REPORT

932028

SITE CHARACTERIZATION PROGRAM FINAL REPORT

TAM Ceramics
NYSDEC Site Code: 932028
Niagara Falls, New York

March 1995

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

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March 31, 1995

Mr. Michael J. Hinton, P.E.
Division of Hazardous Waste Remediation
Region 9
New York State Department
Of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203-2999

Re: TAM Ceramics Site
Niagara Falls, New York
Site Characterization Program
Final Report

File: 163.04 #2

Dear Mr. Hinton:

Please find enclosed three (3) copies of the "Site Characterization Program Final Report", prepared by Blasland, Bouck & Lee, Inc. for the TAM Ceramics Site, as required and described in Section III Paragraph D of the Administrative Order on Consent, Index Number B9-0430-93-04 (Consent Order).

This document has been prepared to detail the activities undertaken as part of the Site Characterization Program, in accordance with the Consent Order and the approved Work Plan. The approval of this report completes all activities required under the specified Consent Order.

If you have any questions regarding this report, please do not hesitate to contact me at (716) 292-6740.

Very truly yours,

BLASLAND, BOUCK & LEE, INC.

William B. Popham
Vice President

WBP/lap
6395966.b

cc: Mr. Thomas Reamon, NYSDEC
James Hazel, Esq., NYSDEC
Mr. Al Wakeman, NYSDOH
Mr. Russ Steiger, TAM Ceramics, Inc.
Jerrold Brown, Esq., Hodgson, Russ, Andrews, Woods & Goodyear
Mr. Jay Young, NL Industries

Report

Site Characterization Program Final Report

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Rochester, New York 14623
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Executive Summary

This Site Characterization Program was performed at the TAM Ceramics Facility (Site), currently classified as a Class 2a site, in accordance with an Administrative Order on Consent, Index Number B9-0430-93-04 (Order) issued by the New York State Department of Environmental Conservation (NYSDEC). The purpose of the investigation was to assess and evaluate the potential subsurface waste disposal areas in the eastern undeveloped portion of the Site. The objective of the investigation was to collect sufficient information to reclassify the TAM Ceramics Site.

The following conclusions are based upon the results of the investigation:

(a) The presence of volatile organic compounds at the site is not a concern at the TAM Ceramics Site.

(b) The presence of semivolatile organic compounds is not a concern at the TAM Ceramics Site.

(c) The presence of polychlorinated biphenyls is not a concern at the TAM Ceramics Site.

(d) The presence of pesticides/herbicides is not a concern at the TAM Ceramics Site.

(e) Metals and inorganic elements were detected throughout the site. However, impacts related to disposal practices are limited to a small area on the eastern side of the site and an area in the south-western corner of the site. Only one sample (TP9-2), located in the south-west disposal area, exceeded a United States Environmental Protection Agency (USEPA) maximum contaminant concentration for Toxicity Characteristic Leaching Procedure (TCLP) analysis (exceeded the 100 milligrams per liter (mg/l) maximum concentration for barium). Analytical results for soil samples collected downgradient of the disposal area do not indicate any barium movement through the soil media.

(f) Ground-water samples collected downgradient of the site do not exceed New York State Part 703 ground-water standards for metals.

(g) The TAM Ceramics Site does not present a significant threat to human health and the environment.

(h) The TAM Ceramics Site should be reclassified as Class 3 site, in accordance with 6 NYCRR Part 375 Regulations. This reclassification would include continued long-term monitoring of the site.

Sworn Statement

"I certify that the information contained in and accompanying this submission to the New York State Department of Environmental Conservation is true, accurate and complete."

"As to the portion(s) of this submission that I cannot attest to as true, accurate and complete on the basis of personal knowledge, I hereby certify and/or declare that I have fully investigated the basis of this submission, and the submission itself in its entirety for the purpose of making this certification and/or declaration, and have concluded that it is true, accurate, and complete in every respect. I further certify and/or declare that I am fully responsible for its content to the fullest extent allowable by law."

Signature* Date 3/31/95

William B. Popham
Printed Name*

* - Responding on behalf of TAM Ceramics, Inc.

Table of Contents

TABLES

FIGURES

PLATES

ATTACHMENTS

1.0 Introduction

1.0 Introduction

1.1 General

TAM Ceramics, Inc. (TAM) retained Blasland, Bouck & Lee, Inc. (BB&L) to perform engineering services for a Site Characterization Program (Investigation) at the TAM Ceramics Manufacturing Facility (Site) located at 4511 Hyde Park Boulevard in the Town of Niagara, County of Niagara, State of New York. The investigation was performed in accordance with the Order issued by the NYSDEC. This final report has been prepared in accordance with the Site Characterization Work Plan (BB&L, July 1993) as the final activity specified in the Order.

The objective of the Investigation at the TAM Facility was to assess and evaluate the potential subsurface waste disposal areas in the eastern undeveloped portion of the Site. To meet this objective, the following activities were undertaken during the investigation:

- Site Survey: The site survey was performed to establish horizontal and vertical control at the site, and to aid in the location of investigative elements;
- Geophysical Survey: The geophysical survey was performed to aid in the identification of areas of possible waste disposal and to eliminate additional areas from further investigation;
- Preliminary Ground-Water Evaluation: The preliminary ground-water evaluation was performed to determine ground-water flow directions in the overburden, determine ground-water quality in existing ground-water monitoring wells, and evaluate the need for the installation of additional ground-water monitoring wells at the Site;
- Excavation of Test Pits: Test pit excavation was performed to determine the presence of buried materials, as identified from the geophysical survey. In addition, test pits were utilized to identify the vertical and horizontal extents of wastes encountered;
- Soil Boring Program: The soil boring program was performed to determine the migration, if any, of the constituents of concern from confirmed waste disposal areas;
- Sample Collection and Analysis: A program of sample collection and analysis was performed to characterize subsurface conditions, including wastes encountered and surrounding soils; and

- Secondary Ground-Water Evaluation: Based on the results of the preliminary ground-water evaluation, two additional monitoring wells were installed, developed, and sampled to provide more complete inform about ground-water quality across the Site.

1.2 Project History

The NYSDEC performed a Preliminary Site Assessment (PSA) at the Site in 1991. The PSA identified a disposal area on-site which contained a waste which failed the TCLP and Extraction Procedure Toxicity (EP Tox) tests for barium. The removal and off-site disposal of this waste has been addressed in the Removal of Barium Waste Work Plan (BB&L, April 1993). The NYSDEC requested that an additional investigation be performed at the Site in order to identify other waste disposal areas, if any, at the Site. TAM agreed to perform the investigation to obtain the additional data necessary to reclassify or delist the Site. The Site Characterization Program Work Plan (BB&L, July 1993) and the Supplemental Work Plan (BB&L, July 1994) presented the methodologies and procedures for conducting the investigation. Both Work Plans were approved by the NYSDEC prior to implementation.

1.3 Report Organization

Following this introductory section, this Final Report is organized as follows: Section 2.0 provides a summary of the site history; Section 3.0 presents a description of the physical characteristics of the Site; Section 4.0 presents a summary of the initial (non-intrusive) site characterization activities undertaken as part of the Investigation. Section 5.0 presents a summary of the supplemental (intrusive) activities; Section 6.0 summarizes the analytical results obtained from the sampling and analysis program; Section 7.0 provides a discussion of the results presented in Section 6.0; Finally, Section 8.0 presents a significant threat evaluation, based on the results of the Investigation. Tables, figures and appendices are included, at the end of the Report.

2.0 Site Description and History

2.0 Site Description and History

2.1 General

This section presents an overview of the TAM Ceramics Site, provides a history of the facility, and describes the Site Characterization Program.

2.2 Site Description

The TAM Ceramics Manufacturing Site occupies approximately 30 acres at 4511 Hyde Park Boulevard, in a commercial area of the Town of Niagara. The facility is located immediately south of the Hyde Park Landfill Superfund Site, and approximately 0.4 miles east of the Niagara River. Figure 2-1 presents the location of the facility.

The developed portion of the site occupies approximately 19 acres and consists of approximately 18 buildings on the west side of the Site dedicated to the manufacture of ceramic products. The remaining 11 acres of the site are undeveloped. This Investigation focused on the undeveloped portion of the Site. A Site Plan is presented in Figure 2-2.

2.3 Site History

The facility was first owned by Titanium Alloy Manufacturing Company (TAMCO). Production operations began at the facility in 1906. The first product was high carbon ferrocarbon titanium which was used by the steel industry as a deoxidizer in the production of rail steel. In 1915, a sulphate process was developed using ilmenite ore, for producing titanium dioxide (TiO_2). The Titanium Pigment Company was formed as a subsidiary of TAMCO, and began operation as a manufacturing plant for titanium dioxide.

Titanium and zirconium metals were first produced by TAMCO at the facility in 1918. Experimental work on zirconium products began in 1914, and by 1919 a zirconium opacifier was produced. Milled zircon (zirconium silicate) ore was also produced and distributed from 1921 to 1937.

In 1920, NL Industries bought half of the Titanium Pigment company from TAMCO and acquired the balance in 1933. NL Industries acquired TAMCO in 1948. NL Industries continued the same types of manufacturing operations at the facility. A summary of the manufacturing processes and products produced by NL Industries is presented in Table 2-1 (Source: Interagency Task Force on Hazardous Waste questionnaire).

In 1978, NL Industries sold the facility to TAM Ceramics, Inc. (TAM), a division of Cookson International. TAM Ceramics continues to produce ceramics and ceramic-products. A summary of manufacturing process and products produced by TAM is presented in Table 2-2 (Source: TAM personnel).

2.4 Project History

In 1978, NL Industries responded to a questionnaire circulated by the New York State Interagency Task Force on Hazardous Wastes (Task Force). The Task Force was formed to identify manufacturing and waste disposal practices of manufacturing facilities in New York State. The questionnaire was designed to obtain information from New York State manufacturing facilities regarding company history and personnel, products and waste production, and disposal methods (both on-site and off-site). Based on the recollection of employees at that time and other available data, NL Industries identified on-site disposal methods for a number of off-specification products and by-products.

Later in 1978, in response to a Task Force request for additional information about waste disposal practices at the facility, NL Industries provided the Task Force with a map that identified disposal sites used by NL Industries at the facility. A representation of the map is presented in Figure 2-3. In addition, NL Industries responded with a letter, which stated that the "on-site landfill for buried material at NL's Hyde Park location was secured with a soil cap spread over an excavation of 4-5 feet. Above-ground materials are not hazardous". In the follow-up letter, NL also identified additional wastes shown on the map. After purchasing the facility in 1978, TAM removed the aboveground wastes from the Site.

In December of 1983, the NYSDEC and the New York State Department of Health (NYSDOH) listed the Site as a Class 2a Site on the New York State Registry of Inactive Hazardous Waste Sites. The classification was assigned based on the suspected disposal of magnesium chloride, as reported by NL Industries in the Task Force questionnaire. Classification 2a is defined as the following (from "NYSDEC Annual Report on Inactive Hazardous Waste Disposal Sites in New York State," April 1992):

> *Classification 2a includes sites for which additional information is needed before the Department can classify them according to the classes established by the ECL [Environmental Conservation Law]. Prior to FY 1990-91, sites were added to the 2a category if the disposal of hazardous waste was suspected . . . . Most Classification 2a sites will require the equivalent of a PSA [Preliminary Site Assessment] before their significance is known.*

In 1986, a Phase I Investigation was performed by Engineering-Science and Dames & Moore for the NYSDEC to assess the hazards to the environment caused by the Site. The investigation utilized existing documents and included a Site visit to evaluate the facility. The evaluation was based on the Hazard Ranking System (HRS), which involves the compilation and rating of various geological, toxicological, environmental, chemical, and demographic factors, and the calculation of an HRS score. The Phase I report recommended that a Phase II Investigation, consisting of a geophysics survey and sediment and groundwater analysis for Hazard Substance List (HSL) metals, be performed at the Site.

In July of 1990, the contractor for the Occidental Chemical Hyde Park Landfill Remediation Project (Sevenson Environmental) discovered a number of buried drums while excavating to relocate a portion of railroad track located on TAM property. The location of these drums is shown on Figure 2-3. The drum contents were sampled and analyzed, and found to contain zirconium oxide. A total of 178 drums were removed from the excavation by September 3, 1990. TCLP analysis of the drum contents indicated that all concentrations were below USEPA maximum concentrations of contaminants for toxicity characteristics. Therefore, the drums were classified as non-hazardous, and disposed of at Modern Disposal's Landfill in

Model City, New York, in August, 1991. The environmental media (soil) moved to reach the drums (approximately 1,000 cubic yards) was placed in a clay-lined bermed area on TAM's property. The analytical results for samples of this soil indicated levels of constituents below USEPA maximum concentrations of contaminants for the toxicity characteristics, and did not indicate the presence of any of the constituents found in the drums. This indicates that there had been no contact between the soils and the waste in the drums. This removed soil remains in the bermed area on TAM property.

In March of 1991, TAM Ceramics received notice from NYSDEC that Ecology and Environment, P.C. (E & E) would be performing a PSA at the facility. The "PSA approach" had recently been developed by the NYSDEC as a "hybrid" of the Phase I and Phase II Investigations. Site visits by E & E and NYSDEC in April and May of 1991 identified two areas of concern in the eastern portion of the undeveloped area. One area contained a black tar-like substance, and the other contained a white solid material. The two areas were sampled and analyzed for full TCLP parameters. The analytical results indicated that concentrations of constituents were below USEPA maximum concentrations of contaminants for the toxicity characteristics, with the exception of the white material, which showed a TCLP concentration of 190 mg/l for barium, which exceeds the USEPA regulatory limit of 100 mg/l. The PSA Report (E & E, August 1991) states:

> *The barium exceedance documents the presence of hazardous waste at the site. Available information is not sufficient to determine whether significant threat is posed by the site. Additional sampling of on-site soils, wastes, and ground water should be conducted in order to determine whether significant threat is posed by the site.*

Early in 1992, TAM Ceramics retained Empire Soils Investigations (ESI) to perform a test pit excavation program, to estimate the quantities of waste in the eastern portion of the Site, the areas that were identified in the May 1991 site walkover for the PSA by E&E and the NYSDEC. In May 1992, ESI performed the test pit program with NYSDEC oversight. A total of 18 test pits were excavated, and three areas of potential waste disposal were identified as Areas A (Blue Material), B (Gold Material, Black Liquid/Water), and C (White Material). ESI estimated the extents of waste, as follows:

- Area A 2,433 cubic feet.
- Area B 1,450 square feet.
- Area C 8 cubic feet.

Four waste samples from these three areas were split between the NYSDEC and Chemical Waste Management. The analytical results for these samples confirmed the original analyses, with Area C material exceeding the USEPA limit of 100 mg/l for barium. This sample was tested using the EP Tox method which indicated a result of 5,130 mg/l. The removal of this waste was performed under the Removal of Barium Waste Work Plan (BB&L, April 1993). The final report for this project was approved by the NYSDEC in August 1994.

In November 1992, TAM received correspondence from the NYSDEC stating that the NYSDEC had selected a contractor to perform a Remedial Investigation/Feasibility Study (RI/FS) at the Site. However, the NYSDEC has placed its contractor on hold in order to provide TAM Ceramics the opportunity to perform their own site characterization program, which TAM Ceramics agreed to perform.

On December 16, 1992, representatives of TAM Ceramics, NL Industries, the NYSDEC, and BB&L met at the Region 9 NYSDEC offices in Buffalo, New York. The purpose of the meeting was to define the general scope and procedures to be utilized in the Site Characterization Program. A program outline was agreed upon. BB&L then prepared a Site Characterization Work Plan (BB&L, July 1993) detailing the procedures and methods to be used during implementation of the Site Characterization Program; the NYSDEC approved the Work Plan.

TAM and the NYSDEC negotiated an Administrative Order on Consent, Index Number B9-0430-93-04, which included the Removal of Barium Waste Work Plan and the Site Characterization Program Work Plan. The submission and approval of this Final Report, in conjunction with the "Removal of Barium Waste Final Report" (submitted in June 1994 and previously approved by the NYSDEC) complete the requirements of the Order.

3.0 Physical Characteristics of the Site

3.0 Physical Characteristics of the Site

3.1 General

This section summarizes the regional physical characteristics of the Niagara Falls area in order to provide background for the field investigation. Site-specific details of the geology and hydrogeology are presented in Sections 3.0 and 4.0 of this report.

3.2 Surface Topography

The TAM Ceramics manufacturing facility is located along Hyde Park Boulevard in the City of Niagara Falls, New York (See Figure 2-1). The principal topographic features in this region are the gorge of the Niagara River and the east-west trending Niagara Escarpment. At the river, the escarpment is a 200-foot high cliff that gradually diminishes to the east. The plain to the north of the escarpment slopes slightly toward Lake Ontario.

3.3 Regional Geology

The surface of the Niagara Falls area is covered by a thin layer of unconsolidated deposits laid down during the closing phases of the Great Ice Age, or Pleistocene Epoch. In the wake of receding glaciers, terminal moraines, shallow lakes, and small streams were formed. This resulted in the deposition of overburden material composed of glacial till, lake clay, fine sand, and localized stream-deposited sands and gravels.

The bedrock of the Niagara Falls area consists of nearly flat-lying Paleozoic sedimentary rock. These sediments were deposited during the Middle Silurian, a period characterized by extensive shallow seas. During the late Silurian Period, restricted seas caused the precipitation of salt, gypsum, and anhydrite deposits. At the close of the Silurian Period, the seas withdrew from Western New York, but persisted in the eastern part of the state. The remainder of the Paleozoic Era, as well the Mesozoic and most of the Cenozoic Eras, left no glacial record in the Niagara Falls Area of Western New York.

The Silurian bedrock units beneath the Niagara Falls area are composed of dolomite, shale, limestone, and sandstone. The bedrock dips to the south at approximately 30 feet per mile. The depth to bedrock is between 5 and 12 feet in the vicinity of the TAM facility, and the first bedrock formation encountered is the Silurian-aged Lockport Dolomite.

The member of the Lockport Dolomite investigated beneath the Site is the Oak Orchard. The Oak Orchard comprises over half the mass of the Lockport formation in Western New York and is approximately 60 feet thick. Underlying the Lockport Dolomite is the Rochester Shale.

3.4 Regional Hydrogeology

Ground water in the Niagara Falls area occurs in both the unconsolidated deposits and bedrock. However, the majority of overburden is composed of lake silt and clay deposits, which are not transmissive enough to yield adequate water for domestic or small agricultural needs. In general, the glacial till deposits within the overburden also do not produce much water.

The Lockport Dolomite is the primary aquifer in the Niagara Falls area. Ground water occurs within the bedrock in secondary openings in the form of fractures due to tectonic stresses, isostatic rebound, and near-surface weathering. Vertical fractures occur predominantly in the upper 10 to 20 feet of bedrock.

The primary conduits of ground water flowing through the bedrock are fractures parallel to bedding. The highest flow rates are obtained in these fractures, which have been further widened by secondary solution of the rock. These fractures may pinch out laterally and be replaced by other fractures in a complex network.

The natural direction of ground-water movement in the overburden (and unconsolidated bedrock) is toward the west and south-west. Under this flow regime, Niagara River is considered to be an ultimate discharge for ground water. However, regional flow in the unconsolidated aquifer show an influence from the overburden collection system at the Hyde Park Landfill located directly to the north of the site.

3.5 Regional Climate

The climate in the Niagara Falls area can be characterized as a humid, changeable, continental type, modified considerably by the Great Lakes. Both Lake Erie and Lake Ontario have a direct effect on the area's climate, as the prevailing westerly winds crossing these waters moderate winter cold and summer heat.

Winters are long and rather cloudy in this area. Snowfall averages 50 to 60 inches, about 40 inches of which can be attributed to general or synoptic storms; the remaining snowfall is due to the "lake effect" phenomenon. These lake effect snows, caused by cold air crossing the warmer Lake Erie waters, can effect Niagara County from time to time, but usually remain to the south in Erie County. Lake Ontario also has minor effects on the local weather patterns. Average daily temperatures fall below freezing from mid-December through mid-March, but thaws occur frequently. Sub-zero temperatures are quite rare, averaging three occurrences per winter. The ground is snow-covered for an average of 60 days per year, but periods of bare ground are not unusual, even in mid-winter. Ground frost reaches a maximum depth of 3 feet.

The least precipitation frequently occurs in the months of April and May in Western New York. Typically, ground-water elevations remain at their highest levels in March, due to snowmelt. The levels begin to drop in late April and May. The season's last frost usually occurs in mid-April near the lakeshore and early May inland. Sunshine increases noticeably in spring as the cooler lakes become a stabilizing influence on the area's climate.

Summer begins rather abruptly in mid-June. The prevailing south-west winds off Lake Erie keep the temperature from rising over 90°F during all but the most intense heat waves. June and July often have extended dry periods, with soil moisture deficits usually evident by early July. Rainfall increases somewhat in August.

Autumns are dry and mild, at least through October, but cloudiness increases markedly in November, and the season's first snowfall can be expected by mid-November.

Niagara County's total precipitation averages 30 to 35 inches and is quite evenly distributed throughout the year. Its frequency and intensity vary from season to season; however, summer rains are intense but of short duration, while winter precipitation is light but frequent.

4.0 Initial Site Characterization

4.0 Initial Site Characterization

4.1 General

The "Site Characterization Work Plan" identified three activities to be performed during the initial (non-intrusive) phase of the Site Characterization Program. These activities are:

- Site Survey;
- Preliminary Ground-Water Monitoring; and
- Geophysical Survey.

The purpose of these activities was to obtain data regarding the overall condition of the Site, prior to the implementation of intrusive activities. This section summarizes the activities performed during these site characterization activities.

4.2 Site Survey

A site survey was performed in accordance with the approved Work Plan. Benchmarks were obtained from Conestoga-Rovers Associates (CRA) from the surveys performed for the Hyde Park Landfill Remediation Project. All permanent and semi-permanent structures within and bordering the undeveloped area were located as part of the site survey.

A 20-foot by 20-foot grid system, originating at the intersection of the Town of Niagara and Town of Lewiston town lines (Point 0,0 on the grid), was staked onto the site. The site coordinate system was tied to the Hyde Park coordinates. Elevations were obtained at each grid location point.

The results of the Site Survey are presented as Plate 4-1 (Site Map) and Plate 4-2 (Topographic Map).

4.3 Ground-Water Monitoring

As described in the approved Work Plan, ground-water monitoring consisted of measuring ground-water elevations in the overburden aquifer, determining the direction of overburden ground-water flow over the Site, and obtaining ground-water samples from one upgradient and two downgradient overburden monitoring wells for analysis for Target Analyte List (TAL) metals and semivolatile organic compounds.

a. Ground-Water Elevations

Ground-Water elevations were measured in all accessible overburden monitoring wells located in the undeveloped portion of the site on May 13, 1994. Ground-water elevations were tabulated, and an overburden groundwater contour map is presented as Figure 4-1. Overburden ground water flows generally in a south-westerly direction. There is some deviation from this trend in the northern part of the Site, most likely caused by the Hyde Park Overburden Collection System. Based on the results of the ground-water elevations, the following overburden monitoring wells were selected for sampling and analysis:

- Upgradient Well: NPW-H2U
- Downgradient Wells: G-3 and OMW-16.

b. Ground-water Sampling and Analysis

Ground-water sampling was performed on May 25 and 26, 1994. On May 25, ground-water elevation readings in overburden monitoring well G-3 indicated that approximately 2 inches of water was present in the well. After purging the well, the well went dry and would not recharge. Enough sample was obtained to measure field parameters; however, the water quality was poor and well integrity must be questioned. Mr. Michael Hinton of the NYSDEC was on-site, and concurred with BB&L's assessment of well conditions. Overburden monitoring well OMW-17T was sampled instead of the monitoring well G-3. OMW-17T was sampled on May 25, and the NYSDEC split samples with BB&L. The ground-water sampling logs for both wells G-3 and OMW-17T are presented in Attachment A.

On May 26, 1994, overburden monitoring wells NPW-H2U and OMW-16 were sampled. Due to heavy rainfall events on May 25 and 26, the overburden ground-water level was extremely high. Due the depression in which overburden monitoring well OMW-16 is located, the overburden ground-water table was above ground at this point, causing a muddy "pond" approximately 15 feet in diameter to form around the well. During purging of well OMW-16, water quality decreased as water from the "pond" recharged the well during purging. After purging seven well volumes, the turbidity of the water had increased to greater the 999 Nephelometric Turbidity Units (NTUs) (the limit of the instrument). Therefore, both filtered and unfiltered TAL metals samples were obtained and sent to the laboratory for analysis. The ground-water sampling logs for both wells OMW-16 and NPW-L1U are presented in Attachment A.

4.4 Geophysical Survey

On May 12 and 13, 1994, Gartner-Lee, Inc. of Niagara Falls, New York, performed an electromagnetic geophysical survey of the undeveloped portions of the Site. The geophysical survey was performed using an EM-31 Terrain Conductivity Meter, which collected continuous readings as the operator walked across the site. The geophysical survey was performed on the 20-foot grid system. Gartner-Lee's final report is presented as Attachment B.

4.5 Supplemental Work Plan

After the completion of the initial site characterization activities, BB&L developed a Supplemental Work Plan, dated July 1994. The Supplemental Work Plan discussed the results of the first phase of work at the Site, and recommended additional activities to be performed at the Site. These activities included:

- The excavation of 19 test pits;
- The placement of soil borings downgradient of the test pits observed to contain wastes;
- The installation of two additional ground-water monitoring wells; and
- Surface soil sampling.

The Work Plan was approved by the NYSDEC, and intrusive activities commenced at the Site.

5.0 Supplemental Site Characterization Activities

5.0 Supplemental Site Characterization Activities

5.1 General

This section presents a detailed description of the field activities associated with the second (intrusive) phase of the Site Characterization Program at the TAM facility. Activities were performed from August 31, 1994 through January 6, 1995.

5.2 Test Pit Excavation

The Supplemental Work Plan detailed the locations of the test pits, determined based upon the observed electromagnetic survey anomalies, areas identified in previous investigations, and "clean areas." Test pit locations were identified in the NYSDEC-approved Supplemental Work Plan. Test pit excavation was performed as follows:

- Excavation began in the center of the anomaly;
- If any type of buried waste was encountered, a sample was taken of the waste and sent to the analytical laboratory for 24-hour turnaround analyses. Analytical methods were determined in the field, based upon field observation and real-time instrument readings; and
- Test pits from which waste sample analytical results exceeded either or both of the following were re-excavated:
  (i) Three times the background concentration (per USEPA's Hazard Ranking System); and/or
  (ii) Twenty times the USEPA maximum contaminant concentration for TCLP analyses (dilution factor inherent in TCLP analytical method).

Additional excavation of test pits was performed to identify the vertical and/or horizontal extents of waste disposal. Additional samples, including TCLP samples and confirmatory samples (to ensure that the waste was the same as originally tested), were obtained from each of these test pits during re-excavation.

On August 31 and September 1, 1994, a total of 19 test pits were excavated and sampled, as described above. The locations of the test pits are shown on Plate 5-1. Test Pit logs are included as Attachment C. Samples were analyzed and compared to the standards identified above. A total of seven test pits were re-excavated, due to high concentrations of metals in the waste. These test pits and associated metals, were:

- TP-4 (barium, chromium, copper, iron, lead, potassium, selenium, and sodium);
- TP-7 (barium, cadmium, copper, mercury, thallium, and zinc);
- TP-8 (arsenic, copper, iron, magnesium, selenium, silver, and sodium) ;
- TP-9 (arsenic, barium, cobalt, lead, mercury, selenium, silver, sodium and thallium);
- TP-10 (arsenic, barium, magnesium, selenium, silver, and sodium);
- TP-13 (antimony, arsenic, selenium, silver, and sodium); and
- TP-15 (barium, copper, lead, mercury, selenium, silver, sodium, thallium, and zinc).

5.3 Soil Borings

As described in the Supplemental Work Plan, soil borings were placed approximately 20 feet downgradient (south-west) of each test pit that contained waste. A total of 12 soil borings were placed at the locations shown on Plate 5-1. Boring logs are included as Attachment D. All borings were drilled until bedrock was encountered. Bedrock ranged from approximately 4 to 13 feet below ground surface (bgs). Borings were continuously sampled using a split-spoon sampler, through the entire depth of installation. All split-spoons were visually inspected for signs of waste, and screened using an photoionization detector (PID) and radiation meter (geiger counter). Samples were selected for off-site analysis based upon field observation and instrument readings.

5.4 Monitoring Well Installation and Sampling

Two overburden monitoring wells (OMW-BBL1 and OMW-BBL2) were installed at the locations identified in the Supplemental Work Plan (See Plate 5-1). Monitoring wells were installed to the top of rock (10.0 feet bgs for OMW-BBL1 and 5.5 feet bgs for OMW-BBL2). After several attempts at developing the wells, it was apparent that the seasonal ground-water table in the overburden dipped below the top of rock.

Monitoring well installation logs are included as Attachment E.

Two additional overburden ground-water monitoring wells (OMW-BBL1R and OMW-BBL2R) were installed 15 feet into the bedrock adjacent to the existing top-of-rock wells (See Plate 5-1). Monitoring well installation logs are included as Attachment E. These wells were developed and produced water. On January 6, 1995, samples were obtained from OMW-BBL1R, OMW-BBL2R, and NPW-H2U (the same upgradient well used during the initial ground-water sampling event). Ground-water sampling logs are included as Attachment E.

5.5 Surface-Soil Sampling

Six surface-soil samples were obtained from the locations identified in the Supplemental Work Plan (See Plate 5-1). Samples were obtained from a depth of zero to six inches bgs. Samples were analyzed as specified in the Work Plan.

In addition, three background samples were obtained from locations upgradient of the site. The samples were approximately evenly spaced outside of the eastern fenceline of the property. Samples were obtained at distances between 50 feet and 100 feet from the fenceline, away from the site. Samples were obtained from a depth of zero to six inches bgs.

6.0 Analytical Results

6.0 Analytical Results

6.1 General

This section presents the results of the intrusive work performed as part of the Site Characterization Program, as described in Sections 4.0 and 5.0 of this report. A discussion of the results of the non-intrusive portion of the project is included in the Supplemental Work Plan. Section 7.0 presents a discussion of these results. All laboratory analytical data sheets are included as Attachment G. Due the large volume of back-up and quality assurance/quality control (QA/QC) data associated with sample analysis for this investigation, this data has not been included with the report, but is available from BB&L, upon request.

6.2 Background Soil Sample Analytical Results

Background surface soil samples were obtained to define the approximate level of inorganic compounds naturally occurring in the area of the Site. Samples were obtained upgradient of the site. Samples were obtained at locations identified by Mr. Michael Hinton of the NYSDEC, equally spaced approximately 50 feet outside of the eastern property line. Samples were analyzed for TAL metals; the results are presented in Table 6-1.

6.3 Test Pit Analytical Results

A total of 17 test pits were excavated in areas of anomalous magnetometer readings or areas of suspected disposal (based on visual observation and/or previous investigations). The two additional test pits (TP-18 and TP-19) were excavated in "clean" areas, in order to confirm the results of the magnetometer survey. Each of these test pits was excavated to the bedrock, and contained no non-native materials.

All 17 of the test pits excavated in areas of anomalous magnetometer readings were found to contain some type of non-native material. Materials observed in two of these test pits were not considered wastes, and therefore were not sampled:

- TP-11 contained slag material under the dirt road. Conversations with Gartner-Lee (the geophysical survey subcontractor) indicate that this type of slag is commonly used as a road sub-base and would produce the anomalous readings observed; and

- TP-7 contained a large piece of sheet metal approximately 6 inches below the surface. This object would produce the magnetic anomaly observed.

The other 15 test pits contained a waste material which was sampled and analyzed. Sample locations within the test pits are indicated on the test pit logs in Attachment C. Inorganic analytical results are included as Table 6-2, volatile organic results as Table 6-3, and semivolatile organic results as Table 6-4. Samples were numbered by test pit and consecutive sample number (e.g., the first samples from test pit 1 would be identified TP1-1, and the second would be identified TP1-2). All samples were analyzed for TAL metals. Samples which produced above-background readings on the PID were also analyzed for volatile organics compounds and/or semi-volatile organic compounds.

As indicated previously, seven of the test pits produced levels of one or more metals greater than thre times the maximum background concentration. Additional excavation was performed to delineate the vertical and horizontal extent of each of these wastes. During delineation, additional samples were obtained for TAL metals and TCLP metals. An additional total metals analysis was conducted to ensure that the sample was similar in nature to the original sample obtained. In all cases, the analytical results from second sample were comparable to the original. Second round samples utilized the same sample identification number, with an appended "C" (for "confirmatory sample"). Confirmatory sample analytical results are also included in Table 6-2. TCLP results are included as Table 6-5. Additional test pit samples for miscellaneous parameters (Table 6-6), uranium and thorium (Table 6-7) and an analysis of IVEX solution (Table 6-8) are also included, and will be interpreted in Section 7.0.

6.4 Soil Boring Analytical Results

As discussed, soil borings were placed approximately 20 feet downgradient of each test pit which was confirmed to contain waste. Samples were obtained using continuous split-spoon sampling through the depth of each boring. Sample collection was determined based on visual examination and PID readings.

A total of 27 samples were obtained from the 12 soil borings. Table 6-9 contains a summary of analytical results for TAL Metals analysis, while Tables 6-10 and 6-11 contain volatile and semi-volatile organic compound analytical results, respectively.

6.5 Surface Soil Sample Analytical Results

A total of six surface soil samples were obtained from the locations identified in the Supplemental Work Plan. Samples were analyzed for a variety of parameters, as identified in the Work Plan. Summaries of analytical results for TAL metals (Table 6-12), volatile organic compounds (Table 6-13), semivolatile organic compounds (Table 6-14) and polychlorinated biphenyls (Table 6-15) are included with the report.

6.6 Ground-Water Sample Analytical Results

Three ground-water samples were obtained during each the first and second round of the Site Characterization Program. The first round of ground-water samples were analyzed for TAL metals and semivolatile organic compounds. No semi-volatile compounds were detected during the first round of ground-water sampling. As defined in the Supplemental Work Plan, the second round of ground-water samples were analyzed for only TAL metals. Ground-water analytical results for inorganic compounds are presented in Table 6-16.

7.0 Discussion of Results

7.0 Discussion of Results

7.1 General

The following section provides a discussion of the analytical results obtained during both phases (non-intrusive and intrusive) of the Site Characterization Program. Analytical results are compared by media and analytical suite to site-specific and regulatory guidelines with regard to concentrations of individual compounds and analytes.

7.2 Geophysical Survey

The geophysical survey was completed by Gartner-Lee as part of the non-intrusive phase of the investigation. The survey indicated that there were discrete anomalies located in various portions of the site. Test pit excavation in both anomalous and non-anomalous areas confirmed the results of the geophysical survey. In addition, analysis of test borings placed in non-anomalous areas downgradient of confirmed waste disposal areas did not indicate any additional areas of waste disposal. Based on physical observations during test pit excavation, the geophysical survey identified all areas of potential waste disposal, and intrusive activities uncovered all subsurface materials within the undeveloped portion of the site.

7.3 Background Soil Samples

Three background soil samples were obtained from upgradient of the site. Samples were analyzed for TAL metals, and analytical results are presented in Table 6-1. Based upon the USEPA's Hazard Ranking System, metals are considered attributable to natural background sources if the maximum observed concentrations are less than three times the maximum observed background concentration. While this guideline is valid for soil samples, we have also taken the conservative approach and applied this to the waste materials encountered, along with the surface soil samples and soil borings. Table 6-1 includes calculations of average and maximum background soil sample concentration for TAL metals.

7.4 Waste Samples

Waste samples were obtained from all test pit excavations which encountered a buried waste. A total of 26 waste samples were obtained from the test pits. Selected samples were analyzed for TAL metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOs), uranium + thorium, silica and zirconium, Hyde Park Indicator Parameters, TCLP metals and miscellaneous parameters, as physical observation and instrument readings dictated. In addition, a bottle of IVEX solution was analyzed for TAL metals and will be considered a waste for purposes of this discussion.

(a) Volatile Organic Compounds

Two test pit samples (TP13-1 and TP13-3) were analyzed for VOCs. A total of three VOCs were detected in the two samples, as follows:

COMPOUND	TP13-1	TP13-3
Chloromethane	ND	70 ug/kg
Acetone	100 ug/kg	460 ug/kg
Total Xylenes	ND	92 ug/kg

Test pit thirteen contained an unidentifiable gelatinous substance, which provided no PID readings. VOC analysis was only performed because of the gelatinous nature of the substance. Acetone is a common laboratory contaminant, and the other detected compounds are at levels of less than one-tenth of a part per million (ppm).

(b) Semivolatile Organic Compounds

Three test pit samples (TP8-3, TP13-1 and TP13-3) were analyzed for SVOs. No SVOs were detected in any of the three samples.

7.4 Waste Samples

Waste samples were obtained from all test pit excavations which encountered a buried waste. A total of 26 waste samples were obtained from the test pits. Selected samples were analyzed for TAL metals, volatile organic compounds (VOCs), semivolatile organic compounds (SVOs), uranium + thorium, silica and zirconium, Hyde Park Indicator Parameters, TCLP metals and miscellaneous parameters, as physical observation and instrument readings dictated. In addition, a bottle of IVEX solution was analyzed for TAL metals and will be considered a waste for purposes of this discussion.

(a) Volatile Organic Compounds

Two test pit samples (TP31-1 and TP13-3) were analyzed for VOCs. A total of three VOCs were detected in the two samples, as follows:

COMPOUND	TP13-1	TP13-3
Chloromethane	ND	70 ug/kg
Acetone	100 ug/kg	460 ug/kg
Total Xylenes	ND	92 ug/kg

Test pit thirteen contained an unidentifiable gelatinous substance, which provided no PID readings. VOC analysis was only performed because of the gelatinous nature of the substance. Acetone is a common laboratory contaminant, and the other detected compounds are at levels of less than one-tenth of a part per million (ppm).

(b) Semivolatile Organic Compounds

Three test pit samples (TP8-3, TP13-1 and TP13-3) were analyzed for SVOs. No SVOs were detected in any of the three samples.

(c) TAL Metals

A total of 24 test pit samples were analyzed for TAL metals, including six confirmatory (duplicate) samples obtained during the second phase of test pit excavation. Of these 18 sample locations, 14 of the waste sample locations exceeded either three times the maximum background concentration for metals or the 20 times the USEPA maximum TCLP contaminant concentration. The sample locations and concentrations which exceeded either of these limits are indicated on Plate 7-1. Any samples in which the total metals concentration exceeded 20 times the TCLP maximum concentration was reanalyzed during subsequent excavation for TCLP metals.

(d) TCLP Metals

Based upon the analysis of total metals, any sample for which it was possible to exceed the USEPA maximum concentrations for TCLP analysis (e.g., if all of the metal would leach) were reanalyzed using a TCLP procedure. A total of seven test pit samples were analyzed for TCLP Metals (TP4-2, TP7-1, TP9-2, TP10-2, TP31-1, TP13-2). Based on these analyses, only one sample location (TP9-2) exceeded the USEPA guideline concentration for a TCLP metal (682 mg/l of barium versus a limit of 100 mg/l).

(e) Silica and Zirconium

Based on the historical use of silica- and zirconium-based compounds in the manufacture of ceramics and ceramic products, wastes encountered which showed the physical characteristics of zirconium- or silica-based compounds were tested for the presence of such analytes. A total of five waste samples were analyzed for silica, and eleven waste samples for zirconium. Silica results ranged from 1.81 to 14.3 ppm. Zirconium results ranged from 450 to 288,000 ppm zirconium. Both of these samples were yellow to gold, powdered solids which became paste-like when wetted.

(f) Uranium and Thorium

As part of the Health & Safety Program, continuous monitoring for radiation was performed during all intrusive activities at the Site using a Geiger Counter. During the excavation of test pit 12, anomalous readings of approximately five times background radiation readings were observed in the vicinity of a grey-

(c) TAL Metals

A total of 24 test pit samples were analyzed for TAL metals, including six confirmatory (duplicate) samples obtained during the second phase of test pit excavation. Of these 18 sample locations, 14 of the waste sample locations exceeded either three times the maximum background concentration for metals or the 20 times the USEPA maximum TCLP contaminant concentration. The sample locations and concentrations which exceeded either of these limits are indicated on Plate 7-1. Any samples in which the total metals concentration exceeded 20 times the TCLP maximum concentration was reanalyzed during subsequent excavation for TCLP metals.

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(f) Uranium and Thorium

As part of the Health & Safety Program, continuous monitoring for radiation was performed during all intrusive activities at the Site using a Geiger Counter. During the excavation of test pit 12, anomalous readings of approximately five times background radiation readings were observed in the vicinity of a grey-

black powder. A sample was obtained from the waste and analyzed for uranium and thorium (See Table 6-7). Results indicate that approximately 45 cubic yards of the waste would be required to make this a reportable quantity. Based on observations at the test pit, there are approximately 3 cubic yards of the waste present.

(g) Miscellaneous Parameters

During initial excavation of the gelatinous waste in test pit 13, samples were analyzed for TAL metals, VOCs, and SVOs. These analyses did not identify the primary constituents of the material. During additional excavation, samples were obtained for TCLP metals and a battery of miscellaneous physical parameters to aid in the identification of the substance. Table 6-6 presents the results of the 15 physical tests performed on the waste. Results indicated that there are no hazardous components or characteristics to the material.

(h) IVEX Solution

Information presented to the Task Force by NL Industries (see Section 2.0) indicated that IVEX solution, a topical skin cream for the treatment of poison ivy and similar conditions, was disposed of on site. A small bottle of the IVEX solution was analyzed for TAL metals. Analytical results, presented in Table 6-8, indicate elevated concentrations of arsenic, selenium, and silver. In addition, total arsenic and silver concentrations exceed 20 times the USEPA maximum contaminant concentration for TCLP analyses. These results may provide a source for the elevated concentrations of these metals in various locations around the site, since there are no other apparent sources of such constituents in previous manufacturing processes at the facility.

7.5 Soil Boring Samples

A total of 12 soil borings were placed approximately 20 feet downgradient (south-west) of all test pits which contained waste. Continuous split-spoon sampling was performed during advancement of the borings, and samples were obtained based upon field observation and the measurements of direct reading instruments.

A total of 28 soil boring samples were obtained. Samples were analyzed for TAL metals, VOCs, SVOs, silica, Hyde Park Indicator Parameters, and pesticides and PCBs.

(a) Volatile Organic Compounds

Six soil boring samples (SB2-8, SB3-10, SB4-0, SB6-8, SB13-4, and BBL2-4) were analyzed for VOCs. Acetone was detected in only one sample at a concentration of 16 ug/kg (ppb). Acetone is a common laboratory contaminant, and is not of concern at such a low concentration.

(b) Semivolatile Organic Compounds

Four soil boring samples (SB2-8, SB3-10, SB4-0, and BBL2-4) were analyzed for SVOs. All four samples contained detected SVOs, as follows:

COMPOUND	SB2-8	SB3-10	SB4-0	BBL2-4
Di-n-butyl Phthalate	630 ug/kg	780 ug/kg	630 ug/kg	700 ug/kg
Fluoranthene	ND	ND	10 ug/kg	ND

Di-n-butyl phthalate is a common breakdown product of rubber, and may have been carried over from the gloves worn during sampling or during laboratory analysis.

(c) TAL Metals

A total of 27 soil boring samples were analyzed for TAL metals, including one QA/QC duplicate sample. These samples were obtained from 12 boring locations. Seven of the twelve boring locations exceed three times the maximum background concentration for metals. No samples exceeded 20 times the USEPA maximum TCLP contaminant concentration. The sample locations and concentrations which exceeded three times the maximum background concentration are indicated on Plate 7-2.

A total of 28 soil boring samples were obtained. Samples were analyzed for TAL metals, VOCs, SVOs, silica, Hyde Park Indicator Parameters, and pesticides and PCBs.

(a) Volatile Organic Compounds

Six soil boring samples (SB2-8, SB3-10, SB4-0, SB6-8, SB13-4, and BBL2-4) were analyzed for VOCs. Acetone was detected in only one sample at a concentration of 16 ug/kg (ppb). Acetone is a common laboratory contaminant, and is not of concern at such a low concentration.

(b) Semivolatile Organic Compounds

Four soil boring samples (SB2-8, SB3-10, SB4-0, and BBL2-4) were analyzed for SVOs. All four samples contained detected SVOs, as follows:

COMPOUND	SB2-8	SB3-10	SB4-0	BBL2-4
Di-n-butyl Phthalate	630 ug/kg	780 ug/kg	630 ug/kg	700 ug/kg
Fluoranthene	ND	ND	10 ug/kg	ND

Di-n-butyl phthalate is a common breakdown product of rubber, and may have been carried over from the gloves worn during sampling or during laboratory analysis.

(c) TAL Metals

A total of 27 soil boring samples were analyzed for TAL metals, including one QA/QC duplicate sample. Of these 26 samples from 12 sample locations, seven sample locations exceeded three times the maximum background concentration for metals. No samples exceeded 20 times the USEPA maximum TCLP contaminant concentration. The sample locations and concentrations which exceeded three times the maximum background concentration are indicated on Plate 7-2.

(d) TCLP Metals

Based upon the analysis of total metals, no samples could exceed the USEPA maximum concentrations for TCLP analysis (e.g., if all of the metal would leach). Therefore, no soil boring samples were analyzed using the TCLP procedure.

(e) Silica and Zirconium

One soil boring sample was analyzed for silica, with a result of 5.31 ppm.

(f) Hyde Park Indicator Parameters

During the placement of the soil borings, several readings were obtained on the photoionization detector (PID) above background at depths directly above the bedrock. Since no readings were observed during test pit excavation, and the borings were located on the northern portion of the site, additional semi-volatile analyses were performed for the "Hyde Park Indicator Parameters." These compounds include a list of long-chain chlorinated compounds indicative of disposal practices at the Hyde Park Landfill. Indicator parameters analyzed were as follows:

- 2-Chlorobenzotrifluoride
- 3,4-Chlorobenzotrifluoride
- 1,2,3,5-Tetrachlorobenzene
- 1,2,4,5-Tetrachlorobenzene
- 1,2,3,4-Tetrachlorobenzene

Six soil boring samples (SB2-8, SB13-4, SB6-8, SB3-10, SB4-0, and BBL2-4) were analyzed for the Hyde Park Indicator Parameters. None of the compounds were detected.

(g) Pesticides and PCBs

Six soil boring samples (SB2-8, SB3-10, SB4-0, SB6-8, SB13-4, and BBL2-4) were analyzed for pesticides and polychlorinated biphenyls (PCBs). One pesticide (4,4'-DDT) was detected in sample SB4-0 at a concentration of 5.3 ug/kg (parts per billion [ppb]). Since this facility has been in operation since the early

1900's and the undeveloped portion of the site has been used for equipment storage, it is possible that pesticides had historically been used on the undeveloped portion of the site. Since this sample was obtained from the surface, and contains very low levels of the pesticide, the presence of pesticides are not a concern.

7.6 Surface-Soil Samples

A total of seven surface-soil samples were obtained from the locations specified in the Supplemental Work Plan, and as indicated on Plate 5-1, including one QA/QC field duplicate. Surface soil samples were obtained from a depth of zero to 6 inches bgs. Samples were analyzed as described in the Supplemental Work Plan, and included TAL metals, VOCs, SVOs, and PCBs.

(a) Volatile Organic Compounds

Two surface soil samples (SS-5 and SS-6) were analyzed for VOCs. Acetone was detected in SS-5 at a concentration of 15 ug/kg. No other VOCs were detected in either sample. Since acetone is a common laboratory contaminant, it is not considered to be a concern at the site.

(b) Semivolatile Organic Compounds

Two surface soil samples (SS-5 and SS-6) were analyzed for SVOs. No SVOs were detected in either sample.

(c) TAL Metals

Five surface soil samples (SS-1, SS-2, SS-5, SS-5D, and SS-6) were analyzed for TAL metals. No metals concentrations in any of the samples exceeded three times the maximum background concentration.

(d) PCBs

Four surface soil samples (SS-3, SS-4, SS-5, and SS-6) were analyzed for PCBs. No PCBs were detected in any of these samples.

7.7 Ground-Water Samples

A total of seven ground-water samples were obtained during the investigation. Three unfiltered and one filtered ground-water sample were obtained during the initial ground-water monitoring, and three unfiltered samples were obtained during the second phase of the investigation. Samples were analyzed for SVOs and metals.

(a) Semivolatile Organic Compounds

Three ground-water samples were analyzed for semi-volatile organic compounds. These samples were obtained during the first phase of ground-water sampling. No semi-volatile organic compounds were detected in any ground-water samples.

(b) TAL Metals

A total of seven ground-water samples were analyzed for TAL metals. As described in the Supplemental Work Plan, the unfiltered sample from OMW-16 is not being considered in this analysis, because the well could not be purged to below 50 NTUs. Two of these samples were upgradient background concentrations. In both upgradient samples, both iron and lead exceed the New York State Part 373 groundwater limits. In the remaining four downgradient ground-water samples, no compounds exceeded the Part 703 groundwater standards.

7.8 Conclusions

Based upon the results of the investigation, the following conclusion can be drawn:

(a) The presence of volatile organic compounds at the site is limited to two compounds (chloromethane and total xylenes) identified in one sample at low concentrations (70 and 92 ug/kg, respectively). Therefore, the presence of volatile organic compounds is not a concern at the TAM Ceramics Site.

(b) The presence of semivolatile organic compounds is limited to one sample in which fluoranthene was detected at 410 ug/kg. Therefore, the presence of semivolatile organic compounds is not a concern

at the TAM Ceramics Site.

(c) No polychlorinated biphenyls were detected in any samples collected. Therefore, the presence of polychlorinated biphenyls is not a concern at the TAM Ceramics Site.

(d) The presence of pesticides/herbicides is limited to a single surface sample from a soil boring, in which 4,4'-DDT was detected at a concentration of 5.3 ug/kg. Based on this data, the presence of pesticides/herbicides is not a concern at the TAM Ceramics Site.

(e) Metals and inorganic compounds were detected at various locations throughout the site. However, impacts from disposal practices are limited to a small area on the eastern side of the site, and an area in the south-western corner of the site. While metal concentrations in the wastes exceed three times the maximum background concentration at some sample locations within these areas, concentrations of the constituents in soil samples surrounding the waste indicate far lower metals concentrations. In addition, only one sample (TP9-2), located in the south-west disposal area, exceeded a USEPA maximum contaminant TCLP concentration (exceeded the 100 mg/l maximum concentration for barium). Soil and ground-water samples obtained downgradient of the disposal area do not show any indication of barium movement through the soil media.

(f) Ground-water samples collected downgradient of the site do not exceed New York State Part 703 ground-water standards for metals.

8.0 Significant Threat Evaluation

8.0 Significant Threat Evaluation

8.1 General

This section discusses the site in terms of the factors presented in 6 NYCRR Part 375 Regulations (Inactive Hazardous Waste Sites), Section 1.4 - Significant Threat to the Environment. The Introduction to this section states that:

"The Commissioner may find that hazardous waste disposed at a site constitutes a significant threat to the environment if, after reviewing the available evidence and considering the factors the Commissioner deems relevant. . . ., the Commissioner determines that the hazardous waste disposed at the site results in, or is reasonably foreseeable to results in any of the following..."

Sub-section 8.2, "Considerations", identifies the factors presented in Part 375 which have been deemed "relevant" by the Commissioner. Sub-section 8.3, "Results", identifies foreseeable results which the Commissioner is to consider during his evaluation of the significant threats of the Site. Sub-section 8.4, "Conclusions", presents TAM's judgement of the lack of a significant threat at the Site, based on the information collected as part of this Investigation and presented in this report.

Please note that, based upon the definition of a significant threat as presented above, only hazardous waste has been considered in this evaluation. Therefore, the single sample which exceeded the USEPA maximum TCLP concentration for barium is discussed in this section.

8.2 Considerations

(a) Duration, aereal extent or magnitude of severity of environmental damage

Only one sample (TP9-2C) exceeded the USEPA maximum contaminant concentration for a TCLP analysis. This sample is located in an area where significant disposal activities have taken place (the south-west corner of the site), including a majority of construction and demolition debris, and a number of drums. While a total of four waste samples were taken from this area, only one sample exceeded USEPA maximum TCLP concentrations.

The total area of disposal in the south-west corner of the site is approximately 40,000 square feet (200 feet by 200 feet). However, only a fraction of the waste disposal area is hazardous (based upon the number of samples taken from this area). While the exact extent of disposal cannot be determined, the area may be as small as a single drum.

Soil samples obtained from borings obtained downgradient of the disposal area do not indicate that barium has migrated outside of the disposal area. Ground-water samples obtained down-gradient and cross-gradient of the disposal area also are not adversely impacted by the disposal area.

(b) Type, mobility, toxicity, quantity, bioaccumulation, and persistence of hazardous waste present

Type: The waste sampled which exceeded USEPA maximum TCLP concentrations was a gray-black solid, crystalline material, obtained from the remnants of a drum.

Mobility/Toxicity: TCLP analysis indicated that leachable barium exceeded the limits set forth by the USEPA (682 mg/l sample results versus 100 mg/l USEPA limit). Total barium analysis indicated that the sample was greater than 50% barium (513,000 mg/kg). Therefore, approximately 3% of the barium in the sample is mobile, and therefore, potentially toxic.

Quantity: All drums encountered during excavation which contained waste were sampled. The single sample collected at TP9-2 is the only hazardous waste encountered during the excavation of approximately 200 linear feet of test pits in this disposal area. The drum was corroded and broken when sampled, and did not contain a large quantity of sample (approximately one cubic foot).

Bioaccumulation and Persistence: The USEPA Superfund Chemical Data Matrix Handbook provides the following assigned factor values for Barium:

- For Drinking Water

  Persistence: in River or Lake: 1.0000

- For the Human Food Chain

  Persistence in River or Lake: 1.0000

  Bioaccumulation in fresh or salt water: 0.5

- For the Environment

  Persistence in River or Lake: 1.0000

  Bioaccumulation in fresh or salt water: 0.5

Persistence values of 1.0000 are assigned due to the inorganic, non-volatile, and non-biodegradable nature of elemental barium. A persistence of 1.0000 is common among metallic elements. Bioaccumulation values of 0.5 are the lowest among all TCLP inorganic analytes.

(c) Manner of disposal

It appears that the waste was disposed of through placement of C&D debris and drums. It appears that areas were excavated for waste disposal and covered after waste disposition. Wastes are found from approximately 4 feet bgs to the surface of the bedrock, which varies locally from approximately 8 to 11 feet bgs.

(d) Nature of soils and bedrock

Natural soils above the bedrock are mostly fine to medium sands, silts, and clays. In addition, a variety of fill materials varying from concrete and C&D debris to cobbles to fine silt and sand have also been encountered. A tight clay layer is situated directly above the bedrock and serves as a hydraulic barrier to the weathered and competent bedrock beneath the overburden materials. For a detailed description of overburden conditions, see the boring and test pit logs in Attachments C and D, respectively. Underlying the natural soils is the Lockport Dolomite. Based upon the examination of cores of the Lockport Dolomite, an approximately 6-inch-thick weathered zone occurs at the top of rock, which is underlain by competent rock. A description of the regional geology of the Lockport Dolomite is included in Section 3.0 of this report.

(e) Groundwater hydrology

Overburden ground-water flows were evaluated during this investigation. Additional investigation would have been performed if contamination was identified in the overburden layer. Since this was not the case, this discussion is limited to the overburden hydrology.

The overburden ground-water shows seasonal fluctuations in ground-water elevations. The ground-water elevations vary from approximately one foot above the surface of the bedrock to 4 feet below the surface of the bedrock. It is evident that the upper region of the bedrock contains fractures which allow water to pass through this upper bedrock unit. However, this unit is still considered to be the overburden ground-water unit.

Regional ground-water flow regimes are generally towards the west, towards the Niagara River. The site shows a similar ground-water flow pattern. The overburden collection system at the Hyde Park Landfill has increased the northerly component of ground-water flow on the northern side of the site. The southern side of the site shows a southerly component of ground-water flow.

(f) Location, nature and size of surface waters

The undeveloped portion of the TAM Ceramics facility absorbs all rainwater and runoff waters. Therefore, the surface water pathway is not a concern at the TAM Ceramics site.

The nearest major surface water body is the Niagara River, which is located approximately 0.4 miles west of the site. The Niagara River is a major water body, and most ground-water and surface water in the region flows toward the Niagara River.

(g) Levels of contaminants in groundwater, surface water, air and soils.

Groundwater: Two ground-water samples were obtained in the vicinity of the disposal area. Analytical results do not indicate elevated metals concentrations in the ground-water in either the down-gradient or cross-gradient direction, when compared to upgradient ground-water samples. Ground-water analytical results are presented in Table 6-17.

Surface Water: No surface water is present on the site; therefore, no surface water samples were

(e) Groundwater hydrology

Overburden ground-water flows were evaluated during this investigation. Additional investigation would have been performed if contamination was identified in the overburden layer. Since this was not the case, this discussion is limited to the overburden hydrology.

The overburden ground-water shows seasonal fluctuations in ground-water elevations. The ground-water elevations vary from approximately one foot above the surface of the bedrock to 4 feet below the surface of the bedrock. It is evident that the upper region of the bedrock contains fractures which allow water to pass through this upper bedrock unit. However, this unit is still considered to be the overburden ground-water unit.

Regional ground-water flow regimes are generally towards the west, towards the Niagara River. The site shows a similar ground-water flow pattern. The overburden collection system at the Hyde Park Landfill has increased the northerly component of ground-water flow on the northern side of the site. The southern side of the site shows a southerly component of ground-water flow.

(f) Location, nature and size of surface waters

The nearest major surface water body is the Niagara River, which is located approximately 0.4 miles west of the site. The Niagara River is a major water body, and most ground-water and surface water in the region flows toward the Niagara River.

(g) Levels of contaminants in groundwater, surface water, air and soils.

Groundwater: Two ground-water samples were obtained in the vicinity of the disposal area. Analytical results do not indicate elevated metals concentrations in the ground-water in either the down-gradient or cross-gradient direction, when compared to upgradient ground-water samples. Ground-water analytical results are presented in Table 6-17.

Surface Water: No surface water is present on the site; therefore, no surface water samples were

obtained as part of the investigation.

Air: Particulate levels in the air were analyzed during all investigative activities. Health-based action levels calculated in the Site Health and Safety Plan presented in the Site Characterization Program Work Plan were not exceeded during any intrusive activities.

Soils: A soil boring (SB9-1) was placed downgradient of the disposal area. The boring did not indicate elevated metals concentrations outside of the disposal area. Soil samples obtained during installation of the monitoring wells (MW-BBL1 and MW-BBL2) indicate slightly elevated concentration of cadmium, iron and potassium, with only cadmium in MW-BBL1 at depths of 2 to 4 feet exceeding three times the maximum background concentration. Since these compounds were not detected at elevated levels within the disposal area, it can be concluded that the elevated concentrations are not due to contaminant migration from the disposal area. Run-off and migration from the automotive junk yard located directly south of the disposal area is the most likely source of the elevated metals concentrations.

Samples obtained from inside the disposal area consisted of waste samples only, and are not considered in the evaluation of soils.

(h) Location of the Site

The site is located in a commercial and industrial area in the Town of Niagara, New York. The site is bordered on the north by Hyde Park Landfill (a Federal National Priority List Site), on the South by an automotive junk yard, on the east by a transport company, and on the west by Hyde Park Boulevard.

(i) Extent to which hazardous wastes / constituents have migrated:

Based upon soil borings obtained downgradient of the area of disposal and ground-water samples obtained upgradient, downgradient, and cross-gradient of the area of disposal, no significant migration of hazardous waste has occurred.

(j) Extent to which hazardous wastes / constituents are reasonable anticipated to migrate:

Since it is estimated that the practice of disposing of wastes on site took place at the TAM Ceramics facility since approximately 1920, and ended in the late 1970's, and based upon the fraction of the barium present in the sample which leached, it is not anticipated that any migration of the hazardous waste or its constituents will occur in the future.

(k) Proximity of site to areas of critical environmental concern:

There are no coastal wetlands, fresh-water wetlands, or critical habitats of an endangered species or national wildlife refuges within one mile of the site.

(l) Potential for wildlife or aquatic exposure:

As previously stated, the waste of concern is located a minimum of 4 feet bgs, which minimizes the potential for wildlife exposure. Burrowing wildlife would be unable to burrow through the C&D debris and be exposed to the hazardous waste.

Since there are no on-site water bodies, and ground-water monitoring has indicated that hazardous constituents are not migrating from the site, there is virtually no potential for aquatic exposure.

(m) Climatic and weather conditions

A complete description of climatic and weather conditions is presented in Section 3.0 of this report.

8.3 Results

(a) Impact on endangered species, threatened species, or species of concern

Based upon the nature and location of the waste disposal area, the disposal area has had no impact on any wildlife species.

(b) Impact upon protected streams, tidal wetlands, freshwater wetlands, or significant fish and wildlife habitat areas.

Based upon the location of the site and the distance to areas of critical environmental concern, the disposal area has had no impact upon protected streams, tidal wetlands, or significant fish and wildlife habitat areas.

(c) Bioaccumulation of contaminants in flora or fauna

Based upon the characteristics of the contaminants of concern, and the location of the source of such contaminants, the bioaccumulation of these contaminants in flora or fauna is not a concern.

(d) Acute or chronic effects on fish, shellfish, crustacea, or wildlife

Since the site is located in an industrial/commercial area, with the nearest significant surface water body nearly 0.5 mile to the west (the Niagara River), and the waste of concern which is buried within C&D debris a minimum of 4 feet bgs, and has not migrated through the ground-water, the disposal area has had no significant effects (acute or chronic) on fish, shellfish, crustacea, or wildlife.

(e) Impact due to a fire, spill, explosion or similar incident or reaction

Since there are no known reactive, flammable or explosive compounds on site, and any waste disposed of on-site was a by-product of the manufacture of ceramic powders (inert inorganic materials), there are no impacts due to a fire, spill, explosion or similar incident or reaction.

(f) Site location

Since the site is located in a commercial and industrial area, adjacent to additional industrial facilities and a National Priority List (NPL) Site, site location does not provide a significant risk.

(g) Significant environmental damage

The disposal of a barium-bearing waste in such an area does not constitute environmental damage. In addition, no portion or portions of the waste are leaving the site through the ground-water route. Based

upon the times of disposal, this waste has been in place for a period of time without impacting the ground-water medium.

8.4 Conclusions

(a) No Significant Threat

Based upon this significant threat analysis, the TAM Ceramics site does not present a significant threat to human health and the environment.

(b) Classification

Based upon the determination of no significant threat, the TAM Ceramics facility should be reclassified to a Class 3 Site on the Registry of Inactive Hazardous Waste Sites.

(c) Continued Action

TAM Ceramics proposes to install an additional ground-water monitoring well approximately 10 feet north of SB-9. The well will be an interface well, extending 10 feet into bedrock, with identical construction to MW-BBL1R and MW-BBL2R previously installed during this investigation.

TAM Ceramics proposes to continue monitoring ground-water upgradient (NPW-H2U), down-gradient (MW-BBL1R, and the to be installed MW-BBL3R) and cross-gradient (MW-BBL2R) of the disposal area. Monitoring would consist of ground-water sample collection and analysis for TAL metals. Monitoring will be performed on a quarterly basis for the first year. After one year of sampling, the parameters and frequency of monitoring will be re-evaluated. Statistical analysis will be performed and submitted to the NYSDEC after each sampling event to determine if metals concentrations are significantly increasing outside of the disposal area.

In addition, a letter will be sent from TAM Ceramics to Occidental Chemical regarding the Hyde Park Landfill, advising them of the wells that have been installed on TAM Ceramics property, and informing them of the ground-water monitoring program which will be implemented. This will allow Occidental Chemical the opportunity to monitor the ground water for Hyde Park indicator parameters, as necessary.

upon the times of disposal, this waste has been in place for a period of time without impacting the ground-water medium.

8.4 Conclusions

(a) No Significant Threat

Based upon this significant threat analysis, the TAM Ceramics site does not present a significant threat to human health and the environment.

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Based upon the determination of no significant threat, the TAM Ceramics facility should be reclassified to a Class 3 Site on the Registry of Inactive Hazardous Waste Sites.

(c) Continued Action

TAM Ceramics proposes to continue monitoring ground-water upgradient (NPW-H2U), down-gradient (MW-BBL1R) and cross-gradient (MW-BBL2R) of the disposal area. Monitoring would consist of ground-water sample collection and analysis for TAL metals. Monitorng will be performed on a quarterly basis for the first year, and annually thereafter. Statistical analysis will be performed and submitted to the NYSDEC after each sampling event to determine if metals concentrations are significantly increasing outside of the disposal area. The frequency of and continued need for ground-water monitoring will be re-evaluated every two years, or as the statistical analysis indicates.

REVISED

1. install additional GW MW down gradient from disposal area
2. Monitoring GW quarterly for 2 years re-evaluate at 2 yrs
3. parameters TAL metals VOC's / SVOC's

Tables

TAM CERAMICS SITE
NIAGARA FALLS, NEW YORK
SITE CHARACTERIZATION PROGRAM
WORK PLAN

NL INDUSTRIES
INDUSTRIAL PROCESSES AND PRODUCTS

PROCESSES UTILIZED	YEARS
Grinding or zircon, rutile, and zirconia	1948 - 1975
Arc furnacing of zircon and zirconia	1948 - 1975
Arc furnacing of ilmerite and rutile	1948 - 1955
Calcinating alkination of earth carbonates and titanium dioxide	1948 - 1975

PRODUCTS PRODUCED	YEARS
Iron-carbon-titanium alloys	1948 - 1970
Iron-aluminum-titanium alloys	1948 - 1965
Zircon and zirconium oxide (powders and grains)	1948 - 1975
Alkaline earth titanites and zirconates	1948 - 1975

TAM CERAMICS SITE
NIAGARA FALLS, NEW YORK
SITE CHARACTERIZATION PROGRAM
WORK PLAN

TAM CERAMICS, INC.
INDUSTRIAL PROCESSES AND PRODUCTS
1979 TO PRESENT

PROCESSES UTILIZED

Arc furnacing of zircon
Milling of zircon and zirconia
Calcination of zircon and zirconia
Mixing of dielectric powders
Calcining of dielectric powders

PRODUCTS PRODUCED

Zirconium silicate
Zirconium oxide
Titanium oxide
Sodium Titanate
Potassium Titanate
Calcium carbide with silicas
Silicas with fluorides and aluminum oxide
Dielectric powders

NOTE:

Dielectric powders are comprised of a combination of one or more of the following constituents:

Aluminum Oxide	Lanthanum Oxide
Barium Titanate	Lead Oxide
Bismuth Oxide	Magnesium Oxide
Boron Oxide	Neodymium Oxide
Cadmium Oxide	Nickel Oxide
Cerium Oxide	Niobium Oxide
Cesium Oxide	Zinc Oxide
Cobalt Oxide	Zirconium Oxide

TABLE 6-1
BACKGROUND SOIL SAMPLES
ANALYTICAL RESULTS

	BACKGROUND SOIL SAMPLES			AVERAGE BACKGROUND SOIL CONCENTRATION	MAXIMUM BACKGROUND SOIL CONCENTRATION
	BG-1	BG-2	BG-3		
Aluminum	3,360	12,900	13,300	9,850	13,300
Antimony	10.6 UN	12.1 UN	12.0 UN	11.6	12.1
Arsenic	3.88 N*	4.94 N*	4.71 N*	4.51	4.94
Barium	253	111	176	180	253
Beryllium	0.531 U	0.825	0.810	0.722	0.825
Cadmium	1.07	0.607 U	0.572	0.750	1.07
Calcium	141,000 *	4,200 *	19,800 *	55,000	141,000
Chromium	22.8 N*	27.5 N*	37.3 N*	29.2	37.3
Cobalt	5.31 U	11.0	11.5	9.30	11.5
Copper	21.2	19.5	28.2	23.0	28.2
Iron	9,750	25,000	23,600	19,500	25,000
Lead	66.8	26.0	51.1	48.0	66.8
Magnesium	76,800 *	4,950 *	8,830 *	30,200	76,800
Manganese	604	697	870	724	870
Mercury	0.106 U	0.121 U	0.119 U	0.115	0.121
Nickel	23.4 *	24.2 *	41.5 *	29.7	41.5
Potassium	637	1,480	1,850	1,320	1,850
Selenium	0.914	2.60	2.98	2.16	2.98
Silver	1.06 U	1.21 U	1.19 U	1.15	1.21
Sodium	172	60.7 U	92.8	109	172
Thallium	31.9 U	36.4 U	35.8 U	34.7	36.4
Vanadium	9.85 N*	264 N*	26.5 N*	100	264
Zinc	223	91.0	156	157	223

Documented Eastern USA Background

33000
N/A
3-12
15-600
0-1.75
0.1-1
130-35000
1.5-40
2.5-60
1-50
2000-5300
100-5000
50-5000
0.001-0.2
.5-25
850-43000
0.1-3.9
N/A
6000 850
N/A
1-300
9-50

NOTES:

All results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
Sample Results Qualifiers are as follows:

U - Not detected above the detection limit.
N - Spiked sample recovery not within control limits (entire batch flagged)
* - Duplicate analysis not within control limits (entire batch flagged)

TABLE 6-2
TEST PIT SAMPLES
ANALYTICAL RESULTS
INORGANICS

COMPOUND / ANALYTE	2-4' TP1-1	TP2-1	2-2.5' TP4-1	TP4-2	TP4-2C	TP5-1	TP6-1
Aluminum	4,530	13,045	10,300	2,500	1,780	191	6,170
Antimony	10.9 UN	13.4 UN	11.7 UN	11.6 UN	19.6	12.4 UN	18.4
Arsenic	2.07 N*	5.31 N*	11.1 N*	10.2 N*	11.4 S	6.34 N*	1.28 N
Barium	86	402	290	1,390	311	142	4,870
Beryllium	0.545 U	0.745	0.985	0.637	0.597 U	1.15	0.555 U
Cadmium	0.545 U	0.665 U	0.586 U	0.579 U	0.597 U	0.623 U	0.844
Calcium	43,400 *	4,590 *	28,100 *	3,800 *	12,800	10,700 *	11,600
Chromium	8.34 N*	45.7 N*	33.5 N*	110 N*	135	24.2 N*	25.8
Cobalt	5.45 U	12	13.6	8.85	15.5	15.4	14
Copper	37.4	81.5	70.1	363	91.5	20	161
Iron	28,000	25,000	47,800	167,000	93,900	33,900	22,600
Lead	9.26	38.3	53.7	294	457	38.5	394
Magnesium	76,800 *	4,750 *	7,820 *	356 *	170	8,207 *	3,330
Manganese	313	1,080	1,060	418	410	308	347
Mercury	0.109 U	0.133 U	0.117 U	0.129	0.268	0.125 U	3.87
Nickel	13.1 *	45 *	26.4 *	14 *	9.73	29.5 *	39.5
Potassium	663	1,046	1,770	6,410	6,900	1,990	969
Selenium	2.22	2.63	4.38	8.15	1.48	2.85	0.555 UN
Silver	1.09 U	1.33 U	1.17 U	1.16 U	3.6	1.24 U	38.1
Sodium	39,000	177	712	6,709	5,330	1,330	610
Thallium	32.7 U	39.9 U	70.3 U	348 U	477	37.4 U	111 U
Vanadium	10.1 N*	36.3 N*	58.2 N*	171 N*	196	31.4 N*	31.1
Zinc	119	132	116	77	70.6	180	690
Silica	NA	NA	NA	NA	NA	NA	NA
Zirconium	NA	NA	NA	NA	NA	NA	NA

NOTES:

All results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
Sample Results Qualifiers are as follows:

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TABLE 6-2
TEST PIT SAMPLES
ANALYTICAL RESULTS
INORGANICS

COMPOUND / ANALYTE	TP7-1	TP7-1C	TP8-1	TP8-2	TP8-3	TP9-1	TP9-2
Aluminum	1,650 N*	4,410	1,180 N*	439 N*	709 N*	4,130 N*	2,450 N*
Antimony	13.4 N*	16.6	14.8 UN*	15.8 UN*	18.1 N*	17.6 UN*	34.8 N*
Arsenic	5.52	1.36	24.8	47.7	83.1	55	5.8
Barium	27,400	19,600	52	61	129	272	262,000
Beryllium	0.602 U	0.561 U	0.742 U	0.79 U	0.718	0.882 U	0.551 U
Cadmium	3.1	2.3	0.742 U	0.79 U	0.665 U	0.882 U	1.4
Calcium	10,400	38,000	2,140	6,970	12,800	2,010	26,700
Chromium	15.6	29.9	1.56	1.58 U	6.14	10.7	412
Cobalt	19	20.5	7.42 U	7.9 U	9.39	12.1	94.8
Copper	48.1	70	17.7	22.1	99.7	34.7	49.7
Iron	5,790 *	10,600	9,150 *	11,800 *	107,000	20,400 *	8,630 *
Lead	79.5	65.9	7.42 U	7.9 U	6.65	25.2	3580
Magnesium	2,730	21,900	74,900	197,000	4,690	13,400	8,170
Manganese	130 *	395	148 *	133 *	525 *	453 *	190 *
Mercury	1.42	0.748	0.148 U	0.158 U	0.133 U	0.176 U	5.51
Nickel	22.3	26.6	6.36	6.32 U	31.1	23.3	261
Potassium	295 *	686	263 *	158 U*	225 *	411 *	529 *
Selenium	2.66	0.561 U	18.1	34.9	64.9	44.3	1.54
Silver	32.7	5.84	131	118	441	229	80.3
Sodium	155	152	24,200	79 U	153	234,000	1,380
Thallium	361 U	673	44.5 U	64	43.1	52.9 U	1650 U
Vanadium	14.4	16.1	12.7	8.52	31.9	24.3	20
Zinc	2270 *	1180	12.7 *	12.2 *	27 *	45.2 *	65.5 *
Silica	NA	NA	3.19	7.23	12.9	1.81	14.3
Zirconium	4400	NA	24600	25800	88000	450	7980

NOTES:

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TABLE 6-2
TEST PIT SAMPLES
ANALYTICAL RESULTS
INORGANICS

COMPOUND / ANALYTE	TP9-2C	TP10-1	TP10-2	TP10-2C	TP12-1	TP13-1	TP13-2
Aluminum	1,170	632 N*	221 N*	416	2,620 N*	286 N*	694 N*
Antimony	10.8 U	23.9 UN*	13.3 UN*	16.3 U	12.1 UN	19.1 UN*	78.1 N*
Arsenic	0.541 U	195	6.3	0.813 S	3.43	180	513
Barium	513,000	524	15	709	262	156	408
Beryllium	0.541 U	1.2 U	0.665 U	0.813 U	0.605 U	0.954 U	1.89 U
Cadmium	0.541 U	1.2 U	0.665 U	0.813 U	0.605 U	0.954 U	1.89 U
Calcium	4,830	8,660	449	17,700	2,640	7,630	2,920
Chromium	5.51	23.9	3.94	82	20.8	19.1 U	37.7 U
Cobalt	38.1	12 U	6.65 U	8.13 U	6.05 U	9.54 U	18.9 U
Copper	16.7	34	57.4	27.8	35.6	13.1	20
Iron	6,550	35,900 *	5,820 *	36,100	4,620 *	9,710 *	13,500 *
Lead	996	12 U	6.65 U	110	60.3	16.4	21.2
Magnesium	440	8,950	246,000	255,000	1,370	4,330	2,060
Manganese	48	407 *	237 *	202	143 *	148 *	52 *
Mercury	6.74	0.239 U	0.133 U	0.163 U	0.121 U	0.191 U	0.377 U
Nickel	4.33 U	16.1	9.11	19.2	13	8.38	15.1 U
Potassium	206	256 *	133 U*	163 U	530 *	191 U*	724 *
Selenium	0.541 U	164	0.665 U	0.813 U	0.690	146	419
Silver	60.2	1130	9.72	149	4.21	954	2940
Sodium	1,050	239	137	468	60.5	676	282
Thallium	649	71.8 U	48.5	42.3	36.3 U	572 U	1130 U
Vanadium	7.75	77.3	6.65 U	12.5	15.1	67.8	202
Zinc	19.5	59.1 *	1.33 U*	56.6	52.5 *	18.5 *	11.4 *
Silica	NA	NA	NA	NA	NA	NA	NA
Zirconium	NA	225000	1760	NA	NA	NA	288000

NOTES:

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TABLE 6-2
TEST PIT SAMPLES
ANALYTICAL RESULTS
INORGANICS

COMPOUND / ANALYTE	TP15-1	TP15-1C
Aluminum	1,370 N*	1,260
Antimony	10.8 UN*	10.1 U
Arsenic	8.54	0.504 U
Barium	42,700	3,360
Beryllium	0.541 U	0.504 U
Cadmium	1.94	0.785
Calcium	1,380	6,980
Chromium	12.8	14.7
Cobalt	22.2	11.7
Copper	36.5	165
Iron	6,170 *	7,530
Lead	60.9	176
Magnesium	3,370	2,340
Manganese	177 *	98
Mercury	0.944	1.5
Nickel	12.5	13.2
Potassium	229 *	178
Selenium	6.12	0.504 U
Silver	35.5	13
Sodium	188	387
Thallium	324 U	151
Vanadium	12.5	10.6
Zinc	1570 *	479
Silica	NA	NA
Zirconium	3660	NA

NOTES:

All results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
Sample Results Qualifiers are as follows:

- U - Not detected above the detection limit.
- N - Spiked sample recovery not within control limits (entire batch flagged)
- * - Duplicate analysis not within control limits (entire batch flagged)

TABLE 6-3
TEST PIT SAMPLES
ANALYTICAL RESULTS - VOLATILES

COMPOUND / ANALYTE	*TP13-1*	*TP13-3*
Chloromethane	9.6 U	70
Bromomethane	9.6 U	37 U
Vinyl Chloride	9.6 U	37 U
Chloroethane	9.6 U	37 U
Methylene Chloride	9.6 U	37 U
Acetone	100	460
Carbon Disulfide	19 U	74 U
1,1-Dichloroethene	9.6 U	37 U
1,1-Dichloroethane	9.6 U	37 U
trans-1,2-Dichloroethene	9.6 U	37 U
cis-1,2-Dichloroethene	9.6 U	37 U
Chloroform	9.6 U	37 U
2-Butanone (MEK)	19 U	74 U
1,2-Dichloroethane	9.6 U	37 U
1,1,1-Trichloroethane	9.6 U	37 U
Carbon Tetrachloride	9.6 U	37 U
Bromodichloromethane	9.6 U	37 U
1,2-Dichloropropane	9.6 U	37 U
1,3-Dichloropropene	9.6 U	37 U
Trichloroethene	9.6 U	37 U
Dibromochloromethane	9.6 U	37 U
1,1,2-Trichloroethane	9.6 U	37 U
Benzene	9.6 U	37 U
1,3-Dichloropropene	9.6 U	37 U
Bromoform	9.6 U	37 U
4-Methyl-2-pentanone	19 U	74 U
2-Hexanone	19 U	74 U
Tetrachloroethene	9.6 U	37 U
1,1,2,2-Tetrachloroethane	9.6 U	37 U
Toluene	9.6 U	37 U
Chlorobenzene	9.6 U	37 U
Ethylbenzene	9.6 U	37 U
Styrene	9.6 U	37 U
Total Xylenes	9.6 U	92

NOTES:

All results are reported in micrograms per kilogram (ug/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-4
TEST PIT SAMPLES
ANALYTICAL RESULTS - SEMIVOLATILES

COMPOUND / ANALYTE	*TP8-3*	*TP13-1*	*TP13-3*
Phenol	890 U	1,300 U	2,600 U
2-Chlorophenol	890 U	1,300 U	2,600 U
2-Nitrophenol	890 U	1,300 U	2,600 U
2,4-Dimethylphenol	890 U	1,300 U	2,600 U
2,4-Dichlorophenol	890 U	1,300 U	2,600 U
4-Chloro-3-methylphenol	890 U	1,300 U	2,600 U
2,4,6-Trichlorophenol	890 U	1,300 U	2,600 U
2,4-Dinitrophenol	1,800 U	2,600 U	5,100 U
4-Nitrophenol	1,800 U	2,600 U	5,100 U
2-Methyl-4,6-dinitrophenol	1,800 U	2,600 U	5,100 U
Pentachlorophenol	1,800 U	2,600 U	5,100 U
2-Methylphenol	890 U	1,300 U	2,600 U
4-Methylphenol	890 U	1,300 U	2,600 U
2,4,5-Trichlorophenol	890 U	1,300 U	2,600 U
N-Nitrosodimethylamine	440 U	640 U	1,300 U
Bis (2-chloroethyl) ether	440 U	640 U	1,300 U
1,3-Dichlorobenzene	440 U	640 U	1,300 U
1,4-Dichlorobenzene	440 U	640 U	1,300 U
1,2-Dichlorobenzene	440 U	640 U	1,300 U
2,2-oxybis(1-Chloropropane)	440 U	640 U	1,300 U
N-Nitroso-Di-n-propylamine	440 U	640 U	1,300 U
Hexachloroethane	440 U	640 U	1,300 U
Nitrobenzene	440 U	640 U	1,300 U
Isophorone	440 U	640 U	1,300 U
bis(2-choroethoxy)methane	440 U	640 U	1,300 U
1,2,4-Trichlorobenzene	440 U	640 U	1,300 U
Naphthalene	440 U	640 U	1,300 U
Hexachlorobutadiene	440 U	640 U	1,300 U
Hexachlorocyclopentadiene	440 U	640 U	1,300 U
2-Chloronaphthalene	440 U	640 U	1,300 U
Dimethyl Phthalate	440 U	640 U	1,300 U
Acenaphthylene	440 U	640 U	1,300 U
Acenaphthene	440 U	640 U	1,300 U
2,4-Dinitrotoluene	440 U	640 U	1,300 U
2,6-Dinitrotoluene	440 U	640 U	1,300 U
Diethyl Phthalate	440 U	640 U	1,300 U
4-Chlorophenyl-phenylether	440 U	640 U	1,300 U
Fluorene	440 U	640 U	1,300 U
1,2-Diphenylhydrazine	440 U	640 U	1,300 U
N-Nitrosodiphenylamine	440 U	640 U	1,300 U
4-Bromophenyl-phenylether	440 U	640 U	1,300 U
Hexachlorobenzene	440 U	640 U	1,300 U
Phenanthrene	440 U	640 U	1,300 U
Anthracene	440 U	640 U	1,300 U
Di-n-butyl phthalate	440 U	640 U	1,300 U
Fluranthene	440 U	640 U	1,300 U
Pyrene	440 U	640 U	1,300 U
Butyl benzyl phthalate	440 U	640 U	1,300 U
3-3'-Dichlorobenzidine	440 U	640 U	1,300 U
Benzo(a)anthracene	440 U	640 U	1,300 U
Bis (2-ethylhexyl)phthalate	440 U	640 U	1,300 U
Chrysene	440 U	640 U	1,300 U
Di-n-octyl phthalate	440 U	640 U	1,300 U
Benzo(b)Fluoranthene	440 U	640 U	1,300 U
Benzo(k)Fluoranthene	440 U	640 U	1,300 U
Benzo(a)pyrene	440 U	640 U	1,300 U
Indeno(1,2,3-cd)pyrene	440 U	640 U	1,300 U
4-Chloroaniline	440 U	640 U	1,300 U
2-Methyl Naphthalene	440 U	640 U	1,300 U
2-Nitroaniline	440 U	640 U	1,300 U
3-Nitroaniline	440 U	640 U	1,300 U
Dibenzofuran	440 U	640 U	1,300 U
4-Nitroaniline	440 U	640 U	1,300 U
Carbazole	440 U	640 U	1,300 U

NOTES:

All results are reported in micrograms per kilogram (ug/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-5
TEST PIT SAMPLES
ANALYTICAL RESULTS - TCLP ANALYSES

	TCLP Limit	*TP4-2C*	*TP7-1C*	*TP9-2C*	*TP10-2C*	*TP13-1C*	*TP13-2*	*TP15-1C*
Arsenic	5	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Barium	100	1.00 U	4.34	**682**	1.00 U	2.22	1.37	3.87
Cadmium	1	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Chromium	5	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Lead	5	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U
Mercury	0.2	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Selenium	2	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U
Silver	5	0.100 U	0.100 U	0.205	0.100 U	0.100 U	0.100 U	0.100 U

NOTES:

All results are reported in milligrams per liter (mg/l)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-6
MISCELLANEOUS ANALYSES
SAMPLE TP13-1

	TP13-1
Specific Gravity	1.154
pH	7.82
Ignitability	> 100 C
Total Cyanide	ND
Total Sulfide	ND
Total Petroleum Hydrocarbons	ND
Total Organic Carbon	0.803%
Total Organic Halogens	ND
Percent Solids	42
Percent Water	59.4
Oil & Grease	ND
Soluble in Cold Water?	Yes
Soluble in Hot Water?	Yes
Soluble in Hexane?	No
Soluble in Methylene Chloride?	No

NOTES:

ND - Not Detected

TABLE 6-7
Test Pit Samples
U + Th Results and Analysis
Test Pit 12

ISOTOPE	*ACTIVITY (pCI/GM)*
TOTAL U	100 - 120
TH-230	1.8 - 2.2
TH-232	0.42 - 0.54
TH-228	.81 - 1.01
U-238 / TH-234	100 - 120
U-235	1.4 - 8.0

Uranium Activity (Maximum): 1.200E-10 Ci/gm
Thorium Activity (Maximum): 1.238E-10 Ci/gm

Reportable Quantities (from 40 CFR 302, Appendix B):
- o Uranium 0.052 Ci
- o Thorium 0.011 Ci

Mass Required for reportable Quantities:

o Uranium 433333333 grams
= 955500 pounds
= 478 tons
<=> **217 cubic yards**

o Thorium 88888889 grams
= 196000 pounds
= 98 tons
<=> **45 cubic yards**

TABLE 6-8
IVEX SOLUTION
ANALYTICAL RESULTS - TAL METALS

	IVEX
Aluminum	97.6
Antimony	47.4 U
Arsenic	129
Barium	33.2
Beryllium	2.37 U
Cadmium	2.37 U
Calcium	943
Chromium	4.73 U
Cobalt	23.7 U
Copper	9.48 U
Iron	3,040
Lead	23.7 U
Magnesium	237 U
Manganese	5.45
Mercury	0.474 U
Nickel	19.0 U
Potassium	474 U
Selenium	114
Silver	277
Sodium	465
Thallium	142 U
Vanadium	23.7 U
Zinc	177,000

NOTES:

All results are reported in milligrams per kilogram (mg/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-9
SOIL BORINGS
ANALYTICAL RESULTS
INORGANICS

	SB1-0	SB1-8	SB2-10	SB3-2	SB3-4	SB3-4D	SB3-10	SB4-0
Aluminum	16,600	11,800	2,950	18,600	20,500	24,800	4,560	21,000
Antimony	11.4 UN	11.5 UN	11.0 UN	11.9 UN	12.2 UN	11.9 UN	12.0 UN	12.0 UN
Arsenic	6.39	5.68	5.16	4.75	5.66	5.77	5.64	5.50
Barium	485.0 *	65.0 *	12.8 *	114.0 *	151.0 *	170.0 *	15.2 *	114.0 *
Beryllium	0.569 U	0.574 U	0.551 U	0.795	0.769	1.020	0.600 U	0.718
Cadmium	4.94	2.47	1.85	4.28	4.43	3.65	1.66	3.06
Calcium	30,200	80,700	150,000	4,600	87,500	14,200	173,000	2,130
Chromium	80.60	13.90	5.44	24.30	27.10	33.10	5.40	25.10
Cobalt	20.30	8.77	5.51 U	15.10	15.00	16.60	6.00 U	20.40
Copper	101.00	16.20	9.74	23.00	39.30	32.20	5.55	18.40
Iron	36,000	18,100	5,750	29,600	23,900	31,400	5,890	27,000
Lead	28.9	10.9	34.6	8.21	12.2	12.4	16.7	17.6
Magnesium	8,280	27,300	82,600	7,510	13,400	10,100	101,000	5,000
Manganese	2,060	544	455	614	606	701	346	1,300
Mercury	0.29	0.115 U	0.11 U	0.329	0.122 U	0.119 U	0.12 U	0.12 U
Nickel	42.6	16.2	4.56	26.7	28.6	32.2	5.73	24.3
Potassium	1,360 N	1,860 N	656	1,640 N	2,760 N	2,530 N	719 N	1,330 N
Selenium	5.67 N	2.89 N	2.07 N	4.08 N	4.72 N	4.23 N	2.01 N	4.39 N
Silver	1.17	28.4	1.1 UN	1.19 U	4.88 U	1.19 U	4.8 U	1.2 U
Sodium	268	217	190	171	196	191	247	79.4
Thallium	34.2 U	34.4 U	33 U	35.6 U	36.6 U	35.6 U	36 U	35.9 U
Vanadium	43.3	18.5	6.91	30.8	34.2	38.5	9.09	36.6
Zinc	107	131	234	60.1	77.3	77.8	267	94.1
Silica	N/A	N/A	5.31	N/A	N/A	N/A	N/A	N/A
Zirconium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:

All results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
Sample Results Qualifiers are as follows:

- U - Not detected above the detection limit.
- N - Spiked sample recovery not within control limits (entire batch flagged)
- * - Duplicate analysis not within control limits (entire batch flagged)

TABLE 6-9
SOIL BORINGS
ANALYTICAL RESULTS
INORGANICS

	SB4-8	*SB6-4*	*SB6-6*	*SB6-8*	*SB7-0*	*SB7-2*	*SB9-6*	*SB13-4*
Aluminum	5,740	20,400	14,400	3,540	27,300	18,500	5,580	19,200
Antimony	11.9 UN	12.1 UN	11.7 UN	11.1 UN	11.7 UN	11.7 UN	11.1 UN	10.6 UN
Arsenic	7.83	5.91	4.16	5.89	5.77	5.41	2.10	6.27
Barium	16.0 *	198.0 *	85.6 *	20.4 *	165.0 *	102.0 *	90.7 *	86.7 *
Beryllium	0.597 U	0.850	0.609	0.554 U	1.170	0.622	0.556 U	0.626
Cadmium	1.64	3.54	2.75	2.97	3.70	3.53	1.64	2.73
Calcium	190,000	30,800	44,400	155,000	3,640	55,500	19,300	65,200
Chromium	7.06	32.30	24.10	5.38	30.80	22.10	12.90	18.60
Cobalt	6.00 U	16.40	12.60	5.54 U	23.40	14.80	6.43	8.21
Copper	12.20	28.60	20.10	10.30	26.80	22.40	10.90	20.30
Iron	4,930	30,700	23,800	7,050	34,200	26,300	12,100	21,400
Lead	80.3	18	5.69	14.6	12.3	21.6	8.74	54.8
Magnesium	112,000	16,300	9,570	91,400	8,110	14,700	11,900	40,800
Manganese	256	752	582	666	651	750	501	745
Mercury	0.119 U	0.121 U	0.117 U	0.111 U	0.117 U	0.117 U	0.111 U	0.106 U
Nickel	6.05	32.2	23	5.09	34	28	9.32	20.3
Potassium	809 N	2,750 N	2,490 N	620 N	3,500 N	3,450 N	1,150 N	2,220
Selenium	2.12 N	5 N	3.57 N	1.82 N	4.86 N	3.73 N	1.96 N	3.69 N
Silver	2.39 U	25.6	1.17 U	2.22 N	1.17 U	1.17 U	1.11 U	1.06 UN
Sodium	264	138	149	188	90.6	15.2	117	160
Thallium	35.8 U	36.4 U	35.1 U	33.3 U	35 U	35.2 U	33.3 U	31.8
Vanadium	10.9	33.7	24.4	8.27	33.2	28.3	13.9	26.3
Zinc	335	90	54.6	105	84	238	46.2	168
Silica	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zirconium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:

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Sample Results Qualifiers are as follows:

U - Not detected above the detection limit.
N - Spiked sample recovery not within control limits (entire batch flagged)
* - Duplicate analysis not within control limits (entire batch flagged)

TABLE 6-9
SOIL BORINGS
ANALYTICAL RESULTS
INORGANICS

	SB15-2	*SB15-4*	*SB15-6*	*SB16-2*	*SB16-4*	*BBL1-2*	*BBL1-4*	*BBL1-6*
Aluminum	22,800	22,000	11,600 *	29,000	20,800	21,700	17,300	13,200
Antimony	11.7 UN	12.0 UN	12.1 UN	12.3 UN	10.9 UN	11.3 UN	11.7 UN	12.0 UN
Arsenic	4.93	5.53	4.19 N*	5.20	5.20	6.16	4.39	4.65
Barium	159.0 *	171.0 *	101.0 *	176.0 *	138.0 *	128.0 *	128.0 *	71.5 *
Beryllium	0.993	0.986	0.603 U	0.944	0.678	0.792	0.584 U	0.598 U
Cadmium	3.45	3.82	4.62 N*	3.44	2.74	3.26	2.69	2.58
Calcium	6,920	38,300	37,200	70,600	58,900	37,400	58,200	47,200
Chromium	29.70	28.20	14.70 *	35.70	25.90	26.50	22.40	18.10
Cobalt	15.20	21.60	11.50 *	16.10	12.10	15.50	13.10	12.00
Copper	25.20	27.80	15.70 *	23.70	19.00	23.80	18.50	19.00
Iron	31,900	32,700	18,800	31,400	23,000	29,400	24,100	22,200
Lead	11.9	11.8	21.1	10.9	20.1	10.9	8.17	7.08
Magnesium	9,650	12,600	26,300 *	12,900	24,600	13,100	12,300	11,500
Manganese	410	1,100	1,230 *	555	646	495	508	566
Mercury	0.117 U	0.12 U	0.121 U	0.123 U	0.109 U	0.113 U	0.117 U	0.12 U
Nickel	31.2	40.9	22.2 *	33.2	25.4	30.2	24.9	24.3
Potassium	3,390 N	3,830 N	1,450 N	5,970	4,240 N	4,080 N	3,290 N	2,620 N*
Selenium	4.73 N	4.66 N	3.1 N	4.84 N	4.18 N	4.17 N	3.7 N	3.34 N
Silver	1.17 U	16.2	4.83 U	1.22 UN	1.09 U	1.13 U	1.17 U	1.2 U
Sodium	136	178	124 *	223	162	296	271	243
Thallium	35 U	36 U	36.2 U	36.8	32.8 U	33.9 U	35 U	35.9 U
Vanadium	33.6	34.7	19.7 *	40.6	29	31	27.8	23.4
Zinc	74.2	74.3	550 *	75.3	92.2	75.3	58.4	54.6
Silica	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zirconium	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

NOTES:

All results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
Sample Results Qualifiers are as follows:

U - Not detected above the detection limit.
N - Spiked sample recovery not within control limits (entire batch flagged)
* - Duplicate analysis not within control limits (entire batch flagged)

TABLE 6-9
SOIL BORINGS
ANALYTICAL RESULTS
INORGANICS

	BBL1-8		*BBL2-2*		*BBL2-4*	
Aluminum	4,670		14,500		9,690	
Antimony	11.7	UN	11.7	UN	11.6	UN
Arsenic	1.08		4.42		4.34	
Barium	15.3	*	99.4	*	59.5	*
Beryllium	0.584	U	0.585	U	0.580	U
Cadmium	1.41		2.74		2.37	
Calcium	22,700		55,800		58,500	
Chromium	6.58		18.80		12.80	
Cobalt	5.84	U	11.70		9.62	
Copper	7.34		22.90		30.40	
Iron	10,200		19,500		17,700	
Lead	5.84	U	5.85	U	5.8	U
Magnesium	4,190		9,170		9,920	
Manganese	479		571		647	
Mercury	0.117	U	0.117	U	0.116	U
Nickel	8.73		20.8		14.6	
Potassium	944	N	2,330	N	1,320	N
Selenium	1.22	N	3.15	N	2.84	N
Silver	1.17	U	1.17	U	1.16	U
Sodium	130		271		133	
Thallium	35	U	35.1	U	34.8	U
Vanadium	9.1		28		20.1	
Zinc	75.5		55.4		145	
Silica	N/A		N/A		N/A	
Zirconium	N/A		N/A		N/A	

NOTES:

All results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
Sample Results Qualifiers are as follows:

U - Not detected above the detection limit.
N - Spiked sample recovery not within control limits (entire batch flagged)
* - Duplicate analysis not within control limits (entire batch flagged)

TABLE 6-10
BORING SAMPLES
ANALYTICAL RESULTS - VOLATILES

COMPOUND / ANALYTE	*SB2-8*	*SB3-10*	*SB4-0*	*SB6-8*	*SB13-4*	*BBL2-4*
Chloromethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Bromomethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Vinyl Chloride	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Chloroethane	6,800 U	12 U	12 U	11 U	11 U	12 U
Methylene Chloride	6,800 U	12 U	12 U	11 U	11 U	12 U
Acetone	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Carbon Disulfide	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
1,1-Dichloroethene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
1,1-Dichloroethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
trans-1,2-Dichloroethene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
cis-1,2-Dichloroethene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Chloroform	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
2-Butanone (MEK)	6,800 U	12 U	12 U	11 U	11 U	12 U
1,2-Dichloroethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
1,1,1-Trichloroethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Carbon Tetrachloride	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Bromodichloromethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
1,2-Dichloropropane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
1,3-Dichloropropene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Trichloroethene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Dibromochloromethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
1,1,2-Trichloroethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Benzene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
1,3-Dichloropropene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Bromoform	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
4-Methyl-2-pentanone	6,800 U	12 U	12 U	11 U	11 U	12 U
2-Hexanone	6,800 U	12 U	12 U	11 U	11 U	12 U
Tetrachloroethene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
1,1,2,2-Tetrachloroethane	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Toluene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Chlorobenzene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Ethylbenzene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Styrene	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U
Total Xylenes	3,400 U	6.0 U	6.0 U	5.6 U	5.3 U	5.8 U

NOTES:

All results are reported in micrograms per kilogram (ug/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-11
SOIL BORING SAMPLES
ANALYTICAL RESULTS - SEMIVOLATILES

COMPOUND / ANALYTE	SB2-8	SB3-10	SB4-0	BBL2-4
Phenol	730 U	800 U	790 U	780 U
2-Chlorophenol	730 U	800 U	790 U	780 U
2-Nitrophenol	730 U	800 U	790 U	780 U
2,4-Dimethylphenol	730 U	800 U	790 U	780 U
2,4-Dichlorophenol	730 U	800 U	790 U	780 U
4-Chloro-3-methylphenol	730 U	800 U	790 U	780 U
2,4,6-Trichlorophenol	730 U	800 U	790 U	780 U
2,4-Dinitrophenol	1500 U	1600 U	1600 U	1600 U
4-Nitrophenol	1500 U	1600 U	1600 U	1600 U
2-Methyl-4,6-dinitrophenol	1500 U	1600 U	1600 U	1600 U
Pentachlorophenol	1500 U	1600 U	1600 U	1600 U
2-Methylphenol	730 U	800 U	790 U	780 U
4-Methylphenol	730 U	800 U	790 U	780 U
2,4,5-Trichlorophenol	730 U	800 U	790 U	780 U
N-Nitrosodimethylamine	360 U	400 U	400 U	390 U
Bis (2-chloroethyl) ether	360 U	400 U	400 U	390 U
1,3-Dichlorobenzene	360 U	400 U	400 U	390 U
1,4-Dichlorobenzene	360 U	400 U	400 U	390 U
1,2-Dichlorobenzene	360 U	400 U	400 U	390 U
2,2-oxybis(1-Chloropropane)	360 U	400 U	400 U	390 U
N-Nitroso-Di-n-propylamine	360 U	400 U	400 U	390 U
Hexachloroethane	360 U	400 U	400 U	390 U
Nitrobenzene	360 U	400 U	400 U	390 U
Isophorone	360 U	400 U	400 U	390 U
bis(2-choroethoxy)methane	360 U	400 U	400 U	390 U
1,2,4-Trichlorobenzene	360 U	400 U	400 U	390 U
Naphthalene	360 U	400 U	400 U	390 U
Hexachlorobutadiene	360 U	400 U	400 U	390 U
Hexachlorocyclopentadiene	360 U	400 U	400 U	390 U
2-Chloronaphthalene	360 U	400 U	400 U	390 U
Dimethyl Phthalate	360 U	400 U	400 U	390 U
Acenaphthylene	360 U	400 U	400 U	390 U
Acenaphthene	360 U	400 U	400 U	390 U
2,4-Dinitrotoluene	360 U	400 U	400 U	390 U
2,6-Dinitrotoluene	360 U	400 U	400 U	390 U
Diethyl Phthalate	360 U	400 U	400 U	390 U
4-Chlorophenyl-phenylether	360 U	400 U	400 U	390 U
Fluorene	360 U	400 U	400 U	390 U
1,2-Diphenylhydrazine	360 U	400 U	400 U	390 U
N-Nitrosodiphenylamine	360 U	400 U	400 U	390 U
4-Bromophenyl-phenylether	360 U	400 U	400 U	390 U
Hexachlorobenzene	360 U	400 U	400 U	390 U
Phenanthrene	360 U	400 U	400 U	390 U
Anthracene	360 U	400 U	400 U	390 U
Di-n-butyl phthalate	630	780	630	700
Fluoranthene	360 U	400 U	410	390 U
Pyrene	360 U	400 U	400 U	390 U
Butyl benzyl phthalate	360 U	400 U	400 U	390 U
3-3'-Dichlorobenzidine	360 U	400 U	400 U	390 U
Benzo(a)anthracene	360 U	400 U	400 U	390 U
Bis (2-ethylhexyl)phthalate	360 U	400 U	400 U	390 U
Chrysene	360 U	400 U	400 U	390 U
Di-n-octyl phthalate	360 U	400 U	400 U	390 U
Benzo(b)Fluoranthene	360 U	400 U	400 U	390 U
Benzo(k)Fluoranthene	360 U	400 U	400 U	390 U
Benzo(a)pyrene	360 U	400 U	400 U	390 U
Indeno(1,2,3-cd)pyrene	360 U	400 U	400 U	390 U
4-Chloroaniline	360 U	400 U	400 U	390 U
2-Methyl Naphthalene	360 U	400 U	400 U	390 U
2-Nitroaniline	360 U	400 U	400 U	390 U
3-Nitroaniline	360 U	400 U	400 U	390 U
Dibenzofuran	360 U	400 U	400 U	390 U
4-Nitroaniline	360 U	400 U	400 U	390 U
Carbazole	360 U	400 U	400 U	390 U
2-Chlorobenzotrifluoride (*)	730 U	800 U	790 U	780 U
3,4-Chlorobenzotrifluoride (*)	730 U	800 U	790 U	780 U
1,2,3,5-Tetrachlorobenzene (*)	730 U	800 U	790 U	780 U
1,2,4,5-Tetrachlorobenzene (*)	730 U	800 U	790 U	780 U
1,2,3,4-Tetrachlorobenzene (*)	730 U	800 U	790 U	780 U

NOTES:

(*) - Hyde Park Indicator Parameters

All results are reported in micrograms per kilogram (ug/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-12
SOIL BORING SAMPLES
ANALYTICAL RESULTS - PESTICIDES AND PCBs

COMPOUND / ANALYTE	*SB2-8*	*SB3-10*	*SB4-0*	*SB6-8*	*SB13-4*	*BBL2-4*
Alpha BHC	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Beta BHC	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Gamma BHC (Liindane)	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Heptachlor	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Delta BHC	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Aldrin	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Heptachlor Epoxide	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Alpha - Endosulfan	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
4,4'-DDE	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
dieldrin	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Endrin	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
4,4'-TDE (DDD)	1.8 U	2.0 U	2.0 U	1.9 U	1.8 U	1.9 U
Beta-Endosulfan	3.6 U	4.1 U	4.0 U	3.7 U	3.5 U	3.9 U
4,4'-DDT	3.6 U	4.1 U	5.3	3.7 U	3.5 U	3.9 U
Endrin Aldehyde	3.6 U	4.1 U	4.0 U	3.7 U	3.5 U	3.9 U
Endosulfan Sulfate	3.6 U	4.1 U	4.0 U	3.7 U	3.5 U	3.9 U
Methoxychlor	7.2 U	8.1 U	7.9 U	7.4 U	7.1 U	7.8 U
Endrin Ketone	3.6 U	4.1 U	4.0 U	3.7 U	3.5 U	3.9 U
Chlordane	7.2 U	8.1 U	7.9 U	7.4 U	7.1 U	7.8 U
Toxaphene	36 U	41 U	40 U	37 U	35 U	39 U
PCB 1016	18 U	20 U	20 U	19 U	18 U	19 U
PCB 1221	18 U	20 U	20 U	19 U	18 U	19 U
PCB 1232	18 U	20 U	20 U	19 U	18 U	19 U
PCB 1242	18 U	20 U	20 U	19 U	18 U	19 U
PCB 1248	18 U	20 U	20 U	19 U	18 U	19 U
PCB 1254	18 U	20 U	20 U	19 U	18 U	19 U
PCB 1260	18 U	20 U	20 U	19 U	18 U	19 U

NOTES:

All results are reported in micrograms per kilogram (ug/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-13
SURFACE SOIL SAMPLES
ANALYTICAL RESULTS - INORGANICS

	SS-1	*SS-2*	*SS-5*	*SS-5D*	*SS-6*
Aluminum	6,870	10,700	13,600	122	11,800
Antimony	11.2 U	12.6 U	15.2	11.6 U	11.4 U
Arsenic	4.72	7.92	3.84	3.1	3.81
Barium	594	278	14,200	20,700	265
Beryllium	0.559 U	0.704	0.782	0.804	0.682
Cadmium	1.64	2.12	1.79	1.55	2.35
Calcium	2413	3,840	19,800	20,600	50,700
Chromium	33	83.4	24.1	27.5	23.9
Cobalt	6	9.59	16.6	21.3	8.45
Copper	35.3	50.9	34.9	37.9	30.3
Iron	33000	25,400	25,500	24,700	25,000
Lead	58	65.2	49.7	77.6	42.8
Magnesium	2180	3,390	10,900	9,940	19,200
Manganese	521	1100	745	723	704
Mercury	0.16	0.529	0.269	0.393	0.114 U
Nickel	33.4	49.7	26.8	29.4	25.9
Potassium	735	1,330	1,500	1,470	1,890
Selenium	2	2.66	3.53	3.85	2.18
Silver	1.18	1.26 U	21.2	34	1.23
Sodium	55.9 U	62.8 U	171	181	90.4
Thallium	33.5	37.7	345 U	350 U	34.1
Vanadium	17.6	27.4	28.3	31	23.2
Zinc	397	136	145	164	142

NOTES:

All results are reported in milligrams per kilogram (mg/kg) or parts per million (ppm)
Sample Results Qualifiers are as follows:

U - Not detected above the detection limit.

TABLE 6-14
SURFACE SOIL SAMPLES
ANALYTICAL RESULTS - VOLATILES

COMPOUND / ANALYTE	*SS-5*	*SS-6*
Chloromethane	5.7 U	5.7 U
Bromomethane	5.7 U	5.7 U
Vinyl Chloride	5.7 U	5.7 U
Chloroethane	5.7 U	5.7 U
Methylene Chloride	5.7 U	5.7 U
Acetone	16	11 U
Carbon Disulfide	11 U	11 U
1,1-Dichloroethene	5.7 U	5.7 U
1,1-Dichloroethane	5.7 U	5.7 U
trans-1,2-Dichloroethene	5.7 U	5.7 U
cis-1,2-Dichloroethene	5.7 U	5.7 U
Chloroform	5.7 U	5.7 U
2-Butanone (MEK)	11 U	11 U
1,2-Dichloroethane	5.7 U	5.7 U
1,1,1-Trichloroethane	5.7 U	5.7 U
Carbon Tetrachloride	5.7 U	5.7 U
Bromodichloromethane	5.7 U	5.7 U
1,2-Dichloropropane	5.7 U	5.7 U
1,3-Dichloropropene	5.7 U	5.7 U
Trichloroethene	5.7 U	5.7 U
Dibromochloromethane	5.7 U	5.7 U
1,1,2-Trichloroethane	5.7 U	5.7 U
Benzene	5.7 U	5.7 U
1,3-Dichloropropene	5.7 U	5.7 U
Bromoform	5.7 U	5.7 U
4-Methyl-2-pentanone	11 U	11 U
2-Hexanone	11 U	11 U
Tetrachloroethene	5.7 U	5.7 U
1,1,2,2-Tetrachloroethane	5.7 U	5.7 U
Toluene	5.7 U	5.7 U
Chlorobenzene	5.7 U	5.7 U
Ethylbenzene	5.7 U	5.7 U
Styrene	5.7 U	5.7 U
Total Xylenes	5.7 U	5.7 U

NOTES:

All results are reported in micrograms per kilogram (ug/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-15
SURFACE SOIL SAMPLES
ANALYTICAL RESULTS - SEMIVOLATILES

COMPOUND / ANALYTE	*SS-5*	*SS-6*
Phenol	770 U	760 U
2-Chlorophenol	770 U	760 U
2-Nitrophenol	770 U	760 U
2,4-Dimethylphenol	770 U	760 U
2,4-Dichlorophenol	770 U	760 U
4-Chloro-3-methylphenol	770 U	760 U
2,4,6-Trichlorophenol	770 U	760 U
2,4-Dinitrophenol	1,500 U	1,500 U
4-Nitrophenol	1,500 U	1,500 U
2-Methyl-4,6-dinitrophenol	1,500 U	1,500 U
Pentachlorophenol	1,500 U	1,500 U
2-Methylphenol	770 U	760 U
4-Methylphenol	770 U	760 U
2,4,5-Trichlorophenol	770 U	760 U
N-Nitrosodimethylamine	380 U	380 U
Bis (2-chloroethyl) ether	380 U	380 U
1,3-Dichlorobenzene	380 U	380 U
1,4-Dichlorobenzene	380 U	380 U
1,2-Dichlorobenzene	380 U	380 U
2,2-oxybis(1-Chloropropane)	380 U	380 U
N-Nitroso-Di-n-propylamine	380 U	380 U
Hexachloroethane	380 U	380 U
Nitrobenzene	380 U	380 U
Isophorone	380 U	380 U
bis(2-choroethoxy)methane	380 U	380 U
1,2,4-Trichlorobenzene	380 U	380 U
Naphthalene	380 U	380 U
Hexachlorobutadiene	380 U	380 U
Hexachlorocyclopentadiene	380 U	380 U
2-Chloronaphthalene	380 U	380 U
Dimethyl Phthalate	380 U	380 U
Acenaphthylene	380 U	380 U
Acenaphthene	380 U	380 U
2,4-Dinitrotoluene	380 U	380 U
2,6-Dinitrotoluene	380 U	380 U
Diethyl Phthalate	380 U	380 U
4-Chlorophenyl-phenylether	380 U	380 U
Fluorene	380 U	380 U
1,2-Diphenylhydrazine	380 U	380 U
N-Nitrosodiphenylamine	380 U	380 U
4-Bromophenyl-phenylether	380 U	380 U
Hexachlorobenzene	380 U	380 U
Phenanthrene	380 U	380 U
Anthracene	380 U	380 U
Di-n-butyl phthalate	380 U	380 U
Fluranthene	380 U	380 U
Pyrene	380 U	380 U
Butyl benzyl phthalate	380 U	380 U
3-3'-Dichlorobenzidine	380 U	380 U
Benzo(a)anthracene	380 U	380 U
Bis (2-ethylhexyl)phthalate	380 U	380 U
Chrysene	380 U	380 U
Di-n-octyl phthalate	380 U	380 U
Benzo(b)Fluoranthene	380 U	380 U
Benzo(k)Fluoranthene	380 U	380 U
Benzo(a)pyrene	380 U	380 U
Indeno(1,2,3-cd)pyrene	380 U	380 U
4-Chloroaniline	380 U	380 U
2-Methyl Naphthalene	380 U	380 U
2-Nitroaniline	380 U	380 U
3-Nitroaniline	380 U	380 U
Dibenzofuran	380 U	380 U
4-Nitroaniline	380 U	380 U
Carbazole	380 U	380 U

NOTES:

All results are reported in micrograms per kilogram (ug/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-16
SURFACE SOIL SAMPLES
ANALYTICAL RESULTS - PCBs

COMPOUND / ANALYTE	*SS-3*	*SS-4*	*SS-5*	*SS-6*
PCB 1016	300 U	300 U	290 U	280 U
PCB 1221	300 U	300 U	290 U	280 U
PCB 1232	300 U	300 U	290 U	280 U
PCB 1242	300 U	300 U	290 U	280 U
PCB 1248	300 U	300 U	290 U	280 U
PCB 1254	300 U	300 U	290 U	280 U
PCB 1260	300 U	300 U	290 U	280 U

NOTES:

All results are reported in micrograms per kilogram (ug/kg)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

TABLE 6-17
GROUND-WATER SAMPLES
ANALYTICAL RESULTS - INORGANICS

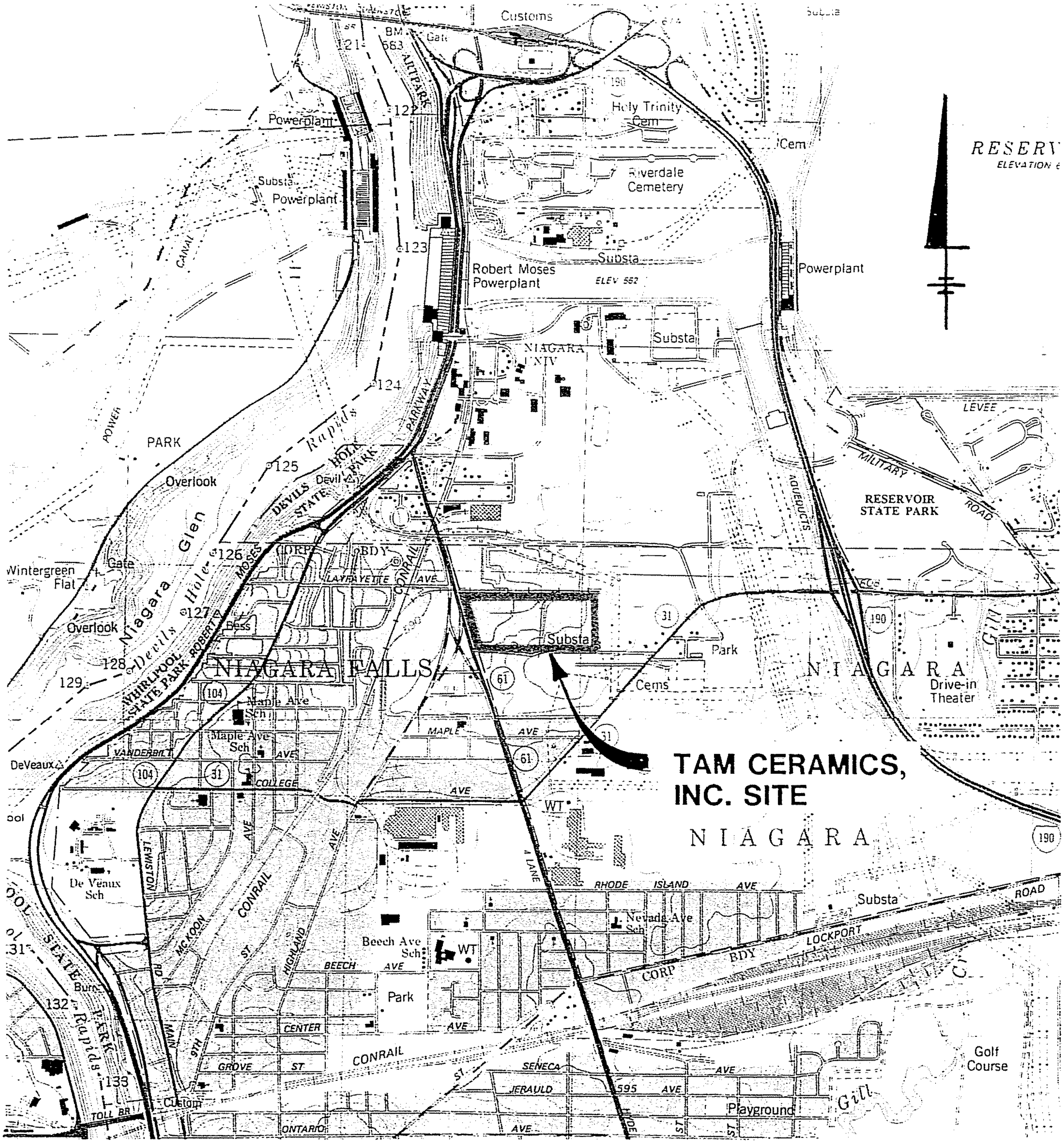
NPW-H2U OMW-17T OMW-1C 1/6/95 1/6/95 1/6/95

COMPOUND / ANALYTE	TAM-GW2 (upgradient)	TAM-GW1 (downgradient)	TAM-GW3 (downgradient)	TAM-GW3A [filtered] (downgradient)	NPW-H2U (upgradient)	MW-BBL1R (downgradient)	MW-BBL2R (downgradient)	PART 703 GW LIMIT
Aluminum	0.99	0.604	67.1	0.213	2.96	0.242	0.118	N/A
Antimony	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U	0.103	N/A
Arsenic	0.0050 U	0.0050 U	0.0102	0.0050 U	0.0094	0.0066	0.03	0.025
Barium	0.0876	0.0748	6.85	0.145	0.0355	0.0200 U	0.0812	1
Beryllium	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	N/A
Cadmium	0.0050 U	0.0050 U	0.0052	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.01
Calcium	145	74.6	100	36.9	129	90.9	192	N/A
Chromium	0.010 U	0.010 U	0.108	0.010 U	0.010 U	0.010 U	0.010 U	N/A
Cobalt	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	0.0500 U	N/A
Copper	0.0200 U	0.200 U	0.188	0.0200 U	0.0200 U	0.0200 U	0.0200 U	1
Iron	3.48	0.692	0.108	0.191	5.64	0.316	0.0973	1
Lead	0.0477	0.0050 U	0.382	0.0050 U	0.103	0.0068	0.0050 U	0.025
Magnesium	57.2	24	39.2	8.16	57.3	35	152	N/A
Manganese	0.122	0.0561	1.71	0.0155	0.127	0.010 U	0.010 U	0.3
Mercury	0.00010 U	0.00010 U	0.00010 U	0.00010 U	0.00020 U	0.00020 U	0.00020 U	0.002
Nickel	0.0400 U	0.0400 U	0.118	0.0400 U	0.0400 U	0.0400 U	0.0400 U	N/A
Potassium	2.9	4.87	16.9	3.19	1.57	1.00 U	6.3	N/A
Selenium	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.0050 U	0.02
Silver	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.05
Sodium	47.8	27.4	12.5	10.8	12.1	7.83	284	N/A
Thallium	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U	N/A
Vanadium	0.0050 U	0.0050 U	0.161	0.0050 U	0.0050 U	0.0500 U	0.0500 U	N/A
Zinc	0.847	0.0323	1.25	0.010 U	0.364	0.0634	0.703	5

NOTES:

All results are reported in milligrams per liter (mg/l)
Sample Results Qualifiers are as follows:
U - Not detected above the detection limit.

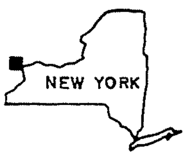
Figures



REFERENCE: LEWISTON, N.Y. - ONT. AND NIAGARA FALLS, N.Y. - ONT. 1980 QUADS.

2000' 0 2000'

APPROX SCALE: 1" = 2000'



QUADRANGLE LOCATION

JAN. 1993 JVM
163.02.02

BLASLAND & BOUCK ENGINEERS, P.C.
ENGINEERS & GEOSCIENTISTS

TAM CERAMICS, INC. • NIAGARA FALLS, NEW YORK
SITE CHARACTERIZATION PROGRAM
FINAL REPORT

SITE LOCATION MAP

FIGURE 2-1

HYDE PARK BL'VD

4800

4801

4715

4708

HYDE PARK LANDFILL

NIAGARA MOHAWK POWER CORP.

TAM CERAMICS INC.

EQUIPMENT SCRAPYARD

GRAVEL ROADWAY

EXISTING GRAVEL ROADWAY

4'–0" HIGH DIKE

SUBSTATION

PLANT PARKING

4501

4425

4401

PENNSYLVANIA AVE.

2998

DELAWARE AVE.

2504

2564

LEGEND:

LIMITS OF CLAY / CONCRETE ASPHALT CAP

200' 0 200'

APPROXIMATE SCALE: 1" = 200'

BLASLAND & BOUCK ENGINEERS, P.C.

ENGINEERS & GEOSCIENTISTS

TAM CERAMICS, INC. • NIAGARA FALLS, NEW YORK

SITE CHARACTERIZATION PROGRAM
FINAL REPORT

SITE PLAN

FIGURE
2-2

5/23 S4-MRC
1630202R\SCP\16302G01.DWG

HYDE PARK LANDFILL

OLD ARC FURNACE SHELLS (50±) WEIGHT, 30,000# EACH

12 DRUMS 2R FUSED SALT, 20 DRUMS AMMONIUM 2R CARBONATE (NOT BURIED)

740 cu. yds (ESTIMATED 800–1000 TONS) INERT SLAG AND HEAVY/ LIGHT INNOCUOUS SCRAP FROM PROCESSING, 1950 – 1977 – IN LONG PILE 18' WIDE x 6' HIGH ±

UNCALCINED TITANIA "MATTE" PILE – 1924 – 1935

178 DRUMS OF ZIRCONIUM OXIDE REMOVED

EQUIPMENT SCRAPYARD

4 DMS, 2 RCl_4

EXCAVATED AND FILLED DUMP AREA CONTAINS SCRAP MOTOR OIL PLUS SILICA FUME 1960 – 1976

LARGE AREA OF FORMER 1935 – 1965 SLAG DUMP– BULLDOZED FLAT POSSIBLE BARIUM TITANATE WITH SOME CHLORINATOR RESIDUE

EXCAVATED AND FILLED DUMP AREA CONTAINS SCRAP FROM BLDG. 147 CHEMICAL PLANT– CHLORINATOR RESIDUE, 2RCl_4 1976 – 1977

SUBSTATION

EXCAVATED AND PILED DUMP AREA 1965–1970 = MAGNESIUM CHLORIDE, "IVEX" LOTION

PENNSYLVANIA AVE.

LEGEND:

AREAS OF SUSPECTED WASTE DISPOSAL

150' 0 150'

APPROXIMATE SCALE: 1" = 150'

SOURCE: MAP SUPPLIED BY NL INDUSTRIES TO INTERAGENCY TASK FORCE ON HAZARDOUS WASTES.

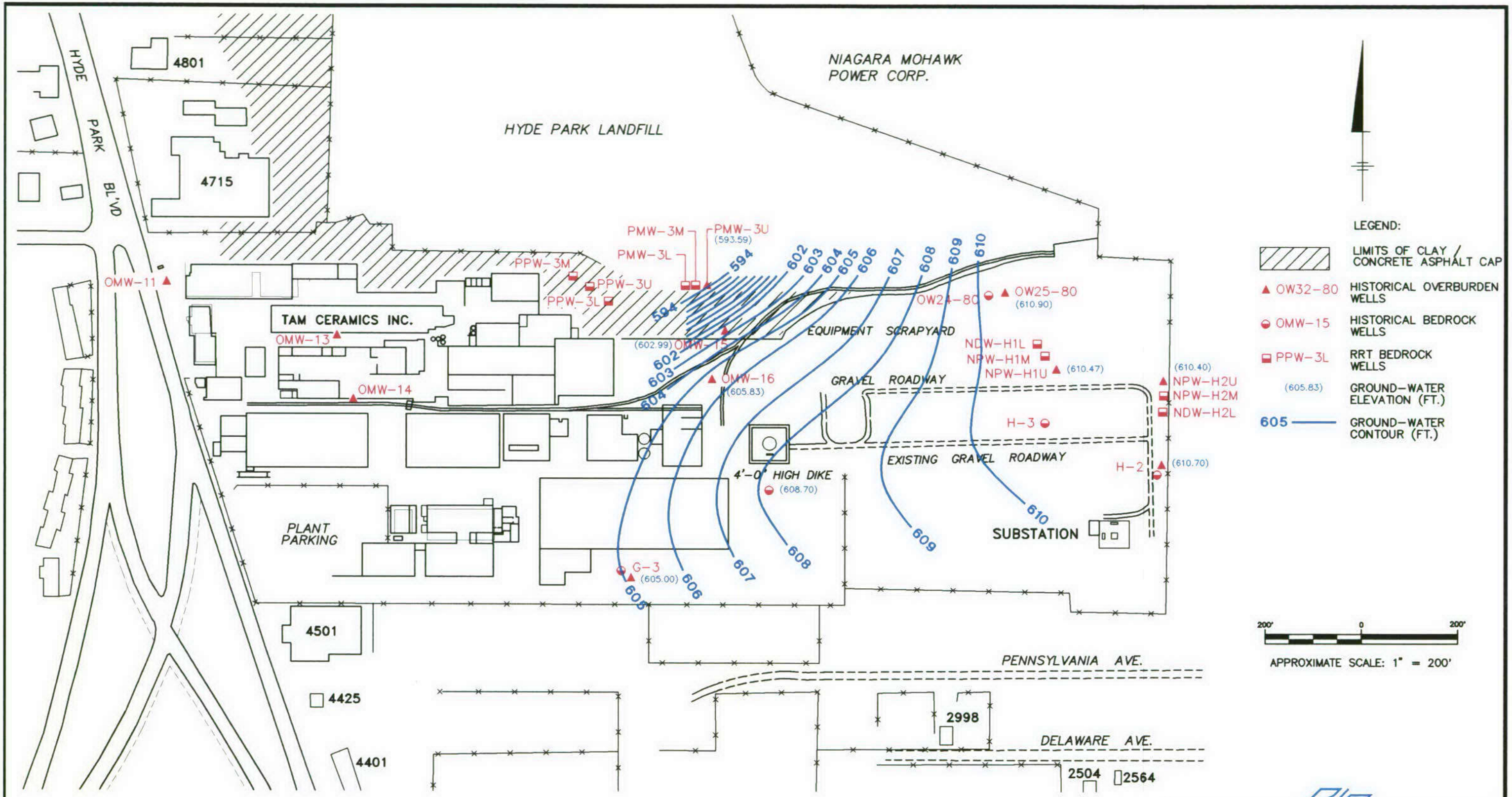
5/93 54–MRC
16302O2R\SCP\16302G02.DWG

BLASLAND & BOUCK ENGINEERS, P.C.
ENGINEERS & GEOSCIENTISTS

TAM CERAMICS, INC. • NIAGARA FALLS, NEW YORK
SITE CHARACTERIZATION PROGRAM
FINAL REPORT

AREAS OF SUSPECTED WASTE DISPOSAL

FIGURE 2-3



7/14/94 54-DMW
1630202R\1630208.DWG

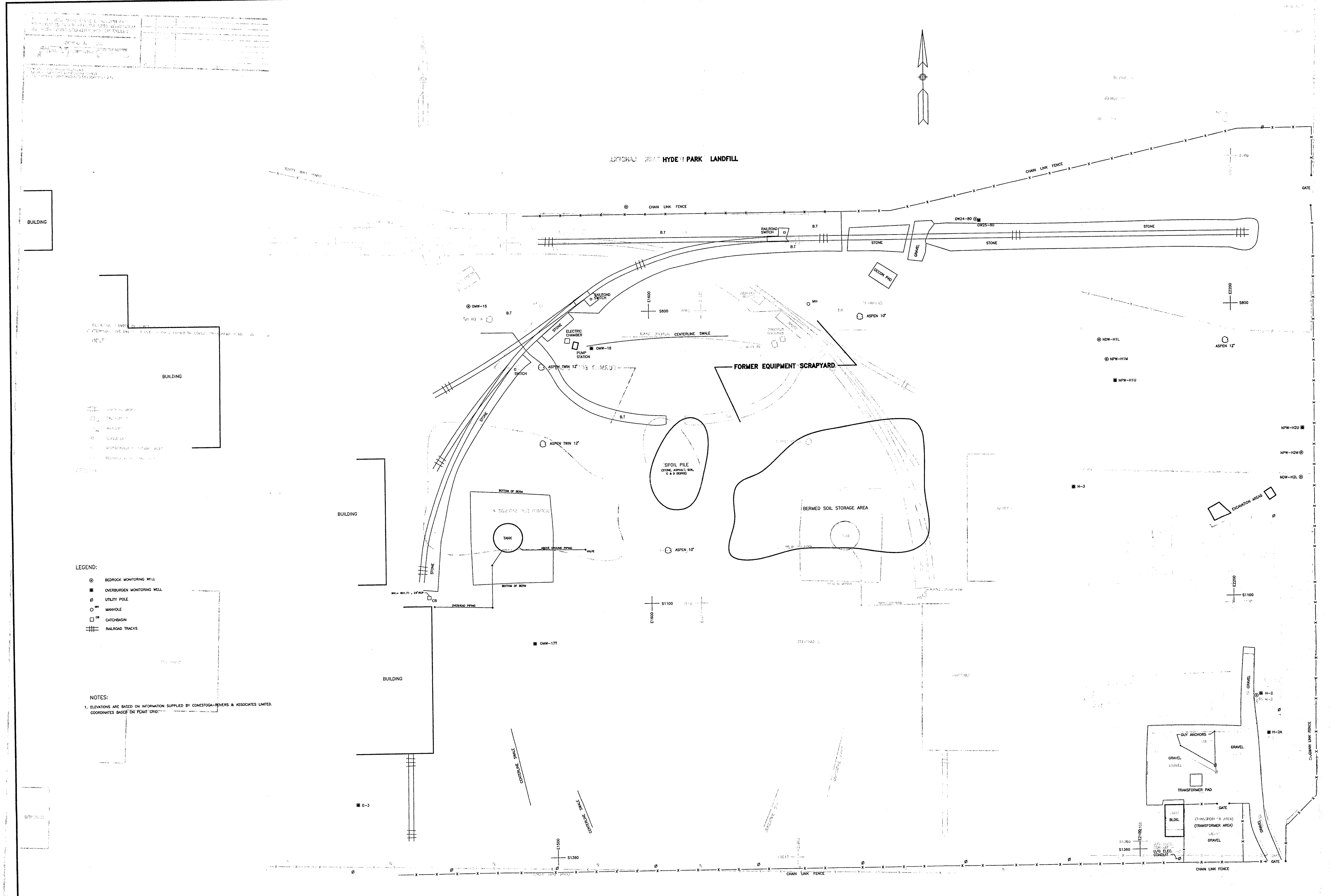
BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

TAM CERAMICS, INC. • NIAGARA FALLS, NEW YORK
SITE CHARACTERIZATION PROGRAM
FINAL REPORT

OVERBURDEN GROUND-WATER CONTOUR MAP (MAY 13, 1994)

FIGURE **4-1**

Plates



HYDE PARK LANDFILL
CHAIN LINK FENCE
BUILDING
STONE
GRAVEL
DECON PAD
B.T
RAILROAD SWITCH
ELECTRIC CHAMBER
PUMP STATION
SWITCH
ASPEN TWIN 12"
ASPEN 10"
ASPEN 12"
CENTERLINE SWALE
FORMER EQUIPMENT SCRAPYARD
SPOIL PILE
BERMED SOIL STORAGE AREA
TANK
BOTTOM OF BERM
ABOVE GROUND PIPING
OVERHEAD PIPING
EXCAVATION AREAS
TRANSFORMER PAD
GUY ANCHORS
GATE
BLDG.
U/G ELEC. CONDUIT
OW-15
OWW-16
OWW-177
NPW-H1L
NPW-H1M
NPW-H1U
NPW-H2U
NPW-H2M
NDW-H2L
H-3
H-2A
G-3
OW24-80
OW25-80
E1000
E1600
E2200
S800
S1100
S1380
LEGEND:
BEDROCK MONITORING WELL
OVERBURDEN MONITORING WELL
UTILITY POLE
MANHOLE
CATCHBASIN
RAILROAD TRACKS
NOTES:
1. ELEVATIONS ARE BASED ON INFORMATION SUPPLIED BY CONESTOGA-ROVERS & ASSOCIATES LIMITED. COORDINATES BASED ON PLANT GRID.

SCALE: 1" = 30'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

In charge of WBP
Designed by
Drawn by
Checked by DJC

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

TAM CERAMICS,INC. • NIAGARA FALLS, N.Y.

SITE MAP

SITE SURVEY

File Number 163.04
Date APRIL 22,1994
Plate 4-1

HYDE PARK LANDFILL

FORMER EQUIPMENT SCRAPYARD

BERMED SOIL STORAGE AREA

BUILDING

BUILDING

BUILDING

LEGEND:

- BEDROCK MONITORING WELL
- OVERBURDEN MONITORING WELL
- UTILITY POLE
- MANHOLE
- CATCHBASIN
- RAILROAD TRACKS

NOTES:

1. ELEVATIONS ARE BASED ON INFORMATION SUPPLIED BY CONESTOGA-ROVERS & ASSOCIATES LIMITED. COORDINATES BASED ON PLANT GRID. CONTOUR INTERVAL = 2 FEET.

SCALE: 1" = 30'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init

In charge of WBP

Designed by DJC

Drawn by

Checked by DJC

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

TAM CERAMICS, INC. • NIAGARA FALLS, N.Y.

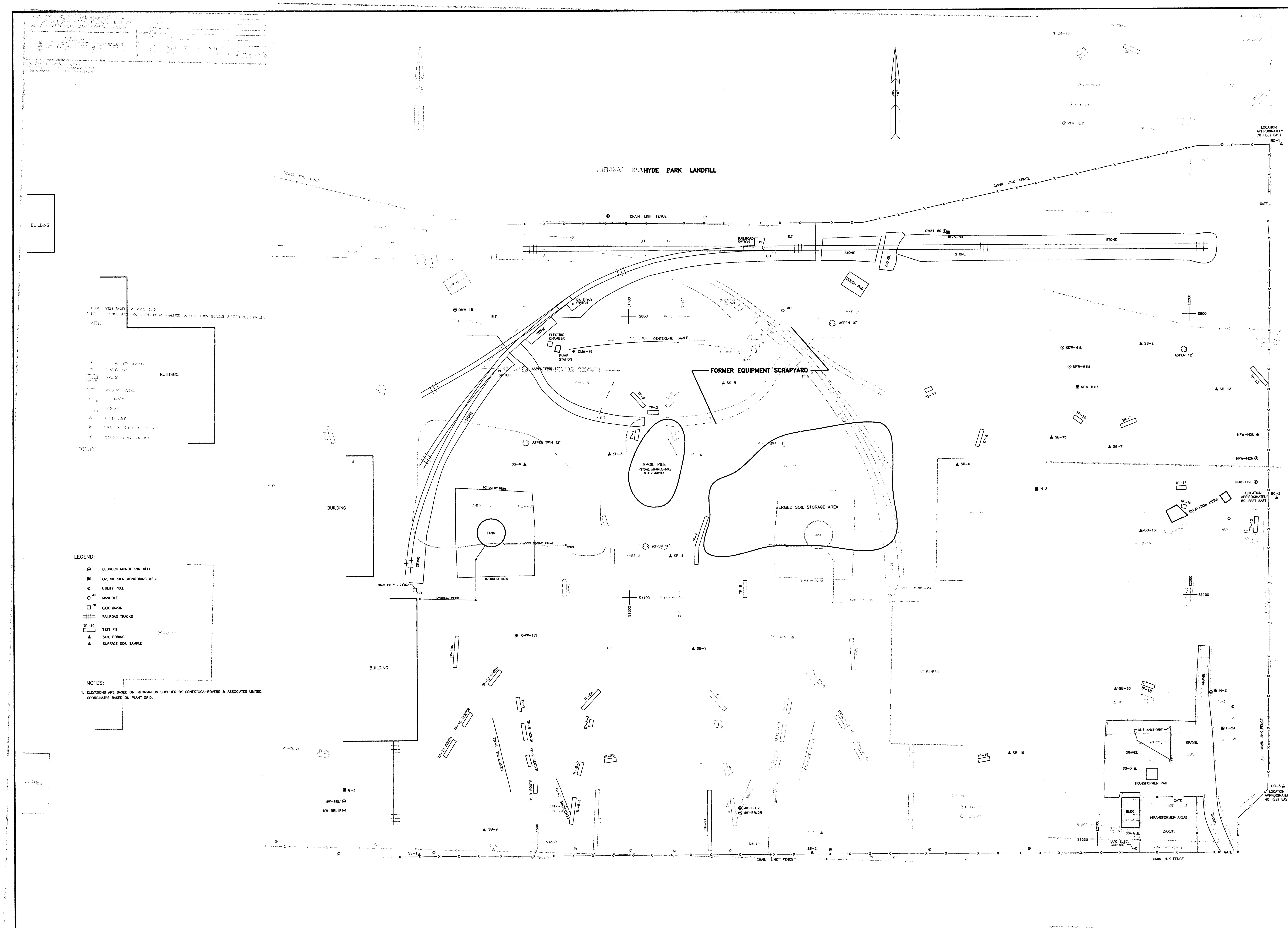
TOPOGRAPHIC MAP

SITE SURVEY

File Number 163.04

Date APRIL 22, 1994

Plate 4-2


HYDE PARK LANDFILL
FORMER EQUIPMENT SCRAPYARD
BERMED SOIL STORAGE AREA
SPOIL PILE (STONE, ASPHALT, SOIL, C & D DEBRIS)
CHAIN LINK FENCE
BUILDING
TANK
STONE
GRAVEL
DECON PAD
RAILROAD SWITCH
ELECTRIC CHAMBER
PUMP STATION
TRANSFORMER PAD
(TRANSFORMER AREA)
GUY ANCHORS
GATE
EXCAVATION AREAS
LOCATION APPROXIMATELY 70 FEET EAST
LOCATION APPROXIMATELY 50 FEET EAST
LOCATION APPROXIMATELY 40 FEET EAST
CENTERLINE SWALE
ASPEN 10"
ASPEN 12"
ASPEN TWN 12"
S800
S1100
S1360
E1600
E2200
LEGEND:
BEDROCK MONITORING WELL
OVERBURDEN MONITORING WELL
UTILITY POLE
MANHOLE
CATCHBASIN
RAILROAD TRACKS
TP-19
TEST PIT
SOIL BORING
SURFACE SOIL SAMPLE
NOTES:
1. ELEVATIONS ARE BASED ON INFORMATION SUPPLIED BY CONESTOGA-ROVERS & ASSOCIATES LIMITED. COORDINATES BASED ON PLANT GRID.

L OFF:CONC+CONTOURS,ELEV,ROCK+,SITE+,SOIL+
4/23/94 DS–TMW\MAD REV.6/15/95 13–ATJ
C:\PJDWG\1995\16304001\16304.DWG

SCALE: 1" = 30'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init
1	9/7/94	ADD TEST PITS, SAMPLES, BORINGS, & WELLS	TMW
2	6/21/95	ADD SURFACE SAMPLES	ATJ

In charge of WBP
Designed by
Drawn by
Checked by DJC

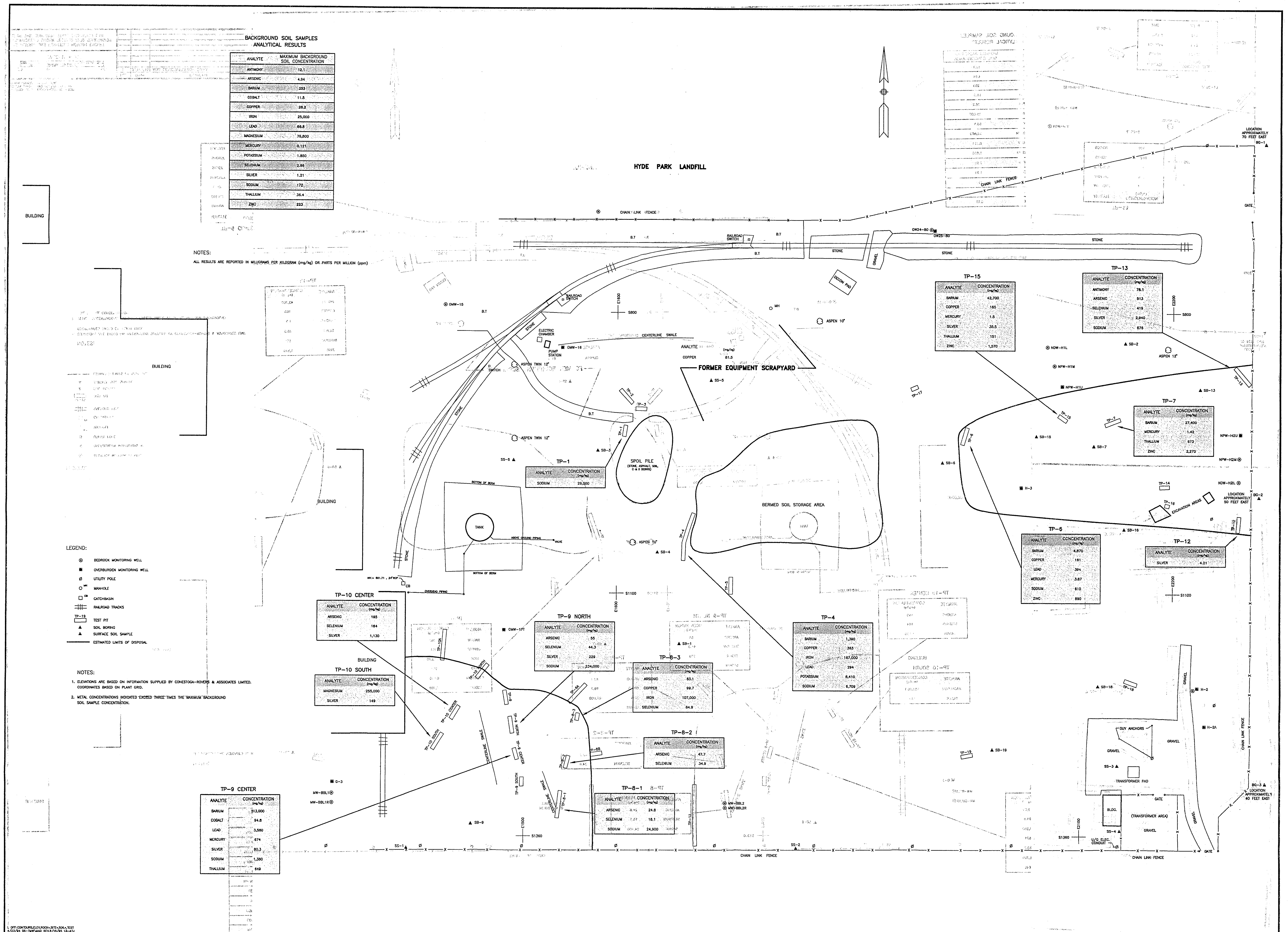
BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

TAM CERAMICS, INC. • NIAGARA FALLS, N.Y.

TEST PIT, BORING and SURFACE SAMPLE LOCATIONS

SITE SURVEY

File Number 163.04
Date APRIL 22, 1994
Plate 5-1



SCALE: 1" = 30'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init
1	3/14/95	ADD CONCENTRATION DATA	ATJ

In charge of WBP
Designed by
Drawn by
Checked by DJC

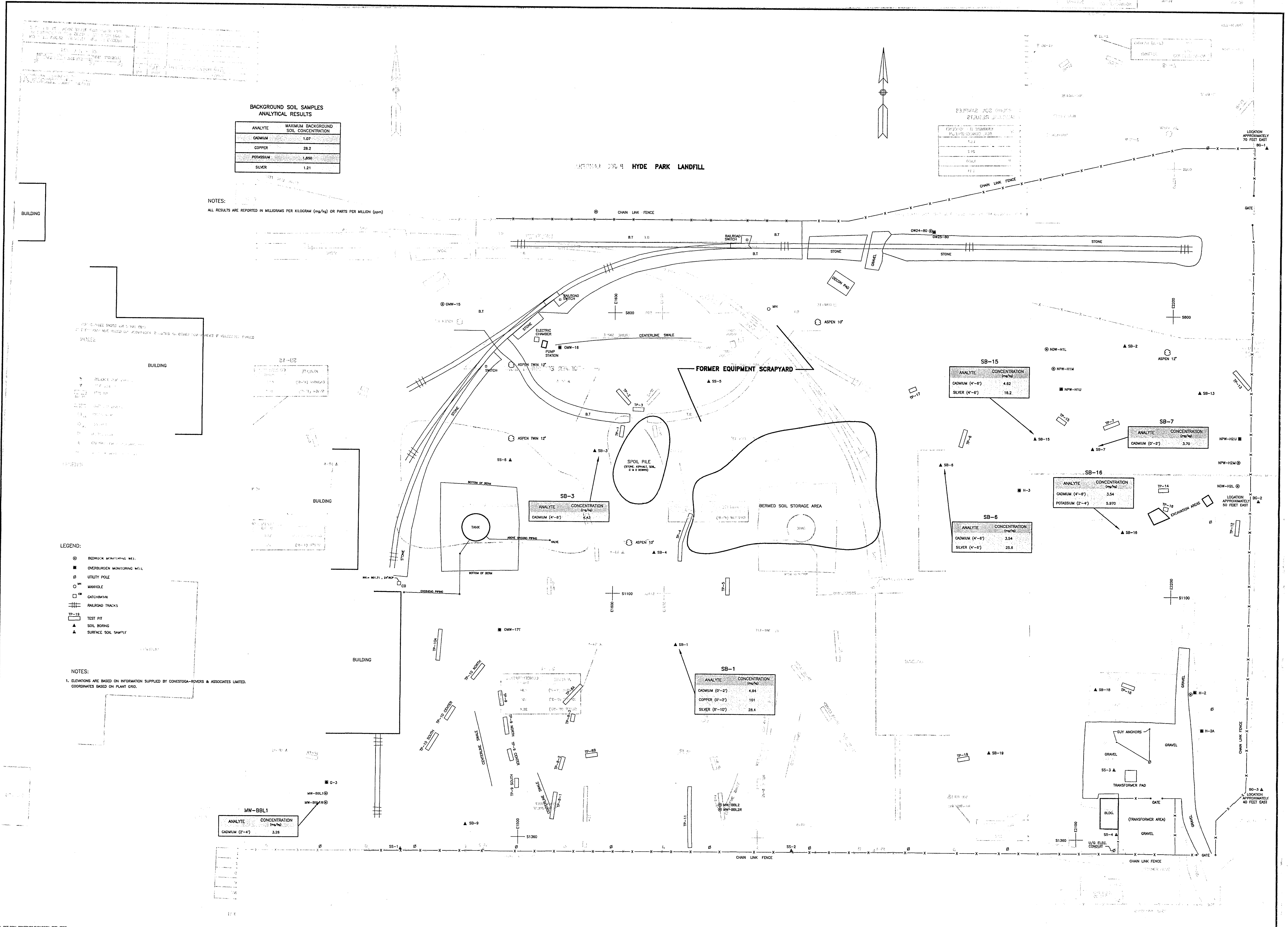
BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

TAM CERAMICS INC. • NIAGARA FALLS, N.Y.

METAL CONCENTRATIONS IN TEST PIT SAMPLES

SITE SURVEY

File Number 163.04
Date APRIL 22,1994
Plate 7-1


BACKGROUND SOIL SAMPLES ANALYTICAL RESULTS
ANALYTE | MAXIMUM BACKGROUND SOIL CONCENTRATION
CADMIUM 1.07
COPPER 28.2
POTASSIUM 1,650
SILVER 1.21
NOTES:
ALL RESULTS ARE REPORTED IN MILLIGRAMS PER KILOGRAM (mg/kg) OR PARTS PER MILLION (ppm)
HYDE PARK LANDFILL
CHAIN LINK FENCE
FORMER EQUIPMENT SCRAPYARD
SPOIL PILE
BERMED SOIL STORAGE AREA
TANK
BUILDING
SB-15
ANALYTE | CONCENTRATION (mg/kg)
CADMIUM (4'-6') 4.62
SILVER (4'-6') 18.2
SB-7
ANALYTE | CONCENTRATION (mg/kg)
CADMIUM (0'-2') 3.70
SB-16
ANALYTE | CONCENTRATION (mg/kg)
CADMIUM (4'-6') 3.54
POTASSIUM (2'-4') 5,970
SB-6
ANALYTE | CONCENTRATION (mg/kg)
CADMIUM (4'-6') 3.54
SILVER (4'-6') 25.6
SB-3
ANALYTE | CONCENTRATION (mg/kg)
CADMIUM (4'-6') 4.43
SB-1
ANALYTE | CONCENTRATION (mg/kg)
CADMIUM (0'-2') 4.84
COPPER (0'-2') 101
SILVER (8'-10') 25.4
MW-BBL1
ANALYTE | CONCENTRATION (mg/kg)
CADMIUM (2'-4') 3.26
LEGEND:
BEDROCK MONITORING WELL
OVERBURDEN MONITORING WELL
UTILITY POLE
MANHOLE
CATCHBASIN
RAILROAD TRACKS
TEST PIT
SOIL BORING
SURFACE SOIL SAMPLE
NOTES:
1. ELEVATIONS ARE BASED ON INFORMATION SUPPLIED BY CONESTOGA-ROVERS & ASSOCIATES LIMITED. COORDINATES BASED ON PLANT GRID.

SCALE: 1" = 30'

NO ALTERATIONS PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

No.	Date	Revisions	Init
1	3/14/95	ADD CONCENTRATION DATA	ATJ

In charge of WBP
Designed by
Drawn by
Checked by DJC

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

TAM CERAMICS, INC. • NIAGARA FALLS, N.Y.

METAL CONCENTRATIONS IN SOIL BORING SAMPLES

SITE SURVEY

File Number 163.04
Date APRIL 22,1994
Plate 7-2

Attachments

Attachment A

Ground-Water Sampling Logs from

Initial Ground-Water Sampling Event

Ground-Water Sampling Field Log

Site TAM Ceramics
Well No. G-3

Sampling Personnel DJC/DMR
Date 5/25
Time 1345
Weather Clear, Cool

I. Well Information

Well Depth	8.00'	Ground Elevation	-
Water Table Depth	7.92'	Top of Casing	
Length of Water Column	0.08'	Elevation (I/O)	-
		Water Table Elevation	-

II. Well Water Information

Volume of Water in Well .06 gal
Pumping Rate of Pump -
Volume of Bailer -

5 x water volume in well to be removed
Minutes of Pumping -
Number of Bails -

III. Physical Appearance/Top of Water Column

Color	Brown	Turbidity	408 NTU	Temperature	20.4 °C
Odor	None	Film	None	Conductivity	5.29 mS/cm
				pH	6.28 SU

IV. Evacuation Information

Volume of Water Removed from Well ½ gal
Did Well go Dry? (Y) N

V. Well Sampling

Container	Analysis
NONE	—

VI. Ground-Water Characteristics (after sample collection)

	1st Volume	2nd Volume	3rd Volume	Final
Color				
Temperature				
Conductivity				
pH				
Turbidity				
Film				
Odor				

9991
0591667G

Ground-Water Sampling Field Log

Site: TAM Ceramics
Well No.: OMW-17T

Sampling Personnel: DJC/DMR
Date: 5/25
Time: 1500
Weather: Clear, Cool

I. Well Information

Well Depth	9.40'	Ground Elevation	-
Water Table Depth	6.06'	Top of Casing Elevation (I/O)	-
Length of Water Column	3.34'	Water Table Elevation	-

II. Well Water Information

Volume of Water in Well: 1.8
Pumping Rate of Pump: -
Volume of Bailer: -

3 x water volume in well to be removed

Minutes of Pumping: -
Number of Bails: -

III. Physical Appearance/Top of Water Column

Color	Clear	Turbidity	191 NTU	Temperature	13.2 °C
Odor	None	Film	None	Conductivity	0.2 mS/cm
				pH	7.27

IV. Evacuation Information

Volume of Water Removed from Well: 5.4 gal
Did Well go Dry? Y (N)

V. Well Sampling

Container	Analysis
Plastic, 1 L	TAL Metals
Glass, 1 L	SVOs

VI. Ground-Water Characteristics (after sample collection)

	1st Volume	2nd Volume	3rd Volume	Final
Color		Clear		Clear
Temperature		13.0 °C		13.9 °C
Conductivity		1.18 mS/cm		0.873 mS/cm
pH		7.30 SU		7.25
Turbidity		21 NTU		48 NTU
Film		None		None
Odor		None		None

5991
05916STG

Ground-Water Sampling Field Log

Site: TAM Ceramics
Well No.: NPW-H2U

Sampling Personnel: DHC
Date: 5/26/94
Time: 0900
Weather: Cold, Rain

I. Well Information

Well Depth	14.56'	Ground Elevation	-
Water Table Depth	10.69'	Top of Casing Elevation (I/O)	-
Length of Water Column	3.87'	Water Table Elevation	-

II. Well Water Information

Volume of Water in Well: 2.2
Pumping Rate of Pump: -
Volume of Bailer: -

3 x water volume in well to be removed

Minutes of Pumping: -
Number of Bails: -

III. Physical Appearance/Top of Water Column

Color	Clear	Turbidity	101	Temperature	9.9 °C
Odor	None	Film	None	Conductivity	0.953 mS/cm
				pH	7.16

IV. Evacuation Information

Volume of Water Removed from Well: 11 gal.
Did Well go Dry? Y (N)

V. Well Sampling

Container	Analysis
Plastic, 1 ℓ	TAL Metals
Glass, 1 ℓ	SVOs

VI. Ground-Water Characteristics (after sample collection)

	1st Volume	2nd Volume	3rd Volume	Final
Color		Clear		Clear
Temperature		8.8 °C		8.7 °C
Conductivity		1.30 mS/cm		1.38 mS/cm
pH		7.02 SU		7.08 SU
Turbidity		177 NTUs		91 NTUs
Film		None		None
Odor		None		None

Ground-Water Sampling Field Log

Site: TAM Ceramics
Well No.: OMW-11C
Sampling Personnel: DJC
Date: 5/26/94
Time: 1100
Weather: Cold, Rainy

I. Well Information

Well Depth	4.99'	Ground Elevation	—
Water Table Depth	1.75'	Top of Casing Elevation (I/O)	—
Length of Water Column	3.24	Water Table Elevation	—

II. Well Water Information

Volume of Water in Well	1.75	3 x water volume in well to be removed	
Pumping Rate of Pump	—	Minutes of Pumping	—
Volume of Bailer	—	Number of Bails	—

III. Physical Appearance/Top of Water Column

Color	Cloudy	Turbidity	850 NTU	Temperature	12.0 °C
Odor	None	Film	None	Conductivity	0.693 mS/cm
				pH	7.64

IV. Evacuation Information

Volume of Water Removed from Well: 12 gallons
Did Well go Dry? Y (N)

V. Well Sampling

Container	Analysis
Plastic, 1ℓ	Total TAL Metals
Plastic, 1ℓ	Dissolved TAL Metals
Glass, 1ℓ	SVOs

VI. Ground-Water Characteristics (after sample collection)

	1st Volume	2nd Volume	3rd Volume	Final
Color			Brown	Brown
Temperature			12.0°C	11.9 °C
Conductivity			~~.483~~ .693 mS/cm	.374 mS/cm
pH			6.45 NTU	8.21 SU
Turbidity			7.95 SU	999+ NTU
Film			None	None
Odor			None	None

9991
0591667G

Attachment B

Gartner-Lee Geophysical Survey Report

Gartner Lee, Inc.

105 Main Street
Niagara Falls, NY 14303
Fax (716) 285-8275

(716) 285-5448

Professional Services in Environmental Management

July 8, 1994 GLI 94-812

Mr. Mark Weider
Project Manager
Blasland Bouck & Lee, Inc.
30 Corporate Woods
Suite 160
Rochester, NY 14623-1477

Dear Mr. Weider:

Re: Geophysical Survey Results, Tam Ceramics Site, Niagara Falls, NY

1.0 Introduction, Background Information, Purpose and Scope

On May 12 and 13, 1994, a high resolution electromagnetic (EM) survey was performed at the above site in Niagara Falls, NY. The site was located in an open field east of the Tam Ceramics industrial facility and south of the Hyde Park Landfill. A chain link fence was located around the northern, eastern and southern boundaries of the area surveyed. An above ground storage tank was located along the western perimeter and railroad tracks were located along the northern perimeter of the site.

During the geophysical survey it was observed that regions of the site had received construction and demolition type fill materials. The purpose of the geophysical survey was to identify the presence of buried metals and fill materials.

All geophysical methods utilize interpretative techniques which can be significantly impacted by varying site conditions. EM anomalies can only be identified if they show recognizable patterns against data representative of background or natural conditions. Therefore, where possible, confirmation of any geophysical anomalies identified or interpreted should be sought through the use of historical aerial photography, test pit and borehole information.

The following report discusses the methodologies, results and the conclusions of the geophysical survey.

2.0 Methodologies

A Geonics EM31-DL Frequency Domain Terrain Conductivity meter was used to collect quadrature and in-phase data at site. All readings with the EM31-DL were taken with the instrument oriented parallel to the direction of travel, in the vertical dipole mode and with

the instrument at waist height. The EM31-DL has a depth of exploration of approximately 12 to 15 feet when operated in this configuration. Approximately 10,500 data points were collected at the site during this investigation. An example of a the instrumentation and a typical response over a buried drum is presented in Figure 1.

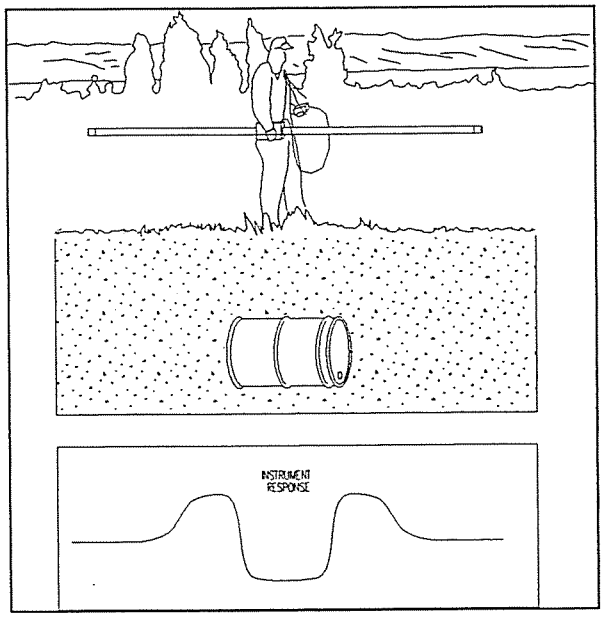


Figure 1. Drawing showing a generalized EM31 response over a buried steel drum.

Quadrature and in-phase data were simultaneously collected at 20 foot line intervals and at virtually continuous station intervals (approximately every 2 to 3 feet). The quadrature component data are a measurement of the "terrain conductivity" or apparent ground conductivity. Anomalous quadrature component data responses can be indicative of the presence of fill material, contaminated soils/ground water, the presence of buried metals/buried utilities, or stratigraphic changes. Quadrature component data were collected in units of milliSiemens per meter (mS/m).

The EM31-DL also records the in-phase component of the electromagnetic field measured and presented in units of parts per thousand (ppt). The in-phase component data are susceptible to the presence of highly conductive materials such as copper, aluminum and steel. Both the in-phase component and the quadrature component data are susceptible to severe signal interference from surface or buried features such as overhead/buried electric services, fences, buildings or vehicles.

The EM31-DL was calibrated on-site prior to the initiation of the survey. The instrument was calibrated following procedures specified in the operations manual. Readings were automatically stored in a solid state data logger during the survey. The data logger was

interfaced to a portable computer and the data were transferred to a floppy disk for subsequent processing and interpretation. Data collection was repeated at three line locations for purposes of quality assurance and quality control.

2.21 EM31-DL Data Reduction

The EM31-DL data were edited and analyzed utilizing the Geonics software package DAT31. Additional survey line editing were then performed using GEOSOFT software.

GEOSOFT software was also used to spline, high pass filter, grid and color contour the EM data. The data are presented as color contour maps of quadrature, in-phase and high pass filtered in-phase data in Figures 2, 3 and 4 respectively.

The EM31 gridded in-phase data were high pass filtered as part of the interpretation process. High pass filtering of data helps enhance narrow responses (high frequency) often attributed to small buried features such as a single or a small cluster of buried metallic containers. The high pass filter utilized for this project removed responses with wavelengths greater than 75 feet.

Color shades were assigned to gridded data value ranges for final interpretation and presentation. Generally, shades of blue are representative of anomalously low readings and shades of red and purple are anomalously high readings. Color shades of green and yellow are typically assigned to data values thought to represent background conditions. Anomalous responses were then identified and annotated for subsequent discussion purposes.

3.0 EM Terrain Conductivity Results

All observed anomalies are annotated on Figures 2, 3 and 4. The following is a discussion of the observed anomalies noted at the site.

(A) Anomaly "A" is presented in shades of red and purple in the quadrature data and in shades of deep blue in the filtered and unfiltered in-phase data (Figures 2, 3 and 4). This anomaly may represent the presence of fill with associated buried metallic debris and/or metallic objects.

(B) Anomaly "B", was observed in a non-vegetated areas that contained surface construction and demolition debris. The debris was observed to contain areas of steel re-

inforced concrete, asphalt, and metallic debris. This anomaly was observed as an above background response in the quadrature component data. The quadrature response anomaly is presented in shades of orange, red and purple in the quadrature component data (Figure 2). The quadrature response is probably indicated of contaminated soils, fill and metallic debris. Several small filtered and unfiltered in-phase responses were observed as shades of blue associated with anomaly "B" (Figures 3 and 4). The presence of the in-phase responses suggests that areas of metallic objects and metallic debris are associated with Anomaly "B". Anomaly "B" may represent an area of contaminated fill materials with associated pockets of metallic debris.

(C) Anomaly "C" was observed as a low anomalous quadrature response with anomalously high shoulders (Figure 2). This response is presented as shades of blue coupled with shades of orange and red. An anomalously low filtered and unfiltered in-phase response, presented in shades of blue, were observed at this location (Figures 3 and 4). This response is a typical response over buried metals as shown in Figure 1. This response may be indicative of buried metals or metallic debris.

(D, E, F, G, I and L) Anomalies "D", "E", "F", "G", "I" and "L" were observed as anomalously low responses in the quadrature and in-phase data. These responses are presented in shades of deep blue. These anomalies probably represent the presence of buried metals or metallic debris.

(H, M) Anomalies "H" and "M" were observed as an anomalously high quadrature responses (Figure 2). These anomalies are presented in shades of yellow, orange and red. These anomalies may represent the presence of fill or contaminated soils.

(J, K) Anomalies "J" and "K" were observed as above background quadrature responses and above and below background in-phase responses (Figures 2, 3 and 4). The surface topography at these anomalous locations appeared to suggest that the area had been trenched and filled. The quadrature and in-phase data suggest that extremely conductive soils, indicative of contaminated soils or fill, are present at this location. The filtered in-phase data suggest that metallic objects and metallic debris are probably associated with the observed response. Anomalies "J" and "K" probably represent the presence of fill, contaminated soils and/or buried metals.

(N) Anomaly "N" was observed as an above and below background quadrature and in-phase responses. This response is presented in shades of blue and red (Figures 2, 3 and 4). This response probably represents the presence of fill with associated buried metals.

At this time we would like to thank Blasland, Bouck & Lee, Inc. for involving our firm in this most interesting study. If there are any questions or comments please feel free to contact our office.

Respectfully submitted,

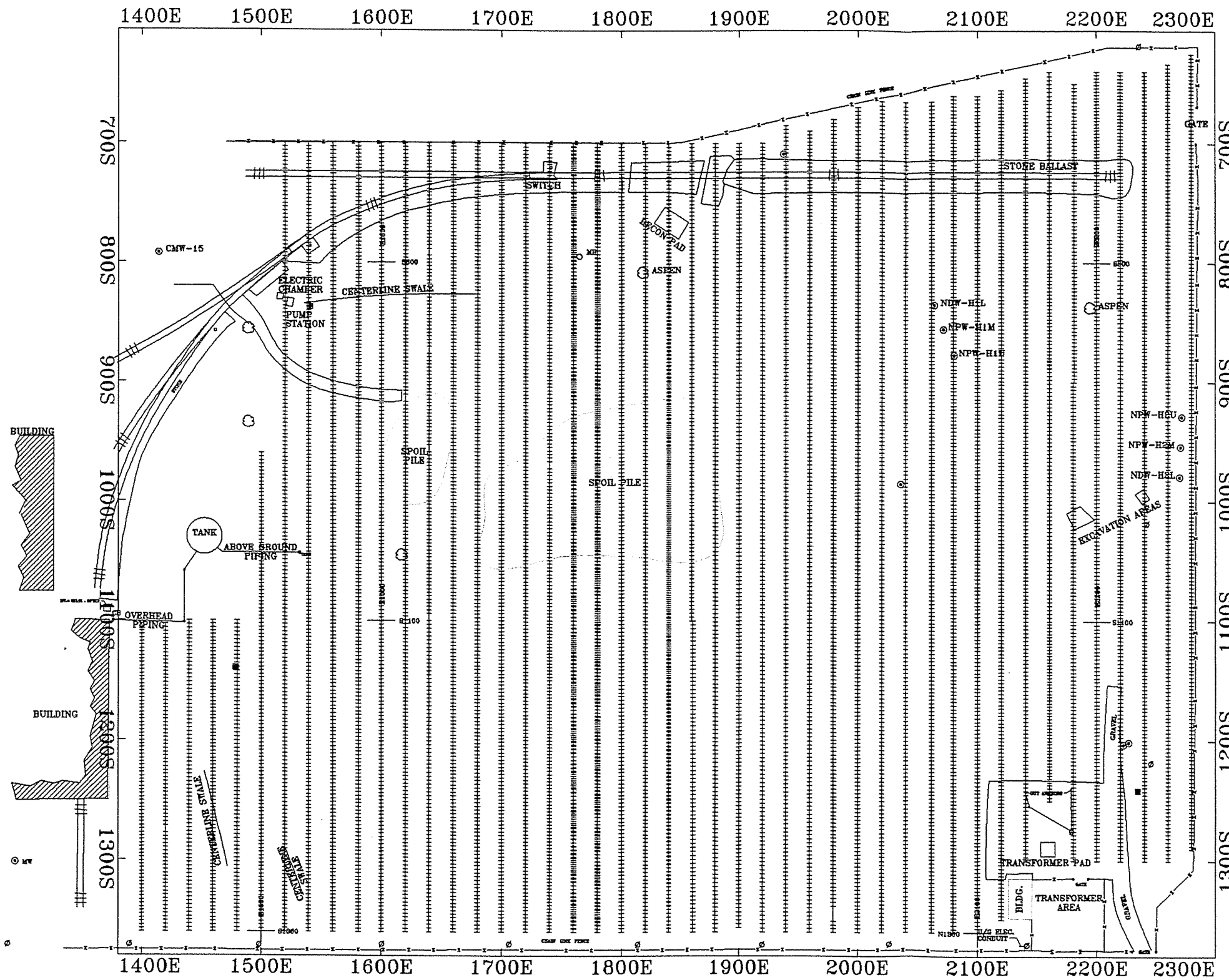
GARTNER LEE, INC.

for Thomas E. Jordan
Hydrogeologist/Geophysicist

for David D. Slaine, C.G.W.P.
Principal
Hydrogeologist/Geophysicist

TEJ/DDS:pmk

FIGURES



LEGEND:

- MONITORING WELL
- PIEZOMETER
- UTILITY POLE
- MH MANHOLE
- CB CATCHBASIN
- RAILROAD TRACKS

BASE MAP PROVIDED BY BLASLAND & BOUCK ENGINEERS, P.C.

Scale 1:1200

50 0 50 100 150 200 250

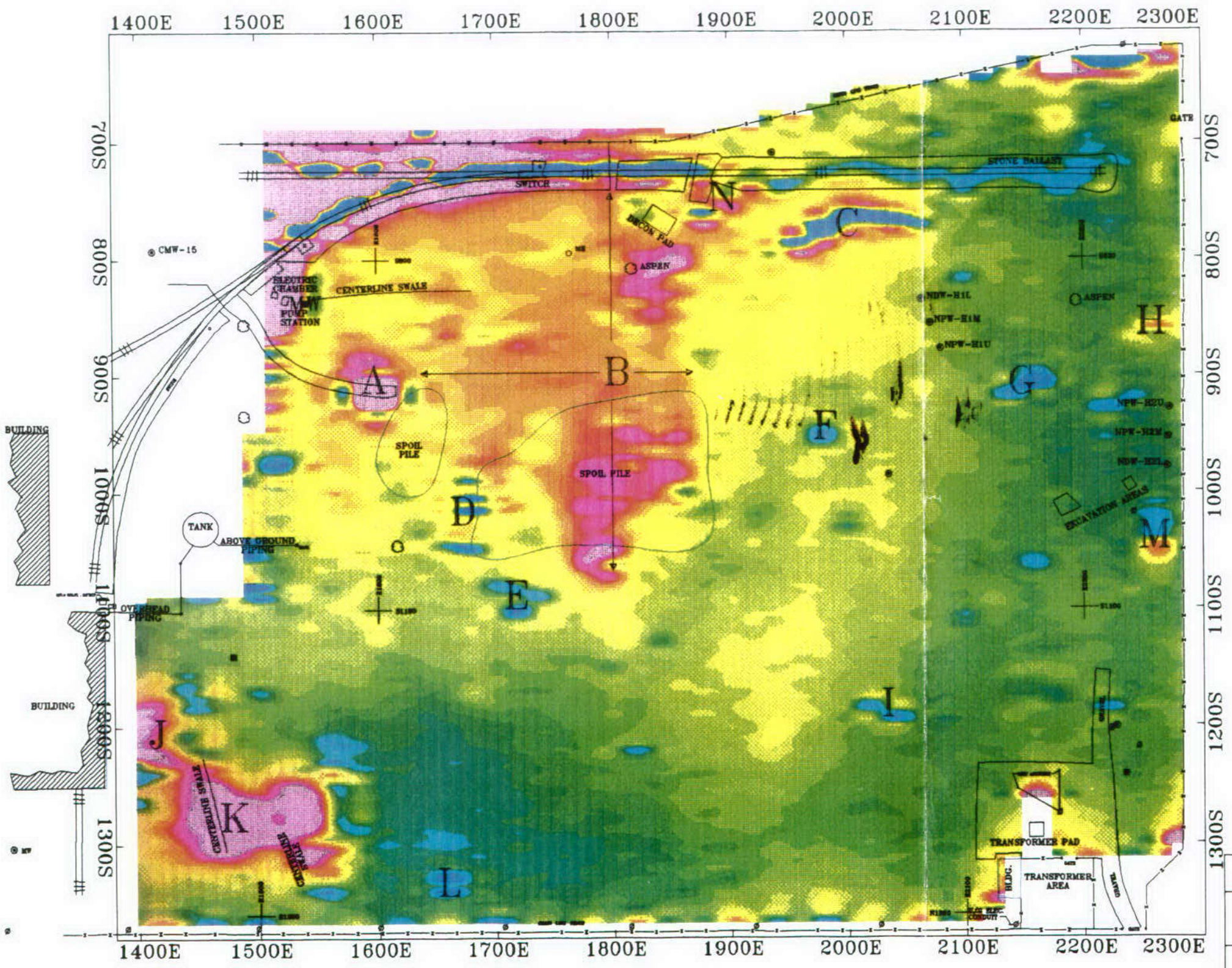
(feet)

FIGURE 1

SITE MAP
TAM CERAMICS SITE, NIAGARA FALLS, NY

MAP SHOWING GEOPHYSICAL SURVEY LINE LOCATIONS
MAY 1994

GARTNER LEE, INC. NIAGARA FALLS, NY



LEGEND:

- MONITORING WELL
- PIEZOMETER
- UTILITY POLE
- MANHOLE
- CATCHBASIN
- RAILROAD TRACKS

BASE MAP PROVIDED BY BLASLAND & BOUCK ENGINEERS, P.C.

Scale 1:1200

50 0 50 100 150 200 250

(feet)

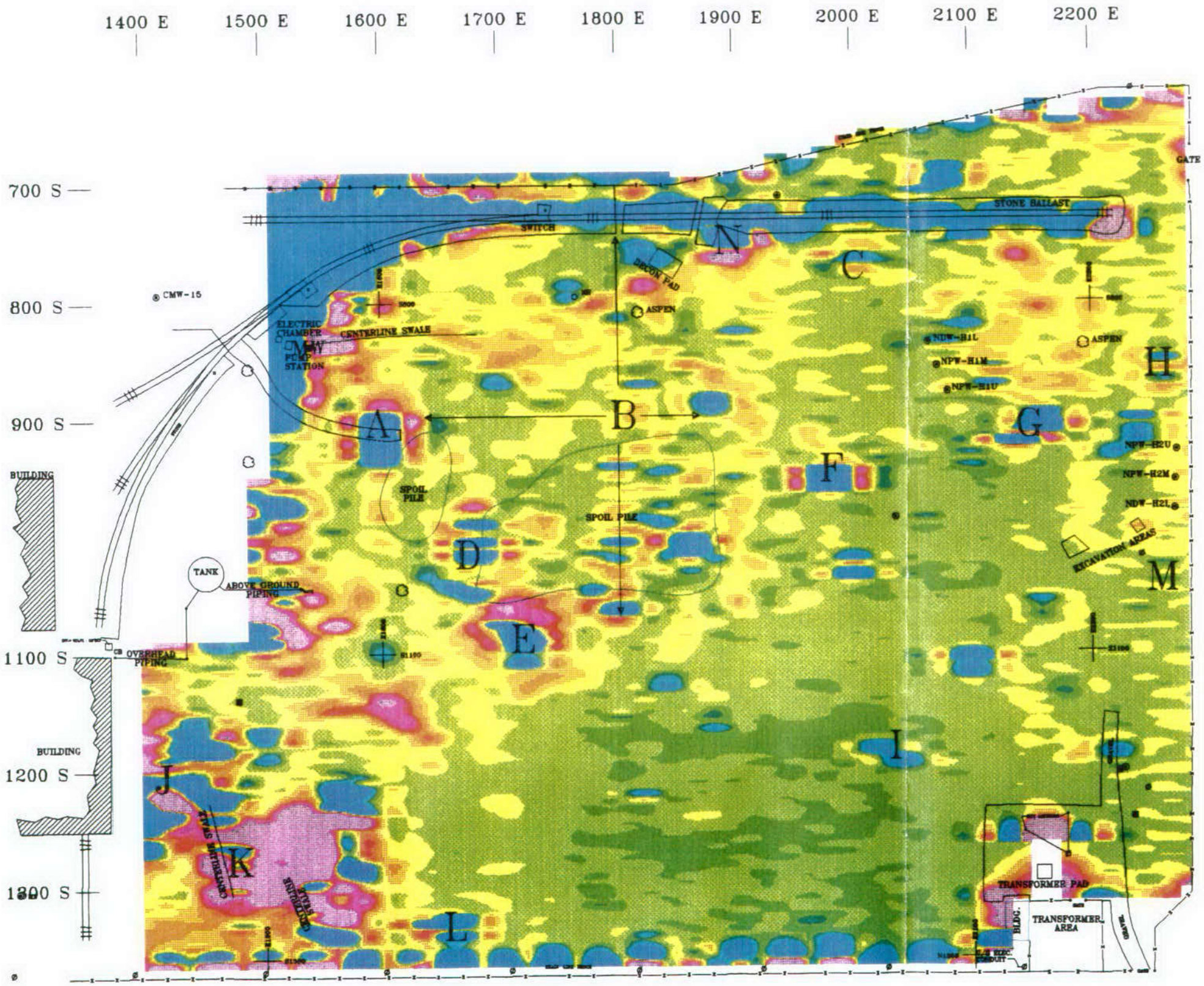
Gartner Lee

FIGURE 2

GEOPHYSICAL SURVEY RESULTS
TAM CERAMICS SITE, NIAGARA FALLS, NY

MAP SHOWING COLOR CONTOURS OF
TERRAIN CONDUCTIVITY DATA
UNITS: MILLISIEMENS PER METER (mS/m)
MAY 1994

GARTNER LEE, INC. NIAGARA FALLS, NY



LEGEND:

- MONITORING WELL
- PIEZOMETER
- UTILITY POLE
- MANHOLE
- CATCHBASIN
- RAILROAD TRACKS

BASE MAP PROVIDED BY BLASLAND & BOUCK ENGINEERS, P.C.

7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0

ppt

Scale 1:1200

50 0 50 100 150 200 250

(feet)

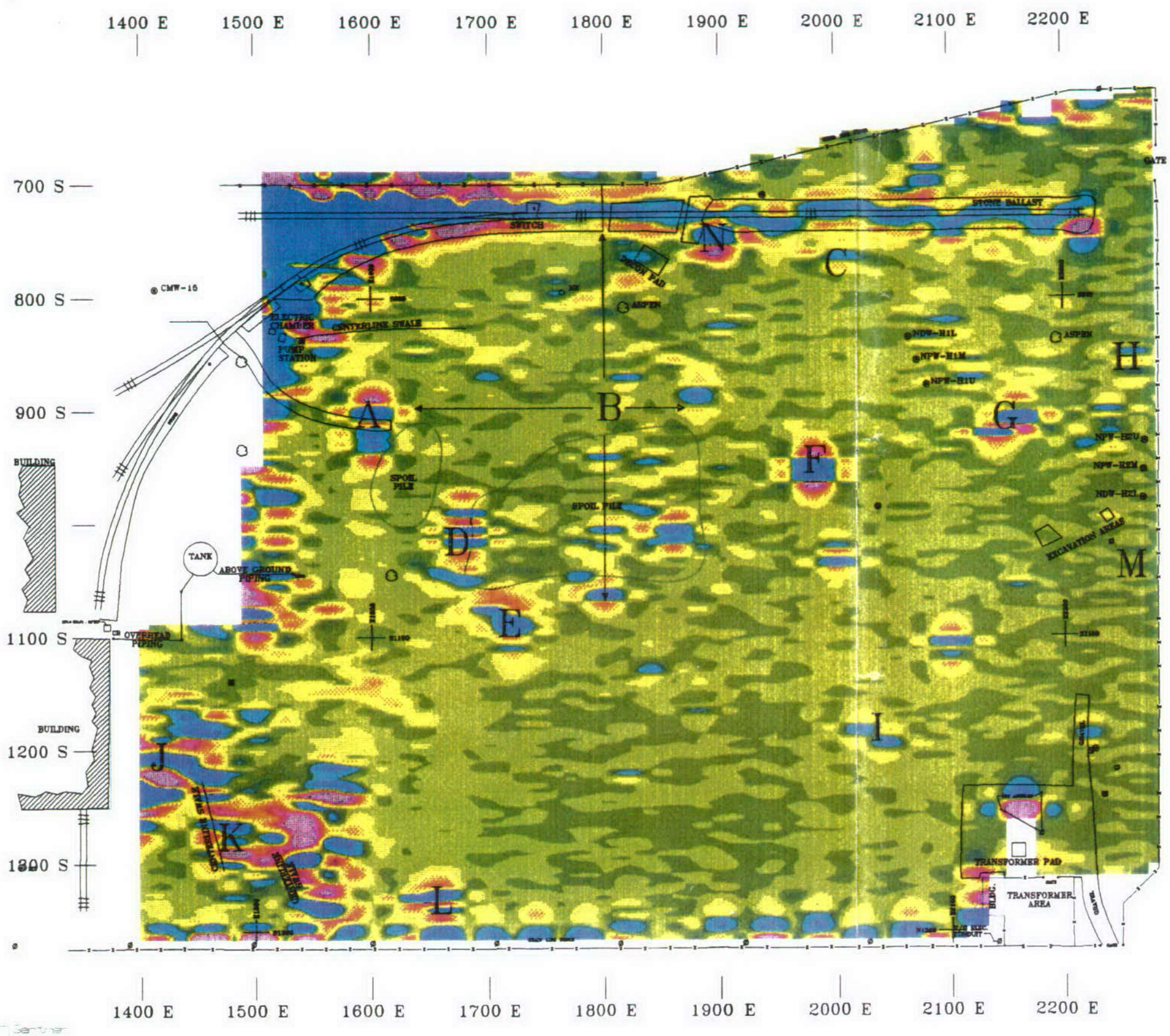
FIGURE 3

GEOPHYSICAL SURVEY RESULTS
TAM CERAMICS SITE, NIAGARA FALLS, NY

MAP SHOWING COLOR CONTOURS OF
IN-PHASE (METAL DETECTION) DATA
UNITS: ppt

GARTNER LEE, INC. NIAGARA FALLS, NY

Gartner Lee



LEGEND:

- MONITORING WELL
- PIEZOMETER
- UTILITY POLE
- MANHOLE
- CATCHBASIN
- RAILROAD TRACKS

BASE MAP PROVIDED BY BLASLAND & BOUCK ENGINEERS, P.C.

7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
-3.5
-4.0

ppt

Scale 1:1200

50 0 50 100 150 200 250

(feet)

FIGURE 4

GEOPHYSICAL SURVEY RESULTS
TAM CERAMICS SITE, NIAGARA FALLS, NY

MAP SHOWING COLOR CONTOURS OF HIGH PASS FILTERD IN-PHASE (METAL DETECTION) DATA
UNITS: ppt

GARTNER LEE, INC. NIAGARA FALLS, NY

Attachment C

Test Pit Logs

Date Start/Finish: 8-31-94 / 8-31-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 4.0 ft. **Ground Surface Elev.:** na ft. **Field Person:** D. Greene	**Test Pit No.** TP-1 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation na ft.						GROUND SURFACE	
			0.0			Brown to light brown, fine to medium SAND and SILT, some large concrete pieces, trace clay, loose, dry. FILL.	
		X	0.0			Dark brown, medium SAND and SILT, trace clay, white substance within a severely rusted drum.	
5						Base of excavation at 4.0'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 8-31-94 / 8-31-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 7.2 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-2 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown, fine to medium SAND and SILT, some fine gravel trace clay, moist. (concrete and asphalt pieces at 2.0'). FILL.	
			0.0			Red brown, fine SAND and SILT, trace clay, red brick fragments and wood pieces. FILL.	
5			0.0			Dark brown, fine SAND and SILT, trace clay, firm, moist. Large boulder at 7.0'.	
						Base of excavation at 7.2'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 8-31-94 / 8-31-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 6.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-3 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown to dark brown, fine SAND and SILT, some clay, firm, moist. FILL. Large cobbles, asphalt pieces, and wood pieces scattered throughout.	
5			0.0			Dark red-brown, fine SAND, SILT and CLAY, firm, moist.	
						Base of excavation at 6.0'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 8-31-94 / 8-31-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 5.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-4 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Dark brown, medium SAND and SILT, some coarse gravel and cobbles, dense, moist. Concrete, red brick and metal pieces throughout. FILL.	
						Yellow/pink, fine SAND and fine gravel size debris.	
			0.0			Red brown, fine SAND and SILT, trace clayand fine gravel, moist.	
5						Base of excavation at 5.0'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 8-31-94 / 8-31-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 2.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-5 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown, fine to medium SAND and SILT, some fine gravel, trace clay, moist. Red brick, metal and wood debri throughout, severely rusted drum encountered at 1.5'. FILL.	
						Base of excavation at 2.0'	
5							
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 2.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-7 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
		X	0.0			Gray-white, fine SAND mixed with powdery material.	
			0.0			Abundant metal pieces, ie. sheet metal, re-bars... FILL.	
						Red brown, fine SAND, SILT, and CLAY, firm, moist.	
						Base of excavation at 2.0'	
5							
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 3.5 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-8 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown – red brown, fine SAND and SILT, some large cobbles and concrete pieces.	
		X	0.0			Brown, fine SAND and SILT, trace clay, moist. Two severely rusted drums encountered, some gray moist ash material within. FILL.	
						Base of excavation at 3.5'	
5							
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 6.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-9 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown, fine to medium SAND and SILT, some fine gravel. Concrete and metal pieces scattered throughout. Several rusted drums encountered within 1.0 – 3.5'. Grayish ash residue in the drums. FILL.	
5			0.0			Red brown, fine SAND, SILT and CLAY.	
						Base of excavation at 6.0'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 4.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-10 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
	gs elevation NA ft.						GROUND SURFACE	
			X	0.0			Brown gray, medium SAND and SILT, some fine gravel, loose, dry. Several rusted drums located at or near surface, containing a gray ash substance. Abundant concrete, metal, wood and glass pieces scattered throughout. FILL.	
				0.0			Red brown, fine SAND, SILT and CLAY, firm, moist.	
5							Base of excavation at 4.0'	
10								
15								

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 3.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-11 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Red brown, fine SAND, SILT and CLAY, some large cobble size pieces of slag, loose, dry.	
			0.0			Red brown, fine SAND, SILT and CLAY.	
						Base of excavation at 3.0'	
5							
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 6.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No. TP-12** **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						**GROUND SURFACE**	
		X	0.0			Grayish white powdery ash material, dry.	
						Brown - light brown, fine to medium SAND and SILT, some fine gravel, trace clay, loose, dry. Concrete pieces at 2.0 - 2.5'.	
			0.0			Red brown, fine SAND and SILT, some coarse gravel and cobbles, loose, moist. FILL.	
5							
						Base of excavation at 6.0'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 3.5 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-13 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown – dark brown, fine to medium SAND and SILT, some cobbles and coarse gravel, moist. FILL.	
						Red brown – yellow brown, fine SAND and SILT. Clear gel substance encountered in and around severely rusted drums and plastic sheeting, wet.	
5						Base of excavation at 3.5'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 2.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-14 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Gray – white, fine SAND and SILT, powdery material, dry.	
			0.0			Red brown, fine to medium SAND, SILT and CLAY, moist.	
						Base of excavation at 2.0'	
5							
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 1.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-15 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
		X	0.0			Gray - white, fine SAND and SILT, intermixed with powdery material.	
						Red brown, fine SAND, SILT and CLAY, firm, dry.	
						Base of excavation at 1.0'	
5							
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 2.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-18 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown to red brown, fine to medium SAND and SILT, trace clay, firm, moist.	
						Base of excavation at 2.0'	
5							
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 5.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-17 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown, fine to coarse SAND and SILT, some fine gravel, loose, moist. Abundant concrete, brick, wood and metal pieces scattered throughout. FILL.	
			0.0			Brown – red brown, fine SAND, SILT and CLAY.	
5						Base of excavation at 5.0'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 4.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-18 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown to red brown, fine to medium SAND and SILT, some clay, trace fine gravel, firm, dry.	
5						Base of excavation at 4.0'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Date Start/Finish: 9-01-94 / 9-01-94 **Excavating Company:** Parratt-Wolff Inc. **Operator's Name:** Kevin White **Backhoe:** JCB-214	**Completion Depth:** 5.0 ft. **Ground Surface Elev.:** NA ft. **Field Person:** D. Greene	**Test Pit No.** TP-19 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample	Sample/Int/Type	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Notes
gs elevation NA ft.						GROUND SURFACE	
			0.0			Brown to red brown, fine SAND and SILT, some clay and small cobbles, loose, dry. Some concrete and metal pieces scatteredthroughout the 0 – 1.0' interval.	
5						Base of excavation at 5.0'	
10							
15							

BLASLAND, BOUCK & LEE, INC.
ENGINEERS & SCIENTISTS

Remarks:

Test pit excavated with a rubber tired backhoe "JCB-214", equipped with a 24-inch wide bucket.

Attachment D

Boring Logs

Date Start/Finish: 9/13/94 – 9/13/94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Kevin White **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A-in. **Auger Size :** 4.25-in. **Rig Type:** CME-45 **Spoon Size:** 2-in. **Hammer Weight:** 140-lb **Height of Fall:** 30-in.	**Northing:** **Easting:** **Borehole Depth:** 8.5 ft. **Ground Surface Elev.:** 615.5 ft. **Geologist:** David L. Greene	**Boring No.** SB-1 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 615.5 ft.										**GROUND SURFACE**	
	615	1		4 7 8 9	15	1.2	0.0			Light brown, fine to medium SAND, SILT, and GRAVEL, loose, dry.	Soil boring backfilled to surface.
		2		10 11 11 11	22	2.0	0.0			Red-brown fine SAND and SILT, trace clay, moist. FILL	
5	610	3		14 11 9 9	20	2.0	0.0			Cobbles at 4.0 to 6.2 feet.	
		4		20 14 21 24	35	1.4	4.0			Brown, fine SAND and SILT, moist.	
		5		100	100	0.2	–				
10	605									Top of rock at 8.5 feet.	
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/12/94 – 9/12/94
Drilling Company: Parratt Wolff Inc.
Driller's Name: Kevin White
Drilling Method: Hollow Stem Auger
Bit Size: N/A–in. **Auger Size :** 4.25–in.
Rig Type: CME–45
Spoon Size: 2–in.
Hammer Weight: 140–lb
Height of Fall: 30–in.

Northing:
Easting:
Borehole Depth: 12.8 ft.
Ground Surface Elev.: 620.3 ft.

Geologist: David L. Greene

Boring No. SB–2

Site:
Niagara Falls, NY

Client:
TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 620.3 ft.										GROUND SURFACE	
	620	1		8 8 7 8	13	1.8	0.0			Light brown, fine SAND and SILT, some fine gravel, loose, moist. FILL	Soil boring backfilled to surface.
		2		8 11 13 11	24	1.5	0.0				
5	615	3		10 10 12 15	22	1.1	0.0			Red–brown fine SAND and SILT, trace clay.	
		4		55 45 39 40	84	1.0	20				
		5		28 35 42 45	77	1.5	40			Wet at 8.0 feet.	
10	610	6		58 48 52 56	100	2.0	20			Black, fine to medium GRAVEL. Dark brown, fine SAND and SILT, wet. Fissile gray ash material from 11.5 to 12.0 feet.	
		7		100 100	100	0.8	–				
										Top of rock at 12.8 feet.	
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/13/94 – 9/13/94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Kevin White **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A–in. **Auger Size :** 4.25–in. **Rig Type:** CME–45 **Spoon Size:** 2–in. **Hammer Weight:** 140–lb **Height of Fall:** 30–in.	**Northing:** **Easting:** **Borehole Depth:** 11.5 ft. **Ground Surface Elev.:** 612.6 ft. **Geologist:** David L. Greene	**Boring No.** SB–3 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 612.6 ft.											
										GROUND SURFACE	
		1		15 20 20 15	40	1.0	0.0			Brown–gray, fine to medium SAND and SILT, some medium gravel, some grass and roots, dry.	Soil boring backfilled to surface.
	610	2		9 9 10 12	19	2.0	0.0			Red–brown fine SAND and SILT, trace clay and fine gravel, moist. FILL	
5		3		14 18 19 20	35	2.0	0.0				
		4		24 21 21 19	42	2.0	40			Light brown, fine SAND, SILT and CLAY, firm, moist.	
	605	5		12 14 12 15	28	2.0	0.0				
10		6		10 28 100	128	1.8	8.0			Fissile rock pieces, slight organic odor.	
										Top of rock at 11.5 feet.	
	600										
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/13/94 - 9/13/94
Drilling Company: Parratt Wolff Inc.
Driller's Name: Kevin White
Drilling Method: Hollow Stem Auger
Bit Size: N/A-in. **Auger Size:** 4.25-in.
Rig Type: CME-45
Spoon Size: 2-in.
Hammer Weight: 140-lb
Height of Fall: 30-in.

Northing:
Easting:
Borehole Depth: 8.5 ft.
Ground Surface Elev.: 614.6 ft.

Geologist: David L. Greene

Boring No. SB-4

Site:
Niagara Falls, NY

Client:
TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 in.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 614.6 ft.										GROUND SURFACE	
		1		9 10 9 14	19	1.5	0.0			Brown, fine to coarse, SAND and SILT, some gravel, grass and roots, moist.	Soil boring backfilled to surface.
		2		14 12 15 17	27	2.0	0.0			Red-brown fine SAND and SILT, trace fine gravel, loose, moist.	
5	610	3		14 14 18 21	32	2.0	-				
		4		17 18 18 25	38	1.0	0.0			Red-brown, fine SAND, SILT and CLAY, firm, moist. Rock pieces.	
		5		100	100	1.0	4.0				
10	605									Top of rock at 8.5 feet.	
15	600										

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/13/94 – 9/13/94
Drilling Company: Parratt Wolff Inc.
Driller's Name: Kevin White
Drilling Method: Hollow Stem Auger
Bit Size: N/A-in. **Auger Size :** 4.25-in.
Rig Type: CME-45
Spoon Size: 2-in.
Hammer Weight: 140-lb
Height of Fall: 30-in.

Northing:
Easting:
Borehole Depth: 10.0 ft.
Ground Surface Elev.: 615.8 ft.

Geologist: David L. Greene

Boring No. SB-6

Site:
Niagara Falls, NY

Client:
TAM Ceramics Inc.

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 615.8 ft.									**GROUND SURFACE**	
615	1		8 12 10 14	22	1.8	0.0			Brown, fine SAND and SILT, some grass and roots, moist.	Soil boring backfilled to surface.
	2		14 12 15 18	27	1.9	0.0			Red-brown fine SAND and SILT, some clay, dry to moist.	
5 / 610	3		18 18 27 29	45	2.0	0.5				
	4		22 21 37 41	58	1.4	0.0			Fine SAND and SILT, moist.	
	5		28 28 33 100	59	1.8	20			Rock fragments at 9.8 feet, some organic odors.	
10 / 605									Top of rock at 10.0 feet.	
15										

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/12/94 – 9/12/94
Drilling Company: Parratt Wolff Inc.
Driller's Name: Kevin White
Drilling Method: Hollow Stem Auger
Bit Size: N/A-in. **Auger Size :** 4.25-in.
Rig Type: CME-45
Spoon Size: 2-in.
Hammer Weight: 140-lb
Height of Fall: 30-in.

Northing:
Easting:
Borehole Depth: 4.1 ft.
Ground Surface Elev.: 616.9 ft.

Geologist: David L. Greene

Boring No. SB-7

Site:
Niagara Falls, NY

Client:
TAM Ceramics Inc.

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 616.9 ft.									GROUND SURFACE	
615	1		9 10 9 11	19	1.4	0.0			Brown, medium to coarse SAND and SILT, some grass and roots.	Soil boring backfilled to surface.
	2		19 27 50 100	77	1.0	10.0			Red-brown fine SAND and SILT, some clay, trace fine gravel (shale), dry to moist.	
5									Top of rock at 4.1 feet.	
610										
10										
605										
15										

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/13/94 – 9/13/94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Kevin White **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A-in. **Auger Size:** 4.25-in. **Rig Type:** CME-45 **Spoon Size:** 2-in. **Hammer Weight:** 140-lb **Height of Fall:** 30-in.	**Northing:** **Easting:** **Borehole Depth:** 6.5 ft. **Ground Surface Elev.:** 615.6 ft. **Geologist:** David L. Greene	**Boring No.** SB-9 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
	gs elevation 615.6 ft.										
										GROUND SURFACE	
	615	1		9 10 11 10	21	1.8	0.0			Brown, medium SAND, SILT and GRAVEL.	Soil boring backfilled to surface.
		2		12 14 11 12	25	1.5	0.0			Red-brown fine SAND and SILT, trace clay, dry.	
5	610	3		17 28 39 51	67	1.8	0.5			Shale (fissile) fragments, dry.	
		4		100	–	0.2	0.0			Top of rock at 6.5 feet.	
10	605										
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/12/94 – 9/12/94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Kevin White **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A–in. **Auger Size :** 4.25–in. **Rig Type:** CME–45 **Spoon Size:** 2–in. **Hammer Weight:** 140–lb **Height of Fall:** 30–in.	**Northing:** **Easting:** **Borehole Depth:** 6.0 ft. **Ground Surface Elev.:** 619.2 ft. **Geologist:** David L. Greene	**Boring No.** SB–13 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
	gs elevation 619.2 ft.									GROUND SURFACE	
		1		6 7 10 8	17	1.8	0.0			Gray–white ASH material, dry. Red–brown fine SAND and SILT, some clay, trace fine gravel, moist.	Soil boring backfilled to surface.
		2		8 8 10 14	18	2.0	0.0			FILL	
	615	3		18 20 100 –	120	2.0	10.0			Large cobble at 5.0 feet. Shale pieces at 5.8 feet.	
5										Top of rock at 6.0 feet.	
	610										
10											
	605										
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/13/94 – 9/13/94
Drilling Company: Parratt Wolff Inc.
Driller's Name: Kevin White
Drilling Method: Hollow Stem Auger
Bit Size: N/A–in. **Auger Size :** 4.25–in.
Rig Type: CME–45
Spoon Size: 2–in.
Hammer Weight: 140–lb
Height of Fall: 30–in.

Northing:
Easting:
Borehole Depth: 10.5 ft.
Ground Surface Elev.: 616.2 ft.

Geologist: David L. Greene

Boring No. SB–15

Site:
Niagara Falls, NY

Client:
TAM Ceramics Inc.

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 616.2 ft.									**GROUND SURFACE**	
615	1		8 8 9 8	17	1.8	0.0			Brown–gray, fine SAND and SILT, some medium gravel, some grass and roots, dry.	Soil boring backfilled to surface.
	2		10 12 16 19	28	1.7	0.0			Trace gray/white ASH material. Red–brown fine SAND and SILT, some clay, dry.	
5	3		12 14 17 20	31	1.9	0.0			FILL	
610	4		43 38 24 27	62	1.5	0.0			Fissile shale fragments. Brown–red/brown, fine SAND and SILT, trace clay and fine gravel, moist.	
	5		14 17 17 100	34	1.8	0.0				
10	6		100	–	0.4	0.0				
605									Top of rock at 10.5 feet.	
15										

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/12/94 – 9/12/94
Drilling Company: Parratt Wolff Inc.
Driller's Name: Kevin White
Drilling Method: Hollow Stem Auger
Bit Size: N/A-in. **Auger Size :** 4.25-in.
Rig Type: CME-45
Spoon Size: 2-in.
Hammer Weight: 140-lb
Height of Fall: 30-in.

Northing:
Easting:
Borehole Depth: 6.0 ft.
Ground Surface Elev.: 617.3 ft.

Geologist: David L. Greene

Boring No. SB-16

Site:
Niagara Falls, NY

Client:
TAM Ceramics Inc.

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 617.3 ft.									GROUND SURFACE	
0	1	SS	17 10 9 10	19	1.4	0.0			Brown, fine to medium SAND and SILT, some grass and roots.	Soil boring backfilled to surface.
615									Brown-red/brown, fine SAND and SILT, trace clay, moist.	
	2	SS	14 10 19 14	24	2.0	0.0				
5	3	SS	28 37 41 43	78	1.8	5.0			Fissile shale pieces, dry to moist.	
									Top of rock at 6.0 feet.	
610										
10										
605										
15										

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/13/94 – 9/13/94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Kevin White **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A-in. **Auger Size :** 4.25-in. **Rig Type:** CME-45 **Spoon Size:** 2-in. **Hammer Weight:** 140-lb **Height of Fall:** 30-in.	**Northing:** **Easting:** **Borehole Depth:** 7.0 ft. **Ground Surface Elev.:** 618.4 ft. **Geologist:** David L. Greene	**Boring No. SB-18** **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 618.4 ft.										GROUND SURFACE	
	615									Note: No sampling performed. Borehole was drilled to determine depth to bedrock.	Soil boring backfilled to surface.
5											
										Top of rock at 7.0 feet.	
	610										
10											
	605										
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Date Start/Finish: 9/13/94 – 9/13/94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Kevin White **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A-in. **Auger Size :** 4.25-in. **Rig Type:** CME-45 **Spoon Size:** 2-in. **Hammer Weight:** 140-lb **Height of Fall:** 30-in.	**Northing:** **Easting:** **Borehole Depth:** 8.8 ft. **Ground Surface Elev.:** 617.4 ft. **Geologist:** David L. Greene	**Boring No.** SB-19 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Boring Construction
gs elevation 617.4 ft.									GROUND SURFACE	
0 / 615									Note: No sampling performed. Borehole was drilled to determine depth to bedrock.	Soil boring backfilled to surface.
5 / 610									Top of rock at 8.8 feet.	
10 / 605										
15										

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Borehole backfilled with soil cuttings upon completion.

Saturated Zones

Date / Time	Elevation	Depth

Attachment E

Monitoring Well Installation Logs

Date Start/Finish: 9-13-94 / 9-13-94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Kevin White **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A-in. **Auger Size:** 4.25-in. **Rig Type:** CME-45 **Spoon Size:** 2-in.	**Northing:** **Easting:** **Well Casing Elev.:** 613.59 ft. **Corehole Depth:** **Borehole Depth:** 10 ft. **Ground Surface Elev.:** 611.3 ft. **Geologist:** David L. Greene	**Well No.** OMWBBL-1 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Well Construction
gs elevation 611.3 ft.										GROUND SURFACE	Vented well cap. 4-inch diameter protective stick-up.
	610	1		12 14 12 10	26	2.0	0.0			Brown-gray, fine to coarse SAND, SILT and GRAVEL, dry. Light brown, fine SAND and SILT, trace fine gravel, moist. Some white-gray ash material at 1.8 to 2.0 feet. FILL	Concrete seal from ground surface to 1.5 feet.
		2		23 23 20 21	43	2.0	0.0				2-inch diameter schedule 40 PVC from 0 to 5.0 feet.
5		3		10 15 18 18	33	1.8	0.0				Hydrated bentonite seal from 1.5 to 4.0 feet.
	605	4		33 32 39 32	71	1.8	0.0			Red-brown, fine SAND, SILT, and CLAY, thinly laminated, moist.	#1 Morie sandpack from 4.0 to 10.0 feet.
		5		11 21 38 100	59	1.0	0.0			Red-brown, fine to medium SAND and SILT, wet.	2-inch diameter schedule 40 PVC screen from 5.0 to 10.0 feet. (Screen size = 0.010)
10										Top of rock at 10.0 feet.	
	600										
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Top of riser at 613.39 ft.

Water Levels

Date / Time	Elevation	Depth
	NA	
	NA	
	NA	

Date Start/Finish: 9-14-94 / 9-14-94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Kevin White **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A-in. **Auger Size :** 4.25-in. **Rig Type:** CME-45 **Spoon Size:** 2-in.	**Northing:** **Easting:** **Well Casing Elev.:** 621.17 ft. **Corehole Depth:** **Borehole Depth:** 5.5 ft. **Ground Surface Elev.:** 619.0 ft. **Geologist:** David L. Greene	**Well No.** OMWBBL-2 **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Well Construction
	gs elevation 619.0 ft.									GROUND SURFACE	Vented well cap. 4-inch diameter protective stick-up.
		1		9 8 14 9	22	1.8	0.0			Brown, fine to coarse SAND and SILT, some gravel, grass, roots, dry. Red-brown, fine SAND and SILT, trace clay, moist.	Concrete seal from ground surface to 1.0 feet.
		2		14 17 19 24	36	1.5	0.0				2-inch diameter schedule 40 PVC from 0 to 3.5 feet. Hydrated bentonite seal from 1.0 to 3.0 feet.
	615	3		19 33 100	133	1.0	0.5			Some fine gravel.	#1 Morie sandpack from 3.0 to 5.5 feet.
5										Top of rock at 5.5 feet.	
	610										2-inch diameter schedule 40 PVC screen from 3.5 to 5.5 feet. (Screen size = 0.010)
10											
	605										
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Top of riser at 620.84 ft.

Water Levels

Date / Time	Elevation	Depth
	NA	
	NA	
	NA	

Date Start/Finish: 12-13-94 / 12-13-94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Doug Richmond **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A-in. **Auger Size :** 4.25-in. **Rig Type:** CME-45 **Spoon Size:** 2-in.	**Northing:** **Easting:** **Well Casing Elev.:** 613.10 ft. **Corehole Depth:** **Borehole Depth:** 26.0 ft. **Ground Surface Elev.:** 611.3 ft. **Geologist:** Michael R. Arlauckas	**Well No.** MWBBL-1R **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH / ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Well Construction
gs elevation 611.3 ft.									GROUND SURFACE	4-inch diameter protective stick-up. Vented well cap.
610									See log OMWBBL-1 for subsurface soil conditions.	Concrete seal from ground surface to 1.0 feet. 2-inch diameter schedule 40 PVC from 1.4 to 5.5 feet. Hydrated bentonite seal from 2.3 to 5.5 feet.
5 / 605										#1 Morie sandpack from 5.5 to 26.0 feet.
10 / 600									Top of Rock @ 10'	2-inch diameter schedule 40 PVC screen from 5.5 to 25.5 feet. (Screen size = 0.010)
15										

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Top of riser at 613.39 ft.

Water Levels

Date / Time	Elevation	Depth

Client:
TAM Ceramics Inc.

Well No. MWBBL-1R

Total Depth = 26.0 ft.

Site:
Niagara Falls, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Well Construction
	595										
20	590										
25	585									Bottom of boring at 26.0 feet.	
30	580										
35											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Water Levels		
Date / Time	Elevation	Depth

Date Start/Finish: 12-14-94 / 12-14-94 **Drilling Company:** Parratt Wolff Inc. **Driller's Name:** Doug Richmond **Drilling Method:** Hollow Stem Auger **Bit Size:** N/A-in. **Auger Size :** 4.25-in. **Rig Type:** CME-45 **Spoon Size:** 2-in.	**Northing:** **Easting:** **Well Casing Elev.:** 620.2 ft. **Corehole Depth:** **Borehole Depth:** 28.0 ft. **Ground Surface Elev.:** 619.0 ft. **Geologist:** Michael R. Arlauckas	**Well No.** MWBBL-2R **Site:** Niagara Falls, NY **Client:** TAM Ceramics Inc.

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Well Construction
	gs elevation 619.0 ft.									GROUND SURFACE	4-inch diameter protective stick-up. Vented well cap.
										See log OMWBBL-2 for subsurface soil conditions.	Concrete seal from ground surface to 1.0 feet. 2-inch diameter schedule 40 PVC from 1.4 to 6.9 feet. Sand filter
	615										
5											
										Top of Bedrock	Hydrated bentonite seal from 5.9 to 7.9 feet.
	610										#1 Morie sandpack from 6.9 to 28.0 feet.
10											
											2-inch diameter schedule 40 PVC screen from 8.9 to 28.9 feet. (Screen size = 0.010)
	605										
15											

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:
Top of riser at 613.39 ft.

Water Levels

Date / Time	Elevation	Depth

Client:
TAM Ceramics Inc.

Well No. MWBBL-2R

Total Depth = 28.0 ft.

Site:
Niagara Falls, NY

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Blows/6 In.	N	Recovery (ft.)	PID (ppm) Headspace	Geotechnical Test	Geologic Column	Stratigraphic Description	Well Construction
20	600										
25	595										
30	590									Bottom of boring at 28.0 feet.	
35	585										

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS

Remarks:

Water Levels

Date / Time	Elevation	Depth

Project: 163.04

Script: BBL-well
Date: 03/02/95

Attachment F

Ground-Water Sampling Logs from

Second Ground-Water Sampling Event

MONITORING WELL DEVELOPMENT FIELD LOG

Project: TAM
Site Name: NIAGARA FALLS
Well Identification: NPW - H2U

Project Number: 136.04
Field Personnel: MICHAEL R BRUZEWSKI
Date and Time: 1/6/95 1315
Weather: COLD @ 30°F SNOWY

I. Monitoring Well Information

Reference Point Marked On Casing Y or N
Well Diameter (I.D.): 2
Total Well Depth from Reference Point: 21.35
Static Water Level from Reference Point: 11.76
Top of Well Screen From Reference Point:
Top of Sand Pack From Reference Point:

II. Ground–Water Information

Water Column Length: 9.59
Well Volume: 5.87
Total Gallons Purged: 18.0
Well Volumes Purged: 3
Surging Equipment: BAILER
Purging Equipment: BAILER
Comments/Observations:
SAMPLES FOR METALS

III. Ground–Water Development Data

Equipment Calibration:
pH Standard _____ Reading _____
Specific Conductivity Standard _____ Reading _____
Turbidity Standard _____ Reading _____
Temperature _____

Ground–Water Readings:

← SAMPLING
BEFORE | AFTER ~~BEFORE~~ | ~~AFTER~~

Parameter	Volume (6.0 gal).	Volume (12.0 gal).	Volume (18.0 gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH	6.82	6.89	6.88	6.86	6.88	
Temperature (F)	6.9	7.0	7.0	7.4	7.3	
Conductivity (mS/cm)	769	782	783	780	779	
Turbidity (NTU)	148	139	134	134	134	

Parameter	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

Parameter	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

MONITORING WELL DEVELOPMENT FIELD LOG

Project: TAM
Site Name: NIAGARA FALLS
Well Identification: OMW-17E

Project Number: 136.04
Field Personnel: MICHAEL R. ARCANGELES
Date and Time: 1/6/95
Weather: COLD @ 30°F SNOWY

I. Monitoring Well Information

Reference Point Marked On Casing Y or N
Well Diameter (I.D.): 2"
Total Well Depth from Reference Point: 9.35
Static Water Level from Reference Point: 7.81
Top of Well Screen From Reference Point: _____
Top of Sand Pack From Reference Point: _____

II. Ground–Water Information

Water Column Length: 1.54
Well Volume: 1
Total Gallons Purged: @ 1.5
Well Volumes Purged: _____
Surging Equipment: BAILER
Purging Equipment: _____
Comments/Observations: _____
NO SAMPLE – WELL DID NOT RECOVER

III. Ground–Water Development Data

Equipment Calibration:
pH Standard _____ Reading _____
Specific Conductivity Standard _____ Reading _____
Turbidity Standard _____ Reading _____
Temperature _____

Ground–Water Readings:

Parameter	Volume (1.5 gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

Parameter	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

Parameter	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

MONITORING WELL DEVELOPMENT FIELD LOG

Project: TAM
Site Name: NIAGARA FALLS
Well Identification: MW-BBL2R

Project Number: 136.04
Field Personnel: MICHAEL R ALLASCHAS
Date and Time: 1/6/95 1230
Weather: CLDS @ 30°F SUNNY

I. Monitoring Well Information

Reference Point Marked On Casing Y or N
Well Diameter (I.D.): 2
Total Well Depth from Reference Point: 27.06
Static Water Level from Reference Point: 13.85
Top of Well Screen From Reference Point:
Top of Sand Pack From Reference Point:

II. Ground–Water Information

Water Column Length: 13.21
Well Volume: 2.12
Total Gallons Purged: 6.6
Well Volumes Purged: 3
Surging Equipment: BAILER
Purging Equipment: BAILER
Comments/Observations:
SAMPLES FOR VOCS/ALS

III. Ground–Water Development Data

Equipment Calibration:
pH Standard _____ Reading _____
Specific Conductivity Standard _____ Reading _____
Turbidity Standard _____ Reading _____
Temperature _____

Ground–Water Readings:

Parameter	Volume (2.2 gal).	Volume (4.4 gal).	Volume (6.6 gal).	Volume (8.8 gal).	Volume BEFORE SAMPLING (gal).	Volume AFTER SAMPLING (gal).
pH	7.06	7.08	7.08	7.08	7.08	7.06
Temperature (F)	7.8	7.8	8.0	8.0	8.0	7.9
Conductivity (mS/cm)	634	631	630	627	624	624
Turbidity (NTU)	135	135	128	126	125	123

Parameter	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

Parameter	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

MONITORING WELL DEVELOPMENT FIELD LOG

Project: TAMI
Site Name: NIAGARA FALLS
Well Identification: MWBBLIR

Project Number: 136.04
Field Personnel: MICHAEL R. ARLAUSKAS
Date and Time: 1/6/95 1250
Weather: COLD @ 30°F SNOWY

I. Monitoring Well Information

Reference Point Marked On Casing Y or N
Well Diameter (I.D.): 2
Total Well Depth from Reference Point: 28.49
Static Water Level from Reference Point: 12.86
Top of Well Screen From Reference Point: _____
Top of Sand Pack From Reference Point: _____

II. Ground–Water Information

Water Column Length: 15.63
Well Volume: 2.61
Total Gallons Purged: 7.8
Well Volumes Purged: C3
Surging Equipment: _____
Purging Equipment: _____
Comments/Observations: _____
SAMPLED FOR METALS

III. Ground–Water Development Data

Equipment Calibration:
pH Standard _____ Reading _____
Specific Conductivity Standard _____ Reading _____
Turbidity Standard _____ Reading _____
Temperature _____

Ground–Water Readings:

Sampling
BEFORE AFTER

Parameter	Volume (2.6 gal).	Volume (5.2 gal).	Volume (7.8 gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH	7.01	7.00	6.93		7.00	7.00
Temperature (F)	7.3	6.9	7.0		7.0	7.0
Conductivity (mS/cm)	331	328	323		320	320
Turbidity (NTU)	12	10	10		10	9

Parameter	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

Parameter	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).	Volume (gal).
pH						
Temperature (F)						
Conductivity (mS/cm)						
Turbidity (NTU)						

Attachment G

Laboratory Analytical Results

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/01899 Date: JUNE 8 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

Tam Ceramics

Received : 05/26/94 P.O. #:

METALS - TAL ANALYTICAL RESULTS - mg/l

Sample:		-001					
Location:		TAMGW1					
Date Collected:		05/25/94					
Time Collected:	PQL	15:45					
Aluminum	0.100	0.604					
Antimony	0.100	0.100 U					
Arsenic	0.0050	0.0050 U					
Barium	0.0050	0.0748					
Beryllium	0.0050	0.0050 U					
Cadmium	0.0050	0.0050 U					
Calcium	0.50	74.6					
Chromium	0.010	0.010 U					
Cobalt	0.0500	0.0500 U					
Copper	0.0200	0.0200 U					
Iron	0.050	0.692					
Lead	0.0050	0.0050 U					
Magnesium	0.250	24.0					
Manganese	0.0050	0.0561					
Mercury	0.00010	0.00010 U					
Nickel	0.0400	0.0400 U					
Potassium	0.50	4.87					
Selenium	0.0050	0.0050 U					
Silver	0.010	0.010 U					
Sodium	0.50	27.4					
Thallium	0.010	0.010 U					
Vanadium	0.050	0.0500 U					
Zinc	0.010	0.0323					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NJ ID# in Hackensack: 02317

NJ ID# in Rochester: 73331 NY ID# in Hackensack: 10801

Michael K. Pearson

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/01899 Date: JUNE 9 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics

Received : 05/26/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 625* ANALYTICAL RESULTS - ug/l

Sample:		-001	-002					
Location:		TAMGW1	LAB METH BLANK					
Date Collected:		05/25/94	--					
Time Collected:	PQL	15:45	--					
Date Extracted:		5/26/94	05/26/94					
Date Analyzed:		5/27/94	05/27/94					
Dilution:		1	1					
Phenol	10	10 UJ	10 U					
2-Chlorophenol	10	10 UJ	10 U					
2-Nitrophenol	10	10 UJ	10 U					
2,4-Dimethylphenol	10	10 UJ	10 U					
2,4-Dichlorophenol	10	10 UJ	10 U					
4-Chloro-3-methylphenol	10	10 UJ	10 U					
2,4,6-Trichlorophenol	10	10 UJ	10 U					
2,4-Dinitrophenol	20	20 UJ	20 U					
4-Nitrophenol	20	20 UJ	20 U					
2-Methyl-4,6-dinitrophenol	20	20 UJ	20 U					
Pentachlorophenol	20	20 UJ	20 U					
2-Methylphenol	10	10 UJ	10 U					
4-Methylphenol	10	10 UJ	10 U					
2,4,5-Trichlorophenol	10	10 UJ	10 U					
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	21-100%	0 *	58					
Phenol-d6	10-94%	0 *	57					
2,4,6-TriBromophenol	10-123%	46	63					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael F. Pecora

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/01899 Date: JUNE 9 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

Tam Ceramics

Received : 05/26/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 625* ANALYTICAL RESULTS - ug/l

Sample:		-001	-002					
Location:		TAMGW1	LAB METH BLANK					
Date Collected:		05/25/94	--					
Time Collected:	PQL	15:45	--					
Date Extracted:		5/26/94	05/26/94					
Date Analyzed:		5/27/94	05/27/94					
Dilution:		1	1					
N-Nitrosodimethylamine	5.0	5.0 UJ	5.0 U					
Bis(2-chloroethyl) ether	5.0	5.0 UJ	5.0 U					
1,3 Dichlorobenzene	5.0	5.0 UJ	5.0 U					
1,4 Dichlorobenzene	5.0	5.0 UJ	5.0 U					
1,2 Dichlorobenzene	5.0	5.0 UJ	5.0 U					
2,2'oxybis(1-Chloropropane)	5.0	5.0 UJ	5.0 U					
N-Nitroso-Di-n-propylamine	5.0	5.0 UJ	5.0 U					
Hexachloroethane	5.0	5.0 UJ	5.0 U					
Nitrobenzene	5.0	5.0 UJ	5.0 U					
Isophorone	5.0	5.0 UJ	5.0 U					
bis(-2-chloroethoxy)methane	5.0	5.0 UJ	5.0 U					
1,2,4-Trichlorobenzene	5.0	5.0 UJ	5.0 U					
Naphthalene	5.0	5.0 UJ	5.0 U					
Hexachlorobutadiene	5.0	5.0 UJ	5.0 U					
Hexachlorocyclopentadiene	5.0	5.0 UJ	5.0 U					
2-Chloronaphthalene	5.0	5.0 UJ	5.0 U					
Dimethyl phthalate	5.0	5.0 UJ	5.0 U					
Acenaphthylene	5.0	5.0 UJ	5.0 U					
Acenaphthene	5.0	5.0 UJ	5.0 U					
2,4-Dinitrotoluene	5.0	5.0 UJ	5.0 U					
2,6-Dinitrotoluene	5.0	5.0 UJ	5.0 U					
Diethyl phthalate	5.0	5.0 UJ	5.0 U					
4-Chlorophenyl-phenyl-ether	5.0	5.0 UJ	5.0 U					
Fluorene	5.0	5.0 UJ	5.0 U					
1,2-Diphenylhydrazine	5.0	5.0 UJ	5.0 U					
N-Nitrosodiphenylamine	5.0	5.0 UJ	5.0 U					
4-Bromophenyl-phenylether	5.0	5.0 UJ	5.0 U					
Hexachlorobenzene	5.0	5.0 UJ	5.0 U					
Phenanthrene	5.0	5.0 UJ	5.0 U					
Anthracene	5.0	5.0 UJ	5.0 U					
Di-n-butyl phthalate	5.0	5.0 UJ	5.0 U					
Fluoranthene	5.0	5.0 UJ	5.0 U					
Pyrene	5.0	5.0 UJ	5.0 U					

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/01899 Date: JUNE 9 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics

Received : 05/26/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 625* ANALYTICAL RESULTS - ug/l

Sample:		-001	-002					
Location:		TAMGW1	LAB METH BLANK					
Date Collected:		05/25/94	--					
Time Collected:		15:45	--					
Date Extracted:		5/26/94	05/26/94					
Date Analyzed:		5/27/94	05/27/94					
Dilution:		1	1					
Butyl benzyl phthalate	5.0	5.0 UJ	5.0 U					
3,3'-Dichlorobenzidine	5.0	5.0 UJ	5.0 U					
Benzo(a)anthracene	5.0	5.0 UJ	5.0 U					
Bis(2-ethylhexyl)phthalate	5.0	5.0 UJ	5.0 U					
Chrysene	5.0	5.0 UJ	5.0 U					
Di-n-octyl phthalate	5.0	5.0 UJ	5.0 U					
Benzo(b)Fluoranthene	5.0	5.0 UJ	5.0 U					
Benzo(k)fluoranthene	5.0	5.0 UJ	5.0 U					
Benzo(a)pyrene	5.0	5.0 UJ	5.0 U					
Indeno(1,2,3-cd)pyrene	5.0	5.0 UJ	5.0 U					
Dibenzo(a,h)anthracene	5.0	5.0 UJ	5.0 U					
Benzo(g,h,i)perylene	5.0	5.0 UJ	5.0 U					
4-Chloroaniline	5.0	5.0 UJ	5.0 U					
2-Methyl Naphthalene	5.0	5.0 UJ	5.0 U					
2-Nitroaniline	5.0	5.0 UJ	5.0 U					
3-Nitroaniline	5.0	5.0 UJ	5.0 U					
Dibenzofuran	5.0	5.0 UJ	5.0 U					
4-Nitroaniline	5.0	5.0 UJ	5.0 U					
Carbazole	5.0	5.0 UJ	5.0 U					
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	35-114%	0 *	66					
2-Fluorobiphenyl	43-116%	0 *	68					
Terphenyl-d14	33-141%	58	66					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/01911 Date: JUNE 8 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics

Received : 05/26/94 P.O. #:

METALS - TAL — ANALYTICAL RESULTS - mg/l

Sample:		-001	-002	-003				
Location:		TAMGW2	TAMGW3	TAMGW3A				
Date Collected:		05/26/94	05/26/94	05/26/94				
Time Collected:	PQL	11:15	13:00	13:00				
Aluminum	0.100	0.990	67.1					
Antimony	0.100	0.100 U	0.100 U					
Arsenic	0.0050	0.0050 U	0.0102					
Barium	0.0050	0.0876	6.85					
Beryllium	0.0050	0.0050 U	0.0050 U					
Cadmium	0.0050	0.0050 U	0.0052					
Calcium	0.50	145	100					
Chromium	0.010	0.010 U	0.108					
Cobalt	0.0500	0.0500 U	0.0500 U					
Copper	0.0200	0.0200 U	0.188					
Iron	0.050	3.48	0.108					
Lead	0.050	0.0477	0.382					
Magnesium	0.250	57.2	39.2					
Manganese	0.0050	0.122	1.71					
Mercury	0.00010	0.00010 U	0.00010 U					
Nickel	0.0400	0.0400 U	0.118					
Potassium	0.50	2.90	16.9					
Selenium	0.0050	0.0050 U	0.0050 U					
Silver	0.010	0.010 U	0.010 U					
Sodium	0.50	47.8	12.5					
Thallium	0.010	0.010 U	0.010 U					
Vanadium	0.0500	0.0500 U	0.161					
Zinc	0.010	0.847	1.25					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NJ ID# in Hackensack: 02317

NJ ID# in Rochester: 73331 NY ID# in Hackensack: 10801

Michael K. Penny

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/01911 Date: JUNE 8 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics

Received : 05/26/94 P.O. #:

METALS - TAL ANALYTICAL RESULTS - mg/l

Sample:		-001	-002	-003			
Location:		TAMGW2	TAMGW3	TAMGW3A			
Date Collected:		05/26/94	05/26/94	05/26/94			
Time Collected:	PQL	11:15	13:00	13:00			
Aluminum, Soluble	0.100			0.213			
Antimony, Soluble	0.100			0.100 U			
Arsenic, Soluble	0.0050			0.0050 U			
Barium, Soluble	0.0050			0.145			
Beryllium, Soluble	0.0050			0.0050 U			
Cadmium, Soluble	0.0050			0.0050 U			
Calcium, Soluble	0.500			36.9			
Chromium, Soluble	0.010			0.010 U			
Cobalt, Soluble	0.050			0.0500 U			
Copper, Soluble	0.020			0.0200 U			
Iron, Soluble	0.050			0.191			
Lead, Soluble	0.0050			0.0050 U			
Magnesium, Soluble	0.500			8.16			
Manganese, Soluble	0.010			0.0155			
Mercury, Soluble	0.00010			0.00010 U			
Nickel, Soluble	0.040			0.0400 U			
Potassium, Soluble	0.500			3.19			
Selenium, Soluble	0.0050			0.0050 U			
Silver, Soluble	0.010			0.010 U			
Sodium, Soluble	0.500			10.8			
Thallium, Soluble	0.010			0.010 U			
Vanadium, Soluble	0.050			0.0500 U			
Zinc, Soluble	0.010			0.010 U			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NJ ID# in Hackensack: 02317

NJ ID# in Rochester: 73331 NY ID# in Hackensack: 10801

Michael K. [illegible]

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/01911 Date: JUNE 8 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics

Received : 05/26/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 625* ANALYTICAL RESULTS - ug/l

Sample:		-001	-002	-003	-004			
Location:		TAMGW2	TAMGW3	TAMGW3A	LAB METH BLANK			
Date Collected:		05/26/94	05/26/94	05/26/94	--			
Time Collected:	PQL	11:15	13:00	13:00	--			
Date Extracted:		5/31/94	5/31/94		5/31/94			
Date Analyzed:		6/02/94	6/02/94		6/01/94			
Dilution:		1	1		1			
Phenol	10	10 U	10 U		10 U			
2-Chlorophenol	10	10 U	10 U		10 U			
2-Nitrophenol	10	10 U	10 U		10 U			
2,4-Dimethylphenol	10	10 U	10 U		10 U			
2,4-Dichlorophenol	10	10 U	10 U		10 U			
4-Chloro-3-methylphenol	10	10 U	10 U		10 U			
2,4,6-Trichlorophenol	10	10 U	10 U		10 U			
2,4-Dinitrophenol	20	20 U	20 U		20 U			
4-Nitrophenol	20	20 U	20 U		20 U			
2-Methyl-4,6-dinitrophenol	20	20 U	20 U		20 U			
Pentachlorophenol	20	20 U	20 U		20 U			
2-Methylphenol	10	10 U	10 U		10 U			
4-Methylphenol	10	10 U	10 U		10 U			
2,4,5-Trichlorophenol	10	10 U	10 U		10 U			
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	21-100%	42	34		47			
Phenol-d6	10-94%	31	29		33			
2,4,6-TriBromophenol	10-123%	85	67		95			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Michael K. Pearson

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/01911 Date: JUNE 8 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics

Received : 05/26/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 625* ANALYTICAL RESULTS - ug/l

Sample:		-001	-002	-003	-004			
Location:		TAMGW2	TAMGW3	TAMGW3A	LAB METH BLANK			
Date Collected:		05/26/94	05/26/94	05/26/94	--			
Time Collected:	PQL	11:15	13:00	13:00	--			
Date Extracted:		5/31/94	5/31/94		5/31/94			
Date Analyzed:		6/02/94	6/02/94		6/01/94			
Dilution:		1	1		1			
N-Nitrosodimethylamine	5.0	5.0 U	5.0 U		5.0 U			
Bis(2-chloroethyl) ether	5.0	5.0 U	5.0 U		5.0 U			
1,3 Dichlorobenzene	5.0	5.0 U	5.0 U		5.0 U			
1,4 Dichlorobenzene	5.0	5.0 U	5.0 U		5.0 U			
1,2 Dichlorobenzene	5.0	5.0 U	5.0 U		5.0 U			
2,2'oxybis(1-Chloropropane)	5.0	5.0 U	5.0 U		5.0 U			
N-Nitroso-Di-n-propylamine	5.0	5.0 U	5.0 U		5.0 U			
Hexachloroethane	5.0	5.0 U	5.0 U		5.0 U			
Nitrobenzene	5.0	5.0 U	5.0 U		5.0 U			
Isophorone	5.0	5.0 U	5.0 U		5.0 U			
bis(-2-chloroethoxy)methane	5.0	5.0 U	5.0 U		5.0 U			
1,2,4-Trichlorobenzene	5.0	5.0 U	5.0 U		5.0 U			
Naphthalene	5.0	5.0 U	5.0 U		5.0 U			
Hexachlorobutadiene	5.0	5.0 U	5.0 U		5.0 U			
Hexachlorocyclopentadiene	5.0	5.0 U	5.0 U		5.0 U			
2-Chloronaphthalene	5.0	5.0 U	5.0 U		5.0 U			
Dimethyl phthalate	5.0	5.0 U	5.0 U		5.0 U			
Acenaphthylene	5.0	5.0 U	5.0 U		5.0 U			
Acenaphthene	5.0	5.0 U	5.0 U		5.0 U			
2,4-Dinitrotoluene	5.0	5.0 U	5.0 U		5.0 U			
2,6-Dinitrotoluene	5.0	5.0 U	5.0 U		5.0 U			
Diethyl phthalate	5.0	5.0 U	5.0 U		5.0 U			
4-Chlorophenyl-phenyl-ether	5.0	5.0 U	5.0 U		5.0 U			
Fluorene	5.0	5.0 U	5.0 U		5.0 U			
1,2-Diphenylhydrazine	5.0	5.0 U	5.0 U		5.0 U			
N-Nitrosodiphenylamine	5.0	5.0 U	5.0 U		5.0 U			
4-Bromophenyl-phenylether	5.0	5.0 U	5.0 U		5.0 U			
Hexachlorobenzene	5.0	5.0 U	5.0 U		5.0 U			
Phenanthrene	5.0	5.0 U	5.0 U		5.0 U			
Anthracene	5.0	5.0 U	5.0 U		5.0 U			
Di-n-butyl phthalate	5.0	5.0 U	5.0 U		5.0 U			
Fluoranthene	5.0	5.0 U	5.0 U		5.0 U			
Pyrene	5.0	5.0 U	5.0 U		5.0 U			

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/01911 Date: JUNE 8 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics

Received : 05/26/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 625* ANALYTICAL RESULTS - ug/l

Sample:		-001	-002	-003	-004			
Location:		TAMGW2	TAMGW3	TAMGW3A	LAB METH BLANK			
Date Collected:		05/26/94	05/26/94	05/26/94	--			
Time Collected:		11:15	13:00	13:00	--			
Date Extracted:		5/31/94	5/31/94		5/31/94			
Date Analyzed:		6/02/94	6/02/94		6/01/94			
Dilution:		1	1		1			
Butyl benzyl phthalate	5.0	5.0 U	5.0 U		5.0 U			
3,3'-Dichlorobenzidine	5.0	5.0 U	5.0 U		5.0 U			
Benzo(a)anthracene	5.0	5.0 U	5.0 U		5.0 U			
Bis(2-ethylhexyl)phthalate	5.0	5.3	5.0 U		5.0 U			
Chrysene	5.0	5.0 U	5.0 U		5.0 U			
Di-n-octyl phthalate	5.0	5.0 U	5.0 U		5.0 U			
Benzo(b)Fluoranthene	5.0	5.0 U	5.0 U		5.0 U			
Benzo(k)fluoranthene	5.0	5.0 U	5.0 U		5.0 U			
Benzo(a)pyrene	5.0	5.0 U	5.0 U		5.0 U			
Indeno(1,2,3-cd)pyrene	5.0	5.0 U	5.0 U		5.0 U			
Dibenzo(a,h)anthracene	5.0	5.0 U	5.0 U		5.0 U			
Benzo(g,h,i)perylene	5.0	5.0 U	5.0 U		5.0 U			
4-Chloroaniline	5.0	5.0 U	5.0 U		5.0 U			
2-Methyl Naphthalene	5.0	5.0 U	5.0 U		5.0 U			
2-Nitroaniline	5.0	5.0 U	5.0 U		5.0 U			
3-Nitroaniline	5.0	5.0 U	5.0 U		5.0 U			
Dibenzofuran	5.0	5.0 U	5.0 U		5.0 U			
4-Nitroaniline	5.0	5.0 U	5.0 U		5.0 U			
Carbazole	5.0	5.0 U	5.0 U		5.0 U			
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	35-114%	66	79		73			
2-Fluorobiphenyl	43-116%	72	79		72			
Terphenyl-d14	33-141%	59	53		64			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

Laboratory Director

NYSDEC Sample No: TAMGW2

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) WATER
Sample wt/vol: 1000 (g/mL) ML
Level (low/med): LOW
% Moisture: not dec. 100 dec.
Extraction: (SepF/Cont/Sonc) SEPT
GPC Cleanup (Y/N) N pH

Contract: B&B
SAS No.: -- SDG No.:
Lab Sample ID: 1911-1
Lab File ID: BC945
Date Received: 05/26/94
Date Extracted: 05/31/94
Date Analyzed: 06/02/94
Dilution Factor: 1

Number TIC's found: 2

Concentration Units: ug/l
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	5.94	15.0	B
2.		Unknown	22.99	6.0	B
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No: TAMGW3

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) WATER
Sample wt/vol: 1000 (g/mL) ML
Level (low/med): LOW
% Moisture: not dec. 100 dec.
Extraction: (SepF/Cont/Sonc)SEPT
GPC Cleanup (Y/N) N pH

Contract: B&B
SAS No.: -- SDG No.:
Lab Sample ID: 1911-2
Lab File ID: BC946
Date Received: 05/26/94
Date Extracted: 05/31/94
Date Analyzed: 06/02/94
Dilution Factor: 1

Number TIC's found: 2

Concentration Units: ug/l
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	5.94	14.0	B
2.		Unknown	24.16	7.0	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No: LAB BLANK

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) WATER
Sample wt/vol: 1000 (g/mL) ML
Level (low/med): LOW
% Moisture: not dec. 100 dec.
Extraction: (SepF/Cont/Sonc)SEPF
GPC Cleanup (Y/N) N pH

Contract: B&B
SAS No.: -- SDG No.:
Lab Sample ID: 1911-3
Lab File ID: BC943
Date Received: --
Date Extracted: 05/31/94
Date Analyzed: 06/01/94
Dilution Factor: 1

Number TIC's found: 2

Concentration Units: ug/l
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	5.94	13.0	
2.		Unknown	20.97	8.0	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03285 Date: SEPT 2 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

Tam Ceramics File #163.04

Received : 08/30/94

P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001		-002		-003	
Location:		BG-1		BG-2		BG-3	
Date Collected:	PQL	08/30/94		08/30/94		08/30/94	
Time Collected:		13:00		13:15		13:30	
Solids, %		94.1		82.4		83.9	
Aluminum	10.0	3360		12900		13300	
Antimony	10.0	10.6	UN	12.1	UN	12.0	UN
Arsenic	0.500	3.88	N*	4.94	N*	4.71	N*
Barium	0.050	253		111		176	
Beryllium	0.500	0.531	U	0.825		0.810	
Cadmium	0.50	1.07		0.607	U	0.572	
Calcium	50.0	141000	*	4200	*	19800	*
Chromium	1.00	22.8	N*	27.5	N*	37.3	N*
Cobalt	5.00	5.31	U	11.0		11.5	
Copper	1.00	21.2		19.5		28.2	
Iron	5.00	9750		25000		23600	
Lead	5.00	66.8		26.0		51.1	
Magnesium	50.0	76800	*	4950	*	8830	*
Manganese	0.500	604		697		870	
Mercury	0.100	0.106	U	0.121	U	0.119	U
Nickel	4.00	23.4	*	24.2	*	41.5	*
Potassium	50.0	637		1480		1850	
Selenium	0.500	0.914		2.60		2.98	
Silver	1.00	1.06	U	1.21	U	1.19	U
Sodium	50.0	172		60.7	U	92.8	
Thallium	30	31.9	U	36.4	U	35.8	U
Vanadium	5.00	9.85	N*	264	N*	26.5	N*
Zinc	1.00	223		91.0		156	

Laboratory Director

00002

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001		-002		-008		-009	
Location:		SS-3		SS-4		SS-1		SS-2	
Date Collected:	PQL	08/30/94		08/30/94		08/30/94		08/30/94	
Time Collected:		13:45		14:00		14:15		14:30	
Solids, %		82.0		83.0		89.5		79.6	
Aluminum	10.0					6870		10700	
Antimony	10.0					11.2	U	12.6	U
Arsenic	0.500					4.72		7.92	
Barium	0.050					594		278	
Beryllium	0.500					0.559	U	0.704	
Cadmium	0.50					1.64		2.12	
Calcium	50.0					2410		3840	
Chromium	1.00					33.4		83.4	
Cobalt	5.00					6.00		9.59	
Copper	1.00					35.3		50.9	
Iron	5.00					33000		25400	
Lead	5.00					58.0		65.2	
Magnesium	50.0					2180		3390	
Manganese	0.500					521		1100	
Mercury	0.100					0.160		0.529	
Nickel	4.00					33.4		49.7	
Potassium	50.0					735		1330	
Selenium	0.500					1.86		2.66	
Silver	1.00					1.18		1.26	U
Sodium	50.0					55.9	U	62.8	U
Thallium	1.00					33.5		37.7	
Vanadium	5.00					17.6		27.4	
Zinc	1.00					397		136	

Laboratory Director

00002

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference

Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-010		-011		-012		-013
Location:		SS-5		SS-6		SS-5D		TRIP BLANK
Date Collected:	PQL	08/30/94		08/30/94		08/30/94		08/30/94
Time Collected:		14:40		14:50		14:45		NA
Solids, %		87.0		88.0		85.8		
Aluminum	10.0	13600		11800		12200		
Antimony	10.0	15.2		11.4	U	11.6	U	
Arsenic	0.500	3.84		3.81		3.10		
Barium	0.050	14200		265		20700		
Beryllium	0.500	0.782		0.682		0.804		
Cadmium	0.50	1.79		2.35		1.55		
Calcium	50.0	19800		50700		20600		
Chromium	1.00	24.1		23.9		27.5		
Cobalt	5.00	16.6		8.45		21.3		
Copper	1.00	34.9		30.6		37.9		
Iron	5.00	25500		25000		24700		
Lead	5.00	49.7		42.8		77.6		
Magnesium	50.0	10900		19200		9942		
Manganese	0.500	745		704		723		
Mercury	0.100	0.269		0.114	U	0.393		
Nickel	4.00	26.8		25.9		29.4		
Potassium	50.0	1500		1890		1470		
Selenium	0.500	3.53		2.18		3.85		
Silver	1.00	21.2		1.23		34.0		
Sodium	50.0	171		90.4		181		
Thallium	1.00	345	U	34.1		350	U	
Vanadium	5.00	28.3		23.2		31.0		
Zinc	1.00	145		142		164		

Laboratory Director

00003

General Testing Corporation

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LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
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30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-008	-009	-010	-011	-012
Location:		SS-3	SS-4	SS-1	SS-2	SS-5	SS-6	SS-5D
Date Collected:		08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94
Time Collected:	PQL	13:45	14:00	14:15	14:30	14:40	14:50	14:45
Date Analyzed:						9/01/94	9/01/94	
Dilution:						1	1	
Chloromethane	5.0					5.7 U	5.7 U	
Bromomethane	5.0					5.7 U	5.7 U	
Vinyl Chloride	5.0					5.7 U	5.7 U	
Chloroethane	5.0					5.7 U	5.7 U	
Methylene Chloride	5.0					5.7 U	5.7 U	
Acetone	5.0					16	11 U	
Carbon Disulfide	5.0					11 U	11 U	
1,1-Dichloroethene	5.0					5.7 U	5.7 U	
1,1-Dichloroethane	5.0					5.7 U	5.7 U	
trans-1,2-Dichloroethene	5.0					5.7 U	5.7 U	
cis-1,2-Dichloroethene	5.0					5.7 U	5.7 U	
Chloroform	5.0					5.7 U	5.7 U	
2-Butanone (MEK)	5.0					11 U	11 U	
1,2-Dichloroethane	5.0					5.7 U	5.7 U	
1,1,1-Trichloroethane	5.0					5.7 U	5.7 U	
Carbon Tetrachloride	5.0					5.7 U	5.7 U	
Bromodichloromethane	5.0					5.7 U	5.7 U	
1,2-Dichloropropane	5.0					5.7 U	5.7 U	
1,3-Dichloropropene-Tran	5.0					5.7 U	5.7 U	
Trichloroethene	5.0					5.7 U	5.7 U	
Dibromochloromethane	5.0					5.7 U	5.7 U	
1,1,2-Trichloroethane	5.0					5.7 U	5.7 U	
Benzene	5.0					5.7 U	5.7 U	
1,3-Dichloropropene(Cis)	5.0					5.7 U	5.7 U	
Bromoform	5.0					5.7 U	5.7 U	
4-Methyl-2-pentanone(MIB	5.0					11 U	11 U	
2-Hexanone	5.0					11 U	11 U	
Tetrachloroethene	5.0					5.7 U	5.7 U	
1,1,2,2-Tetrachloroethan	5.0					5.7 U	5.7 U	
Toluene	5.0					5.7 U	5.7 U	
Chlorobenzene	5.0					5.7 U	5.7 U	

General Testing Corporation

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LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
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Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference

Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-008	-009	-010	-011	-012
Location:		SS-3	SS-4	SS-1	SS-2	SS-5	SS-6	SS-5D
Date Collected:		08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94
Time Collected:	PQL	13:45	14:00	14:15	14:30	14:40	14:50	14:45
Date Analyzed:						9/01/94	9/01/94	
Dilution:						1	1	
Ethylbenzene	5.0					5.7 U	5.7 U	
Styrene	5.0					5.7 U	5.7 U	
Total Xylene (o,m,p)	5.0					5.7 U	5.7 U	
Surrogate Standard Recoveries								
dibromofluoromethane	80-120					102	102	
Toluene d8	81-117					95	97	
4-Bromofluorobenzene	74-121					77	80	

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

00007

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 30 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference

Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-014						
Location:		LAB METH BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Analyzed:		9/01/94						
Dilution:		1						
Chloromethane	5.0	5.0 U						
Bromomethane	5.0	5.0 U						
Vinyl Chloride	5.0	5.0 U						
Chloroethane	5.0	5.0 U						
Methylene Chloride	5.0	5.0 U						
Acetone	5.0	10 U						
Carbon Disulfide	5.0	10 U						
1,1-Dichloroethene	5.0	5.0 U						
1,1-Dichloroethane	5.0	5.0 U						
trans-1,2-Dichloroethene	5.0	5.0 U						
cis-1,2-Dichloroethene	5.0	5.0 U						
Chloroform	5.0	5.0 U						
2-Butanone (MEK)	5.0	10 U						
1,2-Dichloroethane	5.0	5.0 U						
1,1,1-Trichloroethane	5.0	5.0 U						
Carbon Tetrachloride	5.0	5.0 U						
Bromodichloromethane	5.0	5.0 U						
1,2-Dichloropropane	5.0	5.0 U						
1,3-Dichloropropene-Tran	5.0	5.0 U						
Trichloroethene	5.0	5.0 U						
Dibromochloromethane	5.0	5.0 U						
1,1,2-Trichloroethane	5.0	5.0 U						
Benzene	5.0	5.0 U						
1,3-Dichloropropene(Cis)	5.0	5.0 U						
Bromoform	5.0	5.0 U						
4-Methyl-2-pentanone(MIB	5.0	10 U						
2-Hexanone	5.0	10 U						
Tetrachloroethene	5.0	5.0 U						
1,1,2,2-Tetrachloroethan	5.0	5.0 U						
Toluene	5.0	5.0 U						
Chlorobenzene	5.0	5.0 U						

General Testing Corporation

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LABORATORY REPORT

Job No: R94/03286 Date: SEPT 30 1994

Client:
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Blasland Bouck Engineers PC
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Rochester, NY 14623

Sample(s) Reference

Tam Ceramics File #163.04

Received : 08/30/94

P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-014					
Location:		LAB METH BLANK					
Date Collected:		--					
Time Collected:	PQL	--					
Date Analyzed:		9/01/94					
Dilution:		1					
Ethylbenzene	5.0	5.0 U					
Styrene	5.0	5.0 U					
Total Xylene (o,m,p)	5.0	5.0 U					
Surrogate Standard Recoveries							
dibromofluoromethane	80-120	98					
Toluene d8	81-117	99					
4-Bromofluorobenzene	74-121	96					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

00009

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
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Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/L

Sample:		-013	-015					
Location:		TRIP BLANK	LAB METH BLANK					
Date Collected:		08/30/94	--					
Time Collected:	PQL	NA	--					
Date Analyzed:		9/07/94	9/01/94					
Dilution:		1	1					
Chloromethane	5.0	5.0 U	5.0 U					
Bromomethane	5.0	5.0 U	5.0 U					
Vinyl Chloride	5.0	5.0 U	5.0 U					
Chloroethane	5.0	5.0 U	5.0 U					
Methylene Chloride	5.0	5.0 U	5.0 U					
Acetone	5.0	10 U	10 U					
Carbon Disulfide	5.0	10 U	10 U					
1,1-Dichloroethene	5.0	5.0 U	5.0 U					
1,1-Dichloroethane	5.0	5.0 U	5.0 U					
trans-1,2-Dichloroethene	5.0	5.0 U	5.0 U					
cis-1,2-Dichloroethene	5.0	5.0 U	5.0 U					
Chloroform	5.0	5.0 U	5.0 U					
2-Butanone (MEK)	5.0	10 U	10 U					
1,2-Dichloroethane	5.0	5.0 U	5.0 U					
1,1,1-Trichloroethane	5.0	5.0 U	5.0 U					
Carbon Tetrachloride	5.0	5.0 U	5.0 U					
Bromodichloromethane	5.0	5.0 U	5.0 U					
1,2-Dichloropropane	5.0	5.0 U	5.0 U					
1,3-Dichloropropene-Tran	5.0	5.0 U	5.0 U					
Trichloroethene	5.0	5.0 U	5.0 U					
Dibromochloromethane	5.0	5.0 U	5.0 U					
1,1,2-Trichloroethane	5.0	5.0 U	5.0 U					
Benzene	5.0	5.0 U	5.0 U					
1,3-Dichloropropene(Cis)	5.0	5.0 U	5.0 U					
Bromoform	5.0	5.0 U	5.0 U					
4-Methyl-2-pentanone(MIB	5.0	10 U	10 U					
2-Hexanone	5.0	10 U	10 U					
Tetrachloroethene	5.0	5.0 U	5.0 U					
1,1,2,2-Tetrachloroethan	5.0	5.0 U	5.0 U					
Toluene	5.0	5.0 U	5.0 U					
Chlorobenzene	5.0	5.0 U	5.0 U					

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/L

Sample:		-013	-015
Location:		TRIP BLANK	LAB METH BLANK
Date Collected:		08/30/94	--
Time Collected:	PQL	NA	--
Date Analyzed:		9/07/94	9/01/94
Dilution:		1	1
Ethylbenzene	5.0	5.0 U	5.0 U
Styrene	5.0	5.0 U	5.0 U
Total Xylene (o,m,p)	5.0	5.0 U	5.0 U
Surrogate Standard Recoveries			
dibromofluoromethane	80-120	82	99
Toluene d8	81-117	101	99
4-Bromofluorobenzene	74-121	102	98

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

00011

Laboratory Director

NYSDEC Sample No.: SS-5

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5.0 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 13
Column (pack/cap): CAP

Contract: BBE
SAS No.: -- SDG No.:
Lab Sample ID: 3286-10
Lab File ID: J0101
Date Received: 08/30/94
Date Analyzed: 09/01/94
Dilution Factor: 1.0

Number TIC's found: 2

Concentration Units:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	2.93	22	J
2.		Unknown	8.27	12	J
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No.: SS-6

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5.0 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 12
Column (pack/cap): CAP

Contract: BBE
SAS No.: -- SDG No.:
Lab Sample ID: 3286-11
Lab File ID: J0102
Date Received: 08/30/94
Date Analyzed: 09/01/94
Dilution Factor: 1.0

Number TIC's found: 0

Concentration Units:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

NYSDEC Sample No.: TRIP BLANK

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/mL)ML
Level (low/med): LOW
% Moisture: not dec. 0
Column (pack/cap): CAP

Contract: BBE
SAS No.: -- SDG No.:
Lab Sample ID: 3286-13
Lab File ID: Q1100
Date Received: 08/30/94
Date Analyzed: 09/07/94
Dilution Factor: 1.0

Number TIC's found: 0

Concentration Units:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No.: METHOD BLANK

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5.0 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 0
Column (pack/cap): CAP

Contract: BBE
SAS No.: -- SDG No.:
Lab Sample ID: 3286-14
Lab File ID: J0100
Date Received: --
Date Analyzed: 09/01/94
Dilution Factor: 1.0

Number TIC's found: 0

Concentration Units:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No.: METHOD BLANK

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/mL)ML
Level (low/med): LOW
% Moisture: not dec. 0
Column (pack/cap): CAP

Contract: BBE
SAS No.: -- SDG No.:
Lab Sample ID: 3286-15
Lab File ID: Q1099
Date Received: --
Date Analyzed: 09/07/94
Dilution Factor: 1.0

Number TIC's found: 0

Concentration Units:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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15.					
16.					
17.					
18.					
19.					
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24.					
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26.					
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28.					
29.					
30.					

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-008	-009	-010	-011	-012
Location:		SS-3	SS-4	SS-1	SS-2	SS-5	SS-6	SS-5D
Date Collected:		08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94
Time Collected:	PQL	13:45	14:00	14:15	14:30	14:40	14:50	14:45
Date Extracted:						8/31/94	8/31/94	
Date Analyzed:						9/01/94	9/01/94	
Dilution:						1	1	
Phenol	670					770 U	760 U	
2-Chlorophenol	670					770 U	760 U	
2-Nitrophenol	670					770 U	760 U	
2,4-Dimethylphenol	670					770 U	760 U	
2,4-Dichlorophenol	670					770 U	760 U	
4-Chloro-3-methylphenol	670					770 U	760 U	
2,4,6-Trichlorophenol	670					770 U	760 U	
2,4-Dinitrophenol	1300					1500 U	1500 U	
4-Nitrophenol	1300					1500 U	1500 U	
2-Methyl-4,6-dinitrophenol	1300					1500 U	1500 U	
Pentachlorophenol	1300					1500 U	1500 U	
2-Methylphenol	670					770 U	760 U	
4-Methylphenol	670					770 U	760 U	
2,4,5-Trichlorophenol	670					770 U	760 U	
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	25-121%					72	66	
Phenol-d6	24-113%					74	68	
2,4,6-TriBromophenol	19-122%					85	74	

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-008	-009	-010	-011	-012
Location:		SS-3	SS-4	SS-1	SS-2	SS-5	SS-6	SS-5D
Date Collected:		08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94
Time Collected:	PQL	13:45	14:00	14:15	14:30	14:40	14:50	14:45
Date Extracted:						8/31/94	8/31/94	
Date Analyzed:						9/01/94	9/01/94	
Dilution:						1	1	
N-Nitrosodimethylamine	330					380 U	380 U	
Bis(2-chloroethyl) ether	330					380 U	380 U	
1,3 Dichlorobenzene	330					380 U	380 U	
1,4 Dichlorobenzene	330					380 U	380 U	
1,2 Dichlorobenzene	330					380 U	380 U	
2,2'oxybis(1-Chloropropane)	330					380 U	380 U	
N-Nitroso-Di-n-propylamine	330					380 U	380 U	
Hexachloroethane	330					380 U	380 U	
Nitrobenzene	330					380 U	380 U	
Isophorone	330					380 U	380 U	
bis(-2-chloroethoxy)methane	330					380 U	380 U	
1,2,4-Trichlorobenzene	330					380 U	380 U	
Naphthalene	330					380 U	380 U	
Hexachlorobutadiene	330					380 U	380 U	
Hexachlorocyclopentadiene	330					380 U	380 U	
2-Chloronaphthalene	330					380 U	380 U	
Dimethyl phthalate	330					380 U	380 U	
Acenaphthylene	330					380 U	380 U	
Acenaphthene	330					380 U	380 U	
2,4-Dinitrotoluene	330					380 U	380 U	
2,6-Dinitrotoluene	330					380 U	380 U	
Diethyl phthalate	330					380 U	380 U	
4-Chlorophenyl-phenyl-ether	330					380 U	380 U	
Fluorene	330					380 U	380 U	
1,2-Diphenylhydrazine	330					380 U	380 U	
N-Nitrosodiphenylamine	330					380 U	380 U	
4-Bromophenyl-phenylether	330					380 U	380 U	
Hexachlorobenzene	330					380 U	380 U	
Phenanthrene	330					380 U	380 U	
Anthracene	330					380 U	380 U	
Di-n-butyl phthalate	330					380 U	380 U	
Fluoranthene	330					380 U	380 U	
Pyrene	330					380 U	380 U	

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-008	-009	-010	-011	-012
Location:		SS-3	SS-4	SS-1	SS-2	SS-5	SS-6	SS-5D
Date Collected:		08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94
Time Collected:	PQL	13:45	14:00	14:15	14:30	14:40	14:50	14:45
Date Extracted:						8/31/94	8/31/94	
Date Analyzed:						9/01/94	9/01/94	
Dilution:						1	1	
Butyl benzyl phthalate	330					380 U	380 U	
3,3'-Dichlorobenzidine	330					380 U	380 U	
Benzo(a)anthracene	330					380 U	380 U	
Bis(2-ethylhexyl)phthalate	330					380 U	380 U	
Chrysene	330					380 U	380 U	
Di-n-octyl phthalate	330					380 U	380 U	
Benzo(b)Fluoranthene	330					380 U	380 U	
Benzo(k)fluoranthene	330					380 U	380 U	
Benzo(a)pyrene	330					380 U	380 U	
Indeno(1,2,3-cd)pyrene	330					380 U	380 U	
Dibenzo(a,h)anthracene	330					380 U	380 U	
Benzo(g,h,i)perylene	330					380 U	380 U	
4-Chloroaniline	330					380 U	380 U	
2-Methyl Naphthalene	330					380 U	380 U	
2-Nitroaniline	330					380 U	380 U	
3-Nitroaniline	330					380 U	380 U	
Dibenzofuran	330					380 U	380 U	
4-Nitroaniline	330					380 U	380 U	
Carbazole	330					380 U	380 U	
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	23-120%					70	63	
2-Fluorobiphenyl	30-115%					88	80	
Terphenyl-d14	18-137%					90	82	

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

00019

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-013	-014
Location:		TRIP BLANK	LAB METH BLANK
Date Collected:		08/30/94	--
Time Collected:	PQL	NA	--
Date Extracted:			8/31/94
Date Analyzed:			9/01/94
Dilution:			1
Phenol	670		670 U
2-Chlorophenol	670		670 U
2-Nitrophenol	670		670 U
2,4-Dimethylphenol	670		670 U
2,4-Dichlorophenol	670		670 U
4-Chloro-3-methylphenol	670		670 U
2,4,6-Trichlorophenol	670		670 U
2,4-Dinitrophenol	1300		1300 U
4-Nitrophenol	1300		1300 U
2-Methyl-4,6-dinitrophenol	1300		1300 U
Pentachlorophenol	1300		1300 U
2-Methylphenol	670		670 U
4-Methylphenol	670		670 U
2,4,5-Trichlorophenol	670		670 U
SURROGATE STANDARD RECOVERIES			
2-Fluorophenol	25-121%		66
Phenol-d6	24-113%		68
2,4,6-TriBromophenol	19-122%		69

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference

Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-013	-014					
Location:		TRIP BLANK	LAB METH BLANK					
Date Collected:		08/30/94	--					
Time Collected:	PQL	NA	--					
Date Extracted:			8/31/94					
Date Analyzed:			9/01/94					
Dilution:			1					
N-Nitrosodimethylamine	330		330 U					
Bis(2-chloroethyl) ether	330		330 U					
1,3 Dichlorobenzene	330		330 U					
1,4 Dichlorobenzene	330		330 U					
1,2 Dichlorobenzene	330		330 U					
2,2'oxybis(1-Chloropropane)	330		330 U					
N-Nitroso-Di-n-propylamine	330		330 U					
Hexachloroethane	330		330 U					
Nitrobenzene	330		330 U					
Isophorone	330		330 U					
bis(-2-chloroethoxy)methane	330		330 U					
1,2,4-Trichlorobenzene	330		330 U					
Naphthalene	330		330 U					
Hexachlorobutadiene	330		330 U					
Hexachlorocyclopentadiene	330		330 U					
2-Chloronaphthalene	330		330 U					
Dimethyl phthalate	330		330 U					
Acenaphthylene	330		330 U					
Acenaphthene	330		330 U					
2,4-Dinitrotoluene	330		330 U					
2,6-Dinitrotoluene	330		330 U					
Diethyl phthalate	330		330 U					
4-Chlorophenyl-phenyl-ether	330		330 U					
Fluorene	330		330 U					
1,2-Diphenylhydrazine	330		330 U					
N-Nitrosodiphenylamine	330		330 U					
4-Bromophenyl-phenylether	330		330 U					
Hexachlorobenzene	330		330 U					
Phenanthrene	330		330 U					
Anthracene	330		330 U					
Di-n-butyl phthalate	330		330 U					
Fluoranthene	330		330 U					
Pyrene	330		330 U					

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference
Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-013	-014
Location:		TRIP BLANK	LAB METH BLANK
Date Collected:		08/30/94	--
Time Collected:	PQL	NA	--
Date Extracted:			8/31/94
Date Analyzed:			9/01/94
Dilution:			1
Butyl benzyl phthalate	330		330 U
3,3'-Dichlorobenzidine	330		330 U
Benzo(a)anthracene	330		330 U
Bis(2-ethylhexyl)phthalate	330		330 U
Chrysene	330		330 U
Di-n-octyl phthalate	330		330 U
Benzo(b)Fluoranthene	330		330 U
Benzo(k)fluoranthene	330		330 U
Benzo(a)pyrene	330		330 U
Indeno(1,2,3-cd)pyrene	330		330 U
Dibenzo(a,h)anthracene	330		330 U
Benzo(g,h,i)perylene	330		330 U
4-Chloroaniline	330		330 U
2-Methyl Naphthalene	330		330 U
2-Nitroaniline	330		330 U
3-Nitroaniline	330		330 U
Dibenzofuran	330		330 U
4-Nitroaniline	330		330 U
Carbazole	330		330 U
SURROGATE STANDARD RECOVERIES			
Nitrobenzene-d5	23-120%		64
2-Fluorobiphenyl	30-115%		77
Terphenyl-d14	18-137%		74

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

Laboratory Director

NYSDEC Sample No: SS-5

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 30 (g/mL) G
Level (low/med): LOW
% Moisture: not dec. 13 dec.
Extraction: (SepF/Cont/Sonc)SONC
GPC Cleanup (Y/N) Y pH

Contract: BBE
SAS No.: -- SDG No.:
Lab Sample ID: 3286-10
Lab File ID: DE562
Date Received: 08/30/94
Date Extracted: 08/31/94
Date Analyzed: 09/01/94
Dilution Factor: 1.0

Number TIC's found: 12

Concentration Units: UG/KG
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	4.83	500	JB
2.		Unknown	5.81	1100	JAB
3.		Unknown	6.36	26000	JAB
4.		Unknown	7.75	450	JAB
5.		Unknown	8.05	870	J
6.		Unknown	8.31	890	J
7.		Unknown	9.18	920	J
8.		Unknown	10.49	2000	J
9.		Unknown	17.08	880	J
10.		Unknown hydrocarbon	18.00	730	J
11.		Unknown hydrocarbon	18.78	350	J
12.		Unknown hydrocarbon	18.83	360	J
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-TIC
NYSDEC B-78

NYSDEC Sample No: SS-6

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 30 (g/mL) G
Level (low/med): LOW
% Moisture: not dec. 12 dec.
Extraction: (SepF/Cont/Sonc)SONC
GPC Cleanup (Y/N) Y pH

Contract: BBE
SAS No.: -- SDG No.:
Lab Sample ID: 3286-11
Lab File ID: DE563
Date Received: 08/30/94
Date Extracted: 08/31/94
Date Analyzed: 09/01/94
Dilution Factor: 1.0

Number TIC's found: 11

Concentration Units: UG/KG
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	4.83	550	JB
2.		Unknown	5.80	970	JAB
3.		Unknown	6.35	24000	JAB
4.		Unknown	7.75	420	JAB
5.		Unknown	8.05	370	J
6.		Unknown	8.31	890	J
7.		Unknown	9.18	920	J
8.		Unknown	10.49	1100	J
9.		Unknown	17.07	660	J
10.		Unknown	25.76	330	J
11.		Unknown hydrocarbon	26.19	440	J
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No: METHOD BLANK

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 30 (g/mL) G
Level (low/med): LOW
% Moisture: not dec. 0 dec.
Extraction: (SepF/Cont/Sonc)SONC
GPC Cleanup (Y/N) Y pH

Contract: BBE
SAS No.: -- SDG No.:
Lab Sample ID: 3286-14
Lab File ID: DE553
Date Received: --
Date Extracted: 08/31/94
Date Analyzed: 09/01/94
Dilution Factor: 1.0

Number TIC's found: 7

Concentration Units: UG/KG
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	4.54	730	J
2.		Unknown	4.83	420	J
3.		Unknown	5.80	910	JA
4.		Unknown	6.36	23000	JA
5.		Unknown	7.75	390	JA
6.		Unknown	8.56	300	JA
7.		Unknown	17.08	510	J
8.					
9.					
10.					
11.					
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13.					
14.					
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FORM I SV-TIC
NYSDEC B-78

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 26 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference

Tam Ceramics File #163.04

Received : 08/30/94 P.O. #:

ANALYSIS * BY EPA METHOD 8080 ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-008	-009	-010	-011	-012
Location:		SS-3	SS-4	SS-1	SS-2	SS-5	SS-6	SS-5D
Date Collected:		08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94	08/30/94
Time Collected:	PQL	13:45	14:00	14:15	14:30	14:40	14:50	14:45
Date Extracted:		09/01/94	09/01/94			09/01/94	09/01/94	
Date Analyzed:		09/01/94	09/01/94			09/01/94	09/01/94	
Dilution:		1	1			1	1	
PCB 1016	250	300 U	300 U			290 U	280 U	
PCB 1221	250	300 U	300 U			290 U	280 U	
PCB 1232	250	300 U	300 U			290 U	280 U	
PCB 1242	250	300 U	300 U			290 U	280 U	
PCB 1248	250	300 U	300 U			290 U	280 U	
PCB 1254	250	300 U	300 U			290 U	280 U	
PCB 1260	250	300 U	300 U			290 U	280 U	
Surrogate Standard Recovery								
Tetrachloro-meta-xylene (Acceptance Limits: 60-150%)		103	104			104	106	

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

00026

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03286 Date: SEPT 30 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods,Suite 160
Rochester, NY 14623

Sample(s) Reference

Tam Ceramics File #163.04

Received : 08/30/94

P.O. #:

ANALYSIS * BY EPA METHOD 8080 ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-013	-014					
Location:		TRIP BLANK	LAB METH BLANK					
Date Collected:		08/30/94	--					
Time Collected:	PQL	NA	--					
Date Extracted:			09/01/94					
Date Analyzed:			09/01/94					
Dilution:			1					
PCB 1016	250		250 U					
PCB 1221	250		250 U					
PCB 1232	250		250 U					
PCB 1242	250		250 U					
PCB 1248	250		250 U					
PCB 1254	250		250 U					
PCB 1260	250		250 U					
Surrogate Standard Recovery								
Tetrachloro-meta-xylene			101					
(Acceptance Limits: 60-150%)								

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

00027

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03300 Date: SEPT 2 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File# 163.04

Received : 08/31/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001		-002		-003		-004	
Location:		TP1-1		TP2-1		TP4-1		TP4-2	
Date Collected:	PQL	08/31/94		08/31/94		08/31/94		08/31/94	
Time Collected:		10:45		11:50		14:15		14:45	
Solids, %		91.8		75.2		85.3		86.3	
Aluminum	10.0	4530		13045		10300		2500	
Antimony	10.0	10.9	UN	13.4	UN	11.7	UN	11.6	UN
Arsenic	0.500	2.07	N*	5.31	N*	11.1	N*	10.2	N*
Barium	2.0	86.0		402		290		1390	
Beryllium	0.500	0.545	U	0.745		0.985		0.637	
Cadmium	0.50	0.545	U	0.665	U	0.586	U	0.579	U
Calcium	50.0	43400	*	4590	*	28100	*	3800	*
Chromium	1.00	8.34	N*	45.7	N*	33.5	N*	110	N*
Cobalt	5.00	5.45	U	12.0		13.6		8.85	
Copper	1.00	37.4		81.5		70.1		363	
Iron	5.00	28000		25000		47800		167000	
Lead	5.00	9.26		38.3		53.7		294	
Magnesium	50.0	76800	*	4750	*	7820	*	356	*
Manganese	0.500	313		1080		1060		418	
Mercury	0.100	0.109	U	0.133	U	0.117	U	0.129	
Nickel	4.00	13.1	*	45.0	*	26.4	*	14.0	*
Potassium	50.0	663		1046		1770		6410	
Selenium	0.500	2.22		2.63		4.38		8.15	
Silver	1.00	1.09	U	1.33	U	1.17	U	1.16	U
Sodium	50.0	39000		177		712		6709	
Thallium	30	32.7	U	39.9	U	70.3	U	348	U
Vanadium	5.00	10.1	N*	36.3	N*	58.2	N*	171	N*
Zinc	1.00	119		132		116		77.0	

Laboratory Director

00002

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03300 Date: SEPT 2 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File# 163.04

Received : 08/31/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-005				
Location:		TP5-1				
Date Collected:	PQL	08/31/94				
Time Collected:		15:30				
Solids, %		80.3				
Aluminum	10.0	191				
Antimony	10.0	12.4	UN			
Arsenic	0.500	6.34	N*			
Barium	2.0	142				
Beryllium	0.500	1.15				
Cadmium	0.50	0.623	U			
Calcium	50.0	10700	*			
Chromium	1.00	24.2	N*			
Cobalt	5.00	15.4				
Copper	1.00	20.0				
Iron	5.00	33900				
Lead	5.00	38.5				
Magnesium	50.0	8207	*			
Manganese	0.500	308				
Mercury	0.100	0.125	U			
Nickel	4.00	29.5	*			
Potassium	50.0	1990				
Selenium	0.500	2.85				
Silver	1.00	1.24	U			
Sodium	50.0	1330				
Thallium	30	37.4	U			
Vanadium	5.00	31.4	N*			
Zinc	1.00	180				

U* - RUN AT DILUTIONS DUE TO HIGH NEGATIVE RESULTS WHEN RUN STRAIGHT

Laboratory Director

00003

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 7 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001		-002		-003		-004	
Location:		TP13-1		TP13-2		TP12-1		TP13-3	
Date Collected:	PQL	09/01/94		09/01/94		09/01/94		09/01/94	
Time Collected:		07:45		07:45		09:30		10:00	
Solids, %		52.4		26.5		82.6			
Aluminum	10.0	286	N*	694	N*	2620	N*		
Antimony	10.0	19.1	UN*	78.1	N*	12.1	UN*		
Arsenic	0.500	180		513		3.43			
Barium	2.00	156		408		262			
Beryllium	0.500	0.954	U	1.89	U	0.605	U		
Cadmium	0.500	0.954	U	1.89	U	0.605	U		
Calcium	50.0	7630		2920		2640			
Chromium	1.00	19.1	U	37.7	U	20.8			
Cobalt	5.00	9.54	U	18.9	U	6.05	U		
Copper	2.00	13.1		20.0		35.6			
Iron	5.00	9710	*	13500	*	4620	*		
Lead	5.00	16.4		21.2		60.3			
Magnesium	50.0	4330		2060		1370			
Manganese	1.00	148	*	52.4	*	143	*		
Mercury	0.100	0.191	U	0.377	U	0.121	U		
Nickel	4.00	8.38		15.1	U	13.0			
Potassium	100	191	U*	724	*	530	*		
Selenium	0.500	146		419		0.690			
Silver	1.00	954		2940		4.21			
Sodium	50.0	676		282		60.5	U		
Thallium	30.0	572	U	1130	U	36.3	U		
Vanadium	5.00	67.8		202		15.5			
Zinc	1.00	18.5	*	11.4	*	52.5	*		

Laboratory Director

00003

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 20 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001	-002	-003	-004
Location:		TP13-1	TP13-2	TP12-1	TP13-3
Date Collected:	PQL	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:		07:45	07:45	09:30	10:00
Solids, %		52.4	26.5	82.6	26.1
Silica	1.0				
Zirconium	10		288000	778	

Laboratory Director

00004

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 7 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-005		-006		-007		-008	
Location:		TP7-1		TP15-1		TP8-1		TP8-2	
Date Collected:	PQL	09/01/94		09/01/94		09/01/94		09/01/94	
Time Collected:		10:15		10:30		13:30		13:40	
Solids, %		83.1		92.5		67.4		63.3	
Aluminum	10.0	1650	N*	1370	N*	1180	N*	439	N*
Antimony	10.0	13.4	N*	10.8	UN*	14.8	UN*	15.8	UN*
Arsenic	0.500	5.52		8.54		24.8		47.7	
Barium	2.00	27400		42700		52.1		61.4	
Beryllium	0.500	0.602	U	0.541	U	0.742	U	0.790	U
Cadmium	0.500	3.10		1.94		0.742	U	0.790	U
Calcium	50.0	10400		1380		2140		6970	
Chromium	1.00	15.6		12.8		1.56		1.58	U
Cobalt	5.00	19.0		22.2		7.42	U	7.90	U
Copper	2.00	48.1		36.5		17.7		22.1	
Iron	5.00	5790	*	6170	*	9150	*	11800	*
Lead	5.00	79.5		60.9		7.42	U	7.90	U
Magnesium	50.0	2730		3370		74900		197000	
Manganese	1.00	130	*	177	*	148	*	133	*
Mercury	0.100	1.42		0.944		0.148	U	0.158	U
Nickel	4.00	22.3		12.5		6.36		6.32	U
Potassium	100	295	*	229	*	263	*	158	U *
Selenium	0.500	2.66		6.12		18.1		34.9	
Silver	1.00	32.7		35.5		131		118	
Sodium	50.0	155		188		24200		79.0	U
Thallium	30.0	361	U	324	U	44.5	U	64.0	
Vanadium	5.00	14.4		12.5		12.7		8.52	
Zinc	1.00	2270	*	1570	*	12.7	*	12.2	*

Laboratory Director

00005

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 20 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-005	-006	-007	-008
Location:		TP7-1	TP15-1	TP8-1	TP8-2
Date Collected:	PQL	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:		10:15	10:30	13:30	13:40
Solids, %		83.1	92.5	67.4	63.3
Silica	1.0			3.19	7.23
Zirconium	10	4400	3660	24600	25800

Laboratory Director

00006

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 7 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-009		-010		-011		-012	
Location:		TP8-3		TP9-1		TP9-2		TP10-1	
Date Collected:	PQL	09/01/94		09/01/94		09/01/94		09/01/94	
Time Collected:		13:50		14:20		14:30		15:40	
Solids, %		75.2		56.7		90.7		41.8	
Aluminum	10.0	709	N*	4130	N*	2450	N*	632	N*
Antimony	10.0	18.1	N*	17.6	UN*	34.8	N*	23.9	UN*
Arsenic	0.500	83.1		55.0		5.80		195	
Barium	2.00	129		272		262000		524	
Beryllium	0.500	0.718		0.882	U	0.551	U	1.20	U
Cadmium	0.500	0.665	U	0.882	U	1.40		1.20	U
Calcium	50.0	12800		2010		26700		8660	
Chromium	1.00	6.14		10.7		412		23.9	
Cobalt	5.00	9.39		12.1		94.8		12.0	U
Copper	2.00	99.7		34.7		49.7		34.0	
Iron	5.00	107000		20400	*	8630	*	35900	*
Lead	5.00	6.65	U	25.2		3580		12.0	U
Magnesium	50.0	4690		13400		8170		8950	
Manganese	1.00	525	*	453	*	190	*	407	*
Mercury	0.100	0.133	U	0.176	U	16.4		0.239	U
Nickel	4.00	31.1		23.3		261		16.1	
Potassium	100	225	*	411	*	529	*	256	*
Selenium	0.500	64.9		44.3		1.54		164	
Silver	1.00	441		229		80.3		1130	
Sodium	50.0	153		234000		1380		239	
Thallium	30.0	43.1		52.9	U	1650	U	71.8	U
Vanadium	5.00	31.9		24.3		20.0		77.3	
Zinc	1.00	27.0	*	45.2	*	65.5	*	59.1	*

Laboratory Director

00007

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 20 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-009	-010	-011	-012
Location:		TP8-3	TP9-1	TP9-2	TP10-1
Date Collected:	PQL	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:		13:50	14:20	14:30	15:40
Solids, %		75.2	56.7	90.7	41.8
Silica	1.0	12.9	1.81	14.3	
Zirconium	10	88000	450	7980	225000

Laboratory Director

00008

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 7 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-013				
Location:		TP10-2				
Date Collected:	PQL	09/01/94				
Time Collected:		16:00				
Solids, %		75.2				
Aluminum	10.0	221	N*			
Antimony	10.0	13.3	UN*			
Arsenic	0.500	6.30				
Barium	2.00	14.5				
Beryllium	0.500	0.665	U			
Cadmium	0.500	0.665	U			
Calcium	50.0	449				
Chromium	1.00	3.94				
Cobalt	5.00	6.65	U			
Copper	2.00	57.4				
Iron	5.00	5820	*			
Lead	5.00	6.65	U			
Magnesium	50.0	246000				
Manganese	1.00	237	*			
Mercury	0.100	0.133	U			
Nickel	4.00	9.11				
Potassium	100	133	U*			
Selenium	0.500	0.665	U			
Silver	1.00	9.72				
Sodium	50.0	137				
Thallium	30.0	48.5				
Vanadium	5.00	6.65	U			
Zinc	1.00	1.33	U*			

Laboratory Director

00009

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 20 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

	PQL	-013			
Sample:					
Location:		TP10-2			
Date Collected:		09/01/94			
Time Collected:		16:00			
Solids, %		75.2			
Silica	1.0				
Zirconium	10	1760			

Laboratory Director

00016

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-004	-005	-006	-007
Location:		TP13-1	TP13-2	TP12-1	TP13-3	TP7-1	TP15-1	TP8-1
Date Collected:		09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:	PQL	07:45	07:45	09:30	10:00	10:15	10:30	13:30
Date Analyzed:		9/06/94			09/07/94			
Dilution:		1			2			
Chloromethane	5.0	9.6 U			70			
Bromomethane	5.0	9.6 U			37 U			
Vinyl Chloride	5.0	9.6 U			37 U			
Chloroethane	5.0	9.6 U			37 U			
Methylene Chloride	5.0	9.6 U			37 U			
Acetone	5.0	100			460			
Carbon Disulfide	5.0	19 U			74 U			
1,1-Dichloroethene	5.0	9.6 U			37 U			
1,1-Dichloroethane	5.0	9.6 U			37 U			
trans-1,2-Dichloroethene	5.0	9.6 U			37 U			
cis-1,2-Dichloroethene	5.0	9.6 U			37 U			
Chloroform	5.0	9.6 U			37 U			
2-Butanone (MEK)	5.0	19 U			74 U			
1,2-Dichloroethane	5.0	9.6 U			37 U			
1,1,1-Trichloroethane	5.0	9.6 U			37 U			
Carbon Tetrachloride	5.0	9.6 U			37 U			
Bromodichloromethane	5.0	9.6 U			37 U			
1,2-Dichloropropane	5.0	9.6 U			37 U			
1,3-Dichloropropene-Tran	5.0	9.6 U			37 U			
Trichloroethene	5.0	9.6 U			37 U			
Dibromochloromethane	5.0	9.6 U			37 U			
1,1,2-Trichloroethane	5.0	9.6 U			37 U			
Benzene	5.0	9.6 U			37 U			
1,3-Dichloropropene(Cis)	5.0	9.6 U			37 U			
Bromoform	5.0	9.6 U			37 U			
4-Methyl-2-pentanone(MIB	5.0	19 U			74 U			
2-Hexanone	5.0	19 U			74 U			
Tetrachloroethene	5.0	9.6 U			37 U			
1,1,2,2-Tetrachloroethan	5.0	9.6 U			37 U			
Toluene	5.0	9.6 U			37 U			
Chlorobenzene	5.0	9.6 U			37 U			

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-004	-005	-006	-007
Location:		TP13-1	TP13-2	TP12-1	TP13-3	TP7-1	TP15-1	TP8-1
Date Collected:		09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:	PQL	07:45	07:45	09:30	10:00	10:15	10:30	13:30
Date Analyzed:		9/06/94			09/07/94			
Dilution:		1			2			
Ethylbenzene	5.0	9.6 U			37 U			
Styrene	5.0	9.6 U			37 U			
Total Xylene (o,m,p)	5.0	9.6 U			92			
Surrogate Standard Recoveries								
Toluene d8	81-117	101			100			
4-Bromofluorobenzene	74-121	92			97			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-004	-005	-006	-007
Location:		TP13-1	TP13-2	TP12-1	TP13-3	TP7-1	TP15-1	TP8-1
Date Collected:		09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:	PQL	07:45	07:45	09:30	10:00	10:15	10:30	13:30
Date Extracted:		9/02/94			9/02/94			
Date Analyzed:		9/06/94			9/06/94			
Dilution:		1			1			
Phenol	670	1300 U			2600 U			
2-Chlorophenol	670	1300 U			2600 U			
2-Nitrophenol	670	1300 U			2600 U			
2,4-Dimethylphenol	670	1300 U			2600 U			
2,4-Dichlorophenol	670	1300 U			2600 U			
4-Chloro-3-methylphenol	670	1300 U			2600 U			
2,4,6-Trichlorophenol	670	1300 U			2600 U			
2,4-Dinitrophenol	1300	2600 U			5100 U			
4-Nitrophenol	1300	2600 U			5100 U			
2-Methyl-4,6-dinitrophenol	1300	2600 U			5100 U			
Pentachlorophenol	1300	2600 U			5100 U			
2-Methylphenol	670	1300 U			2600 U			
4-Methylphenol	670	1300 U			2600 U			
2,4,5-Trichlorophenol	670	1300 U			2600 U			
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	25-121%	91			64			
Phenol-d6	24-113%	96			78			
2,4,6-TriBromophenol	19-122%	111			84			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-004	-005	-006	-007
Location:		TP13-1	TP13-2	TP12-1	TP13-3	TP7-1	TP15-1	TP8-1
Date Collected:		09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:	PQL	07:45	07:45	09:30	10:00	10:15	10:30	13:30
Date Extracted:		9/02/94			9/02/94			
Date Analyzed:		9/06/94			9/06/94			
Dilution:		1			1			
N-Nitrosodimethylamine	330	640 U			1300 U			
Bis(2-chloroethyl) ether	330	640 U			1300 U			
1,3 Dichlorobenzene	330	640 U			1300 U			
1,4 Dichlorobenzene	330	640 U			1300 U			
1,2 Dichlorobenzene	330	640 U			1300 U			
2,2'oxybis(1-Chloropropane)	330	640 U			1300 U			
N-Nitroso-Di-n-propylamine	330	640 U			1300 U			
Hexachloroethane	330	640 U			1300 U			
Nitrobenzene	330	640 U			1300 U			
Isophorone	330	640 U			1300 U			
bis(-2-chloroethoxy)methane	330	640 U			1300 U			
1,2,4-Trichlorobenzene	330	640 U			1300 U			
Naphthalene	330	640 U			1300 U			
Hexachlorobutadiene	330	640 U			1300 U			
Hexachlorocyclopentadiene	330	640 U			1300 U			
2-Chloronaphthalene	330	640 U			1300 U			
Dimethyl phthalate	330	640 U			1300 U			
Acenaphthylene	330	640 U			1300 U			
Acenaphthene	330	640 U			1300 U			
2,4-Dinitrotoluene	330	640 U			1300 U			
2,6-Dinitrotoluene	330	640 U			1300 U			
Diethyl phthalate	330	640 U			1300 U			
4-Chlorophenyl-phenyl-ether	330	640 U			1300 U			
Fluorene	330	640 U			1300 U			
1,2-Diphenylhydrazine	330	640 U			1300 U			
N-Nitrosodiphenylamine	330	640 U			1300 U			
4-Bromophenyl-phenylether	330	640 U			1300 U			
Hexachlorobenzene	330	640 U			1300 U			
Phenanthrene	330	640 U			1300 U			
Anthracene	330	640 U			1300 U			
Di-n-butyl phthalate	330	640 U			1300 U			
Fluoranthene	330	640 U			1300 U			
Pyrene	330	640 U			1300 U			

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-004	-005	-006	-007
Location:		TP13-1	TP13-2	TP12-1	TP13-3	TP7-1	TP15-1	TP8-1
Date Collected:		09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:	PQL	07:45	07:45	09:30	10:00	10:15	10:30	13:30
Date Extracted:		9/02/94			9/02/94			
Date Analyzed:		9/06/94			9/06/94			
Dilution:		1			1			
Butyl benzyl phthalate	330	640 U			1300 U			
3,3'-Dichlorobenzidine	330	640 U			1300 U			
Benzo(a)anthracene	330	640 U			1300 U			
Bis(2-ethylhexyl)phthalate	330	640 U			1300 U			
Chrysene	330	640 U			1300 U			
Di-n-octyl phthalate	330	640 U			1300 U			
Benzo(b)Fluoranthene	330	640 U			1300 U			
Benzo(k)fluoranthene	330	640 U			1300 U			
Benzo(a)pyrene	330	640 U			1300 U			
Indeno(1,2,3-cd)pyrene	330	640 U			1300 U			
Dibenzo(a,h)anthracene	330	640 U			1300 U			
Benzo(g,h,i)perylene	330	640 U			1300 U			
4-Chloroaniline	330	640 U			1300 U			
2-Methyl Naphthalene	330	640 U			1300 U			
2-Nitroaniline	330	640 U			1300 U			
3-Nitroaniline	330	640 U			1300 U			
Dibenzofuran	330	640 U			1300 U			
4-Nitroaniline	330	640 U			1300 U			
Carbazole	330	640 U			1300 U			
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	23-120%	94			77			
2-Fluorobiphenyl	30-115%	116 *			99			
Terphenyl-d14	18-137%	125			109			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801

NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

00015

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-008	-009	-010	-011	-012	-013
Location:		TP8-2	TP8-3	TP9-1	TP9-2	TP10-1	TP10-2
Date Collected:		09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:	PQL	13:40	13:50	14:20	14:30	15:40	16:00
Date Extracted:			9/02/94				
Date Analyzed:			9/06/94				
Dilution:			1				
Phenol	670		890 U				
2-Chlorophenol	670		890 U				
2-Nitrophenol	670		890 U				
2,4-Dimethylphenol	670		890 U				
2,4-Dichlorophenol	670		890 U				
4-Chloro-3-methylphenol	670		890 U				
2,4,6-Trichlorophenol	670		890 U				
2,4-Dinitrophenol	1300		1800 U				
4-Nitrophenol	1300		1800 U				
2-Methyl-4,6-dinitrophenol	1300		1800 U				
Pentachlorophenol	1300		1800 U				
2-Methylphenol	670		890 U				
4-Methylphenol	670		890 U				
2,4,5-Trichlorophenol	670		890 U				
SURROGATE STANDARD RECOVERIES							
2-Fluorophenol	25-121%		75				
Phenol-d6	24-113%		77				
2,4,6-TriBromophenol	19-122%		78				

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-008	-009	-010	-011	-012	-013
Location:		TP8-2	TP8-3	TP9-1	TP9-2	TP10-1	TP10-2
Date Collected:		09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:	PQL	13:40	13:50	14:20	14:30	15:40	16:00
Date Extracted:			9/02/94				
Date Analyzed:			9/06/94				
Dilution:			1				
N-Nitrosodimethylamine	330		440 U				
Bis(2-chloroethyl) ether	330		440 U				
1,3 Dichlorobenzene	330		440 U				
1,4 Dichlorobenzene	330		440 U				
1,2 Dichlorobenzene	330		440 U				
2,2'oxybis(1-Chloropropane)	330		440 U				
N-Nitroso-Di-n-propylamine	330		440 U				
Hexachloroethane	330		440 U				
Nitrobenzene	330		440 U				
Isophorone	330		440 U				
bis(-2-chloroethoxy)methane	330		440 U				
1,2,4-Trichlorobenzene	330		440 U				
Naphthalene	330		440 U				
Hexachlorobutadiene	330		440 U				
Hexachlorocyclopentadiene	330		440 U				
2-Chloronaphthalene	330		440 U				
Dimethyl phthalate	330		440 U				
Acenaphthylene	330		440 U				
Acenaphthene	330		440 U				
2,4-Dinitrotoluene	330		440 U				
2,6-Dinitrotoluene	330		440 U				
Diethyl phthalate	330		440 U				
4-Chlorophenyl-phenyl-ether	330		440 U				
Fluorene	330		440 U				
1,2-Diphenylhydrazine	330		440 U				
N-Nitrosodiphenylamine	330		440 U				
4-Bromophenyl-phenylether	330		440 U				
Hexachlorobenzene	330		440 U				
Phenanthrene	330		440 U				
Anthracene	330		440 U				
Di-n-butyl phthalate	330		440 U				
Fluoranthene	330		440 U				
Pyrene	330		440 U				

00017

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-008	-009	-010	-011	-012	-013
Location:		TP8-2	TP8-3	TP9-1	TP9-2	TP10-1	TP10-2
Date Collected:		09/01/94	09/01/94	09/01/94	09/01/94	09/01/94	09/01/94
Time Collected:	PQL	13:40	13:50	14:20	14:30	15:40	16:00
Date Extracted:			9/02/94				
Date Analyzed:			9/06/94				
Dilution:			1				
Butyl benzyl phthalate	330		440 U				
3,3'-Dichlorobenzidine	330		440 U				
Benzo(a)anthracene	330		440 U				
Bis(2-ethylhexyl)phthalate	330		440 U				
Chrysene	330		440 U				
Di-n-octyl phthalate	330		440 U				
Benzo(b)Fluoranthene	330		440 U				
Benzo(k)fluoranthene	330		440 U				
Benzo(a)pyrene	330		440 U				
Indeno(1,2,3-cd)pyrene	330		440 U				
Dibenzo(a,h)anthracene	330		440 U				
Benzo(g,h,i)perylene	330		440 U				
4-Chloroaniline	330		440 U				
2-Methyl Naphthalene	330		440 U				
2-Nitroaniline	330		440 U				
3-Nitroaniline	330		440 U				
Dibenzofuran	330		440 U				
4-Nitroaniline	330		440 U				
Carbazole	330		440 U				
SURROGATE STANDARD RECOVERIES							
Nitrobenzene-d5	23-120%		75				
2-Fluorobiphenyl	30-115%		94				
Terphenyl-d14	18-137%		99				

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801

NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

00016

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-014	-015
Location:		LAB METH BLANK	LAB METH BLANK
Date Collected:		--	--
Time Collected:	PQL	--	--
Date Analyzed:		9/06/94	9/07/94
Dilution:		1	1
Chloromethane	5.0	5.0 U	5.0 U
Bromomethane	5.0	5.0 U	5.0 U
Vinyl Chloride	5.0	5.0 U	5.0 U
Chloroethane	5.0	5.0 U	5.0 U
Methylene Chloride	5.0	5.0 U	5.0 U
Acetone	5.0	10 U	10 U
Carbon Disulfide	5.0	10 U	10 U
1,1-Dichloroethene	5.0	5.0 U	5.0 U
1,1-Dichloroethane	5.0	5.0 U	5.0 U
trans-1,2-Dichloroethene	5.0	5.0 U	5.0 U
cis-1,2-Dichloroethene	5.0	5.0 U	5.0 U
Chloroform	5.0	5.0 U	5.0 U
2-Butanone (MEK)	5.0	10 U	10 U
1,2-Dichloroethane	5.0	5.0 U	5.0 U
1,1,1-Trichloroethane	5.0	5.0 U	5.0 U
Carbon Tetrachloride	5.0	5.0 U	5.0 U
Bromodichloromethane	5.0	5.0 U	5.0 U
1,2-Dichloropropane	5.0	5.0 U	5.0 U
1,3-Dichloropropene-Tran	5.0	5.0 U	5.0 U
Trichloroethene	5.0	5.0 U	5.0 U
Dibromochloromethane	5.0	5.0 U	5.0 U
1,1,2-Trichloroethane	5.0	5.0 U	5.0 U
Benzene	5.0	5.0 U	5.0 U
1,3-Dichloropropene(Cis)	5.0	5.0 U	5.0 U
Bromoform	5.0	5.0 U	5.0 U
4-Methyl-2-pentanone(MIB	5.0	10 U	10 U
2-Hexanone	5.0	10 U	10 U
Tetrachloroethene	5.0	5.0 U	5.0 U
1,1,2,2-Tetrachloroethan	5.0	5.0 U	5.0 U
Toluene	5.0	5.0 U	5.0 U
Chlorobenzene	5.0	5.0 U	5.0 U

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-014	-015
Location:		LAB METH BLANK	LAB METH BLANK
Date Collected:		--	--
Time Collected:	PQL	--	--
Date Analyzed:		9/06/94	9/07/94
Dilution:		1	1
Ethylbenzene	5.0	5.0 U	5.0 U
Styrene	5.0	5.0 U	5.0 U
Total Xylene (o,m,p)	5.0	5.0 U	5.0 U
Surrogate Standard Recoveries			
Toluene d8	81-117	101	101
4-Bromofluorobenzene	74-121	95	96

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-014						
Location:		LAB METH BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Extracted:		9/02/94						
Date Analyzed:		9/06/94						
Dilution:		1						
Phenol	670	670 U						
2-Chlorophenol	670	670 U						
2-Nitrophenol	670	670 U						
2,4-Dimethylphenol	670	670 U						
2,4-Dichlorophenol	670	670 U						
4-Chloro-3-methylphenol	670	670 U						
2,4,6-Trichlorophenol	670	670 U						
2,4-Dinitrophenol	1300	1300 U						
4-Nitrophenol	1300	1300 U						
2-Methyl-4,6-dinitrophenol	1300	1300 U						
Pentachlorophenol	1300	1300 U						
2-Methylphenol	670	670 U						
4-Methylphenol	670	670 U						
2,4,5-Trichlorophenol	670	670 U						
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	25-121%	83						
Phenol-d6	24-113%	86						
2,4,6-TriBromophenol	19-122%	102						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-014						
Location:		LAB METH BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Extracted:		9/02/94						
Date Analyzed:		9/06/94						
Dilution:		1						
N-Nitrosodimethylamine	330	330 U						
Bis(2-chloroethyl) ether	330	330 U						
1,3 Dichlorobenzene	330	330 U						
1,4 Dichlorobenzene	330	330 U						
1,2 Dichlorobenzene	330	330 U						
2,2'oxybis(1-Chloropropane)	330	330 U						
N-Nitroso-Di-n-propylamine	330	330 U						
Hexachloroethane	330	330 U						
Nitrobenzene	330	330 U						
Isophorone	330	330 U						
bis(-2-chloroethoxy)methane	330	330 U						
1,2,4-Trichlorobenzene	330	330 U						
Naphthalene	330	330 U						
Hexachlorobutadiene	330	330 U						
Hexachlorocyclopentadiene	330	330 U						
2-Chloronaphthalene	330	330 U						
Dimethyl phthalate	330	330 U						
Acenaphthylene	330	330 U						
Acenaphthene	330	330 U						
2,4-Dinitrotoluene	330	330 U						
2,6-Dinitrotoluene	330	330 U						
Diethyl phthalate	330	330 U						
4-Chlorophenyl-phenyl-ether	330	330 U						
Fluorene	330	330 U						
1,2-Diphenylhydrazine	330	330 U						
N-Nitrosodiphenylamine	330	330 U						
4-Bromophenyl-phenylether	330	330 U						
Hexachlorobenzene	330	330 U						
Phenanthrene	330	330 U						
Anthracene	330	330 U						
Di-n-butyl phthalate	330	330 U						
Fluoranthene	330	330 U						
Pyrene	330	330 U						

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/03325 Date: SEPT 27 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File #163.04

Received : 09/02/94 P.O. #:

TCL BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-014						
Location:		LAB METH BLANK						
Date Collected:		--						
Time Collected:	PQL	--						
Date Extracted:		9/02/94						
Date Analyzed:		9/06/94						
Dilution:		1						
Butyl benzyl phthalate	330	330 U						
3,3'-Dichlorobenzidine	330	330 U						
Benzo(a)anthracene	330	330 U						
Bis(2-ethylhexyl)phthalate	330	330 U						
Chrysene	330	330 U						
Di-n-octyl phthalate	330	330 U						
Benzo(b)Fluoranthene	330	330 U						
Benzo(k)fluoranthene	330	330 U						
Benzo(a)pyrene	330	330 U						
Indeno(1,2,3-cd)pyrene	330	330 U						
Dibenzo(a,h)anthracene	330	330 U						
Benzo(g,h,i)perylene	330	330 U						
4-Chloroaniline	330	330 U						
2-Methyl Naphthalene	330	330 U						
2-Nitroaniline	330	330 U						
3-Nitroaniline	330	330 U						
Dibenzofuran	330	330 U						
4-Nitroaniline	330	330 U						
Carbazole	330	330 U						
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	23-120%	85						
2-Fluorobiphenyl	30-115%	112						
Terphenyl-d14	18-137%	120						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801

NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

00023

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03568 Date: OCT. 20 1994

Client:
Mr. Darrin Constantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics
File 163.02 #2

Received : 09/02/94

P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001				
Location:		TP6-1				
Date Collected:	PQL	09/01/94				
Time Collected:		11:00				
Solids, %		90.1				
Aluminum	10.0	6170				
Antimony	10.0	18.4				
Arsenic	0.500	1.28	N			
Barium	1.0	4870				
Beryllium	0.500	0.555	U			
Cadmium	0.50	0.844				
Calcium	50.0	11600				
Chromium	1.00	25.8				
Cobalt	5.00	14.0				
Copper	1.00	161				
Iron	5.00	22600				
Lead	5.00	394				
Magnesium	50.0	3330				
Manganese	0.500	347				
Mercury	0.100	3.87				
Nickel	4.00	39.5				
Potassium	50.0	969				
Selenium	5.00	0.555	UN			
Silver	1.00	38.1				
Sodium	50.0	610				
Thallium	30.0	111	U			
Vanadium	5.00	31.1				
Zinc	1.00	690				

Laboratory Director

00002

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03368 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

TAM Ceramics File 163.02

Received : 09/08/94

P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001		-002		-003		-004	
Location:		TP4-2C		TP15-1C		TP7-1C		TP10-2C	
Date Collected:	PQL	09/08/94		09/08/94		09/08/94		09/08/94	
Time Collected:		10:00		10:30		10:45		12:00	
Solids, %		83.8		99.3		89.2		61.5	
Aluminum	10.0	1780		1260		4410		416	
Antimony	10.0	19.6		10.1	U	16.6		16.3	U
Arsenic	0.500	11.4	S	0.504	U	1.36		0.813	S
Barium	1.0	311		3360		19600		709	
Beryllium	0.500	0.597	U	0.504	U	0.561	U	0.813	U
Cadmium	0.500	0.597	U	0.785		2.30		0.813	U
Calcium	50.0	12800		6980		38000		17700	
Chromium	1.00	135		14.7		29.9		82.0	
Cobalt	5.00	15.5		11.7		20.5		8.13	U
Copper	1.00	91.5		165		70.0		27.8	
Iron	5.00	93900		7530		10600		36100	
Lead	5.00	457		176		65.9		110	
Magnesium	50.0	170		2340		21900		255000	
Manganese	0.500	410		98.2		395		202	
Mercury	0.100	0.268		1.50		0.748		0.163	U
Nickel	4.00	9.73		13.2		26.6		19.2	
Potassium	100	6900		178		686		163	U
Selenium	0.500	1.48		0.504	U	0.561	U	0.813	U
Silver	1.00	3.60		13.0		5.84		149	
Sodium	50.0	5330		387		152		468	
Thallium	1.00	477		151		673		42.3	
Vanadium	5.00	196		10.6		16.1		12.5	
Zinc	1.00	70.6		479		1180		56.6	

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03368 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

TAM Ceramics File 163.02

Received : 09/08/94

P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-005				
Location:		TP9-2C				
Date Collected:	PQL	09/08/94				
Time Collected:		15:00				
Solids, %		92.4				
Aluminum	10.0	1170				
Antimony	10.0	10.8	U			
Arsenic	0.500	0.541	U			
Barium	1.0	513000				
Beryllium	0.500	0.541	U			
Cadmium	0.500	0.541	U			
Calcium	50.0	4830				
Chromium	1.00	5.51				
Cobalt	5.00	38.1				
Copper	1.00	16.7				
Iron	5.00	6550				
Lead	5.00	996				
Magnesium	50.0	440				
Manganese	0.500	48.3				
Mercury	0.100	6.74				
Nickel	4.00	4.33	U			
Potassium	100	206				
Selenium	0.500	0.541	U			
Silver	1.00	60.2				
Sodium	50.0	1050				
Thallium	1.00	649				
Vanadium	5.00	7.75				
Zinc	1.00	19.5				

Laboratory Director

00003

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03368 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
TAM Ceramics File 163.02

Received : 09/08/94 P.O. #:

ANALYTICAL RESULTS - mg/l

Sample:	-006	-007	-008	-009	-010			
Location:	TP4-2C	TP15-1C	TP7-1C	TP10-2C	TP9-2C			
Date Collected:	09/08/94	09/08/94	09/08/94	09/08/94	09/08/94			
Time Collected:	10:00	10:30	10:45	12:00	15:00			
TCLP Extraction Metals								
Arsenic	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U			
Barium	1.00 U	3.87	4.34	1.00 U	682			
Cadmium	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U			
Chromium	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U			
Lead	0.100 U	0.100 U	0.100 U	0.100 U	0.100 U			
Mercury	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U			
Selenium	0.500 U	0.500 U	0.500 U	0.500 U	0.500 U			
Silver	0.100 U	0.100 U	0.100 U	0.100 U	0.205			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

***TCLP Toxicity Characteristic Leaching Procedure.
Federal Register, Part 261, Vol. 55, No. 126,
June 29, 1990.

Data reported is unbiased on the above regulation.

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03393 Date: SEPT 30 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/09/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001		-002			
Location:		IVEX-1		TP13-2C			
Date Collected:	PQL	09/09/94		09/09/94			
Time Collected:		11:00		10:15			
Solids, %		21.1		42.5			
Aluminum	10.0	97.6		16000			
Antimony	10.0	47.4	U	23.5	U		
Arsenic	0.500	129		141			
Barium	0.050	33.2		53.2			
Beryllium	0.500	2.37	U	1.18	U		
Cadmium	0.50	2.37	U	9.74			
Calcium	50.0	943		21000			
Chromium	1.00	4.73	U	56.7			
Cobalt	5.00	23.7	U	22.1			
Copper	1.00	9.48	U	100			
Iron	5.00	3040		87500			
Lead	5.00	23.7	U	65.2			
Magnesium	50.0	237	U	14600			
Manganese	0.500	5.45		264			
Mercury	0.100	0.474	U	0.426			
Nickel	4.00	19.0	U	9.41	U		
Potassium	50.0	474	U	1300			
Selenium	0.500	114		132			
Silver	1.00	277		304			
Sodium	50.0	465		242			
Thallium	30.0	142	U	70.6	U		
Vanadium	5.00	23.7	U	41.9			
Zinc	1.00	177000		224			

Laboratory Director

00002

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03393 Date: SEPT 30 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/09/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-003	-004					
Location:		TP13-1C	TP13-2C					
Date Collected:		09/09/94	09/09/94					
Time Collected:	PQL	10:15	10:15					
Grease/Oil	300	748 U						
% Water	0.1	59.4						
Pet. Hydrocarbons, IR	25	60.0 U						
Total Organic Carbons %	0.1	0.803						
Total Organic Halogens	200	480 U						
Solids, %		42.0						
Soluble In Cold Water		Yes						
Soluble In Hot Water		Yes						
Soluble In Hexane		No						
Soluble In Methylene Chloride		No						
Specific Gravity *	---	1.154						
pH		7.82						
Ignitability °C		>100						
Reactivity								
Total Available Cyanide	0.333	0.333 U						
Total Available Sulfide	5.00	5.00 U						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801
*Subcontracted to Schwarzkopf Laboratory, ID#11028

Laboratory Director

00003

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03393 Date: SEPT 23 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

Tam Ceramics File 163.02

Received : 09/09/94

P.O. #:

ANALYTICAL RESULTS - mg/l

Sample:	-003	-004
Location:	TP13-1C	TP13-2C
Date Collected:	09/09/94	09/09/94
Time Collected:	10:15	10:15
TCLP Extraction Metals		
Arsenic	0.500 U	0.500 U
Barium	2.22	1.37
Cadmium	0.100 U	0.100 U
Chromium	0.100 U	0.100 U
Lead	0.100 U	0.100 U
Mercury	0.0020 U	0.0020 U
Selenium	0.500 U	0.500 U
Silver	0.100 U	0.100 U

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

***TCLP Toxicity Characteristic Leaching Procedure.
Federal Register, Part 261, Vol. 55, No. 126,
June 29, 1990.

Data reported is unbiased on the above regulation.

00004

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-001		-002		-003		-004	
Location:		SB2-8		SB2-10		SB13-4		SB16-2	
Date Collected:	PQL	09/12/94		09/12/94		09/12/94		09/12/94	
Time Collected:		13:30		13:45		16:30		16:45	
Solids, %		92.3		90.8		94.2		81.6	
Aluminum	10.0			2950		19200		29000	
Antimony	10.0			11.0	UN	10.6	UN	12.3	UN
Arsenic	0.500			5.16		6.27		5.20	
Barium	1.0			12.8	*	86.7	*	176	*
Beryllium	0.500			0.551	U	0.626		0.944	
Cadmium	0.50			1.85		2.73		3.44	
Calcium	50.0			150000		65200		70600	
Chromium	1.00			5.44		18.6		35.7	
Cobalt	5.00			5.51	U	8.21		16.1	
Copper	1.00			9.74		20.3		23.7	
Iron	5.00			5750		21400		31400	
Lead	5.00			34.6		54.8		10.9	
Magnesium	50.0			82600		40800		12900	
Manganese	0.500			455		745		555	
Mercury	0.100			0.110	U	0.106	U	0.123	U
Nickel	4.00			4.56		20.3		33.2	
Potassium	50.0			656		2220		5970	
Selenium	0.500			2.07	N	3.69	N	4.84	N
Silver	1.00			1.10	UN	1.06	UN	1.22	N U
Silica	0.400			5.31					
Sodium	50.0			190		160		223	
Thallium	30.0			33.0	U	31.8	U	36.8	U
Vanadium	5.00			6.91		26.3		40.6	
Zinc	1.00			234		168		75.3	

Laboratory Director

00003

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-005		-006		-007		-008	
Location:		SB16-4		SB7-0		SB7-2		BBL1-2	
Date Collected:	PQL	09/12/94		09/12/94		09/12/94		09/13/94	
Time Collected:		17:00		17:25		17:40		07:40	
Solids, %		91.5		85.6		85.2		88.4	
Aluminum	10.0	20800		27300		18500		21700	
Antimony	10.0	10.9	UN	11.7	UN	11.7	UN	11.3	UN
Arsenic	0.500	5.20		5.77		5.41		6.16	
Barium	1.0	138	*	165	*	102	*	128	*
Beryllium	0.500	0.678		1.17		0.622		0.792	
Cadmium	0.50	2.74		3.70		3.53		3.26	
Calcium	50.0	58900		3640		55500		37400	
Chromium	1.00	25.9		30.8		22.1		26.5	
Cobalt	5.00	12.1		23.4		14.8		15.5	
Copper	1.00	19.0		26.8		22.4		23.8	
Iron	5.00	23000		34200		26300		29400	
Lead	5.00	20.1		12.3		21.6		10.9	
Magnesium	50.0	24600		8110		14700		13100	
Manganese	0.500	646		651		750		495	
Mercury	0.100	0.109	U	0.117	U	0.117	U	0.113	U
Nickel	4.00	25.4		34.0		28.0		30.2	
Potassium	50.0	4240	N	3500	N	3450	N	4080	N
Selenium	0.500	4.18	N	4.86	N	3.73	N	4.17	N
Silver	1.00	1.09	U	1.17	U	1.17	U	1.13	U
Sodium	50.0	162		90.6		15.2		296	
Thallium	30.0	32.8	U	35.0	U	35.2	U	33.9	U
Vanadium	5.00	29.0		33.2		28.3		31.0	
Zinc	1.00	92.2		84.0		238		75.3	

Laboratory Director

00004

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94

P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-009		-010		-011		-012	
Location:		BBL1-4		BBL1-6		BBL1-8		SB9-6	
Date Collected:	PQL	09/13/94		09/13/94		09/13/94		09/13/94	
Time Collected:		07:50		08:00		08:10		09:00	
Solids, %		85.6		83.6		85.6		90.0	
Aluminum	10.0	17300		13200		4670		5580	
Antimony	10.0	11.7	UN	12.0	UN	11.7	UN	11.1	UN
Arsenic	0.500	4.39		4.65		1.08		2.10	
Barium	1.0	128	*	71.5	*	15.3	*	90.7	*
Beryllium	0.500	0.584	U	0.598	U	0.584	U	0.556	U
Cadmium	0.50	2.69		2.58		1.41		1.64	
Calcium	50.0	58200		47200		22700		19300	
Chromium	1.00	22.4		18.1		6.58		12.9	
Cobalt	5.00	13.1		12.0		5.84	U	6.43	
Copper	1.00	18.5		19.0		7.34		10.9	
Iron	5.00	24100		22200		10200		12100	
Lead	5.00	8.17		7.08		5.84	U	8.74	
Magnesium	50.0	12300		11500		4190		11900	
Manganese	0.500	508		566		479		501	
Mercury	0.100	0.117	U	0.120	U	0.117	U	0.111	U
Nickel	4.00	24.9		24.3		8.73		9.32	
Potassium	50.0	3290	N	2620	N*	944	N	1150	N
Selenium	0.500	3.70	N	3.34	N	1.22	N	1.96	N
Silver	1.00	1.17	U	1.20	U	1.17	U	1.11	U
Sodium	50.0	271		243		130		117	
Thallium	30.0	35.0	U	35.9	U	35.0	U	33.3	U
Vanadium	5.00	27.8		23.4		9.10		13.9	
Zinc	1.00	58.4		54.6		75.5		46.2	

Laboratory Director

00005

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-013		-014		-015		-016	
Location:		SB15-2		SB15-4		SB15-6		SB6-4	
Date Collected:	PQL	09/13/94		09/13/94		09/13/94		09/13/94	
Time Collected:		09:55		10:05		10:15		11:00	
Solids, %		85.6		83.2		82.9		82.4	
Aluminum	10.0	22800		22000		11600	*	20400	
Antimony	10.0	11.7	UN	12.0	UN	12.1	UN	12.1	UN
Arsenic	0.500	4.93		5.53		4.19	*N	5.91	
Barium	1.0	159	*	171	*	101	*	198	*
Beryllium	0.500	0.993		0.986		0.603	U	0.850	
Cadmium	0.50	3.45		3.82		4.62	N*	3.54	
Calcium	50.0	6920		38300		37200		30800	
Chromium	1.00	29.7		28.2		14.7	*	32.3	
Cobalt	5.00	15.2		21.6		11.5	*	16.4	
Copper	1.00	25.2		27.8		15.7	*	28.6	
Iron	5.00	31900		32700		18800		30700	
Lead	5.00	11.9		11.8		21.1		18.0	
Magnesium	50.0	9650		12600		26300	*	16300	
Manganese	0.500	410		1100		1230	*	752	
Mercury	0.100	0.117	U	0.120	U	0.121	U	0.121	U
Nickel	4.00	31.2		40.9		22.2	*	32.2	
Potassium	50.0	3390	N	3830	N	1450	N	2750	N
Selenium	0.500	4.73	N	4.66	N	3.10	N	5.00	N
Silver	1.00	1.17	U	16.2		4.83	U	25.6	
Sodium	50.0	136		178		124	*	138	
Thallium	30.0	35.0	U	36.0	U	36.2	U	36.4	U
Vanadium	5.00	33.6		34.7		19.7	*	33.7	
Zinc	1.00	74.2		74.3		550	*	90.0	

Laboratory Director

00006

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-017		-018		-019		-020	
Location:		SB6-6		SB6-8		SB3-2		SB3-4	
Date Collected:	PQL	09/13/94		09/13/94		09/13/94		09/13/94	
Time Collected:		11:10		11:20		13:05		13:15	
Solids, %		85.4		90.2		84.3		81.9	
Aluminum	10.0	14400		3540		18600		20500	
Antimony	10.0	11.7	UN	11.1	UN	11.9	UN	12.2	UN
Arsenic	0.500	4.16		5.89		4.75		5.66	
Barium	1.0	85.6	*	20.4	*	114	*	151	*
Beryllium	0.500	0.609		0.554	U	0.795		0.769	
Cadmium	0.50	2.75		2.97		4.28		4.43	
Calcium	50.0	44400		155000		4600		87500	
Chromium	1.00	24.1		5.38		24.3		27.1	
Cobalt	5.00	12.6		5.54	U	15.1		15.0	
Copper	1.00	20.1		10.3		23.0		39.3	
Iron	5.00	23800		7050		29600		23900	
Lead	5.00	5.69		14.6		8.21		12.2	
Magnesium	50.0	9570		91400		7510		13400	
Manganese	0.500	582		666		614		606	
Mercury	0.100	0.117	U	0.111	U	0.329		0.122	U
Nickel	4.00	23.0		5.09		26.7		28.6	
Potassium	50.0	2490	N	620	N	1640	N	2760	N
Selenium	0.500	3.57	N	1.82	N	4.08	N	4.72	N
Silver	1.00	1.17	U	2.22	U	1.19	U	4.88	U
Sodium	50.0	149		188		171		196	
Thallium	30.0	35.1	U	33.3	U	35.6	U	36.6	U
Vanadium	5.00	24.4		8.27		30.8		34.2	
Zinc	1.00	54.6		105		60.1		77.3	

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94

P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-021		-022		-023		-024	
Location:		SB3-4D		SB3-10		SB4-0		SB4-8	
Date Collected:	PQL	09/13/94		09/13/94		09/13/94		09/13/94	
Time Collected:		13:15		13:30		13:45		14:25	
Solids, %		84.2		83.4		83.6		83.8	
Aluminum	10.0	24800		4560		21000		5740	
Antimony	10.0	11.9	UN	12.0	UN	12.0	UN	11.9	UN
Arsenic	0.500	5.77		5.64		5.50		7.83	
Barium	1.0	170	*	15.2	*	114	*	16.0	*
Beryllium	0.500	1.02		0.600	U	0.718		0.597	U
Cadmium	0.50	3.65		1.66		3.06		1.64	
Calcium	50.0	14200		173000		2130		190000	
Chromium	1.00	33.1		5.40		25.1		7.06	
Cobalt	5.00	16.6		6.00	U	20.4		6.00	U
Copper	1.00	32.2		5.55		18.4		12.2	
Iron	5.00	31400		5890		27000		4930	
Lead	5.00	12.4		16.7		17.6		80.3	
Magnesium	50.0	10100		101000		5000		112000	
Manganese	0.500	701		346		1300		256	
Mercury	0.100	0.119	U	0.120	U	0.120	U	0.119	U
Nickel	4.00	32.2		5.73		24.3		6.05	
Potassium	50.0	2530	N	719	N	1330	N	809	N
Selenium	0.500	4.23	N	2.01	N	4.39	N	2.12	N
Silver	1.00	1.19	U	4.80	U	1.20	U	2.39	U
Sodium	50.0	191		247		79.4		264	
Thallium	30.0	35.6	U	36.0	U	35.9	U	35.8	U
Vanadium	5.00	38.5		9.09		36.6		10.9	
Zinc	1.00	77.8		267		94.1		335	

00008

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94

P.O. #:

ANALYTICAL RESULTS - ug/g Dry Wt.

Sample:		-025		-026		-027		-028	
Location:		SB1-0		SB1-8		BBL2-2		BBL2-4	
Date Collected:	PQL	09/13/94		09/13/94		09/14/94		09/14/94	
Time Collected:		14:35		15:15		09:40		09:45	
Solids, %		87.8		87.1		85.5		86.2	
Aluminum	10.0	16600		11800		14500		9690	
Antimony	10.0	11.4	UN	11.5	UN	11.7	UN	11.6	UN
Arsenic	0.500	6.39		5.68		4.42		4.34	
Barium	1.0	485	*	65.0	*	99.4	*	59.5	*
Beryllium	0.500	0.569	U	0.574	U	0.585	U	0.580	U
Cadmium	0.50	4.94		2.47		2.74		2.37	
Calcium	50.0	30200		80700		55800		58500	
Chromium	1.00	80.6		13.9		18.8		12.8	
Cobalt	5.00	20.3		8.77		11.7		9.62	
Copper	1.00	101		16.2		22.9		30.4	
Iron	5.00	36000		18100		19500		17700	
Lead	5.00	28.9		10.9		5.85	U	5.80	U
Magnesium	50.0	8280		27300		9170		9920	
Manganese	0.500	2060		544		571		647	
Mercury	0.100	0.290		0.115	U	0.117	U	0.116	U
Nickel	4.00	42.6		16.2		20.8		14.6	
Potassium	50.0	1360	N	1860	N	2330	N	1320	N
Selenium	0.500	5.67	N	2.89	N	3.15	N	2.84	N
Silver	1.00	1.14	U	28.4		1.17	U	1.16	U
Sodium	50.0	268		217		271		133	
Thallium	30.0	34.2	U	34.4	U	35.1	U	34.8	U
Vanadium	5.00	43.3		18.5		28.0		20.1	
Zinc	1.00	107		131		55.4		145	

Laboratory Director

00009

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference:
Tam Ceramics File 163.02

Received : 09/15/94

P.O. #:

ANALYTICAL UNITS - ug/g Dry Wt.

Location:		-001 SB2-8	-002 SB2-10	-003 SB13-4	-018 SB6-8	-022 SB3-10	-023 SB4-0	-028 BBL2-4
Date Collected:		09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	PQL	13:30	13:45	16:30	11:20	13:30	13:45	09:45
Date Analyzed:		09/26/94		09/26/94	09/26/94	09/26/94	09/26/94	09/26/94
Dilution:		1		1	1	1	1	1
Pet. Hydrocarbons, IR	25	83.6		26.2 U	26.5 U	38.7 U	31.0 U	30.0 U

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 11 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

METALS - TAL ANALYTICAL RESULTS - mg/l

Sample:		-029	-030	-031			
Location:		EB-1	EB-2	FB-2			
Date Collected:		09/14/94	09/14/94	09/14/94			
Time Collected:	PQL	09:00	09:50	10:00			
Aluminum	0.100	0.100 U	0.100 U	0.100 U			
Antimony	0.100	0.100 U	0.100 U	0.100 U			
Arsenic	0.0050	0.0050 U	0.0050 U	0.0050 U			
Barium	0.0200	0.0200 U	0.0200 U	0.0200 U			
Beryllium	0.0050	0.0050 U	0.0050 U	0.0050 U			
Cadmium	0.0050	0.0050 U	0.0050 U	0.0050 U			
Calcium	0.500	0.500 U	0.769	0.500 U			
Chromium	0.010	0.010 U	0.010 U	0.010 U			
Cobalt	0.0500	0.0500 U	0.0500 U	0.0500 U			
Copper	0.0200	0.0200 U	0.0200 U	0.0200 U			
Iron	0.0500	0.0652	3.27	0.0500 U			
Lead	0.0500	0.0500 U	0.0500 U	0.0500 U			
Magnesium	0.500	0.500 U	0.500 U	0.500 U			
Manganese	0.010	0.010 U	0.0390	0.010 U			
Mercury	0.00020	0.00020 U	0.00020 U	0.00020 U			
Nickel	0.0400	0.0400 U	0.0400 U	0.0400 U			
Potassium	1.00	1.00 U	1.00 U	1.00 U			
Selenium	0.0050	0.0050 U	0.0050 U	0.0050 U			
Silver	0.010	0.0276	0.010 U	0.010 U			
Sodium	0.50	6.32	3.52	1.61			
Thallium	0.300	0.300 U	0.300 U	0.300 U			
Vanadium	0.0500	0.0500 U	0.0500 U	0.0500 U			
Zinc	0.010	0.010 U	0.0173	0.010 U			

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NJ ID# in Hackensack: 02317

NJ ID# in Rochester: 73331 NY ID# in Hackensack: 10801

Laboratory Director

00011

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94

P.O. #:

VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-018	-022	-023	-028
Location:		SB2-8	SB2-10	SB13-4	SB6-8	SB3-10	SB4-0	BBL2-4
Date Collected:		09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	PQL	13:30	13:45	16:30	11:20	13:30	13:45	09:45
Date Analyzed:		9/23/94		9/23/94	9/23/94	9/23/94	9/24/94	9/24/94
Dilution:		625		1	1	1	1	1
Chloromethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Bromomethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Vinyl Chloride	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Chloroethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Methylene Chloride	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Acetone	10	6800 U		11 U	11 U	12 U	12 U	12 U
Carbon Disulfide	10	6800 U		11 U	11 U	12 U	12 U	12 U
1,1-Dichloroethene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,1-Dichloroethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
trans-1,2-Dichloroethene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
cis-1,2-Dichloroethene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Chloroform	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
2-Butanone (MEK)	10	6800 U		11 U	11 U	12 U	12 U	12 U
1,2-Dichloroethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,1,1-Trichloroethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Carbon Tetrachloride	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Bromodichloromethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,2-Dichloropropane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,3-Dichloropropene-Trans	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Trichloroethene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Dibromochloromethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,1,2-Trichloroethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Benzene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,3-Dichloropropene(Cis)	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Bromoform	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
4-Methyl-2-pentanone(MIBK)	10	6800 U		11 U	11 U	12 U	12 U	12 U
2-Hexanone	10	6800 U		11 U	11 U	12 U	12 U	12 U
Tetrachloroethene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,1,2,2-Tetrachloroethane	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Toluene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Chlorobenzene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 11 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

VOLATILES BY EPA METHOD 8260* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-018	-022	-023	-028
Location:		SB2-8	SB2-10	SB13-4	SB6-8	SB3-10	SB4-0	BBL2-4
Date Collected:		09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	PQL	13:30	13:45	16:30	11:20	13:30	13:45	09:45
Date Analyzed:		9/23/94		9/23/94	9/23/94	9/23/94	9/24/94	9/24/94
Dilution:		625		1	1	1	1	1
Ethylbenzene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Styrene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Total Xylene (o,m,p)	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
2-Chlorotoluene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
4-Chlorotoluene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,2,4-Trichlorobenzene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
1,2,3-Trichlorobenzene	5.0	3400 U		5.3 U	5.6 U	6.0 U	6.0 U	5.8 U
Surrogate Standard Recoveries								
Dibromofluoromethane	80-120	83		98	97	96	102	95
Toluene d8	81-117	91		93	100	99	99	100
4-Bromofluorobenzene	74-121	94		83	91	89	80	90

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

00013

NYSDEC Sample No.: SB2-8

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 8
Column (pack/cap): CAP

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-001
Lab File ID: Q1351
Date Received: 09/15/94
Date Analyzed: 09/23/94
Dilution Factor: 625

Number TIC's found: 12

Concentration Units:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown alkane	18.32	33000	J
2.		Unknown alkane	19.41	41000	J
3.		Unknown alkane	19.80	41000	J
4.		Unknown alkane	20.31	110000	J
5.		Unknown alkane	20.64	26000	J
6.		Unknown aromatic hydrocarbon	22.06	13000	J
7.		Unknown	22.60	5400	J
8.		Unknown	24.70	13000	J
9.		Unknown aromatic hydrocarbon	24.86	11000	J
10.		Unknown	25.12	15000	J
11.		Unknown aromatic hydrocarbon	25.64	5200	J
12.		Unknown	27.18	5800	J
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No.: SB13-4

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 6
Column (pack/cap): CAP

Number TIC's found: 0

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-003
Lab File ID: J0363
Date Received: 09/15/94
Date Analyzed: 09/23/94
Dilution Factor: 1.0

Concentration Units:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
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24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No.: SB6-8

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 10
Column (pack/cap): CAP

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-018
Lab File ID: J0364
Date Received: 09/15/94
Date Analyzed: 09/23/94
Dilution Factor: 1.0

Number TIC's found: 0

Concentration Units:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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17.				
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25.				
26.				
27.				
28.				
29.				
30.				

NYSDEC Sample No.: SB3-10

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 17
Column (pack/cap): CAP

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-022
Lab File ID: J0371
Date Received: 09/15/94
Date Analyzed: 09/23/94
Dilution Factor: 1.0

Number TIC's found: 0

Concentration Units:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No.: SB4-0

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 16
Column (pack/cap): CAP

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-023
Lab File ID: J0372
Date Received: 09/15/94
Date Analyzed: 09/24/94
Dilution Factor: 1.0

Number TIC's found: 0

Concentration Units:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No.: BBl2-4

1E - VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 5 (g/mL)G
Level (low/med): LOW
% Moisture: not dec. 14
Column (pack/cap): CAP

Number TIC's found: 0

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-028
Lab File ID: J0373
Date Received: 09/15/94
Date Analyzed: 09/24/94
Dilution Factor: 1.0

Concentration Units:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-018	-022	-023	-028
Location:		SB2-8	SB2-10	SB13-4	SB6-8	SB3-10	SB4-0	BBL2-4
Date Collected:		09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	PQL	13:30	13:45	16:30	11:20	13:30	13:45	09:45
Date Extracted:		9/20/94				9/20/94	9/20/94	9/20/94
Date Analyzed:		9/22/94				9/22/94	9/22/94	9/22/94
Dilution:		1				1	1	1
Phenol	670	730 U				800 U	790 U	780 U
2-Chlorophenol	670	730 U				800 U	790 U	780 U
2-Nitrophenol	670	730 U				800 U	790 U	780 U
2,4-Dimethylphenol	670	730 U				800 U	790 U	780 U
2,4-Dichlorophenol	670	730 U				800 U	790 U	780 U
4-Chloro-3-methylphenol	670	730 U				800 U	790 U	780 U
2,4,6-Trichlorophenol	670	730 U				800 U	790 U	780 U
2,4-Dinitrophenol	1300	1500 U				1600 U	1600 U	1600 U
4-Nitrophenol	1300	1500 U				1600 U	1600 U	1600 U
2-Methyl-4,6-dinitrophenol	1300	1500 U				1600 U	1600 U	1600 U
Pentachlorophenol	1300	1500 U				1600 U	1600 U	1600 U
2-Methylphenol	670	730 U				800 U	790 U	780 U
4-Methylphenol	670	730 U				800 U	790 U	780 U
2,4,5-Trichlorophenol	670	730 U				800 U	790 U	780 U
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	25-121%	109				79	64	66
Phenol-d6	24-113%	120 *				96	78	78
2,4,6-TriBromophenol	19-122%	77				84	69	74

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

00020

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-018	-022	-023	-028
Location:		SB2-8	SB2-10	SB13-4	SB6-8	SB3-10	SB4-0	BBL2-4
Date Collected:		09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	PQL	13:30	13:45	16:30	11:20	13:30	13:45	09:45
Date Extracted:		9/20/94				9/20/94	9/20/94	9/20/94
Date Analyzed:		9/22/94				9/22/94	9/22/94	9/22/94
Dilution:		1				1	1	1
N-Nitrosodimethylamine	330	360 U				400 U	400 U	390 U
Bis(2-chloroethyl) ether	330	360 U				400 U	400 U	390 U
1,3 Dichlorobenzene	330	360 U				400 U	400 U	390 U
1,4 Dichlorobenzene	330	360 U				400 U	400 U	390 U
1,2 Dichlorobenzene	330	360 U				400 U	400 U	390 U
2,2'oxybis(1-Chloropropane)	330	360 U				400 U	400 U	390 U
N-Nitroso-Di-n-propylamine	330	360 U				400 U	400 U	390 U
Hexachloroethane	330	360 U				400 U	400 U	390 U
Nitrobenzene	330	360 U				400 U	400 U	390 U
Isophorone	330	360 U				400 U	400 U	390 U
bis(-2-chloroethoxy)methane	330	360 U				400 U	400 U	390 U
1,2,4-Trichlorobenzene	330	360 U				400 U	400 U	390 U
Naphthalene	330	360 U				400 U	400 U	390 U
Hexachlorobutadiene	330	360 U				400 U	400 U	390 U
Hexachlorocyclopentadiene	330	360 U				400 U	400 U	390 U
2-Chloronaphthalene	330	360 U				400 U	400 U	390 U
Dimethyl phthalate	330	360 U				400 U	400 U	390 U
Acenaphthylene	330	360 U				400 U	400 U	390 U
Acenaphthene	330	360 U				400 U	400 U	390 U
2,4-Dinitrotoluene	330	360 U				400 U	400 U	390 U
2,6-Dinitrotoluene	330	360 U				400 U	400 U	390 U
Diethyl phthalate	330	360 U				400 U	400 U	390 U
4-Chlorophenyl-phenyl-ether	330	360 U				400 U	400 U	390 U
Fluorene	330	360 U				400 U	400 U	390 U
1,2-Diphenylhydrazine	330	360 U				400 U	400 U	390 U
N-Nitrosodiphenylamine	330	360 U				400 U	400 U	390 U
4-Bromophenyl-phenylether	330	360 U				400 U	400 U	390 U
Hexachlorobenzene	330	360 U				400 U	400 U	390 U
Phenanthrene	330	360 U				400 U	400 U	390 U
Anthracene	330	360 U				400 U	400 U	390 U
Di-n-butyl phthalate	330	630				780	630	700
Fluoranthene	330	360 U				400 U	410	390 U
Pyrene	330	360 U				400 U	400 U	390 U

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-018	-022	-023	-028
Location:		SB2-8	SB2-10	SB13-4	SB6-8	SB3-10	SB4-0	BBL2-4
Date Collected:		09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	PQL	13:30	13:45	16:30	11:20	13:30	13:45	09:45
Date Extracted:		9/20/94				9/20/94	9/20/94	9/20/94
Date Analyzed:		9/22/94				9/22/94	9/22/94	9/22/94
Dilution:		1				1	1	1
2-Chlorobenzotrifluoride	670	730 U				800 U	790 U	780 U
3,4-Chlorobenzotrifluoride	670	730 U				800 U	790 U	780 U
1,2,3,5-Tetrachlorobenzene	670	730 U				800 U	790 U	780 U
1,2,4,5-Tetrachlorobenzene	670	730 U				800 U	790 U	780 U
1,2,3,4-Tetrachlorobenzene	670	730 U				800 U	790 U	780 U

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/kg Dry Wt.

Sample:		-001	-002	-003	-018	-022	-023	-028
Location:		SB2-8	SB2-10	SB13-4	SB6-8	SB3-10	SB4-0	BBL2-4
Date Collected:		09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	PQL	13:30	13:45	16:30	11:20	13:30	13:45	09:45
Date Extracted:		9/20/94				9/20/94	9/20/94	9/20/94
Date Analyzed:		9/22/94				9/22/94	9/22/94	9/22/94
Dilution:		1				1	1	1
Butyl benzyl phthalate	330	360 U				400 U	400 U	390 U
3,3'-Dichlorobenzidine	330	360 U				400 U	400 U	390 U
Benzo(a)anthracene	330	360 U				400 U	400 U	390 U
Bis(2-ethylhexyl)phthalate	330	360 U				400 U	400 U	390 U
Chrysene	330	360 U				400 U	400 U	390 U
Di-n-octyl phthalate	330	360 U				400 U	400 U	390 U
Benzo(b)Fluoranthene	330	360 U				400 U	400 U	390 U
Benzo(k)fluoranthene	330	360 U				400 U	400 U	390 U
Benzo(a)pyrene	330	360 U				400 U	400 U	390 U
Indeno(1,2,3-cd)pyrene	330	360 U				400 U	400 U	390 U
Dibenzo(a,h)anthracene	330	360 U				400 U	400 U	390 U
Benzo(g,h,i)perylene	330	360 U				400 U	400 U	390 U
4-Chloroaniline	330	360 U				400 U	400 U	390 U
2-Methyl Naphthalene	330	360 U				400 U	400 U	390 U
2-Nitroaniline	330	360 U				400 U	400 U	390 U
3-Nitroaniline	330	360 U				400 U	400 U	390 U
Dibenzofuran	330	360 U				400 U	400 U	390 U
4-Nitroaniline	330	360 U				400 U	400 U	390 U
Carbazole	330	360 U				400 U	400 U	390 U
SURROGATE STANDARD RECOVERIES								
Nitrobenzene-d5	23-120%	79				92	74	75
2-Fluorobiphenyl	30-115%	89				93	78	80
Terphenyl-d14	18-137%	84				93	76	85

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801

NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

00023

Laboratory Director

NYSDEC Sample No: SB2-8

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 30 (g/mL) G
Level (low/med): LOW
% Moisture: not dec. 8 dec.
Extraction: (SepF/Cont/Sonc)SONC
GPC Cleanup (Y/N) Y pH

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-001
Lab File ID: DE760
Date Received: 09/15/94
Date Extracted: 09/20/94
Date Analyzed: 09/22/94
Dilution Factor: 1.0

Number TIC's found: 25

Concentration Units: UG/KG
(ug/L or ug/Kg)

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	Unknown	6.51	4700	JAB
2.	Unknown alkane	8.30	1100	J
3.	Unknown alkane	8.44	1100	J
4.	Unknown alkane	8.73	730	J
5.	Unknown alkane	8.86	590	J
6.	Unknown alkane	8.99	800	J
7.	Unknown hydrocarbon	9.30	380	J
8.	Unknown alkane	9.45	1100	J
9.	Unknown hydrocarbon	9.56	790	J
10.	Unknown alkane	9.66	2100	J
11.	Unknown alkane	9.88	480	J
12.	Unknown	9.99	870	J
13.	Unknown hydrocarbon	10.23	460	J
14.	Unknown alkane	10.35	900	J
15.	Unknown alkane	10.43	1200	J
16.	Unknown alkane	10.63	430	J
17.	Unknown alkane	10.73	1500	J
18.	Unknown alkane	10.81	520	J
19.	Unknown alkane	10.88	1200	J
20.	Unknown alkane	10.99	790	J
21.	Unknown hydrocarbon	11.36	420	J
22.	Unknown hydrocarbon	11.96	1100	J
23.	Unknown alkane	12.19	1300	J
24.	Unknown	12.24	980	J
25.	Unknown	12.47	1700	J
26.				
27.				
28.				
29.				
30.				

NYSDEC Sample No: SB3-10

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 30 (g/mL) G
Level (low/med): LOW
% Moisture: not dec. 17 dec.
Extraction: (SepF/Cont/Sonc)SONC
GPC Cleanup (Y/N) Y pH

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-022
Lab File ID: DE761
Date Received: 09/15/94
Date Extracted: 09/20/94
Date Analyzed: 09/22/94
Dilution Factor: 1.0

Number TIC's found: 11

Concentration Units: UG/KG
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	4.75	600	J
2.		Unknown	5.05	1200	JB
3.		Unknown	5.60	340	JAB
4.		Unknown	6.01	1300	JAB
5.		Unknown	6.50	19000	JAB
6.		Unknown	6.84	410	JAB
7.		Unknown	7.98	350	JAB
8.		Unknown	8.80	1500	JAB
9.		Unknown	9.38	410	JB
10.		Unknown	9.85	1300	JAB
11.		Unknown alkane	23.68	330	J
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

NYSDEC Sample No: SB4-0

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 30 (g/mL) G
Level (low/med): LOW
% Moisture: not dec. 16 dec.
Extraction: (SepF/Cont/Sonc)SONC
GPC Cleanup (Y/N) Y pH

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-023
Lab File ID: DE762
Date Received: 09/15/94
Date Extracted: 09/20/94
Date Analyzed: 09/22/94
Dilution Factor: 1.0

Number TIC's found: 6

Concentration Units: UG/KG
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	5.05	1100	JB
2.		Unknown	6.01	1300	JAB
3.		Unknown	6.50	14000	JAB
4.		Unknown	7.88	350	J
5.		Unknown	8.54	890	JA
6.		Unknown	9.84	930	JAB
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

FORM I SV-TIC
NYSDEC B-78

NYSDEC Sample No: BBL2-4

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) SOIL
Sample wt/vol: 30 (g/mL) G
Level (low/med): LOW
% Moisture: not dec. 14 dec.
Extraction: (SepF/Cont/Sonc)SONC
GPC Cleanup (Y/N) Y pH

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-028
Lab File ID: DE763
Date Received: 09/15/94
Date Extracted: 09/20/94
Date Analyzed: 09/22/94
Dilution Factor: 1.0

Number TIC's found: 8

Concentration Units: UG/KG
(ug/L or ug/Kg)

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	Unknown	4.81	690	JB
2.	Unknown	5.04	900	JB
3.	Unknown	6.01	1300	JAB
4.	Unknown	6.49	14000	JAB
5.	Unknown	7.88	410	J
6.	Unknown	8.32	340	J
7.	Unknown	8.54	840	JA
8.	Unknown	9.84	840	JB
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 24 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94

P.O. #:

ANALYSIS * BY GC METHOD 8080

ANALYTICAL RESULTS-ug/kg Dry Wt.

Sample:		-001	-002	-003	-018	-022	-023	-028
Location:		SB2-8	SB2-10	SB13-4	SB6-8	SB3-10	SB4-0	BBL2-4
Location:								
Date Collected:		09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	PQL	13:30	13:45	16:30	11:20	13:30	13:45	09:45
Date Extracted:		09/20/94		09/20/94	09/20/94	09/20/94	09/20/9	09/20/94
Date Analyzed:		09/22/94		09/22/94	09/22/94	09/22/94	09/22/9	09/22/94
alpha-BHC	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
beta-BHC	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
gamma-BHC (Lindane)	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
Heptachlor	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
delta-BHC	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
Aldrin	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
Heptachlor epoxide	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
alpha-Endosulfan	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
4,4'-DDE	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
Dieldrin	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
Endrin	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
4,4'-TDE (DDD)	1.7	1.8 U		1.8 U	1.9 U	2.0 U	2.0 U	1.9 U
beta-Endosulfan	3.3	3.6 U		3.5 U	3.7 U	4.1 U	4.0 U	3.9 U
4,4'-DDT	3.3	3.6 U		3.5 U	3.7 U	4.1 U	5.3	3.9 U
Endrin Aldehyde	3.3	3.6 U		3.5 U	3.7 U	4.1 U	4.0 U	3.9 U
Endosulfan Sulfate	3.3	3.6 U		3.5 U	3.7 U	4.1 U	4.0 U	3.9 U
Methoxychlor	6.7	7.2 U		7.1 U	7.4 U	8.1 U	7.9 U	7.8 U
Endrin Ketone	3.3	3.6 U		3.5 U	3.7 U	4.1 U	4.0 U	3.9 U
Chlordane	6.7	7.2 U		7.1 U	7.4 U	8.1 U	7.9 U	7.8 U
Toxaphene	33	36 U		35 U	37 U	41 U	40 U	39 U
PCB 1016	0.50	18 U		18 U	19 U	20 U	20 U	19 U
PCB 1221	0.50	18 U		18 U	19 U	20 U	20 U	19 U
PCB 1232	0.50	18 U		18 U	19 U	20 U	20 U	19 U
PCB 1242	0.50	18 U		18 U	19 U	20 U	20 U	19 U
PCB 1248	0.50	18 U		18 U	19 U	20 U	20 U	19 U
PCB 1254	0.50	18 U		18 U	19 U	20 U	20 U	19 U
PCB 1260	0.50	18 U		18 U	19 U	20 U	20 U	19 U

*SW 846 Manual, Test Methods for Evaluating Solid Waste, 3rd Edition, 11/86

NY LABORATORY CERTIFICATION ID#: 10145
NJ ID#: 73331 in Rochester; NJ ID#: 02317 in Hackensack

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference:
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

ANALYSIS * BY GC METHOD 8080 ANALYTICAL RESULTS - %

Sample:	-001	-002	-003	-018	-022	-023	-028
Location:	SB2-8	SB2-10	SB13-4	SB6-8	SB3-10	SB4-0	BBL2-4
Date Collected:	09/12/94	09/12/94	09/12/94	09/13/94	09/13/94	09/13/94	09/14/94
Time Collected:	13:30	13:45	16:30	11:20	13:30	13:45	09:45
SURROGATE STANDARD RECOVERY							
% Recovery							
Dibutylchlorendate (Acceptance Limits: 24-150%)	95		95	84	105	103	95
Tetrachloro-meta-xylene (Acceptance Limits: 60-150%)	105		104	82	111	110	99

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

GT029

Laboratory Director

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

ACID EXTRACTABLES BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-029	-030	-031				
Location:		EB-1	EB-2	FB-2				
Date Collected:		09/14/94	09/14/94	09/14/94				
Time Collected:	PQL	09:00	09:50	10:00				
Date Extracted:		9/20/94						
Date Analyzed:		9/22/94						
Dilution:		1						
Phenol	10	10 U						
2-Chlorophenol	10	10 U						
2-Nitrophenol	10	10 U						
2,4-Dimethylphenol	10	10 U						
2,4-Dichlorophenol	10	10 U						
4-Chloro-3-methylphenol	10	10 U						
2,4,6-Trichlorophenol	10	10 U						
2,4-Dinitrophenol	20	20 U						
4-Nitrophenol	20	20 U						
2-Methyl-4,6-dinitrophenol	20	20 U						
Pentachlorophenol	20	20 U						
2-Methylphenol	10	10 U						
4-Methylphenol	10	10 U						
2,4,5-Trichlorophenol	10	10 U						
SURROGATE STANDARD RECOVERIES								
2-Fluorophenol	21-100%	48						
Phenol-d6	10-94 %	38						
2,4,6-TriBromophenol	10-123%	68						

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.
NY ID# in Rochester: 10145
NJ ID# in Rochester: 73331
NJ ID# in Hackensack: 02317
NY ID# in Hackensack: 10801

Laboratory Director

00030

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-029	-030	-031				
Location:		EB-1	EB-2	FB-2				
Date Collected:		09/14/94	09/14/94	09/14/94				
Time Collected:	PQL	09:00	09:50	10:00				
Date Extracted:		9/20/94						
Date Analyzed:		9/22/94						
Dilution:		1						
N-Nitrosodimethylamine	5.0	5.0 U						
Bis(2-chloroethyl) ether	5.0	5.0 U						
1,3 Dichlorobenzene	5.0	5.0 U						
1,4 Dichlorobenzene	5.0	5.0 U						
1,2 Dichlorobenzene	5.0	5.0 U						
2,2'oxybis(1-Chloropropane)	5.0	5.0 U						
N-Nitroso-Di-n-propylamine	5.0	5.0 U						
Hexachloroethane	5.0	5.0 U						
Nitrobenzene	5.0	5.0 U						
Isophorone	5.0	5.0 U						
bis(-2-chloroethoxy)methane	5.0	5.0 U						
1,2,4-Trichlorobenzene	5.0	5.0 U						
Naphthalene	5.0	5.0 U						
Hexachlorobutadiene	5.0	5.0 U						
Hexachlorocyclopentadiene	5.0	5.0 U						
2-Chloronaphthalene	5.0	5.0 U						
Dimethyl phthalate	5.0	5.0 U						
Acenaphthylene	5.0	5.0 U						
Acenaphthene	5.0	5.0 U						
2,4-Dinitrotoluene	5.0	5.0 U						
2,6-Dinitrotoluene	5.0	5.0 U						
Diethyl phthalate	5.0	5.0 U						
4-Chlorophenyl-phenyl-ether	5.0	5.0 U						
Fluorene	5.0	5.0 U						
1,2-Diphenylhydrazine	5.0	5.0 U						
N-Nitrosodiphenylamine	5.0	5.0 U						
4-Bromophenyl-phenylether	5.0	5.0 U						
Hexachlorobenzene	5.0	5.0 U						
Phenanthrene	5.0	5.0 U						
Anthracene	5.0	5.0 U						
Di-n-butyl phthalate	5.0	5.0 U						
Fluoranthene	5.0	5.0 U						
Pyrene	5.0	5.0 U						

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job Number: R94/03467 Date: OCT. 10 1994

Client:
Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference
Tam Ceramics File 163.02

Received : 09/15/94 P.O. #:

BASE NEUTRALS BY EPA METHOD 8270* ANALYTICAL RESULTS - ug/l

Sample:		-029	-030	-031			
Location:		EB-1	EB-2	FB-2			
Date Collected:		09/14/94	09/14/94	09/14/94			
Time Collected:	PQL	09:00	09:50	10:00			
Date Extracted:		9/20/94					
Date Analyzed:		9/22/94					
Dilution:		1					
Butyl benzyl phthalate	5.0	5.0 U					
3,3'-Dichlorobenzidine	5.0	5.0 U					
Benzo(a)anthracene	5.0	5.0 U					
Bis(2-ethylhexyl)phthalate	5.0	5.0 U					
Chrysene	5.0	5.0 U					
Di-n-octyl phthalate	5.0	5.0 U					
Benzo(b)Fluoranthene	5.0	5.0 U					
Benzo(k)fluoranthene	5.0	5.0 U					
Benzo(a)pyrene	5.0	5.0 U					
Indeno(1,2,3-cd)pyrene	5.0	5.0 U					
Dibenzo(a,h)anthracene	5.0	5.0 U					
Benzo(g,h,i)perylene	5.0	5.0 U					
4-Chloroaniline	5.0	5.0 U					
2-Methyl Naphthalene	5.0	5.0 U					
2-Nitroaniline	5.0	5.0 U					
3-Nitroaniline	5.0	5.0 U					
Dibenzofuran	5.0	5.0 U					
4-Nitroaniline	5.0	5.0 U					
Carbazole	5.0	5.0 U					
SURROGATE STANDARD RECOVERIES							
Nitrobenzene-d5	35-114%	81					
2-Fluorobiphenyl	43-116%	74					
Terphenyl-d14	33-141%	72					

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NY ID# in Hackensack: 10801
NJ ID# in Rochester: 73331 NJ ID# in Hackensack: 02317

00032

Laboratory Director

NYSDEC Sample No: E.B.

1F - SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: GENERAL TESTING CORP.
Lab Code: 10145 Case No.: --
Matrix: (soil/water) WATER
Sample wt/vol: 1000(g/mL) ML
Level (low/med): LOW
% Moisture: not dec. 100 dec.
Extraction: (SepF/Cont/Sonc)SEPF
GPC Cleanup (Y/N) N pH

Contract: B&B
SAS No.: -- SDG No.:--
Lab Sample ID: R94/3467-029
Lab File ID: DE758
Date Received: 09/15/94
Date Extracted: 09/20/94
Date Analyzed: 09/22/94
Dilution Factor: 1.0

Number TIC's found: 21

Concentration Units: UG/L
(ug/L or ug/Kg)

	CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.		Unknown	6.47	9.0	JB
2.		Unknown	6.86	11	JB
3.		Unknown	21.20	4.0	JB
4.		Unknown	21.87	10	JB
5.		Unknown	22.49	36	JB
6.		Unknown	23.10	68	JB
7.		Unknown	23.70	90	JB
8.		Unknown	24.32	99	JB
9.		Unknown hydrocarbon	24.73	5.0	J
10.		Unknown alkane	24.99	99	J
11.		Unknown alkane	25.44	7.0	J
12.		Unknown alkane	25.73	85	J
13.		Unknown	25.94	6.0	JB
14.		Unknown alkane	26.23	6.0	J
15.		Unknown alkane	26.32	5.0	J
16.		Unknown alkane	26.55	80	J
17.		Unknown alkane	27.13	6.0	J
18.		Unknown alkane	27.51	48	J
19.		Unknown alkane	28.62	28	J
20.		Unknown alkane	29.92	12	J
21.		Unknown alkane	31.46	5.0	J
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

General Testing Corporation

A Full Service Environmental Laboratory

LABORATORY REPORT

Job No: R95/00060 Date: JAN. 25 1995

Client:

Mr. Darrin Costantini
Blasland Bouck Engineers PC
30 Corporate Woods, Suite 160
Rochester, New York 14623

Sample(s) Reference

TAM Ceramics File 163.02

Received : 01/06/95

P.O. #:

METALS - TAL

ANALYTICAL RESULTS - mg/l

Sample:		-001	-002	-003				
Location:		MWBBL2R	MWBBL1R	NPW-H2U				
Date Collected:		01/06/95	01/06/95	01/06/95				
Time Collected:	PQL	12:30	12:50	13:15				
Aluminum	0.100	0.118	0.242	2.96				
Antimony	0.100	0.103	0.100 U	0.100 U				
Arsenic	0.0050	0.0300	0.0066	0.0094				
Barium	0.0200	0.0812	0.0200 U	0.0355				
Beryllium	0.0050	0.0050 U	0.0050 U	0.0050 U				
Cadmium	0.0050	0.0050 U	0.0050 U	0.0050 U				
Calcium	0.50	192	90.9	129				
Chromium	0.010	0.010 U	0.010 U	0.010 U				
Cobalt	0.0500	0.0500 U	0.0500 U	0.0500 U				
Copper	0.0200	0.0200 U	0.0200 U	0.0200 U				
Iron	0.050	0.0973	0.316	5.64				
Lead	0.0050	0.0050 U	0.0068	0.103				
Magnesium	0.250	152	35.0	57.3				
Manganese	0.010	0.010 U	0.010 U	0.127				
Mercury	0.00020	0.00020 U	0.00020 U	0.00020 U				
Nickel	0.0400	0.0400 U	0.0400 U	0.0400 U				
Potassium	0.50	6.30	1.00 U	1.57				
Selenium	0.0050	0.0050 U	0.0050 U	0.0050 U				
Silver	0.010	0.010 U	0.010 U	0.010 U				
Sodium	0.50	284	7.83	12.1				
Thallium	0.010	0.010 U	0.010 U	0.010 U				
Vanadium	0.0500	0.0500 U	0.0500 U	0.0500 U				
Zinc	0.010	0.703	0.0634	0.364				

Unless otherwise noted, analytical methodology has been obtained from references as cited in 40 CFR, parts #136 & #261.

NY ID# in Rochester: 10145 NJ ID# in Hackensack: 02317

NJ ID# in Rochester: 73331 NY ID# in Hackensack: 10801

Laboratory Director

00002

BLASLAND, BOUCK & LEE, INC.

ENGINEERS & SCIENTISTS

Syracuse, NY • Rochester, NY • Islandia, NY • White Plains, NY • Middletown, NY • Cranbury, NJ • Pittsburgh, PA • Baltimore, MD
Durham, NC • Columbus, OH • Boca Raton, FL • Tampa, FL • Orlando, FL • Miami, FL • Irvine, CA • Novato, CA