February 24, 2006

Mr. Joseph Handy
Handy Family Trust
75 South Winooski Street
Burlington, Vermont 05401

RE: Site Investigation Report – Simon's Chimney Corners Store
Ethan Allen Highway, Colchester, Vermont
SMS Site #98-2420, Verterre Project #05053

Dear Mr. Handy:

The Verterre Group, Inc.® (Verterre) has prepared the enclosed Site Investigation Report to detail the findings of recent subsurface investigation activities at the Simon's Chimney Corners Store on Route 7 in Colchester, Vermont (the Site). Verterre installed soil borings to further assess the extent of petroleum contamination at the Site in response to the July 28, 2000 and March 23, 2005 correspondence from the Vermont Sites Management Section.

On December 15, 2005, Verterre installed a total of five (5) soil borings. Groundwater was not encountered during the subsurface investigation and refusal, a good indication of bedrock, was encountered at depths ranging from 1.0 to 12.3 feet below ground surface. Soil samples were collected from each boring and field screened for volatile organic compounds (VOCs) using a photoionization detector. VOCs were detected in soil samples at concentrations from 1.0 to 328 parts per million by volume.

On January 2, 2006, Verterre returned to the Site to collect soil samples from the borings for laboratory analysis of VOCs. The highest total VOC concentration was found in boring B-4 at 6,212 parts per billion (ppb).

In addition, Verterre collected a water sample from the on-Site supply well for laboratory analysis of VOCs. The supply well results showed no target contaminants detected above detection limits.

Based on the results of the Site Investigation and the subsequent soil and supply well sampling, it appears that petroleum-contaminated soil (from the former gasoline underground storage tanks) is present primarily in the former tank cavity area. Since bedrock was encountered before groundwater was reached and no groundwater samples could be collected, Verterre recommends the collection of surface water samples from a potentially down gradient swale/rivulet.

Please do not hesitate to contact me if you have any questions regarding the enclosed report. I can be reached at (802) 654-8663, ext. 102, or via e-mail at **johnd@vterre.com**.

Sincerely,
The Verterre Group, Inc.®

John R. Diego
Project Manager

cc: Mr. Ashley Desmond, VT SMS.
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THE VERTERRE GROUP, INC

Environmental Scientists and Engineers

Phase (check one)	Type (check one)
✓ Initial Site Investigation	☐ Work Scope
☐ Corrective Action Feasibility Investigation	✓ Technical Report
☐ Corrective Action Plan	☐ PCF Reimbursement Request
☐ Corrective Action Summary Report	☐ General Correspondence
☐ Operations & Monitoring Report	

INITIAL SITE INVESTIGATION REPORT
DECEMBER 2005/JANUARY 2006

Simon's Chimney Corners Store
6387 Roosevelt Highway, Route 7
Colchester, Vermont

SMS # 98-2420
Verterre Project # 05053

Date Prepared: February 24, 2006

Report Prepared for:
Mr. Joseph Handy
Handy Family Trust
75 South Winooski Street
Burlington, Vermont 05401

Written By: Deirdra I. Diehl
Deirdra I. Diehl, Staff Scientist

Reviewed By: _____
John R. Diego, Vice President

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414 Roosevelt Highway, Suite 200 Colchester, Vermont 05446 · *Tel* 802.654.8663 · *Fax* 802.654.8667

1.0 INTRODUCTION AND BACKGROUND

This report was prepared by The Verterre Group, Inc.® (Verterre) on behalf of Mr. Joseph Handy to present the findings of our recent Site Investigation conducted at Simon's Chimney Corners Store (the Site). The Site is located on the west side of Route 7 in Colchester, Chittenden County, Vermont (as shown on the Site Location Map, **Figure 1**, and Site Plan, **Figure 2**). The Site is currently used as a retail gasoline station, convenience store, and residential apartment. Site Photographs are presented in **Appendix A**.

During the removal of two 4,000-gallon gasoline underground storage tanks (USTs) at the Site on May 12, 1998, a release of petroleum was discovered, and soil was found to be impacted. The tanks were replaced in 1998 with a 7,000-gallon diesel/kerosene and two 7,000-gallon gasoline tanks.

As a result of the soil contamination discovered in 1998, the Vermont Sites Management Section (SMS) requested a subsurface investigation. Verterre conducted a subsurface investigation in December 2005 and January 2006, the results of which are summarized in this report.

2.0 COMPLETED WORK SCOPE

The following activities were performed as part of this Site Investigation:

- Review files at the Vermont Department of Environmental Conservation documenting past Site work;
- Clearance of the Site and vicinity for underground utilities by contacting Dig Safe;
- Advancement of five (5) on-Site soil borings using Geoprobe® Direct Push technology;
- Field screening of soil samples for the presence of volatile organic compounds (VOCs) with a photoionization detector (PID);
- Collection of soil samples for laboratory analysis of VOCs via US EPA Method 8260;
- Collection of a water sample from the on-Site supply well for laboratory analysis of VOCs via US EPA Method 524.2;
- Surveying of the soil borings, potential receptors, and important Site features;
- Development of a Site map including the pertinent surveyed features; and,
- Preparation of this Site Investigation Report with findings, conclusions, and recommendations.

3.0 SITE LOCATION AND DESCRIPTION

Site Owner:	Handy Family Trust
UST Owner:	Salamin Handy's Convenience Stores, Inc.
Site Address:	6387 Roosevelt Highway (Rt. 7) Colchester, Vermont
Latitude:	44° 35' 15.74" North
Longitude:	73° 10' 2.50" West

Zoning:	General Development (GD-4)
Utilities:	Water – On-Site supply well Sewer – on-SITE mound system Electric – overhead Telephone – overhead
Structures:	Two-story convenience store and apartment with a basement and pump island with a canopy.

4.0 SUBSURFACE INVESTIGATION PROCEDURES

The primary objectives of the subsurface investigation were to evaluate the extent of contamination and to determine potential impact to area receptors. To accomplish these objectives, Verterre installed soil borings, conducted a Site survey, and collected soil samples and a supply well sample for laboratory analysis.

4.1 Advancement of Soil Borings

Verterre advanced a total of five (5) soil borings on December 15, 2005 in the locations shown on **Figure 2** using Verterre's Geoprobe®. Logs for these borings are presented in **Appendix B**. These borings were advanced to depths ranging from approximately 3.5 to 12.3 feet below ground surface (bgs). All borings were logged, describing soil strata conditions, and field screened for VOCs with a PID using conventional headspace techniques. A Thermo Environmental Instruments Model 580B Organic Vapor Meter with a 10.6 eV photoionizing lamp was employed to detect the presence of VOCs. The PID was calibrated to a 95-ppmv isobutylene standard, referenced to benzene. Groundwater monitoring wells were not installed since groundwater was not encountered during the investigation. Refusal, a good indication of bedrock, was encountered in each boring.

BORING SUMMARY TABLE

Boring ID	Boring Location	Depth of Boring/ Depth to Refusal (feet bgs)
B-1	Approximately 55 feet west of the USTs.	3.5
B-2	Approximately 20 feet east of the USTs.	9.5
B-3	Approximately 18 feet east of the gasoline pumps.	12.3
B-4	Approximately 20 feet southeast of the gasoline pumps.	11.0
B-5	Approximately 18 feet east of the diesel pump.	8.4

The subsurface conditions encountered during the investigation are described in **Section 5.0**.

4.2 Soil and Supply Well Sampling

After consulting with Ashley Desmond of the State of Vermont SMS, Verterre returned to the Site on January 2, 2006 to collect soil samples for laboratory analysis. Soil samples were collected at the bedrock interface of borings B-4 and B-5. The soils samples were submitted for VOC analysis via US EPA Method 8260.

Verterre also collected a supply well sample on January 11, 2006. The water sample was collected for laboratory analysis via US EPA Method 524.2 for VOCs.

Endyne, Inc. performed all analyses for this investigation. The analytical results are discussed in **Section 5.0**.

4.3 Site Survey

Following the subsurface investigation, a Site survey was conducted on January 11, 2006. A Topcon AT-G6 auto level was used to perform a stadia survey to identify the location of the soil borings and other pertinent Site features. The collected data was used to create the Site Plan (**Figure 2**).

5.0 SOIL BORINGS EVALUATION

5.1 Soil Sample PID Screening Results

As described in **Section 4.1**, soil samples collected from borings B-1 through B-5 were screened using a PID. The PID readings ranged from 1.0 to 328 parts per million by volume (ppmv). The PID data obtained during drilling is presented on the boring logs provided in **Appendix B**.

PID readings in the 0-4 foot bgs interval ranged from 1.6 ppmv (in B-1 and B-2) to 4.3 ppmv (in B-3). PID readings in the 4-8 foot bgs interval ranged from 2.2 ppmv (in B-2) to 328 ppmv (in B-4). PID readings in the 8+ foot bgs interval ranged from 1.0 ppmv (in B-3) to 75 ppmv (in B-4).

5.2 Site Geology and Conceptual Model

According to "Geological Soil Survey of Chittenden County, Vermont [1]", soil beneath the Site consists of somewhat excessively drained Farmington extremely rocky loam with slopes of 5-20%, and bedrock beneath the Site consists of quartzite or limestone.

Based on the soil boring evaluation, the general soil stratigraphy of the Site (near borings) consists of a sand and gravel layer atop of a clay layer. Underlying this clay layer appears to be basal till over bedrock. The general soil stratigraphy is further described in the soil profile below:

Soil Layer	Depth Interval (feet bgs)	Soil Description
1	0 to 3-4	Sand with some gravel, dry to moist.
2	3-4 to 8-10	Clay, moist.
3	8-10+	Till or bedrock, moist.
4	10+	Bedrock.

[1] US Department of Agriculture Soil Conservation Service in cooperation with VT Agricultural Experiment Station and VT Department of Forests and Parks, 1967.

For a more detailed description of geological units, see the Boring Logs in **Appendix B**. Combining the PID screening results with the soil evaluation indicates that the bulk of the petroleum contamination is southeast of the current gasoline pumps approximately 4 to 7 feet bgs.

5.3 Soil Analytical Results

The January 2006 soil sampling results are summarized on **Table 1**. The complete analytical laboratory report for the January 2006 soil samples is provided in **Attachment 1**.

Contaminants of concern (COCs) were detected above the method detection limits (MDLs) in boring B-4 at 6.2 milligrams per kilogram (mg/kg). B-4 is located southeast of the current gasoline pumps. COCs were not detected above their respective MDLs in B-5.

Benzene was detected in B-4 at 0.4 mg/kg.

n-Butylbenzene was detected above the MDL in B-4 at 0.1 mg/kg.

Toluene was detected at 0.1 mg/kg in B-4.

Ethylbenzene was detected above the MDL in B-4 (0.9 mg/kg).

Total xylenes were detected in boring B-4 at 2.2 mg/kg.

Isopropylbenzene was detected in B-4 at 0.1 mg/kg.

1,3,5 trimethylbenzene (135 TMB) was detected in B-4 at 0.5 mg/kg.

1,2,4 trimethylbenzene (124 TMB) was detected in B-4 (1.4 mg/kg).

Naphthalene was detected above the MDL in B-4 at 0.13 mg/kg.

n-Propylbenzene was also detected above the MDL in B-4 at 0.3 mg/kg.

The State of Vermont does not currently have soil quality enforcement standards, so the laboratory results were compared to the US EPA Region IX Project Remediation Goals (PRGs) for residential properties. No target compounds were detected above their respective US EPA Region IX PRGs for residential properties in any soil sample submitted for laboratory analysis.

5.4 Supply Well Analytical Results

The complete analytical laboratory report for the January 2006 supply well sample is provided in **Attachment 1**.

No target contaminants were detected above the MDLs in the supply well.

5.5 QA/QC Results

The laboratory data was evaluated for the following parameters prior to acceptance in this report:

- Correct sample ID's;
- Analysis date within method specified holding times;
- Acceptable detection limit multipliers;
- Acceptable matrix spike (MS) and matrix spike duplicate (MSD) recoveries, where applicable;
- Acceptable relative percent difference between the MS and MSD, where applicable; and,
- Acceptable surrogate recoveries.

Based on Verterre's evaluation of these parameters, the data was determined to be acceptable.

6.0 RECEPTOR EVALUATION

Sensitive receptors in the vicinity of the Site include: soil, on-Site and area supply wells, on-Site building basement, utility corridors, and a swale/rivulet located southeast of the Site, across Route 7.

PID screening and soil evaluations from the installation of soil borings, described above, suggest that the bulk of the gasoline contamination in the soil is located southeast of the current gasoline pump island at depths of 4 to 7 feet bgs.

The area has access to municipal water: however, supply wells are located on-Site and in the area. No target contaminants were detected above the MDLs in the Site supply well. Based on the Private Well Locator interactive map on the Vermont Agency of Natural Resources website, there are supply wells in the general area; however, these wells are located more than 1,500 feet from the Site. The Arbortech, Inc. supply well, located approximately 1,700 feet from the Site, is potentially up gradient. Another private supply well (registered to Howard Lyman) is located approximately 1,500 feet to the southeast, potentially down gradient.

On February 3, 2006, Verterre screened the indoor air of the basement of the on-Site building for VOCs with a PID equipped with a 10.6 eV photoionizing lamp. All results were below detection limits.

Two (2) stormwater catch basins were observed on the northeastern portion of the Site, adjacent to US Route 7. The municipal waterline appears to be located along the eastern side of US Route 7.

A swale/rivulet was noted approximately 200 feet southeast of the Site, leading toward Allen Brook (located approximately 700 feet east of the Site). The swale/rivulet was not inspected during this investigation and appears to be potentially down gradient of the Site.

7.0 FINDINGS AND CONCLUSIONS

Based on the investigation results, Verterre provides the following findings and conclusions regarding this Site:

- Five (5) soil borings were advanced to define the degree and extent of contamination;
- No groundwater monitoring wells were installed because groundwater was not encountered;
- Refusal on bedrock occurred during the installation of each soil boring;
- A Site survey was completed, and borings, the supply well, and additional features were added to the Site map;
- PID screening and soil evaluations from the installation of soil borings, which ranged from 1.0 to 328 ppmv, suggest that the bulk of the gasoline contamination in the soil is located southeast of the current gasoline pump island at depths of 4 to 7 feet bgs;
- VOCs detected in the soil collected for laboratory analysis, do not exceed the US EPA Region IX PRGs for residential properties;
- No target contaminants were detected above the MDLs in the supply well; and,
- Threatened and impacted receptors associated with the Site primarily include soil beneath the Site.

8.0 RECOMMENDATIONS

Based on the information collected to date, it appears that the only sensitive receptor impacted by the former UST system is the soil beneath the Site. Since no groundwater was encountered during this investigation and no groundwater samples could be collected, Verterre recommends the collection of surface water samples from a potentially down gradient swale/rivulet.

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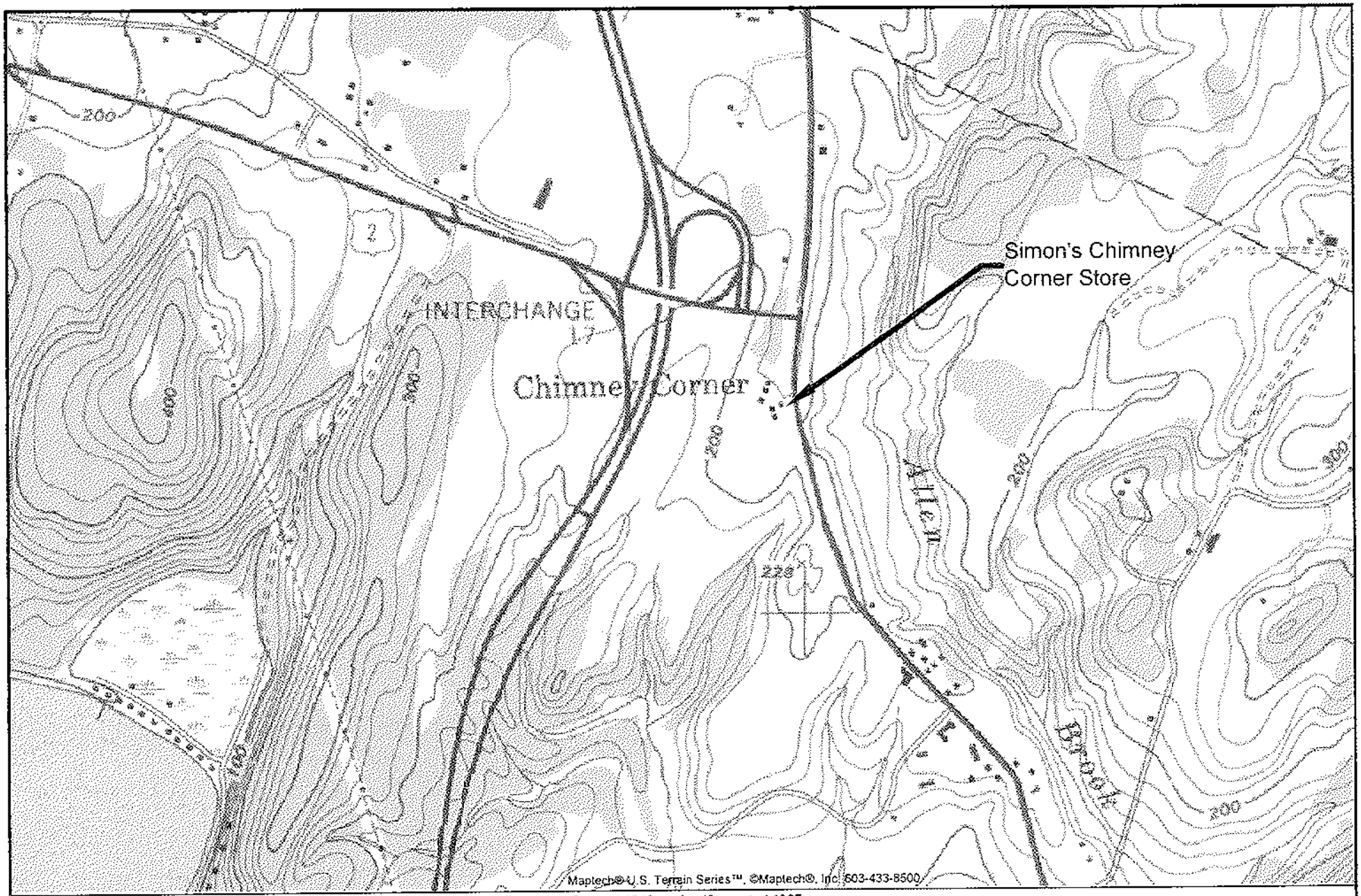
FIGURES



SOURCE: USGS 7.5' Minute Topographic Map Series Colchester, Vermont Quadrangle. Created 1948, revised/inspected 1987.

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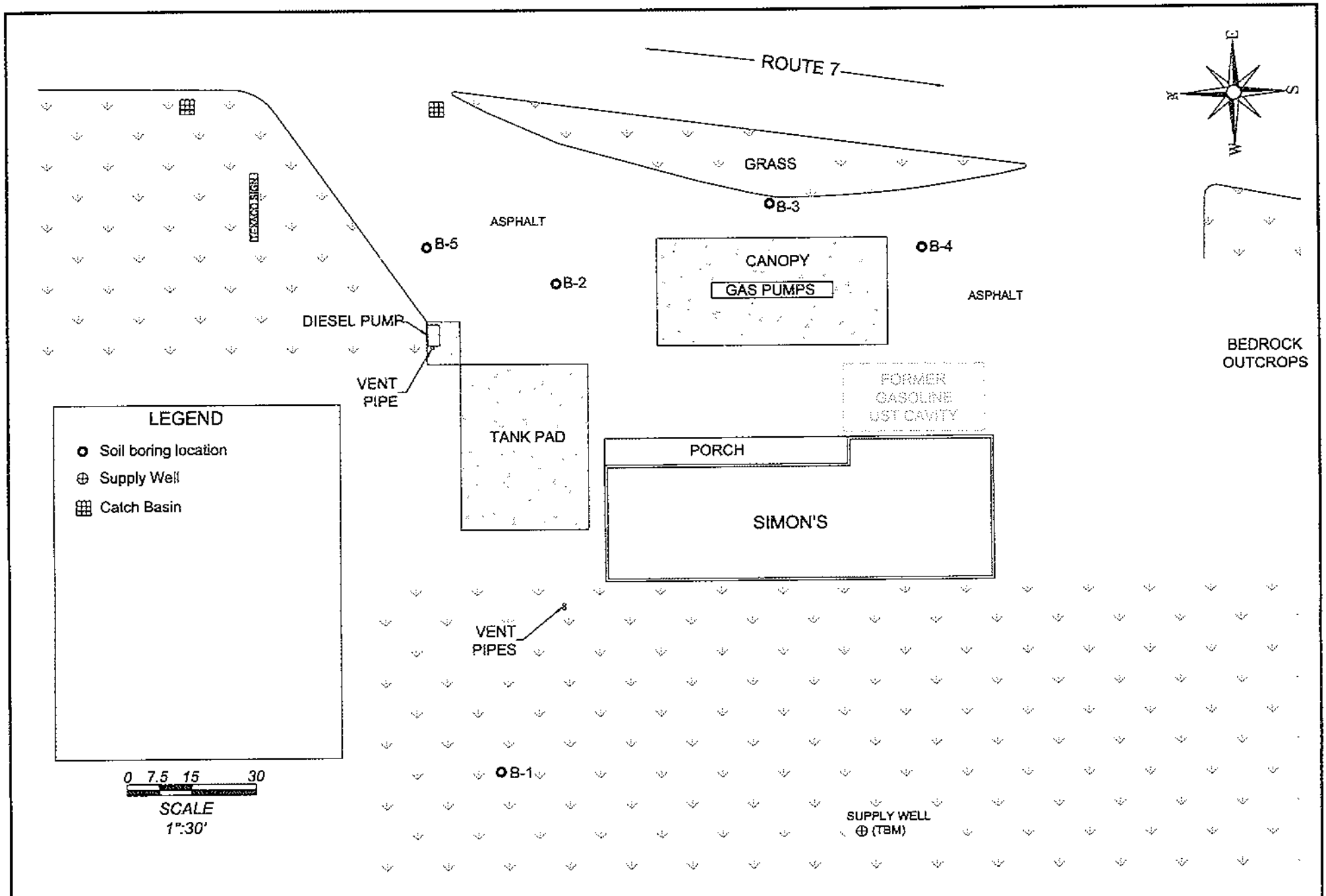
Fs1:/project/05053/Site Location Map.dwg

Project #05053	DRAWN BY: DID CHECKED BY: MER APPROVED BY: JRD DATE: 01/23/06 SCALE: 1" = 1,000'	**The Verterre Group, Inc.®** 414 Roosevelt Highway - Suite 200 Colchester, Vermont 05446 (802) 654-8663	**FIGURE 1** **SITE LOCATION MAP** Simon's Chimney Corner Store Colchester, Vermont



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FS1:\PROJECT\05053\SITE PLAN.DWG

Verterre Project #05053

DRAWN BY:	TMA/DID
CHECKED BY:	
APPROVED BY:	
DATE:	01/16/06
SCALE:	1" = 30'

THE VERTERRE GROUP, INC.®
414 Roosevelt Highway - Suite 200
Colchester, Vermont 05446
(802) 654-8663

FIGURE 2
SITE PLAN

Simon's Chimney Corners
Colchester, Vermont

TABLE

TABLE 1

SUMMARY OF SOIL QUALITY

Simon's Chimney Corner Store
Colchester, Vermont

Compound	Benzene	n-Butyl benzene	Toluene	Ethyl-benzene	Total Xylenes	Isopropyl benzene	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	Naphthalene	n-Propyl benzene	Total COC
Sample ID/Date Sampled	Concentration (mg/kg dry wt)										
B-4 / January 2, 2006	0.439	0.103	0.121	0.892	2.22	0.103	0.489	1.41	0.133	0.302	6.212
B-5 / January 2, 2006	<0.14	<0.14	<0.14	<0.14	<0.28	<0.14	<0.14	<0.14	<0.28	<0.14	nd
EPA Region IX PRGs	0.64	240	520	400	270	ne	21	52	ne	240	ne

Notes:

1. PRGs - Project Remediation Goals, residential limits.
2. ne - PRG not established.
3. **Bold** and *italic* numbers indicate concentrations that exceed PRG.
4. All samples were analyzed for VOC's via US EPA Method 8260.

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The Verterre Group, Inc.

APPENDIX A

Simon's Chimney Corner Store
Colchester, Vermont

Photo 1: The Site, looking south. (1/13/06)

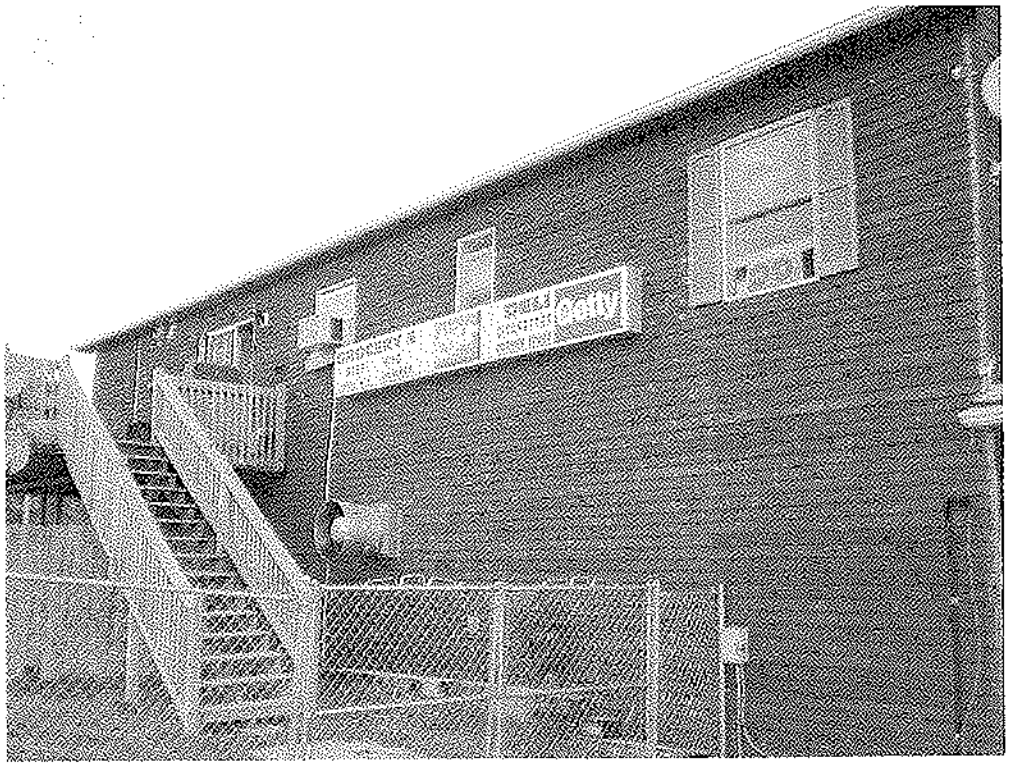

Photo 2: Back of building, showing apartment. (8/2/05)

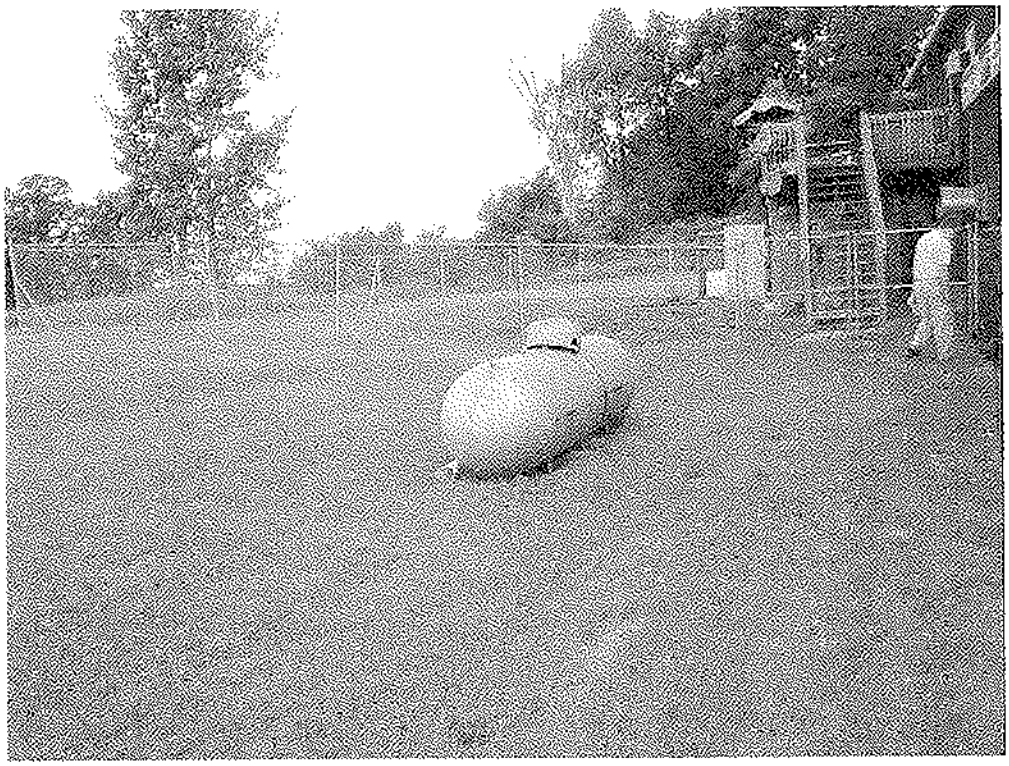

Photo 3: Back of property. (8/2/05)

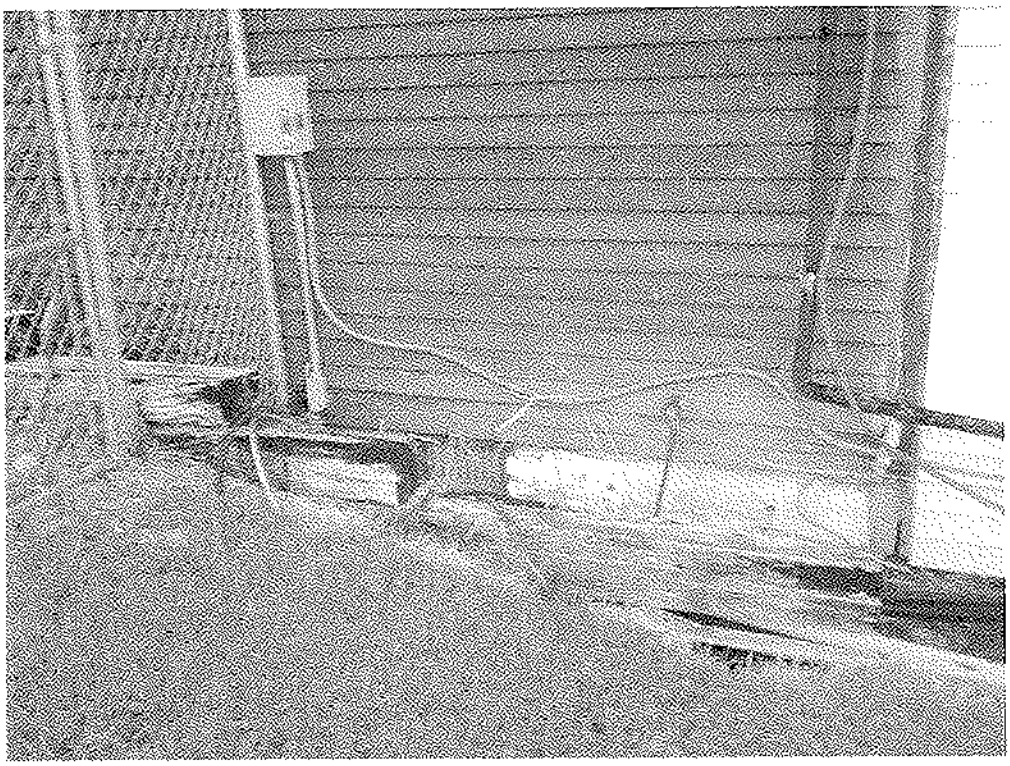

Photo 4: Back of building showing basement. (8/2/05)

Photo 5: Supply well west of the Site building. (8/2/05)

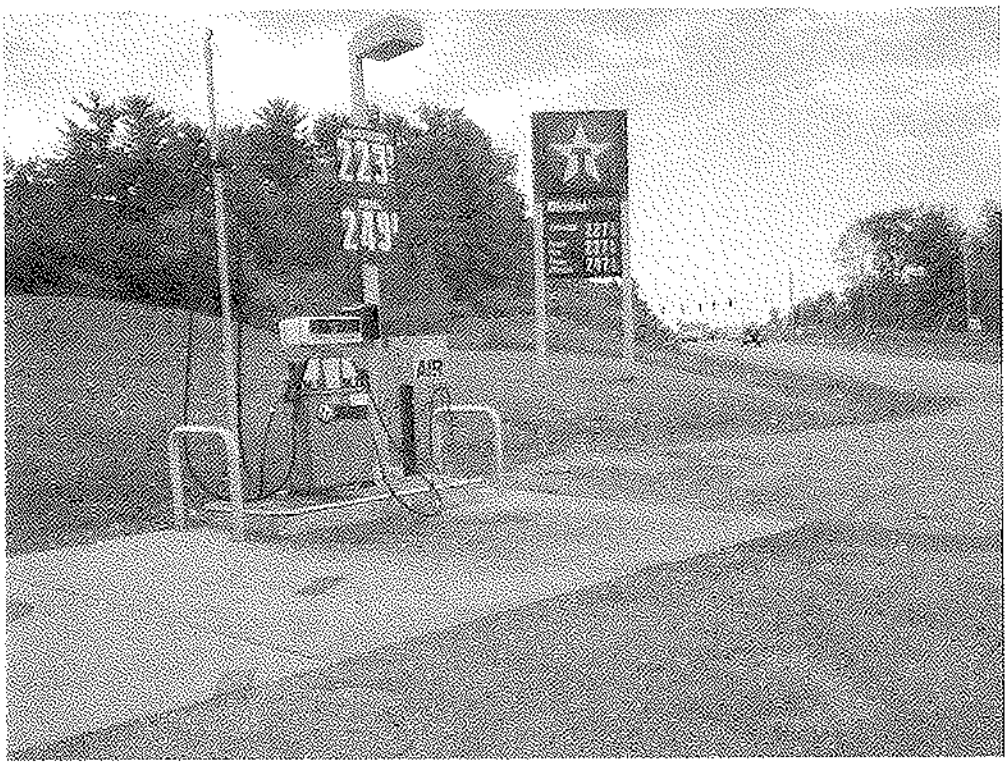

Photo 6: Diesel area northern side of Site, looking north. (8/2/05)

Photo 7: Easterly adjacent property, across Route 7, looking east. (1/13/06)

APPENDIX B

MONITORING WELL/SOIL BORING LOG

THE VERTERRE GROUP, INC
Environmental Scientists and Engineers
414 Roosevelt Highway Colchester, Vermont 05446
(802) 654-8663 FAX: (802) 654-8667

Project Name: **Simon's Chimney Corners**
Location: **Colchester, Vermont**
Project #: **05-053**

WELL/ BORING ID: B-1

INSTALL DATE:	December 15, 2005	WELL DEPTH: NA	BORING DEPTH: 3.5 ft
VERTERRE REP:	R. Vandenberg	DEPTH TO WATER: (during drilling) NA	
DRILLING CO:	The Verterre Group Colchester, VT	SCREEN DIA: NA	DEPTH: NA
		SCREEN TYPE/SIZE: NA	
DRILLING METHOD:	Geoprobe® Tools	RISER TYPE: NA	
SAMPLING METHOD:	Macrocore	RISER DIA.: NA	DEPTH: NA
REFERENCE POINT (RP):	Grade	GUARD TYPE: NA	
ELEVATION OF RP:	N/A	RISER CAP: NA	
REMARKS:	No well installed.		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES*	LEGEND
0 4 8 12 16 20 24	NO WELL INSTALLED	0-3.5'	1.6	48" Recovery	Clay, brown, dense. Refusal at 3.5 feet (bedrock?) **General Notes:** Moved rig over 10' and attempted another boring, but refusal was also obtained at 1.0 feet. Bedrock on the surface nearby suggests that the refusals were most likely on bedrock.	CEMENT GROUT NATIVE BACKFILL BENTONITE SEAL SAND PACK WELL SCREEN RISER PIPE HS HEAD SPACE WATER LEVEL (APPROXIMATE)

GRANULAR SOILS		COHESIVE SOILS		PROPORTIONS USED		NOTES:
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY	TRACE	0-10%	1. See SITE Plan for boring locations
0-4	V.LOOSE	<2	V.SOFT	LITTLE	10-20%	
4-10	LOOSE	2-4	SOFT	SOME	20-35%	
10-20	M.DENSE	4-8	M.STIFF	AND	35-50%	
30-50	DENSE	8-15	STIFF			
>50	V.DENSE	15-30	V.STIFF			
		>30	HARD			

THE VERTERRE GROUP, INC
Environmental Scientists and Engineers
414 Roosevelt Highway Colchester, Vermont 05446
(802) 654-8663 FAX: (802) 654-8667

MONITORING WELL/SOIL BORING LOG

Project Name: Simon's Chimney Corners
Location: Colchester, Vermont
Project #: 05-053

WELL/ BORING ID: B-2

INSTALL DATE:	December 15, 2005	WELL DEPTH: NA	BORING DEPTH: 9.5 ft
VERTERRE REP:	R. Vandenberg	DEPTH TO WATER: (during drilling) NA	
DRILLING CO:	The Verterre Group Colchester, VT	SCREEN DIA: NA	DEPTH: NA
		SCREEN TYPE/SIZE: NA	
DRILLING METHOD:	Geoprobe® Tools	RISER TYPE: NA	
SAMPLING METHOD:	Macrocore	RISER DIA.: NA	DEPTH: NA
REFERENCE POINT (RP):	Grade	GUARD TYPE: NA	
ELEVATION OF RP:	N/A	RISER CAP: NA	
REMARKS:	No PVC well installed.		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES*	LEGEND
0	NO WELL INSTALLED	0-4'	1.6	47" Recovery	Top 3" - Asphalt; Next 24" - Sand, fine to coarse, brown; some gravel, fine; trace silt; Next 20" - Clay, brown to gray, dense to very dense; No odor; Dry to Moist.	CEMENT GROUT; NATIVE BACKFILL; BENTONITE SEAL; SAND PACK; WELL SCREEN; RISER PIPE; HS HEAD SPACE; WATER LEVEL (APPROXIMATE)
4		4-8'	2.3	48" Recovery	Clay, brown, dense to very dense; No odor.	
8		8-9.5'	3.5	48" Recovery	Clay, brown, dense to very dense; some 1 to 2 mm very fine sand stringers; Slight odor at bottom; broken bedrock noted at bottom of sampling suggesting that a basal till is formed directly atop bedrock. Refusal at 9.5 feet on bedrock.	
12						
16						
20						
24						

GRANULAR SOILS		COHESIVE SOILS		PROPORTIONS USED	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY	TRACE	0-10%
0-4	V.LOOSE	<2	V.SOFT	LITTLE	10-20%
4-10	LOOSE	2-4	SOFT	SOME	20-35%
10-30	M.DENSE	4-8	M.STIFF	AND	35-50%
30-50	DENSE	8-15	STIFF		
>50	V.DENSE	15-30	V.STIFF		
		>30	HARD		

NOTES: 1. See SITE Plan, for boring locations

MONITORING WELL/SOIL BORING LOG

THE VERTERRE GROUP, INC
Environmental Scientists and Engineers
414 Roosevelt Highway Colchester, Vermont 05446
(802) 654-8663 FAX: (802) 654-8667

Project Name: **Simon's Chimney Corners**
Location: **Colchester, Vermont**
Project #: **05-053**

WELL/ BORING ID: B-3

INSTALL DATE:	December 15, 2005	WELL DEPTH: NA	BORING DEPTH: 12.3 ft
VERTERRE REP:	R. Vandenberg	DEPTH TO WATER: (during drilling)	NA
DRILLING CO:	The Verterre Group Colchester, VT	SCREEN DIA: NA	DEPTH: NA
		SCREEN TYPE/SIZE: NA	
DRILLING METHOD:	Geoprobe® Tools	RISER TYPE: NA	
SAMPLING METHOD:	Macrocore	RISER DIA.: NA	DEPTH: NA
REFERENCE POINT (RP):	Grade	GUARD TYPE: NA	
ELEVATION OF RP:	N/A	RISER CAP: NA	
REMARKS:	No PVC well installed.		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES*	LEGEND
0	NO WELL INSTALLED	0-4'	4.3	48" Recovery	Sand, fine to very coarse, brown some gravel, fine to medium trace silt; No odor; Moist.	CEMENT GROUT; NATIVE BACKFILL; BENTONITE SEAL; SAND PACK; WELL SCREEN; RISER PIPE; HS HEAD SPACE; WATER LEVEL (APPROXIMATE)
4		4-7'	14.2	18" Recovery	Clay, gray, dense to very dense; some wood; The wood has an odor of old degraded hydrocarbons.	
		7-10'	4.0	48" Recovery	Clay, gray, dense to very dense; trace gravel, fine moist; slight odor at bottom.	
8						
		10-12.3'	1.0	36" Recovery	Clay, gray, trace gravel; Evidence of basal till; Broken rock fragments at bottom of sampler moist; Slight hydrocarbon odor.	
12					Refusal at 12.3 feet on bedrock.	
16						
20						
24						

GRANULAR SOILS	
BLOWS/FT	DENSITY
0-4	V.LOOSE
4-10	LOOSE
10-30	M.DENSE
30-50	DENSE
>50	V.DENSE

COHESIVE SOILS	
BLOWS/FT	DENSITY
<2	V.SOFT
2-4	SOFT
4-8	M.STIFF
8-15	STIFF
15-30	V.STIFF
>30	HARD

PROPORTIONS USED	
TRACE	0-10%
LITTLE	10-20%
SOME	20-35%
AND	35-50%

NOTES: 1. See SITE Plan for boring locations

MONITORING WELL/SOIL BORING LOG

THE VERTERRE GROUP, INC
Environmental Scientists and Engineers
414 Roosevelt Highway Colchester, Vermont 05446
(802) 654-8663 FAX: (802) 654-8667

Project Name: Simon's Chimney Corners
Location: Colchester, Vermont
Project #: 05-053

WELL/ BORING ID: B-4

INSTALL DATE:	December 15, 2005	WELL DEPTH: NA	BORING DEPTH: 11 ft
VERTERRE REP:	R. Vandenberg	DEPTH TO WATER: (during drilling)	NA
DRILLING CO:	The Verterre Group Colchester, VT	SCREEN DIA: NA	DEPTH: NA
		SCREEN TYPE/SIZE: NA	
DRILLING METHOD:	Geoprobe Tools	RISER TYPE: NA	
SAMPLING METHOD:	Macrocore	RISER DIA.: NA	DEPTH: NA
REFERENCE POINT (RP):	Grade	GUARD TYPE: NA	
ELEVATION OF RP:	N/A	RISER CAP: NA	
REMARKS:	No PVC well installed.		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES*	LEGEND
0	NO WELL INSTALLED	0-4'	3.8	34" Recovery	Top 32"- Sand, fine to coarse, brown; Some gravel, fine; Trace silt; Bottom 4"- Clay, gray, slight hydrocarbon odor; Moist.	CEMENT GROUT; NATIVE BACKFILL
4		4-7'	329 (4') 65 (7')	48" Recovery	Clay, gray, dense to very dense; trace gravel, fine; trace fine sand lenses (1 to 2 mm); hydrocarbon odor; moist.	BENTONITE SEAL; SAND PACK
		7-10'	75	24" Recovery	Top 20"- Clay, gray, dense to very dense; trace gravel, fine; Bottom 1"- Basal till; moist.	WELL SCREEN
8		10-11'	24	36" Recovery	Basal till, dense to very dense; Moist to wet - no groundwater.	RISER PIPE
12					Refusal at 11 feet on bedrock.	HS HEAD SPACE; WATER LEVEL (APPROXIMATE)
16						
20						
24						

GRANULAR SOILS		COHESIVE SOILS		PROPORTIONS USED	
BLOWS FT	DENSITY	BLOWS FT	DENSITY	TRACE	0-10%
0-4	V.LOOSE	<2	V.SOFT	LITTLE	10-20%
4-10	LOOSE	2-4	SOFT	SOME	20-35%
10-30	M.DENSE	4-8	M.STIFF	AND	35-50%
30-50	DENSE	8-15	STIFF		
>50	V.DENSE	15-30	V.STIFF		
		>30	HARD		

NOTES: 1. See SITE Plan. for boring locations

MONITORING WELL/SOIL BORING LOG

THE VERTERRE GROUP, INC
Environmental Scientists and Engineers
414 Roosevelt Highway Colchester, Vermont 05446
(802) 654-8663 FAX: (802) 654-8667

Project Name:	Simon's Chimney Corners
Location:	Colchester, Vermont
Project #:	05-053

WELL/ BORING ID: B-5

INSTALL DATE:	December 15, 2005	WELL DEPTH: NA	BORING DEPTH: 8.4 ft
VERTERRE REP:	R. Vandenberg	DEPTH TO WATER: (during drilling) NA	
DRILLING CO:	The Verterre Group Colchester, VT	SCREEN DIA: NA	DEPTH: NA
		SCREEN TYPE/SIZE: NA	
DRILLING METHOD:	Geoprobe Tools	RISER TYPE: NA	
SAMPLING METHOD:	Macrocore	RISER DIA.: NA	DEPTH: NA
REFERENCE POINT (RP):	Grade	GUARD TYPE: NA	
ELEVATION OF RP:	N/A	RISER CAP: NA	
REMARKS:	No PVC well installed.		

DEPTH IN FEET	WELL PROFILE	SAMPLE DEPTH (FT)	PID (PPMV)	BLOWS/6" AND RECOVERY	SOIL DESCRIPTION AND NOTES*	LEGEND
0	NO WELL INSTALLED	0-4'	2.4	47" Recovery	Top 17"- Sand, fine to coarse, brown; Some gravel, fine; Trace silt; Bottom 28"- Clay, gray, dense to very dense; dry to moist.	CEMENT GROUT; NATIVE BACKFILL; BENTONITE SEAL; SAND PACK; WELL SCREEN; RISER PIPE; HS HEAD SPACE; WATER LEVEL (APPROXIMATE)
4		4-8'	2.4	48" Recovery	Top 22"- Clay, gray, dense to very dense; Bottom 26"- Fill, brown, wet but not saturated; no odors.	
		8-8.4'	1.6	-	Fill, brown, wet but not saturated; no odors.	
8					Refusal at 8.4 feet on bedrock.	
12						
16						
20						
24						

GRANULAR SOILS		COHESIVE SOILS		PROPORTIONS USED	
BLOWS FT	DENSITY	BLOWS FT	DENSITY	TRACE	0-10%
0-4	V.LOOSE	<2	V.SOFT	LITTLE	10-20%
4-10	LOOSE	2-4	SOFT	SOME	20-35%
10-30	M.DENSE	4-8	M.STIFF	AND	35-50%
30-50	DENSE	8-15	STIFF		
>50	V.DENSE	15-30	V.STIFF		
		>30	HARD		

NOTES: 1. See SITE Plan, for boring locations

ATTACHMENT 1

ENDYNE, INC.

Laboratory Services

160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

JAN 1 1 2006

LABORATORY REPORT

Verterre Group
414 Roosevelt Highway
Colchester, VT 05446
Attn: Martha Roy

PROJECT: Simons Chimney Corners/05053
ORDER ID: 42329
RECEIVE DATE: January 4, 2006
REPORT DATE: January 11, 2006

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which include matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT
SW 8260

CLIENT: Verterre Group
PROJECT: Simons Chimney Corners/05053
SITE: B-4
DATE RECEIVED: January 4, 2006
REPORT DATE: January 11, 2006
ANALYSIS DATE: January 9, 2006

ORDER ID: 42329
REFERENCE NUMBER: 266886
DATE SAMPLED: January 2, 2006
TIME SAMPLED: 11:33 AM
SAMPLER: RL
ANALYST: 725

Parameter	Result ug/kg, dry
Benzene	439.
Bromobenzene	< 31.0
Bromochloromethane	< 62.0
Bromodichloromethane	< 31.0
Bromoform	< 31.0
Bromomethane	< 155.
n-Butylbenzene	103.
sec-Butylbenzene	< 31.0
tert-Butylbenzene	< 31.0
Carbon Tetrachloride	< 31.0
Chlorobenzene	< 31.0
Chloroethane	< 155.
Chloroform	< 31.0
Chloromethane	< 93.0
2-Chlorotoluene	< 31.0
4-Chlorotoluene	< 31.0
Dibromochloromethane	< 31.0
1,2-Dibromo-3-Chloropropane	< 62.0
1,2-Dibromoethane	< 62.0
Dibromomethane	< 62.0
1,2-Dichlorobenzene	< 31.0
1,3-Dichlorobenzene	< 31.0
1,4-Dichlorobenzene	< 31.0
Dichlorodifluoromethane	< 155.
1,1-Dichloroethane	< 31.0
1,2-Dichloroethane	< 31.0
1,1-Dichloroethene	< 31.0
cis-1,2-Dichloroethene	< 31.0
trans-1,2-Dichloroethene	< 31.0
1,2-Dichloropropane	< 31.0
1,3-Dichloropropane	< 31.0
2,2-Dichloropropane	< 31.0

Parameter	Result ug/kg, dry
1,1-Dichloropropene	< 31.0
cis-1,3-Dichloropropene	< 31.0
trans-1,3-Dichloropropene	< 31.0
Ethylbenzene	892.
Hexachlorobutadiene	< 62.0
Isopropylbenzene	103.
p-Isopropyltoluene	< 31.0
Methylene Chloride	< 155.
MTBE	< 62.0
Naphthalene	133.
n-Propylbenzene	302.
Styrene	< 31.0
1,1,1,2-Tetrachloroethane	< 62.0
1,1,2,2-Tetrachloroethane	< 62.0
Tetrachloroethene	< 31.0
Toluene	121.
1,2,3-Trichlorobenzene	< 62.0
1,2,4-Trichlorobenzene	< 62.0
1,1,1-Trichloroethane	< 31.0
1,1,2-Trichloroethane	< 31.0
Trichloroethene	< 31.0
Trichlorofluoromethane	< 62.0
1,2,3-Trichloropropane	< 62.0
1,2,4-Trimethylbenzene	1,410.
1,3,5-Trimethylbenzene	489.
Vinyl Chloride	< 62.0
Xylenes, Total	2,220.
Surrogate 1	88.%
Surrogate 2	98.%
Surrogate 3	91.%
UIP's	> 10.
Percent Solids	76.

ENDYNE, INC.

Laboratory Services

160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT
SW 8260

CLIENT: Verterre Group
PROJECT: Simons Chimney Corners/05053
SITE: B-5
DATE RECEIVED: January 4, 2006
REPORT DATE: January 11, 2006
ANALYSIS DATE: January 9, 2006

ORDER ID: 42329
REFERENCE NUMBER: 266887
DATE SAMPLED: January 2, 2006
TIME SAMPLED: 11:29 AM
SAMPLER: RL
ANALYST: 725

Parameter	Result ug/kg, dry	Parameter	Result ug/kg, dry
Benzene	< 14.0	1,1-Dichloropropene	< 14.0
Bromobenzene	< 14.0	cis-1,3-Dichloropropene	< 14.0
Bromochloromethane	< 28.0	trans-1,3-Dichloropropene	< 14.0
Bromodichloromethane	< 14.0	Ethylbenzene	< 14.0
Bromoform	< 14.0	Hexachlorobutadiene	< 28.0
Bromomethane	< 70.0	Isopropylbenzene	< 14.0
n-Butylbenzene	< 14.0	p-Isopropyltoluene	< 14.0
sec-Butylbenzene	< 14.0	Methylene Chloride	< 70.0
tert-Butylbenzene	< 14.0	MTBE	< 28.0
Carbon Tetrachloride	< 14.0	Naphthalene	< 28.0
Chlorobenzene	< 14.0	n-Propylbenzene	< 14.0
Chloroethane	< 70.0	Styrene	< 14.0
Chloroform	< 14.0	1,1,1,2-Tetrachloroethane	< 28.0
Chloromethane	< 42.0	1,1,2,2-Tetrachloroethane	< 28.0
2-Chlorotoluene	< 14.0	Tetrachloroethene	< 14.0
4-Chlorotoluene	< 14.0	Toluene	< 14.0
Dibromochloromethane	< 14.0	1,2,3-Trichlorobenzene	< 28.0
1,2-Dibromo-3-Chloropropane	< 28.0	1,2,4-Trichlorobenzene	< 28.0
1,2-Dibromoethane	< 28.0	1,1,1-Trichloroethane	< 14.0
Dibromomethane	< 28.0	1,1,2-Trichloroethane	< 14.0
1,2-Dichlorobenzene	< 14.0	Trichloroethene	< 14.0
1,3-Dichlorobenzene	< 14.0	Trichlorofluoromethane	< 28.0
1,4-Dichlorobenzene	< 14.0	1,2,3-Trichloropropane	< 28.0
Dichlorodifluoromethane	< 70.0	1,2,4-Trimethylbenzene	< 14.0
1,1-Dichloroethane	< 14.0	1,3,5-Trimethylbenzene	< 14.0
1,2-Dichloroethane	< 14.0	Vinyl Chloride	< 28.0
1,1-Dichloroethene	< 14.0	Xylenes, Total	< 28.0
cis-1,2-Dichloroethene	< 14.0	Surrogate 1	89.%
trans-1,2-Dichloroethene	< 14.0	Surrogate 2	96.%
1,2-Dichloropropane	< 14.0	Surrogate 3	89.%
1,3-Dichloropropane	< 14.0	UIP's	0.
2,2-Dichloropropane	< 14.0	Percent Solids	87.

ENDYNE, INC.
160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY-RECORD

79951

Special Reporting Instructions:

Project Name: 05053 Simon's Chimney Corners	Reporting Address: S. A. →	Billing Address: 414 Roosevelt Hwy Suite 200 Colchester, VT 05446
Endyne Order ID: (Lab Use Only) 42329 — 1 -O, -I, -S	Company: The Vertex Group Contact Name/Phone #: Martha Roy	Sampler Name: Rod Lindsey II Phone #: 802-654-8665

Ref # (Lab Use Only)	Sample Identification	Matrix	GRAB	COMP	Date/Time 1/2/06	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
	B-4	S		X	1133	1	40 ml VOA		8260	ice	
	B-5	S		X	1129	1	40 ml VOA		8260	ice	

Relinquished by:	Date/Time	Received by:	Date/Time	Received by:	Date/Time
[signature]		[signature]	1/4/06 1:10		

New York State Project: Yes _____ No ✓

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	PP13 Metals
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	RCRA8 Metals
4	Nitrite N	9	BOD	14	Turbidity	19	8021B	24	8260/8260B	29	
5	Nitrate N	10	Alkalinity	15	Conductivity	20	8010/8020	25	8270 B/N or Acid	30	

31 Metals (As Is, Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Tl, V, Zn

32 TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides) 33

34 Other

LAB USE ONLY
Delivery: [signature]
Temp:
Comment:

(White, Yellow - Laboratory / Pink - Client)

JAN 31 2006

ENDYNE, INC.

Laboratory Services

160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

Verterre Group
414 Roosevelt Highway
Colchester, VT 05446
Attn: Martha Roy

PROJECT: 05053
ORDER ID: 42535
RECEIVE DATE: January 13, 2006
REPORT DATE: January 25, 2006

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Different groups of analyses may be reported under separate cover.

All samples were prepared and analyzed by requirements outlined in the referenced methods and within the specified holding times.

All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced methods.

Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which include matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits, unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA 524.2

CLIENT: Verterre Group
PROJECT: 05053
SITE: Tap-1
DATE RECEIVED: January 13, 2006
REPORT DATE: January 25, 2006
ANALYSIS DATE: January 24, 2006

ORDER ID: 42535
REFERENCE NUMBER: 267359
DATE SAMPLED: January 11, 2006
TIME SAMPLED: 10:20 AM
SAMPLER: SC
ANALYST: 725

Parameter	Result ug/L
Benzene	< 0.5
Bromobenzene	< 0.5
Bromomethane	< 0.5
Bromochloromethane	< 0.5
n-Butylbenzene	< 0.5
sec-Butylbenzene	< 0.5
tert-Butylbenzene	< 0.5
Carbon tetrachloride	< 0.5
Chlorobenzene	< 0.5
Chloroethane	< 0.5
Chloromethane	< 1.0
2-Chlorotoluene	< 0.5
4-Chlorotoluene	< 0.5
Dibromomethane	< 1.0
Dichloromethane	< 1.0
Dichlorodifluoromethane	< 0.5
1,2-Dichlorobenzene	< 0.5
1,3-Dichlorobenzene	< 0.5
1,4-Dichlorobenzene	< 0.5
1,2-Dichloroethane	< 0.5
1,1-Dichloroethane	< 0.5
1,1-Dichloroethene	< 0.5
cis-1,2-Dichloroethene	< 0.5
trans-1,2-Dichloroethene	< 0.5
1,2-Dichloropropane	< 0.5
1,3-Dichloropropane	< 0.5
2,2-Dichloropropane	< 1.0
1,1-Dichloropropene	< 0.5
cis-1,3-Dichloropropene	< 0.5
trans-1,3-Dichloropropene	< 0.5
Ethylbenzene	< 0.5

Parameter	Result ug/L
Hexachlorobutadiene	< 0.5
Isopropylbenzene	< 0.5
4-Isopropyltoluene	< 0.5
Naphthalene	< 1.0
MTBE	< 1.0
n-Propylbenzene	< 0.5
Styrene	< 0.5
1,1,1,2-Tetrachloroethane	< 0.5
1,1,2,2-Tetrachloroethane	< 1.0
Tetrachloroethene	< 0.5
Toluene	< 0.5
1,2,3-Trichlorobenzene	< 0.5
1,2,4-Trichlorobenzene	< 0.5
1,1,1-Trichloroethane	< 0.5
1,1,2-Trichloroethane	< 0.5
Trichloroethene	< 0.5
Trichlorofluoromethane	< 1.0
1,2,3-Trichloropropane	< 0.5
1,2,4-Trimethylbenzene	< 0.5
1,3,5-Trimethylbenzene	< 0.5
Vinyl Chloride	< 0.5
Xylenes, Total	< 1.0
Bromodichloromethane	< 0.5
Chloroform	< 0.5
Dibromochloromethane	< 0.5
Bromoform	< 0.5
Total Trihalomethanes	< 0.5
Surrogate 1	99.%
Surrogate 2	97.%
UIP's	0.

ENDYNE, INC.
160 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY-RECORD

79953

Special Reporting Instructions:

Project Name: 05053	Reporting Address: 414 Roosevelt Highway Colchester, VT 05446	Billing Address: Same
Endyne Order ID: (Lab Use Only) 42535 -O -I -S	Company: The Verterra Group Inc. Contact Name/Phone #: Martha Roy 654-8663	Sampler Name: Steven Chase Phone #: 654-8663

Ref # (Lab Use Only)	Sample Identification	Matrix	GRAB	COMP	Date/Time	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
	TAP-1	L	✓		1/11/06 10:20	2	1/2 40ml		524.2	HCL	

Relinquished by:	Date/Time	Received by:	Date/Time	Received by:	Date/Time
[signature]	1/13/06 4:27	[signature]	1/13/06 4:30		

New York State Project: Yes _____ No ✓

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Sulfate	21	1664 TPH/FOG	26	8270 PAH
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	8015 GRO	27	PP13 Metals
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	8015 DRO	28	RCRA8 Metals
4	Nitrite N	9	BOD	14	Turbidity	19	8021B	24	8260/8260B	29	524.2
5	Nitrate N	10	Alkalinity	15	Conductivity	20	8010/8020	25	8270 B/N or Acid	30	
31	Metals (As is, Total, Diss.) Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, Hg, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Tl, V, Zn										
32	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)					33					
34	Other										

LAB USE ONLY
Delivery: [signature]
Temp:
Comment:

(White, Yellow - Laboratory / Pink - Client)