW-2D) below grade across the site.

3.11 MANAGEMENT OF WASTE

Soil, groundwater and personal protective equipment (PPE) wastes were generated as the result of subsurface explorations at the site. These wastes were containerized in 55-gallon drums, properly labeled and temporarily stored on-site until the completion of all field work. Upon the completion of all field work, the contents of each drum were characterized and, as needed, transported by a licensed hazardous water hauler under a hazardous waste manifest to a permitted facility for proper disposal. Refer to Appendix J for the disposal logs and associated paperwork.

4.1 SOIL RESULTS

4.1.1 Review of PCB and VOC Results

As outlined in Section 3, the soil samples collected from the borings and monitoring wells were submitted to STL of Westfield, Massachusetts for PCB and VOC analysis. The results were compared with the NHDES RCMP soil clean-up standards. The comparison of the data to the RCMP criteria is presented in Table 1 and 2 in Appendix F.

There were no exceedances of the VOC RCMP limits. However, there were several locations where the PCB concentrations in the soil exceeded one or more of the RCMP criteria. The results were grouped into three classifications to help categorize the level of impacts. These categories include:

Low Level Impacts	Greater than 1 mg/kg but less than the S-3 limit of 2 mg/kg),
High Level Impacts	Greater than the S-3 limit of 2 mg/kg but lower than the UCL of 20 mg/kg), and
Very High Level Impacts	Greater than the UCL of 20 mg/kg).

Results that were presented in the previous February 24, 2000 study report are listed in red (italic) and the results from the additional site investigations described in Section 3 of this report are listed in black.

Low Level Impacts - Soil Samples that Only Exceed the RCMP S-1 and S-2 Soil Standard of 1 mg/kg (between 1 mg/kg and 2 mg/kg):

- *T-1 Bank at 1.10 mg/kg (collected approximately 1.5 feet below grade);*
- 1.8 mg/kg at boring location B-9 at a depth of 7 feet (B-3 S-2);
- 1.1 mg/kg at boring location B-13 at a depth of 3 to 3.8 feet (B-13 S-2);
- 1.4 mg/kg at well location MW-3D at a depth of 10 to 12 feet (MW-3D S-3);
- 1.6 mg/kg at well location MW-4S at a depth of 5 to 7 feet (MW-4S S-2);
- 1.2 mg/kg at well location MW-6D at a depth of 5 to 7 feet (MW-6D S-2); and
- 1.5 mg/kg at well location MW-7S at a depth of 0.5 to 2.5 feet (MW-7S S-1).

High Level Impacts - Soil Samples that Only Exceed the RCMP S-3 Soil Standard of 2 mg/kg (between 2 mg/kg and 20 mg/kg):

- *19 mg/kg at boring location B-3 at depth interval 10 to 11.5 feet (B-3 S-3);*
- *14 mg/kg from T-1 ESW (east side wall);*
- 3.4 mg/kg at boring location B-7 at a depth of 5 feet (B-7 S-1);

- 7.9 mg/kg at boring location B-8 at a depth of 8 feet (B-8 S-2);
- 3.8 mg/kg at boring location B-10 at a depth of 5 feet (B-10 S-1);
- 6.4 mg/kg at boring location B-13 at a depth of 0 to 1 feet (B-13 S-1);
- 11 mg/kg at boring location B-14 at a depth of 1 to 1.5 feet (B-14 S-1);
- 10 mg/kg at well location MW-1D at a depth of 14 to 14.6 feet (MW-1D S-3);
- 9 mg/kg at well location MW-2D at a depth of 10 to 12 feet (MW-2D S-3);
- 7.3 mg/kg at well location MW-3D at a depth of 5 to 7 feet (MW-3D S-2);
- 13 mg/kg at well location MW-4S at a depth of 10 to 12 feet (MW-4S S-3); and
- 8.1 mg/kg at well location MW-6D at a depth of 1 to 3 feet (MW-6D S-1).

Very High Level Impacts - Soil Samples that Exceed the RCMP UCL of 20 mg/kg:

- *31 mg/kg from boring location B-2 at depth interval one to three feet (B-2 S-1);*
- *6,856 mg/kg from T-1 SSW (south side wall);*
- *36 mg/kg from T-1 WSW (west side wall);*
- *6,727 from T-1 NSWB (north side wall bottom);*
- *40 mg/kg from T-1 NSWT (north side wall top);*
- 25 mg/kg at boring location B-8 at a depth of 5 feet (B-8 S-1);
- 48 mg/kg at well location MW-1D at a depth of 1 to 3 feet (MW-1D S-1);
- 202 mg/kg at well location MW-2D at a depth of 1 to 3 feet (MW-2D S-1);
- 28 mg/kg at well location MW-2D at a depth of 5 to 7 feet (MW-2D S-2); and
- 34 mg/kg at well location MW-3D at a depth of 1 to 3 feet (MW-3D S-1).

Within the T-1 transformer yard area proper (former fenced area), soil samples from all four of the new borings drilled in this area (B-7, B-8, B-9, and B-10) contained elevated levels of PCBs at depths of five to eight feet below grade (below the area that was previously excavated). Since the borings were drilled to refusal (bedrock), the vertical extent of soil impacts within the T-1 yard area is defined at the bedrock layer (ranging from five to ten feet deep). The maximum concentration detected in this area was 25 mg/kg (above the UCL) from boring B-8 collected at a depth of five feet. This boring is located nearest to the original hot spot area that was excavated. All other soil samples with detectable levels of PCBs had concentrations between 3.4 and 7.9 mg/kg.

Along the southwest side of the transformer yard (just outside the yard before the bank area), soils collected from drilling the new wells MW-1D, MW-2D, and MW-3D contained very high levels of PCBs (34 to 202 mg/kg) at the shallower depths of one to seven feet. At deeper depths (seven to fifteen feet), the PCB concentrations ranged from 7.3 to 10 mg/kg. At these locations, the soils appear to be impacted with PCBs from the surface to a depth near or at the bedrock surface. The soil collected from well location MW-7S had low levels of PCB impacts only in the surficial soils (1.5 mg/kg at a depth of one-half to two and a half feet).

Along the riverbank area (T-1 Bank), the new borings were drilled around the original T-1 bank sample which contained 1.1 mg/kg of PCBs. PCBs were detected in borings B-13 and B-14 at concentrations ranging from 1.5 to 6.3 mg/kg of PCBs at depths of one to four feet. Borings B-12 and B-11 did not contain elevated concentrations of PCBs. Drilling could not be conducted past a maximum depth of four feet, so the PCB impacts are surficial.

PCBs were detected in the subsurface soils (depth of five to twelve feet) at the north end of the site (well MW-4S and boring B-3). Unlike most other locations outside of the transformer yard proper, there are no PCB impacts detected at the surface. The subsurface impacts may be due to the historic use of fill in this area. The maximum PCB concentration detected in this area was 19 mg/kg at boring B-3 at a depth of approximately eleven feet. This concentration is similar to the PCB level detected in a sample collected at a depth of approximately eleven feet when MW-4 was installed (13 mg/kg).

PCBs were also detected in the surface soils at the "background" location at MW-6D. The sample collected from the surface contained 8.1 mg/kg of PCBs and the sample collected at a depth of seven feet contained 1.2 mg/kg. The sample collected at ten feet did not contained detectable levels of PCBs. It appears that MW-6 is too close to the transformer yard to be considered background.

Overall, with the latest round of soil sampling, the lateral boundary of PCB impacted soils has expanded and a "clean" boundary was not defined. The highest PCB concentrations (i.e., greater than 100 mg/kg) are limited to the sidewalls of the original excavation area and one surface sample at MW-2D. The PCB soil concentrations at all other sample locations were below 50 mg/kg. It appears that the primary source area was identified and removed during the previous excavation program.

4.1.2 Soil PCB Congener Results

Selected samples were submitted to Phillips Analytical for PCB congener analysis via EPA Method 680. Samples were selected based on visual observations and PID readings from the field. The purpose of this analysis was to help identify the type of PCBs present in the soils.

PCBs are a category or family of chemical compounds formed by the addition of chlorine to biphenyl. There are a total of 209 individual PCB congeners. The longevity of PCBs in the environment increases with an increase in the degree of chlorination. Also, higher chlorinated congeners have a lower tendency to leach than lower chlorinated congeners. (EPA, Office of Water, Technical Fact Sheet of PCBs).

The three samples selected for the congener analysis were MW-1D (S-4), MW-2D (S-S-1), and MW-4S (S-2) and the results are summarized in Table 3 in Appendix F. The first half of the table lists the individual congeners that were detected in the sample (i.e., PCB 167). The second half of the table lists the summation of each of the PCB homologues (groups such as mono, di, tri, etc.). Only a few specific PCB congeners were detected in the samples including PCB-123, PCB 118, PCB-114, PCB-105, PCB-167, PCB-156, PCB-157, and PCB-189. The primary homologue detected in all three samples was hexachlorobiphenyl.

The total PCB homologue value listed from EPA Method 670 (Philips Laboratory) may differ from the value detected using the EPA Method 8082 (STL) because of the significant difference in the test methodologies, potential PCB degredation, and the difficulty in obtaining a homogeneous split of a solid sample. The total PCB results appear to compare better in MW-4S (S-2), with a PCB concentration of 220 mg/kg using Method 670 and 202 mg/kg using Method 8082, because there is less opportunity for results interpretation in samples with higher PCB concentrations.

4.2 GROUNDWATER RESULTS

4.2.1 Review of PCB and VOC Results

As summarized in Section 3, the groundwater monitoring wells were sampled and the samples were submitted for PCB and VOC analysis. Well MW-5S could not be sampled because it was dry. The results are summarized in Table 4 in Appendix F along with the respective RCMP groundwater (GW-1 and GW-2) criteria.

There were several groundwater samples that exceeded the PCB RCMP limit of 0.5 μg/l. Results that were presented in the previous February 24, 2000 study report are listed in red (italic) and the results from the additional site investigations described in Section 3 of this report are listed in black:

- *MW-1S on October 25, 1999 at 0.5 μg/l;*
- *MW-1S on December 15, 1999 at 0.74 μg/l;*
- *MW-3S on December 15, 1999 at 0.90 μg/l;*
- Pair of wells MW-1S (10 μg/l) and MW-1D (2.5 μg/l);
- Well MW-2D at 2.1 μg/l (not present in the shallow well MW-2S);
- Pair of wells MW-3S (9.8 μg/l) and MW-3D (2.7 μg/l);
- Well MW-6D at 0.73 μg/l (not present in the shallow well MW-6S); and
- Well MW-7S at 2.8 μg/l (no deep well drilled in this area).

The groundwater in some of the shallow wells (MW-1S, MW-3S, and MW-7S) located along the southwest portion of the site is impacted with PCBs. The PCB concentrations range from 2.8 to 10 μg/l. The groundwater in all three of the bedrock

wells located in this same area of the site (MW-1D, MW-2D, MW-3D) is impacted with PCBs. The PCB concentrations in the deep wells are similar (range of 2.1 to 2.7 μg/l). It is likely that the PCBs in these deep wells are in soluble form (sediment is not typically a concern in bedrock wells).

PCB was present just above the limit of 0.5 μg/l in the "background" well MW-6D at a concentration of 0.73 μg/l. The PCBs were not present in the shallow well MW-6S.

During this round of groundwater sample analysis, low levels of VOCs were also detected in several of the wells including MW-1S, MW-1D, MW-2D, MW-3S (estimated value below the standard detection limit), and MW-6D. The VOC 1,2,4-trichlorobenzene was detected in well MW-1D above the RCMP GW-1 limit of 70 μg/l.

Impacted groundwater appears to have traveled along the fractures of the bedrock. This is based on visual observation of anomalous dark (black) staining in the rock fractions in wells MW-1D (at 16.5 feet, between 20 and 20.8 feet and 22.4 feet), MW-2D (at 15.7 feet) and MW-3D (at 14 feet). The bedrock was highly competent at a depth between seventeen and thirty feet below grade because the calculated RQD values at each location met or exceeded 90% at these depths.

4.2.2 Groundwater Congener Results

Selected groundwater samples were submitted to Phillips Analytical for PCB congener analysis via EPA Method 680. The samples selected were from locations where PCBs were previously detected in the groundwater. The purpose of this analysis was to help identify the type of PCBs present in the groundwater.

The three samples selected for the congener analysis were from wells MW-1S, MW-2D, and MW-3S and the results are summarized in Table 5 in Appendix F. The first half of the table lists the individual congeners that were detected in the sample (i.e., PCB 167). The second half of the table lists the summation of each of the PCB homologues (groups such as mono, di, tri, etc.). Only two specific PCB congeners were detected in the samples including PCB-123 and PCB 118. These two congeners were also detected in the soil samples collected from these areas. The primary homologue detected in all three groundwater samples was hexachlorobiphenyl. This is the same primary homologue detected in the soil samples submitted for congener testing.

As with the soil samples, the total PCB homologue value listed from EPA Method 670 (Philips Laboratory) may differ from the value detected using the EPA Method 8082 (STL) because of the significant difference in the test methodologies and potential PCB degredation.

4.2.3 Hydraulic Gradient and Conductivity

Water elevation data and site survey data were used to develop groundwater contour plans for the unconsolidated aquifer and the bedrock aquifer. The groundwater flow path was drawn perpendicular to the direction of groundwater flow. The flow paths were used to determine the horizontal groundwater gradient beneath the site. Groundwater flow is in an east to west (southwest) direction towards the river. Groundwater flow along the north end of the site is not known (suspected to be in a northwest direction). Refer to Figure 5 in Appendix D.

From previous testing, groundwater apparently flows northwest toward the Androscoggin River at a gradient of approximately 0.08 feet/foot. The hydraulic conductivity testing conducted during the additional site investigation was inconclusive.

SECTION 5

5.1 SUMMARY OF SITE INVESTIGATIONS

As presented in this report, the T-1 site was investigated over two phases with the installation of a total of twelve wells (MW-1S, MW-1D, MW-2S, MW-2D MW-3S, MW-3 D, MW-4S, MW-5S (dry), MW-5D, MW-6S, MW-6D, and MW-7S) and ten borings (B-1 through B-10). The February 24, 2000 summary report outlines the first phase of investigations and remediation activities which included the removal of PCB impacted soils within the T-1 yard proper. The additional investigation activities were described in this report.

From all of the investigation and remediation work completed to date, the following conclusions can be made regarding the T-1 site:

- Initial remediation efforts consisted of the removal of approximately almost ninety tons of PCB contaminated soil and debris from the T-1 transformer yard site for off-site disposal. The soils that were removed contained PCBs at concentrations in the range of 2,000 mg/kg to 66,000 mg/kg;
- The lateral boundary of PCB impacted soils around the site has expanded and a "clean" boundary was not defined from the latest round of investigations;
- The highest PCB concentrations (i.e., greater than 100 mg/kg) are limited to the sidewalls of the original excavation area and one surface sample at MW-2D. The PCB soil concentrations at all other sample locations are below 50 mg/kg;
- It appears that the primary source area was identified and removed during the previous excavation program. However, soils do remain with PCB concentrations above the UCL of 20 mg/kg within the tranformer yard proper (B-8) and just outside the yard along the southwest edge (MW-1D, MW-2D, and MW-3D);
- Only a few specific PCB congeners were detected in the soil samples and the primary homologue detected was hexachlorobiphenyl;
- The groundwater collected from the bedrock wells located along the southwest portion of the site has PCBs concentrations in the range of 2.1 to 2.7 μg/l;
- Some of the shallow wells (MW-1S, MW-3S, and MW-7S) located in the southwest portion of the site are impacted with 2.8 to 10 μg/l of PCBs;
- The wells located in the northwest side of the site (MW-5D, MW-4S) did not contain detectable levels of PCBs;
- Low levels of VOCs were detected in MW-1S, MW-1D, MW-2D, MW-3S (estimated value below the standard detection limit), and MW-6D. The VOC

1,2,4-trichlorobenzene was detected in well MW-1D above the RCMP GW-1 limit of 70 μg/l;

- Impacted groundwater appears to have traveled along the fractures of the bedrock. This is based on visual observation of anomalous black staining in the rock fractions in wells MW-1D, MW-2D and MW-3D;
- The bedrock was highly competent at a depth of seventeen to thirty feet below grade because the calculated RQD values at each location met or exceeded 90% at these depths;
- Only two specific PCB congeners were detected in the groundwater samples and the primary homologue detected was hexachlorobiphenyl. This is the same homologue that was detected in the soil samples; and
- From the second round of study, it was determined that groundwater flow is in an east to west (southwest) direction towards the river. Groundwater flow along the north end of the site is not known (suspected to be in a northwest direction). The conductivity testing was inconclusive.

5.2 RECOMMENDED ADDITIONAL WORK

5.2.1 General Approach

Additional site information needs to be obtained to complete a risk assessment and develop a remedial approach. The recommended approach for the project consists of the following:

- Install a limited numbers of additional borings and wells to help further define the outer lateral and vertical limits of the impacts;
- Obtain additional information on the direction and velocity of groundwater flow through the bedrock;
- Collect air samples and soil gas samples for use in risk assessment;
- Conduct a baseline risk assessment and reassess data needs at that time;
- Evaluate options for a remedial approach; and
- Develop a summary report for EPA.

Details of this approach are presented in the following sections.

5.2.2 Additional Field Investigations

Additional Bedrock Coring and Monitoring Well Installation

It has already been determined that the PCB contamination is present in the bedrock wells and that the flow is towards the river. To further assess the horizontal and lateral extent of PCB contamination in the bedrock, bedrock should be cored at three locations (one upgradient and two along the western perimeter of the site) to the depth of approximately ten feet below the bottom of the Androscoggin River. Refer to Figure 6 in Appendix A.

Subsequent to coring activities at each location along the river, a series of Packer Tests will be conducted within each borehole to assess the permeability of selected bedrock fractures. The Packer Test data will be used in conjunction with bedrock fracture trace analysis (see separate section) to determine if the Androscoggin River is hydraulically connected to the T-1 site. Coring will be completed at each location following the same scope of work prepared for the June 2000 round of bedrock coring. Each borehole will be completed as a monitoring well. Monitoring well screens will be installed at depths determined during coring activities.

Installation of Soil Borings and Soil Sample Collection

Up to five additional soil borings (some may be conducted at the rock drilling locations) will be installed around the perimeter of the T-1 site to further determine the vertical and horizontal extent of PCBs in soil at the site. During advancement of each boring, soil samples will be collected at five-foot intervals and submitted to STL for PCB analysis.

Collection of Groundwater Samples

Subsequent to the installation of bedrock monitoring wells at the site, groundwater samples will be collected from all the newly installed wells and from all other existing wells. These samples will be collected via Teflon coated bailers and will be submitted to STL for PCB analysis using EPA Method 8082. Prior to sampling, the wells will be allowed to site for a minimum of two weeks after installation.

Bedrock Fracture Trace Analysis

During the last twenty years, fracture trace analysis has been used with increasing frequency and with excellent success to locate bedrock fracture zones. Subtle features in aerial photographs, termed photolinears, may indicate the presence and location of bedrock fracture zones. Although fracture zones produce photolinears, not all photolinears are caused by fracture zones. They may also be caused by such other features as streams, rock walls, old roads, old paths (animal as well as human), edges of formerly tilled fields that are now woodlands, and other cultural features. Thus, verification in the field and bedrock mapping of the area of interest are highly recommended as an essential part of the process.

As groundwater collected from within the consolidated zone (bedrock) has exhibited elevated levels of PCBs at the site, a bedrock fracture trace analysis will be completed. The fracture trace analysis will detect large fractures within the bedrock that could act as potential conduits for contaminant migration.

Collection of Surface Water and Sediment Samples

As PCBs have been identified on the bank of the Androscoggin River and in the groundwater located within the unconsolidated zone and the bedrock, there is a potential for PCBs to have migrated to the river. Therefore, it is proposed that both surface water and sediment samples (if feasible) from seven locations along the Androscoggin River. The proposed sampling locations are as follows:

- Two sampling locations upstream of site;
- Three sampling locations along the site; and
- Two locations downstream of the site.

The surface water and sediment data will be used to determine if these environmental receptors have been impacted and to supplement the Screening Level Ecological Risk Evaluation (see Section 5.2.2).

Indoor Air and Soil Gas Sampling

As part of the Human Health Risk Assessment (see Section 5.2.2), indoor ambient air from within the control house and soil gas from within the vadose zone will be collected from the site for PCB analysis. The objectives of collecting the indoor air and soil gas samples are to assess the migration of PCBs through subsurface soils and to verify that PCBs have not impacted the indoor air quality of the control house.

A series of four soil gas points will be installed at the T-1 site by a Tighe & Bond hydrogeologist. It is anticipated that the installation of these soil gas points will take one day to complete. Soil gas will be collected from each point in accordance with EPA Method TO-10A (low volume sampling). Tighe & Bond recommends that soil gas sampling be conducted at the site prior to the installation of soil borings and monitoring wells.

Indoor ambient air will also be sampled in accordance with EPA Method TO-4A (high volume sampling). Due to the small size of the control house, one air sample will be collected from within that building. In addition, a background ambient air sample will be collected near the overfill tank to the south of the T-1 site.

5.2.3 Field Investigation Reporting

At the conclusion of the proposed field activities and risk assessment tasks, a report will be prepared summarizing the findings. The report will outline the activities conducted, present all analytical data (compared to NHDES and EPA standards), identify potential contaminant sources, define contaminant plumes, and document any other pertinent information. Charts, graphs, site plans, groundwater flow maps and other information as necessary to provide an understanding of the site. We will then provide an opinion, based solely upon the information presented in the report, whether any evidence was observed of conditions that may be of environmental concern and whether further investigation of those conditions is warranted.

5.2.4 Risk Assessment

Purpose of Assessment

During a risk assessment, a risk assessor will take all the PCB data generated from the site and compare that data to the PCB congener analysis provided by Phillips Analytical. The risk assessment will be completed in two parts, a Human Health Risk Assessment and a Screening Level Ecological Risk Evaluation.

The Human Health Risk Assessment will:

- Identify exposure pathways and calculate the associated risks under current conditions;
- Identify the exposure pathways and calculate the associated risks under various future land use scenarios;
- Identify precautions which should be taken during subsequent activities which may bring receptors in contact with contaminants; and
- Provide an opinion regarding whether there is a condition of no significant risk to human health or the environment.

The Screening Level Ecological Risk Evaluation will:

- Describe site conditions and the extent of contamination with regard to ecological concerns;
- Identify potential environmental receptors; and
- Compare the concentrations of contaminants to applicable and suitably analogous environmental standards and to concentrations known to be without deleterious effects to environmental receptors.

At the completion of these two studies, the risk assessor will either provide an opinion stating that the residual PCBs that remain on-site pose no significant risk of harm to health, safety, public welfare, and the environment or assign a site-specific PCB cleanup level that accomplish the same.

Approach

On April 5, 2000, Tighe & Bond personnel met with staff from Menzie-Cura & Associates, Inc. of Chelmsford, Massachusetts to determine the scope of additional assessment activities. We reviewed the scope proposed by the EPA and discussed data needs to facilitate a Human Health Risk Assessment at the site.

In summary, Menzie-Cura & Associates suggested the following assessment activities:

- Collect indoor air samples from inside the control house for PCB analysis (using EPA Method TO-4A) to evaluate inhalation exposure potential;
- Collect soil gas samples from the site for PCB analysis (using EPA Method TO-10A) to evaluate the potential for contaminant migration through the vadose zone;
- Conduct PCB congener analysis (using EPA Method 680) on three soil samples and three groundwater samples to confirm the "availability and toxicity" of the PCB contamination found in the soil and groundwater; and
- Collect river and sediment sampling upstream and downstream of the site to help establish current levels and identify whether an ecological risk assessment will be required.

As outlined in Section 5.2.1, these data will be collected during the next round of site investigation. The report outlined in Section 5.2.2 will be presented to Menzie-Cura & Associates, Inc. to complete the Human Health Risk Assessment.

The first step of the risk assessment will be to conduct a site visit (already conducted by Menzie-Cura). Next, the all PCB data collected from the site will be reviewed and computations will be made to conduct a Human Health Risk Assessment and a Screening Level Ecological Risk Evaluation. Finally, the risk assessor will provide a risk opinion on the site. Menzie-Cura will prepare a final risk assessment report that will be included with the final submission to the EPA.

5.2.5 Follow-up Reporting

After the risk assessment is completed, a final report will be prepared for EPA. The report will include the results presented in the field investigation report (Section 5.2.3) and the risk assessment report (Section 5.2.4). In addition, recommendations on a remedial approach will be made along with any additional data needs.

APPENDIX A

May 16, 2000

Ms. Kimberly Tisa
CPT
U.S. EPA Region I
1 Congress Street
Suite 1100
Boston, MA 02114-2023

Re: T-1 Transformer Site
Pulp & Paper of America

Dear Ms. Tisa:

As discussed in our last meeting, we have prepared summary Scope of Work (SOW) for the next phase of site investigation activities for the T-1 transformer site located at the Berlin Pulp Mill, Pulp & Paper of America (PPA), Berlin, New Hampshire. The summary SOW is enclosed along with an updated site map that illustrates the proposed sampling locations.

The purpose of these sampling activities is to delineate the horizontal and vertical extent of polychlorinated biphenyl (PCB) contamination in the soil and groundwater, as required by 40 CFR 761, and as request of the United States Environmental Protection Agency (EPA). The proposed assessment activities were developed based on information from the February 24, 2000 letter report entitled *Summary of Site Investigations and Removal Actions* and discussions in the March 23, 2000 meeting with staff from PPA, EPA, American Tissue Corporation (ATC), and Tighe & Bond, Inc.

We must complete the sampling within the transformer yard during the Mill shut-down period that occurs only once per year. The substation will be deenergized and made accessible to a drilling rig on **May 31, 2000 at 0800 hours**. It is anticipated that the advancement of these four soil borings will take one day to complete and that they will be completed on this date.

Since we must begin work on May 30, 2000 (set-up for the sampling on May 31, 2000), your timely response to the proposed scope would be appreciated. Please call the undersigned or Suzanne L. Pisano, P.E. at Tighe & Bond (508-856-0999) if you have any questions. Thank you for your consideration of this matter.

Very truly yours,

Tammie L. Lavoie
Environmental Project Engineer

Enclosures
Copy: John Fuller, PPA
Suzanne L. Pisano, Tighe & Bond

Investigation Scope of Work – T-1 Transformer Yard
Pulp & Paper of America, Berlin, NH
May 2000

This scope of work (SOW) has been prepared for Pulp & Paper of America (PPA) to summarize additional voluntary assessment activities proposed at the T-1 transformer yard (the site). The purpose of these activities is to delineate the horizontal and vertical extent of polychlorinated biphenyl (PCB) contamination in the soil and groundwater, as required by 40 CFR 761.

The site investigation tasks include the following:

1. Four soil borings (B-7 through B-10 on Figure 1) will be advanced within the T-1 Transformer Yard using Geoprobe direct push technology to further delineate PCB contamination within this area.
   - As the area to the north of the control house has previously been excavated to two to four feet below grade, soil samples will be collected in two-foot increments at five-foot intervals beginning at five feet below grade until drilling refusal is encountered.
   - Soil samples will be screened in the field for total volatile organic vapors (TVOVs) using a photoionization detector (PID) utilizing a 10.6 eV ultra violet (UV) lamp.
   - Up to two soil samples will be collected from each soil boring and submitted to the lab for PCB analysis via EPA Method 8082 (estimated total of eight samples). In addition, one soil sample from each soil boring (the sample that reported the highest PID reading) will be selected for VOC analysis via EPA Method 8260 (estimated total of four samples).
2. To delineate the horizontal and vertical extent of PCB contamination at T-1 Bank, four soil borings (B-11 through B-14 on Figure 1) will be advanced around the T-1 Bank sample location using Geoprobe direct push technology.
   - Soil samples will be collected at each proposed location from surfical soil (0 to 2 feet below grade) and from soil at five to seven feet below grade and 10 to 12 feet below grade (up to three samples for each boring location).
   - Each soil sample will be screened in the field for TVOVs using a PID.
   - Each soil sample collected from soil borings B-11 through B-14 will be submitted for PCB analysis (estimated total of 12 samples). In addition, one soil sample will be selected from each soil boring (the sample that reported the highest PID reading) for VOC (estimate total of four samples).
3. Four additional overburden wells (shallow wells) and six bedrock monitoring wells (deep wells) be installed at the T-1 transformer yard to assess PCB contamination in groundwater within both the unconsolidated zone and bedrock. Table 1 summarizes the locations of each proposed monitoring well. Proposed monitoring well locations are identified on Figure 1 in Appendix A.

Table 1 Proposed Monitoring Well Locations T-1 Transformer Yard Burgess Mill Berlin, New Hampshire		
Proposed Well ID	**Well Type (Deep or Shallow)**	**Proposed Well Location**
MW-1D	Deep Well	Adjacent to MW-1
MW-2D	Deep Well	Adjacent to MW-2
MW-3D	Deep Well	Adjacent to MW-3
MW-4S	Shallow Well	Near soil borings B-3 and B-4
MW-4D	Deep Well	Near soil borings B-3 and B-4
MW-5S	Shallow Well	Between MW-1 and soil boring B-3
MW-5D	Deep Well	Between MW-1 and soil boring B-3
MW-6S	Shallow Well	Upgradient of the site; east of the control house
MW-6D	Deep Well	Upgradient of the site; east of the control house
MW-7S	Shallow Well	South of MW-3
Deep Well indicates a monitoring well installed into bedrock. Shallow Well indicates a monitoring well installed into the overburden soils (above bedrock). Proposed monitoring well locations are identified on Figure 1 in Appendix A.		

- Each deep well will be coupled with a shallow well in order to determine the hydraulic gradient of groundwater at the site.
- Wells will be constructed using standard Tighe & Bond field procedures.
- Each well will be developed by surging or pumping to remove fine materials from the formation surrounding the screen. Development water will be contained (see Item 9).

4. Soil samples will be collected when the monitoring wells are being advanced.
   - Soil samples will be collected at five-foot intervals using a split-spoon sampling device.
   - Representative soil samples will be collected from each of the borings and screened for TVOVs.
   - Soil samples collected from the installation of each deep well and MW-7S will be submitted to STL for PCB analysis (estimated total of 21 samples). In addition, one soil sample (the sample that reported the highest PID reading) will be selected from each deep well and MW-7S for VOC analysis (estimated total of seven samples).

5. Bedrock coring will be completed at each location proposed for bedrock monitoring well installation.
   - Subsequent to the installation of the soil boring at each deep well location (as described in task 4 above) steel casing will be advanced (by spinning) through the overburden materials and seated approximately two feet into competent bedrock. Once the four-inch casing is seated into bedrock, a roller-bit will be advance through the center of the casing to the depth of the bottom of the casing to wash out overburden materials.

- A diamond core bit will be run through the four-inch casing and into bedrock. The rock will be drilled and core barrel samples examined at five-foot intervals. The core bit will be advanced to the desired depth.
- Subsequent to the completion of the rock coring, a roller-bit will be advanced through the cored section of rock in preparation for the installation of a two-inch diameter bedrock monitoring well (as described above).
- As a means of quantitatively assessing the concentration of bedrock fractures at each location, Rock Quality Determination (RQD) values will be calculated in the field for each core segment obtained during this investigation.
- Coring will be completed at each location until RQD values exceed 90% or until 15 feet of bedrock has been cored.

6. Each of the 13 wells (seven shallow and six deep) will be sampled via low flow sampling techniques.
   - Prior to groundwater sample collection at the site, the newly installed groundwater monitoring wells will be given a minimum of two weeks to equilibrate.
   - The groundwater samples will be submitted to STL for VOCs and PCBs analyses via EPA Method 8260 and 8082, respectively.
   - During low flow sampling, measurements for pH, Eh, dissolved oxygen, turbidity, specific conductance and temperature will be collected from the purged water.
   - To determine the groundwater flow velocity, a series of hydraulic conductivity tests will be performed using a Troll 4000 data logger pressure transducer.

7. PCB congener analysis via EPA Method 680 will be conducted on three selected soil and three groundwater samples. Samples will be selected based on visual observations and PID readings from the field.

8. Water elevation data and site survey data will be used to develop groundwater contour plans for the unconsolidated aquifer and the bedrock aquifer. The flow path will be used to determine the horizontal groundwater gradient beneath the site. These gradients will be used in conjunction with the hydraulic conductivity data to calculate the velocity at which groundwater is moving beneath the site.

9. It is anticipated that soil, groundwater and personal protective equipment (PPE) wastes will be generated as the result of subsurface explorations at the site. These wastes will be containerized in 55-gallon drums, properly labeled and temporarily stored on-site until the completion of all field work. The materials will be characterized and, as needed, transported by a licensed hazardous water hauler under a hazardous waste manifest to a permitted facility for proper disposal.

10. At the conclusion of the field activities proposed within this SOW, we will prepare an investigation report summarizing the findings.

APPENDIX B

May 23, 2000

Tammie L. Lavoie, Environmental Project Engineer
Pulp & Paper of America
650 Main Street
Berlin, New Hampshire 03570-2489

Re: T-1 Transformer Site

Dear Ms. Lavoie:

EPA has reviewed the May 2000 Scope of Work for the next phase of work at the T-1 Transformer Yard (SOW). In general we believe the proposed SOW is adequate to describe the horizontal and vertical extent of PCB contamination in the soil and ground water, with the following caveats:

1. The locations of soil borings B-11 through B-14 should be determined at the intersection of the major bedrock fracture sets and the soil layer (if any) based on primary fracture orientations visible in the rock cliff below the site and above the Androscoggin River. That is, sample locations should be chosen where the possibility of PCB/ground water seepage from bedrock to overlying soils or the atmosphere and river is the greatest. A key objective of this additional site characterization is contaminant fate and transport from the site to the river; therefore, seepage sampling in optimum (i.e., likely or observed) locations is highly important.

2. The SOW describes rock coring activities and states on Page 3 that "The rock will be drilled and core barrel samples examined at five-foot intervals." EPA recommends that the SOW provide a more detailed explanation of what the examination will entail. For example, will free product, if found, be quantified; will fracture orientation, density, etc. be described and photographed; will rock cores be stored in such a way as to allow later follow-up examination, if necessary, etc.?

3. In Part 8 of the SOW you mention the use of hydraulic conductivity to calculate ground water velocities at the site. How will this parameter be estimated, especially in thinly-saturated and fine-grained porous media above bedrock and in the fractured rock itself? If ground water velocity must be assessed, given the high degree of subsurface heterogeneity, EPA recommends the use of fluorescent tracers. Slugs of Rhodamine WT and/or Fluorescein may be injected into selected overburden wells (MW-1, MW-2, MW-4S, MW-5S, MW-6S, and MW-7S) and sampled with surgical cotton or coconut charcoal packets with a UV lamp at identified seepage locations. While inconvenient, this

APPENDIX C

32-3138-1-01
May 24, 2000

Ms. Kimberly Tisa
CPT
U.S. EPA Region I
1 Congress Street
Suite 1100
Boston, MA 02114-2023

Re: Response to May 23, 2000 Letter
Pulp & Paper - T-1 Transformer Site

Dear Ms. Tisa:

This letter is in response to your May 23, 2000 comment letter on the Pulp & Paper of America (PPA) Scope of Work (SOW) for the T-1 Transformer site. Our comments are as follows:

1. The final locations of soil borings B-11 through B-14 will be determined based primarily on field conditions. At this time, we proposed locations around the existing T-1 Bank sample location to further delineate the PCB contamination in soils between the site and the river. Since the area is not easily accessible, we proposed to use Geoprobe direct push technology to obtain soil samples from the cliff area. Even with this approach, it may be difficult to collect samples from the most strategic locations. As feasible, we will identify locations where the possibility of PCB/groundwater seepage from the bedrock to overlying soils or the atmosphere is the greatest (i.e., if we identify a seepage area, we will collect a soil sample from that location). Our goal includes the assessment of potential contaminant fate and transport from the site to the river.

2. Subsequent to the installation of the soil boring at each deep well location (as described above), four-inch inside diameter (I.D.) flush threaded steel casing will be advanced (by spinning) through the overburden materials and seated approximately two feet into competent bedrock. Once the four-inch casing is seated into bedrock, a four-inch diameter roller-bit will be advance through the center of the casing to the depth of the bottom of the casing to wash out any overburden materials.

   For rock drilling, a minimum three-inch (NX) diamond core bit will be run through the four-inch casing that is spun into bedrock. The rock will be drilled and core barrel samples examined at five-foot intervals. The core bit will be advanced to the desired depth. Subsequent to the completion of the rock coring, a four-inch diameter roller-bit will

3. Since the area does not consist of fine-grained porous media above the rock, we plan to use standard conductivity testing procedures to determine the groundwater flow velocity. A series of hydraulic conductivity tests will be performed to determine the hydraulic conductivity of the subsurface soils and the bedrock at the site. The tests will be performed by placing a Troll 4000 data logger pressure transducer at the bottom of each well. The transducer measures the pressure of the water above it and translates that pressure reading into a length of water column above the transducer. A small diameter PVC "slug" is then placed into the well and the water level allowed to equilibrate. Once the water level equilibrates, the data logger is engaged and the slug is quickly removed. The data logger then measures the rate at which the water level re-equilibrates. Data is collected until the water level indicated on the pressure transducer in the well recovers to within 0.05 feet of the original static water level reading or for an interval of about 30 minutes, whichever is reached first.

   Based on these results and groundwater data collected from the bedrock aquifer, we will determine whether alternative testing techniques are necessary.

4. Using our standard sampling procedures, we will collect samples at the predefined intervals in addition to locations of observed apparent contamination (i.e., visual or olfactory observations).

5. Wastes will properly be characterized and disposed in accordance with all applicable hazardous waste and PCB regulations.

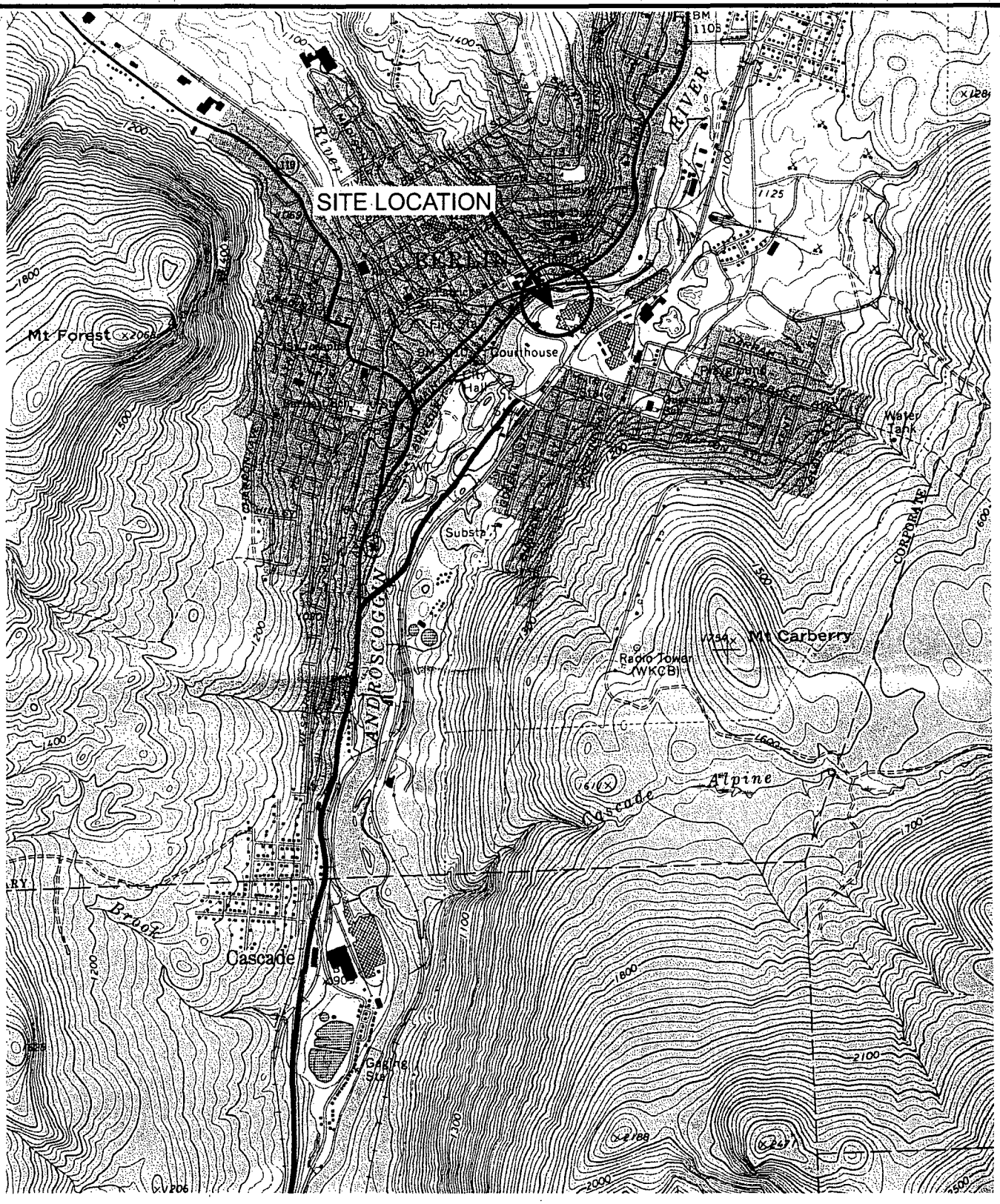
It is understood that with these responses, the EPA agrees with our proposed SOW. We plan to initiate work on May 30, 2000. Please call the undersigned or Suzanne L. Pisano, P.E. at Tighe & Bond (508-856-0999) if you have any questions.

Very truly yours,

Tammie L. Lavoie
Environmental Project Engineer

Copy: John Fuller, PPA
Suzanne L. Pisano, Tighe & Bond

APPENDIX D



Based upon USGS topographic maps for Berlin, NH Quadrangles
Published 1970
Photorevised 1989
Contour Interval 25 Feet

N
W E
S

FIGURE 1
SITE LOCUS

T-1 TRANSFORMER AREA
PULP & PAPER OF AMERICA
BERLIN, NEW HAMPSHIRE

Tighe&Bond

SCALE: 1:24000

May 2001

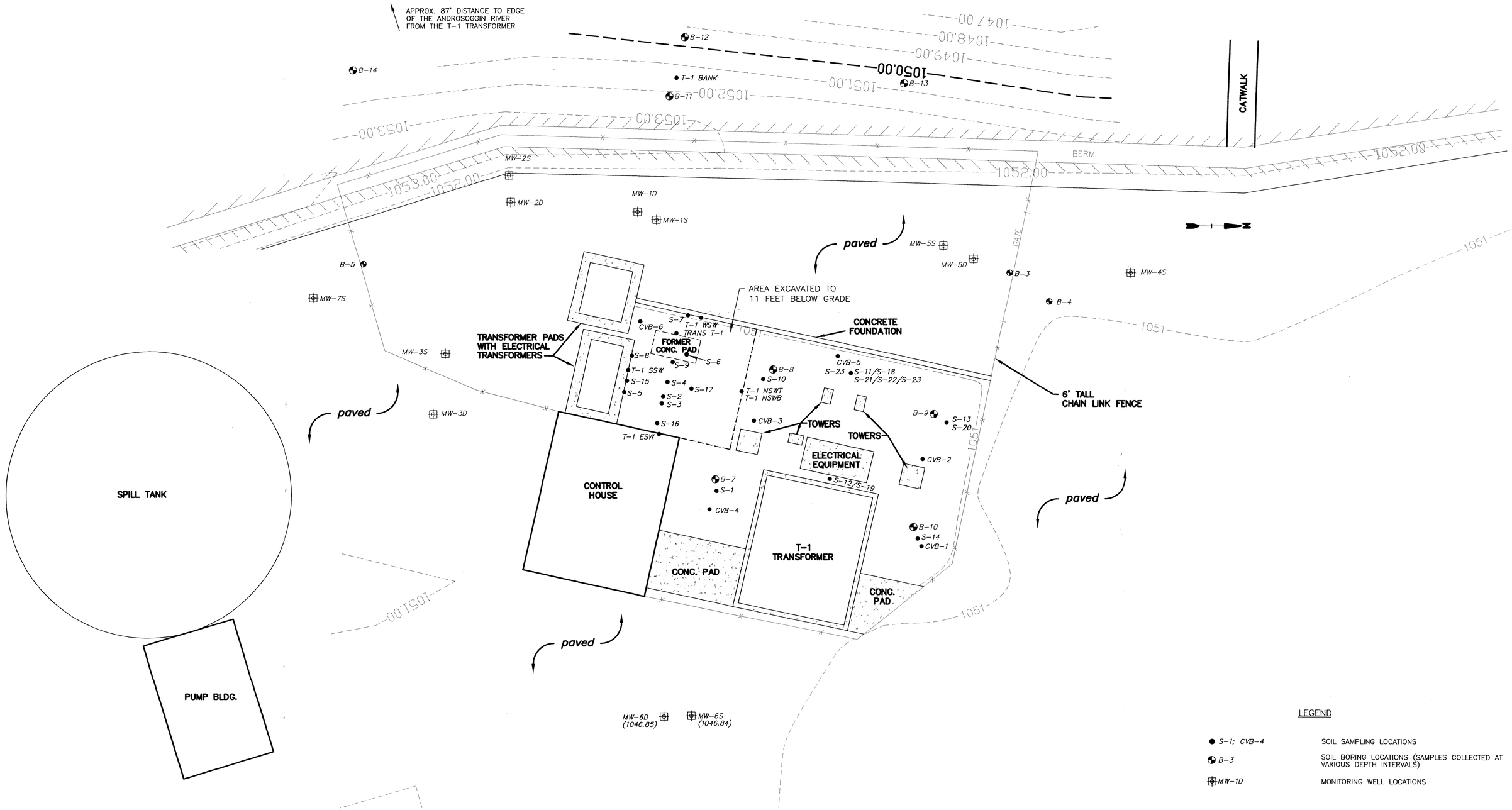


FIGURE 2

DRAWN BY: LPT	CHECKED BY: RPG	APPROVED BY: RPG

NO.	DATE	REVISIONS	BY

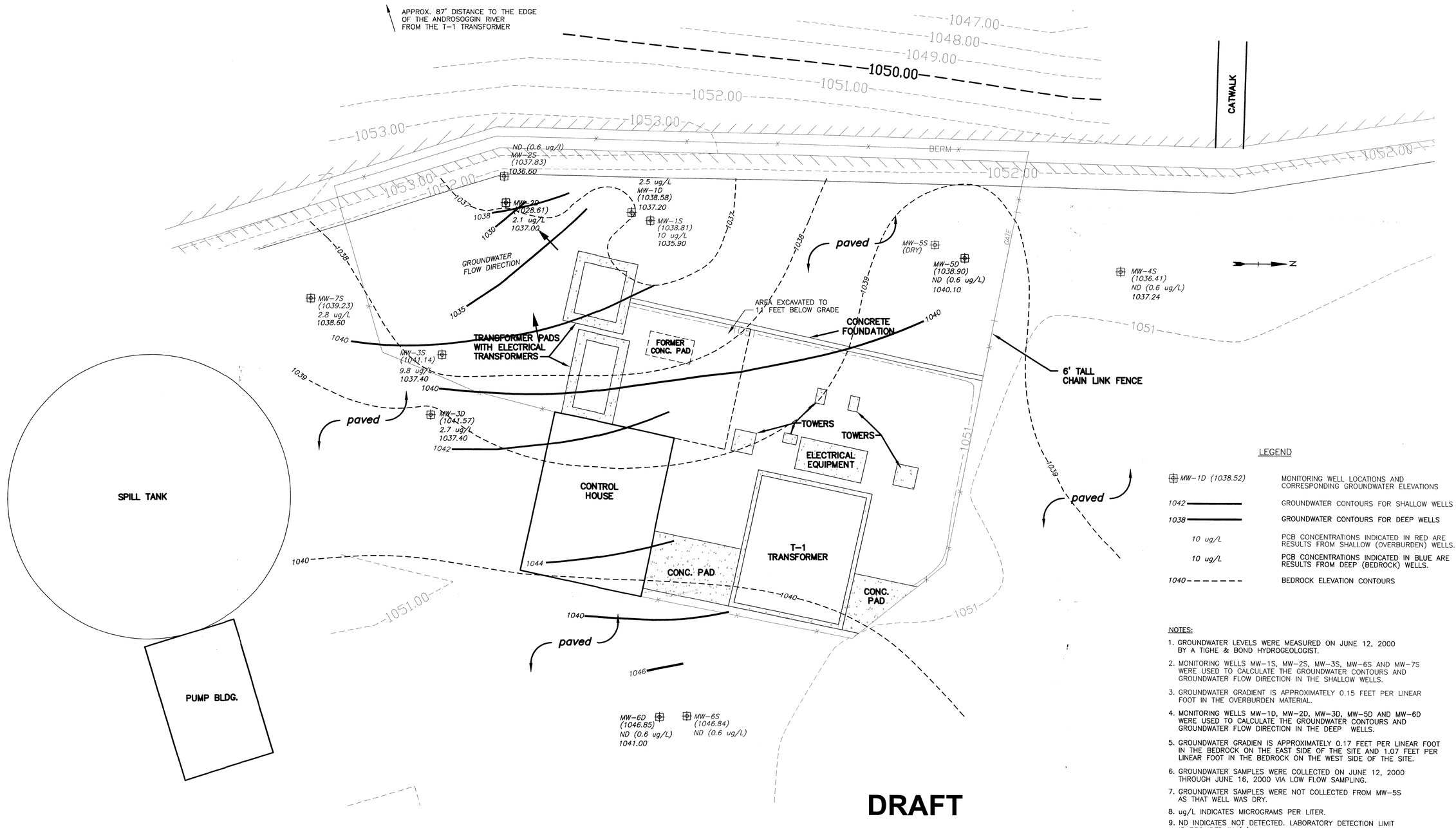
Tighe&Bond
Consulting Engineers

SITE PLAN

T-1 TRANSFORMER YARD
PULP & PAPER OF AMERICA
BURGESS MILL
BERLIN, NEW HAMPSHIRE

TIGHE & BOND, INC.
DATE: MAY 2001
DWG. NO. 1
SCALE: 1"=5'
SHEET 1 OF 1

3/14/02 W:\138\SITE2



DRAFT

LEGEND

MW-1D (1038.52)	MONITORING WELL LOCATIONS AND CORRESPONDING GROUNDWATER ELEVATIONS
1042	GROUNDWATER CONTOURS FOR SHALLOW WELLS
1038	GROUNDWATER CONTOURS FOR DEEP WELLS
10 ug/L	PCB CONCENTRATIONS INDICATED IN RED ARE RESULTS FROM SHALLOW (OVERBURDEN) WELLS.
10 ug/L	PCB CONCENTRATIONS INDICATED IN BLUE ARE RESULTS FROM DEEP (BEDROCK) WELLS.
1040	BEDROCK ELEVATION CONTOURS

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED ON JUNE 12, 2000 BY A TIGHE & BOND HYDROGEOLOGIST.
2. MONITORING WELLS MW-1S, MW-2S, MW-3S, MW-6S AND MW-7S WERE USED TO CALCULATE THE GROUNDWATER CONTOURS AND GROUNDWATER FLOW DIRECTION IN THE SHALLOW WELLS.
3. GROUNDWATER GRADIENT IS APPROXIMATELY 0.15 FEET PER LINEAR FOOT IN THE OVERBURDEN MATERIAL.
4. MONITORING WELLS MW-1D, MW-2D, MW-3D, MW-5D AND MW-6D WERE USED TO CALCULATE THE GROUNDWATER CONTOURS AND GROUNDWATER FLOW DIRECTION IN THE DEEP WELLS.
5. GROUNDWATER GRADIEN IS APPROXIMATELY 0.17 FEET PER LINEAR FOOT IN THE BEDROCK ON THE EAST SIDE OF THE SITE AND 1.07 FEET PER LINEAR FOOT IN THE BEDROCK ON THE WEST SIDE OF THE SITE.
6. GROUNDWATER SAMPLES WERE COLLECTED ON JUNE 12, 2000 THROUGH JUNE 16, 2000 VIA LOW FLOW SAMPLING.
7. GROUNDWATER SAMPLES WERE NOT COLLECTED FROM MW-5S AS THAT WELL WAS DRY.
8. ug/L INDICATES MICROGRAMS PER LITER.
9. ND INDICATES NOT DETECTED. LABORATORY DETECTION LIMIT IS PROVIDED IN ( ).

FIGURE 3

DRAWN BY: LPT	CHECKED BY: RPG	APPROVED BY: RPG

NO.	DATE	REVISIONS	BY

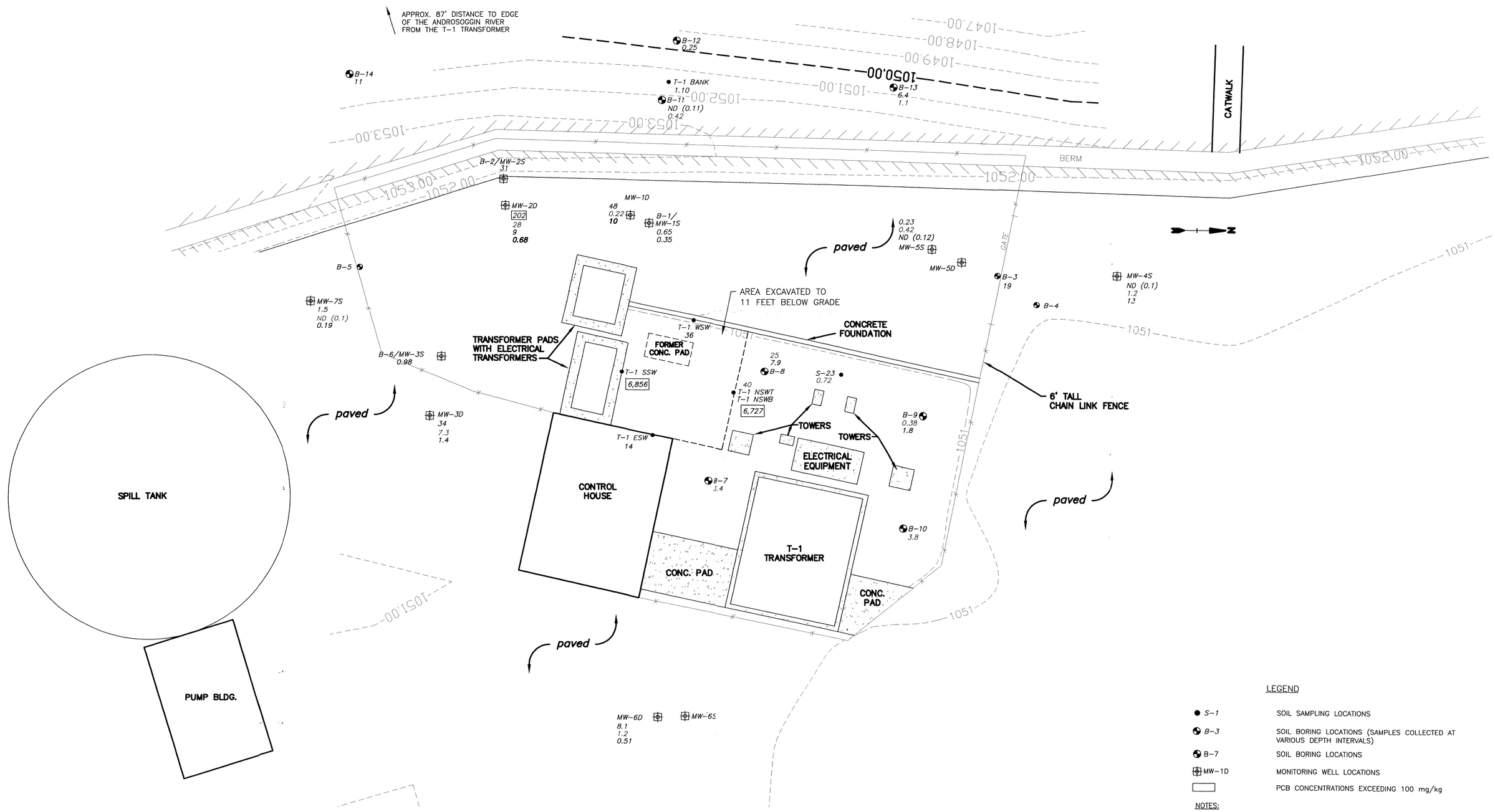
Tighe&Bond
Consulting Engineers

HYDROGEOLOGIC PLAN, PCB GROUNDWATER CONTAMINATION MAP AND BEDROCK CONTOUR MAP

T-1 TRANSFORMER YARD
PULP & PAPER OF AMERICA
BURGESS MILL
BERLIN, NEW HAMPSHIRE

TIGHE & BOND, INC.
DATE: AUGUST 2000
DWG. NO. 1
SCALE: 1"=5'
SHEET 1 OF 1

8/25/00 W3138_SITE1



LEGEND

● S-1	SOIL SAMPLING LOCATIONS
B-3	SOIL BORING LOCATIONS (SAMPLES COLLECTED AT VARIOUS DEPTH INTERVALS)
B-7	SOIL BORING LOCATIONS
MW-1D	MONITORING WELL LOCATIONS
▭	PCB CONCENTRATIONS EXCEEDING 100 mg/kg

NOTES:

1. ALL PCB CONCENTRATIONS ARE IN mg/kg.

COLOR	APPROXIMATE DEPTH (IN FT.)
GREEN	0 – 2'
RED	5' – 7'
PURPLE	10' – 12'
BLUE	15' – 17'

FIGURE 3

DRAWN BY: LPT	CHECKED BY: RPG	APPROVED BY: RPG

NO.	DATE	REVISIONS	BY

Tighe&Bond
Consulting Engineers

PCB SOIL CONTAMINATION MAP

T-1 TRANSFORMER YARD
PULP & PAPER OF AMERICA
BURGESS MILL
BERLIN, NEW HAMPSHIRE

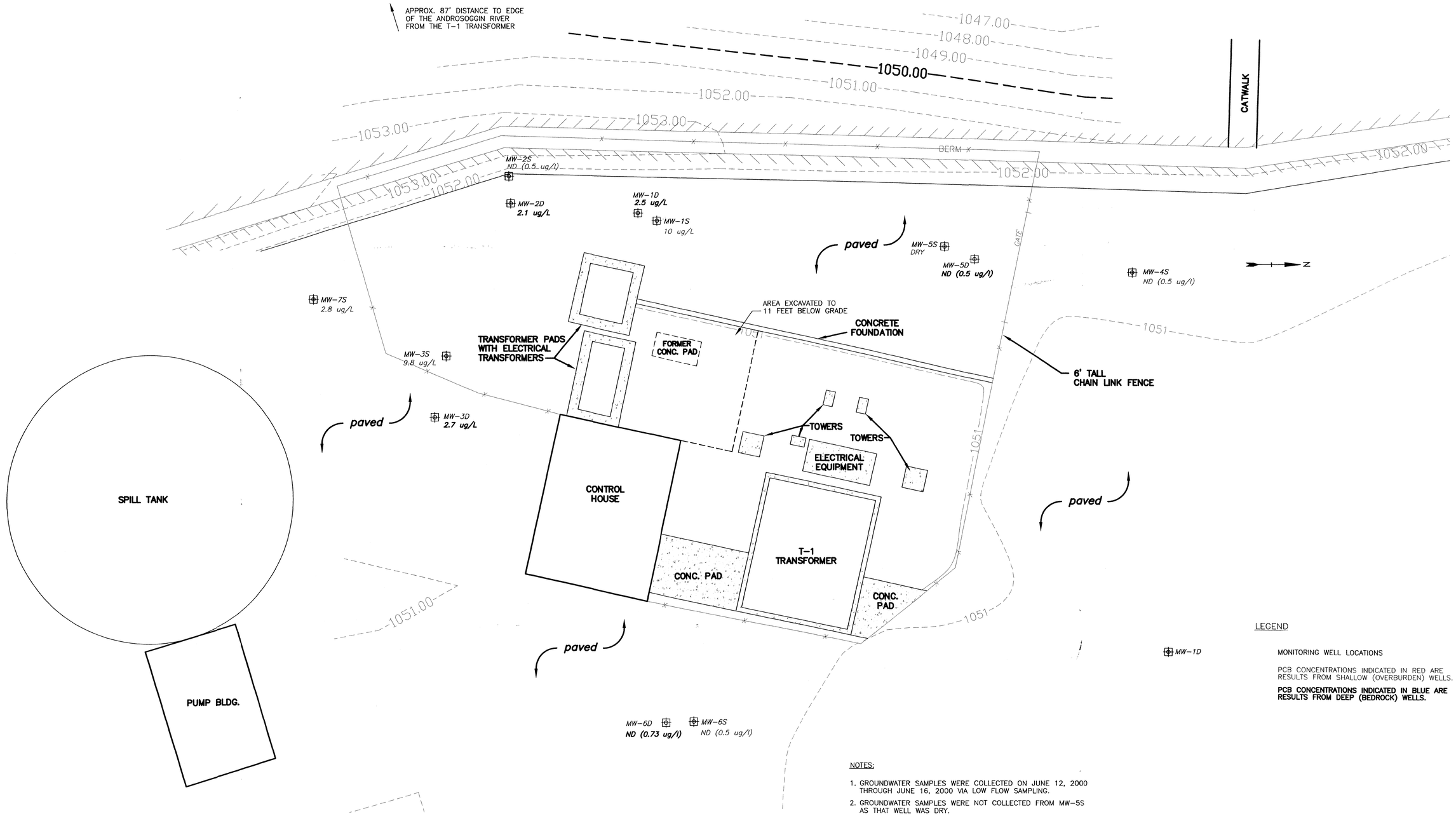
TIGHE & BOND, INC.

DATE: MAY 2001

DWG. NO. 1

SCALE: 1"=5'

SHEET 1 OF 1



LEGEND

MW-1D — MONITORING WELL LOCATIONS

PCB CONCENTRATIONS INDICATED IN RED ARE RESULTS FROM SHALLOW (OVERBURDEN) WELLS.

PCB CONCENTRATIONS INDICATED IN BLUE ARE RESULTS FROM DEEP (BEDROCK) WELLS.

NOTES:

1. GROUNDWATER SAMPLES WERE COLLECTED ON JUNE 12, 2000 THROUGH JUNE 16, 2000 VIA LOW FLOW SAMPLING.
2. GROUNDWATER SAMPLES WERE NOT COLLECTED FROM MW-5S AS THAT WELL WAS DRY.
3. ug/L INDICATES MICROGRAMS PER LITER.
4. ND INDICATES NOT DETECTED. LABORATORY DETECTION LIMIT IS PROVIDED IN ( ).

FIGURE 4

DRAWN BY: LPT	CHECKED BY: RPG	APPROVED BY: RPG

NO.	DATE	REVISIONS	BY

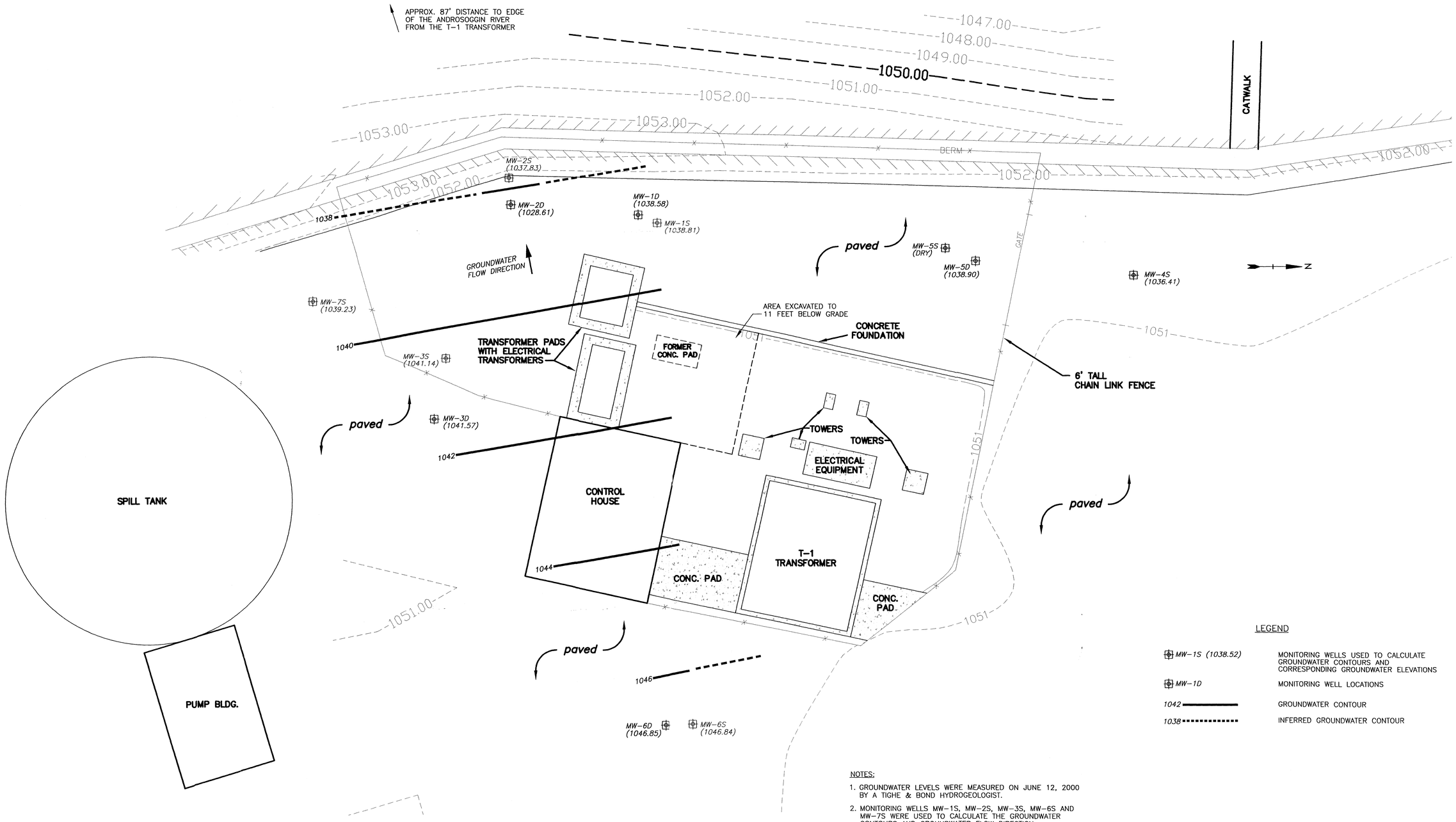
Tighe&Bond
Consulting Engineers

PCB GROUNDWATER CONTAMINATION MAP

T-1 TRANSFORMER YARD
PULP & PAPER OF AMERICA
BURGESS MILL
BERLIN, NEW HAMPSHIRE

TIGHE & BOND, INC.
DATE: MAY 2001
DWG. NO. 1
SCALE: 1"=5'
SHEET 1 OF 1

3/15/02 W3138\SITE4



LEGEND

MW-1S (1038.52)	MONITORING WELLS USED TO CALCULATE GROUNDWATER CONTOURS AND CORRESPONDING GROUNDWATER ELEVATIONS
MW-1D	MONITORING WELL LOCATIONS
1042	GROUNDWATER CONTOUR
1038	INFERRED GROUNDWATER CONTOUR

NOTES:

1. GROUNDWATER LEVELS WERE MEASURED ON JUNE 12, 2000 BY A TIGHE & BOND HYDROGEOLOGIST.
2. MONITORING WELLS MW-1S, MW-2S, MW-3S, MW-6S AND MW-7S WERE USED TO CALCULATE THE GROUNDWATER CONTOURS AND GROUNDWATER FLOW DIRECTION.
3. GROUNDWATER GRADIENT IS APPROXIMATLEY 0.04 FEET PER LINIER FOOT.

FIGURE 5

DRAWN BY: LPT	CHECKED BY: RPG	APPROVED BY: RPG

NO.	DATE	REVISIONS	BY

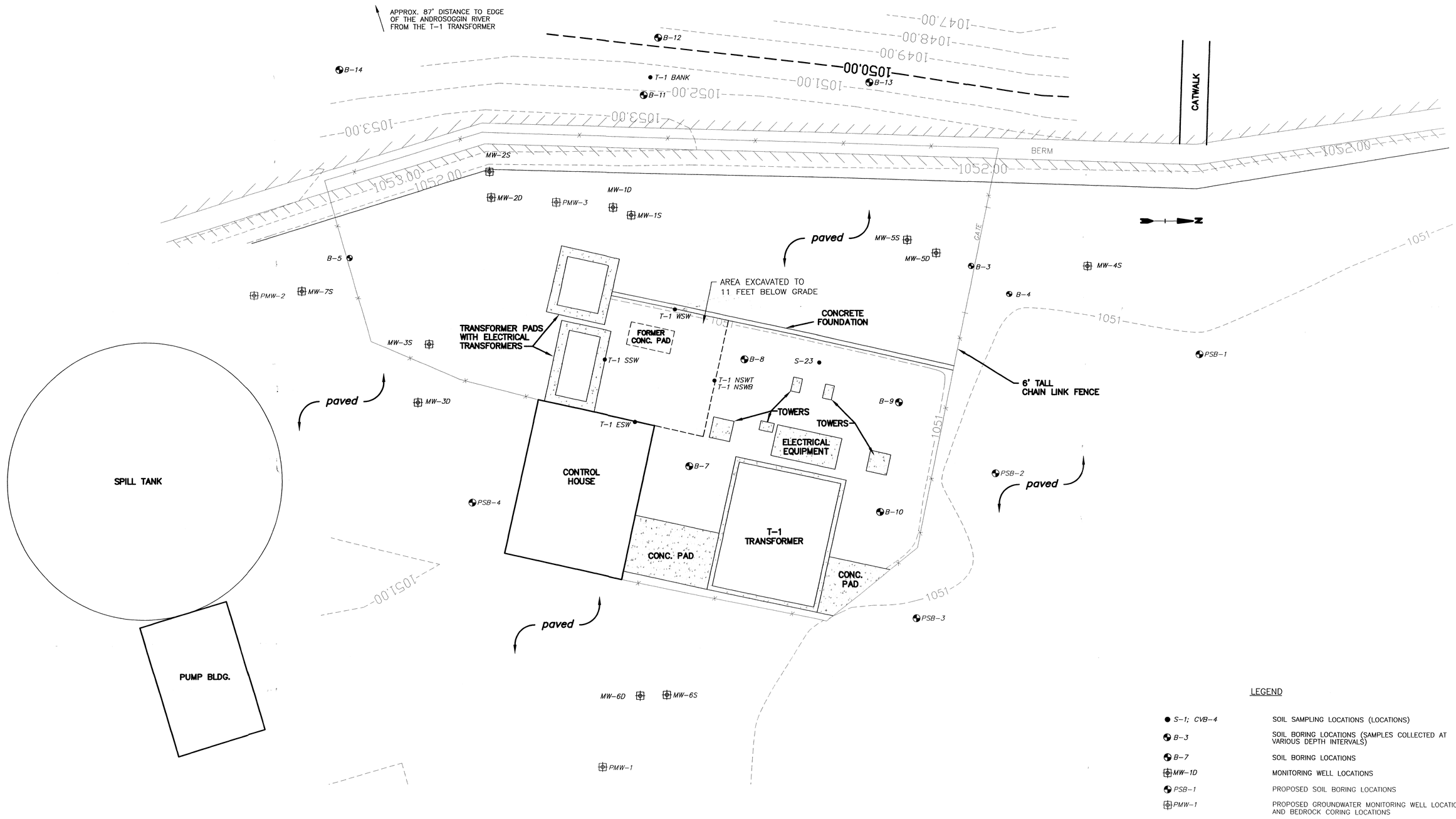
Tighe&Bond
Consulting Engineers

HYDROGEOLOGIC PLAN

T-1 TRANSFORMER YARD
PULP & PAPER OF AMERICA
BURGESS MILL
BERLIN, NEW HAMPSHIRE

TIGHE & BOND, INC.
DATE: MAY 2001
DWG. NO. 1
SCALE: 1"=5'
SHEET 1 OF 1

3/15/02 W3138\SITE1



LEGEND

● S-1; CVB-4	SOIL SAMPLING LOCATIONS (LOCATIONS)
B-3	SOIL BORING LOCATIONS (SAMPLES COLLECTED AT VARIOUS DEPTH INTERVALS)
B-7	SOIL BORING LOCATIONS
MW-1D	MONITORING WELL LOCATIONS
PSB-1	PROPOSED SOIL BORING LOCATIONS
PMW-1	PROPOSED GROUNDWATER MONITORING WELL LOCATIONS AND BEDROCK CORING LOCATIONS

FIGURE 6

DRAWN BY: LPT	CHECKED BY: RPG	APPROVED BY: RPG

NO.	DATE	REVISIONS	BY

Tighe&Bond
Consulting Engineers

PROPOSED WELL AND BORING LOCATIONS

T-1 TRANSFORMER YARD
PULP & PAPER OF AMERICA
BURGESS MILL
BERLIN, NEW HAMPSHIRE

TIGHE & BOND, INC.
DATE: MAY 2001
DWG. NO. 1
SCALE: 1"=5'
SHEET 1 OF 1

3/15/02 W3138\SITES

APPENDIX E

PROJECT: W-3072

B-1/MW-1S

LOCATION: T-1 P&PA Berlin, NH

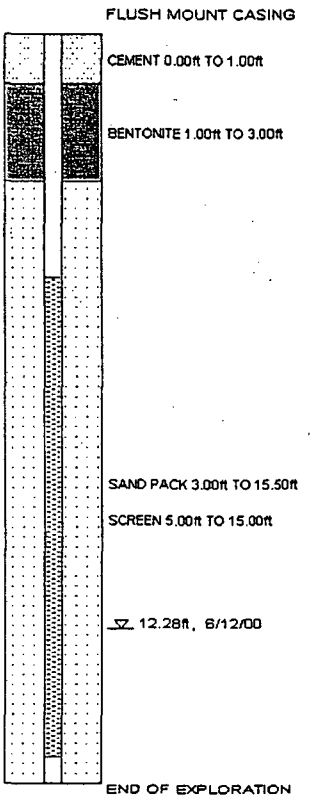
BORING DATE: 10/5/99 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geilser

Tighe&Bond
Consulting Engineers
Environmental Specialists

DEPTH SCALE (METRES / FEET)	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples: ID	Type	Recov (in.)	SPT (total)	Field Screening Results: L-2000 PCB kit (ppm) (0 20 40 60 80 100)
		GROUND SURFACE		0					
				0.5					
		Tan/brown; dry; medium to coarse Sand; little fine sand; little gravel		1	S-1	SS	8	32	◆
				3					
		Black; dry; Ash		5	S-2	SS	20	13	◆
				7					
		This sample designation is B-1A S-1. Black; wet; Ash; little coarse to fine sand; trace gravel		10	S-1	SS	12	31	◆
				12					
		This samples designation is B-1A S-2. Tan/brown		15	S-2	SS	6	100	◆
		END OF EXPLORATION @ 15.50ft		15.50					

BORING METHOD: 4.25-inch ID Hollow Stem Auger

MW-1



PROJECT: W-3138-2-1-1451

MW-1D

LOCATION: PPA T-1 Site

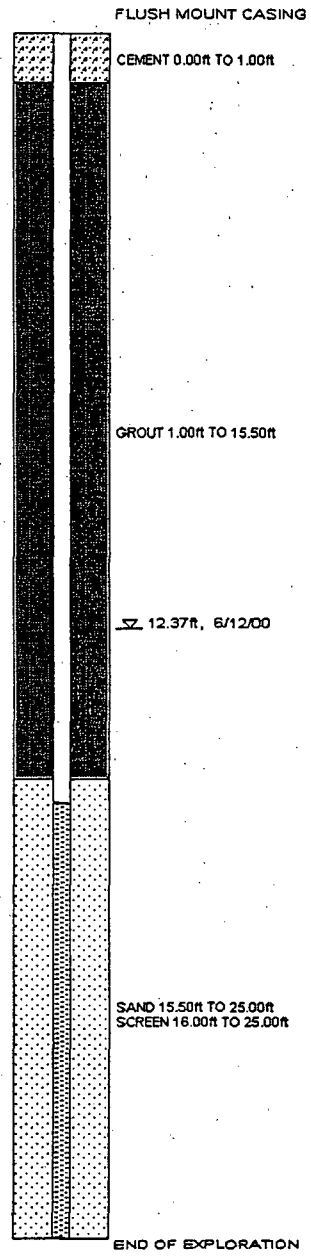
BORING DATE: 6-1-00 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

Tighe&Bond
Consulting Engineers
Environmental Specialists

DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples ID	Type	Recovery (")	RQD (%)
0	Drive 4-inch ID Steel Casing	GROUND SURFACE						
		Dry, black ash		0	S-1	SS	12	
					S-2	SS	0	
		Wet, black ash		8	S-3	SS	18	
					S-4	SS	6	
		Bedrock encountered at 14.75' (Monzonite). Black staining observed in bedrock fractures at 16.5', 20-20.8', and 22.4'.		14.75	C-1	RC	60	51
					C-2	RC	60	49
		END OF EXPLORATION @ 25.00ft		25.00				

Concentration — PID Concentration (0 2 4 6 8 10)

MW-1D



PROJECT: W-3072

B-2/MW-2S

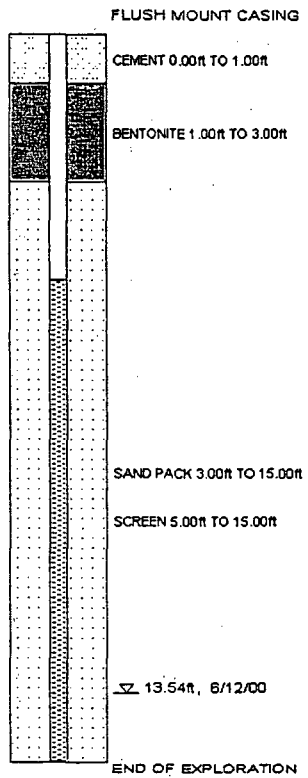
LOCATION: T-1 P&PA Berlin, NH

BORING DATE: 10/5/99 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

Tighe&Bond
Consulting Engineers
Environmental Specialists

DEPTH SCALE (METRES / FEET)	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples: ID	Type	Recov (in.)	SPT (total)	Field Screening Results: L-2000 PCB kit (ppm) (0 20 40 60 80 100)
		GROUND SURFACE		0					
				0.5					
	4.25-inch ID Hollow Stem Augers	Black; dry; ash		1	S-1	SS	12	47	◆
				3					
		Black; dry; Ash		5	S-2	SS	24	7	◆
				7					
		Tan/brown; damp; medium to coarse Sand; some gravel; little fine sand		10	S-3	SS	6	7	◆
				12					
		Tan/brown; wet; medium to coarse Sand; some gravel; little fine sand		13	S-4	SS	14	84	◆
		(Auger refusal @ 15')		14.5					
		END OF EXPLORATION @ 15.00ft		15.00					

MW-2



PROJECT: W-3138-2-1-1451

MW-2D

LOCATION: PPA T-1 Site

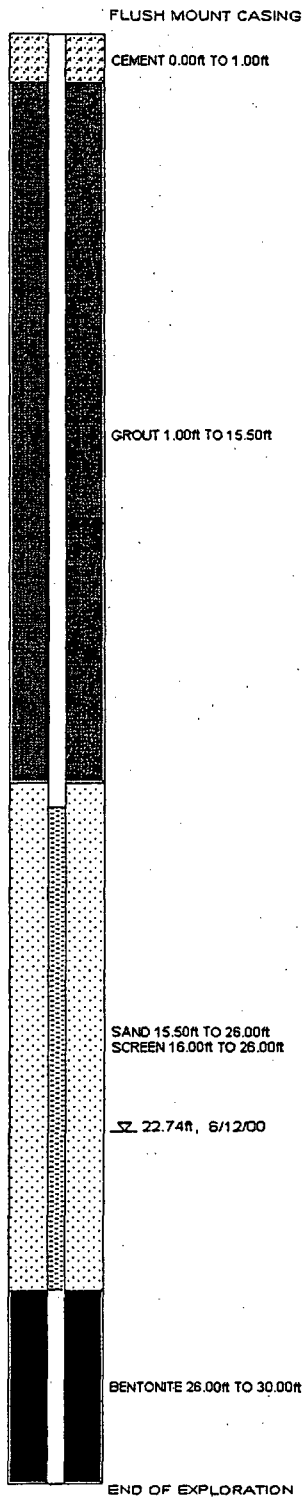
BORING DATE: 6-1-00 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

Tighe&Bond
Consulting Engineers
Environmental Specialists

DEPTH SCALE (FEET)	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples ID	Type	Recovery (")	RQD (%)
0	Drive 4-inch ID Steel Casing	GROUND SURFACE		0				
2		Dry, medium to coarse sand, fine to medium gravel, little black ash		0.5	S-1	SS	12	
4				4				
6		Dry black ash			S-2	SS	24	
8				8				
10		Dry, brown, little fine to medium sand, trace gravel, black ash			S-3	SS	12	
12				12				
14		Wet, orange/brown, medium to coarse sand, some coarse gravel.			S-4	SS	6	
16				15				
18					C-1	RC	60	82
20								
22		Bedrock encountered at 15' (monzonite). Black Staining observed in bedrock fractures at 15.7' and 22.7'.			C-2	RC	60	80
24								
26								
28					C-3	RC	60	90
30		END OF EXPLORATION @ 30.00ft		30.00				
32								

Concentration — PID Concentration (0 2 4 6 8 10)

MW-2D



PROJECT: W-3072

B-6/MW-3S

LOCATION: T-1 P&PA Berlin, NH

BORING DATE: 10/5/99 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

Tighe&Bond
Consulting Engineers
Environmental Specialists

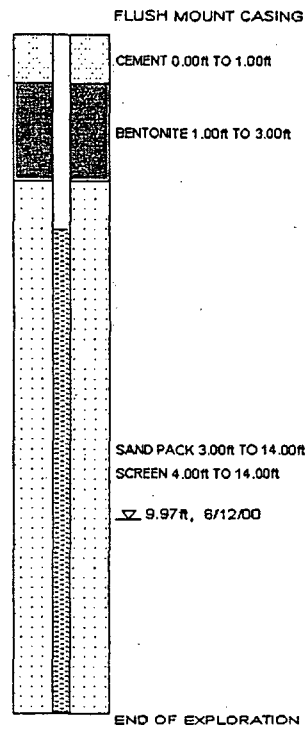
DEPTH SCALE METRES	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples ID	Type	Recov (in.)	SPT (total)
			GROUND SURFACE		0				
					0.5				
	2	4.25-inch ID Hollow Stem Auger	Black; dry; Ash. Apparent petroleum identified within sample.		1	S-1	SS	12	12
1	4				3				
	6		Black; dry; Ash. Apparent petroleum identified within sample.		5	S-2	SS	18	10
2	8				7				
3	10		Black; dry; Ash. Apparent petroleum identified within sample.		10	S-3	SS	8	14
	12				12				
4			(Auger refusal @14')						
	14		END OF EXPLORATION @ 14.00ft		14.00				
5	16								
	18								
6	20								
	22								
7	24								
8	26								
	28								
9	30								
	32								
10									

Field Screening Results

L-2000 PCB kit (ppm) ◆
Dexil TPH kit (ppm) ●
■

0 20 40 60 80 100

MW-3



PROJECT: W-3138-2-1-1451

LOCATION: PPA T-1 Site

MW-3D

BORING DATE: 6-2-00 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

Tighe&Bond
Consulting Engineers
Environmental Specialists

DEPTH SCALE (FEET)	BORING METHOD	DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	ID	Type	Recovery (")	RQD (%)
		GROUND SURFACE		0				
	Drive 4-inch ID Steel Casing	Dry, black ash			S-1	SS	12	
					S-2	SS	10	
		Black ash, rocks in last 4"		8	S-3	SS	14	
		Bedrock encountered at 12.5' (monzonite). Black staining observed in bedrock fractures at 14'.		12	C-1	RC	60	97
		END OF EXPLORATION @ 17.00ft		17.00				

Samples

Concentration

PID Concentration ◆ ● ■

0 2 4 6 8 10

MW-3D

PROJECT: W-3138-2-1-1451

LOCATION: PPA T-1 Site

BORING DATE: 6-2-00 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

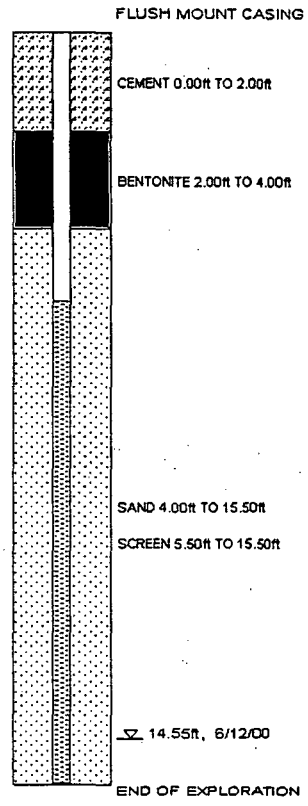
MW-4S

Tighe&Bond
Consulting Engineers
Environmental Specialists

DEPTH SCALE METRES	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples ID	Type	Recovery (")
0	0	Drive 4-Inch ID Steel Casing	GROUND SURFACE		0			
			Dry, brown, fine to medium sand, some gravel.		5	S-1	SS	18
1	2							
	4							
	6					S-2	SS	18
2	8				8			
3	10		Medium to coarse sand, little gravel			S-3	SS	12
	12				12			
4	14		Auger refusal encountered at 15.5'.					
	16		END OF EXPLORATION @ 15.50ft		15.50			
5	18							
6	20							
	22							
7	24							
8	26							
	28							
9	30							
	32							
10								

Concentration — PID Concentration (0 2 4 6 8 10)

MW-4S



PROJECT: W-3138-2-1-1451

MW-5S

LOCATION: PPA T-1 Site

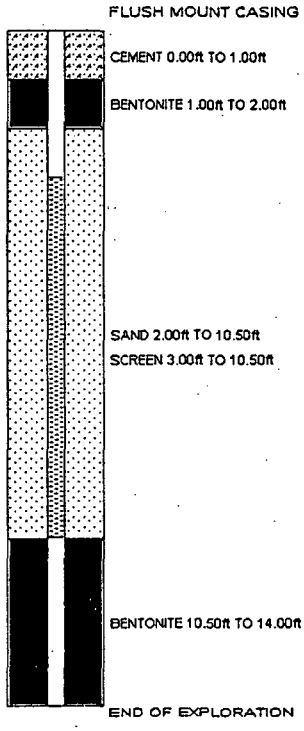
BORING DATE: 31-May-2000 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

Tighe&Bond
Consulting Engineers
Environmental Specialists

DEPTH SCALE (METRES / FEET)	BORING METHOD	SOIL PROFILE: DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples: ID	Type	Recovery (")	Concentration: PID Concentration (0 2 4 6 8 10)
		GROUND SURFACE		0				
				0.5				
		Dry, fine to medium sand, little coarse sand, little fine to medium gravel		1	S-1	SS	12	◆
		Dry, fine to medium sand, little coarse sand, little fine to medium gravel		3	S-2	SS	5	◆
		Wet, fine to medium sand, little coarse sand, little fine to medium gravel		7	S-3	SS		◆
		Auger refusal encountered at 11.5'. Roller bit to 14' to confirm bedrock.		11				
		END OF EXPLORATION @ 14.00ft		14.00				

Drive 4-inch ID Steel Casing

MW-5D



PROJECT: W-3138-2-1-1451

MW-5D

LOCATION: PPA T-1 Site

BORING DATE: 31-May-2000 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

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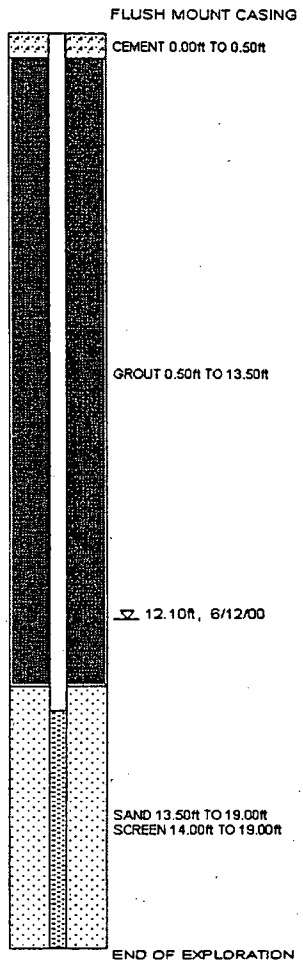
Environmental Specialists

DEPTH SCALE METRES	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples ID	Type	Recovery (")	RQD (%)	Concentration PID Concentration 0 2 4 6 8 10
			GROUND SURFACE		0					
					.5					
			Casing advanced to 14'. Soil samples not collected. See boring log MW-5S for geology of unconsolidated material.							
					14					
		Drive 4-inch ID Steel Casing	No black staining in bedrock fractures.			C-1	RC	60	92	
			END OF EXPLORATION @ 19.00ft		19.00					

MW-5D



PROJECT: W-3138-2-1-1451

MW-6S

LOCATION: PPA T-1 Site

BORING DATE: 30-May-2000 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

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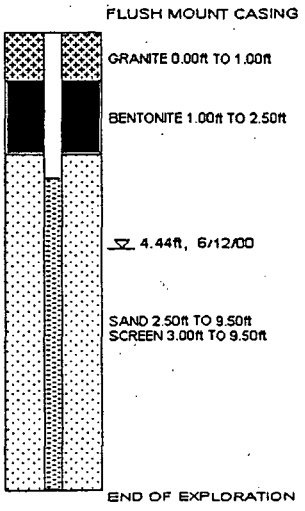
DEPTH SCALE METRES	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples ID	Type	Recovery (%)	Concentration PID Concentration 0 20 40 60 80 100
	0	Drive 4-inch ID Steel Casing	GROUND SURFACE		0				
					.5				
	2								
	4		Soil samples were collected. See boring MW-6D for the geology of unconsolidated material.						
	6								
	8								
	10		END OF EXPLORATION @ 9.50ft		9.50				
	12								
	14								
	16								
	18								
	20								
	22								
	24								
	26								
	28								
	30								
	32								

MW-6S



PROJECT: W-3138-2-1-1451

LOCATION: PPA T-1 Site

MW-6D

BORING DATE: 30-May-2000 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

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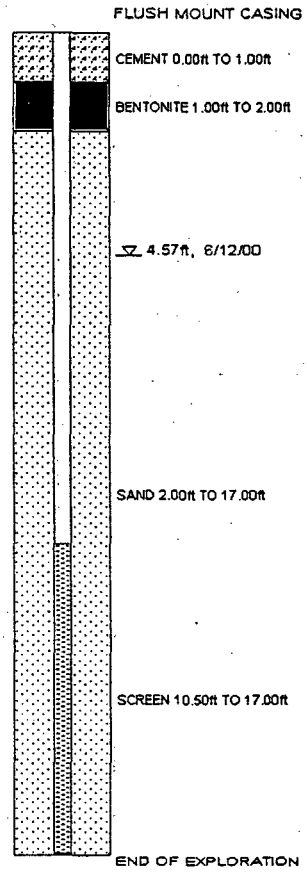
DEPTH SCALE METRES	DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples ID	Type	Recovery (%)	RQD (%)
			GROUND SURFACE						
0	0		Paved asphalt driveway.		0				
					.5				
	2					S-1	SS	12	
1			Dry, light brown, fine to medium sand, some coarse sand, little fine to medium gravel (Fill)						
	4								
	6					S-2	SS	14	
2					6				
	8		Saturated, black, ash, little fine to medium sand and gravel (Fill)						
3	10								
					10.6	S-3	SS	0.5	
	12								
4									
	14		Monzonite						
						C-1	RC	1.0	92
	16								
5									
			END OF EXPLORATION @ 17.00ft		17.00				
	18								
6	20								
	22								
7	24								
8	26								
	28								
9	30								
	32								
10									

Drive 4-inch ID Steel Casing

Concentration: Standardize PID Section ◆ ● ■ — 0 20 40 60 80 100

MW-6D



PROJECT: W-3138-2-1-1451

MW-7S

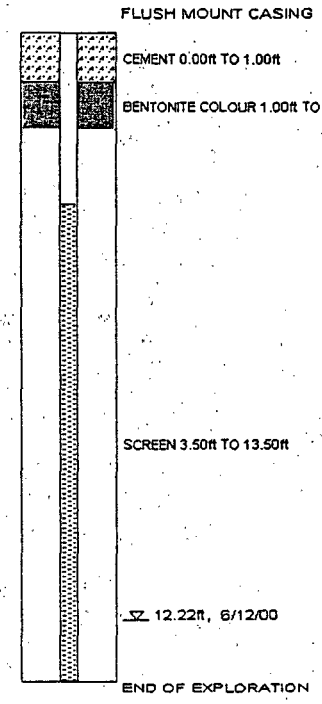
LOCATION: PPA T-1 Site

BORING DATE: 6-2-00 DATUM: GROUND SURFACE DIP: ADS, Inc. LOGGED: Richard Geisler

Tighe&Bond
Consulting Engineers
Environmental Specialists

DEPTH SCALE FEET	BORING METHOD	SOIL PROFILE DESCRIPTION	STRATA PLOT	DEPTH B.G.S. (ft)	Samples ID	Type	Recovery (")	Concentration PID Concentration (0 2 4 6 8 10)
0	Drive 4-inch ID Steel Casing	GROUND SURFACE		0				
		Dry, brown, fine to medium sand and gravel, fill		0.5	S-1	SS	12	
		Brown, dry, medium to coarse sand and gravel, fill		2.5	S-2	SS	14	◆
		Wet, brown, dry, medium to coarse sand and gravel, fill. Augers refusal excavated at 13.5'		7	S-3	SS	13	◆
		END OF EXPLORATION @ 13.50ft		13.50				

MW-7S



APPENDIX F

Table 1 (Page 1 of 2)
Soil Samples from Borings
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected from May 31, 2000 through June 2, 2000
(all results in mg/kg)

Sample ID	**B-7 S-1**	**B-8 S-1**	**B-8 S-2**	**B-9 S-1**	**B-9 S-2**	**B-10 S-1**	**RCMP**		
Depth Collected (Feet)	5	5	8	5	7	5	**NHS-1**	**NHS-2**	**NHS-3**
Polychlorinated Biphenyls (PCBs)									
Arochlor-1016	ND(0.5)	ND(4.9)	ND(1.1)	ND(0.11)	ND(0.11)	ND(0.55)	NE	NE	NE
Arochlor-1221	ND(0.5)	ND(4.9)	ND(1.1)	ND(0.11)	ND(0.11)	ND(0.55)	NE	NE	NE
Arochlor-1232	ND(0.5)	ND(4.9)	ND(1.1)	ND(0.11)	ND(0.11)	ND(0.55)	NE	NE	NE
Arochlor-1242	ND(0.5)	ND(4.9)	ND(1.1)	ND(0.11)	ND(0.11)	ND(0.55)	NE	NE	NE
Arochlor-1248	ND(0.5)	ND(4.9)	ND(1.1)	ND(0.11)	ND(0.11)	ND(0.55)	NE	NE	NE
Arochlor-1254	ND(0.5)	ND(4.9)	ND(1.1)	ND(0.11)	ND(0.11)	ND(0.55)	NE	NE	NE
Arochlor-1260	3.4	25	7.9	0.38	1.8	3.8	NE	NE	NE
Total PCBs	**3.4**	**25**	**7.9**	0.38	**1.8**	**3.8**	1	1	2
Volatile Organic Compounds (VOCs)									
Acetone	ND(0.045)	NA	ND(0.074)	NA	ND(0.06)	0.46	9	9	9
Fluorotrichloromethane	ND(0.0022)	NA	ND(0.0037)	NA	0.014	ND(0.0022)	1,000	2,500	5,000
1,2,3 - Trichlorobenzene	ND(0.0022)	NA	0.0061	NA	ND(0.003)	ND(0.0022)	NE	NE	NE
1,2,4 - Trichlorobenzene	ND(0.0022)	NA	0.0043	NA	ND(0.003)	ND(0.0022)	15	15	15
All other VOCs	ND	ND	ND	ND	ND	ND	NE	NE	NE

Boldface indicates an exceedance of the applicable standard.
ND = Analyte was not detected in the sample above the laboratory detection limit. Detection limits are provided in the parentheses.
NE = No listed RCMP standard exists for these compounds.
RCMP S-1, S-2 & S-3 are the New Hampshire Risk Characterization and Management Policy Soil Standards.
NAot analyzed.

Table 1 (Page 2 of 2)
Soil Samples from Borings
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected from May 31, 2000 through June 2, 2000
(all results in mg/kg)

Sample ID	**B-11 S-1**	**B-11 S-2**	**B-12 S-1**	**B-13 S-1**	**B-13 S-2**	**B-14 S-1**	**Trip Blank**	**RCMP**		
Depth Collected (Feet)	0 to 2	4 to 5.5	0 to 2	0 to 1	3 to 3.8	0 to 1.5	---	**NHS-1**	**NHS-2**	**NHS-3**
Polychlorinated Biphenyls (PCBs)										
Arochlor-1016	ND(0.11)	ND(0.13)	ND(0.13)	ND(1.3)	ND(0.11)	ND(1.1)	NA	NE	NE	NE
Arochlor-1221	ND(0.11)	ND(0.13)	ND(0.13)	ND(1.3)	ND(0.11)	ND(1.1)	NA	NE	NE	NE
Arochlor-1232	ND(0.11)	ND(0.13)	ND(0.13)	ND(1.3)	ND(0.11)	ND(1.1)	NA	NE	NE	NE
Arochlor-1242	ND(0.11)	ND(0.13)	ND(0.13)	ND(1.3)	ND(0.11)	ND(1.1)	NA	NE	NE	NE
Arochlor-1248	ND(0.11)	ND(0.13)	ND(0.13)	ND(1.3)	ND(0.11)	ND(1.1)	NA	NE	NE	NE
Arochlor-1254	ND(0.11)	ND(0.13)	ND(0.13)	ND(1.3)	ND(0.11)	ND(1.1)	NA	NE	NE	NE
Arochlor-1260	ND(0.11)	0.42	0.25	6.4	1.1	11	NA	NE	NE	NE
Total PCBs	ND(0.11)	0.42	0.25	**6.4**	**1.1**	**11**	NA	1	1	2
Volatile Organic Compounds (VOCs)										
Acetone	NA	1.3	1.3	NA	0.32	0.78	ND(2.5)	9	9	9
1,2,3 - Trichlorobenzene	NA	ND(0.0031)	ND(0.0028)	NA	ND(0.0025)	ND(0.0024)	ND(0.12)	NE	NE	NE
1,2,4 - Trichlorobenzene	NA	ND(0.0031)	ND(0.0028)	NA	ND(0.0025)	ND(0.0024)	ND(0.12)	15	15	15
All other VOCs	NA	ND	ND	NA	ND	ND	ND	NE	NE	NE

Boldface indicates an exceedance of the applicable standard.
ND = Analyte was not detected in the sample above the laboratory detection limit. Detection limits are provided in the parentheses.
NE = No listed RCMP standard exists for these compounds.
RCMP S-1, S-2 & S-3 are the New Hampshire Risk Characterization and Management Policy Soil Standards.
NAot analyzed.

Table 2 (Page 1 of 3)
Soil Samples from Well Installation
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected from May 31, 2000 through June 2, 2000
(all results in mg/kg)

Sample ID	**MW-1D S-1**	**MW-1D S-3**	**MW-1D S-4**	**MW-2D S-1**	**MW-2D S-2**	**MW-2D S-3**	**MW-2D S-4**	**RCMP**		
Depth Collected (Feet)	1 to 3	5 to 7	14 to 14.6	1 to 3	5 to 7	10 to 12	14 to 14.9	**NHS-1**	**NHS-2**	**NHS-3**
Polychlorinated Biphenyls (PCBs)										
Arochlor-1016	ND(1.1)	ND(0.13)	ND(1.1)	ND(2.2)	ND(2.2)	ND(1.1)	ND(0.13)	NE	NE	NE
Arochlor-1221	ND(1.1)	ND(0.13)	ND(1.1)	ND(2.2)	ND(2.2)	ND(1.1)	ND(0.13)	NE	NE	NE
Arochlor-1232	ND(1.1)	ND(0.13)	ND(1.1)	ND(2.2)	ND(2.2)	ND(1.1)	ND(0.13)	NE	NE	NE
Arochlor-1242	ND(1.1)	ND(0.13)	ND(1.1)	ND(2.2)	ND(2.2)	ND(1.1)	ND(0.13)	NE	NE	NE
Arochlor-1248	ND(1.1)	ND(0.13)	ND(1.1)	ND(2.2)	ND(2.2)	ND(1.1)	ND(0.13)	NE	NE	NE
Arochlor-1254	ND(1.1)	ND(0.13)	ND(1.1)	ND(2.2)	ND(2.2)	ND(1.1)	ND(0.13)	NE	NE	NE
Arochlor-1260	48	0.22	10	202	28	9	0.68	NE	NE	NE
Total PCBs	**48**	0.22	**10**	**202**	**28**	**9**	0.68	1	1	2
Volatile Organic Compounds (VOCs)										
Acetone	NA	ND(0.054)	NA	NA	NA	ND(0.051)	NA	9	9	9
Chloroform	NA	ND(0.0027)	NA	NA	NA	ND(0.0025)	NA	NE	NE	NE
Tetrachloroethene	NA	ND(0.0027)	NA	NA	NA	ND(0.0025)	NA	7	7	7
1,2,3 - Trichlorobenzene	NA	ND(0.0027)	NA	NA	NA	ND(0.0025)	NA	NE	NE	NE
1,2,4 - Trichlorobenzene	NA	ND(0.0027)	NA	NA	NA	ND(0.0025)	NA	15	15	15
1,1,1- Trichloroethane	NA	ND(0.0027)	NA	NA	NA	ND(0.0025)	NA	42	42	42
All other VOCs	NA	ND	NA	NA	NA	ND	NA	NE	NE	NE

Boldface indicates an exceedance of the applicable standard.
ND = Analyte was not detected in the sample above the laboratory detection limit. Detection limits are provided in the parentheses.
NE = No listed RCMP standard exists for these compounds.
RCMP S-1, S-2 & S-3 are the New Hampshire Risk Characterization and Management Policy Soil Standards.
NAot analyzed.

Table 2 (Page 2 of 3)
Soil Samples from Well Installation
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected from May 31, 2000 through June 2, 2000
(all results in mg/kg)

Sample ID	**MW-3D S-1**	**MW-3D S-2**	**MW-3D S-3**	**MW-4S S-1**	**MW-4S S-2**	**MW-4S S-3**	**RCMP**		
Depth Collected (Feet)	1 to 3	5 to 7	10 to 12	0.5 to 2.5	5 to 7	10 to 12	**NHS-1**	**NHS-2**	**NHS-3**
Polychlorinated Biphenyls (PCBs)									
Arochlor-1016	ND(5.3)	ND(1.1)	ND(0.11)	ND(0.1)	ND(0.11)	ND(1.1)	NE	NE	NE
Arochlor-1221	ND(5.3)	ND(1.1)	ND(0.11)	ND(0.1)	ND(0.11)	ND(1.1)	NE	NE	NE
Arochlor-1232	ND(5.3)	ND(1.1)	ND(0.11)	ND(0.1)	ND(0.11)	ND(1.1)	NE	NE	NE
Arochlor-1242	ND(5.3)	ND(1.1)	ND(0.11)	ND(0.1)	ND(0.11)	ND(1.1)	NE	NE	NE
Arochlor-1248	ND(5.3)	ND(1.1)	ND(0.11)	ND(0.1)	ND(0.11)	ND(1.1)	NE	NE	NE
Arochlor-1254	ND(5.3)	ND(1.1)	ND(0.11)	ND(0.1)	ND(0.11)	ND(1.1)	NE	NE	NE
Arochlor-1260	34	7.3	1.4	ND(0.1)	1.6	13	NE	NE	NE
Total PCBs	**34**	**7.3**	**1.4**	ND(0.1)	**1.6**	**13**	1	1	2
Volatile Organic Compounds (VOCs)									
Acetone	NA	NA	ND(0.062)	NA	NA	ND(0.048)	9	9	9
Chloroform	NA	NA	ND(0.0031)	NA	NA	0.0035	NE	NE	NE
Tetrachloroethene	NA	NA	0.013	NA	NA	ND(0.0024)	7	7	7
1,2,3 - Trichlorobenzene	NA	NA	ND(0.0031)	NA	NA	0.0031	NE	NE	NE
1,2,4 - Trichlorobenzene	NA	NA	ND(0.0031)	NA	NA	0.0071	15	15	15
1,1,1- Trichloroethane	NA	NA	0.014	NA	NA	ND(0.0024)	42	42	42
All other VOCs	ND	ND	ND	ND	ND	ND	NE	NE	NE

Boldface indicates an exceedance of the applicable standard.
ND = Analyte was not detected in the sample above the laboratory detection limit. Detection limits are provided in the parentheses.
NE = No listed RCMP standard exists for these compounds.
RCMP S-1, S-2 & S-3 are the New Hampshire Risk Characterization and Management Policy Soil Standards.
NAot analyzed.

Table 2 (Page 3 of 3)
Soil Samples from Well Installation
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected from May 31, 2000 through June 2, 2000
(all results in mg/kg)

Sample ID	**MW-5S S-1**	**MW-5S S-2**	**MW-5S S-3**	**MW-6D S-1**	**MW-6D S-2**	**MW-6D S-3**	**MW-7S S-1**	**MW-7S S-2**	**MW-7S S-3**	**RCMP**		
Sample Depth (Feet)	1 to 3	5 to 7	9 to 11	1 to 3	5 to 7	10 to 10.11	0.5 to 2.5	5 to 7	10 to 12	**NHS-1**	**NHS-2**	**NHS-3**
Polychlorinated Biphenyls (PCBs)												
Arochlor-1016	ND(0.1)	ND(0.1)	ND(0.12)	ND(1)	ND(0.11)	ND(0.11)	ND(0.53)	ND(0.1)	ND(0.11)	NE	NE	NE
Arochlor-1221	ND(0.1)	ND(0.1)	ND(0.12)	ND(1)	ND(0.11)	ND(0.11)	ND(0.53)	ND(0.1)	ND(0.11)	NE	NE	NE
Arochlor-1232	ND(0.1)	ND(0.1)	ND(0.12)	ND(1)	ND(0.11)	ND(0.11)	ND(0.53)	ND(0.1)	ND(0.11)	NE	NE	NE
Arochlor-1242	ND(0.1)	ND(0.1)	ND(0.12)	ND(1)	ND(0.11)	ND(0.11)	ND(0.53)	ND(0.1)	ND(0.11)	NE	NE	NE
Arochlor-1248	ND(0.1)	ND(0.1)	ND(0.12)	ND(1)	ND(0.11)	ND(0.11)	ND(0.53)	ND(0.1)	ND(0.11)	NE	NE	NE
Arochlor-1254	ND(0.1)	ND(0.1)	ND(0.12)	ND(1)	ND(0.11)	ND(0.11)	ND(0.53)	ND(0.1)	ND(0.11)	NE	NE	NE
Arochlor-1260	0.23	0.42	ND(0.12)	8.1	1.2	0.51	1.5	ND(0.1)	0.19	NE	NE	NE
Total PCBs	0.23	0.42	ND(0.12)	**8.1**	**1.2**	0.51	**1.5**	ND(0.1)	0.19	1	1	2
Volatile Organic Compounds (VOCs)												
Acetone	NA	NA	ND(0.057)	NA	ND(0.047)	NA	NA	NA	ND(0.045)	9	9	9
Chloroform	NA	NA	ND(0.0029)	NA	ND(0.0023)	NA	NA	NA	ND(0.0022)	NE	NE	NE
Tetrachloroethene	NA	NA	ND(0.0029)	NA	ND(0.0023)	NA	NA	NA	ND(0.0022)	7	7	7
1,2,3 - Trichlorobenzene	NA	NA	ND(0.0029)	NA	ND(0.0023)	NA	NA	NA	ND(0.0022)	NE	NE	NE
1,2,4 - Trichlorobenzene	NA	NA	ND(0.0029)	NA	ND(0.0023)	NA	NA	NA	ND(0.0022)	15	15	15
1,1,1- Trichloroethane	NA	NA	ND(0.0029)	NA	ND(0.0023)	NA	NA	NA	ND(0.0022)	42	42	42
All other VOCs	ND	ND	ND	ND	ND	ND	ND	ND	ND	NE	NE	NE

Boldface indicates an exceedance of the applicable standard.
ND = Analyte was not detected in the sample above the laboratory detection limit. Detection limits are provided in the parentheses.
NE = No listed RCMP standard exists for these compounds.
RCMP S-1, S-2 & S-3 are the New Hampshire Risk Characterization and Management Policy Soil Standards.
NAot analyzed.

Table 3
Congener Soil Sample Analysis
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected from May 31, 2000 through June 2, 2000
(all results in mg/kg)

	MW-1D	MW-2D	MW-4S	Cl Substituents	PCB Congeners
	S-4	S-1	S-2		
Detected Individual Congeners					
PCB-81	---	---	---	---	---
PCB-77	---	---	---	---	---
PCB-123	0.023	0.57	0.065	---	---
PCB-118	0.045	1.3	0.13	---	---
PCB-114	---	<.013	---	---	---
PCB-105	0.011	0.46	---	---	---
PCB-126	---	---	---	---	---
PCB-167	0.013	0.93	0.048	---	---
PCB-156	0.013	1.6	0.082	---	---
PCB-157	---	0.25	0.014	---	---
PCB-169	---	---	---	---	---
PCB-189	---	0.39	0.022	---	---
				---	---
Sum of the Homologues					
Monochlorobiphenyl	---	---	---	1	3
Dichlorobiphenyl	---	---	---	2	12
Trichlorobiphenyl	---	0.11	0.01	3	24
Tetrachlorobiphenyl	0.042	1.3	0.1	4	42
Pentachlorobiphenyl	0.72	24	2.1	5	46
Hexachlorobiphenyl	2.8	100	7.1	6	42
Heptachlorobiphenyl	2	79	4.9	7	24
Octachlorobiphenyl	0.25	11	0.64	8	12
Nonachlorobiphenyl	0.016	0.73	0.042	9	3
Decachlorobiphenyl	---	0.015	0.011	10	1
Total PCBs	**5.8**	**220**	**15**	**---**	**---**

Table 4 (Page 1 of 2)
Groundwater Sampling Results
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected June 12, 2000 through June 16, 2000
(all results in ug/L)

Sample ID	MW-1S	MW-1D	MW-2S	MW-2D	MW-3S	MW-3D	RCMP	
Polychlorinated Biphenyls (PCBs)							NH GW-1	NH GW-2
Arochlor-1016	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.6)	NE	NE
Arochlor-1221	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.6)	NE	NE
Arochlor-1232	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.6)	NE	NE
Arochlor-1242	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.6)	NE	NE
Arochlor-1248	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.6)	NE	NE
Arochlor-1254	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.6)	NE	NE
Arochlor-1260	10	2.5	ND(0.5)	2.1	9.8	2.7	NE	NE
Total PCBs	**10**	**2.5**	ND(0.5)	**2.1**	**9.8**	**2.7**	0.5	NA
Volatile Organic Compounds (VOCs)								
Chlorobenzene	0.64 J	ND (20)	ND (1.0)	ND (10)	ND (1.0)	ND (1.0)	NE	NE
p-Isopropyltoluene	ND (1.0)	ND (20)	ND (1.0)	ND (10)	ND (1.0)	ND (1.0)	NE	NE
1,3 - Dichlorobenzene	18	18 J	ND(1.0)	13	ND (1.0)	ND(1.0)	600	10,000
1,4 - Dichlorobenzene	15	26	ND(1.0)	13	ND(1.0)	ND(1.0)	75	30,000
Tetrachloroethene	ND(1.0)	ND(20)	ND(1.0)	ND(10)	0.59 J	ND(1.0)	5	3,000
1,2,3 - Trichlorobenzene	ND (1.0)	560	ND (1.0)	ND (10)	ND (1.0)	ND (1.0)	NE	NE
1,2,4 - Trichlorobenzene	ND(1.0)	**290**	ND(1.0)	ND(10)	ND(1.0)	ND(1.0)	70	600
All other VOCs	ND	ND	ND	ND	ND	ND	NE	NE

Boldface indicates an exceedance of the applicable standard.
J- Indicates an estimated value.
ug/l indicates micrograms per liter.
RCMP NH GW-1 and GW-2 - Risk Characterization Management Policy New Hampshire GW-1 and GW-2 Groundwater Standards.
ND (X) - Analyte was not detected in the sample above the laboratory detection limit. Detection limits are provided in the parentheses.
NE - No listed RCMP standards exist for these compounds.
NA - Not analyzed.

Table 4 (Page 2 of 2)
Groundwater Sampling Results
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected June 12, 2000 through June 16, 2000
(all results in ug/L)

Sample ID	**MW-4S**	**MW-5D**	**MW-6S**	**MW-6D**	**MW-7S**	**RCMP**	
Polychlorinated Biphenyls (PCBs)						**NH GW-1**	**NH GW-2**
Arochlor-1016	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NE	NE
Arochlor-1221	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NE	NE
Arochlor-1232	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NE	NE
Arochlor-1242	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NE	NE
Arochlor-1248	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NE	NE
Arochlor-1254	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	ND(0.5)	NE	NE
Arochlor-1260	ND(0.5)	ND(0.5)	ND(0.5)	0.73	2.8	NE	NE
Total PCBs	ND(0.5)	ND(0.5)	ND(0.5)	**0.73**	**2.8**	0.5	NA
Volatile Organic Compounds (VOCs)							
Chlorobenzene	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NE	NE
p-Isopropyltoluene	ND (1.0)	ND (1.0)	ND (1.0)	1.4	ND (1.0)	NE	NE
1,3 - Dichlorobenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	600	10,000
1,4 - Dichlorobenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	75	30,000
Tetrachloroethene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	5	3,000
1,2,3 - Trichlorobenzene	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	NE	NE
1,2,4 - Trichlorobenzene	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	70	600
All other VOCs	ND	ND	ND	ND	ND	NE	NE

Boldface indicates an exceedance of the applicable standard.
J- Indicates an estimated value.
ug/l indicates micrograms per liter.
RCMP NH GW-1 and GW-2 - Risk Characterization Management Policy New Hampshire GW-1 and GW-2 Groundwater Standards.
ND (X) - Analyte was not detected in the sample above the laboratory detection limit. Detection limits are provided in the parentheses.
NE - No listed RCMP standards exist for these compounds.
NA - Not analyzed.

Table 5
Congener Groundwater Sample Analysis
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected from May 31, 2000 through June 2, 2000
(all results in ug/l)

	MW-1S	MW-2D	MW-3S	Cl Substituents	PCB Conegers
Detected Individual Congeners					
PCB-81	---	---	---	---	---
PCB-77	---	---	---	---	---
PCB-123	---	---	0.027	---	---
PCB-118	0.022	0.023	0.026	---	---
PCB-114	---	---	---	---	---
PCB-105	---	---	---	---	---
PCB-126	---	---	---	---	---
PCB-167	---	---	---	---	---
PCB-156	---	---	---	---	---
PCB-157	---	---	---	---	---
PCB-169	---	---	---	---	---
PCB-189	---	---	---	---	---
				---	---
Sum of the Homologues					
Monochlorobiphenyl	---	---	---	1	3
Dichlorobiphenyl	0.02	---	---	2	12
Trichlorobiphenyl	0.08	0.048	---	3	24
Tetrachlorobiphenyl	0.14	0.15	0.037	4	42
Pentachlorobiphenyl	0.83	0.86	1.2	5	46
Hexachlorobiphenyl	1.6	1.6	3.7	6	42
Heptachlorobiphenyl	0.58	0.61	1.8	7	24
Octachlorobiphenyl	0.042	0.052	0.14	8	12
Nonachlorobiphenyl	---	---	---	9	3
Decachlorobiphenyl	---	---	---	10	1
Total PCBs	**3.3**	**3.3**	**6.8**	---	---

Table 6
Groundwater Elevation Data
T-1 Transformer Site
Pulp and Paper of America, Berlin, NH
Collected from May 31, 2000 through June 2, 2000
(all results in feet)

Well ID	Depth to TPVC	Elevation of TPVC	Depth to GW	Elevation of GW GW
MW-1S	5.83	1051.09	12.28	1038.81
MW-1D	5.97	1050.95	12.37	1038.58
MW-2S		1051.37	13.54	1037.83
MW-2D	5.57	1051.35	22.74	1028.61
MW-3S		1051.11	9.97	1041.14
MW-3D	5.97	1050.95	9.38	1041.57
MW-4S	5.96	1050.96	14.55	1036.41
MW-5S	6.02	1050.9	DRY	
MW-5D	5.86	1051.06	12.16	1038.90
MW-6S	5.64	1051.28	4.44	1046.84
MW-6D	5.5	1051.42	4.57	1046.85
MW-7S		1051.45	12.22	1039.23

APPENDIX G

W-3138

Committed To *Your* Success

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

Tel: (413) 572-4000
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www.stl-inc.com

June 09, 2000

Mr. Richard Geisler

Tighe & Bond, Inc. W3138
110 West Boylston St.

Worcester, MA

Report Number : 22706

Dear Mr. Geisler,

The analysis of your sample(s) submitted on 6/2/00 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

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. Common laboratory contaminants in applicable method blanks are reported with J qualifiers to one-tenth the quantitation limit.

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.

Committed To *Your* Success

MADEP MA014
RIDOH57
CTDPH 0494
NY DOH 10843
NH DES 2539

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CASE NARRATIVE FOR REPORT NUMBER 22706

Client Name : Tighe & Bond, Inc. W3138

Project Name : PPA T-1

Date : June 09, 2000

Sample Number	Comments
149056	
149057	Surrogate standard outliers on the SW846 8260B soil analysis could not be confirmed since a duplicate sample was not available for analysis.
149058	
149059	
149060	
149061	
149062	
149063	
149064	
149065	
149066	The septum closure on the SW846 8260B soil analysis sample appeared compromised.
149067	
149068	
149069	
149070	
149071	

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-6D S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149056
Project Name :	PPA T-1	Lab File ID :	H4400.D
Matrix :	Soil	Date Collected :	5/30/00
Sample Wt/Vol :	10.5g	Date Received :	6/2/00
% Solid :	94.4	Date Extracted :	6/5/00
GPC Clean up :		Date Analyzed :	6/7/00
Sulfur Clean up :		By :	SM
Dilution Factor :	10		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,000	U
11104-28-2	Arochlor-1221	1,000	U
11141-16-5	Arochlor-1232	1,000	U
53469-21-9	Arochlor-1242	1,000	U
12672-29-6	Arochlor-1248	1,000	U
11097-69-1	Arochlor-1254	1,000	U
11096-82-5	Arochlor-1260	1,000	8100

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-6D S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149057
Project Name :	PPA T-1	Lab File ID :	H4395
Matrix :	Soil	Date Collected :	5/30/00
Sample Wt/Vol :	10.4g	Date Received :	6/2/00
% Solid :	85.2	Date Extracted :	6/5/00
GPC Clean up :		Date Analyzed :	6/7/00
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	1200

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-6D S-3	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149058
Project Name :	PPA T-1	Lab File ID :	H4409.D
Matrix :	Soil	Date Collected :	5/30/00
Sample Wt/Vol :	10.1g	Date Received :	6/2/00
% Solid :	86.2	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/7/00
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	510

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-5S S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149059
Project Name :	PPA T-1	Lab File ID :	H4411.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.3g	Date Received :	6/2/00
% Solid :	94.0	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/7/00
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	100	U
11104-28-2	Arochlor-1221	100	U
11141-16-5	Arochlor-1232	100	U
53469-21-9	Arochlor-1242	100	U
12672-29-6	Arochlor-1248	100	U
11097-69-1	Arochlor-1254	100	U
11096-82-5	Arochlor-1260	100	230

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-5S S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149060
Project Name :	PPA T-1	Lab File ID :	H4412.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.1g	Date Received :	6/2/00
% Solid :	96.5	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/7/00
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	100	U
11104-28-2	Arochlor-1221	100	U
11141-16-5	Arochlor-1232	100	U
53469-21-9	Arochlor-1242	100	U
12672-29-6	Arochlor-1248	100	U
11097-69-1	Arochlor-1254	100	U
11096-82-5	Arochlor-1260	100	420

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-5S S-3	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149061
Project Name :	PPA T-1	Lab File ID :	H4413.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.2g	Date Received :	6/2/00
% Solid :	85.0	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/7/00
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 :	B-7 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149062
Project Name :	PPA T-1	Lab File ID :	H4438.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.5g	Date Received :	6/2/00
% Solid :	94.3	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
Sulfur Clean up :		By :	SM
Dilution Factor :	5		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
2674-11-2	Arochlor-1016	500	U
1104-28-2	Arochlor-1221	500	U
1141-16-5	Arochlor-1232	500	U
53469-21-9	Arochlor-1242	500	U
12672-29-6	Arochlor-1248	500	U
11097-69-1	Arochlor-1254	500	U
11096-82-5	Arochlor-1260	500	3400

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-8 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149063
Project Name :	PPA T-1	Lab File ID :	H4442.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.2g	Date Received :	6/2/00
% Solid :	81.5	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
Sulfur Clean up :		By :	SM
Dilution Factor :	50		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	4,900	U
11104-28-2	Arochlor-1221	4,900	U
11141-16-5	Arochlor-1232	4,900	U
53469-21-9	Arochlor-1242	4,900	U
12672-29-6	Arochlor-1248	4,900	U
11097-69-1	Arochlor-1254	4,900	U
11096-82-5	Arochlor-1260	4,900	25000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-8 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149064
Project Name :	PPA T-1	Lab File ID :	H4441.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.2g	Date Received :	6/2/00
% Solid :	87.7	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
Sulfur Clean up :		By :	SM
Dilution Factor :	10		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,100	U
11104-28-2	Arochlor-1221	1,100	U
11141-16-5	Arochlor-1232	1,100	U
53469-21-9	Arochlor-1242	1,100	U
12672-29-6	Arochlor-1248	1,100	U
11097-69-1	Arochlor-1254	1,100	U
11096-82-5	Arochlor-1260	1,100	7900

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-9 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149065
Project Name :	PPA T-1	Lab File ID :	H4417.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.2g	Date Received :	6/2/00
% Solid :	85.7	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	380

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-9 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149066
Project Name :	PPA T-1	Lab File ID :	H4418.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.1g	Date Received :	6/2/00
% Solid :	87.7	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	1800

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-10 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149067
Project Name :	PPA T-1	Lab File ID :	H4439.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.1g	Date Received :	6/2/00
% Solid :	89.4	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
Sulfur Clean up :		By :	SM
Dilution Factor :	5		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	550	U
11104-28-2	Arochlor-1221	550	U
11141-16-5	Arochlor-1232	550	U
53469-21-9	Arochlor-1242	550	U
12672-29-6	Arochlor-1248	550	U
11097-69-1	Arochlor-1254	550	U
11096-82-5	Arochlor-1260	550	3800

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-12 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149068
Project Name :	PPA T-1	Lab File ID :	H4420.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.1g	Date Received :	6/2/00
% Solid :	76.4	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	130	U
11104-28-2	Arochlor-1221	130	U
11141-16-5	Arochlor-1232	130	U
53469-21-9	Arochlor-1242	130	U
12672-29-6	Arochlor-1248	130	U
11097-69-1	Arochlor-1254	130	U
11096-82-5	Arochlor-1260	130	250

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-13 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149069
Project Name :	PPA T-1	Lab File ID :	H4440.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.4g	Date Received :	6/2/00
% Solid :	76.0	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
Sulfur Clean up :		By :	SM
Dilution Factor :	10		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,300	U
11104-28-2	Arochlor-1221	1,300	U
11141-16-5	Arochlor-1232	1,300	U
53469-21-9	Arochlor-1242	1,300	U
12672-29-6	Arochlor-1248	1,300	U
11097-69-1	Arochlor-1254	1,300	U
11096-82-5	Arochlor-1260	1,300	6400

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-13 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149070
Project Name :	PPA T-1	Lab File ID :	H4423.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	10.2g	Date Received :	6/2/00
% Solid :	85.9	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	1100

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-6D S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149057
Project Name :	PPA T-1	Lab File ID :	V17287.D
Matrix :	Soil	Date Collected :	5/30/00
Sample Wt/Vol :	6.28g	Date Received :	6/2/00
% Solid :	85.2	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	47	U
108-86-1	Bromobenzene	2.3	U
71-43-2	Benzene	2.3	U
75-27-4	Bromodichloromethane	2.3	U
74-97-5	Bromochloromethane	2.3	U
75-25-2	Bromoform	2.3	U
74-83-9	Bromomethane	4.7	U
78-93-3	2-Butanone	47	U
56-23-5	Carbon Tetrachloride	2.3	U
[illegible]3-90-7	Chlorobenzene	2.3	U
124-48-1	Chlorodibromomethane	2.3	U
75-00-3	Chloroethane	4.7	U
67-66-3	Chloroform	2.3	U
74-87-3	Chloromethane	4.7	U
95-49-8	2-Chlorotoluene	2.3	U
106-43-4	4-Chlorotoluene	2.3	U
156-59-2	cis-1,2-Dichloroethene	2.3	U
156-60-5	trans-1,2-Dichloroethene	2.3	U
74-95-3	Dibromomethane	2.3	U
96-12-8	1,2-Dibromo-3-chloropropane	2.3	U
95-50-1	1,2-Dichlorobenzene	2.3	U
541-73-1	1,3-Dichlorobenzene	2.3	U
106-46-7	1,4-Dichlorobenzene	2.3	U
75-34-3	1,1-Dichloroethane	2.3	U
107-06-2	1,2-Dichloroethane	2.3	U
75-35-4	1,1-Dichloroethene	2.3	U
78-87-5	1,2-Dichloropropane	2.3	U
142-28-9	1,3-Dichloropropane	2.3	U
590-20-7	2,2-Dichloropropane	2.3	U
[illegible]3-58-6	1,1-Dichloropropene	2.3	U
10061-01-5	cis-1,3-Dichloropropene	2.3	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-6D S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149057
Project Name :	PPA T-1	Lab File ID :	V17287.D
Matrix :	Soil	Date Collected :	5/30/00
Sample Wt/Vol :	6.28g	Date Received :	6/2/00
% Solid :	85.2	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.3	U
100-41-4	Ethylbenzene	2.3	U
106-93-4	Ethylenedibromide	2.3	U
75-69-4	Fluorotrichloromethane	2.3	U
591-78-6	2-Hexanone	9.3	U
87-68-3	Hexachlorobutadiene	2.3	U
98-82-8	Isopropylbenzene	2.3	U
108-10-1	4-Methyl-2-pentanone	9.3	U
75-09-2	Methylene chloride	2.3	U
4-04-4	Methyl-t-butyl ether	2.3	U
104-51-8	n-Butylbenzene	2.3	U
103-65-1	n-Propylbenzene	2.3	U
91-20-3	Naphthalene	23	U
108-38-3/106423	m+p- Xylene	2.3	U
99-87-6	p-Isopropyltoluene	2.3	U
95-47-6	o-Xylene	2.3	U
135-98-8	s-Butylbenzene	2.3	U
100-42-5	Styrene	2.3	U
98-06-6	tert-Butylbenzene	2.3	U
127-18-4	Tetrachloroethene	2.3	U
630-20-6	1,1,1,2-Tetrachloroethane	2.3	U
79-34-5	1,1,2,2-Tetrachloroethane	2.3	U
108-88-3	Toluene	2.3	U
87-61-6	1,2,3-Trichlorobenzene	2.3	U
120-82-1	1,2,4-Trichlorobenzene	2.3	U
71-55-6	1,1,1-Trichloroethane	2.3	U
79-00-5	1,1,2-Trichloroethane	2.3	U
79-01-6	Trichloroethene	2.3	U
96-18-4	1,2,3-Trichloropropane	2.3	U
5-63-6	1,2,4-Trimethylbenzene	2.3	U
08-67-8	1,3,5-Trimethylbenzene	2.3	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-6D S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149057
Project Name :	PPA T-1	Lab File ID :	V17287.D
Matrix :	Soil	Date Collected :	5/30/00
Sample Wt/Vol :	6.28g	Date Received :	6/2/00
% Solid :	85.2	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	4.7	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-5S S-3	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149061
Project Name :	PPA T-1	Lab File ID :	V17288.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.15g	Date Received :	6/2/00
% Solid :	85.0	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	57	U
108-86-1	Bromobenzene	2.9	U
71-43-2	Benzene	2.9	U
75-27-4	Bromodichloromethane	2.9	U
74-97-5	Bromochloromethane	2.9	U
75-25-2	Bromoform	2.9	U
74-83-9	Bromomethane	5.7	U
78-93-3	2-Butanone	57	U
56-23-5	Carbon Tetrachloride	2.9	U
[illegible]-90-7	Chlorobenzene	2.9	U
124-48-1	Chlorodibromomethane	2.9	U
75-00-3	Chloroethane	5.7	U
67-66-3	Chloroform	2.9	U
74-87-3	Chloromethane	5.7	U
95-49-8	2-Chlorotoluene	2.9	U
106-43-4	4-Chlorotoluene	2.9	U
156-59-2	cis-1,2-Dichloroethene	2.9	U
156-60-5	trans-1,2-Dichloroethene	2.9	U
74-95-3	Dibromomethane	2.9	U
96-12-8	1,2-Dibromo-3-chloropropane	2.9	U
95-50-1	1,2-Dichlorobenzene	2.9	U
541-73-1	1,3-Dichlorobenzene	2.9	U
106-46-7	1,4-Dichlorobenzene	2.9	U
75-34-3	1,1-Dichloroethane	2.9	U
107-06-2	1,2-Dichloroethane	2.9	U
75-35-4	1,1-Dichloroethene	2.9	U
78-87-5	1,2-Dichloropropane	2.9	U
142-28-9	1,3-Dichloropropane	2.9	U
590-20-7	2,2-Dichloropropane	2.9	U
[illegible]3-58-6	1,1-Dichloropropene	2.9	U
10061-01-5	cis-1,3-Dichloropropene	2.9	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-5S S-3	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149061
Project Name :	PPA T-1	Lab File ID :	V17288.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.15g	Date Received :	6/2/00
% Solid :	85.0	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.9	U
100-41-4	Ethylbenzene	2.9	U
106-93-4	Ethylenedibromide	2.9	U
75-69-4	Fluorotrichloromethane	2.9	U
591-78-6	2-Hexanone	11	U
87-68-3	Hexachlorobutadiene	2.9	U
98-82-8	Isopropylbenzene	2.9	U
108-10-1	4-Methyl-2-pentanone	11	U
75-09-2	Methylene chloride	2.9	U
34-04-4	Methyl-t-butyl ether	2.9	U
104-51-8	n-Butylbenzene	2.9	U
103-65-1	n-Propylbenzene	2.9	U
91-20-3	Naphthalene	29	U
108-38-3/106423	m+p- Xylene	2.9	U
99-87-6	p-Isopropyltoluene	2.9	U
95-47-6	o-Xylene	2.9	U
135-98-8	s-Butylbenzene	2.9	U
100-42-5	Styrene	2.9	U
98-06-6	tert-Butylbenzene	2.9	U
127-18-4	Tetrachloroethene	2.9	U
630-20-6	1,1,1,2-Tetrachloroethane	2.9	U
79-34-5	1,1,2,2-Tetrachloroethane	2.9	U
108-88-3	Toluene	2.9	U
87-61-6	1,2,3-Trichlorobenzene	2.9	U
120-82-1	1,2,4-Trichlorobenzene	2.9	U
71-55-6	1,1,1-Trichloroethane	2.9	U
79-00-5	1,1,2-Trichloroethane	2.9	U
79-01-6	Trichloroethene	2.9	U
96-18-4	1,2,3-Trichloropropane	2.9	U
5-63-6	1,2,4-Trimethylbenzene	2.9	U
08-67-8	1,3,5-Trimethylbenzene	2.9	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-5S S-3	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149061
Project Name :	PPA T-1	Lab File ID :	V17288.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.15g	Date Received :	6/2/00
% Solid :	85.0	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	5.7	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-7 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149062
Project Name :	PPA T-1	Lab File ID :	V17304.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.90g	Date Received :	6/2/00
% Solid :	94.3	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	45	U
108-86-1	Bromobenzene	2.2	U
71-43-2	Benzene	2.2	U
75-27-4	Bromodichloromethane	2.2	U
74-97-5	Bromochloromethane	2.2	U
75-25-2	Bromoform	2.2	U
74-83-9	Bromomethane	4.5	U
78-93-3	2-Butanone	45	U
56-23-5	Carbon Tetrachloride	2.2	U
108-90-7	Chlorobenzene	2.2	U
124-48-1	Chlorodibromomethane	2.2	U
75-00-3	Chloroethane	4.5	U
67-66-3	Chloroform	2.2	U
74-87-3	Chloromethane	4.5	U
95-49-8	2-Chlorotoluene	2.2	U
106-43-4	4-Chlorotoluene	2.2	U
156-59-2	cis-1,2-Dichloroethene	2.2	U
156-60-5	trans-1,2-Dichloroethene	2.2	U
74-95-3	Dibromomethane	2.2	U
96-12-8	1,2-Dibromo-3-chloropropane	2.2	U
95-50-1	1,2-Dichlorobenzene	2.2	U
541-73-1	1,3-Dichlorobenzene	2.2	U
106-46-7	1,4-Dichlorobenzene	2.2	U
75-34-3	1,1-Dichloroethane	2.2	U
107-06-2	1,2-Dichloroethane	2.2	U
75-35-4	1,1-Dichloroethene	2.2	U
78-87-5	1,2-Dichloropropane	2.2	U
142-28-9	1,3-Dichloropropane	2.2	U
590-20-7	2,2-Dichloropropane	2.2	U
563-58-6	1,1-Dichloropropene	2.2	U
10061-01-5	cis-1,3-Dichloropropene	2.2	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-7 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149062
Project Name :	PPA T-1	Lab File ID :	V17304.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.90g	Date Received :	6/2/00
% Solid :	94.3	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.2	U
100-41-4	Ethylbenzene	2.2	U
106-93-4	Ethylenedibromide	2.2	U
75-69-4	Fluorotrichloromethane	2.2	U
591-78-6	2-Hexanone	9.0	U
87-68-3	Hexachlorobutadiene	2.2	U
98-82-8	Isopropylbenzene	2.2	U
108-10-1	4-Methyl-2-pentanone	9.0	U
75-09-2	Methylene chloride	2.2	U
[illegible]4-04-4	Methyl-t-butyl ether	2.2	U
104-51-8	n-Butylbenzene	2.2	U
103-65-1	n-Propylbenzene	2.2	U
91-20-3	Naphthalene	22	U
108-38-3/106423	m+p- Xylene	2.2	U
99-87-6	p-Isopropyltoluene	2.2	U
95-47-6	o-Xylene	2.2	U
135-98-8	s-Butylbenzene	2.2	U
100-42-5	Styrene	2.2	U
98-06-6	tert-Butylbenzene	2.2	U
127-18-4	Tetrachloroethene	2.2	U
630-20-6	1,1,1,2-Tetrachloroethane	2.2	U
79-34-5	1,1,2,2-Tetrachloroethane	2.2	U
108-88-3	Toluene	2.2	U
87-61-6	1,2,3-Trichlorobenzene	2.2	U
120-82-1	1,2,4-Trichlorobenzene	2.2	U
71-55-6	1,1,1-Trichloroethane	2.2	U
79-00-5	1,1,2-Trichloroethane	2.2	U
79-01-6	Trichloroethene	2.2	U
96-18-4	1,2,3-Trichloropropane	2.2	U
[illegible]63-6	1,2,4-Trimethylbenzene	2.2	U
[illegible]8-67-8	1,3,5-Trimethylbenzene	2.2	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-7 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149062
Project Name :	PPA T-1	Lab File ID :	V17304.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.90g	Date Received :	6/2/00
% Solid :	94.3	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	4.5	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-8 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149064
Project Name :	PPA T-1	Lab File ID :	V17305.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	3.85g	Date Received :	6/2/00
% Solid :	87.7	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	74	U
108-86-1	Bromobenzene	3.7	U
71-43-2	Benzene	3.7	U
75-27-4	Bromodichloromethane	3.7	U
74-97-5	Bromochloromethane	3.7	U
75-25-2	Bromoform	3.7	U
74-83-9	Bromomethane	7.4	U
78-93-3	2-Butanone	74	U
56-23-5	Carbon Tetrachloride	3.7	U
[illegible]-90-7	Chlorobenzene	3.7	U
124-48-1	Chlorodibromomethane	3.7	U
75-00-3	Chloroethane	7.4	U
67-66-3	Chloroform	3.7	U
74-87-3	Chloromethane	7.4	U
95-49-8	2-Chlorotoluene	3.7	U
106-43-4	4-Chlorotoluene	3.7	U
156-59-2	cis-1,2-Dichloroethene	3.7	U
156-60-5	trans-1,2-Dichloroethene	3.7	U
74-95-3	Dibromomethane	3.7	U
96-12-8	1,2-Dibromo-3-chloropropane	3.7	U
95-50-1	1,2-Dichlorobenzene	3.7	U
541-73-1	1,3-Dichlorobenzene	3.7	U
106-46-7	1,4-Dichlorobenzene	3.7	U
75-34-3	1,1-Dichloroethane	3.7	U
107-06-2	1,2-Dichloroethane	3.7	U
75-35-4	1,1-Dichloroethene	3.7	U
78-87-5	1,2-Dichloropropane	3.7	U
142-28-9	1,3-Dichloropropane	3.7	U
590-20-7	2,2-Dichloropropane	3.7	U
[illegible]-58-6	1,1-Dichloropropene	3.7	U
10061-01-5	cis-1,3-Dichloropropene	3.7	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-8 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149064
Project Name :	PPA T-1	Lab File ID :	V17305.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	3.85g	Date Received :	6/2/00
% Solid :	87.7	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	3.7	U
100-41-4	Ethylbenzene	3.7	U
106-93-4	Ethylenedibromide	3.7	U
75-69-4	Fluorotrichloromethane	3.7	U
591-78-6	2-Hexanone	15	U
87-68-3	Hexachlorobutadiene	3.7	U
98-82-8	Isopropylbenzene	3.7	U
108-10-1	4-Methyl-2-pentanone	15	U
75-09-2	Methylene chloride	3.7	U
[illegible]4-04-4	Methyl-t-butyl ether	3.7	U
104-51-8	n-Butylbenzene	3.7	U
103-65-1	n-Propylbenzene	3.7	U
91-20-3	Naphthalene	37	U
108-38-3/106423	m+p- Xylene	3.7	U
99-87-6	p-Isopropyltoluene	3.7	U
95-47-6	o-Xylene	3.7	U
135-98-8	s-Butylbenzene	3.7	U
100-42-5	Styrene	3.7	U
98-06-6	tert-Butylbenzene	3.7	U
127-18-4	Tetrachloroethene	3.7	U
630-20-6	1,1,1,2-Tetrachloroethane	3.7	U
79-34-5	1,1,2,2-Tetrachloroethane	3.7	U
108-88-3	Toluene	3.7	U
87-61-6	1,2,3-Trichlorobenzene	3.7	6.1
120-82-1	1,2,4-Trichlorobenzene	3.7	4.3
71-55-6	1,1,1-Trichloroethane	3.7	U
79-00-5	1,1,2-Trichloroethane	3.7	U
79-01-6	Trichloroethene	3.7	U
96-18-4	1,2,3-Trichloropropane	3.7	U
[illegible]-63-6	1,2,4-Trimethylbenzene	3.7	U
[illegible]8-67-8	1,3,5-Trimethylbenzene	3.7	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-8 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149064
Project Name :	PPA T-1	Lab File ID :	V17305.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	3.85g	Date Received :	6/2/00
% Solid :	87.7	Date Analyzed :	6/8/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	7.4	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-9 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149066
Project Name :	PPA T-1	Lab File ID :	V17306.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	4.78g	Date Received :	6/2/00
% Solid :	87.7	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	60	U
108-86-1	Bromobenzene	3.0	U
71-43-2	Benzene	3.0	U
75-27-4	Bromodichloromethane	3.0	U
74-97-5	Bromochloromethane	3.0	U
75-25-2	Bromoform	3.0	U
74-83-9	Bromomethane	6.0	U
78-93-3	2-Butanone	60	U
56-23-5	Carbon Tetrachloride	3.0	U
[illegible]-90-7	Chlorobenzene	3.0	U
124-48-1	Chlorodibromomethane	3.0	U
75-00-3	Chloroethane	6.0	U
67-66-3	Chloroform	3.0	U
74-87-3	Chloromethane	6.0	U
95-49-8	2-Chlorotoluene	3.0	U
106-43-4	4-Chlorotoluene	3.0	U
156-59-2	cis-1,2-Dichloroethene	3.0	U
156-60-5	trans-1,2-Dichloroethene	3.0	U
74-95-3	Dibromomethane	3.0	U
96-12-8	1,2-Dibromo-3-chloropropane	3.0	U
95-50-1	1,2-Dichlorobenzene	3.0	U
541-73-1	1,3-Dichlorobenzene	3.0	U
106-46-7	1,4-Dichlorobenzene	3.0	U
75-34-3	1,1-Dichloroethane	3.0	U
107-06-2	1,2-Dichloroethane	3.0	U
75-35-4	1,1-Dichloroethene	3.0	U
78-87-5	1,2-Dichloropropane	3.0	U
142-28-9	1,3-Dichloropropane	3.0	U
590-20-7	2,2-Dichloropropane	3.0	U
[illegible]-58-6	1,1-Dichloropropene	3.0	U
10061-01-5	cis-1,3-Dichloropropene	3.0	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-9 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149066
Project Name :	PPA T-1	Lab File ID :	V17306.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	4.78g	Date Received :	6/2/00
% Solid :	87.7	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	3.0	U
100-41-4	Ethylbenzene	3.0	U
106-93-4	Ethylenedibromide	3.0	U
75-69-4	Fluorotrichloromethane	3.0	14
591-78-6	2-Hexanone	12	U
87-68-3	Hexachlorobutadiene	3.0	U
98-82-8	Isopropylbenzene	3.0	U
108-10-1	4-Methyl-2-pentanone	12	U
75-09-2	Methylene chloride	3.0	U
[illegible]4-04-4	Methyl-t-butyl ether	3.0	U
104-51-8	n-Butylbenzene	3.0	U
103-65-1	n-Propylbenzene	3.0	U
91-20-3	Naphthalene	30	U
108-38-3/106423	m+p- Xylene	3.0	U
99-87-6	p-Isopropyltoluene	3.0	U
95-47-6	o-Xylene	3.0	U
135-98-8	s-Butylbenzene	3.0	U
100-42-5	Styrene	3.0	U
98-06-6	tert-Butylbenzene	3.0	U
127-18-4	Tetrachloroethene	3.0	U
630-20-6	1,1,1,2-Tetrachloroethane	3.0	U
79-34-5	1,1,2,2-Tetrachloroethane	3.0	U
108-88-3	Toluene	3.0	U
87-61-6	1,2,3-Trichlorobenzene	3.0	U
120-82-1	1,2,4-Trichlorobenzene	3.0	U
71-55-6	1,1,1-Trichloroethane	3.0	U
79-00-5	1,1,2-Trichloroethane	3.0	U
79-01-6	Trichloroethene	3.0	U
96-18-4	1,2,3-Trichloropropane	3.0	U
[illegible]-63-6	1,2,4-Trimethylbenzene	3.0	U
[illegible]8-67-8	1,3,5-Trimethylbenzene	3.0	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-9 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149066
Project Name :	PPA T-1	Lab File ID :	V17306.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	4.78g	Date Received :	6/2/00
% Solid :	87.7	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	6.0	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-10 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149067
Project Name :	PPA T-1	Lab File ID :	V17307.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	6.51g	Date Received :	6/2/00
% Solid :	89.4	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	43	460
108-86-1	Bromobenzene	2.2	U
71-43-2	Benzene	2.2	U
75-27-4	Bromodichloromethane	2.2	U
74-97-5	Bromochloromethane	2.2	U
75-25-2	Bromoform	2.2	U
74-83-9	Bromomethane	4.3	U
78-93-3	2-Butanone	43	U
56-23-5	Carbon Tetrachloride	2.2	U
[illegible]-90-7	Chlorobenzene	2.2	U
124-48-1	Chlorodibromomethane	2.2	U
75-00-3	Chloroethane	4.3	U
67-66-3	Chloroform	2.2	U
74-87-3	Chloromethane	4.3	U
95-49-8	2-Chlorotoluene	2.2	U
106-43-4	4-Chlorotoluene	2.2	U
156-59-2	cis-1,2-Dichloroethene	2.2	U
156-60-5	trans-1,2-Dichloroethene	2.2	U
74-95-3	Dibromomethane	2.2	U
96-12-8	1,2-Dibromo-3-chloropropane	2.2	U
95-50-1	1,2-Dichlorobenzene	2.2	U
541-73-1	1,3-Dichlorobenzene	2.2	U
106-46-7	1,4-Dichlorobenzene	2.2	U
75-34-3	1,1-Dichloroethane	2.2	U
107-06-2	1,2-Dichloroethane	2.2	U
75-35-4	1,1-Dichloroethene	2.2	U
78-87-5	1,2-Dichloropropane	2.2	U
142-28-9	1,3-Dichloropropane	2.2	U
590-20-7	2,2-Dichloropropane	2.2	U
[illegible]3-58-6	1,1-Dichloropropene	2.2	U
10061-01-5	cis-1,3-Dichloropropene	2.2	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-10 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149067
Project Name :	PPA T-1	Lab File ID :	V17307.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	6.51g	Date Received :	6/2/00
% Solid :	89.4	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.2	U
100-41-4	Ethylbenzene	2.2	U
106-93-4	Ethylenedibromide	2.2	U
75-69-4	Fluorotrichloromethane	2.2	U
591-78-6	2-Hexanone	8.6	U
87-68-3	Hexachlorobutadiene	2.2	U
98-82-8	Isopropylbenzene	2.2	U
108-10-1	4-Methyl-2-pentanone	8.6	U
75-09-2	Methylene chloride	2.2	U
34-04-4	Methyl-t-butyl ether	2.2	U
104-51-8	n-Butylbenzene	2.2	U
103-65-1	n-Propylbenzene	2.2	U
91-20-3	Naphthalene	22	U
108-38-3/106423	m+p- Xylene	2.2	U
99-87-6	p-Isopropyltoluene	2.2	U
95-47-6	o-Xylene	2.2	U
135-98-8	s-Butylbenzene	2.2	U
100-42-5	Styrene	2.2	U
98-06-6	tert-Butylbenzene	2.2	U
127-18-4	Tetrachloroethene	2.2	U
630-20-6	1,1,1,2-Tetrachloroethane	2.2	U
79-34-5	1,1,2,2-Tetrachloroethane	2.2	U
108-88-3	Toluene	2.2	U
87-61-6	1,2,3-Trichlorobenzene	2.2	U
120-82-1	1,2,4-Trichlorobenzene	2.2	U
71-55-6	1,1,1-Trichloroethane	2.2	U
79-00-5	1,1,2-Trichloroethane	2.2	U
79-01-6	Trichloroethene	2.2	U
96-18-4	1,2,3-Trichloropropane	2.2	U
95-63-6	1,2,4-Trimethylbenzene	2.2	U
108-67-8	1,3,5-Trimethylbenzene	2.2	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-10 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149067
Project Name :	PPA T-1	Lab File ID :	V17307.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	6.51g	Date Received :	6/2/00
% Solid :	89.4	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	4.3	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID : B-12 S-1	Report No : 22706
Client Name : Tighe & Bond, Inc. W3138	STL Sample Number : 149068
Project Name : PPA T-1	Lab File ID : V17308.D
Matrix : Soil	Date Collected : 6/1/00
Sample Wt/Vol : 5.76g	Date Received : 6/2/00
% Solid : 76.4	Date Analyzed : 6/9/00
Dilution Factor : 1	By : JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	57	1300
108-86-1	Bromobenzene	2.8	U
71-43-2	Benzene	2.8	U
75-27-4	Bromodichloromethane	2.8	U
74-97-5	Bromochloromethane	2.8	U
75-25-2	Bromoform	2.8	U
74-83-9	Bromomethane	5.7	U
78-93-3	2-Butanone	57	U
56-23-5	Carbon Tetrachloride	2.8	U
[illegible]-90-7	Chlorobenzene	2.8	U
124-48-1	Chlorodibromomethane	2.8	U
75-00-3	Chloroethane	5.7	U
67-66-3	Chloroform	2.8	U
74-87-3	Chloromethane	5.7	U
95-49-8	2-Chlorotoluene	2.8	U
106-43-4	4-Chlorotoluene	2.8	U
156-59-2	cis-1,2-Dichloroethene	2.8	U
156-60-5	trans-1,2-Dichloroethene	2.8	U
74-95-3	Dibromomethane	2.8	U
96-12-8	1,2-Dibromo-3-chloropropane	2.8	U
95-50-1	1,2-Dichlorobenzene	2.8	U
541-73-1	1,3-Dichlorobenzene	2.8	U
106-46-7	1,4-Dichlorobenzene	2.8	U
75-34-3	1,1-Dichloroethane	2.8	U
107-06-2	1,2-Dichloroethane	2.8	U
75-35-4	1,1-Dichloroethene	2.8	U
78-87-5	1,2-Dichloropropane	2.8	U
142-28-9	1,3-Dichloropropane	2.8	U
590-20-7	2,2-Dichloropropane	2.8	U
[illegible]3-58-6	1,1-Dichloropropene	2.8	U
10061-01-5	cis-1,3-Dichloropropene	2.8	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-12 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149068
Project Name :	PPA T-1	Lab File ID :	V17308.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.76g	Date Received :	6/2/00
% Solid :	76.4	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.8	U
100-41-4	Ethylbenzene	2.8	U
106-93-4	Ethylenedibromide	2.8	U
75-69-4	Fluorotrichloromethane	2.8	U
591-78-6	2-Hexanone	11	U
87-68-3	Hexachlorobutadiene	2.8	U
98-82-8	Isopropylbenzene	2.8	U
108-10-1	4-Methyl-2-pentanone	11	U
75-09-2	Methylene chloride	2.8	U
[illegible]4-04-4	Methyl-t-butyl ether	2.8	U
104-51-8	n-Butylbenzene	2.8	U
103-65-1	n-Propylbenzene	2.8	U
91-20-3	Naphthalene	28	U
108-38-3/106423	m+p- Xylene	2.8	U
99-87-6	p-Isopropyltoluene	2.8	U
95-47-6	o-Xylene	2.8	U
135-98-8	s-Butylbenzene	2.8	U
100-42-5	Styrene	2.8	U
98-06-6	tert-Butylbenzene	2.8	U
127-18-4	Tetrachloroethene	2.8	U
630-20-6	1,1,1,2-Tetrachloroethane	2.8	U
79-34-5	1,1,2,2-Tetrachloroethane	2.8	U
108-88-3	Toluene	2.8	U
87-61-6	1,2,3-Trichlorobenzene	2.8	U
120-82-1	1,2,4-Trichlorobenzene	2.8	U
71-55-6	1,1,1-Trichloroethane	2.8	U
79-00-5	1,1,2-Trichloroethane	2.8	U
79-01-6	Trichloroethene	2.8	U
96-18-4	1,2,3-Trichloropropane	2.8	U
[illegible]-63-6	1,2,4-Trimethylbenzene	2.8	U
[illegible]08-67-8	1,3,5-Trimethylbenzene	2.8	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-12 S-1	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149068
Project Name :	PPA T-1	Lab File ID :	V17308.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.76g	Date Received :	6/2/00
% Solid :	76.4	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	5.7	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-13 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149070
Project Name :	PPA T-1	Lab File ID :	V17309.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.87g	Date Received :	6/2/00
% Solid :	85.9	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	50	320
108-86-1	Bromobenzene	2.5	U
71-43-2	Benzene	2.5	U
75-27-4	Bromodichloromethane	2.5	U
74-97-5	Bromochloromethane	2.5	U
75-25-2	Bromoform	2.5	U
74-83-9	Bromomethane	5.0	U
78-93-3	2-Butanone	50	U
56-23-5	Carbon Tetrachloride	2.5	U
3-90-7	Chlorobenzene	2.5	U
124-48-1	Chlorodibromomethane	2.5	U
75-00-3	Chloroethane	5.0	U
67-66-3	Chloroform	2.5	U
74-87-3	Chloromethane	5.0	U
95-49-8	2-Chlorotoluene	2.5	U
106-43-4	4-Chlorotoluene	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
74-95-3	Dibromomethane	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
142-28-9	1,3-Dichloropropane	2.5	U
590-20-7	2,2-Dichloropropane	2.5	U
3-58-6	1,1-Dichloropropene	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-13 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149070
Project Name :	PPA T-1	Lab File ID :	V17309.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.87g	Date Received :	6/2/00
% Solid :	85.9	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.5	U
100-41-4	Ethylbenzene	2.5	U
106-93-4	Ethylenedibromide	2.5	U
75-69-4	Fluorotrichloromethane	2.5	U
591-78-6	2-Hexanone	9.9	U
87-68-3	Hexachlorobutadiene	2.5	U
98-82-8	Isopropylbenzene	2.5	U
108-10-1	4-Methyl-2-pentanone	9.9	U
75-09-2	Methylene chloride	2.5	U
34-04-4	Methyl-t-butyl ether	2.5	U
04-51-8	n-Butylbenzene	2.5	U
103-65-1	n-Propylbenzene	2.5	U
91-20-3	Naphthalene	25	U
108-38-3/106423	m+p- Xylene	2.5	U
99-87-6	p-Isopropyltoluene	2.5	U
95-47-6	o-Xylene	2.5	U
135-98-8	s-Butylbenzene	2.5	U
100-42-5	Styrene	2.5	U
98-06-6	tert-Butylbenzene	2.5	U
127-18-4	Tetrachloroethene	2.5	U
630-20-6	1,1,1,2-Tetrachloroethane	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
108-88-3	Toluene	2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U
96-18-4	1,2,3-Trichloropropane	2.5	U
95-63-6	1,2,4-Trimethylbenzene	2.5	U
8-67-8	1,3,5-Trimethylbenzene	2.5	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-13 S-2	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149070
Project Name :	PPA T-1	Lab File ID :	V17309.D
Matrix :	Soil	Date Collected :	5/31/00
Sample Wt/Vol :	5.87g	Date Received :	6/2/00
% Solid :	85.9	Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	5.0	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	TRIP BLANK	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149071
Project Name :	PPA T-1	Lab File ID :	V17316.D
Matrix :	Lab Water	Date Collected :	5/31/00
Sample Wt/Vol :	100uL	Date Received :	6/2/00
% Solid :		Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	2,500	U
108-86-1	Bromobenzene	120	U
71-43-2	Benzene	120	U
75-27-4	Bromodichloromethane	120	U
74-97-5	Bromochloromethane	120	U
75-25-2	Bromoform	120	U
74-83-9	Bromomethane	250	U
78-93-3	2-Butanone	2,500	U
56-23-5	Carbon Tetrachloride	120	U
[illegible]-90-7	Chlorobenzene	120	U
124-48-1	Chlorodibromomethane	120	U
75-00-3	Chloroethane	250	U
67-66-3	Chloroform	120	U
74-87-3	Chloromethane	250	U
95-49-8	2-Chlorotoluene	120	U
106-43-4	4-Chlorotoluene	120	U
156-59-2	cis-1,2-Dichloroethene	120	U
156-60-5	trans-1,2-Dichloroethene	120	U
74-95-3	Dibromomethane	120	U
96-12-8	1,2-Dibromo-3-chloropropane	120	U
95-50-1	1,2-Dichlorobenzene	120	U
541-73-1	1,3-Dichlorobenzene	120	U
106-46-7	1,4-Dichlorobenzene	120	U
75-34-3	1,1-Dichloroethane	120	U
107-06-2	1,2-Dichloroethane	120	U
75-35-4	1,1-Dichloroethene	120	U
78-87-5	1,2-Dichloropropane	120	U
142-28-9	1,3-Dichloropropane	120	U
590-20-7	2,2-Dichloropropane	120	U
[illegible]3-58-6	1,1-Dichloropropene	120	U
10061-01-5	cis-1,3-Dichloropropene	120	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	TRIP BLANK	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149071
Project Name :	PPA T-1	Lab File ID :	V17316.D
Matrix :	Lab Water	Date Collected :	5/31/00
Sample Wt/Vol :	100uL	Date Received :	6/2/00
% Solid :		Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	120	U
100-41-4	Ethylbenzene	120	U
106-93-4	Ethylenedibromide	120	U
75-69-4	Fluorotrichloromethane	120	U
591-78-6	2-Hexanone	500	U
87-68-3	Hexachlorobutadiene	120	U
98-82-8	Isopropylbenzene	120	U
108-10-1	4-Methyl-2-pentanone	500	U
75-09-2	Methylene chloride	120	U
[illegible]4-04-4	Methyl-t-butyl ether	120	U
104-51-8	n-Butylbenzene	120	U
103-65-1	n-Propylbenzene	120	U
91-20-3	Naphthalene	1,200	U
108-38-3/106423	m+p- Xylene	120	U
99-87-6	p-Isopropyltoluene	120	U
95-47-6	o-Xylene	120	U
135-98-8	s-Butylbenzene	120	U
100-42-5	Styrene	120	U
98-06-6	tert-Butylbenzene	120	U
127-18-4	Tetrachloroethene	120	U
630-20-6	1,1,1,2-Tetrachloroethane	120	U
79-34-5	1,1,2,2-Tetrachloroethane	120	U
108-88-3	Toluene	120	U
87-61-6	1,2,3-Trichlorobenzene	120	U
120-82-1	1,2,4-Trichlorobenzene	120	U
71-55-6	1,1,1-Trichloroethane	120	U
79-00-5	1,1,2-Trichloroethane	120	U
79-01-6	Trichloroethene	120	U
96-18-4	1,2,3-Trichloropropane	120	U
[illegible]5-63-6	1,2,4-Trimethylbenzene	120	U
[illegible]8-67-8	1,3,5-Trimethylbenzene	120	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	TRIP BLANK	Report No :	22706
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149071
Project Name :	PPA T-1	Lab File ID :	V17316.D
Matrix :	Lab Water	Date Collected :	5/31/00
Sample Wt/Vol :	100uL	Date Received :	6/2/00
% Solid :		Date Analyzed :	6/9/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	250	U

Severn Trent Laboratory

Chain of Custody Form

Committed to Your Success

Westfield, MA 01085 (P) 413-572-4000 (F) 413-572-3707
N. Billerica, MA 01862 (P) 978-667-1400 (F) 978-667-7871

Client: Tighe & Bond
Address: 110 West Boylston St. Worcester MA
Phone: Fax:
Job#: W-3138
Project Manager: SLP
Work ID: PPA T-1
Contact: Tammie Lavoie

Job# 22742 | Quote# | PO#

Requested Turn Around Time
5 Business Day ____ Rush 05 DAY
0 Business Day ____ Other ____

Regulatory Classification - Please Specify
NPDES ____ Drinking Water ____ MCP Other ____
RCRA ____ MCP GW1 ____ Other NH S-1

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.
8000-series for haz/solid waste
Use comments section to further define.

Comments (Special Instructions)
(1) PCBs 8082
(2) VOCs Low level 8260

Sample Type Codes
WW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
RW-Raw Water GW-Groundwater PW-Public Water SO-Soil
S-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container For volatiles-one line/analysis)	Sample Type	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Na2S2O3	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH<2	NaOH to pH>12	Other:	4° C	pH	Volatiles	Semivolatiles	PCB & Pesticides	Metals	Cyanide	TCLP	Oil & Grease	Total Pet. Hyd.(TPH)	General Chemistry	Bacteriological	Other
MW-1D S-1	SO	6/1/00 1535	✓		1	G							✓				(1)								
MW-1D S-3	SO	6/1/00 1545	✓		1	G							✓				(1)								
MW-1D S-4	SO	6/1/00 1600	✓		1	G							✓				(1)								
MW-2D S-1	SO	6/1/00 0840	✓		1	G							✓				(1)								
MW-2D S-2	SO	6/1/00 0845	✓		1	G							✓				(1)								
MW-2D S-3	SO	6/1/00 0850	✓		1	G							✓				(1)								
MW-2D S4	SO	6/1/00 0900	✓		1	G							✓				(1)								
B-11 S-1	SO	6/1/00 1330	✓		1	G							✓				(1)								
B-11 S-2	SO	6/1/00 1340	✓		1	G							✓				(1)								
B-14 S-1	SO	6/1/00 1430	✓		1	G							✓				(1)								

Sampled by (print): Richard P. Grisler
Signature: [signature]

Relinquished by: [signature] Date: Time:
Received by: [signature] Date: 6/5/00 Time: 1505

Relinquished by: [signature] Date: Time:
Received by: [signature] Date: 6/6/00 Time: 0800

Method of shipment: STL
Laboratory: STL

Cooler #: 102
Temp. @ receipt: 5.3
Preservation pH checked
By: [signature] Date: 6/6/00

White = Lab file Yellow = Report copy Pink = Office use only Green = Customer copy

Chain of Custody Form

STL
Committed to Your Success

(P) 413-572-4000 (F) 413-572-3707
(P) 978-667-1400 (F) 978-667-7871

Client: Tighe & Bond
Address: 110 West Boylston St. Worcester, MA
Phone: Fax:

Job#: W-3138
Project Manager: SLP
Work ID: PPA T-1
Contact: Tammie Lavoie

Job# 22742 | Quote# | PO#

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
8000-series for haz/solid waste
Use comments section to further define.

Comments (Special Instructions)
(1) PCBs 8082
(2) VOCs low level 8260

Requested Turn Around Time
5 Business Day ____ Rush 3 DAY
0 Business Day ____ Other ____

Regulatory Classification - Please Specify
NPDES ____ Drinking Water ____ MCP Other ____
RCRA ____ MCP GW1 ____ Other NH-S-1

ample Type Codes
W-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
W-Raw Water GW-Groundwater PW-Public Water SO-Soil
-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container For volatiles-one line/analysis)	Sample Type	Date / Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Na2S2O3	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH<2	NaOH to pH>12	Other: NaHSO4	4° C	pH	Volatiles	Semivolatiles	PCB & Pesticides	Metals	Cyanide	TCLP	Oil & Grease	Total Pet. Hyd.(TPH)	General Chemistry	Bacteriological	Other
MW-3D S-1	SO	6/2/00 1005	✓		1	G							✓				(1)								
MW-3D S-2	SO	6/2/00 1010	✓		1	G							✓				(1)								
MW-3D S-3	SO	6/2/00 1015	✓		1	G							✓				(1)								
MW-4S S-1	SO	6/2/00 1350	✓		1	G							✓				(1)								
MW-4S S-2	SO	6/2/00 1355	✓		1	G							✓				(1)								
MW-4S S-3	SO	6/2/00 1400	✓		1	G							✓				(1)								
MW-7S S-1	SO	6/2/00 1200	✓		1	G							✓				(1)								
MW-7S S-2	SO	6/2/00 1215	✓		1	G							✓				(1)								
MW-7S S-3	SO	6/2/00 1225	✓		1	G							✓				(1)								
MW-1D S-3	SO	6/1/00 1600	✓		1	G						✓	✓		(2)										

Sampled by (print): Richard P. Geisler
Signature: Richard P. Geisler

Relinquished by: Richard P. Geisler Date: Time:
Received by: [signature] Date: 6/5/00 Time: 1505

Relinquished by: [signature] Date: Time:
Received by: Anne M Fuller Date: 6/6/00 Time: 0800

Method of shipment: STL
Laboratory: STL

Cooler #: 102
Temp. @ receipt: 5.3
Preservation pH checked
By: AMF Date: 6/6/00

White = Lab file Yellow = Report copy Pink = Office use only Green = Customer copy

Severn Trent Laboratory

Chain of Custody Form

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Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707

N. Billerica, MA 01862
(P) 978-667-1400
(F) 978-667-7871

Client: Tighe & Bond
Address: 110 West Boylston St. Worcester, MA
Phone: Fax:

Job#: W-3138
Project Manager: SLP
Work ID: PPA 1-1
Contact: Tammie Lavoie

Job# 22742 | Quote# | PO#

Requested Turn Around Time: 15 Business Day ____ Rush 5DAY ____ 10 Business Day ____ Other ____

Regulatory Classification - Please Specify: NPDES ____ Drinking Water ____ MCP Other ____ RCRA ____ MCP GW1 ____ Other NH 5-1

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
8000-series for haz/solid waste
Use comments section to further define.

Comments (Special Instructions)
(1) PCBs 8082
(2) VOCs (Low Level) 8260

Sample Type Codes
AW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
RW-Raw Water GW-Groundwater PW-Public Water SO-Soil
S-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container; For volatiles-one line/analysis)	Sample Type	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Na2S2O3	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH<2	NaOH to pH>12	Other	4°C	pH	Volatiles	Semivolatiles	PCB & Pesticides	Metals	Cyanide	TCLP	Oil & Grease	Total Pet. Hyd.(TPH)	General Chemistry	Bacteriological	Other
MW-2D S-3	SO	6/1/00 0850	✓		1	G						(2)	✓		(2)										
B-11 S-2	SO	6/1/00 1340	✓		1	G						(2)	✓		(2)										
B-14 S-1	SO	6/1/00 1430	✓		1	G						(2)	✓		(2)										
MW-3D S-3	SO	6/2/00 1015	✓		1	G						(2)	✓		(2)										
MW-4S S-3	SO	6/2/00 1400	✓		1	G						(2)	✓		(2)										
MW-7S S-3	SO	6/2/00 1225	✓		1	G						(2)	✓		(2)										
Trip Blank	Z	6/1/00 0800	✓		1	G						(1)	✓		(2)										

Sampled by (print): Richard P. Geisler
Signature: Richard P. Geisler

Relinquished by: Richard P. Geisler Date: Time:
Received by: [illegible] Date: 6/5/00 Time: 1505

Relinquished by: [illegible] Date: Time:
Received by: Anne M. Fuller Date: 6/6/00 Time: 800

Method of shipment: STL
Laboratory: STL

Cooler #: 102
Temp. @ receipt: 5.3
Preservation pH checked
By: ANF Date: 6/6/00

White = Lab file Yellow = Report copy Pink = Office use only Green = Customer copy

Severn Trent Laboratory
Chain of Custody Form

Committed To Your Success

[illegible] Southampton Rd. — [illegible] Ra[illegible] Road
Westfield, MA 01085 — N. Bille[illegible] MA 01862
(P) 413-572-4000 — (P) 9[illegible]7-1400
(F) 413-572-3707 — (F) 978-667-7871

Client: Tighe & Bond
Address: 110 West Boylston St. Worcester MA
Phone: Fax:

Job#: LW-3138
Project Manager: SLP
Work ID: ~~[illegible]~~ PPA T-1
Contact: Tammie Lavoie

Job# 22706 | Quote# | PO#

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
8000-series for haz/solid waste
Use comments section to further define

Comments (Special Instructions)
(1) PCBs 8082
(2) VOCs Low level 8260

Requested Turn Around Time
15 Business Day ____ Rush X 5 DAY
10 Business Day ____ Other ____

Regulatory Classification - Please Specify
NPDES ____ Drinking Water ____ ~~MCP Other~~
RCRA ____ MCP GW1 NH3-1 Other ~~[illegible]~~

Sample Type Codes
WW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
RW-Raw Water GW-Groundwater PW-Public Water SO-Soil
S-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container. For volatiles-one line/analysis)	Sample Type	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	Other NaOH	4° C	pH	Volatiles	Semivolatiles	PCB & Pesticides	EPH	VPH	DRO/GRO (circle)	Oil & Grease	Metals	General Chemistry	Bacteriological	Other
MW-6D S-1	SO	5/30/00 1130	✓		1	G							✓				(1)								
MW-6D S-2	SO	5/30/00 1145	✓		1	G							✓				(1)								
MW-6D-S2	SO	5/30/00 1145	✓		1	G						✓	✓		(2)										
MW-6D-S-3	SO	5/30/00 1155	✓		1	G							✓				(1)								
MW-5S S-1	SO	5/31/00 0900	✓		1	G							✓				(1)								
MW-5S S-2	SO	5/31/00 0915	✓		1	G							✓				(1)								
MW-5S S-3	SO	5/31/00 0930	✓		1	G							✓				(1)								
MW-5S S-3	SO	5/31/00 0930	✓		1	G						✓	✓		(2)										
B-7 S-1	SO	5/31/00 1335	✓		1	G							✓				(1)								
B-7 S-1	SO	5/31/00 1335	✓		1	G						✓	✓		(2)										

Sampled by (print): Richard P. Geisler
Signature: Richard P. Geisler

Relinquished by: Richard P. Geisler Date: 6/1/00 Time: 1530
Received by: Anne M Fuller Date: 6/2/00 Time: 0900

Relinquished by: Date: Time:
Received by: Date: Time:

Method of shipment: Overnight Mail
Laboratory: STL

Cooler #: Med. blue
Temp. @ receipt: on ice
Preservation/pH checked
By: [illegible] Date: 6/2/00

White = Lab file Yellow = Report copy Pink = Office use only Green = Customer copy

Chain of Custody Form

Committed To Your Success

(P) 413-572-4000
(F) 413-572-3707

(P) 9[redacted]7-1400
(F) 978-667-7871

Client: Tighe & Bond
Address: 110 West Boylston St. Worcester MA
Phone: Fax:

Job#: W-3138
Project Manager: SLP
Work ID: PPA T-1
Contact: Tammie Lavoie

Job# 22706 | Quote# | PO#

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
8000-series for haz/solid waste
Use comments section to further define.

Comments (Special Instructions)
1 PCBs 8082
2 VOCs 8260
Low Level

Requested Turn Around Time
15 Business Day ____ Rush X5DAY
10 Business Day ____ Other ____

Regulatory Classification - Please Specify
NPDES ____ Drinking Water ____ MCP Other ____
RCRA ____ MCP GW1 ____ Other NHS-1

Sample Type Codes
WW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
RW-Raw Water GW-Groundwater PW-Public Water SO-Soil
S-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container For volatiles-one line/analysis)	Sample Type	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	Other NaOH	4° C	pH	Volatiles	Semivolatiles	PCB & Pesticides	EPH	VPH	DRO/GRO (circle)	Oil & Grease	Metals	General Chemistry	Bacteriological	Other
B-8 S-1	SO	5/31/00 1400	✓		1	G							✓				1								
B-8 S-2	SO	5/31/00 1410	✓		1	G							✓				1								
B-8-S-2	SO	5/31/00 1410	✓		1	G						✓	✓		2										
B-9 S-1	SO	5/31/00 1430	✓		1	G							✓				1								
B-9 S-2	SO	5/31/00 1445	✓		1	G							✓				1								
B-9 S-2	SO	5/31/00 1445	✓		1	G						✓	✓		2										
B-10 S-1	SO	5/31/00 1345	✓		1	G							✓				1								
B-10 S-1	SO	5/31/00 1345	✓		1	G						✓	✓		2										
B-12 S-1	SO	6/1/00 0900	✓		1	G							✓				1								
B-12 S-1	SO	6/1/00 0900	✓		1	G						✓	✓		2										

Sampled by (print): Richard P. Geister
Signature: [signature]

Relinquished by: [signature] Date: 6/1/00 Time: 1530
Received by: [signature] Date: 6/2/00 Time: 0900

Relinquished by: Date: Time:
Received by: Date: Time:

Method of shipment: Overnight Mail
Laboratory: STL

Cooler #: med. blue
Temp. @ receipt: on ice
Preservation/pH checked
By: [signature] Date: 6/2/00

White = Lab file Yellow = Report copy Pink = Office use only Green = Customer copy

Severn Trent Laboratory
Chain of Custody Form

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•5[illegible] Southampton Rd.
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707

[illegible] Ranc[illegible]way Road
N. Bille[illegible] MA 01862
(P) 9[illegible]67-1400
(F) 978-667-7871

Client: Tighe & Bond
Address: 110 West Boylston St, Worcester MA
Phone: Fax:
Job#: W-3138
Project Manager: SLP
Work ID: PPA T-1
Contact: Tammie Lavoie

Job# 22706 | Quote# | PO#

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
8000-series for haz/solid waste
Use comments section to further define

Comments
(Special Instructions)
(1) PCBs 8082
(2) VOCs 8260
Low level

Requested Turn Around Time
15 Business Day
10 Business Day
Rush 5 DAY
Other

Regulatory Classification - Please Specify
NPDES
RCRA
Drinking Water
MCP GW1
MCP Other
Other NH-57

Sample Type Codes
WW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
RW-Raw Water GW-Groundwater PW-Public Water SO-Soil
S-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container, For volatiles-one line/analysis)	Sample Type	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	Other MeOH	4° C NaOH	pH	Volatiles	Semivolatiles	PCB & Pesticides	EPH	VPH	DRO/GRO (circle)	Oil & Grease	Metals	General Chemistry	Bacteriological	Other
B-13 S-1	SO	5/31/00 1600	✓		1	G							✓				(1)								
B-13 S-2	SO	5/31/00 1630	✓		1	G							✓				(1)								
B-13 S-2	SO	5/31/00 1630	✓		1	G						✓	✓		(2)										
Trip Blank	Z	6/1/00 1500	✓		1	G						✓	✓		(2)										

Sampled by (print): Richard P. Geisler
Signature: [signature]

Relinquished by: [signature] Date: 6/1/00 Time: 1530
Received by: [signature] Date: 6/2/00 Time: 0900

Relinquished by: Date: Time:
Received by: Date: Time:

Method of shipment: Overnight
Laboratory: STL

Cooler #: red. blue
Temp. @ receipt: 0° ice
Preservation/pH checked
By: [illegible] Date: 6/2/00

White = Lab file Yellow = Report copy Pink = Office use only Green = Customer copy

Committed To *Your* Success

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

Tel: (413) 572-4000
Fax: (413) 572-3707
www.stl-inc.com

June 13, 2000

Mr. Richard Geisler

Tighe & Bond, Inc. W3138
110 West Boylston St.
Worcester, MA

Report Number : 22742

Dear Mr. Geisler,

The analysis of your sample(s) submitted on 6/5/00 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

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. Common laboratory contaminants in applicable method blanks are reported with J qualifiers to one-tenth the quantitation limit.

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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CASE NARRATIVE FOR REPORT NUMBER 22742

Client Name : Tighe & Bond, Inc. W3138

Project Name : PPA T-1

Date : June 13, 2000

Sample Number	Comments
149134	
149135	
149136	
149137	
149138	
149139	
149140	
149141	
149142	
149143	
149144	
149145	
149146	
149147	
149148	
149149	
149150	
149151	

CASE NARRATIVE FOR REPORT NUMBER 22742

Client Name : Tighe & Bond, Inc. W3138

Project Name : PPA T-1

Date : June 13, 2000

Sample Number	Comments
149152	
149153	
149154	
149155	
149156	
149157	The SW846 8260 analysis of this sample resulted in low internal standard and surrogate responses. Additional sample was not available for reanalysis. This may indicate the presence of matrix interference, and the data should be reviewed with due consideration.
149158	
149159	
149160	

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-1D S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149134
Project Name :	PPA T-1	Lab File ID :	H4443.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.2g	Date Received :	6/5/00
% Solid :	92.9	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
Sulfur Clean up :		By :	SM
Dilution Factor :	100		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,100	U
11104-28-2	Arochlor-1221	1,100	U
11141-16-5	Arochlor-1232	1,100	U
53469-21-9	Arochlor-1242	1,100	U
12672-29-6	Arochlor-1248	1,100	U
11097-69-1	Arochlor-1254	1,100	U
11096-82-5	Arochlor-1260	1,100	48000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-1D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149135
Project Name :	PPA T-1	Lab File ID :	H4425.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.1g	Date Received :	6/5/00
% Solid :	75.6	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	130	U
11104-28-2	Arochlor-1221	130	U
11141-16-5	Arochlor-1232	130	U
53469-21-9	Arochlor-1242	130	U
12672-29-6	Arochlor-1248	130	U
11097-69-1	Arochlor-1254	130	U
11096-82-5	Arochlor-1260	130	220

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-1D S-4	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149136
Project Name :	PPA T-1	Lab File ID :	H4445.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.2g	Date Received :	6/5/00
% Solid :	87.7	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
Sulfur Clean up :		By :	SM
Dilution Factor :	10		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,100	U
11104-28-2	Arochlor-1221	1,100	U
11141-16-5	Arochlor-1232	1,100	U
53469-21-9	Arochlor-1242	1,100	U
12672-29-6	Arochlor-1248	1,100	U
11097-69-1	Arochlor-1254	1,100	U
11096-82-5	Arochlor-1260	1,100	10000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-2D S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149137
Project Name :	PPA T-1	Lab File ID :	H4446.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.1g	Date Received :	6/5/00
% Solid :	91.5	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/9/00
Sulfur Clean up :		By :	SM
Dilution Factor :	200		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	2,200	U
11104-28-2	Arochlor-1221	2,200	U
11141-16-5	Arochlor-1232	2,200	U
53469-21-9	Arochlor-1242	2,200	U
12672-29-6	Arochlor-1248	2,200	U
11097-69-1	Arochlor-1254	2,200	U
11096-82-5	Arochlor-1260	2,200	202000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID : MW-2D S-2	Report No : 22742
Client Name : Tighe & Bond, Inc. W3138	STL Sample Number : 149138
Project Name : PPA T-1	Lab File ID : H4447.D
Matrix : Soil	Date Collected : 6/1/00
Sample Wt/Vol : 10.2g	Date Received : 6/5/00
% Solid : 88.3	Date Extracted : 6/6/00
GPC Clean up :	Date Analyzed : 6/9/00
Sulfur Clean up :	By : SM
Dilution Factor : 20	

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	2,200	U
11104-28-2	Arochlor-1221	2,200	U
11141-16-5	Arochlor-1232	2,200	U
53469-21-9	Arochlor-1242	2,200	U
12672-29-6	Arochlor-1248	2,200	U
11097-69-1	Arochlor-1254	2,200	U
11096-82-5	Arochlor-1260	2,200	28000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-2D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149139
Project Name :	PPA T-1	Lab File ID :	H4448.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.1g	Date Received :	6/5/00
% Solid :	89.8	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/9/00
Sulfur Clean up :		By :	SM
Dilution Factor :	10		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,100	U
11104-28-2	Arochlor-1221	1,100	U
11141-16-5	Arochlor-1232	1,100	U
53469-21-9	Arochlor-1242	1,100	U
12672-29-6	Arochlor-1248	1,100	U
11097-69-1	Arochlor-1254	1,100	U
11096-82-5	Arochlor-1260	1,100	9000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-2D S-4	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149140
Project Name :	PPA T-1	Lab File ID :	H4430.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.2g	Date Received :	6/5/00
% Solid :	90.0	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	130	U
11104-28-2	Arochlor-1221	130	U
11141-16-5	Arochlor-1232	130	U
53469-21-9	Arochlor-1242	130	U
12672-29-6	Arochlor-1248	130	U
11097-69-1	Arochlor-1254	130	U
11096-82-5	Arochlor-1260	130	680

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-11 S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149141
Project Name :	PPA T-1	Lab File ID :	H4431.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.0g	Date Received :	6/5/00
% Solid :	74.1	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	U

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-11 S-2	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149142
Project Name :	PPA T-1	Lab File ID :	H4433.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.1g	Date Received :	6/5/00
% Solid :	77.8	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	130	U
11104-28-2	Arochlor-1221	130	U
11141-16-5	Arochlor-1232	130	U
53469-21-9	Arochlor-1242	130	U
12672-29-6	Arochlor-1248	130	U
11097-69-1	Arochlor-1254	130	U
11096-82-5	Arochlor-1260	130	420

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	B-14 S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149143
Project Name :	PPA T-1	Lab File ID :	H4483.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.1g	Date Received :	6/5/00
% Solid :	92.7	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/10/00
Sulfur Clean up :		By :	SM
Dilution Factor :	10		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,100	U
11104-28-2	Arochlor-1221	1,100	U
11141-16-5	Arochlor-1232	1,100	U
53469-21-9	Arochlor-1242	1,100	U
12672-29-6	Arochlor-1248	1,100	U
11097-69-1	Arochlor-1254	1,100	U
11096-82-5	Arochlor-1260	1,100	11000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-3D S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149144
Project Name :	PPA T-1	Lab File ID :	H4484.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.1g	Date Received :	6/5/00
% Solid :	92.8	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/10/00
Sulfur Clean up :		By :	SM
Dilution Factor :	50		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	5,300	U
11104-28-2	Arochlor-1221	5,300	U
11141-16-5	Arochlor-1232	5,300	U
53469-21-9	Arochlor-1242	5,300	U
12672-29-6	Arochlor-1248	5,300	U
11097-69-1	Arochlor-1254	5,300	U
11096-82-5	Arochlor-1260	5,300	34000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-3D S-2	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149145
Project Name :	PPA T-1	Lab File ID :	H4485.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.1g	Date Received :	6/5/00
% Solid :	87.7	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/10/00
Sulfur Clean up :		By :	SM
Dilution Factor :	10		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,100	U
11104-28-2	Arochlor-1221	1,100	U
11141-16-5	Arochlor-1232	1,100	U
53469-21-9	Arochlor-1242	1,100	U
12672-29-6	Arochlor-1248	1,100	U
11097-69-1	Arochlor-1254	1,100	U
11096-82-5	Arochlor-1260	1,100	7300

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-3D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149146
Project Name :	PPA T-1	Lab File ID :	H4437.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.2g	Date Received :	6/5/00
% Solid :	86.5	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
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	1400

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-4S S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149147
Project Name :	PPA T-1	Lab File ID :	H4479.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.4g	Date Received :	6/5/00
% Solid :	94.6	Date Extracted :	6/7/00
GPC Clean up :		Date Analyzed :	6/10/00
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	100	U
11104-28-2	Arochlor-1221	100	U
11141-16-5	Arochlor-1232	100	U
53469-21-9	Arochlor-1242	100	U
12672-29-6	Arochlor-1248	100	U
11097-69-1	Arochlor-1254	100	U
11096-82-5	Arochlor-1260	100	U

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-4S S-2	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149148
Project Name :	PPA T-1	Lab File ID :	H4454.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.2g	Date Received :	6/5/00
% Solid :	92.6	Date Extracted :	6/7/00
GPC Clean up :		Date Analyzed :	6/9/00
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	1600

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-4S S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149149
Project Name :	PPA T-1	Lab File ID :	H4456.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.0g	Date Received :	6/5/00
% Solid :	91.9	Date Extracted :	6/7/00
GPC Clean up :		Date Analyzed :	6/9/00
Sulfur Clean up :		By :	SM
Dilution Factor :	10		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	1,100	U
11104-28-2	Arochlor-1221	1,100	U
11141-16-5	Arochlor-1232	1,100	U
53469-21-9	Arochlor-1242	1,100	U
12672-29-6	Arochlor-1248	1,100	U
11097-69-1	Arochlor-1254	1,100	U
11096-82-5	Arochlor-1260	1,100	13000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-7S S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149150
Project Name :	PPA T-1	Lab File ID :	H4482.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.0g	Date Received :	6/5/00
% Solid :	94.5	Date Extracted :	6/7/00
GPC Clean up :		Date Analyzed :	6/10/00
Sulfur Clean up :		By :	SM
Dilution Factor :	5		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	530	U
11104-28-2	Arochlor-1221	530	U
11141-16-5	Arochlor-1232	530	U
53469-21-9	Arochlor-1242	530	U
12672-29-6	Arochlor-1248	530	U
11097-69-1	Arochlor-1254	530	U
11096-82-5	Arochlor-1260	530	1500

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-7S S-2	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149151
Project Name :	PPA T-1	Lab File ID :	H4480.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.4g	Date Received :	6/5/00
% Solid :	93.8	Date Extracted :	6/7/00
GPC Clean up :		Date Analyzed :	6/10/00
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	100	U
11104-28-2	Arochlor-1221	100	U
11141-16-5	Arochlor-1232	100	U
53469-21-9	Arochlor-1242	100	U
12672-29-6	Arochlor-1248	100	U
11097-69-1	Arochlor-1254	100	U
11096-82-5	Arochlor-1260	100	U

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-7S S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149152
Project Name :	PPA T-1	Lab File ID :	H4481.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	10.2g	Date Received :	6/5/00
% Solid :	88.8	Date Extracted :	6/7/00
GPC Clean up :		Date Analyzed :	6/10/00
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	190

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-1D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149153
Project Name :	PPA T-1	Lab File ID :	V17337.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	6.18g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	54	U
108-86-1	Bromobenzene	2.7	U
71-43-2	Benzene	2.7	U
75-27-4	Bromodichloromethane	2.7	U
74-97-5	Bromochloromethane	2.7	U
75-25-2	Bromoform	2.7	U
74-83-9	Bromomethane	5.3	U
78-93-3	2-Butanone	54	U
56-23-5	Carbon Tetrachloride	2.7	U
108-90-7	Chlorobenzene	2.7	U
124-48-1	Chlorodibromomethane	2.7	U
75-00-3	Chloroethane	5.3	U
67-66-3	Chloroform	2.7	U
74-87-3	Chloromethane	5.3	U
95-49-8	2-Chlorotoluene	2.7	U
106-43-4	4-Chlorotoluene	2.7	U
156-59-2	cis-1,2-Dichloroethene	2.7	U
156-60-5	trans-1,2-Dichloroethene	2.7	U
74-95-3	Dibromomethane	2.7	U
96-12-8	1,2-Dibromo-3-chloropropane	2.7	U
95-50-1	1,2-Dichlorobenzene	2.7	U
541-73-1	1,3-Dichlorobenzene	2.7	U
106-46-7	1,4-Dichlorobenzene	2.7	U
75-34-3	1,1-Dichloroethane	2.7	U
107-06-2	1,2-Dichloroethane	2.7	U
75-35-4	1,1-Dichloroethene	2.7	U
78-87-5	1,2-Dichloropropane	2.7	U
142-28-9	1,3-Dichloropropane	2.7	U
590-20-7	2,2-Dichloropropane	2.7	U
563-58-6	1,1-Dichloropropene	2.7	U
10061-01-5	cis-1,3-Dichloropropene	2.7	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-1D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149153
Project Name :	PPA T-1	Lab File ID :	V17337.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	6.18g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.7	U
100-41-4	Ethylbenzene	2.7	U
106-93-4	Ethylenedibromide	2.7	U
75-69-4	Fluorotrichloromethane	2.7	U
591-78-6	2-Hexanone	11	U
87-68-3	Hexachlorobutadiene	2.7	U
98-82-8	Isopropylbenzene	2.7	U
108-10-1	4-Methyl-2-pentanone	11	U
75-09-2	Methylene chloride	2.7	U
1634-04-4	Methyl-t-butyl ether	2.7	U
04-51-8	n-Butylbenzene	2.7	U
103-65-1	n-Propylbenzene	2.7	U
91-20-3	Naphthalene	27	U
108-38-3/106423	m+p- Xylene	2.7	U
99-87-6	p-Isopropyltoluene	2.7	U
95-47-6	o-Xylene	2.7	U
135-98-8	s-Butylbenzene	2.7	U
100-42-5	Styrene	2.7	U
98-06-6	tert-Butylbenzene	2.7	U
127-18-4	Tetrachloroethene	2.7	U
630-20-6	1,1,1,2-Tetrachloroethane	2.7	U
79-34-5	1,1,2,2-Tetrachloroethane	2.7	U
108-88-3	Toluene	2.7	U
87-61-6	1,2,3-Trichlorobenzene	2.7	U
120-82-1	1,2,4-Trichlorobenzene	2.7	U
71-55-6	1,1,1-Trichloroethane	2.7	U
79-00-5	1,1,2-Trichloroethane	2.7	U
79-01-6	Trichloroethene	2.7	U
96-18-4	1,2,3-Trichloropropane	2.7	U
95-63-6	1,2,4-Trimethylbenzene	2.7	U
108-67-8	1,3,5-Trimethylbenzene	2.7	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-1D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149153
Project Name :	PPA T-1	Lab File ID :	V17337.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	6.18g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	5.3	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID : MW-2D S-3	Report No : 22742
Client Name : Tighe & Bond, Inc. W3138	STL Sample Number : 149154
Project Name : PPA T-1	Lab File ID : V17338.D
Matrix : Soil	Date Collected : 6/1/00
Sample Wt/Vol : 5.47g	Date Received : 6/5/00
% Solid :	Date Analyzed : 6/12/00
Dilution Factor : 1	By : JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	51	U
108-86-1	Bromobenzene	2.5	U
71-43-2	Benzene	2.5	U
75-27-4	Bromodichloromethane	2.5	U
74-97-5	Bromochloromethane	2.5	U
75-25-2	Bromoform	2.5	U
74-83-9	Bromomethane	5.1	U
78-93-3	2-Butanone	51	U
56-23-5	Carbon Tetrachloride	2.5	U
108-90-7	Chlorobenzene	2.5	U
124-48-1	Chlorodibromomethane	2.5	U
75-00-3	Chloroethane	5.1	U
67-66-3	Chloroform	2.5	U
74-87-3	Chloromethane	5.1	U
95-49-8	2-Chlorotoluene	2.5	U
106-43-4	4-Chlorotoluene	2.5	U
156-59-2	cis-1,2-Dichloroethene	2.5	U
156-60-5	trans-1,2-Dichloroethene	2.5	U
74-95-3	Dibromomethane	2.5	U
96-12-8	1,2-Dibromo-3-chloropropane	2.5	U
95-50-1	1,2-Dichlorobenzene	2.5	U
541-73-1	1,3-Dichlorobenzene	2.5	U
106-46-7	1,4-Dichlorobenzene	2.5	U
75-34-3	1,1-Dichloroethane	2.5	U
107-06-2	1,2-Dichloroethane	2.5	U
75-35-4	1,1-Dichloroethene	2.5	U
78-87-5	1,2-Dichloropropane	2.5	U
142-28-9	1,3-Dichloropropane	2.5	U
590-20-7	2,2-Dichloropropane	2.5	U
563-58-6	1,1-Dichloropropene	2.5	U
10061-01-5	cis-1,3-Dichloropropene	2.5	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-2D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149154
Project Name :	PPA T-1	Lab File ID :	V17338.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.47g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.5	U
100-41-4	Ethylbenzene	2.5	U
106-93-4	Ethylenedibromide	2.5	U
75-69-4	Fluorotrichloromethane	2.5	U
591-78-6	2-Hexanone	10	U
87-68-3	Hexachlorobutadiene	2.5	U
98-82-8	Isopropylbenzene	2.5	U
108-10-1	4-Methyl-2-pentanone	10	U
75-09-2	Methylene chloride	2.5	U
1634-04-4	Methyl-t-butyl ether	2.5	U
104-51-8	n-Butylbenzene	2.5	U
103-65-1	n-Propylbenzene	2.5	U
91-20-3	Naphthalene	25	U
108-38-3/106423	m+p- Xylene	2.5	U
99-87-6	p-Isopropyltoluene	2.5	U
95-47-6	o-Xylene	2.5	U
135-98-8	s-Butylbenzene	2.5	U
100-42-5	Styrene	2.5	U
98-06-6	tert-Butylbenzene	2.5	U
127-18-4	Tetrachloroethene	2.5	U
630-20-6	1,1,1,2-Tetrachloroethane	2.5	U
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U
108-88-3	Toluene	2.5	U
87-61-6	1,2,3-Trichlorobenzene	2.5	U
120-82-1	1,2,4-Trichlorobenzene	2.5	U
71-55-6	1,1,1-Trichloroethane	2.5	U
79-00-5	1,1,2-Trichloroethane	2.5	U
79-01-6	Trichloroethene	2.5	U
96-18-4	1,2,3-Trichloropropane	2.5	U
95-63-6	1,2,4-Trimethylbenzene	2.5	U
108-67-8	1,3,5-Trimethylbenzene	2.5	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-2D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149154
Project Name :	PPA T-1	Lab File ID :	V17338.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.47g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	5.1	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-11 S-2	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149155
Project Name :	PPA T-1	Lab File ID :	V17339.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.12g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	63	1300
108-86-1	Bromobenzene	3.1	U
71-43-2	Benzene	3.1	U
75-27-4	Bromodichloromethane	3.1	U
74-97-5	Bromochloromethane	3.1	U
75-25-2	Bromoform	3.1	U
74-83-9	Bromomethane	6.3	U
78-93-3	2-Butanone	63	U
56-23-5	Carbon Tetrachloride	3.1	U
108-90-7	Chlorobenzene	3.1	U
124-48-1	Chlorodibromomethane	3.1	U
75-00-3	Chloroethane	6.3	U
67-66-3	Chloroform	3.1	U
74-87-3	Chloromethane	6.3	U
95-49-8	2-Chlorotoluene	3.1	U
106-43-4	4-Chlorotoluene	3.1	U
156-59-2	cis-1,2-Dichloroethene	3.1	U
156-60-5	trans-1,2-Dichloroethene	3.1	U
74-95-3	Dibromomethane	3.1	U
96-12-8	1,2-Dibromo-3-chloropropane	3.1	U
95-50-1	1,2-Dichlorobenzene	3.1	U
541-73-1	1,3-Dichlorobenzene	3.1	U
106-46-7	1,4-Dichlorobenzene	3.1	U
75-34-3	1,1-Dichloroethane	3.1	U
107-06-2	1,2-Dichloroethane	3.1	U
75-35-4	1,1-Dichloroethene	3.1	U
78-87-5	1,2-Dichloropropane	3.1	U
142-28-9	1,3-Dichloropropane	3.1	U
590-20-7	2,2-Dichloropropane	3.1	U
563-58-6	1,1-Dichloropropene	3.1	U
10061-01-5	cis-1,3-Dichloropropene	3.1	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-11 S-2	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149155
Project Name :	PPA T-1	Lab File ID :	V17339.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.12g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	3.1	U
100-41-4	Ethylbenzene	3.1	U
106-93-4	Ethylenedibromide	3.1	U
75-69-4	Fluorotrichloromethane	3.1	U
591-78-6	2-Hexanone	13	U
87-68-3	Hexachlorobutadiene	3.1	U
98-82-8	Isopropylbenzene	3.1	U
108-10-1	4-Methyl-2-pentanone	13	U
75-09-2	Methylene chloride	3.1	U
634-04-4	Methyl-t-butyl ether	3.1	U
104-51-8	n-Butylbenzene	3.1	U
103-65-1	n-Propylbenzene	3.1	U
91-20-3	Naphthalene	31	U
108-38-3/106423	m+p- Xylene	3.1	U
99-87-6	p-Isopropyltoluene	3.1	U
95-47-6	o-Xylene	3.1	U
135-98-8	s-Butylbenzene	3.1	U
100-42-5	Styrene	3.1	U
98-06-6	tert-Butylbenzene	3.1	U
127-18-4	Tetrachloroethene	3.1	U
630-20-6	1,1,1,2-Tetrachloroethane	3.1	U
79-34-5	1,1,2,2-Tetrachloroethane	3.1	U
108-88-3	Toluene	3.1	U
87-61-6	1,2,3-Trichlorobenzene	3.1	U
120-82-1	1,2,4-Trichlorobenzene	3.1	U
71-55-6	1,1,1-Trichloroethane	3.1	U
79-00-5	1,1,2-Trichloroethane	3.1	U
79-01-6	Trichloroethene	3.1	U
96-18-4	1,2,3-Trichloropropane	3.1	U
95-63-6	1,2,4-Trimethylbenzene	3.1	U
108-67-8	1,3,5-Trimethylbenzene	3.1	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-11 S-2	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149155
Project Name :	PPA T-1	Lab File ID :	V17339.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.12g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	6.3	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID : B-14 S-1	Report No : 22742
Client Name : Tighe & Bond, Inc. W3138	STL Sample Number : 149156
Project Name : PPA T-1	Lab File ID : V17340.D
Matrix : Soil	Date Collected : 6/1/00
Sample Wt/Vol : 5.72g	Date Received : 6/5/00
% Solid :	Date Analyzed : 6/12/00
Dilution Factor : 1	By : JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	47	780
108-86-1	Bromobenzene	2.4	U
71-43-2	Benzene	2.4	U
75-27-4	Bromodichloromethane	2.4	U
74-97-5	Bromochloromethane	2.4	U
75-25-2	Bromoform	2.4	U
74-83-9	Bromomethane	4.7	U
78-93-3	2-Butanone	47	U
56-23-5	Carbon Tetrachloride	2.4	U
108-90-7	Chlorobenzene	2.4	U
124-48-1	Chlorodibromomethane	2.4	U
75-00-3	Chloroethane	4.7	U
67-66-3	Chloroform	2.4	U
74-87-3	Chloromethane	4.7	U
95-49-8	2-Chlorotoluene	2.4	U
106-43-4	4-Chlorotoluene	2.4	U
156-59-2	cis-1,2-Dichloroethene	2.4	U
156-60-5	trans-1,2-Dichloroethene	2.4	U
74-95-3	Dibromomethane	2.4	U
96-12-8	1,2-Dibromo-3-chloropropane	2.4	U
95-50-1	1,2-Dichlorobenzene	2.4	U
541-73-1	1,3-Dichlorobenzene	2.4	U
106-46-7	1,4-Dichlorobenzene	2.4	U
75-34-3	1,1-Dichloroethane	2.4	U
107-06-2	1,2-Dichloroethane	2.4	U
75-35-4	1,1-Dichloroethene	2.4	U
78-87-5	1,2-Dichloropropane	2.4	U
142-28-9	1,3-Dichloropropane	2.4	U
590-20-7	2,2-Dichloropropane	2.4	U
563-58-6	1,1-Dichloropropene	2.4	U
10061-01-5	cis-1,3-Dichloropropene	2.4	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-14 S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149156
Project Name :	PPA T-1	Lab File ID :	V17340.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.72g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.4	U
100-41-4	Ethylbenzene	2.4	U
106-93-4	Ethylenedibromide	2.4	U
75-69-4	Fluorotrichloromethane	2.4	U
591-78-6	2-Hexanone	9.4	U
87-68-3	Hexachlorobutadiene	2.4	U
98-82-8	Isopropylbenzene	2.4	U
108-10-1	4-Methyl-2-pentanone	9.4	U
75-09-2	Methylene chloride	2.4	U
1634-04-4	Methyl-t-butyl ether	2.4	U
104-51-8	n-Butylbenzene	2.4	U
103-65-1	n-Propylbenzene	2.4	U
91-20-3	Naphthalene	24	U
108-38-3/106423	m+p- Xylene	2.4	U
99-87-6	p-Isopropyltoluene	2.4	U
95-47-6	o-Xylene	2.4	U
135-98-8	s-Butylbenzene	2.4	U
100-42-5	Styrene	2.4	U
98-06-6	tert-Butylbenzene	2.4	U
127-18-4	Tetrachloroethene	2.4	U
630-20-6	1,1,1,2-Tetrachloroethane	2.4	U
79-34-5	1,1,2,2-Tetrachloroethane	2.4	U
108-88-3	Toluene	2.4	U
87-61-6	1,2,3-Trichlorobenzene	2.4	U
120-82-1	1,2,4-Trichlorobenzene	2.4	U
71-55-6	1,1,1-Trichloroethane	2.4	U
79-00-5	1,1,2-Trichloroethane	2.4	U
79-01-6	Trichloroethene	2.4	U
96-18-4	1,2,3-Trichloropropane	2.4	U
95-63-6	1,2,4-Trimethylbenzene	2.4	U
108-67-8	1,3,5-Trimethylbenzene	2.4	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	B-14 S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149156
Project Name :	PPA T-1	Lab File ID :	V17340.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	5.72g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	4.7	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-3D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149157
Project Name :	PPA T-1	Lab File ID :	V17341.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	4.65g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	62	U
108-86-1	Bromobenzene	3.1	U
71-43-2	Benzene	3.1	U
75-27-4	Bromodichloromethane	3.1	U
74-97-5	Bromochloromethane	3.1	U
75-25-2	Bromoform	3.1	U
74-83-9	Bromomethane	6.2	U
78-93-3	2-Butanone	62	U
56-23-5	Carbon Tetrachloride	3.1	U
108-90-7	Chlorobenzene	3.1	U
124-48-1	Chlorodibromomethane	3.1	U
75-00-3	Chloroethane	6.2	U
67-66-3	Chloroform	3.1	U
74-87-3	Chloromethane	6.2	U
95-49-8	2-Chlorotoluene	3.1	U
106-43-4	4-Chlorotoluene	3.1	U
156-59-2	cis-1,2-Dichloroethene	3.1	U
156-60-5	trans-1,2-Dichloroethene	3.1	U
74-95-3	Dibromomethane	3.1	U
96-12-8	1,2-Dibromo-3-chloropropane	3.1	U
95-50-1	1,2-Dichlorobenzene	3.1	U
541-73-1	1,3-Dichlorobenzene	3.1	U
106-46-7	1,4-Dichlorobenzene	3.1	U
75-34-3	1,1-Dichloroethane	3.1	U
107-06-2	1,2-Dichloroethane	3.1	U
75-35-4	1,1-Dichloroethene	3.1	U
78-87-5	1,2-Dichloropropane	3.1	U
142-28-9	1,3-Dichloropropane	3.1	U
590-20-7	2,2-Dichloropropane	3.1	U
563-58-6	1,1-Dichloropropene	3.1	U
10061-01-5	cis-1,3-Dichloropropene	3.1	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-3D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149157
Project Name :	PPA T-1	Lab File ID :	V17341.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	4.65g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	3.1	U
100-41-4	Ethylbenzene	3.1	U
106-93-4	Ethylenedibromide	3.1	U
75-69-4	Fluorotrichloromethane	3.1	U
591-78-6	2-Hexanone	12	U
87-68-3	Hexachlorobutadiene	3.1	U
98-82-8	Isopropylbenzene	3.1	U
108-10-1	4-Methyl-2-pentanone	12	U
75-09-2	Methylene chloride	3.1	U
634-04-4	Methyl-t-butyl ether	3.1	U
104-51-8	n-Butylbenzene	3.1	U
103-65-1	n-Propylbenzene	3.1	U
91-20-3	Naphthalene	31	U
108-38-3/106423	m+p- Xylene	3.1	U
99-87-6	p-Isopropyltoluene	3.1	U
95-47-6	o-Xylene	3.1	U
135-98-8	s-Butylbenzene	3.1	U
100-42-5	Styrene	3.1	U
98-06-6	tert-Butylbenzene	3.1	U
127-18-4	Tetrachloroethene	3.1	13
630-20-6	1,1,1,2-Tetrachloroethane	3.1	U
79-34-5	1,1,2,2-Tetrachloroethane	3.1	U
108-88-3	Toluene	3.1	U
87-61-6	1,2,3-Trichlorobenzene	3.1	U
120-82-1	1,2,4-Trichlorobenzene	3.1	U
71-55-6	1,1,1-Trichloroethane	3.1	14
79-00-5	1,1,2-Trichloroethane	3.1	U
79-01-6	Trichloroethene	3.1	U
96-18-4	1,2,3-Trichloropropane	3.1	U
95-63-6	1,2,4-Trimethylbenzene	3.1	U
108-67-8	1,3,5-Trimethylbenzene	3.1	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-3D S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149157
Project Name :	PPA T-1	Lab File ID :	V17341.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	4.65g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	6.2	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-4S S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149158
Project Name :	PPA T-1	Lab File ID :	V17342.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	5.66g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	48	U
108-86-1	Bromobenzene	2.4	U
71-43-2	Benzene	2.4	U
75-27-4	Bromodichloromethane	2.4	U
74-97-5	Bromochloromethane	2.4	U
75-25-2	Bromoform	2.4	U
74-83-9	Bromomethane	4.8	U
78-93-3	2-Butanone	48	U
56-23-5	Carbon Tetrachloride	2.4	U
108-90-7	Chlorobenzene	2.4	U
124-48-1	Chlorodibromomethane	2.4	U
75-00-3	Chloroethane	4.8	U
67-66-3	Chloroform	2.4	3.5
74-87-3	Chloromethane	4.8	U
95-49-8	2-Chlorotoluene	2.4	U
106-43-4	4-Chlorotoluene	2.4	U
156-59-2	cis-1,2-Dichloroethene	2.4	U
156-60-5	trans-1,2-Dichloroethene	2.4	U
74-95-3	Dibromomethane	2.4	U
96-12-8	1,2-Dibromo-3-chloropropane	2.4	U
95-50-1	1,2-Dichlorobenzene	2.4	U
541-73-1	1,3-Dichlorobenzene	2.4	U
106-46-7	1,4-Dichlorobenzene	2.4	U
75-34-3	1,1-Dichloroethane	2.4	U
107-06-2	1,2-Dichloroethane	2.4	U
75-35-4	1,1-Dichloroethene	2.4	U
78-87-5	1,2-Dichloropropane	2.4	U
142-28-9	1,3-Dichloropropane	2.4	U
590-20-7	2,2-Dichloropropane	2.4	U
563-58-6	1,1-Dichloropropene	2.4	U
10061-01-5	cis-1,3-Dichloropropene	2.4	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-4S S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149158
Project Name :	PPA T-1	Lab File ID :	V17342.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	5.66g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.4	U
100-41-4	Ethylbenzene	2.4	U
106-93-4	Ethylenedibromide	2.4	U
75-69-4	Fluorotrichloromethane	2.4	U
591-78-6	2-Hexanone	9.6	U
87-68-3	Hexachlorobutadiene	2.4	U
98-82-8	Isopropylbenzene	2.4	U
108-10-1	4-Methyl-2-pentanone	9.6	U
75-09-2	Methylene chloride	2.4	U
634-04-4	Methyl-t-butyl ether	2.4	U
104-51-8	n-Butylbenzene	2.4	U
103-65-1	n-Propylbenzene	2.4	U
91-20-3	Naphthalene	24	U
108-38-3/106423	m+p- Xylene	2.4	U
99-87-6	p-Isopropyltoluene	2.4	U
95-47-6	o-Xylene	2.4	U
135-98-8	s-Butylbenzene	2.4	U
100-42-5	Styrene	2.4	U
98-06-6	tert-Butylbenzene	2.4	U
127-18-4	Tetrachloroethene	2.4	U
630-20-6	1,1,1,2-Tetrachloroethane	2.4	U
79-34-5	1,1,2,2-Tetrachloroethane	2.4	U
108-88-3	Toluene	2.4	U
87-61-6	1,2,3-Trichlorobenzene	2.4	3.1
120-82-1	1,2,4-Trichlorobenzene	2.4	7.1
71-55-6	1,1,1-Trichloroethane	2.4	U
79-00-5	1,1,2-Trichloroethane	2.4	U
79-01-6	Trichloroethene	2.4	U
96-18-4	1,2,3-Trichloropropane	2.4	U
95-63-6	1,2,4-Trimethylbenzene	2.4	U
108-67-8	1,3,5-Trimethylbenzene	2.4	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-4S S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149158
Project Name :	PPA T-1	Lab File ID :	V17342.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	5.66g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	4.8	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-7S S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149159
Project Name :	PPA T-1	Lab File ID :	V17343.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	6.31g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	45	U
108-86-1	Bromobenzene	2.2	U
71-43-2	Benzene	2.2	U
75-27-4	Bromodichloromethane	2.2	U
74-97-5	Bromochloromethane	2.2	U
75-25-2	Bromoform	2.2	U
74-83-9	Bromomethane	4.5	U
78-93-3	2-Butanone	45	U
56-23-5	Carbon Tetrachloride	2.2	U
108-90-7	Chlorobenzene	2.2	U
124-48-1	Chlorodibromomethane	2.2	U
75-00-3	Chloroethane	4.5	U
67-66-3	Chloroform	2.2	U
74-87-3	Chloromethane	4.5	U
95-49-8	2-Chlorotoluene	2.2	U
106-43-4	4-Chlorotoluene	2.2	U
156-59-2	cis-1,2-Dichloroethene	2.2	U
156-60-5	trans-1,2-Dichloroethene	2.2	U
74-95-3	Dibromomethane	2.2	U
96-12-8	1,2-Dibromo-3-chloropropane	2.2	U
95-50-1	1,2-Dichlorobenzene	2.2	U
541-73-1	1,3-Dichlorobenzene	2.2	U
106-46-7	1,4-Dichlorobenzene	2.2	U
75-34-3	1,1-Dichloroethane	2.2	U
107-06-2	1,2-Dichloroethane	2.2	U
75-35-4	1,1-Dichloroethene	2.2	U
78-87-5	1,2-Dichloropropane	2.2	U
142-28-9	1,3-Dichloropropane	2.2	U
590-20-7	2,2-Dichloropropane	2.2	U
563-58-6	1,1-Dichloropropene	2.2	U
10061-01-5	cis-1,3-Dichloropropene	2.2	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-7S S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149159
Project Name :	PPA T-1	Lab File ID :	V17343.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	6.31g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	2.2	U
100-41-4	Ethylbenzene	2.2	U
106-93-4	Ethylenedibromide	2.2	U
75-69-4	Fluorotrichloromethane	2.2	U
591-78-6	2-Hexanone	8.9	U
87-68-3	Hexachlorobutadiene	2.2	U
98-82-8	Isopropylbenzene	2.2	U
108-10-1	4-Methyl-2-pentanone	8.9	U
75-09-2	Methylene chloride	2.2	U
634-04-4	Methyl-t-butyl ether	2.2	U
104-51-8	n-Butylbenzene	2.2	U
103-65-1	n-Propylbenzene	2.2	U
91-20-3	Naphthalene	22	U
108-38-3/106423	m+p- Xylene	2.2	U
99-87-6	p-Isopropyltoluene	2.2	U
95-47-6	o-Xylene	2.2	U
135-98-8	s-Butylbenzene	2.2	U
100-42-5	Styrene	2.2	U
98-06-6	tert-Butylbenzene	2.2	U
127-18-4	Tetrachloroethene	2.2	U
630-20-6	1,1,1,2-Tetrachloroethane	2.2	U
79-34-5	1,1,2,2-Tetrachloroethane	2.2	U
108-88-3	Toluene	2.2	U
87-61-6	1,2,3-Trichlorobenzene	2.2	U
120-82-1	1,2,4-Trichlorobenzene	2.2	U
71-55-6	1,1,1-Trichloroethane	2.2	U
79-00-5	1,1,2-Trichloroethane	2.2	U
79-01-6	Trichloroethene	2.2	U
96-18-4	1,2,3-Trichloropropane	2.2	U
95-63-6	1,2,4-Trimethylbenzene	2.2	U
108-67-8	1,3,5-Trimethylbenzene	2.2	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-7S S-3	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149159
Project Name :	PPA T-1	Lab File ID :	V17343.D
Matrix :	Soil	Date Collected :	6/2/00
Sample Wt/Vol :	6.31g	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	4.5	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	TRIP BLANK	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149160
Project Name :	PPA T-1	Lab File ID :	V17336.D
Matrix :	Lab Water	Date Collected :	6/1/00
Sample Wt/Vol :	100uL	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
67-64-1	Acetone	2,500	U
108-86-1	Bromobenzene	120	U
71-43-2	Benzene	120	U
75-27-4	Bromodichloromethane	120	U
74-97-5	Bromochloromethane	120	U
75-25-2	Bromoform	120	U
74-83-9	Bromomethane	250	U
78-93-3	2-Butanone	2,500	U
56-23-5	Carbon Tetrachloride	120	U
108-90-7	Chlorobenzene	120	U
124-48-1	Chlorodibromomethane	120	U
75-00-3	Chloroethane	250	U
67-66-3	Chloroform	120	U
74-87-3	Chloromethane	250	U
95-49-8	2-Chlorotoluene	120	U
106-43-4	4-Chlorotoluene	120	U
156-59-2	cis-1,2-Dichloroethene	120	U
156-60-5	trans-1,2-Dichloroethene	120	U
74-95-3	Dibromomethane	120	U
96-12-8	1,2-Dibromo-3-chloropropane	120	U
95-50-1	1,2-Dichlorobenzene	120	U
541-73-1	1,3-Dichlorobenzene	120	U
106-46-7	1,4-Dichlorobenzene	120	U
75-34-3	1,1-Dichloroethane	120	U
107-06-2	1,2-Dichloroethane	120	U
75-35-4	1,1-Dichloroethene	120	U
78-87-5	1,2-Dichloropropane	120	U
142-28-9	1,3-Dichloropropane	120	U
590-20-7	2,2-Dichloropropane	120	U
563-58-6	1,1-Dichloropropene	120	U
10061-01-5	cis-1,3-Dichloropropene	120	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	TRIP BLANK	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149160
Project Name :	PPA T-1	Lab File ID :	V17336.D
Matrix :	Lab Water	Date Collected :	6/1/00
Sample Wt/Vol :	100uL	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
10061-02-6	trans-1,3-Dichloropropene	120	U
100-41-4	Ethylbenzene	120	U
106-93-4	Ethylenedibromide	120	U
75-69-4	Fluorotrichloromethane	120	U
591-78-6	2-Hexanone	500	U
87-68-3	Hexachlorobutadiene	120	U
98-82-8	Isopropylbenzene	120	U
108-10-1	4-Methyl-2-pentanone	500	U
75-09-2	Methylene chloride	120	U
634-04-4	Methyl-t-butyl ether	120	U
104-51-8	n-Butylbenzene	120	U
103-65-1	n-Propylbenzene	120	U
91-20-3	Naphthalene	1,200	U
108-38-3/106423	m+p- Xylene	120	U
99-87-6	p-Isopropyltoluene	120	U
95-47-6	o-Xylene	120	U
135-98-8	s-Butylbenzene	120	U
100-42-5	Styrene	120	U
98-06-6	tert-Butylbenzene	120	U
127-18-4	Tetrachloroethene	120	U
630-20-6	1,1,1,2-Tetrachloroethane	120	U
79-34-5	1,1,2,2-Tetrachloroethane	120	U
108-88-3	Toluene	120	U
87-61-6	1,2,3-Trichlorobenzene	120	U
120-82-1	1,2,4-Trichlorobenzene	120	U
71-55-6	1,1,1-Trichloroethane	120	U
79-00-5	1,1,2-Trichloroethane	120	U
79-01-6	Trichloroethene	120	U
96-18-4	1,2,3-Trichloropropane	120	U
95-63-6	1,2,4-Trimethylbenzene	120	U
108-67-8	1,3,5-Trimethylbenzene	120	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	TRIP BLANK	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149160
Project Name :	PPA T-1	Lab File ID :	V17336.D
Matrix :	Lab Water	Date Collected :	6/1/00
Sample Wt/Vol :	100uL	Date Received :	6/5/00
% Solid :		Date Analyzed :	6/12/00
Dilution Factor :	1	By :	JAW

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
75-01-4	Vinyl chloride	250	U

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

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www.stl-inc.com

June 14, 2000

Mr. Richard Geisler
Tighe & Bond, Inc.
110 West Boylston St.
Worcester, MA 01606

Report Number: 22742

REVISED

Dear Mr. Geisler,

The revised report for Job Number 22742 is now complete. This report was revised to correct the quantitation limits for the SW846 8082 analysis of sample MW-1D S-1. The result for the sample remains unchanged. 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

RECEIVED
JUN 16 2000

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-1D S-1	Report No :	22742
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149134
Project Name :	PPA T-1	Lab File ID :	H4443.D
Matrix :	Soil	Date Collected :	6/1/00
Sample Wt/Vol :	10.2g	Date Received :	6/5/00
% Solid :	92.9	Date Extracted :	6/6/00
GPC Clean up :		Date Analyzed :	6/8/00
Sulfur Clean up :		By :	SM
Dilution Factor :	100		

CAS NO	Compound	Quantitation Limit ug/kg dry	Concentration ug/kg dry
12674-11-2	Arochlor-1016	11,000	U
11104-28-2	Arochlor-1221	11,000	U
11141-16-5	Arochlor-1232	11,000	U
53469-21-9	Arochlor-1242	11,000	U
12672-29-6	Arochlor-1248	11,000	U
11097-69-1	Arochlor-1254	11,000	U
11096-82-5	Arochlor-1260	11,000	48000

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Severn Trent Laboratories
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www.stl-inc.com

June 26, 2000

Mr. Richard Geisler

Tighe & Bond, Inc. W3138
110 West Boylston St.

Worcester, MA 01606

Report Number : 22952

Dear Mr. Geisler,

The analysis of your sample(s) submitted on 6/16/00 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

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. Common laboratory contaminants in applicable method blanks are reported with J qualifiers to one-tenth the quantitation limit.

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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CASE NARRATIVE FOR REPORT NUMBER 22952

Client Name : Tighe & Bond, Inc. W3138

Project Name : PPA T-1

Date : June 26, 2000

Sample Number	Comments
149962	
149963	
149964	
149965	
149966	
149967	Due to foaming, the SW8468260B analysis for this sample required a 10x dilution.
149968	
149969	
149970	
149971	
149972	
149973	

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-6D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149962
Project Name :	PPA T-1	Lab File ID :	H4528.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	1040mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	U

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-6S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149963
Project Name :	PPA T-1	Lab File ID :	H4529.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	950mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	U

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-7S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149965
Project Name :	PPA T-1	Lab File ID :	H4530.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	1000mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	2.8

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-3S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149966
Project Name :	PPA T-1	Lab File ID :	H4531.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	1000mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	9.8

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-2D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149967
Project Name :	PPA T-1	Lab File ID :	H4532.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	1000mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	2.1

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-1S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149968
Project Name :	PPA T-1	Lab File ID :	H4533.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	1000mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	10

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-2S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149969
Project Name :	PPA T-1	Lab File ID :	H4534.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	1000mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	U

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-1D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149970
Project Name :	PPA T-1	Lab File ID :	H4535.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	1000mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	2.5

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-5D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149971
Project Name :	PPA T-1	Lab File ID :	H4536.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	1000mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	U

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-4S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149972
Project Name :	PPA T-1	Lab File ID :	H4537.D
Matrix :	Groundwater	Date Collected :	6/15/00
Sample Wt/Vol :	1000mL	Date Received :	6/16/00
% Solid :		Date Extracted :	6/16/00
GPC Clean up :		Date Analyzed :	6/19/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	U

PULP & PAPER OF AMERICA
650 Main St., Berlin, NH 03570

Fax

To:	Suzanne Pisano	**From:**	Tammie Lavoie – 603-342-2361
Fax:	508-795-1087	**Pages:**	5
Phone:	508-754-2201	**Date:**	5/25/01
Re:		**CC:**	

☐ **Urgent** X **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Suzanne,

Here is the correct information you were looking for....believe it or not, I actually filed it correctly under T-1. So the manifests belong to the T-1 site. Have a good weekend.

Tammie

DESCRIPTION: Disposal of contaminated debris NUMBER: 0C0085824
ORIGINATOR: LAVOIE TL DATE OPENED/REQUIRED: 08MAY00/15MAY00
TOTAL AMNT: 3,300.00 Waiting for B1AREA.MGR

LINE	ITEM NUMBER & DESCRIPTION 1 DESCRIPTION 2 (EXTRA DESCRIPTIONS) COST CENTRE & DESCRIPTION SUGGESTED SUPPLIER	UNITS QUANTITY	EST PRICE EST VALUE TAX CODE
	"*" Denotes a contract item		
1	> Disposal of drilling waste material consisting of PCB contaminated soil & water As a result of ongoing remediation of the T-1 site, it will be necessary for the drilling material to be disposed of properly. It may consist of PCB contaminated soil & water. (AC)022-0179-541408 - Contract Other Expenses Suggested supplier: Draghi Environmental Services	EACH 1	3300.0000 3300.0000 TAX CODE TAX CODE

APPROVAL HISTORY:

Waiting for approval of JOHN FULLER since 08May00

Approver name	Date Approved

4/23/00

3300.00
−2300.00
1000.00

DES DRAGHI ENVIRONMENTAL SERVICES, INC.
POST OFFICE BOX 101 • LONDONDERRY, NH 03053
TEL: (603) 437-1352 FAX: (603) 434-6485

Vendor # 8178
Voucher #
JUN 30 2000
Invoice #

Invoice

DATE	INVOICE #
6/23/'00	619

BILL TO:

Pulp & Paper of America, Inc.
Riverside Rec.- Sup# 004123
1201 Unity St.
Berlin, NH 03570-2906
Attn Ray Danforth

SHIP TO:

Transport & Disposal of
Waste Materials
Re: NYB9112383
NYB9289467

P.O. NUMBER	TERMS	REP	SHIP	VIA	F.O.B.	PROJECT
00-07709	1% 10 Net 30	VJD	06/22/00	FCI	Berlin, NH	

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
7	drums	Disposal of PCB contaminated materials	250.00	1,750.00
1	1	On-site labor	550.00	550.00

T. Lavoie

Thank you for your business.

TOTAL 2,300.00

NYB9112383

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

CWM

Please type or print. Do not staple.

(Hazardous Waste Manifest 4/97)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No. NHD981928266 Manifest Doc. No. 2. Page 1 of 1 — Information within heavy bold line is not required by Federal Law.

A. NYB9112383

3. Generator's Name and Mailing Address
PULP & PAPER OF AMERICA
650 MAIN ST
BERLIN NH 03570-2489

4. Generator's Telephone Number (603) 342-3000 ATTN: J Ullman

B. Generator's ID SAME Unit of Beta

5. Transporter 1 (Company Name) Reynolds Haulage Inc — 6. US EPA ID Number NPDEN0525

C. State Transporter's ID

D. Transporter's Telephone ( ) 732 462 1200

7. Transporter 2 (Company Name) — 8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Telephone ( )

9. Designated Facility Name and Site Address
CWM CHEMICAL SERVICES, L.L.C.
1550 BALMER RD.
MODEL CITY NY 14107

10. US EPA ID Number NYD049836679

G. State Facility ID

H. Facility Telephone ( ) 716 754-8211

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers Number	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. NA, POLYCHLORINATED BIPHENYL MIXTURE, 9, UN2315, III	00	HM	00750	E	EPA / STATE 9507
b.					EPA / STATE
c.					EPA / STATE
d.					EPA / STATE

J. Additional Descriptions for Materials listed Above
a. PCB 5011 b. c. d.

K. Handling Codes for Wastes Listed Above
a. L b. a. b.

15. Special Handling Instructions and Additional Information
CHEMTREC Emergency Response Number (800)424-9300 NMI Contract
PCB Unit of Service Date: _____

Certificate of Disposal

GENERATOR

National Response Center (800) 424-8802 and the NYS Department of Environmental Conservation (518) 457-7362

PULP & PAPER OF AMERICA
650 Main St., Berlin, NH 03570

Fax

To:	Suzanne Pisano	**From:**	Tammie Lavoie – 603-342-2361
Fax:	508-795-1087	**Pages:**	5
Phone:	508-754-2201	**Date:**	5/25/01
Re:		**CC:**	

☐ **Urgent** X **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

Suzanne,

Here is the correct information you were looking for....believe it or not, I actually filed it correctly under T-1. So the manifests belong to the T-1 site. Have a good weekend.

Tammie

DESCRIPTION: Disposal of contaminated debris NUMBER: 000085824
ORIGINATOR: LAVOIE_TL DATE OPENED/REQUIRED: 08MAY00/15MAY00
TOTAL AMNT: 3,300.00 Waiting for B1AREA.MGR

LINE	ITEM NUMBER & DESCRIPTION 1 DESCRIPTION 2 (EXTRA DESCRIPTIONS) COST CENTRE & DESCRIPTION SUGGESTED SUPPLIER	UNITS QUANTITY	EST PRICE EST VALUE TAX CODE
	"*" Denotes a contract item		
1	> Disposal of drilling waste material consisting of PCB contaminated soil & water As a result of ongoing remediation of the T-1 site, it will be necessary for the drilling material to be disposed of properly. It may consist of PCB contaminated soil & water. (AC)022-0179-541408 - Contract Other Expenses Suggested supplier: Draghi Environmental Services	EACH 1	3300.0000 3300.0000 TAX CODE TAX CODE

APPROVAL HISTORY:

Waiting for approval of JOHN FULLER since 08May00

Approver name	Date Approved

4/23/00

3300.00
−2300.00
1000.00

DES DRAGHI ENVIRONMENTAL SERVICES, INC.
POST OFFICE BOX 601 • LONDONDERRY, NH 03053
TEL: (603) 437-1352 FAX: (603) 434-6485

Vendor # 8178
Voucher #
JUN 30 2000
Invoice #

Invoice

DATE	INVOICE #
6/23/'00	619

BILL TO:

Pulp & Paper of America, Inc.
Riverside Rec.- Sup# 004123
1201 Unity St.
Berlin, NH 03570-2906
Attn Ray Danforth

SHIP TO:

Transport & Disposal of
Waste Materials
Re: NYB9112383
NYB3289467

P.O. NUMBER	TERMS	REP	SHIP	VIA	F.O.B.	PROJECT
00-07709	1% 10 Net 30	VJD	06/22/00	FCI	Berlin, NH	

QUANTITY	ITEM CODE	DESCRIPTION	PRICE EACH	AMOUNT
7	drums	Disposal of PCB contaminated materials	250.00	1,750.00
1	1	On-site labor	550.00	550.00

T. Lavoie

Thank you for your business.

TOTAL 2,300.00

NYB9112383

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

CWM

Please type or print. Do not staple.

(Hazardous Waste Manifest 4/97)

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the NYS Department of Environmental Conservation (518) 457-7362

GENERATOR

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No. / Manifest Doc. No.: NHD001191939 / 062331

2. Page 1 of 1

Information within heavy bold line is not required by Federal Law.

3. Generator's Name and Mailing Address
PULP & PAPER OF AMERICA
650 MAIN ST
BERLIN NH 03570-2489

4. Generator's Telephone Number: 603 342-3000 ATTN: J Olteen

A. NYB9112383

B. Generator's ID: SAME

5. Transporter 1 (Company Name): Rosebold Carriage Inc

6. US EPA ID Number: NJD980505874

C. State Transporter's ID: NJ 4905

D. Transporter's Telephone ( ): 732 462-1000

7. Transporter 2 (Company Name)

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Telephone ( )

9. Designated Facility Name and Site Address
CWM CHEMICAL SERVICES, L.L.C.
1550 BALMER RD.
MODEL CITY NY 14107

10. US EPA ID Number: NYD049836679

G. State Facility ID

H. Facility Telephone ( ): 716 754-8231

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers Number	Type	13. Total Quantity	14. Unit WV/Vol	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYL MIXTURE, 9, UN2315, III	00	HM	00150	K	EPA / STATE 9007
b.					EPA / STATE
c.					EPA / STATE
d.					EPA / STATE

J. Additional Descriptions for Materials listed Above
Oil
PCB Soil

K. Handling Codes for Wastes Listed Above
a. L b. c. d.

15. Special Handling Instructions and Additional Information
CHEMTREC Emergency Response Number (800)424-9300 WMI Contract
PCB Unit of Service Date:
Service Request #: 15573
Certificate of Disposal Required

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Jeffrey Olteen Signature: [signature] Mo. Day Year: 06 22 01

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Thomas Simpson Signature: [signature] Mo. 06 Day 22 Year

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name Signature Mo. Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed Typed Name Signature Mo. Day Year

NYB9289467

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please type or print. Do not staple.

(Hazardous Waste Manifest 4/97)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No.: NYB9289467
Manifest Doc. No.: 06220
2. Page 1 of 1

Information within heavy bold line is not required by Federal Law.

3. Generator's Name and Mailing Address
PULP & PAPER OF AMERICA
650 MAIN ST
BERLIN NH 03570-2809
4. Generator's Telephone Number (603) 752-2000 ATTN: J. O'Hearn

A. NYB9289467
B. Generator's ID: Utility St Berlin NH
C. State Transporter's ID: 014458 mm
D. Transporter's Telephone ( ) 752 462 2001
E. State Transporter's ID
F. Transporter's Telephone ( )
G. State Facility ID
H. Facility Telephone ( ) 716 754-8231

5. Transporter 1 (Company Name): Greenfield Garage, Inc.
6. US EPA ID Number: NHD981021614
7. Transporter 2 (Company Name)
8. US EPA ID Number

9. Designated Facility Name and Site Address
CWM CHEMICAL SERVICES, L.L.C.
1550 BALMER RD.
MODEL CITY NY 14107
10. US EPA ID Number: NYD049836679

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers Number	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ, POLYCHLORINATED BIPHENYL SOLUTION, 9, UN2315, III	001	DM	00115	G	EPA / STATE 002, B003
b.					EPA / STATE
c.					EPA / STATE
d.					EPA / STATE

J. Additional Descriptions for Materials listed Above
a. UN2315 - PCB Water
b.
c.
d.

K. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
CHEMTREC Emergency Response Number 1800 424 9300 NH Contract
PCB out of Service Date: _____
Service Equipment: _____
Certificate of Disposal Required
45113

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR if I am a small generator, I have made a good faith effort to minimize my waste and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Jeffrey O'Hearn
Signature: [signature]
Mo. Day Year: 05 21 01

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Roger S. Hopkin
Signature: [signature]
Mo. Day Year: 05 21 01

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Mo. Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name
Signature
Mo. Day Year

GENERATOR / TRANSPORTER / FACILITY

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-6D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149962
Project Name :	PPA T-1	Lab File ID :	V38606.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-6D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149962
Project Name :	PPA T-1	Lab File ID :	V38606.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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	1.4
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 :	MW-6D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149962
Project Name :	PPA T-1	Lab File ID :	V38606.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-6S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149963
Project Name :	PPA T-1	Lab File ID :	V38548.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-6S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149963
Project Name :	PPA T-1	Lab File ID :	V38548.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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 :	MW-6S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149963
Project Name :	PPA T-1	Lab File ID :	V38548.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-3D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149964
Project Name :	PPA T-1	Lab File ID :	V38549.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-3D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149964
Project Name :	PPA T-1	Lab File ID :	V38549.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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 :	MW-3D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149964
Project Name :	PPA T-1	Lab File ID :	V38549.D
Matrix :	Groundwater	Date Collected :	6/12/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-7S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149965
Project Name :	PPA T-1	Lab File ID :	V38550.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-7S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149965
Project Name :	PPA T-1	Lab File ID :	V38550.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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 :	MW-7S	Report No :	22952
Client Name :	Tighe & Bond, Inc., W3138	STL Sample Number :	149965
Project Name :	PPA T-1	Lab File ID :	V38550.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-3S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149966
Project Name :	PPA T-1	Lab File ID :	V38551.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-3S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149966
Project Name :	PPA T-1	Lab File ID :	V38551.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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	0.59 J
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 :	MW-3S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149966
Project Name :	PPA T-1	Lab File ID :	V38551.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-2D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149967
Project Name :	PPA T-1	Lab File ID :	V38554.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	10	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
67-64-1	Acetone	100	U
108-86-1	Bromobenzene	10	U
71-43-2	Benzene	10	U
75-27-4	Bromodichloromethane	10	U
74-97-5	Bromochloromethane	10	U
75-25-2	Bromoform	10	U
74-83-9	Bromomethane	20	U
78-93-3	2-Butanone	100	U
56-23-5	Carbon tetrachloride	10	U
108-90-7	Chlorobenzene	10	U
124-48-1	Chlorodibromomethane	10	U
75-00-3	Chloroethane	20	U
67-66-3	Chloroform	10	U
74-87-3	Chloromethane	20	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
74-95-3	Dibromomethane	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
95-50-1	1,2-Dichlorobenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	13
106-46-7	1,4-Dichlorobenzene	10	13
75-34-3	1,1-Dichloroethane	10	U
107-06-2	1,2-Dichloroethane	10	U
75-35-4	1,1-Dichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
142-28-9	1,3-Dichloropropane	10	U
590-20-7	2,2-Dichloropropane	10	U
563-58-6	1,1-Dichloropropene	10	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-2D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149967
Project Name :	PPA T-1	Lab File ID :	V38554.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	10	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
10061-02-6	trans-1,3-Dichloropropene	5.0	U
100-41-4	Ethylbenzene	10	U
106-93-4	Ethylenedibromide	10	U
75-69-4	Fluorotrichloromethane	10	U
591-78-6	2-Hexanone	100	U
87-68-3	Hexachlorobutadiene	6.0	U
98-82-8	Isopropylbenzene	10	U
108-10-1	4-Methyl-2-pentanone	100	U
75-09-2	Methylene chloride	10	U
634-04-4	Methyl-t-butylether	10	U
104-51-8	n-Butylbenzene	10	U
103-65-1	n-Propylbenzene	10	U
91-20-3	Naphthalene	50	U
108-38-3/106-42	m+p-Xylene	10	U
99-87-6	p-Isopropyltoluene	10	U
95-47-6	o-Xylene	10	U
135-98-8	sec-Butylbenzene	10	U
100-42-5	Styrene	10	U
98-06-6	tert-Butylbenzene	10	U
127-18-4	Tetrachloroethene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
71-55-6	1,1,1-Trichloroethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
79-01-6	Trichloroethene	10	U
96-18-4	1,2,3-Trichloropropane	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-2D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149967
Project Name :	PPA T-1	Lab File ID :	V38554.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	10	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
75-01-4	Vinyl chloride	20	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-1S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149968
Project Name :	PPA T-1	Lab File ID :	V38555.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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	0.64 J
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	18
106-46-7	1,4-Dichlorobenzene	1.0	15
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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-1S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149968
Project Name :	PPA T-1	Lab File ID :	V38555.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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 :	MW-1S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149968
Project Name :	PPA T-1	Lab File ID :	V38555.D
Matrix :	Groundwater	Date Collected :	6/13/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID : MW-2S	Report No : 22952
Client Name : Tighe & Bond, Inc. W3138	STL Sample Number : 149969
Project Name : PPA T-1	Lab File ID : V38556.D
Matrix : Groundwater	Date Collected : 6/14/00
Sample Wt/Vol : 25mL	Date Received : 6/16/00
% Solid :	Date Analyzed : 6/23/00
Dilution Factor : 1	By : GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-2S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149969
Project Name :	PPA T-1	Lab File ID :	V38556.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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 :	MW-2S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149969
Project Name :	PPA T-1	Lab File ID :	V38556.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-1D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149970
Project Name :	PPA T-1	Lab File ID :	V38613.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	20	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
67-64-1	Acetone	200	U
108-86-1	Bromobenzene	20	U
71-43-2	Benzene	20	U
75-27-4	Bromodichloromethane	20	U
74-97-5	Bromochloromethane	20	U
75-25-2	Bromoform	20	U
74-83-9	Bromomethane	40	U
78-93-3	2-Butanone	200	U
56-23-5	Carbon tetrachloride	20	U
108-90-7	Chlorobenzene	20	U
124-48-1	Chlorodibromomethane	20	U
75-00-3	Chloroethane	40	U
67-66-3	Chloroform	20	U
74-87-3	Chloromethane	40	U
95-49-8	2-Chlorotoluene	20	U
106-43-4	4-Chlorotoluene	20	U
156-59-2	cis-1,2-Dichloroethene	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
74-95-3	Dibromomethane	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
95-50-1	1,2-Dichlorobenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	18 J
106-46-7	1,4-Dichlorobenzene	20	26
75-34-3	1,1-Dichloroethane	20	U
107-06-2	1,2-Dichloroethane	20	U
75-35-4	1,1-Dichloroethene	20	U
78-87-5	1,2-Dichloropropane	20	U
142-28-9	1,3-Dichloropropane	20	U
590-20-7	2,2-Dichloropropane	20	U
563-58-6	1,1-Dichloropropene	20	U
10061-01-5	cis-1,3-Dichloropropene	10	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-1D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149970
Project Name :	PPA T-1	Lab File ID :	V38613.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	20	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
10061-02-6	trans-1,3-Dichloropropene	10	U
100-41-4	Ethylbenzene	20	U
106-93-4	Ethylenedibromide	20	U
75-69-4	Fluorotrichloromethane	20	U
591-78-6	2-Hexanone	200	U
87-68-3	Hexachlorobutadiene	12	U
98-82-8	Isopropylbenzene	20	U
108-10-1	4-Methyl-2-pentanone	200	U
75-09-2	Methylene chloride	20	U
634-04-4	Methyl-t-butylether	20	U
104-51-8	n-Butylbenzene	20	U
103-65-1	n-Propylbenzene	20	U
91-20-3	Naphthalene	100	U
108-38-3/106-42	m+p-Xylene	20	U
99-87-6	p-Isopropyltoluene	20	U
95-47-6	o-Xylene	20	U
135-98-8	sec-Butylbenzene	20	U
100-42-5	Styrene	20	U
98-06-6	tert-Butylbenzene	20	U
127-18-4	Tetrachloroethene	20	U
630-20-6	1,1,1,2-Tetrachloroethane	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
108-88-3	Toluene	20	U
87-61-6	1,2,3-Trichlorobenzene	20	560
120-82-1	1,2,4-Trichlorobenzene	20	290
71-55-6	1,1,1-Trichloroethane	20	U
79-00-5	1,1,2-Trichloroethane	20	U
79-01-6	Trichloroethene	20	U
96-18-4	1,2,3-Trichloropropane	20	U
95-63-6	1,2,4-Trimethylbenzene	20	U
108-67-8	1,3,5-Trimethylbenzene	20	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-1D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149970
Project Name :	PPA T-1	Lab File ID :	V38613.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	20	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
75-01-4	Vinyl chloride	40	U

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-5D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149971
Project Name :	PPA T-1	Lab File ID :	V38612.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-5D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149971
Project Name :	PPA T-1	Lab File ID :	V38612.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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 :	MW-5D	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149971
Project Name :	PPA T-1	Lab File ID :	V38612.D
Matrix :	Groundwater	Date Collected :	6/14/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-4S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149972
Project Name :	PPA T-1	Lab File ID :	V38611.D
Matrix :	Groundwater	Date Collected :	6/15/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	MW-4S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149972
Project Name :	PPA T-1	Lab File ID :	V38611.D
Matrix :	Groundwater	Date Collected :	6/15/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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 :	MW-4S	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149972
Project Name :	PPA T-1	Lab File ID :	V38611.D
Matrix :	Groundwater	Date Collected :	6/15/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/26/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	TRIP BLANK	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149973
Project Name :	PPA T-1	Lab File ID :	V38569.D
Matrix :	Lab Water	Date Collected :	6/15/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Volatile Organics Analysis Data Sheet

SW8468260B

Client ID :	TRIP BLANK	Report No :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149973
Project Name :	PPA T-1	Lab File ID :	V38569.D
Matrix :	Lab Water	Date Collected :	6/15/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

CAS NO	Compound	Quantitation Limit ug/L	Concentration 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
634-04-4	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 :	22952
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	149973
Project Name :	PPA T-1	Lab File ID :	V38569.D
Matrix :	Lab Water	Date Collected :	6/15/00
Sample Wt/Vol :	25mL	Date Received :	6/16/00
% Solid :		Date Analyzed :	6/23/00
Dilution Factor :	1	By :	GJB

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

Chain of Custody Form

STL
Committed to Your Success

(P) 413-572-4000
(F) 413-572-3707
(P) 978-667-1400
(F) 978-667-7871

Client: Tighe & Bond
Address: 110 West Boylston St.
Worcester MA
Phone: Fax:

Job#: (1)-3138
Project Manager: SCP
Work ID: PRA T-1 Site
Contact: Tammie Lavoie

Job# 22952 | Quote# | PO#

Requested Turn Around Time
15 Business Day ____ Rush 5DAY
10 Business Day ____ Other ____

Regulatory Classification - Please Specify
NPDES ____ Drinking Water ____ MCP Other ____
RCRA ____ MCP GW1 ____ Other NH GW-1

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
8000-series for haz/solid waste
Use comments section to further define.

Comments (Special Instructions)
(1) PCBs 8082
(2) VOCs 8260

Sample Type Codes
WW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
RW-Raw Water GW-Groundwater PW-Public Water SO-Soil
S-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container For volatiles-one line/analysis)	Sample Type	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Preservative: Na2S2O3	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH<2	NaOH to pH>12	Other:	4° C	pH	Volatiles	Semivolatiles	PCB & Pesticides	Metals	Cyanide	TCLP	Oil & Grease	Total Pet. Hyd.(TPH)	General Chemistry	Bacteriological	Other
MW-2D	GW	6/13/00 1100	✓		1	G							✓				(1)								
MW-2D	GW	6/13/00 1100	✓		2	G				✓			✓		(2)										
MW-1S	GW	6/13/00 1423	✓		1	G							✓				(1)								
MW-1S	GW	6/13/00 1423	✓		2	G				✓			✓		(2)										
MW-2S	GW	6/14/00 1000	✓		1	G							✓				(1)								
MW-2S	GW	6/14/00 1000	✓		2	G				✓			✓		(2)										
MW-1D	GW	6/14/00 0922	✓		1	G							✓				(1)								
MW-1D	GW	6/14/00 0922	✓		2	G				✓			✓		(2)										
MW-5D	GW	6/14/00 1105	✓		1	G							✓				(1)								
MW-5D	GW	6/14/00 1105	✓		2	G				✓			✓		(2)										

Sampled by (print): Richard P. Geisler
Signature: Richard P. Geisler

Relinquished by: Richard P. Geisler Date: 6/15/00 Time: 1400
Received by: [illegible] Date: 6/16/00 Time: 0800

Relinquished by: Date: Time:
Received by: Date: Time:

Method of shipment: UPS
Laboratory: STL

Cooler #: 20
Temp. @ receipt: on ice
Preservation pH checked
By: [illegible] Date: 6/16/00

White = Lab file Yellow = Report copy Pink = Office use only Green = Customer copy

Severn Trent Laboratory

Chain of Custody Form

STL
Committed to Your Success

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

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

Client: Tighe & Bond
Address: 110 West Boylston St
Worcester, MA
Phone: Fax:

Job#: W-3138
Project Manager: SCP
Work ID: PPA T-1 Site
Contact: Tammie Lavoie

Job# 22952 | Quote# | PO#

Requested Turn Around Time
15 Business Day ____ Rush 5 DAY
10 Business Day ____ Other ____

Regulatory Classification - Please Specify
NPDES ____ Drinking Water ____ MCP Other ____
RCRA ____ MCP GW1 ____ Other NH

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
8000-series for haz/solid waste
Use comments section to further define.

Comments
(Special Instructions)
1. PCBs 8082
2. VOCs 8260

Sample Type Codes
AW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
RW-Raw Water GW-Groundwater PW-Public Water SO-Soil
S-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container; For volatiles-one line/analysis)	Sample Type	Date Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Na2S2O3	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH<2	NaOH to pH>12	Other:	4°C	pH	Volatiles	Semivolatiles	PCB & Pesticides	Metals	Cyanide	TCLP	Oil & Grease	Total Pet. Hyd.(TPH)	General Chemistry	Bacteriological	Other
MW-4S	GW	6/15/00 1300	✓		1	G							✓				(1)								
MW-4S	GW	6/15/00 1300	✓		2	G				✓			✓		(2)										
Trip Blank	LW	6/7/00 1030	✓		2	G				✓			✓		(2)										

Sampled by (print): Richard P. Gaeler
Signature: Richard P. Gaeler

Relinquished by: Richard P. Gaeler Date: 6/15/00 Time: 1400
Received by: Anne M Fuller Date: 6/16/00 Time: 0500

Relinquished by: Date: Time:
Received by: Date: Time:

Method of shipment: UPS
Laboratory: STL

Cooler #: 26
Temp. @ receipt: on ice
Preservation pH checked
By: CMF Date: 6/16/00

Chain of Custody Form

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(P) 413-572-4000
(F) 413-572-3707
(P) 978-667-1400
(F) 978-667-7871

Client: Tighe & Bond
Address: 110 West Boylston St, Worcester, MA
Phone: Fax:
Job#: W-3138
Project Manager: SLP
Work ID: RPA T-1 Site
Contact: Tammie Lavoie

Job# 22952 | Quote# | PO#

Requested Turn Around Time: 15 Business Day ____ Rush 5 DAY; 10 Business Day ____ Other ____

Regulatory Classification - Please Specify: NPDES ____ Drinking Water ____ MCP Other ____; RCRA ____ MCP GW1 ____ Other NH GW-1

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
8000-series for haz/solid waste
Use comments section to further define.

Comments (Special Instructions)
(1) PCBs 8082
(2) VOCs 8260

Sample Type Codes: WW-Wellwater, W-Wastewater, SW-Surfacewater, LW-Labwater, RW-Raw Water, GW-Groundwater, PW-Public Water, SO-Soil, S-Solid, SL-Sludge, O-Oil, A-Air, Z-Other

Sample ID (Use one line per container; For volatiles-one line/analysis)	Sample Type	Date / Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Preservative: Na2S2O3	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH<2	NaOH to pH>12	Other: ____	4° C	pH	Volatiles	Semivolatiles	PCB & Pesticides	Metals	Cyanide	TCLP	Oil & Grease	Total Pet. Hyd.(TPH)	General Chemistry	Bacteriological	Other ____	Comments
MW-6D	GW	6/12/00 1222	✓		1	G							✓				(1)									
MW-6D	GW	6/12/00 1222	✓		2	G				✓			✓		(2)											
MW-6S	GW	6/12/00 1411	✓		1	G							✓				(1)									
MW-6S	GW	6/12/00 1411	✓		2	G				✓			✓		(2)											
MW-3D	GW	6/12/00 1520	✓		1	G							✓				(1)									broken
MW-3D	GW	6/12/00 1520	✓		2	G				✓			✓		(2)											
MW-7S	GW	6/13/00 1010	✓		1	G							✓				(1)									
MW-7S	GW	6/13/00 1010	✓		2	G				✓			✓		(2)											
MW-3S	GW	6/13/00 0956	✓		1	G							✓				(1)									
MW-3S	GW	6/13/00 0956	✓		2	G				✓			✓		(2)											

Sampled by (print): [illegible]
Signature: [illegible]

Relinquished by: [illegible] Date: 10/15/00 Time: 1400
Received by: [illegible] Date: 6/16/00 Time: 0800

Relinquished by: Date: Time:
Received by: Date: Time:

Method of shipment: UPS
Laboratory: STL

Cooler #: 26
Temp. @ receipt: on ice
Preservation pH checked By: CMF Date: 6/16/00

White = Lab file Yellow = Report copy Pink = Office use only Green = Customer copy

Committed To *Your* Success

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

Tel: (413) 572-4000
Fax: (413) 572-3707
www.stl-inc.com

June 26, 2000

Mr. Richard Geisler

Tighe & Bond, Inc. W3138
110 West Boylston St.
Worcester, MA 01606

Report Number : 22992

Dear Mr. Geisler,

The analysis of your sample(s) submitted on 6/19/00 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

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. Common laboratory contaminants in applicable method blanks are reported with J qualifiers to one-tenth the quantitation limit.

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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MADEP MA014
RIDOH57
CTDPH 0494
NY DOH 10843
NH DES 2539

149 Rangeway Rd.
N. Billerica, MA 01862
Tel: (978) 667-1400
Fax: (978) 667-7871

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

Pesticides/PCB Organics Analysis Data Sheet

SW8468082A

Client ID :	MW-3D	Report No :	22992
Client Name :	Tighe & Bond, Inc. W3138	STL Sample Number :	150145
Project Name :	PPA T-1	Lab File ID :	H4579.D
Matrix :	Groundwater	Date Collected :	6/16/00
Sample Wt/Vol :	1000mL	Date Received :	6/19/00
% Solid :		Date Extracted :	6/22/00
GPC Clean up :		Date Analyzed :	6/23/00
Sulfur Clean up :		By :	SM
Dilution Factor :	1		

CAS NO	Compound	Quantitation Limit ug/L	Concentration ug/L
12674-11-2	Arochlor-1016	0.6	U
11104-28-2	Arochlor-1221	0.6	U
11141-16-5	Arochlor-1232	0.6	U
53469-21-9	Arochlor-1242	0.6	U
12672-29-6	Arochlor-1248	0.6	U
11097-69-1	Arochlor-1254	0.6	U
11096-82-5	Arochlor-1260	0.6	2.7

Severn Trent Laboratory

Chain of Custody Form

STL
Committed to Your Success

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

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

Job# 22992 | Quote# | PO#

Client: Tighe & Bond
Address: 110 West Boylston Street
Worcester, MA 01606
Phone: 508 856 0999 Fax: 508 852 8741

Job#: W-3138
Project Manager: Suzanne Pisano
Work ID: PPA T-1 Site
Contact: Tammie Lavoie

Requested Turn Around Time
15 Business Day _____ Rush 5 Days _____
10 Business Day _____ _____

Regulatory Classification - Please Specify
NPDES _____ Drinking Water _____ MCP Other _____
RCRA _____ MCP GW1 _____ Other NH GW-1

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
8000-series for haz/solid waste
Use comments section to further define.

Comments
1) PCBs by EPA Method 8082

Sample Type Codes
WW-Wellwater W-Wastewater SW-Surfacewater LW-Labwater
RW-Raw Water GW-Groundwater PW-Public Water SO-Soil
S-Solid SL-Sludge O-Oil A-Air Z-Other

Sample ID (Use one line per container; For volatiles-one line/analysis)	Sample Type	Date / Time Collected	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	Preservative: Na2S2O3	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH<2	NaOH to pH>12	Other:	4° C	pH	Volatiles	Semivolatiles	PCB & Pesticides	Metals	EPH	VPH	DRO/GRO	Oil & Grease	General Chemistry	Bacteriological	Other
MW-3D	GW	6/16/2000 1210	X		1	G							X				1								

Sampled by (print): Richard P. Geisler
Signature: Richard P. Geisler

Relinquished by: Richard P. Geisler Date: 6/19/00 Time: 1150
Received by: [illegible] Date: 6/19/00 Time: 1150

Relinquished by: [illegible] Date: 6/19/00 Time: 1320
Received by: Anne M Fuller Date: 6/19/00 Time: 1320

Method of shipment: STL
Laboratory: STL

Cooler #: 10GN
Temp. @ receipt: 1.5°C
Preservation pH checked
By: AMF Date: 6/19/00

PHILIP SERVICES

Certificate of Analysis

CLIENT INFORMATION		LABORATORY INFORMATION	
Attention:	Suzanne Pisano	**Contact:**	Ada Blythe, B.Sc., C.Chem.
Client Name:	Tighe & Bond	**Project:**	AN000694
Project:		**Date Received:**	00/06/15
Project Desc:	PPA Berlin, NH T-1 Site	**Date Reported:**	00/08/14
Address:	110 West Boylston Street Worchester, MA 1606	**Submission No.:**	0F0656
		Sample No.:	030682-030685
Fax Number:	508 853-8741		
Phone Number:	508 856-0999		

NOTES: ***"-" = not analysed '<' = less than Method Detection Limit (MDL) 'NA' = no data available***
LOQ can by determined for all analytes by multiplying the appropriate MDL X 3.33
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)

Methods used by PASC are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Nineteenth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PASC for a period of three weeks from receipt of data or as per contract.

COMMENTS:

Certified by:

PHILIP ENVIRONMENTAL SERVICES INC.
5555 North Service Road, Burlington, Ontario, Canada L7L 5H7 Tel: (905) 332-9788 Fax: (905) 332-9169

PASC - Certificate of Analysis

			Method Blank	MW-1S	MW-2D	MW-3S
	Client ID:		Method Blank	MW-1S	MW-2D	MW-3S
	Lab No.:		030682 00	030683 00	030684 00	030685 00
	Date Sampled:		00/06/13	00/06/13	00/06/13	00/06/13
Component	**MDL**	**Units**				
PCBs via EPA Method 680 Modified						
PCB-81	0.020	ug/L	<	<	<	<
PCB-77	0.020	"	<	<	<	<
PCB-123	0.020	"	<	<	<	0.027
PCB-118	0.020	"	<	0.022	0.023	0.026
PCB-114	0.020	"	<	<	<	<
PCB-105	0.020	"	<	<	<	<
PCB-126	0.020	"	<	<	<	<
PCB-167	0.020	"	<	<	<	<
PCB-156	0.020	"	<	<	<	<
PCB-157	0.020	"	<	<	<	<
PCB-169	0.020	"	<	<	<	<
PCB-189	0.020	"	<	<	<	<
Chlorobiphenyl	0.020	"	<	<	<	<
Dichlorobiphenyl	0.020	"	<	0.020	<	<
Trichlorobiphenyl	0.020	"	<	0.080	0.048	<
Tetrachlorobiphenyl	0.020	"	<	0.14	0.15	0.037
Pentachlorobiphenyl	0.020	"	<	0.83	0.86	1.2
Hexachlorobiphenyl	0.020	"	<	1.6	1.6	3.7
Heptachlorobiphenyl	0.020	"	<	0.58	0.61	1.8
Octachlorobiphenyl	0.020	"	<	0.042	0.052	0.14
Nonachlorobiphenyl	0.020	"	<	<	<	<
Decachlorobiphenyl	0.020	"	<	<	<	<
Total PCBs	0.020	"	<	3.3	3.3	6.8
Surrogate Recoveries		%				
13C12-Trichlorobiphenyl			78	101	95	96
13C12-Tetrachlorobiphenyl			93	97	93	92
13C12-Pentachlorobiphenyl			93	95	92	91
13C12-Hexachlorobiphenyl			95	95	89	89
13C12-Heptachlorobiphenyl			100	98	96	91
13C12-Octachlorobiphenyl			96	92	88	88

CHAIN OF CUSTODY

PHILIP SERVICES
PHILIP ANALYTICAL SERVICES INC.
5555 North Service Road
Burlington, Ontario L7L 5H7
Toll Free: 1-800-668-0639
Tel: (905) 332-8788
Fax: (905) 332-9169

Page 1 of 1

CLIENT INFORMATION

Company Name: Tighe & Bond
Project Manager: Suzanne Pisano
Address: 110 West Boylston St.
Worcester, MA 01606
Phone #: 508-856-0999 Fax #: 508-852-8741
Sampled by:

MB - 30682

ANALYSIS REQUESTED

Philip Use Only	Field Sample ID	# Bottles	Matrix	Date	Time	PCBs via 680 w/ total congeners & Homologs								Level of contamination (low, high, unknown)
	MW-1S	3	GW	6/13/00	1423	✓		30684		1L Ag x 3				
	MW-2D	3	GW	6/13/00	1100	✓		30684		1L Ag x 2	- one rec'd broken			
	MW-3S	3	GW	6/13/00	0956	✓		30685		1L Ag x 2	"			

Richard P. Disch

TAT (Turnaround Time)

RUSH TAT MUST HAVE PRIOR APPROVAL

*some exceptions apply please contact Lab

- STD 10 Business Days ☒
- RUSH 5 Business Days ☐
- RUSH 2 Business Days ☐
- RUSH 1 Business Days ☐
- Other Business Days ____

PROJECT INFORMATION

Project #:
Site: PPA Berlin, NH T-1 Site
PO#:
Philip Quote #:
Philip Project #:
Philip Contact: Rod Thompson

SPECIAL DETECTION LIMITS

MISA ☐

SPECIAL REQUIREMENTS / REGULATIONS

REMARKS

Rec'd By:
Date/Time

Client Signature: Richard P. Disch
Affiliation: Tighe & Bond
Date/Time: 1200 6/14/00

Received By: [illegible]
Affiliation: PASI
Date/Time: 00/06/15 1:00

WHITE - LAB / YELLOW - CLIENT

SEE OVER FOR COMPLETION & SAMPLING INSTRUCTIONS

JUN 05 2000 13:09 FR PHILIP ANALYTICAL 905 332 9169 TO 15088528741 P.02/05

PHILIP SERVICES

Certificate of Analysis

CLIENT INFORMATION		LABORATORY INFORMATION	
Attention:	Suzanne Pisano	**Contact:**	Ada Blythe, B.Sc., C.Chem.
Client Name:	Tighe & Bond	**Project:**	AN000643
Project:	W-3138	**Date Received:**	00/06/07
Project Desc:	PPA T-1	**Date Reported:**	00/08/14
Address:	110 West Boylston Street Worchester, MA 1606	**Submission No.:**	0F0332
		Sample No.:	028385-028388
Fax Number:	508 853-8741		
Phone Number:	508 856-0999		

NOTES: ***"-" = not analysed '<' = less than Method Detection Limit (MDL) 'NA' = no data available***
LOQ can by determined for all analytes by multiplying the appropriate MDL X 3.33
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)

Methods used by PASC are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Nineteenth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PASC for a period of three weeks from receipt of data or as per contract.

COMMENTS:

NA : No recovery, likely due to sample non-homogeneity

Certified by: _____

Philip Analytical Services Inc.
5555 Magh Service Road, Burlington, Ontario, Canada L7L 5H7 Tel: (905) 332-8388 Fax: (905) 332-9169

PASC - Certificate of Analysis

			Method	MW-1D	MW-2D	MW-4S
	Client ID:		Blank	S-4	S-1	S-2
	Lab No.:		028385 00	028386 00	028387 00	028388 00
	Date Sampled:		00/06/01	00/06/01	00/06/01	00/06/01
Component	**MDL**	**Units**				
PCB-81	0.010	mg/kg	<	<	<	<
PCB-77	0.010	"	<	<	<	<
PCB-123	0.010	"	<	0.023	0.57	0.065
PCB-118	0.010	"	<	0.045	1.3	0.13
PCB-114	0.010	"	<	<	<0.013	<
PCB-105	0.010	"	<	0.011	0.46	<
PCB-126	0.010	"	<	<	<	<
PCB-167	0.010	"	<	0.013	0.93	0.048
PCB-156	0.010	"	<	0.033	1.6	0.082
PCB-157	0.010	"	<	<	0.25	0.014
PCB-169	0.010	"	<	<	<	<
PCB-189	0.010	"	<	<	0.39	0.022

PASC - Certificate of Analysis

			Method	Blank	%	MW-1D	MW-2D	MW-4S	MW-4S	MW-4S
	Client ID:		Blank	Spike	Recovery	S-4	S-1	S-2	S-2	S-2
	Lab No.:		028385 00	028385 00	028385 00	028386 00	028387 00	028388 00	028388 00	028388 00
	Date Sampled:		00/06/01	00/06/01	00/06/01	00/06/01	00/06/01	00/06/01	00/06/01	00/06/01
Component	**MDL**	**Units**							M.Spike	% Rec.
PCBs via EPA Method 680 Modified										
Chlorobiphenyl	0.010	mg/kg	<	0.12	59	<	<	<	0.034	85
Dichlorobiphenyl	0.010	"	<	0.15	76	<	<	<	0.014	71
Trichlorobiphenyl	0.010	"	<	0.17	86	<	0.11	0.010	0.031	75
Tetrachlorobiphenyl	0.010	"	<	0.18	91	0.042	1.3	0.10	0.12	75
Pentachlorobiphenyl	0.010	"	<	0.20	100	0.72	24	2.1	1.4	NA
Hexachlorobiphenyl	0.010	"	<	0.20	100	2.8	100	7.1	5.7	NA
Heptachlorobiphenyl	0.010	"	<	0.20	100	2.0	79	4.9	3.8	NA
Octachlorobiphenyl	0.010	"	<	0.21	99	0.25	11	0.64	0.50	NA
Nonachlorobiphenyl	0.010	"	<	0.20	98	0.016	0.73	0.042	0.056	71
Decachlorobiphenyl	0.010	"	<	0.19	95	<	0.015	0.011	0.025	73
Total PCBs	0.010	"	0.012	1.8	91	5.8	220	15	12	NA
Surrogate Recoveries		%								
13C12-Trichlorobiphenyl			79	85	85	82	100	102	91	91
13C12-Tetrachlorobiphenyl			88	93	93	92	123	104	102	102
13C12-Pentachlorobiphenyl			82	88	88	85	99	95	89	89
13C12-Hexachlorobiphenyl			87	92	92	82	85	95	92	92
13C12-Heptachlorobiphenyl			94	95	95	89	111	111	103	103
13C12-Octachlorobiphenyl			82	84	84	79	131	117	97	97

PASC - Certificate of Analysis

	Client ID:		MW-4S	MW-4S
	Lab No.:		S-2	S-2
	Date Sampled:		028388 00	028388 00
			00/06/01	00/06/01
Component	**MDL**	**Units**	MS Dup	% Rec.
PCBs via EPA Method 680 Modified				
Chlorobiphenyl	0.010	mg/kg	0.036	89
Dichlorobiphenyl	0.010	"	0.015	73
Trichlorobiphenyl	0.010	"	0.036	88
Tetrachlorobiphenyl	0.010	"	0.12	110
Pentachlorobiphenyl	0.010	"	1.8	NA
Hexachlorobiphenyl	0.010	"	5.9	NA
Heptachlorobiphenyl	0.010	"	4.0	NA
Octachlorobiphenyl	0.010	"	0.54	NA
Nonachlorobiphenyl	0.010	"	0.059	89
Decachlorobiphenyl	0.010	"	0.026	78
Total PCBs	0.010	"	13	NA
Surrogate Recoveries		%		
13C12-Trichlorobiphenyl			100	100
13C12-Tetrachlorobiphenyl			107	107
13C12-Pentachlorobiphenyl			93	93
13C12-Hexachlorobiphenyl			95	95
13C12-Heptachlorobiphenyl			109	109
13C12-Octachlorobiphenyl			105	105

Batch Code:	**0613BKX1**
PCB-81 etc.	028385 00
	028386 00
	028387 00
	028388 00
Date Analysed:	00/07/24
Preparation Date:	00/06/13

Batch Code:	**0613BKX1**
Chlorobiphenyl etc.	028385 00
	028386 00
	028387 00
	028388 00
Date Analysed:	00/07/24
Preparation Date:	00/06/13

CHAIN OF CUSTODY

PHILIP SERVICES
PHILIP ANALYTICAL SERVICES INC.
5555 North Service Road
Burlington, Ontario L7L 5H7
Toll Free: 1-800-668-0639
Tel: (905) 332-8768
Fax: (905) 332-9169

Page 1 of 1

CLIENT INFORMATION

Company Name: Tighe & Bond
Project Manager: Suzanne Pisano
Address: 110 West Boylston Street
Worcester Mt 01606
Phone #: 508-756-0999 Fax #: 508-852-8741
Sampled by: Richard P. Geisler

MB-28385.

ANALYSIS REQUESTED

Philip Use Only	Field Sample ID	# Bottles	Matrix	Date	Time	PCBs total Homologues w/WHO Congeners 680									Level of contamination (low, high, unknown)
	MW-1D S-4	1	Soil	6/1/00	1600	✓					250 CG				86.
	MW-2D S-1	1	Soil	6/1/00	0840	✓					↓				87.
	MW-4S S-2	1	Soil	6/2/00	1355	✓					↓				88.

TAT (Turnaround Time)

RUSH TAT MUST HAVE PRIOR APPROVAL

*some exceptions apply please contact Lab

- STD 10 Business Days ☐
- RUSH 5 Business Days ☐
- RUSH 2 Business Days ☐
- RUSH 1 Business Days ☐
- Other Business Days ____

PROJECT INFORMATION

Project #: W-3138
Site: PPA T-1
PO#: W-3138-1-2
Philip Quote #: 005009rt
Philip Project #:
Philip Contact: Rod Thomson

SPECIAL DETECTION LIMITS

MISA ☐

SPECIAL REQUIREMENTS / REGULATIONS

REMARKS

Client Signature: Richard P. Geisler
Affiliation: Tighe & Bond
Date/Time: 6/5/00 1700

Received By: [signature] PASI
Affiliation:
Date/Time: 000607 12:30

Rec'd By:
Date/Time

WHITE - LAB / YELLOW - CLIENT

SEE OVER FOR COMPLETION & SAMPLING INSTRUCTIONS

APPENDIX H

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-7S	Date 06/12/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG			bottom of screen (ft[1])_____
Sampling Organization	Tighe & Bond		Pump Intake at (ft[1]) _____	
			Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
0845	12.25	200	12.92	1143.0	7.30	22.6	2.89	E	
0853									Pump well dry. Stop pump to allow well to recharge. Will then collect samples.
1010	Collect Samples								

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-6D Date 06/12/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG		bottom of screen (ft[1])_____
Sampling Organization	Tighe & Bond	Pump Intake at (ft[1]) _____	
		Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
1120	4.87	220	13.78	4294.0	11.25	-114.2	-0.36	65	
1123	4.87	220	13.78	4225.0	10.99	-120.8	-0.41	65	
1128		220	13.74	4182.0	10.48	-122.0	-0.32	60	
1133	4.91	220	13.77	4174.0	10.19	-124.5	-0.23	55	
1137	4.94	220	13.78	4178.0	9.95	-126.9	-0.20	55	
1142	4.95	220	13.80	4180.0	9.74	-129.7	-0.25	55	
1145		220	13.79	4188.0	9.62	-132.1	-0.23	50	
1149		220	13.82	4196.0	9.51	-139.8	-0.22	45	
1153	4.97	230	13.80	4197.0	9.45	-149.8	-0.21	45	
1157	4.97	230	13.82	4211.0	9.32	-193.1	-0.24	45	
1202	5.00	230	13.81	4223.0	9.18	-241.2	-0.27	45	
1207		240	13.85	4239.0	9.06	-267.9	-0.20	40	
1212	5.0	240	13.86	4245.0	8.97	-282.1	-0.21	40	
1217	5.0	240	13.90	4260.0	8.86	-288.2	-0.19	40	
1220		240	13.90	4254.0	8.87	-291.3	-0.20	40	
1222	Sample Collected								

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-6S Date 06/12/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG		bottom of screen (ft[1])_____
Sampling Organization	Tighe & Bond	Pump Intake at (ft[1]) _____	
		Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
1337	4.57	250	15.31	4071.0	6.75	-70.6	2.30	55	
1342	4.57	250	15.3	4033.0	6.60	-61.4	1.60	22	
1346	4.59	250	15.3	4123.0	6.55	-61.6	1.33	17	
1350	4.60	250	15.31	4174.0	6.54	-64.1	1.08	16	
1355	4.60	250	15.34	4202.0	6.53	-66.9	1.12	16	
1358	4.61	265	15.38	4229.0	6.52	-69.5	0.81	16	
1403		265	15.38	4253.0	6.52	-72.8	0.78	17	
1406		265	15.35	4277.0	6.52	-74.6	0.75	18	
1409	4.64	265	15.37	4291.0	6.52	-76.9	0.77	18	
1411	Sample Collected								

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-5D	Date 06/14/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG			bottom of screen (ft[1])_____
Sampling Organization	Tighe & Bond		Pump Intake at (ft[1]) _____	
			Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
1033	12.51	200	13.85	953.0	6.97	-80.2	2.17	4.5	
1036	12.56	200	13.70	950.0	6.95	-80.3	1.88	4.1	
1039	12.66	200	13.62	945.0	6.94	-80.7	1.69	4.4	
1042	12.8	200	13.61	942.0	6.94	-80.9	1.58	4.7	
1045	12.82	200	13.50	939.0	6.94	-80.7	1.27	5.0	
1048	12.89	200	13.47	938.0	6.93	-80.4	1.47	5.6	
1051	12.96	200	13.55	939.0	6.93	-80.1	1.13	6.2	
1054	13.03	200	13.51	942.0	6.93	-80.0	1.16	7.0	
1057	13.09	200	13.56	946.0	6.93	-80.3	1.19	7.3	
1100	13.19	200	13.41	955.0	6.93	-80.4	1.20	7.2	

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-3D	Date 06/16/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG			bottom of screen (ft[1]) _____
Sampling Organization	Tighe & Bond		Pump Intake at (ft[1]) _____	
			Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
1143	9.42	250	11.73	1268.0	6.81	20.2	1.32	36	
1146	9.43	250	11.72	1244.0	6.79	4.5	1.13	37	
1150	9.43	250	11.73	1220.0	6.78	-6.1	1.04	38	
1153	9.50	250	11.75	1194.0	6.79	-6.5	0.95	37	
1156	9.51	250	11.77	1160.0	6.77	-7.6	0.84	37	
1159	9.51	250	11.79	1152.0	6.76	-11.9	0.78	38	
1203	9.51	250	11.81	1150.0	6.76	-12.0	0.79	39	
1207	9.51	250	11.80	1142.0	6.75	-12.1	0.77	39	

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Page _____ of _____

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-3D	Date 06/12/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG			bottom of screen (ft[1])_____
Sampling Organization	Tighe & Bond		Pump Intake at (ft[1]) _____	
			Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
1449	9.51	240	11.92	1171.0	6.87	15.8	1.47	33	
1452	9.51	240	11.87	1151.0	6.83	3.1	1.14	31	
1455	9.53	240	11.82	1131.0	6.81	-3.5	1.09	31	
1459	9.53	240	11.79	1089.0	6.78	-8.4	0.93	34	
1503	9.55	240	11.77	1053.0	6.75	-10.3	0.91	37	
1507	9.56	240	11.75	1031.0	6.73	-11.0	0.64	39	
1511	9.57	240	11.73	1018.0	6.70	-11.2	0.68	40	
1514	9.57	240	11.72	1011.0	6.69	-11.4	0.70	40	
1520	Collect GW Sample								

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-3S	Date 06/12/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG		bottom of screen (ft[1]) _____
Sampling Organization	Tighe & Bond	Pump Intake at (ft[1]) _____	
		Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
0906	9.98	225							
0916	10.42	225							
0920	10.48	225	12.04	886.0	6.61	111.5	4.48	40	
0924	10.52	225	12.12	889.0	6.60	99.6	3.65	39	
0928	10.59	250	12.43	917.0	6.62	96.2	3.04	36	
0933	10.65	250	12.63	941.0	6.63	99.0	2.82	37	
0938	10.86	200	12.52	943.0	6.63	107.3	3.16	39	
0943	11.03	200	12.47	942.0	6.62	112.7	2.97	40	
0946	11.18	200	12.20	943.0	6.61	117.3	3.60	45	
0950									Well runs dry.
0956	Collect Samples								

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-2D	Date 06/12/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG		bottom of screen (ft[1])_____
Sampling Organization	Tighe & Bond	Pump Intake at (ft[1]) _____	
		Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
1030	22.57								Run dry during initial filling of cell and tubing.
1100	Begin Sampling								

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site	Well Depth (ft[1]) _____	
Well Number	MW-1D	Date 06/14/2000	Length of screen (ft[1]) _____	top of screen (ft[1]) _____
Field Personnel	RPG/JPG			bottom of screen (ft[1])_____
Sampling Organization	Tighe & Bond		Pump Intake at (ft[1]) _____	
			Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
0839	12.76	190	10.95	1646.0	7.42	84.2	1.64	6.8	
0842	12.86	190	10.83	1646.0	7.39	37.1	1.38	6.7	
0845	13.2	190	10.85	1645.0	7.38	14.1	1.77	6.7	
0848	13.4	190	11.12	1644.0	7.39	-7.6	0.54	7.0	
0851	13.56	200	11.23	1642.0	7.38	-17.5	1.09	7.2	
0858	13.80	200	11.11	1639.0	7.37	-26.3	0.48	6.8	
0900	14.10	190	11.10	1633.0	7.35	-31.6	0.82	6.7	
0903	14.28	190	11.30	1633.0	7.35	-33.0	0.76	6.9	
0906	14.62	190	11.40	1636.0	7.35	-34.0	0.69	6.6	
0909	14.91	190	11.42	1640.0	7.35	-37.1	0.66	6.8	
0912	15.45	190	11.21	1645.0	7.35	-41.1	0.51	6.9	
0915	15.78	190	11.06	1646.0	7.35	-42.4	0.64	7.0	
0918	16.21	190	11.06	1647.0	7.35	-43.6	0.65	7.2	

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

WELL PURGING - FIELD WATER QUALITY MEASUREMENTS FORM

Location (Site/Facility Name)	PPA Burgess Transformer T-1 Site			Well Depth (ft[1])	
Well Number	MW-1S	Date	06/12/2000	Length of screen (ft[1])	top of screen (ft[1])
Field Personnel	RPG/JPG				bottom of screen (ft[1])
Sampling Organization	Tighe & Bond			Pump Intake at (ft[1])	
				Purging Device; (pump type)	Geotech Peristaltic pump

Time (24 hr)	Water Depth (ft[1])	Purge Rate (ml/min)	Temp. (°C)	Spec. Cond.[2] (µS/cm)	pH	ORP/Eh[3] (mv)	DO (mg/L)	Turbidity (NTU)	Comments
1200	12.25	200							
1210	12.61	150	13.05	1670.0	7.28	162.3	5.24	11	
1214	12.76	150	12.43	1685.0	7.24	165.1	4.50	10	
1217	12.85	200	12.29	1695.0	7.22	166.4	3.86	10	
1220	12.97	150	12.21	1708.0	7.22	166.3	3.32	11	
1224	13.10	150	12.39	1727.0	7.22	161.0	3.17	17	
1228	13.28	150	12.31	1753.0	7.24	133.1	2.78	18	
1231	13.35	150	12.21	1769.0	7.25	103.2	2.63	22	
1232	Well goes dry.								
1423	Collect Sample.		19.94						

(1.) Indicates feet below the top of PVC.
(2.) µSiemens per cm (same as µmhos/cm) at 25°C).
(3.) Oxidation reduction potential (stand in for Eh).

APPENDIX I

In-Situ Inc.	Troll	
Report generated:	06/16/2000	12:08:48
Report from file:	C:\windows\TEMP\~bin291F.TMP	
DataMgr Version	2.31.0.0	
Serial number:	11256	
Firmware Version	7.1	
Unit name:	SP4000	
Test name:	testrpg2	
Test defined on:	06/16/2000	11:59:10
Test started on:	06/16/2000	11:59:40
Test stopped on:	06/16/2000	12:06:28
Test extracted on:	06/16/2000	12:08:39

Data gathered using Logarithmic testing

Maximum time between data points:	0.0833	Minutes.
Number of data samples:	131	

TOTAL DATA SAMPLES	131

Channel number [1]

Measurement type:	Temperature
Channel name:	OnBoard Temp

Channel number [2]

Measurement type:	Pressure/Level	
Channel name:	OnBoard Pressure	
Sensor Range:	30 PSI.	
Specific gravity:	1	
Mode:	TOC	
User-defined reference:	0	Feet H2O
Referenced on:	test start	
Pressure head at reference:	4.713	Feet H2O

Date Time	ET (min)	Celsius	Chan[1] Feet H2O
06/16/2000 11:59	0	14.47	0
06/16/2000 11:59	0.005	14.47	0
06/16/2000 11:59	0.01	14.48	0
06/16/2000 11:59	0.015	14.48	0
06/16/2000 11:59	0.02	14.49	0.005
06/16/2000 11:59	0.025	14.49	0.005
06/16/2000 11:59	0.03	14.49	0.194
06/16/2000 11:59	0.035	14.5	0.168
06/16/2000 11:59	0.04	14.5	0.231
06/16/2000 11:59	0.045	14.51	0.316
06/16/2000 11:59	0.05	14.51	0.221
06/16/2000 11:59	0.055	14.51	0.168
06/16/2000 11:59	0.06	14.52	0.136
06/16/2000 11:59	0.065	14.52	0.118
06/16/2000 11:59	0.07	14.52	0.108
06/16/2000 11:59	0.075	14.52	0.095
06/16/2000 11:59	0.08	14.53	0.085
06/16/2000 11:59	0.085	14.53	0.081
06/16/2000 11:59	0.09	14.54	0.074
06/16/2000 11:59	0.095	14.54	0.069
06/16/2000 11:59	0.1	14.54	0.065
06/16/2000 11:59	0.1058	14.54	0.06
06/16/2000 11:59	0.112	14.54	0.06
06/16/2000 11:59	0.1185	14.54	0.051
06/16/2000 11:59	0.1255	14.55	0.051
06/16/2000 11:59	0.1328	14.55	0.046
06/16/2000 11:59	0.1407	14.55	0.042
06/16/2000 11:59	0.149	14.56	0.042
06/16/2000 11:59	0.1578	14.56	0.037
06/16/2000 11:59	0.1672	14.56	0.032
06/16/2000 11:59	0.177	14.57	0.032
06/16/2000 11:59	0.1875	14.58	0.028
06/16/2000 11:59	0.1985	14.58	0.028
06/16/2000 11:59	0.2102	14.58	0.023
06/16/2000 11:59	0.2227	14.59	0.023
06/16/2000 11:59	0.2358	14.6	0.023
06/16/2000 11:59	0.2498	14.61	0.023
06/16/2000 11:59	0.2647	14.61	0.023
06/16/2000 11:59	0.2803	14.61	0.018
06/16/2000 11:59	0.297	14.61	0.018
06/16/2000 11:59	0.3147	14.61	0.018
06/16/2000 12:00	0.3333	14.61	0.018
06/16/2000 12:00	0.3532	14.61	0.018
06/16/2000 12:00	0.3742	14.6	0.018
06/16/2000 12:00	0.3963	14.62	0.014
06/16/2000 12:00	0.4198	14.62	0.014

Date Time	ET (min)	Celsius	Chan[1] Feet H2O
06/16/2000 12:00	0.4447	14.62	0.014
06/16/2000 12:00	0.4697	14.61	0.014
06/16/2000 12:00	0.4963	14.61	0.014
06/16/2000 12:00	0.5247	14.61	0.014
06/16/2000 12:00	0.5547	14.61	0.014
06/16/2000 12:00	0.5863	14.61	0.014
06/16/2000 12:00	0.6213	14.61	0.014
06/16/2000 12:00	0.658	14.62	0.014
06/16/2000 12:00	0.6963	14.64	0.014
06/16/2000 12:00	0.738	14.66	0.014
06/16/2000 12:00	0.7813	14.67	0.018
06/16/2000 12:00	0.828	14.69	0.018
06/16/2000 12:00	0.8763	14.71	0.028
06/16/2000 12:00	0.928	14.72	0.037
06/16/2000 12:00	0.983	14.73	0.046
06/16/2000 12:00	1.0413	14.75	0.055
06/16/2000 12:00	1.103	14.76	0.065
06/16/2000 12:00	1.168	14.78	0.074
06/16/2000 12:00	1.238	14.78	0.078
06/16/2000 12:00	1.3113	14.75	0.078
06/16/2000 12:01	1.3897	14.78	0.078
06/16/2000 12:01	1.473	14.81	0.078
06/16/2000 12:01	1.5563	14.81	0.078
06/16/2000 12:01	1.6397	14.79	0.074
06/16/2000 12:01	1.723	14.78	0.074
06/16/2000 12:01	1.8063	14.77	0.074
06/16/2000 12:01	1.8897	14.77	0.069
06/16/2000 12:01	1.973	14.75	0.069
06/16/2000 12:01	2.0563	14.75	0.069
06/16/2000 12:01	2.1397	14.75	0.065
06/16/2000 12:01	2.223	14.74	0.069
06/16/2000 12:01	2.3063	14.74	0.065
06/16/2000 12:02	2.3897	14.73	0.065
06/16/2000 12:02	2.473	14.73	0.065
06/16/2000 12:02	2.5563	14.73	0.065
06/16/2000 12:02	2.6397	14.73	0.069
06/16/2000 12:02	2.723	14.73	0.069
06/16/2000 12:02	2.8063	14.73	0.065
06/16/2000 12:02	2.8897	14.73	0.065
06/16/2000 12:02	2.973	14.73	0.065
06/16/2000 12:02	3.0563	14.77	0.065
06/16/2000 12:02	3.1397	14.79	0.074
06/16/2000 12:02	3.223	14.79	0.078
06/16/2000 12:02	3.3063	14.78	0.088
06/16/2000 12:03	3.3897	14.78	0.088
06/16/2000 12:03	3.473	14.78	0.088

Date	Time	ET (min)	Celsius	Chan[1] Feet H2O
	06/16/2000 12:03	3.5563	14.78	0.088
	06/16/2000 12:03	3.6397	14.78	0.088
	06/16/2000 12:03	3.723	14.79	0.088
	06/16/2000 12:03	3.8063	14.79	0.083
	06/16/2000 12:03	3.8897	14.79	0.083
	06/16/2000 12:03	3.973	14.79	0.083
	06/16/2000 12:03	4.0563	14.79	0.083
	06/16/2000 12:03	4.1397	14.79	0.083
	06/16/2000 12:03	4.223	14.79	0.083
	06/16/2000 12:03	4.3063	14.79	0.083
	06/16/2000 12:04	4.3897	14.79	0.083
	06/16/2000 12:04	4.473	14.79	0.083
	06/16/2000 12:04	4.5563	14.79	0.083
	06/16/2000 12:04	4.6397	14.8	0.083
	06/16/2000 12:04	4.723	14.8	0.078
	06/16/2000 12:04	4.8063	14.8	0.083
	06/16/2000 12:04	4.8897	14.8	0.078
	06/16/2000 12:04	4.973	14.8	0.078
	06/16/2000 12:04	5.0563	14.8	0.078
	06/16/2000 12:04	5.1397	14.8	0.078
	06/16/2000 12:04	5.223	14.8	0.078
	06/16/2000 12:04	5.3063	14.8	0.078
	06/16/2000 12:05	5.3897	14.8	0.078
	06/16/2000 12:05	5.473	14.8	0.078
	06/16/2000 12:05	5.5563	14.8	0.078
	06/16/2000 12:05	5.6397	14.8	0.074
	06/16/2000 12:05	5.723	14.8	0.074
	06/16/2000 12:05	5.8063	14.8	0.074
	06/16/2000 12:05	5.8897	14.79	0.074
	06/16/2000 12:05	5.973	14.79	0.074
	06/16/2000 12:05	6.0563	14.79	0.074
	06/16/2000 12:05	6.1397	14.79	0.074
	06/16/2000 12:05	6.223	14.79	0.074
	06/16/2000 12:05	6.3063	14.79	0.074
	06/16/2000 12:06	6.3897	14.79	0.074
	06/16/2000 12:06	6.473	14.79	0.069
	06/16/2000 12:06	6.5563	14.78	0.074
	06/16/2000 12:06	6.6397	14.78	0.069
	06/16/2000 12:06	6.723	14.78	0.069

In-Situ Inc.	Troll	
Report generated:	06/16/2000	12:47:30
Report from file:	C:\windows\TEMP\~bin132D.TMP	
DataMgr Version	2.31.0.0	
Serial number:	11256	
Firmware Version	7.1	
Unit name:	SP4000	
Test name:	testrpg3	
Test defined on:	06/16/2000	12:38:42
Test started on:	06/16/2000	12:39:21
Test stopped on:	N/A	N/A
Test extracted on:	06/16/2000	12:46:28

Data gathered using Logarithmic testing

Maximum time between data points:	0.3333	Minutes.
Number of data samples:	95	

TOTAL DATA SAMPLES	95

Channel number [1]

Measurement type:	Temperature
Channel name:	OnBoard Temp

Channel number [2]

Measurement type:	Pressure/Level
Channel name:	OnBoard Pressure
Sensor Range:	30 PSI.
Specific gravity:	1
Mode:	TOC
User-defined reference:	0 Feet H2O
Referenced on:	test start
Pressure head at reference:	4.65 Feet H2O

Date Time	ET (min)	Celsius	Chan[1] Feet H2O
06/16/2000 12:39	0	14.31	0
06/16/2000 12:39	0.005	14.32	0.005
06/16/2000 12:39	0.01	14.32	0.005
06/16/2000 12:39	0.015	14.32	0.005
06/16/2000 12:39	0.02	14.32	0.005
06/16/2000 12:39	0.025	14.33	0.005
06/16/2000 12:39	0.03	14.34	0.005
06/16/2000 12:39	0.035	14.34	0.005
06/16/2000 12:39	0.04	14.34	0.005
06/16/2000 12:39	0.045	14.34	0.009
06/16/2000 12:39	0.05	14.35	0.005
06/16/2000 12:39	0.055	14.35	0.009
06/16/2000 12:39	0.06	14.35	0.009
06/16/2000 12:39	0.065	14.36	0.014
06/16/2000 12:39	0.07	14.36	0.221
06/16/2000 12:39	0.075	14.36	0.537
06/16/2000 12:39	0.08	14.37	0.321
06/16/2000 12:39	0.085	14.37	0.245
06/16/2000 12:39	0.09	14.37	0.194
06/16/2000 12:39	0.095	14.37	0.159
06/16/2000 12:39	0.1	14.38	0.127
06/16/2000 12:39	0.1058	14.38	0.108
06/16/2000 12:39	0.112	14.38	0.085
06/16/2000 12:39	0.1185	14.38	0.076
06/16/2000 12:39	0.1255	14.39	0.069
06/16/2000 12:39	0.1328	14.39	0.06
06/16/2000 12:39	0.1407	14.39	0.051
06/16/2000 12:39	0.149	14.4	0.042
06/16/2000 12:39	0.1578	14.4	0.037
06/16/2000 12:39	0.1672	14.41	0.032
06/16/2000 12:39	0.177	14.41	0.032
06/16/2000 12:39	0.1875	14.41	0.028
06/16/2000 12:39	0.1985	14.42	0.023
06/16/2000 12:39	0.2102	14.43	0.023
06/16/2000 12:39	0.2227	14.44	0.023
06/16/2000 12:39	0.2358	14.44	0.018
06/16/2000 12:39	0.2498	14.44	0.023
06/16/2000 12:39	0.2647	14.44	0.023
06/16/2000 12:39	0.2803	14.45	0.018
06/16/2000 12:39	0.297	14.46	0.018
06/16/2000 12:39	0.3147	14.46	0.018
06/16/2000 12:39	0.3333	14.45	0.018
06/16/2000 12:39	0.3532	14.47	0.014
06/16/2000 12:39	0.3742	14.47	0.014
06/16/2000 12:39	0.3963	14.47	0.014
06/16/2000 12:39	0.4198	14.47	0.014

Date	Time	ET (min)	Celsius	Chan[1] Feet H2O
	06/16/2000 12:39	0.4447	14.47	0.014
	06/16/2000 12:39	0.4697	14.46	0.014
	06/16/2000 12:39	0.4963	14.46	0.014
	06/16/2000 12:39	0.5247	14.46	0.014
	06/16/2000 12:39	0.5547	14.46	0.014
	06/16/2000 12:39	0.5863	14.47	0.014
	06/16/2000 12:39	0.6213	14.47	0.014
	06/16/2000 12:40	0.658	14.46	0.014
	06/16/2000 12:40	0.6963	14.46	0.014
	06/16/2000 12:40	0.738	14.46	0.014
	06/16/2000 12:40	0.7813	14.46	0.014
	06/16/2000 12:40	0.828	14.46	0.014
	06/16/2000 12:40	0.8763	14.46	0.014
	06/16/2000 12:40	0.928	14.46	0.014
	06/16/2000 12:40	0.983	14.46	0.014
	06/16/2000 12:40	1.0413	14.46	0.014
	06/16/2000 12:40	1.103	14.46	0.014
	06/16/2000 12:40	1.168	14.45	0.014
	06/16/2000 12:40	1.238	14.45	0.014
	06/16/2000 12:40	1.3113	14.44	0.018
	06/16/2000 12:40	1.3897	14.44	0.014
	06/16/2000 12:40	1.473	14.44	0.018
	06/16/2000 12:40	1.5613	14.44	0.014
	06/16/2000 12:41	1.6547	14.44	0.014
	06/16/2000 12:41	1.753	14.44	0.018
	06/16/2000 12:41	1.858	14.43	0.018
	06/16/2000 12:41	1.968	14.43	0.014
	06/16/2000 12:41	2.0847	14.43	0.014
	06/16/2000 12:41	2.2097	14.42	0.018
	06/16/2000 12:41	2.3413	14.42	0.018
	06/16/2000 12:41	2.4813	14.42	0.014
	06/16/2000 12:41	2.6297	14.41	0.018
	06/16/2000 12:42	2.7863	14.41	0.014
	06/16/2000 12:42	2.953	14.41	0.014
	06/16/2000 12:42	3.1297	14.4	0.014
	06/16/2000 12:42	3.3163	14.4	0.014
	06/16/2000 12:42	3.5147	14.4	0.014
	06/16/2000 12:43	3.7247	14.4	0.014
	06/16/2000 12:43	3.9463	14.39	0.014
	06/16/2000 12:43	4.1813	14.38	0.014
	06/16/2000 12:43	4.4297	14.38	0.014
	06/16/2000 12:44	4.693	14.38	0.014
	06/16/2000 12:44	4.973	14.37	0.014
	06/16/2000 12:44	5.2697	14.37	0.014
	06/16/2000 12:44	5.583	14.36	0.014
	06/16/2000 12:45	5.9147	14.4	0.018

Date	Time	ET (min)	Celsius	Chan[1] Feet H2O
06/16/2000	12:45	6.248	14.38	0.018
06/16/2000	12:45	6.5813	14.37	0.018
06/16/2000	12:46	6.9147	14.36	0.014

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