Brian Sadowski - Periodic Review Report, Inactive Landfill Area

From: Wright, Douglas M<Douglas.M.Wright@saint-gobain.com> (Brian Sadowski)
To: bpsadows@gw.dec.state.ny.us
Date: 4/12/2011 9:16 AM
Subject: Periodic Review Report, Inactive Landfill Area

Dear Mr. Sadowski,

Please find enclosed a electronic format of report "Periodic Review Report, Inactive Landfill Area, Saint-Gobain Abrasives Inc.," Site# 932007 and supporting documentation as requested.

This report is in response to a January 14, 2011 request from the NYSDEC, Division of Environmental Remediation.

A hard copy of this report will also be sent out as requested.

Yours truly,

Douglas M. Wright

Saint-Gobain Grains and Powders

6600 Walmore Road

Niagara Falls NY, 14304

H.S.E. / Inventory / Document Control

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FRONTIER TECHNICAL ASSOCIATES INC.

PERIODIC REVIEW REPORT (PRR)

INACTIVE LANDFILL AREA

SAINT GOBAIN ABRASIVES, INC.

Carborundum Abrasives Division
Site No. 932007
6600 Walmore Road
Wheatfield NY 14304

FTA Report ET-10-703PRR

March 31, 2011

Prepared For:

Mr. Douglas M. Wright
Saint Gobain Abrasives, Inc.
P.O. Box 301
(6600 Walmore Road)
Niagara Falls, NY 14304

Prepared By:

Dr. P. Michael Terlecky, P.HG.
Frontier Technical Associates, Inc.
9120 Main Street
Clarence, NY 14031

This report was prepared at the request of and for the use of Saint Gobain Abrasives, Inc. management use only, and except for required regulatory compliance reporting, is not intended for any other purpose. This report updates previously submitted information and reflects no change in the data.

INTRODUCTION

In response to the requirements of NYSDEC (6 NYCRR 375-1.2), Saint Gobain Abrasives, Inc. has requested that Frontier Technical Associates, Inc. complete documentation of site activities and site characteristics of the former Carborundum Abrasives Inactive Landfill Site (932007). This site was capped in 1981 and since that time inspections and groundwater sampling and analysis for the landfill area located on the southwest corner of the property in Wheatfield, NY have been completed. Figure 1 is a ***sketch*** of the landfill area showing the location of the monitoring wells which were installed in 1981 and the location of the "A" storm sewer line (West Branch) (see NFTA security fence installed in 2004). Figure 1 A is an ***aerial photo*** of the area with the fence installed. Frontier Technical Associates, Inc. has completed much of the monitoring and site activities since that time, and has periodically submitted inspection and monitoring reports to the NYSDEC documenting these activities. FTA had prepared technical reports which described the results of the sampling and analysis for 1991. The NYSDEC subsequently reduced monitoring parameters for 1992. For 1993, the NYSDEC deleted the requirement for analysis of unfiltered groundwater for metals, and for 1994, all metals requirements were deleted and turbidity was added for informational purposes. After the 1997 monitoring episode, SGC requested and received approval to monitor these wells every two years (1999-2009 were subsequently submitted). FTA has been inspecting the wells quarterly and expects to continue to do so until the next regularly scheduled bi-annual sampling event in 2011.

Since 1982, the monitoring wells and adjacent catch basin were sampled for pH and total phenolics (4AAP). In the period 1982-1988 there were no detectable levels of phenolics in monitoring wells OW2-81 through OW5-81. However, in 1989, perhaps as the result of unusual spring and summer precipitation events, low levels of phenolics (4AAP) were detected in the monitoring wells and adjacent catch basins. Again in 1990, low levels of total phenolics were detected using the same method. This resulted in the NYSDEC's desire to obtain additional data for evaluation beginning in 1991. Based upon the 1991 results, Well OW1-81 was decommissioned because it had fallen into disrepair and was no longer functioning to monitor the *interior* of the landfill. The request was approved by the NYSDEC and implemented on September 27, 1991. The phenolic compound analytical methodology was also changed to the more accurate and specific EPA Method 625/8270. The former method (4AAP) is subject to many interferences (colorimetric method) typically yielding false positive results. It was deemed inappropriate for monitoring at thi ssite.

This report outlines the approach used to fulfill the NYSDEC requirements for 2010 in connection with the Site Management Periodic Review request. This report covers the period from August 2007 to December 31, 2009.

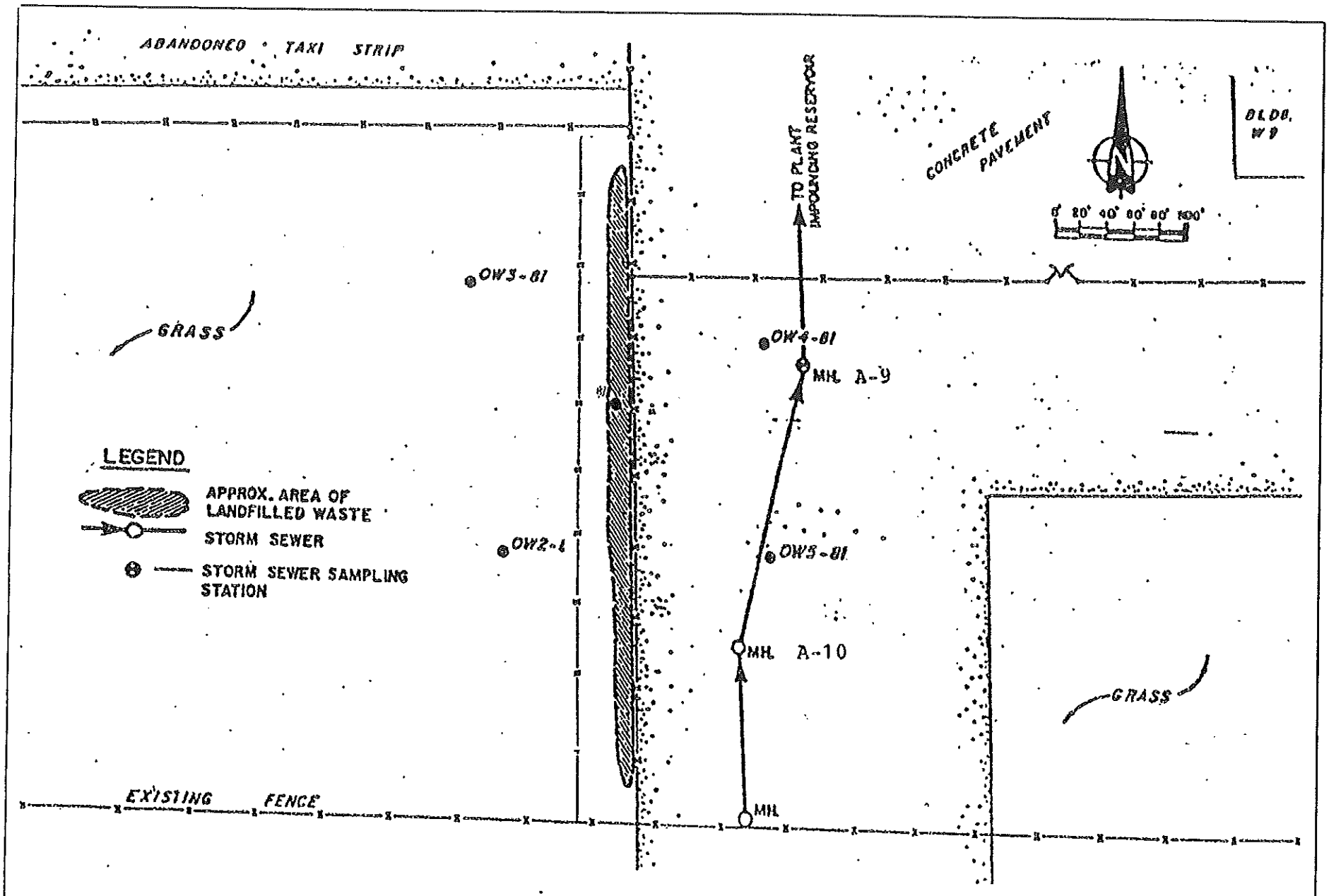


FIGURE 1

WELL LOCATIONS

The Carborundum Company

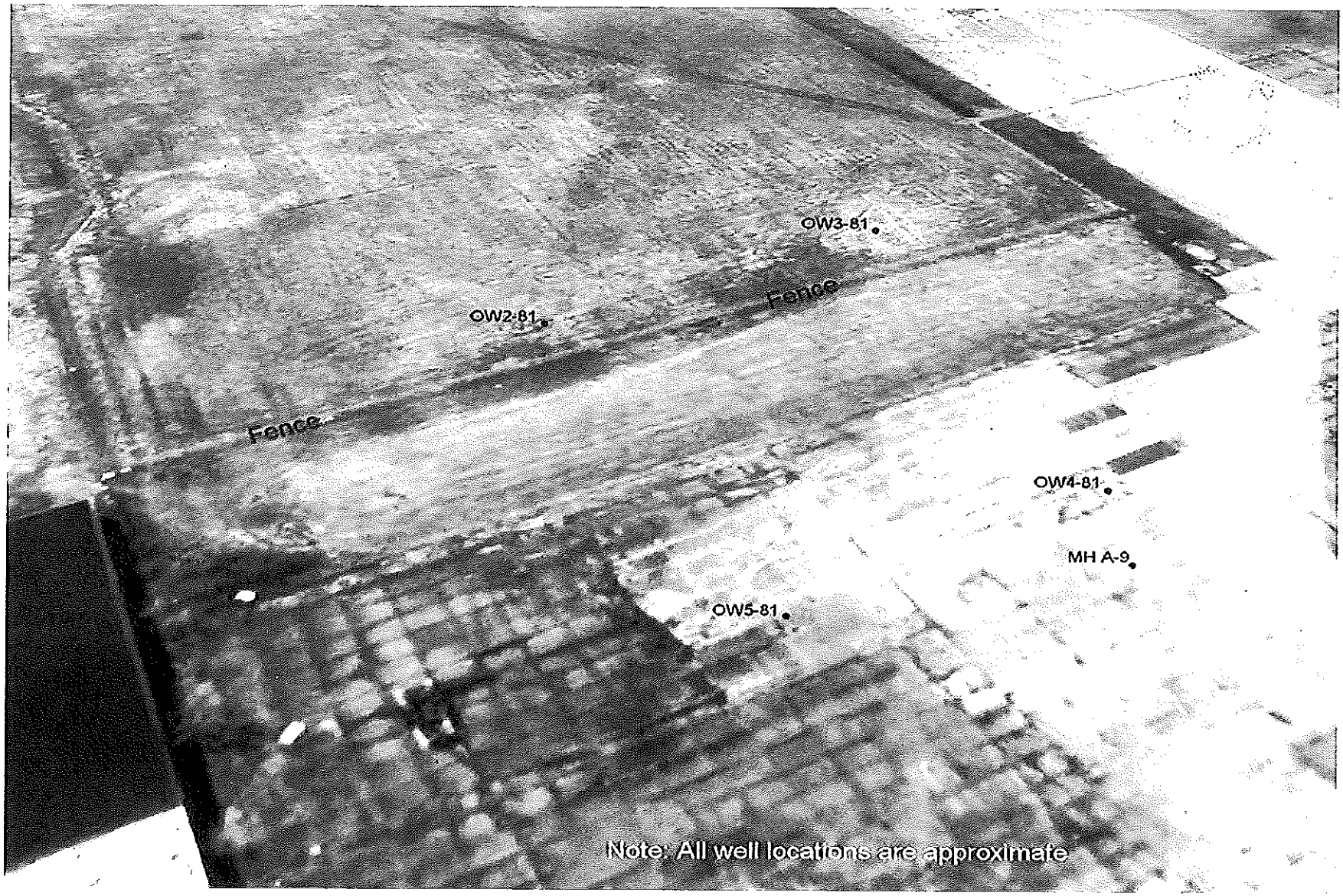


Figure 1A. SGC Landfill Well Location.

The most recent biannual sampling and monitoring effort took place in 2009 and included sampling of all four groundwater monitoring wells and one catch basin which drains the surface runoff and subsurface drainage from the the landfill area . In accordance with the Site Sampling Plan, the samples collected were all analyzed for pH, specific conductance, temperature, turbidity and phenolic compounds by EPA Method 8270.

GEOLOGY AND HYDROGEOLOGY

The area in the immediate vicinity of the SGA, Inc. (formerly Carborundum Abrasives) plant is underlain by approximately 10-15 feet of clayey to sandy silt, glacial-lacustrine deposits and glacial till. These deposits thicken southward across the site toward the Niagara River. The hydraulic conductivity of these materials is relatively low, perhaps reaching the range of 10^{-5} to 10^{-8} cm/sec.

The bedrock underlying the site consists of approximately 160 feet of dolomite of the Lockport Formation. The upper zone of the Lockport Formation is generally highly weathered, medium gray dolomite with extensive vertical fractures. It is generally striated on the surface, has extensive partings which are argillaceous or gypsum-coated. Water produced from this upper zone in the Bergholtz area of Wheatfield is generally of very poor quality, with a characteristic odor. The water generally is not suitable for drinking but occasionally is used for watering livestock or agricultural purposes. The Town of Wheatfield has extended its water lines throughout the area and recent information indicates that there are few wells in use throughout the area. Those that were used occasionally along Walmore Rd to the south were closed as part of a groundwater remediation effort conducted by the former Bell Aerospace-Textron in the late 1980's and early 1990's. That groundwater withdrawal and treatment on-site continues to the present.

The upper portion of the dolomite sequence consists of 10 to 20 feet of bedrock consisting of thinly bedded dolomite which may produce well yields of 10-20 gpm. Hydraulic conductivities of 0.1 to 0.01 cm/sec may be encountered in this unit. For purposes of this current study, it is not thought that any of the wells penetrate significantly into the bedrock and were either drilled to refusal or into the uppermost few feet of the weathered bedrock. The bedrock surface is generally encountered at elevations between 560 feet to 570 feet MSL and is gently dipping to the south.

The wells monitored in this project were drilled to refusal as indicated in a report by Conestoga-Rovers Associates, who installed the wells in 1981 after placement of a clay cap by Secured Landfill Contractors, Inc. (SLC Contractors). **Figure 2** illustrates a typical surficial geologic cross section in the landfill area.

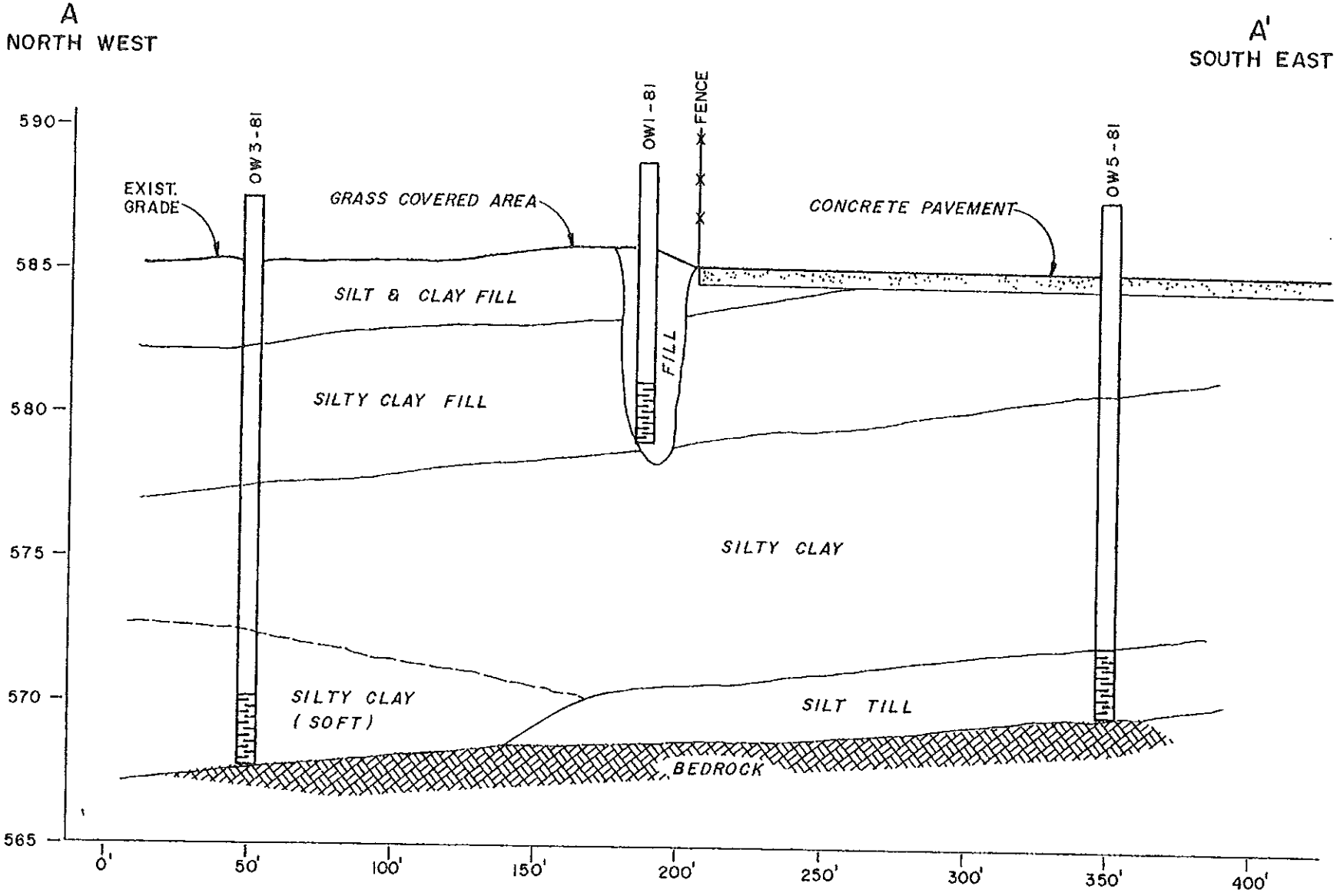


Figure 2

GEOLOGIC CROSS SECTION A - A'

The Carborundum Company

FORMER USE OF THE LANDFILL

The former Carborundum Abrasives Company landfill site in Wheatfield was identified in a report by the Inter-Agency Task Force on Hazardous Wastes in the report entitled "Draft Report on Hazardous Waste Disposal in Erie and Niagara County, New York, March 1979." The site was used during the period 1968 to 1976 to dispose of plant-generated wastes described in the Draft Report as follows:

> **"...partially solidified and solidified resins, floor sweepings, wastes (sic) fillers including calcium carbonate, clays and animal glue (est. 400 tons total) with free phenols (resins) (est. 800 to 1600 lbs total)."**

The method used to dispose of the waste materials involved the excavation of a long, narrow trench. The dimensions of the trench were estimated to be 20 feet in width, 450 feet in length, and 12 feet in depth. As waste materials were deposited into the trench, a soil cover utilizing the excavated soil (glacial-lacustrine clays) was placed over the waste.

MONITORING WELLS

From January 20-22, 1981, Empire Soils Investigations, Inc. installed a total of five groundwater monitoring wells in the landfill area. Four were located at the perimeter of the site and the fifth well was installed through the center of the landfilled waste in order to identify landfill characteristics. This included waste types, depth of disposal, soil cover, and moisture conditions.

All four of the perimeter wells extended to the bedrock-overburden interface or penetrated them slightly. The monitoring well installed in the landfilled waste extended only to the bottom of the landfilled materials. This well was damaged over time and ceased to function properly and was subsequently removed in 1991 (see locations in Figure 1). The wells were constructed of two inch diameter black steel pipe attached to a two foot, Johnson SS well point. All joints were welded during installation. Each well has a protective outer casing with a lockable cap. A typical installation is shown in Figure 3.

STRATIGRAPHY

The landfill area had a typical overburden which includeed an upper mixed layer of silt and clay fill which supported a grass cover. Two of the wells were installed through the concrete pavement which was approximately six to eight inches in thickness. Beneath these materials was a medium to stiff silty clay material. Traces of vegetative matter could be observed and these materials appreaed to be graded and compacted prior to installation of

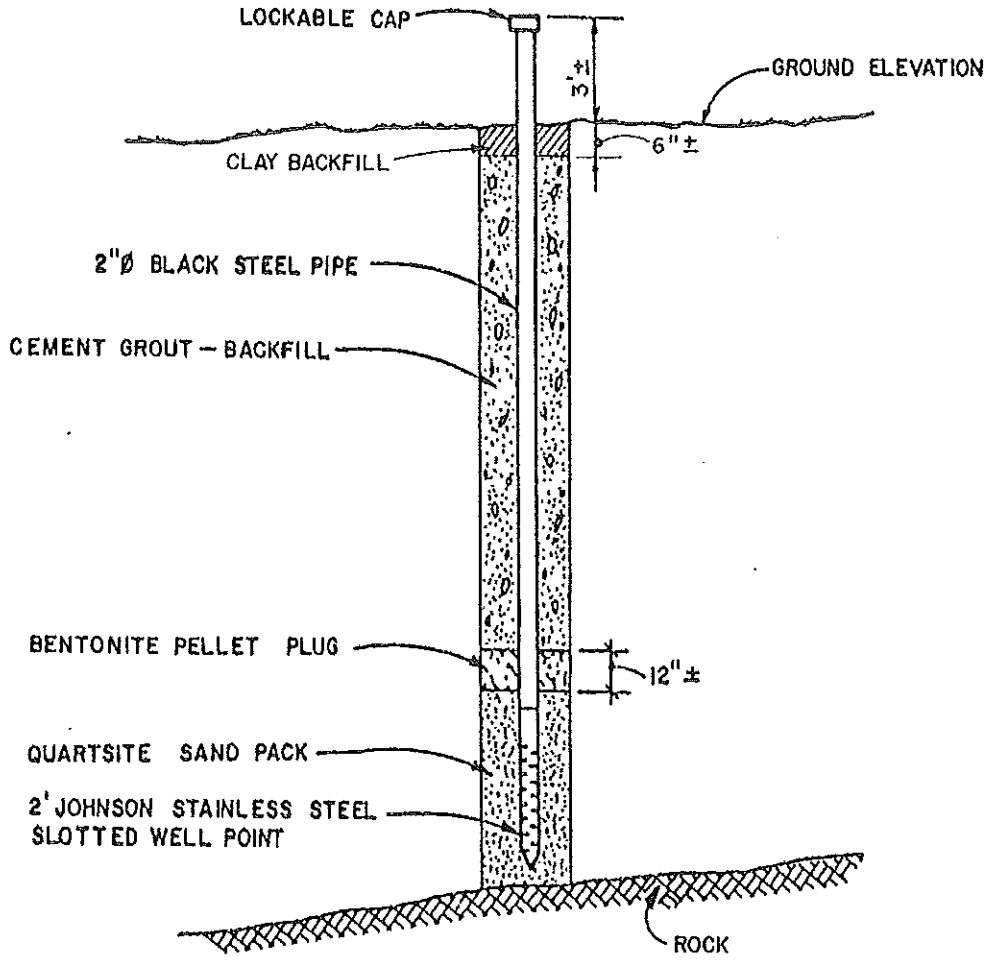


Figure 3

TYPICAL MONITORING
WELL INSTALLATIONS
The Carborundum Company

the concrete pad which, from old photographs of the site, appeared to be either a taxiway or parking area for aircraft manufactured at Bell Aircraft Co. during WW II. Beneath the silty clay fill is a silty clay layer which in the area is reddish brown in color. Some mottling can be observed with gray clay. Beneath these layers is a reddish-brown silt to clayey silt till. The thickness of the materials overlying the bedrock at this site may reach 15 feet based upon other excavations. Most of the perimeter boreholes reached a maximum depth of approximately 17 feet. Bedrock slopes in the area are approximately 0.25 to 0.5 degrees to the south.

Materials encounterd in the central borehole included wood, silt, sand, screen materials, paper and the backing cloth used for sandpaper manufacturing. Most of the materials contained in the landfill were general plant trash and off spec materials and damaged goods from the manufacturing process.

GROUNDWATER

The primary presence of groundwater at the landfill site and surrounding area is in a silty till material immediately overlying the bedrock. This layer ranges in thickness from absent at some site locations to approximately 8-12 inches in thickness at others. At the time of the initial investigation in 1981, perched groundwater was observed in the landfill monitoring well. Installation of a landfilll cap with appropriate slopes coupled with the low permeability surrounding soils subsequent to the initial investigation in 1981, indicated that the landfill water itself was contained in the landfill. The source was precipitation infiltration. The terrain is realatively flat except for the capped landfill itself. To the west of the landfill, soils remain moist throughout most of the summer due to runoff from the airport runways and taxiways in the area and low permeability of the soils.

The initial piezometric surface observed differs little from 1981 to the present time. The direction of groundwater flow is from the southwest to northeast and has remained constant through the series of investigations carried on over the last 20 years of monitoring by Frontier Technical Associates, Inc. In addition, based up the analysis of the groundwater, the landfill cap has remained intact, and the quality of the groundwater has not been impaired. The landfill is functioning to contain the waste materials present. In addition, it would appear that the waste resins either were polymerized or became polymerized and thus very resistant to breakdown. No phenolic compounds are present in the catch basin draining the immediate area during recent sampling episodes in the last ten years. .

SITE MONITORING AND ANALYICAL PLAN

Sampling Objectives

The results of analysis of samples collected and analyzed in accordance with the approval of the NYSDEC are being used to:

1. Assess the groundwater flow direction and chemistry.

2. Define the nature and extent of pollutant migration, if any.

3. Meet the NYSDEC requirements for data submission.

Sampling Personnel

Sampling personnel must be trained and experienced in the procedures used for data collection, sampling procedures and analytical methodology in the field. They must demonstrate their competence in accordance with NYDOH-ELAP certification program. In addition, since pH and other parameters must be measured in the field immediately (15 min), these measurements must be made by a NYDOH-ELAP-certified laboratory or consultant. See 6 NYCRR Pt 360-2.11(d)(4)(i): *"Laboratory analyses must be performed by a laboratory currently certified under the appropriate approval categories by the New York State Department of Health's Environmental Laboratory Approval Program (ELAP).".* Hydrogen ion, for example, must be performed within 15 minutes of sampling, thus to be compliant with holding times, must be performed by an ELAP laboratory. Ppersonnel must be specifically trained in the analytical procedure and pass demonstrations of capability in accordance with the NYSDOH-ELAP requirements and FTA SOPs implementing the Laboratory Procedures Manual.

The project manager during the last 20+ years has been Dr. P. Michael Terlecky, P.HG., a certified Professional Hydrogeologist (American Institute of Hydrology). In the event he is not available immediately, David M. Harty, P.E. is familiar with the project and will assist in the completeion of the work.

Sampling Locations

As indicated previously, Figure 1A and 1B illustrate the sample locations. Four wells are sampled together with one catch basin (MH-9 located on the "A" Storm Line). Table 1 presents the sample locations and **USEPA** or **Standard Methods** ananalytical methods used for samples from each location. All methods used conformed to the USEPA Methods of

Table 1. Sample Locations and Parameters Analyzed.

Well Designation	Well Depth (ft)*	Analytical Parameters**
OW2-81	18.20	pH, SC, Phenols (625) Temp., Turbidity
OW3-81	19.66	ditto
OW4-81	19.38	ditto (also dupl)
OW5-81	18.23	ditto
MH A-9	-----	ditto

* Based upon measurement by FTA in 1998; rechecked in 2000 and 2003; measured from top of riser pipe.

** Field measurement of pH made within NYELAP guidelines (15 minutes); Turbidity measured using a nephelometer in the field.

SC = Specific Conductance
Phenols = Phenol Compounds as measured by EPA Method 8270/625.
Temp. = Temperature

Table 2. Summary of Parameters, Methods, Preservation Methods and Holding Times.

Parameter	EPA Method	Preservation	Holding Time
pH*	SM18-21: 4500 H B	None	Analyze Immediately-15 Minutes (Field)
Specific Cond.	120.1 (rev 1982)	4 C	6 Hours (or Field)
Temperature*	SM 18:21 2550B	---	Immediately (Field)
Turbidity	180.1 (Rev 2.0)	4 C	Immediately (Field)
Phenol Compounds	8270	4 C	5 days to extract 21 days to analyze

* pH, Specific Conductance, turbidity, and temperature were measured immediately in the field. Temperature measurements were used with cell constant correction to correct specific conductance measurements to 25 C. Frontier Technical Associates, Inc. is a NYELAP-Certified Laboratory (10475).

Analysis for Water and Wastewater (40 CFR Pt 136) or SW-846 (as revised). Table 2 is a summary of the parameters, methods used, preservation methods, and holding times required.

Sampling Equipment and Procedures

The procedures outlined here were developed to minimize contamination of water sampling equipment and analyses, minimize concentration changes prior to testing, and standardize procedures to minimize analytical differences.

The procedures below outline the purging, sampling, and preservation methods used during this sampling program in accordance with the approved sampling plan submitted and approved in 1991 and revised in 1999: This plan has remained in place since that time, and periodic review has indicated no changes are necessary.

1. Inspection of the well noting any unusual conditions (this is also performed (Quarterly).

2. The water level indicating device and the bottom foot or more of cable was triple rinsed with distilled water.

3. The depth to the water surface from the top of the riser pipe was measured and recorded on the Sample Collection Form. Depth to the bottom of each well was also measured.

4. The volume of water in each well is calculated. Each well is purged by removing three times this volume, or if the well yield is low, water is removed until the well is considered "dry" (within 1-2 inches of the bottom).

5. A peristaltic pump is used to purge these shallow wells. All tubing coming into contact with the well water consists of food-grade polyethylene tubing dedicated to the well. This dedicated tubing is intended to eliminate cross-contamination between the wells. The tubing was gradually lowered into the well as pumping continued. The volume required, volume obtained, water level before purging, and the start and stop times are to be recorded.

6. All purge water is to be placed in a container specifically used for that well and for measuring purge volume. If the well contained very little volume, this water was reserved for pH, specific conductance and turbidity determination. After a time had elapsed for sufficient recovery, sampling was completed. In one instance several days are occasionally necessary to obtain a sufficient volume for phenol

compound analysis. Based upon results of the analyses performed over the past decade, the water, contains no parameters which might be incompatible with the treatment process or SGA's sanitary sewage permit, and is acceptable to the NCSD #1 and meets their criteria. The water is then disposed of in the sanitary sewer.

7. For the wells which generally recover slowly, the wells are sampled within 24 to 48 hours of purging. Sample size, containers and amount of sample obtained are contained in Table 3. In 2007 for example, it took nine days to recharge to an adequate volume for sampling from one well after checking it daily.

8. Groundwater samples are obtained by dedicated tubing. No equipment is to be used for more than one well location.

9. Usually, the first sample is taken for analysis of pH, temperature, specific conductance and turbidity. Probes are triple rinsed with distilled water after use. The temperature measurement is used to correct specific conductance to 25C together with a determination of cell constant compared to a reference standard. A standard reporting form with all field data is provided for each well and sample location (See Appendix).

10. Temperature, specific conductance, turbidity and pH were reported on the form along with the equipment used, weather conditions, field observations, and sampling times.

11. Sample container labels are affixed to the sample container and the samples placed in an insulated container where they were kept cool with ice if temperatures were above 4 C.

12. In a similar fashion, samples were obtained for phenolic compounds as required for each sample location (EPA 8270). Each sample label was completed including the date, time, location, analysis required, and sampler's initials.

13. All samples are packed in an insulated cooler with sufficient ice to ensure cooling to a temperature of 4 to 6 C during storage and transport to the laboratory.

15. Analyses are to be completed within the specified holding times. The laboratory is notified by the sampling team prior to sampling and upon shipping to assist in scheduling analyses to meet all specified holding times.

SAMPLE CUSTODY

Field sampling data and purging was documented on a Well Monitoring Field Form. The following information was included:

1. Site name (Saint Gobain Abrasives, Inc.), sample number, etc;
2. Date, time, and elapsed time from purge start to finish;
3. Information regarding the well groundwater level, purge volume required, and actual purge volume;
4. Field test results including pH, temperature, turbidity and specific conductance;
5. Sampling method used; the materials of construction of special equipment (in margin);
6. Type of sample and information which appears significant;
7. Field observations/sampling conditions (e.g. weather)
8. Appearance of sample such as color, sediment, oil on surface, obvious odor, etc.
9. Sampler's identity and signature.

In order to maintain integrity of the groundwater samples, strict chain-of-custody procedures are to be followed. From the time the sample was collected until the sample was in the custody of the analytical laboratory, the samples were:

1. In the sampler's possession;

2. In the sampler's view, after being in his/her possession;

3. In the sampler's possession and then locked in a designated, secure area to prevent tampering; or in a sample cooler sealed with a tamper proof chain-of-custody seal.

A written Chain-of-Custody Record of the transfer of samples is maintained with a copy in the Appendix of the Sampling and analytical report.

The Chain-of-Custody Record is transported with the sample container at the time the sample is collected. When transferring the possession of the samples, the person making the transfer signs and records the date and time on the record. The number of custodians in the chain of possession are as few as possible.

SAFETY

Personnel performing the sampling adhered to all safety requirements for contractors and/or visitors of the facility. Personnel performing the sampling wear suitable personal protective equipment.

ANALYTICAL LABORATORIES

The pH, temperature, turbidity and specific conductance are measured in the field by Frontier Technical Associates, Inc., NYELAP # 10475, Dr. P. Michael Terlecky, Laboratory Director. FTA is a CERTIFIED NYSDOH-ELAP laboratory and all field analyses for appropriate parameters under the NYELAP program are perfomred within prescribed holding times (15 min for pH for example, in the field) . The phenol compound analyses (EPA 8270) is performed by Columbia Analytical Services, Inc., NYELAP # 10145. Each laboratory is certified for the parameters for which data are provided.

FIELD SAMPLING PERSONNEL

All field sampling and field measurements were performed by personnel who are specifically trained in the analytical procedure and who pass demonstrations of capability in accordance with the NYSDOH-ELAP requirements and FTA SOPs implementing the Laboratory Procedures Manual.

The project manager during the last 20+ years has been Dr. P. Michael Terlecky, P.HG., a certified Professional Hydrogeologist (American Institute of Hydrology).

RESULTS OF RECENT SAMPLING AND INSPECTIONS

Phenol Compounds

Table 3 is a summary of the analysis for phenol compounds for 2009 (Complete data are contained in Appendix II). EPA Method 8270 was used for analysis of these compounds. There were **no detectable** concentrations of phenol above minimum detection or quantitation limits in all samples analyzed including the duplicate sample obtained at Well OW4-81. This includes Catch Basin A-9. Surrogate recovery data indicated acceptable recoveries of spiked compounds. The data are consistent with the data collected over the last 20 years, and there is no reason to believe with the low detection limits reported here, that phenol compounds are migrating from the landfill. Tables 4 and 5 summarize the 2009 field data collected and analyzed.

Table 3. Results for Phenol Compound Analysis at SGA, Inc. (EPA Method 8270).

Location	Concentration (mg/l) All Phenol Compounds*	Phenol (MRL)	Phenol (MDL)
OW2-81	ND	<0.0094 mg/l	<0.00054 mg/l
OW3-81	ND	<0.0094 mg/l	<0.00054 mg/l
OW4-81	ND	<0.0094 mg/l	<0.00054 mg/l
OW4-81(Dupl)	ND	<0.0094 mg/l	<0.00054 mg/l
OW5-81	ND	<0.0094 mg/l	<0.00054 mg/l
MH A-9	ND	<0.0094 mg/l	<0.00054 mg/l
Method Blank	ND	<0.0100 mg/l	<0.00054 mg/l

ND = None of the 14 phenolic compounds detected by this method were present above laboratory quantitation levels for each sample (See Anal. Report).

MS/MSD Recovery: All acceptable and nearly identical.

Method Blank: ND for all compounds .

MRL = Minimum Reporting Level
MDL = Minimum Detection Level

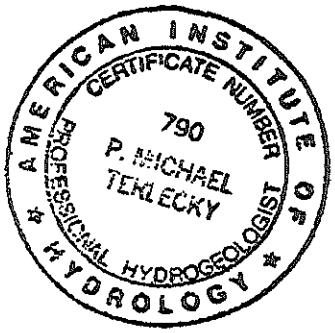
Note: Values detected above the MDL but below the MRL are reported as "J" concentrations. There were no phenol compounds detected in this range. There were no TICs.

Table 4. Groundwater Elevations at Saint Gobain Abrasives, Inc. (September 16, 2009).

Date	Well No.	Top of Pipe Elevation	Depth to Water Surface	Groundwater Elevation
09/16/09	OW2-81	588.50	7.51	580.99
09/16/09	OW3-81	587.59	7.60	579.99
09/16/09	OW4-81	587.74	10.37	577.37
09/16/09	OW5-81	587.52	9.06	578.46

* Groundwater level measurements obtained on September 15, 2009 by Ronald B. Blinston of Frontier Technical Associates, Inc. under the supervision of Dr. P. Michael Terlecky, P.HG. (Certified Professional Hydrogeologist).

The groundwater elevation data presented above were obtained under my supervision and represent, to the best of my knowledge, accurate measurements for the date listed.



P. Michael Terlecky, Ph.D., P.HG.
Certified Prof. Hydrogeologist
88-HG-790 American Inst. of Hydrology

Table 5. Field Monitoring Data at Saint Gobain Abrasives Inc. (September 16, 2009).

Well No.	pH (SU)	Spec. Conductance (umho/cm)	Turbidity (NTU)
OW2-81	8.01	3497	29
OW3-81	9.91	2296	366
OW4-81	8.69	2500	10.7
OW5-81	4.58	4949	250
MH A-9	6.97	476	4.7

Notes:

1. Specific conductance data corrected for cell constant and temperature (YSI Model 33).

2. pH, specific conductance and turbidity analsyses performed by **Ronald B. Blinston** immediately upon sampling.

** = pH, Specific Conductance, and Turbidity represent an average of four readings each..

P. Michael Terlecky, Ph.D.
Laboratory Director
NYELAP # 10475

The recoveries of spiked surrogate compounds in the set of samples analyzed from the site were very similar. Duplicate analysis performed on OW4 indicated consistant results with the separate sample. Blank spike recoveries were also within QC limits and indicated agreement with surrogate recoveries. The monitoring wells appear to have a dark, biological particulate material. These waters when stored in the laboratory support rapid biological growth. The method blank also had no detectable phenol at MDLs or MRLs.

. It should be noted that historically only "phenol" resins were used in the resins and materials disposed in the landfill. The other compounds, particularly chlorinated phenols, were not used and have never been detected. Other substances present in groundwater including biological materials may produce false positive detections by the 4AAP test as seen in previous analyses by both methods at this site. Colorimetric methods such as the 4AAP method are subject to many interferences, and thus are not recommended nor used for monitoring at this site.

Quality Assurance/Quality Control

As part of the QA/QC activities associated with the **2009** sampling episode, a field duplicate was obtained at Well OW4-81, surrogate recoveries were reported, and a method blank was analyzed for this batch. A matrix spike and matrix spike duplicate was performed on laboratory control sample water. Analysis for all these samples was by EPA Method 8270. pH, Temperature, specific conductance and turbidity were run in quadruplicate and the average value of the measurements was reported. However, there was little to no little variation noted in the data.

Physical Appearance

New concrete pads installed in 1999 at Wells OW2-81 and OW3-81 by Frontier Technical Associates, Inc. have remained intact. The riser for Well OW4-81 was replaced and repaired in 2004 due to a vehicle collision. Some cracking may be present in the well pads but this does not impede their function. Quarterly inspections of the landfill area continue under the supervision of Saint Gobain Abrasives Co. and are conducted by Frontier Technical Associates, Inc. Copies of the quarterly inspection reports have been provided to Mr. Michael Hinton, P.E., and Brian Sadowski of the NYSDEC Region 9.

COMMENTS ON HISTORICAL DATA

Groundwater associated with the Lockport Dolomite is highly mineralized as evidenced by the specific conductance values measured at the wells which indicates the concentratin of dissolved solids present. This has been consistent with previous data from this site and data available for wells in the immediate vicinity.

As a result of evaluation of the data recovered, the following is concluded:

1. Sampling of the four existing monitoring wells and catch basin in 2009 and quantification of the phenolic compounds again showed no detectable levels of any of the phenol compounds above detectable or quantitation limits.

2. Groundwater data indicate no migration of materials from the former landfill . This confirms after 28 years of monitoring that the containment and cap is effective.

3. Any future monitoring for phenols should continue to use EPA Method 625/8270.

4. There are no data developed within the past several years that would indicate a need to alter the current monitoring frequency (every two years).

5. pH measurements during this episode indicate elevated pH values at Well OW4-81. Repair and replacement of the riser for this well was completed during the Fall of 2004. It is believed that the bentonite-cement grout and water migrating along the casing contributed to the rise in pH at this location.

6. pH measurements at Well OW5-81 were slightly lower (4.5-4.7 SU) than normally measured historically, although occasionally pH values in the high 5 SU range have been encountered. This well has the highest value of specific conductance and the presence of black particles has always been noted . There was no change otherwise. When Well OW4-81 is redeveloped periodically, we repeat the pH measurements. This well was the one that was repaired and grout appears to be leaking down the well casing. Generally when these wells are redeveloped, the pH returns to the typical range.

OPERATIONS AND MAINTENANCE PLAN

This operations and maintenance plan was modified from the original plan developed in 1999 and taken from the following document with appropriate timely minor modifications:

> **"Operations and Maintenance Plan, Landfill Area Carborundum Abrasives Company, Frontier Technical Associates, Inc. Report ET-99-703-01."**

Originally five wells were installed in the landfill area, one in the landfill itself and four on the perimeter of the landfill. In 1991, one well was removed because it was no longer functioning properly and soil shifts between the cap materials and landfill materials themselves had occurred, most likely due to settling. The request was approved and implemented on September 27, 1991. The phenolics analytical methodology was changed from the 4AAP method to EPA Method 8270 to develop more specific and accurate data.

Site Inspection

The physical attributes of the site will be inspected quarterly This inspection may be conducted by Saint Gobain Abrasives personnel or Frontier Technical Associates, inc. personnel. The inspections will be conducted in January, April, July and October.

For each monitoring point, the following items will be included: well locks, well casings, covers, concrete pads, bailers and ropes (if any), general conditions and tubing. If any of these items are missing, deteriorated or in disrepair, they will be replaced as or repaired as appropriate. This action will be undertaken immediately or prior to the next quarterly inspection. A written inspection report (usually a form) will be prepared and completed and maintained on file at Saint Gobain Abrasives, Inc.

A monitoring point assessment form to be used for the quarterly inspections is attached on the following page. A copy of the completed forms will be forwarded to the NYSDEC Project Manager.

Physical Conditions and Grass Cutting

During the quarterly inspection, observations of the landfill cap will be made to assess whether any soil slumping is present, rodent burrows present, growth of any large rooted vegetation, etc. Brush and bushes will be trimed and the area will be kept free of debris or trash which might blow onto the site.

Grass cutting will be performed as needed, however it is expected that it will be cut at least once annually during the growing season or more frequently if inspection indicates it is necessary.

Annual Inspection

Once each year, the wells will be purged and depths checked. If depth data indicates infilling of sand or sediment to a depth of 25% of the screen length, the wells will be developed in order to remove the sediment. Sampling and purging will be conducted in accordance with the following schedule:

1999	Purging, Sampling	2006	Purging
2000	Purging	2007	Purging, Sampling
2001	Purging, Sampling	2008	Purging
2002	Purging	2009	Purging, Sampling
2003	Purging, Sampling	2010	Purging
2004	Purging	2011	Purging, Sampling
2005	Purging, Sampling	2012	Purging

During even years, field measurements are taken after completion of purging during the annual inspection. However, biannual sampling for phenols occurs only in odd years.

The annual inspection (even years) will include the following in addition to purging:

1. Analysis of well samples for field parameters, pH, turbidity, specific conductance and temperature.

2. The depth/elevation to the water surface. The total depth of each well will be checked against previous measurements. If infilling is noted, well development will be scheduled.

3. Each well will be purged to remove suspended sediment and biological growth, if present.

4. A peristattic pump or bailer may be used to purge these shallow wells. All tubing or bailers are dedicated to ensure that no cross-contamination occurs.

5. In years ending with odd numbers, sampling will be conducted in accordance with the sampling and analytical plan and schedule above.

Safety

Personnel performing the sampling will adhere to all safety requirements for contractors and visitors to the SGC facility. In addition, since two of the wells are within the security fence erected by the NFTA and the USAF, appropriate arrangements with the NFTA Police and an escort is required to inspect and conduct operations at those well locations. Personnel performing the sampling or purging will wear suitable field boots,and protective gloves and safety glasses or goggles.

EVALUATION OF REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

As can be seen from the information presented above and elsewhere in this document, the landfill cap is functioning as intended, the lacustrine clay surrounding the fill has prevented any escape of phenols and phenol-containing resins, and the polymerization of these meaterials, appears to have taken place. There have been no detection of phenol containing materials or alteration of the groundwater quality thoughout the last ten year monitoring period (1999-2009). Therefore, no change in the current status of the landfill or the monitoring plan is appropriate..

IC/EC PLAN COMPLIANCE REPORT

The clay cap, periodic inspections and biannual sampling of the monitoring wells and catch basin have been proven effective in prevention of seepage of leachate from the landfill. In addition the site appears to be relatively dry from a groundwater standpoint. Recharge of three of the wells is generally slow. The site monitoring plan is appropriate for the type of site and little maintenance appears to be warranted provided inspections are conducted on a regularly scheduled basis.

No corrective measures or alterations of the plans are necessary.

OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

1. Site analytical plan is adequate for the site and the monitoring frequency is appropriate. No detection of phenol-containing groundwater has occurred in the last ten years.

2. Biannual sampling, annual well development and field sample analysis, plus quarterly inspection affords an adequate level of protection for the facility and remedy.

3. The O & M plan, in conjunction with the quarterly inspections, have been adequate to detect any changes in the landfill cap or site conditions.

4. We would recommend submittal of PRRs every decade. The changes in this facility have been minimal during the past thirty years, there is no reason to believe that this may change. At some point in the future, monitoring wells may have to be replaced, but at this point they are functioning properly and in good repair. Quarterly and annual inspections will be sufficient to detect any needed repair needed.

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APPENDIX

Well Development Record

Monitoring Point Inspection Form

Well Purging Report Form

2009 Analytical Data Laboratory Report

FRONTIER TECHNICAL ASSOCIATES INC.

Well Development Record

Project:_____ **Job No.**_____ **Page** __**of**__

Well No.:_____ **Date:**_____ **Developed by:**_____

Total Depth of Well: _____**ft.**
Depth to Water Before Development: _____**ft.**
Standing Water Column: _____**ft.**
Well Volume _____ **gal. Screen length** _____**ft.**
Development Method: _____

Date/ Time:	Volume Removed (gal)	Field Measurements				Comments
		pH (SU)	Specific Conductance (umhos/cm)	Temp.(C)	Turbidity (NTU)	

_____
Signature

FRONTIER TECHNICAL ASSOCIATES, INC.
WELL MONITORING FIELD FORM

Site Location: _____ Job No: ET-_____
Sample Point ID: _____ Consultant: Frontier Technical Associates, Inc.
PURGE INFORMATION Purge Method: Bailer, Peristaltic Pump
Depth to Bottom of Well: _____ft. 2" Well = 0.17 gals/ft.
Depth to Water Surface: _____ft. 4" well = 0.66 gals/ft.
Depth of Water Column: _____ft.
Volume of Standing Water in Well: _____ gallons
Start of Purge: Date: __/__/__ Time: ___:_____
End of Purge: Date: __/__/__ Time: ___:_____
Total Volume Purge: _____ gallons Well Purged Dry?: Yes No
# of Volumes Purged _____Purging Personnel:_____
Recharge Rate: Rapid, Slow, Extremely Slow
SAMPLING INFORMATION Sample Method: Bailer, Peristaltic Pump, Bladder Pump
Sample Date: __/__/__ Sample Time: ___:___ Depth to Water Surface _____ ft.
Sample Appearance: _____
Samples Preserved: Yes No Dissolved Metals Field Filtered: Yes No
Sampling Personnel: _____
FIELD MEASUREMENTS
Meters Calibrated Yes No

PARAMETER	METER NUMBER	UNITS	MEASUREMENT	NOTES
pH	Corning 103	STD. UNITS		
Spec. Conductance	YSI 33	µMHOS/CM		
Temperature	YSI 33	C		
Turbidity	Hach 16800	NTU		
REDOX	ORPTestr	mV		

Weather: _____
Notes: _____

FRONTIER TECHNICAL ASSOCIATES INC.
9120 Main Street Clarence, NY 14031 (716)634-2293 NYSDOH ELAP No. 10475

Monitoring Point Assessment Form at Saint-Gobain Abrasives Landfill

Monitoring Point:_____ Date:_____

Inspector's Name (Print):_____

Well Locked:	Yes	No	NA
Lock Functioning:	Yes	No	NA
Bailer and Rope OK:	Yes	No	NA
Tubing OK:	Yes	No	NA
Protective Casing OK:	Yes	No	NA
Concrete Pad in Good Condition:	Yes	No	NA
Heaving of Well or Casing:	Yes	No	NA
Well Sand in Purge Water:	Yes	No	NA
Well Constricted:	Yes	No	NA
Debris in Well:	Yes	No	NA
Insects in Well:	Yes	No	NA

Other Observations or Details on Conditions Above: _____

_____

_____

Inspector's Signature:_____

Columbia Analytical Services 1 Mustard Street, Suite 250, Rochester, NY 14609-5425 | 585.288.5380 | www.caslab.com

September 28, 2009

Service Request No: R0905281

Dr. P. Michael Terlecky
Frontier Technical Associates
9120 Main Street
Clarence, NY 14031

Laboratory Results for: Plant C Landfill/ET-703

Dear Dr. P. Michael Terlecky:

Enclosed are the results of the sample(s) submitted to our laboratory on September 16, 2009. For your reference, these analyses have been assigned our service request number R0905281.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report.. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 131. You may also contact me via email at DPatton@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Deb Patton
Project Manager

CASE NARRATIVE
COMPANY: Frontier Technical Inc.
Plant C (SPDES) ET-533
SUBMISSION #: R0905281

LAB ID	Client ID
R0905281-001	OW2
R0905281-002	OW3
R0905281-003	OW4
R0905281-004	OW8
R0905281-005	OW4DUP
R0905281-006	MW9

Frontier samples were collected and received at CAS on 9/16/09 in good condition at 7°C outside of the 0-6°C temperature guidelines.

SEMI-VOLATILE ORGANICS

Six water samples were analyzed for a client specific list of Semi-Volatile Organics by Method 8270.

All surrogate recoveries were within limits.

All Blank Spike Recoveries were within limits.

The initial and continuing calibration criteria were met for all analytes.

The Laboratory Blanks associated with this analysis were free of contamination.

No other analytical or QC problems were encountered.

Columbia Analytical Services

REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- * Indicates that a quality control parameter has exceeded laboratory limits.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Pesticide/Aroclor: Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
- X See Case Narrative for discussion.

ACCREDITED IN ACCORDANCE WITH NELAC

CAS/Rochester Lab ID # for State Certifications[1]

NELAP Accredited
Delaware Accredited
Connecticut ID # PH0556
Florida ID # E87674
Illinois ID #200047
Maine ID #NY0032
Nebraska Accredited
Navy Facilities Engineering Service Center Approved
Nevada ID # NY-00032
New Jersey ID # NY004
New York ID # 10145
New Hampshire ID # 294100 A/B
Pennsylvania ID# 68-786
Rhode Island ID # 158
West Virginia ID # 292

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at www.caslab.com.

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Frontier Technical Associates
Project: Plant C Landfill/RY-703
Sample Matrix: Water
Sample Name: OW2
Lab Code: R0905281-001

Service Request: R0905281
Date Collected: 9/16/09 1009
Date Received: 9/16/09
Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2,4,5-Trichlorophenol	ND U	9.4	0.74	1	9/21/09	9/23/09 11:48	96404	171776	
2,4,6-Trichlorophenol	ND U	9.4	1.1	1	9/21/09	9/23/09 11:48	96404	171776	
2,4-Dichlorophenol	ND U	9.4	0.91	1	9/21/09	9/23/09 11:48	96404	171776	
2,4-Dimethylphenol	ND U	9.4	0.39	1	9/21/09	9/23/09 11:48	96404	171776	
2,4-Dinitrophenol	ND U	47	.44	1	9/21/09	9/23/09 11:48	96404	171776	
2-Chlorophenol	ND U	9.4	0.77	1	9/21/09	9/23/09 11:48	96404	171776	
2-Methylphenol	ND U	9.4	0.99	1	9/21/09	9/23/09 11:48	96404	171776	
2-Nitrophenol	ND U	9.4	0.87	1	9/21/09	9/23/09 11:48	96404	171776	
3- and 4-Methylphenol Coelution	ND U	9.4	1.5	1	9/21/09	9/23/09 11:48	96404	171776	
4,6-Dinitro-2-methylphenol	ND U	47	24	1	9/21/09	9/23/09 11:48	96404	171776	
4-Chloro-3-methylphenol	ND U	9.4	0.86	1	9/21/09	9/23/09 11:48	96404	171776	
4-Nitrophenol	ND U	47	12	1	9/21/09	9/23/09 11:48	96404	171776	
Pentachlorophenol (PCP)	ND U	47	31	1	9/21/09	9/23/09 11:48	96404	171776	
Phenol	ND U	9.4	0.54	1	9/21/09	9/23/09 11:48	96404	171776	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2,4,6-Tribromophenol	89	46-134	9/23/09 11:48		
2-Fluorophenol	44	12-84	9/23/09 11:48		
Phenol-d6	28	10-70	9/23/09 11:48		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Frontier Technical Associates	Service Request:	R0905281
Project:	Plant C Landfill/BT-703	Date Collected:	9/16/09 1015
Sample Matrix:	Water	Date Received:	9/16/09
Sample Name:	OW3	Units:	µg/L
Lab Code:	R0905281-002	Basis:	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2,4,5-Trichlorophenol	ND	U	9.4	0.74	1	9/21/09	9/23/09 13:38	96404	171776	
2,4,6-Trichlorophenol	ND	U	9.4	1.1	1	9/21/09	9/23/09 13:38	96404	171776	
2,4-Dichlorophenol	ND	U	9.4	0.91	1	9/21/09	9/23/09 13:38	96404	171776	
2,4-Dimethylphenol	ND	U	9.4	0.59	1	9/21/09	9/23/09 13:38	96404	171776	
2,4-Dinitrophenol	ND	U	47	44	1	9/21/09	9/23/09 13:38	96404	171776	
2-Chlorophenol	ND	U	9.4	0.77	1	9/21/09	9/23/09 13:38	96404	171776	
2-Methylphenol	ND	U	9.4	0.99	1	9/21/09	9/23/09 13:38	96404	171776	
2-Nitrophenol	ND	U	9.4	0.87	1	9/21/09	9/23/09 13:38	96404	171776	
3- and 4-Methylphenol Coelution	ND	U	9.4	1.5	1	9/21/09	9/23/09 13:38	96404	171776	
4,6-Dinitro-2-methylphenol	ND	U	47	24	1	9/21/09	9/23/09 13:38	96404	171776	
4-Chloro-3-methylphenol	ND	U	9.4	0.86	1	9/21/09	9/23/09 13:38	96404	171776	
4-Nitrophenol	ND	U	47	12	1	9/21/09	9/23/09 13:38	96404	171776	
Pentachlorophenol (PCP)	ND	U	47	31	1	9/21/09	9/23/09 13:38	96404	171776	
Phenol	ND	U	9.4	0.54	1	9/21/09	9/23/09 13:38	96404	171776	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2,4,6-Tribromophenol	99	46-134	9/23/09 13:38		
2-Fluorophenol	50	12-84	9/23/09 13:38		
Phenol-d6	32	10-70	9/23/09 13:38		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	Frontier Technical Associates	Service Request:	R0905281
Project:	Plant C Landfill/BT-703	Date Collected:	9/16/09 1055
Sample Matrix:	Water	Date Received:	9/16/09
Sample Name:	OW4	Units:	µg/L
Lab Code:	R0905281-003	Basis:	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2,4,5-Trichlorophenol	ND	U	9.4	0.74	1	9/21/09	9/23/09 14:19	96404	171776	
2,4,6-Trichlorophenol	ND	U	9.4	1.1	1	9/21/09	9/23/09 14:19	96404	171776	
2,4-Dichlorophenol	ND	U	9.4	0.91	1	9/21/09	9/23/09 14:19	96404	171776	
2,4-Dimethylphenol	ND	U	9.4	0.59	1	9/21/09	9/23/09 14:19	96404	171776	
2,4-Dinitrophenol	ND	U	47	44	1	9/21/09	9/23/09 14:19	96404	171776	
2-Chlorophenol	ND	U	9.4	0.77	1	9/21/09	9/23/09 14:19	96404	171776	
2-Methylphenol	ND	U	9.4	0.99	1	9/21/09	9/23/09 14:19	96404	171776	
2-Nitrophenol	ND	U	9.4	0.87	1	9/21/09	9/23/09 14:19	96404	171776	
3- and 4-Methylphenol Coelution	ND	U	9.4	1.5	1	9/21/09	9/23/09 14:19	96404	171776	
4,6-Dinitro-2-methylphenol	ND	U	47	24	1	9/21/09	9/23/09 14:19	96404	171776	
4-Chloro-3-methylphenol	ND	U	9.4	0.86	1	9/21/09	9/23/09 14:19	96404	171776	
4-Nitrophenol	ND	U	47	12	1	9/21/09	9/23/09 14:19	96404	171776	
Pentachlorophenol (PCP)	ND	U	47	31	1	9/21/09	9/23/09 14:19	96404	171776	
Phenol	ND	U	9.4	0.54	1	9/21/09	9/23/09 14:19	96404	171776	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2,4,6-Tribromophenol	101	46-134	9/23/09 14:19		
2-Fluorophenol	50	12-84	9/23/09 14:19		
Phenol-d6	35	10-70	9/23/09 14:19		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Frontier Technical Associates
Project: Plant C Landfill/BT-703
Sample Matrix: Water

Sample Name: OW5
Lab Code: R0905281-004

Service Request: R0905281
Date Collected: 9/16/09 1108
Date Received: 9/16/09

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2,4,5-Trichlorophenol	ND	U	9.4	0.74	1	9/21/09	9/23/09 14:59	96404	171776	
2,4,6-Trichlorophenol	ND	U	9.4	1.1	1	9/21/09	9/23/09 14:59	96404	171776	
2,4-Dichlorophenol	ND	U	9.4	0.91	1	9/21/09	9/23/09 14:59	96404	171776	
2,4-Dimethylphenol	ND	U	9.4	0.59	1	9/21/09	9/23/09 14:59	96404	171776	
2,4-Dinitrophenol	ND	U	47	44	1	9/21/09	9/23/09 14:59	96404	171776	
2-Chlorophenol	ND	U	9.4	0.77	1	9/21/09	9/23/09 14:59	96404	171776	
2-Methylphenol	ND	U	9.4	0.99	1	9/21/09	9/23/09 14:59	96404	171776	
2-Nitrophenol	ND	U	9.4	0.87	1	9/21/09	9/23/09 14:59	96404	171776	
3- and 4-Methylphenol Coelution	ND	U	9.4	1.5	1	9/21/09	9/23/09 14:59	96404	171776	
4,6-Dinitro-2-methylphenol	ND	U	47	24	1	9/21/09	9/23/09 14:59	96404	171776	
4-Chloro-3-methylphenol	ND	U	9.4	0.86	1	9/21/09	9/23/09 14:59	96404	171776	
4-Nitrophenol	ND	U	47	12	1	9/21/09	9/23/09 14:59	96404	171776	
Pentachlorophenol (PCP)	ND	U	47	31	1	9/21/09	9/23/09 14:59	96404	171776	
Phenol	ND	U	9.4	0.54	1	9/21/09	9/23/09 14:59	96404	171776	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2,4,6-Tribromophenol	103	46-134	9/23/09 14:59		
2-Fluorophenol	52	12-84	9/23/09 14:59		
Phenol-d6	34	10-70	9/23/09 14:59		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Frontier Technical Associates
Project: Plant C Landfill/BT-703
Sample Matrix: Water

Sample Name: OW4DUP
Lab Code: R0905281-005

Service Request: R0905281
Date Collected: 9/16/09 1055
Date Received: 9/16/09

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2,4,5-Trichlorophenol	ND	U	9.4	0.74	1	9/21/09	9/23/09 15:39	96404	171776	
2,4,6-Trichlorophenol	ND	U	9.4	1.1	1	9/21/09	9/23/09 15:39	96404	171776	
2,4-Dichlorophenol	ND	U	9.4	0.91	1	9/21/09	9/23/09 15:39	96404	171776	
2,4-Dimethylphenol	ND	U	9.4	0.59	1	9/21/09	9/23/09 15:39	96404	171776	
2,4-Dinitrophenol	ND	U	47	44	1	9/21/09	9/23/09 15:39	96404	171776	
2-Chlorophenol	ND	U	9.4	0.77	1	9/21/09	9/23/09 15:39	96404	171776	
2-Methylphenol	ND	U	9.4	0.99	1	9/21/09	9/23/09 15:39	96404	171776	
2-Nitrophenol	ND	U	9.4	0.87	1	9/21/09	9/23/09 15:39	96404	171776	
3- and 4-Methylphenol Coelution	ND	U	9.4	1.5	1	9/21/09	9/23/09 15:39	96404	171776	
4,6-Dinitro-2-methylphenol	ND	U	47	24	1	9/21/09	9/23/09 15:39	96404	171776	
4-Chloro-3-methylphenol	ND	U	9.4	0.86	1	9/21/09	9/23/09 15:39	96404	171776	
4-Nitrophenol	ND	U	47	12	1	9/21/09	9/23/09 15:39	96404	171776	
Pentachlorophenol (PCP)	ND	U	47	31	1	9/21/09	9/23/09 15:39	96404	171776	
Phenol	ND	U	9.4	0.54	1	9/21/09	9/23/09 15:39	96404	171776	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2,4,6-Tribromophenol	95	46-134	9/23/09 15:39		
2-Fluorophenol	48	12-84	9/23/09 15:39		
Phenol-d6	32	10-70	9/23/09 15:39		

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Frontier Technical Associates
Project: Plant C Landfill/BT-703
Sample Matrix: Water

Sample Name: MH9
Lab Code: R0905281-006

Service Request: R0905281
Date Collected: 9/16/09 1115
Date Received: 9/16/09

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2,4,5-Trichlorophenol	ND	U	9.4	0.74	1	9/21/09	9/23/09 16:19	96404	171776	
2,4,6-Trichlorophenol	ND	U	9.4	1.1	1	9/21/09	9/23/09 16:19	96404	171776	
2,4-Dichlorophenol	ND	U	9.4	0.91	1	9/21/09	9/23/09 16:19	96404	171776	
2,4-Dimethylphenol	ND	U	9.4	0.59	1	9/21/09	9/23/09 16:19	96404	171776	
2,4-Dinitrophenol	ND	U	47	44	1	9/21/09	9/23/09 16:19	96404	171776	
2-Chlorophenol	ND	U	9.4	0.77	1	9/21/09	9/23/09 16:19	96404	171776	
2-Methylphenol	ND	U	9.4	0.99	1	9/21/09	9/23/09 16:19	96404	171776	
2-Nitrophenol	ND	U	9.4	0.87	1	9/21/09	9/23/09 16:19	96404	171776	
3- and 4-Methylphenol Coelution	ND	U	9.4	1.5	1	9/21/09	9/23/09 16:19	96404	171776	
4,6-Dinitro-2-methylphenol	ND	U	47	24	1	9/21/09	9/23/09 16:19	96404	171776	
4-Chloro-3-methylphenol	ND	U	9.4	0.86	1	9/21/09	9/23/09 16:19	96404	171776	
4-Nitrophenol	ND	U	47	12	1	9/21/09	9/23/09 16:19	96404	171776	
Pentachlorophenol (PCP)	ND	U	47	31	1	9/21/09	9/23/09 16:19	96404	171776	
Phenol	ND	U	9.4	0.54	1	9/21/09	9/23/09 16:19	96404	171776	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2,4,6-Tribromophenol	92	46-134	9/23/09 16:19		
2-Fluorophenol	45	12-84	9/23/09 16:19		
Phenol-d6	29	10-70	9/23/09 16:19		

Comments:

Printed 10/6/09 16:42
Form 1A
SuperSet Reference: 09-0000111156 rev 00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client: Frontier Technical Associates
Project: Plant C Landfill/BT-703
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: RQ0903835-01

Service Request: R0905281
Date Collected: NA
Date Received: NA

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 8270C
Prep Method: EPA 3510C

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
2,4,5-Trichlorophenol	ND	U	10	0.74	1	9/21/09	9/22/09 16:44	96404	171562	
2,4,6-Trichlorophenol	ND	U	10	1.1	1	9/21/09	9/22/09 16:44	96404	171562	
2,4-Dichlorophenol	ND	U	10	0.91	1	9/21/09	9/22/09 16:44	96404	171562	
2,4-Dimethylphenol	ND	U	10	0.59	1	9/21/09	9/22/09 16:44	96404	171562	
2,4-Dinitrophenol	ND	U	50	44	1	9/21/09	9/22/09 16:44	96404	171562	
2-Chlorophenol	ND	U	10	0.77	1	9/21/09	9/22/09 16:44	96404	171562	
2-Methylphenol	ND	U	10	0.99	1	9/21/09	9/22/09 16:44	96404	171562	
2-Nitrophenol	ND	U	10	0.87	1	9/21/09	9/22/09 16:44	96404	171562	
3- and 4-Methylphenol Coelution	ND	U	10	1.5	1	9/21/09	9/22/09 16:44	96404	171562	
4,6-Dinitro-2-methylphenol	ND	U	50	24	1	9/21/09	9/22/09 16:44	96404	171562	
4-Chloro-3-methylphenol	ND	U	10	0.86	1	9/21/09	9/22/09 16:44	96404	171562	
4-Nitrophenol	ND	U	50	12	1	9/21/09	9/22/09 16:44	96404	171562	
Pentachlorophenol (PCP)	ND	U	50	31	1	9/21/09	9/22/09 16:44	96404	171562	
Phenol	ND	U	10	0.54	1	9/21/09	9/22/09 16:44	96404	171562	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q	Note
2,4,6-Tribromophenol	91	46-134	9/22/09 16:44		
2-Fluorophenol	48	12-84	9/22/09 16:44		
Phenol-d6	31	10-70	9/22/09 16:44		

Comments:

Printed 10/6/09 16:42
Form 1A
SuperSet Reference: 09-0000111806 rev 00

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Frontier Technical Associates
Project: Plant C Landfill/ET-703
Sample Matrix: Water

Service Request: R0905281
Date Analyzed: 9/12/09

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

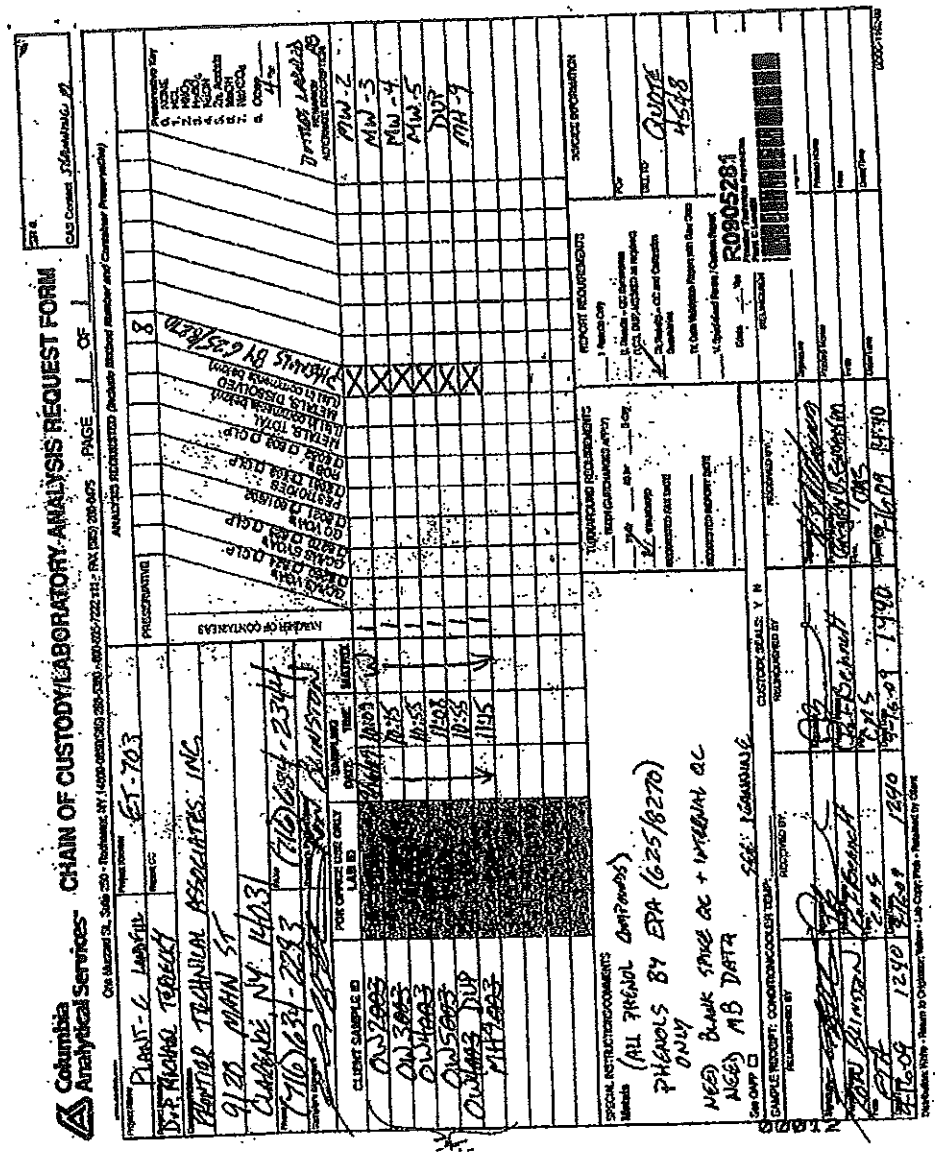
Analytical Method: 8270C
Prep Method: EPA 3510C

Units: pg/L
Basis: NA

Extraction Lot: 96404

Analyte Name	Lab Control Sample RQ0908825-02 Result	Expected	% Rec	Duplicate Lab Control Sample RQ0908825-03 Result	Expected	% Rec	% Rec Limits	RPD	RPD Limit
2,4,5-Trichlorophenol	97.5	100	97	101	100	101	62 - 117	3	30
2,4,6-Trichlorophenol	95.4	100	95	100	100	100	62 - 115	5	30
2,4-Dichlorophenol	89.3	100	89	92.9	100	93	61 - 109	4	30
2,4-Dimethylphenol	72.2	100	72	78.0	100	78	33 - 130	8	30
2,4-Dinitrophenol	94.9	100	95	98.9	100	99	48 - 142	4	30
2-Chlorophenol	84.2	100	84	83.8	100	84	42 - 112	0	30
2-Methylphenol	79.5	100	80	79.9	100	80	51 - 130	0	30
2-Nitrophenol	91.5	100	92	94.5	100	95	60 - 113	3	30
3- and 4-Methylphenol Coelution	157	200	78	153	200	76	49 - 130	3	30
4,6-Dinitro-2-methylphenol	102	100	102	108	100	108	60 - 135	6	30
4-Chloro-3-methylphenol	94.3	100	94	98.5	100	98	42 - 124	4	30
4-Nitrophenol	40.8	100	41	39.7	100	40	15 - 130	3	30
Pentachlorophenol (PCP)	98.7	100	99	104	100	104	39 - 147	5	30
Phenol	41.8	100	42	39.4	100	39	16 - 130	6	30

Comments:



Cooler Receipt And Preservation Check Form

Project/Client Frontier Submission Number R09-5281

Cooler received on 9-16-09 by: KE COURIER: (CAS) UPS FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	YES	(NO)
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO
4.	Did any VOA vials have significant* air bubbles?	YES	NO (N/A)
5.	Were Ice or Ice packs present?	(YES)	NO
6.	Where did the bottles originate?		(CAS/ROC) CLIENT
7.	Temperature of cooler(s) upon receipt:	7°	

Is the temperature within 0° - 6° C?:	Yes	Yes	Yes	Yes	Yes
If No, Explain Below	(No)	No	No	No	No

Date/Time Temperatures Taken: 9-16-09 @ 15:06

Thermometer ID: 161 / IR GUN#2 / (IR GUN#3) Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition: Client Approval to Run Samples: _____

PC Secondary Review: DU 9/17/09

Cooler Breakdown: Date: 9-17-09 by: KE

1.	Were all bottle labels complete (i.e. analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO
4.	Air Samples: Cassettes / Tubes Intact Canisters Pressurized	Tedlar® Bags Inflated	(N/A)

Explain any discrepancies: _____

pH	Reagent	yes	no	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	$Na_2S_2O_3$	-	-			*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Acet	-	-						
	HCl	*	*						

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 092809-11

Other Comments: _____

PC Secondary Review: _____

*significant air bubbles are greater than 5-6 mm

H:\SM\DOCS\Cooler Receipt 2.doc

FRONTIER TECHNICAL ASSOCIATES, INC.
WELL MONITORING FIELD FORM

Site Location: SAINT GOBAIN L.F. Job No: ET- 703
Sample Point ID: MW-2 (OW2) Consultant: Frontier Technical Associates, Inc.

PURGE INFORMATION

Purge Method: Bailer, Peristaltic Pump
2" Well = 0.17 gals/ft.
4" well = 0.66 gals/ft.

Depth to Bottom of Well: 18.20 ft.
Depth to Water Surface: 7.51 ft.
Depth of Water Column: 10.69 ft.
Volume of Standing Water in Well: 1.9 gallons
Start of Purge: Date: 9/15/09 Time: 1:16
End of Purge: Date: 9/15/09 Time: 1:23
Total Volume Purge: 1.9 gallons Well Purged Dry? Yes No
# of Volumes Purged 1 Purging Personnel: RON BLINSTON
Recharge Rate: Rapid, Slow, Extremely Slow

SAMPLING INFORMATION

Sample Method: Bailer, Peristaltic Pump, Bladder Pump
Sample Date: 9/16/09 Sample Time: 10:09 Depth to Water Surface 12.76 ft.
Sample Appearance: SLIGHTLY TURBID
Samples Preserved: Yes No Dissolved Metals Field Filtered: Yes No
Sampling Personnel: RON BLINSTON

FIELD MEASUREMENTS

Meters Calibrated: Yes No

PARAMETER	METER NUMBER	UNITS	MEASUREMENT	NOTES
pH	Corning 103	STD. UNITS	8.05/8.03/7.99/7.97	(8.01)
Spec. Conductance	YSI 33	µMHOS/CM	2880/2890/2895/2900	(2891)
Temperature	YSI 33	C	14/14/14/14	14°C
Turbidity	Hach 16800	NTU	30.5/29.3/28.4/28.8	(29.25)
REDOX	ORPTestr	mV	—	—

Weather: SUNNY, 70°F
Notes: INITIAL pH 12.46 TEMP 15 SPEC COND. 2700

9/16/09 SPEC COND 1000 STD READS 885 @ 17°C TURBIDITY 265

Temp C 1.1804 1044.65

S.C. = 2891 × 0.9573 × 1.2637 CC = 0.9573
= 2497

FRONTIER TECHNICAL ASSOCIATES, INC.
WELL MONITORING FIELD FORM

Site Location: SAINT GOBAIN L.F. Job No: ET- 703
Sample Point ID: MW-3 (OW-3) Consultant: Frontier Technical Associates, Inc.
Purge Method: Bailer, Peristaltic Pump

PURGE INFORMATION

Depth to Bottom of Well: 19.66 ft.
Depth to Water Surface: 7.60 ft.
Depth of Water Column: 12.06 ft.

2" Well = 0.17 gals/ft.
4" well = 0.66 gals/ft.

Volume of Standing Water in Well: 2.1 gallons
Start of Purge: Date: 9/15/09 Time: 1:37
End of Purge: Date: 9/15/09 Time: 1:47
Total Volume Purge: 2.1 gallons Well Purged Dry? (Yes) No
# of Volumes Purged 1 Purging Personnel: RON BLINSTON
Recharge Rate: Rapid, Slow, Extremely Slow

SAMPLING INFORMATION Sample Method: Bailer, Peristaltic Pump, Bladder Pump
Sample Date: 9/16/09 Sample Time: 10:15 Depth to Water Surface DRY ft.
Sample Appearance: TURBID
Samples Preserved: Yes No Dissolved Metals Field Filtered: Yes No
Sampling Personnel: RON BLINSTON

FIELD MEASUREMENTS

Meters Calibrated: (Yes) No

PARAMETER	METER NUMBER	UNITS	MEASUREMENT	NOTES
pH	Corning 103	STD. UNITS	9.75/9.92/9.96/9.99	(9.94)
Spec. Conductance	YSI 33	µMHOS/CM	1890/1900/1900/1900	(1898)
Temperature	YSI 33	C	14/14/14/14	
Turbidity	Hach 16800	NTU	378/365/363/359	(366)
REDOX	ORPTestr	mV	—	—

Weather:
Notes: INITIAL pH 8.37 TEMP 14° SPEC. COND 2500 TURBIDITY 131

SC = 1898 x 0.9573 x 1.2637 = 2296

FRONTIER TECHNICAL ASSOCIATES, INC.
WELL MONITORING FIELD FORM

Site Location: SAINT GOBAIN L.F. Job No: ET- 703
Sample Point ID: MW-4 (OW-4) Consultant: Frontier Technical Associates, Inc.
PURGE INFORMATION Purge Method: Bailer, (Peristaltic Pump)
Depth to Bottom of Well: 19.38 ft. 2" Well = 0.17 gals/ft.
Depth to Water Surface: 10.37 ft. 4" well = 0.66 gals/ft.
Depth of Water Column: 9.01 ft.
Volume of Standing Water in Well: 1.54 gallons
Start of Purge: Date: 9/15/09 Time: 11:13
End of Purge: Date: 9/15/09 Time: 11:21
Total Volume Purge: 1.6 gallons Well Purged Dry?: (Yes) No
# of Volumes Purged 1.0 Purging Personnel: RON BLINSTON
Recharge Rate: Rapid, (Slow) Extremely Slow
SAMPLING INFORMATION Sample Method: Bailer, (Peristaltic Pump) Bladder Pump
Sample Date: 9/16/09 Sample Time: 10:55 Depth to Water Surface 14.68 ft.
Sample Appearance: CLEAR
Samples Preserved: Yes No Dissolved Metals Field Filtered: Yes No
Sampling Personnel: RON BLINSTON
FIELD MEASUREMENTS
Meters Calibrated (Yes) No

PARAMETER	METER NUMBER	UNITS	MEASUREMENT	NOTES
pH	Corning 103	STD. UNITS	8.67/8.69/8.69/8.71	(8.69)
Spec. Conductance	YSI 33	µMHOS/CM	2110/2115/2115/2120	(2115)
Temperature	YSI 33	C	15/15/15/15	
Turbidity	Hach 16800	NTU	10.7/10.9/10.8/10.6	(10.7)
REDOX	ORPTestr	mV	—	—

Weather: DUP
Notes: INITIAL pH 11.92 TEMP 15°C SPEC COND 2200 TURBIDITY 23.
9/15/09 1000 STD READING 900 @ 19°C
9/15/09 7:50 pH (4) 4.00 (7) 7.00 (10) 10.05 TEMP 17°C
SC = 2115 x 0.9573 x 1.2347 = 2500

FRONTIER TECHNICAL ASSOCIATES, INC.
WELL MONITORING FIELD FORM

Site Location: SAINT GOBAIN L.F. Job No: ET- 703
Sample Point ID: MW-5 (OW-5) Consultant: Frontier Technical Associates, Inc.

PURGE INFORMATION

Purge Method: Bailer, Peristaltic Pump
2" Well = 0.17 gals/ft.
4" well = 0.66 gals/ft.

Depth to Bottom of Well: 18.23 ft.
Depth to Water Surface: 9.06 ft.
Depth of Water Column: 9.17 ft.
Volume of Standing Water in Well: 1.6 gallons
Start of Purge: Date: 9/15/09 Time: 11:31
End of Purge: Date: 9/15/09 Time: 11:45
Total Volume Purge: 1.6 gallons Well Purged Dry?: Yes No
# of Volumes Purged 1 Purging Personnel: RON BLINSTON
Recharge Rate: Rapid, Slow, Extremely Slow

Purged to dryness

SAMPLING INFORMATION Sample Method: Bailer, Peristaltic Pump, Bladder Pump
Sample Date: 9/16/09 Sample Time: 11:08 Depth to Water Surface DRY ft.
Sample Appearance: TURBID
Samples Preserved: Yes No Dissolved Metals Field Filtered: Yes No
Sampling Personnel: RON BLINSTON

FIELD MEASUREMENTS

Meters Calibrated: Yes No

PARAMETER	METER NUMBER	UNITS	MEASUREMENT	NOTES
pH	Corning 103	STD. UNITS	4.63/4.61/4.57/4.50	(4.58)
Spec. Conductance	YSI 33	µMHOS/CM	3800/3805/3810/3810	(3806)
Temperature	YSI 33	C	11/11/11/11	(11)
Turbidity	Hach 16800	NTU	237/254/255/254	(250)
REDOX	ORPTestr	mV	—	—

Weather:
Notes: INITIAL pH 5.95 TEMP 18C SPEC COND. 4600 TURBIDITY 199

SC = 3806 x 0.9573 x 1.3583 = 4949

FRONTIER TECHNICAL ASSOCIATES, INC.
WELL MONITORING FIELD FORM

Site Location: SAINT GOBAIN L.F. Job No: ET- 703
Sample Point ID: MW-9 Consultant: Frontier Technical Associates, Inc.
PURGE INFORMATION Purge Method: Bailer, Peristaltic Pump
Depth to Bottom of Well: _____ ft. 2" Well = 0.17 gals/ft.
Depth to Water Surface: _____ ft. 4" well = 0.66 gals/ft.
Depth of Water Column: _____ ft.
Volume of Standing Water in Well: _____ gallons
Start of Purge: Date: / / Time: :
End of Purge: Date: / / Time: :
Total Volume Purge: _____ gallons Well Purged Dry?: Yes No
# of Volumes Purged _____ Purging Personnel: _____
Recharge Rate: Rapid, Slow, Extremely Slow
SAMPLING INFORMATION Sample Method: Bailer, Peristaltic Pump, Bladder Pump
Sample Date: 9/16/09 Sample Time: 11:15 Depth to Water Surface — ft.
Sample Appearance: CLEAR
Samples Preserved: Yes No Dissolved Metals Field Filtered: Yes No
Sampling Personnel: JON BLINSTON
FIELD MEASUREMENTS
Meters Calibrated: Yes No

PARAMETER	METER NUMBER	UNITS	MEASUREMENT	NOTES
pH	Corning 103	STD. UNITS	6.91/6.97/6.99/7.01	(6.99)
Spec. Conductance	YSI 33	µMHOS/CM	440/440/440/440	(440)
Temperature	YSI 33	C	19/19/19/19	(19)
Turbidity	Hach 16800	NTU	4.24/4.77/4.82/5.22	(4.7)
REDOX	ORPTestr	mV	—	—

Weather: _____
Notes: pH 7/16/09 7:49 (4) 3.99 (7) 7.00 (10) 10.05 TEMP 18c

SC = 440 x 0.9573 X 1.1301 = 476

FRONTIER TECHNICAL ASSOCIATES INC.
9120 Main Street Clarence, NY 14031 (716)634-2293 NYSDOH ELAP No. 10475

Monitoring Point Assessment Form at Saint-Gobain Abrasives Landfill

Monitoring Point: OW-2 **Date:** 9/15/09

Inspector's Name (Print): RON ELINSTON

Well Locked:	(Yes)	No	NA
Lock Functioning:	(Yes)	No	NA
Bailer and Rope OK:	Yes	No	(NA)
Tubing OK:	(Yes)	No	NA
Protective Casing OK:	(Yes)	No	NA
Concrete Pad in Good Condition:	(Yes)	No	NA
Heaving of Well or Casing:	Yes	(No)	NA
Well Sand in Purge Water:	Yes	(No)	NA
Well Constricted:	Yes	(No)	NA
Debris in Well:	Yes	(No)	NA
Insects in Well:	Yes	(No)	NA

Other Observations or Details on Conditions Above:

INSPECTION ~~COMPLETED~~ COMPLETED AS PART OF ANNUAL / BI-ANNUAL SAMPLING

Inspector's Signature: [signature]

FRONTIER TECHNICAL ASSOCIATES INC.
9120 Main Street Clarence, NY 14031 (716)634-2293 NYSDOH ELAP No. 10475

Monitoring Point Assessment Form
at Saint-Gobain Abrasives Landfill

Monitoring Point: OW-3 **Date:** 9/15/09

Inspector's Name (Print): ROD BLINSTON

Well Locked:	(Yes)	No	NA
Lock Functioning:	(Yes)	No	NA
Bailer and Rope OK:	Yes	No	(NA)
Tubing OK:	(Yes)	No	NA
Protective Casing OK:	*(Yes)	No	NA
Concrete Pad in Good Condition:	*(Yes)	No	NA
Heaving of Well or Casing:	Yes	(No)	NA
Well Sand in Purge Water:	Yes	(No)	NA
Well Constricted:	Yes	(No)	NA
Debris in Well:	Yes	(No)	NA
Insects in Well:	Yes	(No)	NA

Other Observations or Details on Conditions Above: * WELL CASING IS CROOKED

CONCRETE PAD IS LOOSE TO THE GROUND

INSPECTION ~~COMPLETED~~ COMPLETED AS PART OF ANNUAL/BI-ANNUAL SAMPLING

Inspector's Signature: [signature]

FRONTIER TECHNICAL ASSOCIATES INC.
9120 Main Street Clarence, NY 14031 (716)634-2293 NYSDOH ELAP No. 10475

Monitoring Point Assessment Form
at Saint-Gobain Abrasives Landfill

Monitoring Point: OW-4 **Date:** 9/15/09

Inspector's Name (Print): RON BLINSON

Well Locked:	(Yes)	No	NA
Lock Functioning:	(Yes)	No	NA
Bailer and Rope OK:	Yes	No	(NA)
Tubing OK:	(Yes)	No	NA
Protective Casing OK:	(Yes)	No	NA
Concrete Pad in Good Condition:	(Yes)	No	NA
Heaving of Well or Casing:	Yes	(No)	NA
Well Sand in Purge Water:	Yes	(No)	NA
Well Constricted:	Yes	(No)	NA
Debris in Well:	Yes	(No)	NA
Insects in Well:	Yes	(No)	NA

Other Observations or Details on Conditions Above:

INSPECTION COMPLETED AS PART OF ANNUAL/BI-ANNUAL SAMPLING.

Inspector's Signature: [signature]

FRONTIER TECHNICAL ASSOCIATES INC.
9120 Main Street Clarence, NY 14031 (716)634-2293 NYSDOH ELAP No. 10475

Monitoring Point Assessment Form
at Saint-Gobain Abrasives Landfill

Monitoring Point: AW-5 **Date:** 9/15/09

Inspector's Name (Print): RON BLINSTON

Well Locked:	(Yes)	No	NA
Lock Functioning:	(Yes)	No	NA
Bailer and Rope OK:	Yes	No	(NA)
Tubing OK:	(Yes)	No	NA
Protective Casing OK:	(Yes)	No	NA
Concrete Pad in Good Condition:	(Yes)	No	NA
Heaving of Well or Casing:	Yes	(No)	NA
Well Sand in Purge Water:	(Yes)	No	NA
Well Constricted:	Yes	(No)	NA
Debris in Well:	Yes	(No)	NA
Insects in Well:	Yes	(No)	NA

Other Observations or Details on Conditions Above:

INSPECTION ~~COMPLETED~~ COMPLETED AS PART OF ANNUAL/BI-ANNUAL SAMPLING

Inspector's Signature:

Niagara County Sewer District #1/Town of Wheatfield

Industrial Waste Permit

Industrial User: Saint Gobain Ceramic Materials
(Permittee)

Division Name (if Applicable): _____

Mailing Address: 6600 Walmore Road, P.O. Box 301
Street or P.O. Box

Niagara Falls, N.Y. 14304
City, State and Zip Code

Facility Address: 6600 Walmore Road
Street Address

Wheatfield, New York
City, State

The above Industrial User is authorized to discharge industrial wastewater to the Niagara County Sewer District #1 sewer system in compliance with the District's Sewer Use Law, Local Law No. 1, Resolution No. 7-94, any applicable provisions of Federal or State law or regulation, and in accordance with discharge points(s), effluent limitations, monitoriing requirements, and other conditions set forth herein.

Effective Date: 4/01/10

Expiration Date: 4/01/12

(Application for renewal shall be submitted 90 days prior to expiration)

District Permit No. 10-01

Date: 12/1/10 Signed: _____
(Authorized Signature)

Date: 12/8/10 Signed: _____
(Authorized Signature)

Schedule A – Listing of Discharged Wastestreams

Industry Name: Saint Gobain Ceramic Materials

The following wastestreams are discharged to sanitary sewer system tributary of Niagara County Sewer District #1.

Waste-Streams	Nature Of Waste	Volume gallons per day	Discharge Point
WS 001	Domestic (restrooms,etc)	3,500 (Est.) Avg.	D 001
WS 002	Non-Domestic (Cooling, Process, Washdown, Boiler Blowdown) (includes approximately 6,500 GPD storm runoff)	65,000 (Est.) Avg.	D 001

PART I - WASTEWATER DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

Sample Point 1- Overall Facility Wastestream

Industry Name: Saint Gobain Ceramic Materials

Sample Point: Sample Point No. 1

Manhole located outside facility boiler house

Description: Combined Facility Sanitary/Process Wastestream

Classification: Non-SIU

Parameter	Discharge Limitations[1]	Monitoring Requirements: Sampling Frequency	Monitoring Requirements: Sample Type
Flow	180,000 gpd (Max.)	Continuous	
Pollutants	Daily Max.		
Phenol (4AAP)	1.0 lbs/day-Action Level[3]	Monthly	24C
BOD5	No Limit	Monthly	24C
Zinc	0.5 lbs/day	Monthly	24C
Trichloroethane	1.0 mg/l	Quarterly	24C[2]
Trichloroethylene	1.0 mg/l	Quarterly	24C[2]
Suspended Solids	No Limit	Quarterly	24C
pH	5.5 to 9.5	Monthly	3 grabs
Lead,Nickel,Copper, Chromium	Surveillance only	Annual	24C
Total Toxic Organics	Surveillance only	Annual	24C

These Limitations shall be effective immediately

(1) All other limitations as set forth in the District's Sewer Use Law shall also apply.

(2) See Item 9 of Sampling Measurements and Analytical Guidelines

(3) If action level is exceeded, permitee shall conduct a sampling/analysis on 3 consecutive days to determine the source and corrective action.

PART II - SPECIAL CONDITIONS/COMPLIANCE SCHEDULE

1. The Industrial User shall continually implement an accidental spill prevention plan to eliminate or minimize the accidental or slug discharge of pollutants into the sewer system, which could have an effect on the District treatment plant, sludge, or cause the District to violate its SPDES permit.

2. Compliance Schedules: If additonal pretreatment and/or operation and maintenance are required to meet discharge limitation and/or Pretreatment Regulations; the User will immediately advise District of the shortest schedule by which the User will provide such additional pretreatment. The completion date in this schedule shall not be later than the compliance date established for any applicable Pretreatment Regulations.

PART III - REPORTING REQUIREMENTS

1. The Industrial User shall notify the District immediately upon any accidental or slug discharge to the sanitary sewer system. Formal written notification discussing circumstances of the event and remedies to prevent recurrence shall be submitted to the District within 3 days of occurrence.

2. The Industrial User shall notify the District and apply for a revised permit 30 days prior to the introduction of new wastewater or pollutants or any substantial change in the volume or characteristics of the wastewater being introduced into the POTW from the User's industrial processes.

3. Any upset experienced by the Industrial User of its treatment that places it in a temporary state of non-compliance with wastewater discharge limitations contained in this permit or other limitations specified in the District's Sewer Use Law shall be reported to the District within 24 hours of first awareness of the commencement of the upset. A detailed report shall be filed within 5 days.

4. Self-monitoring reports are due at the NCSD #1 office within 30 days from the date of the lab report, but in no case greater than 60 days after the date of sampling. When reporting results, the following information shall be provided:

   a.) 1. The date, exact place, and time of sampling or measurements;
   2. The individual(s) who performed the sampling or measurements;
   3. The date(s) analyses were performed;
   4. The individual(s) who performed the analyses;
   5. The analytical techniques or methods used;
   6. The results of such analyses

   b.) A copy of the original lab report(s) as provided by the certified testin lab(s), including properly completed chain(s) of custody.

   c.) The original data from the lab report shall be transcribed into table WSR-1 (see appendix). It is acceptable for the Industrial User to create their own copy of table WSR-1, provided that it is essentially the same as the copy provided by Niagara County Sewer District #1.

   d.) All daily flows obtained since the previous reporting period, as well as the maximum and average daily flow for each month. Flows must be reported using a copy of form IDFS. It is acceptable for the Industrial User to create their own copy of form IDFS, provided that it is essentially the same as the copy provided by Niagara County Sewer District #1.

   e.) A certification statement as to whether the Industrial User is in compliance with the permit limitations. If the permit contains limitations for both daily max. and max. mo. avg., the statement must specify whether the User is in compliance with both limitations.

   f.) A certification statement that all normally operated (applicable) processes were operating (and discharging) during the monitoring period. Any processes not in operation shall be cited together with a listing of pollutants which might normally be present in said process discharge.

5. Additional Monitoring by Permittee - If the permittee monitors any pollutants at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified herein, the results of such monitoring shall be included in the calculation and reporting of values required under Part I. Such increased frequency shall also be indicated.

PART III - REPORTING REQUIREMENTS (cont'd.)

6. All self-monitoring reports prepared shall be submitted to:

John T. Timkey, Chief Operator
Niagara County Sewer District #1 Water Pollution Control Center
7346 Liberty Drive
Niagara Falls, New York 14304

7. Signatory Requirements - All reports required by this permit shall be signed by an authorized representative of the Industrial User.

8. If sampling performed by the Industrial User indicates a violation, the Industrial User is required to repeat the sampling and analysis and submit the results to the District within thirty (30) days after becoming aware of the violation. This sampling and analysis shall be in addition to those performed to satisfy your permit requirements.

Additionally, applicable quality control is mandatory in cases where the Industrial User is conducting additional self-monitoring as a result of non- compliance. (See Sampling Measurement and Analytical Guidelines, Item #19 "Quality Control.")

9. Toxic Organic Management Plan - For Industrial Users who are required to monitor for Total Toxic Organics (TTO), and who are implementing a District-Approved, Toxic Organic Management Plan in lieu of this monitoring, the following certification shall be included with each self-monitoring report:

> "Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics, I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the control authority."

PART IV - STANDARD CONDITIONS

1. **PROHIBITED DISCHARGES**

The Industrial User shall comply with all the general prohibitive discharge standards.

2. **INSPECTION/RIGHT-OF-ENTRY**

The administrator and/or other duly authorized employees of the District, NYSDEC and/or USEPA, bearing proper credentials and identification, shall be permitted to enter all industrial properties without advance notice for the purpose of inspection, observation, measurement, sampling, monitoring, and testing in accordance with the provisions of its Sewer Use Law. The District shall also have the right to inspect and copy records pertaining to the Industry's self-monitoring procedures.

3. **RECORDS RETENTION**

The Industrial User shall retain and preserve for no less than (3) years, any records, books, documents, memoranda, reports, correspondence, records of calibration and maintenance of instrumentation, recordings from continous monitoring instrumentation, and any summaries thereof, relating to monitoring, sampling and chemical analysis made by or in behalf of the user in connection with its discharge. All records that pertain to matters that are the subject of special orders, or any other enforcement or litigation activities brought by the District, shall be retained and observed by the Industrial User until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

4. **CONFIDENTIAL INFORMATION**

Except for data determined to be confidential under Section 5.15 of the District's Sewer Use Law, all reports required by this permit shall be available for public inspection at the office of the Pretreatment Administrator, 7346 Liberty Drive, Niagara Falls, New York 14304.

5. **DILUTION**

No Industrial User shall increase the use of potable or process water or, in any way, attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

6. **PROPER DISPOSAL OF PRETREATMENT SLUDGES AND SPENT CHEMICALS**

The disposal of sludges and spent chemicals generated shall be done in a manner such as to prevent the pollutants from such material from entering the NCSD #1 sewer system. Said disposal shall also conform to all applicable State/Federal regulations.

7. **REVOCATION OF PERMIT**

The permit issued to the Industrial User by the District may be revoked when after inspection, monitoring or analysis, it is determined that the discharge of wastewater to the sanitary sewer is in violation of Federal, State, or local laws, ordinances, or regulations. Additionally, falsification or intentional misrepresentation of data or statements pertaining to the permit application or any other required reporting form, shall be cause for permit revocation, revocation of sewer discharges privileges, and/or imposition of criminal penalties.

8. **LIMITATION ON PERMIT TRANSFER**

Wastewater discharge permits are issued to a specific user for a specific operation and are not assignable to another user or transferrable to any other location without the prior written approval of the District. Sale of a facility by a User shall obligate the purchaser to seek prior written approval of the District for continued discharge to the sewerage system.

9. **PERMIT AVAILABILITY**

The original signed permit must be available upon request at all times for review at the Industrial User's address stated on the first page of this permit.

10. **MODIFICATION OR REVISION OF THE PERMIT**

a. The terms and conditions of this permit may be subject to modification by the District at any time as limitations or requirements, as identified in the District Sewer Use Law, are modified or other just cause exists.

b. This permit may also be modified to incorporate special conditions resulting from the issuance of a special order by NYSDEC or EPA.

c. The terms and conditions may be modified as a result of EPA promulgating a new federal pretreatment standard. If a pretreatment standard or prohibition (including Schedule of Compliance specified in such pretreatment standard or prohibition) is established under Section 807 (b) of the Act for a pollutant which is present, the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in permit, this permit shall be revised or modified in accordance with such pretreatment standard or prohibition.

d. The terms and conditions of this permit shall remain in effect until the permit is terminated or replaced by a subsequent permit.

11. **DUTY TO REAPPLY**

Within ninety (90) days of the expiration, the User shall reapply for reissuance of the permit. Application forms are available from the District upon request.

12. **SEVERABILITY**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

PART IV - STANDARD CONDITIONS (cont'd.)

13. **ENFORCEMENT AND PENALTIES**

Any violation of Section 2 or 3 of the Niagara County Sewer Use Law (adopted January 18, 1994) is declared a violation except as otherwise provided by law. Any violation of Section 4, 5 or 6 of the Niagara County Sewer Use Law is thereby a misdemeanor except as otherwise provided by law. A User who is found to have violated any provision of the Niagara County Sewer Use Law (or permits and orders issued thereunder) and/or applicable pretreatment standards and requirements, shall be subject to applicable civil and criminal penalties including but not limited to fines not to exceed five thousand dollars ($5,000) per violation per day for each day on which non-compliance shalloccur or continue.

PART V - SPECIFIC CONDITIONS

NONE

NIAGARA COUNTY SEWER DISTRICT #1

SAMPLING MEASUREMENT AND ANALYTICAL GUIDELINES

1. Prior to implementing the self-monitoring sampling and analyses, the Industrial User must submit the following information to the District.

   a. The name(s) and address(es) of the laboratory or laboratories proposed to perform each of the chemical analyses.
   b. A description of the equipment and test methods proposed for the chemical analyses for each parameter.
   c. A list of the lower level of detectability expected for each parameter.
   d. A description of the overall recovery efficiency of the prepared sample, where applicable.
   e. A description of the quality control procedures used by the laboratory or laboratories to ensure reliable test results.
   f. A description of the sample collection point and sample collection procedures.
   g. A description of the compositing technique and equipment.
   h. A description of the sample preservation methods used for each parameter.

2. Before commencement of any sampling or flow monitoring, Niagara County Sewer District #1 Water Pollution Control Center shall be notified in writing at least seventy-two (72) hours in advance by the firm or designee. The District will give a twenty-four (24) hour verbal notification to the firm or District designee of whether split sampling will be initiated.

3. Before sampling is done, the sample points must be approved by the District.

4. All discharge lines from one (1) building, or all discharge lines from only one (1) single process must be sampled at the same time.

5. Sampling record must be used and submitted with monitoring reports. The sampling report shall contain the following minimum information:

   a. Date of each sample day.
   b. Exact location of sampling points - attach drawing for reference.
   c. If done manually, time of each grab sample with sampler's inititals each time.
   d. Type of auto-sampler used. Size and type of tubing and sampling interval.
   e. Record all physical observation (sight, smell etc.) of the discharge at start-up, during inspections and changing of samples.
   f. Note weather conditions.
   g. Signature of immediate sampling supervisor at the bottom of page.

6. If an auto-sampler is used, new tubing must be at least 1/4 I.D. If visibly contaminated after sampling, it must be cleaned with detergent or methanol and deionized water each day. Proper refrigeration of the sample must be maintained during entire sampling period, when necessary. The intake hose velocity must be at least 2.0 f.p.s. with a maximum lift of twenty (20) feet.

7. All sampling shall be taken at the highest velocity, greatest turbulence and center of flow.

8. All sampling must be done on normal work days. If there is a process discharge after normal working hours, sampling must continue until no further discharge.

9. "COMPOSITE SAMPLE" "Composite" shall mean a combination of individual (or continuously taken) samples obtained at regular intervals over the entire discharge day. The volume of each sample shall be proportional to the discharge flow rate, when possible. For a continuous discharge, a minimum of forty-eight (48) individual grab samples (at half hour intervals shall be collected and combined to constitute a twenty-four (24) hour composite sample. For intermittent discharges of less than four hours duration, grab samples shall be taken at a minimum of fifteen (15) minute intervals.

Composite samples for purgeable halocarbons (Method 601/8010), purgeable aromatics (Method 602/8020), acrolein/acrylonitrile (Method 603), volatile organics (Method 624/8240), or cyanide shall be lab composited from grab samples taken at regular intervals over the entire discharge day utilizing the appropriate special sample containers, preservatives and collection techniques. The number of grabs collected is dependent on the length of the sampling period, and shall be determined the following:

For a discharge period of one hour or less, a single grab sample may be collected for analysis of the above parameters.

For a discharge period between one and 24 hours, a minimum of four (4) grabs will be taken at regular intervals and lab composited for analysis of the above parameters.

Proper sample collection containers and techniques must be used.

"SPLIT SAMPLE" - must be done on site with both parties present before preservatives are added.

"DAILY" - each operating day

"DAILY MAXIMUM" - shall mean the highest allowable discharge of a pollutant and/or flow measured during any twenty-four (24) hour sampling period. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the daily discharge is calculated as the average measurement of the pollutant over the day.

"GRAB" - shall mean an individual sample which is taken from a wastestream on a one (1) time basis with no regard to the flow in the wastestream and without consideration of time.

"MONTHLY" on day each month (the same day each month) and a normal operating day (i.e. the 2nd Tuesday of each month).

"MONTHLY AVERAGE" - discharge limitation means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month, divided by the number of daily discharges measured during that month.

"WEEKLY" - every seventh day (the same day each week) and a normal operating day.

10. Total water consumption shall be recorded for each day's composite using the water meters. Water consumption method must be explained in report.

11. All discharges shall be flow-monitored whenever possible. If flow monitoring cannot be done, flow determination should be a best practical engineering estimate without being economically burdensome to the firm involved. Results and procedure used to determine flow must be included with the analysis report.

12. **Sample Collection Techniques for Single Discharge Lines**

On single discharge lines (all regulated wastes discharge through one outlet), sample collection for the required parameters will be collected according to the following:

a. The following parameters should only be analyzed on manually taken grab samples:

pH
Temperature
Chlorine Residual
Dissolved Oxygen
Fecal Coliforms

SAMPLING MEASUREMENT AND ANALYTICAL GUIDELINES (cont'd.)

Sample Collection Techniques for Single Discharge Lines (cont'd.)

b. The following parameters should only be analyzed on composite samples made from manually collected grab samples:

Oil and Grease
Purgeable Halocarbons (EPA 601)
Purgeable Aromatics (EPA 602)
Acrolein/Acrylonitrile (EPA 603)
Purgeables (EPA 624)
Cyanide

For a discharge period of one hour or less, a single grab sample may be collected for analysis of the above parameters.

For a discharge period between one and 24 hours, a minimum of four (4) grabs will be taken at regular intervals and lab composited for analysis of the above parameters.

Proper sample collection containers and techniques must be used.

c. The following parameters should be analyzed on an automatically collected composite sample or, if an auto sampler is unavailable, a manually collected composite sample:

Metals
Phenol-4AAP
BOD
Total Suspended Solids
Total Phosphorus
TKN/Ammonia
Base/Neutral Acids (EPA 625)
EPA Methods 604-614

(For a continuous discharge, a minimum of forty-eight (48) individual grab samples (at half-hour intervals) shall be collected and combined to constitute a twenty-four (24) hour composite sample. For intermittent discharges of less than four (4) hours duration, grab samples shall be taken at a minimum of fifteen (15) minute intervals.)

13. **Sample Collection Techniques for Multiple Discharge Lines**

For multiple discharge lines (all regulated wastes discharge through more than one outlet), sample collection for the required parameters will be collected according to the following:

a. The following parameters must be analyzed separately from each discharge line's individual grab samples:

pH
Temperature
Chlorine Residual
Dissolved Oxygen
Fecal Coliforms

b. For the following parameters, a composite made from manually collected grab samples must be used. A separate composite must be made from each discharge line. The composites from the different discharge lines cannot be combined for analysis.

Oil and Grease
Purgeable Halocarbons (EPA 601)
Purgeable Aromatics (EPA 602)
Acrolein/Acrylonitrile (EPA 603)
Purgeables (EPA 624)
Cyanide

SAMPLING MEASUREMENT AND ANALYTICAL GUIDELINES (cont'd.)

Sample Collection Techniques for Multiple Discharge Lines (cont'd.)

For a discharge period of one hour or less, a single grab sample may be collected for analysis of the above parameters.

For a discharge period between one and 24 hours, a minimum of four (4) grabs will be taken at regular intervals and lab composited for analysis of the above parameters.

Proper sample collection containers and techniques must be used.

c. For the following parameters, composites from each discharge line may be combined proportional to their flow only if physical flow measurement can be done.

Metals
Phenol-4AAP
BOD
Total Suspended Solids
Total Phosphorus
TKN/Ammonia
Base/Neutral Acids (EPA 625)
EPA Methods 604-613

(For a continuous discharge, a minimum of forty-eight (48) individualgrab samples (at half-hour intervals) shall be collected from each discharge line and combined to constitute a twenty-four (24) hour composite sample. For intermittent discharges of less than four (4) hours duration, grab samples shall be taken at a minimum of fifteen (15) minute intervals.)

14. A chain of custody log sheet is required to be used for all sampling and analysis of each sample and attached to the report.

15. The handling, storage preservation and analytical procedures for each parameter shall follow Environmental Protection Agency Guidelines published in the Federal Register, pursuant to 40 CFR 136, dated October 26, 1984, or as subsequently revised.

16. The monitoring results report, sampling record(s), and chain of custody log sheet must be sent by the industry to the District and not by the consulting firm.

17. If any exemptions or changes have to be made due to unique situations, the District must be notified immediately for approval. When approved, a written explanation of the change must accompany the analysis sheet.

18. Any split samples that indicate a discrepenancy of greater than 20% may be grounds for requring resampling and analyses.

19. **"QUALITY CONTROL"** - All additional analyses which were run along with self-monitoring samples as a quality control measure, such as field blanks, duplicates or matrix spikes, etc., must be included in the self-monitoring report submitted to the District. Applicable quality control is mandatory in cases where the industrial user is conducting additional self-monitoring as a result of non-compliance.

20. All analyses conducted pursuant to this permit shall be performed by a laboratory certified for said analyses by the New York State Department of Health.

APPENDICES

Table WSR - 1

Form IDFS
Industrial Discharge Flow Sheet

Table WSR-1

Company Name:_____

Date of sample collection: _____

Wastestream-Overall Facility Wastestream

Parameter	Discharge limitation	Results
Flow	180,000 GPD	
Phenol (4AAP)	1.0 lb per day – action level	
Zinc	0.5 pounds per day	
Trichloroethane	1.0 mg/L	
Trichloroethylene	1.0 mg/L	
Total suspended solids	No limit	
pH	5.5 to 9.5	
Lead	Surveillance only	
Nickel	Surveillance only	
Copper	Surveillance only	
Chromium	Surveillance only	
Total toxic organics	Surveillance only	

Form IDFS

Industrial Discharge Flow Sheet

Company Name:_____

Month:_____

Wastestream: Overall facility wastestream

Date	Flow (Gallons)

Monthly Average (Gallons) _____

Maximum Monthly Flow (Gallons):_____

Enclosure 1

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. 932007

Site Name Carborundum-Abrasive Division

Site Address: 6600 Walmore Road Zip Code: 14304
City/Town: Wheatfield
County: Niagara
Site Acreage: 1.0

Reporting Period: July 05, 2009 to March 01, 2011

	YES	NO
1. Is the information above correct?	☑	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☑
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☑
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☑	☐
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☑

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☑	☐
7. Are all ICs/ECs in place and functioning as designed?	☑	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. 932007 Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
146.00-1-9.2	Patriot Wheatfield Assoc, LP c/o P.Equit	Monitoring Plan O&M Plan

Box 4

Description of Engineering Controls

Parcel	Engineering Control
146.00-1-9.2	Cover System

Control Description for Site No. 932007

Parcel: 146.00-1-9.2

Clay landfill cap inspected quarterly with bi-ennial physical and chemical groundwater quality monitoring. Mowing performed annually in late summer after ground nesting birds have fledged.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☑	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☑	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 932007

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 and/or 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Douglas M Wright (print name) at 6600 Walmore Road, Wheatfield, NY 14304 (print business address)

am certifying as Remedial Party (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Signature of Owner or Remedial Party Rendering Certification — Date: 3/30/2011

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I P. Michael Terlecky (print name) at Frontier Technical Assoc. Inc. (print business address) 9120 Main St. Clarence NY 14031

am certifying as a Qualified Environmental Professional for the St Gobain Abrasives, Inc. (Owner or Remedial Party)

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification — Stamp (Required for PE) — Date: 3/31/2011