THE JOHNSON COMPANY, INC.
Environmental Sciences and Engineering

May 28, 1998

Mr. John Schmeltzer
Sites Management Section
Vermont Department of Environmental Conservation
103 South Main Street
Waterbury, VT

Re: Groundwater Investigation and Sampling, Coca-Cola Facility,
46 Hercules Drive, Colchester, VT.
Vermont UST #6559660. JCO # 3-0328-1.

Dear Mr. Schmeltzer:

Attached please find The Johnson Company, Inc. report on the soil screening and groundwater investigation associated with the former underground storage tank (UST) closure at this Facility in Colchester, Vermont.

Please call Don Maynard or Jim Bowes at (802) 229-4600 if you have questions or comments concerning our report.

Sincerely,
THE JOHNSON COMPANY, INC.

By: Jim Bowes
James R, Bowes, CPG
Senior Scientist

enclosure

cc: Robert Barrett, Coca Cola

Soil and Groundwater Investigation

May 1998

46 Hercules Drive
(Coca-Cola Facility)
Colchester, Vermont

Vermont Underground Storage Tank Facility
6559660

Prepared for:

COCA COLA NORTHERN NEW ENGLAND
One Executive Park Drive
Bedford, New Hampshire

THE JOHNSON COMPANY, INC.
Environmental Sciences and Engineering

100 State Street, Suite 600
Montpelier, Vermont 05602
802.229.4600/Fax 5876

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ATTACHMENTS

EXECUTIVE SUMMARY

The Johnson Company, Inc. (Montpelier, Vermont) has completed a soil screening and groundwater investigation performed May 12, 1998 at the Coca Cola Facility, 46 Hercules Drive, Colchester, VT. The investigation incorporated the advancement of six soil borings, which an observation well, two temporary monitoring wells, and three permanent monitoring wells were installed in the vicinity of two former underground storage tanks maintained at this facility. The USTs were permanently closed on April 23, 1998 during which time elevated readings of volatile organic compounds (VOC) in soil vapor were high enough to preclude some of the excavated soils from being backfilled. Approximately 60 cubic yards of petroleum contaminated soils were temporarily stockpiled under polyencapsulation on the premises, for off site transport and disposal at a certified disposal facility. In addition to installing the soil borings and monitoring wells, we collected soil bag headspace readings with a photoionization detector (PID), and groundwater samples from the monitoring wells specified for analyses for VOCs in groundwater by Environmental Protection Agency (EPA) Method 8020. Groundwater samples were collected from three permanent monitoring wells, and two temporary monitoring wells. The temporary wells were arranged as a pair, located immediately west of the former UST pump island. The deep well (TMW-1) was installed to a depth of 19.5 feet below ground surface (bgs), and the shallow well (TMW-2) was installed to 5.4 feet bgs. The groundwater flow direction was calculated to flow toward the southeast at a gradient of 0.009 feet/foot from the depth to water readings collected May 12, 1998. Two of the three observation wells were designated monitoring wells (MWs) since they were located in appropriate downgradient, and upgradient locations respectively in terms of he groundwater flow. A third monitoring well (MW-2) was installed to the west of the former pump island. A sample was collected from each of the TMWs and MWs and packaged for delivery along with a Trip Blank and Sample Duplicate under chain of custody to ENDYNE Inc., Environmental Laboratories in Williston, Vermont (Endyne).

Results of this soil and groundwater investigation demonstrate that no significant impacts have occurred to the groundwater. Of the locations tested, none were reported with concentrations of VOCs at or greater than their respective Vermont Groundwater Protection Rule and Strategy Preventive Action Level. The only location reported with a detectable concentrations of a VOC was in the upgradient well (MW-1) (with respect to groundwater flow direction) which contained 2.2 micrograms per Liter (μg/L) toluene. The 60 yard stockpile was shipped off site on May 18, 1998 to Environmental Soil Management Inc. (ESMI) in Louden, New Hampshire. Prior to shipping, a representative sample was collected and analyzed for Total Petroleum Hydrocarbons (TPH) and Ignitability, pursuant to State of New Hampshire regulations, and ESMI's facility acceptance criteria. The Johnson Company recommends that no further environmental actions be performed at this facility, and that the Site, (if designated as an active hazardous waste Site with the VT Sites Management Section) be removed from this listing and designated with the Sites Management Activity Complete (SMAC) status.

1.0 INTRODUCTION

what was in the USTs? gas, fuel oil

The Johnson Company has completed a soil and groundwater investigation May 12, 1998 at the Coca Cola Facility in Colchester, Vermont. The Coca-Cola Facility is located at 46 Hercules Drive, Colchester, Vermont (see Location Map, Figure 1). Two underground storage tanks (USTs) were permanently closed and removed from the premises April 23, 1998 under The Johnson Company's supervision, at which time approximately 60 cubic yards of gasoline and/or diesel contaminated soils were stockpiled on the premises. Most of the contaminated soils were noted to be beneath the former pump island. The USTs were not replaced with any other containment vessels.

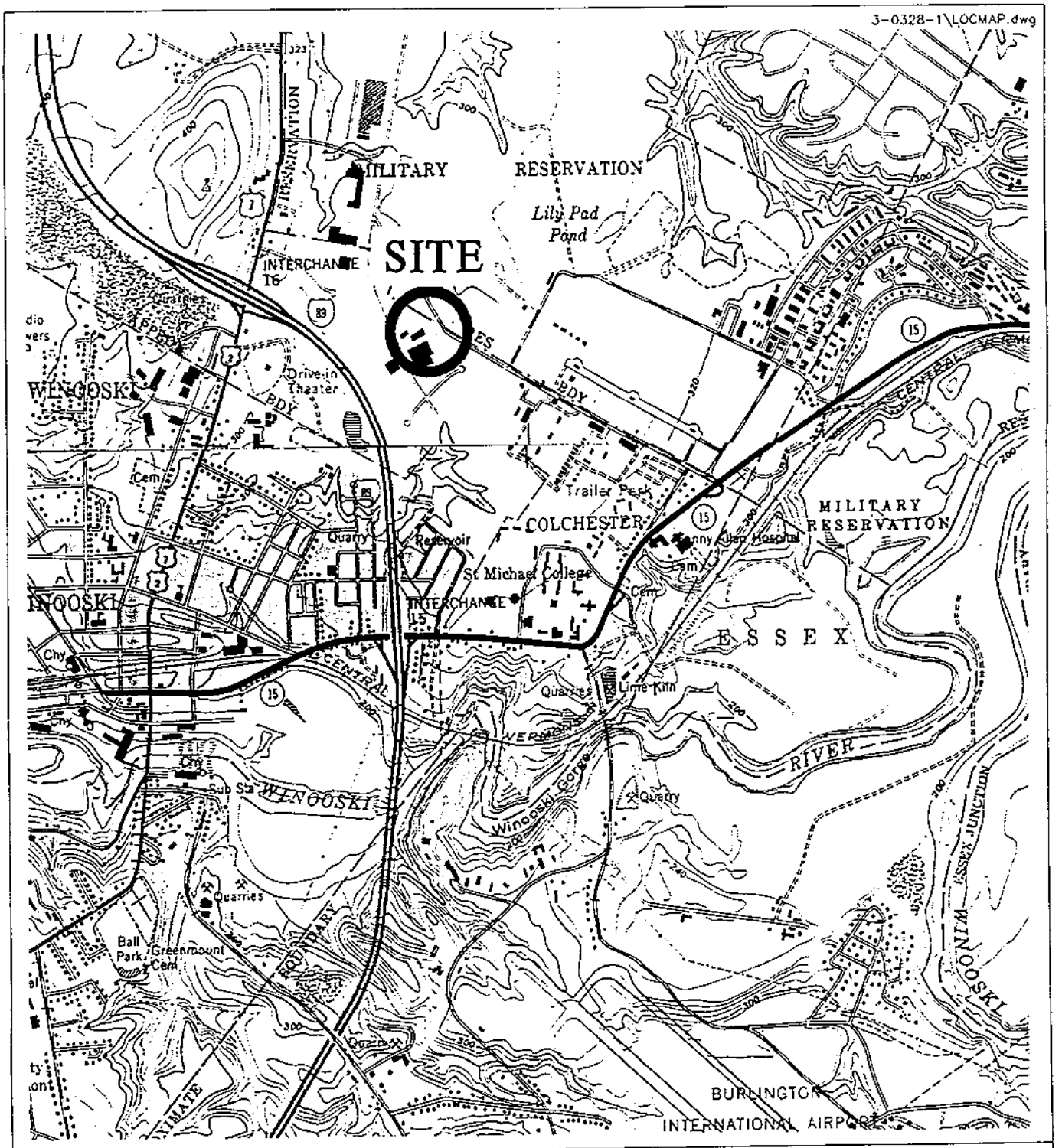
The performance of this investigation was approved by the Vermont Sites Management Section (SMS) during a telephone conversation on May 2, 1948. The investigation was approved in a facsimile from Charles Schwer dated May 12, 1998.

2.0 BACKGROUND

The Coca-Cola facility has been in operation at 46 Hercules Drive for 25 to 30 years, according to personnel at this facility. No information was available as to what businesses preceded Coca Cola, however, it is likely that this land was undeveloped prior to that. A 1915 edition of the 15 minute United States Geological Survey (USGS) Milton Quadrangle (reprinted 1921) depicts this area as undeveloped.

Potential sensitive receptors in the area are limited to groundwater and wetlands. The Coca-Cola facility is served by municipal water and sewer. A 50 foot "wetlands buffer" delineator post was noted May 12, 1998 by The Johnson Company on the adjacent property. The National Wetlands Inventory Map for Colchester Vermont depicts an area mapped on the abutting Fort Ethan Allen Air Base property as "Palustrine Forested" wetland (PFO1C). The groundwater flow direction as determined from the May 12 field work is toward this area. The north-abutting property, formerly the Ethan Allen Air Base, is federal land, and posted as such.

The nearest water supply well as identified from Vermont Department of Environmental Conservation (DEC) Water Resources Division is 2,300 feet northeast of the former UST locations. This well is listed with the DEC as 150 feet deep, finished in bedrock, with a 3 gallon per minute yield. No information as to static depth to groundwater was given.



BASE MAP: USGS 7.5 Minute Topographic Quadrangle BURLINGTON, VT 1948 PHOTOREVISED 1987 COLCHESTER, VT 1948 PHOTOREVISED 1987;

FIGURE 1: SITE LOCATION MAP
COCA COLA BOTTLING COMPANY
COLCHESTER, VERMONT

THE JOHNSON COMPANY, INC.
Environmental Sciences and Engineering
100 STATE STREET MONTPELIER, VT 05602

The Coca Cola facility is characterized with surficial deposits described as "pebbly marine sand" (Stewart and McClintock, 1970) which overlies bedrock mapped as mid-Cambrian-age (540 million years) Danby, and Clarenden Springs Formations (Doll, 1961). The bedrock is described as interbedded quartzites and dolomites, and massive dolomite respectively. No depth to bedrock information other than that listed in the DEC water well records (12 feet) for the nearest well was available.

3.0 SITE INVESTIGATION

3.1 SOIL BORINGS AND MONITORING WELLS

A total of six soil borings were advanced into which an observation well, two temporary monitoring wells, and three permanent monitoring wells were installed in the immediate area surrounding the former USTs on May 12, 1998 using The Johnson Company's Ingersoll-Rand A300 drilling rig. The test locations are shown on Figure 2.

3.1.1 Soil Core Sampling and Field Screening

The Johnson Company used an Envirocore drive point sampler fixed on the A300 drill rig for collecting soil cores to ascertain the nature and extent of suspected subsurface petroleum impacts. Due to the presence of heaving sands encountered associated with the shallow water table (measured this day at 3.5-4 feet bgs), problems were encountered with soil coring, which limited the number of locations tested by this method to the former pump island area. Other locations planned for soil core testing were inspected by logging and field screening the soil cuttings off solid stem augers.

A Thermo Environmental Model 580 B Organic Vapor Meter photionization detector (calibrated the same day of its use to 100 part per million by volume (ppmV) isobutylene span gas) was used to record the volatile organic compound (VOC) headspace readings in ppmV. Soil cores were collected in one-inch butyrate liners using the Envirocore sampler, from the ground surface to depth, and were logged and field screened for presence of VOCs in soils using the organic vapor meter (OVM). A total of six samples were collected for field screening . A summary of the field screen readings is listed in Table 1. No bag headspace OVM readings were above 10.0 ppmV.

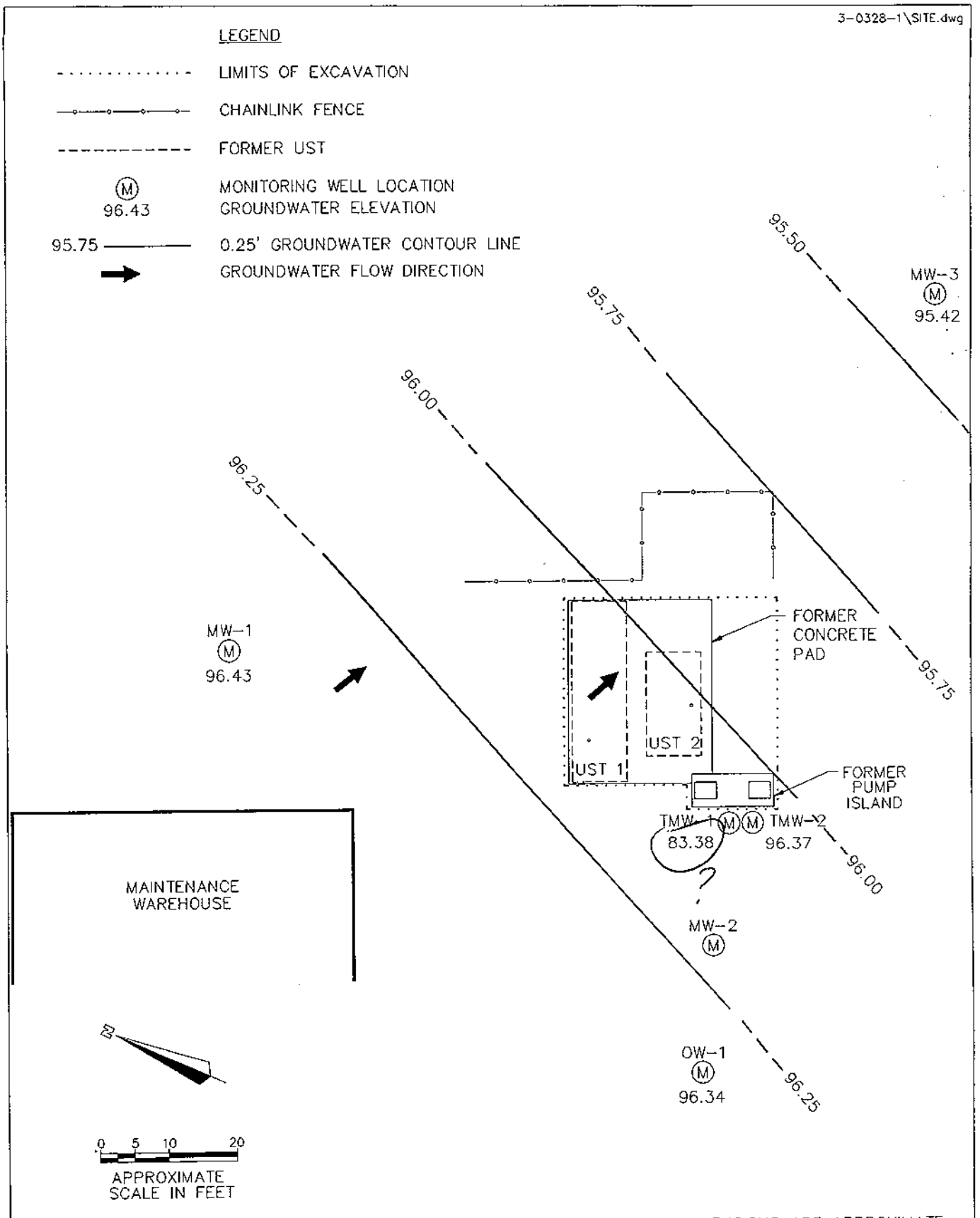


FIGURE 2: SKETCH MAP
COCA COLA BOTTLING COMPANY
COLCHESTER, VERMONT

THE JOHNSON COMPANY, INC.
Environmental Sciences and Engineering
100 STATE STREET MONTPELIER, VT 05602

TABLE 1
SUMMARY OF FIELD SCREENING
May 12, 1998
Coca Cola Facility, Colchester, VT

Soil Boring (MW ID)	Total Depth (FEET)	Sample Depth (FEET)	Field Screen Reading (Max ppmV)	Comments
TMW - 1	19.5	4 - 4.5	2.0	fine to medium brown sand
		9 - 9.5	9.0	saturated olive gray/green fine to medium sand
		13.5 - 14	1.5	saturated medium gray to coarse gray sand
TMW-2	5.4	N.R. [1]	N.R.	N.R.
OW-1	8.0	0 -5	0.0	grab sample of cuttings
OW-2 (MW-1)	8.0	N.R.	N.R.	N.R.
MW-2	7.2	0 - 2.5	3.0	med. dark olive green sand
		7 - 8	0.5	fine - med. dark olive gray sand
OW-3 (MW-3)	8.0	N.R.	N.R.	N.R.

1 N.R. = No readings collected. The soil boring was initially installed as an observation well for obtaining water level data only.

3.1.2 Monitoring Well Construction Details

Monitoring wells MW-1, MW-2, and MW-3 were installed May 12, 1998 and were constructed of one inch diameter PVC with five foot slotted (0.010") sections. Each well was finished with a stickup above grade inside a protective steel well guard, and developed by over-pumping with a bailer prior to water quality sampling. The well logs are included as Attachment A of this report.

Temporary monitoring wells TMW-1, and TMW-2 were also installed on May 12, and were constructed of 0.75 inch schedule 80 steel pipe threaded to a 1.4 foot stainless steel screened drive point. The screened drive point was connected to the surface via 0.5 inch polyethylene tubing to facilitate water level readings and sampling. These wells were removed the same day after sampling, and the borings back filled with native material to grade.

3.2 GROUNDWATER HYDRAULICS

Prior to sampling, depth to water readings were collected from the observation wells and the temporary monitoring wells for constructing a groundwater contour map, from which the direction of groundwater flow could be calculated. A relative top of casing (TOC) survey, and OVM field screen readings from each well headspace were also performed. A summary of the depth to groundwater, relative TOC elevations, and calculated groundwater elevations along with field screening measurements is summarized in Table 2.

TABLE 2
May 12, 1998 WATER LEVEL/PID READINGS
Coca Cola, Colchester, Vermont

Location	TOC[1]	Depth to Groundwater (Feet BTOC)[2]	GW Elev. (Feet)	OVM Headspace Reading (ppm)
TMW-1	101.61	18.23	83.38	0.0
TMW-2	100.67	4.30	96.37	0.0
OW-1	104.25	7.91	96.34	N.R.[3]
OW-2 (MW-1)[4]	101.57	5.14	96.43	0.2
OW-3 (MW-3)[4]	99.53	4.11	95.42	0.2
MW-2	N.S.[5]	~5.9	N.S.	0.0

1. TOC = Top of Casing. Relative TOC elevations surveyed May 12, 1998 by The Johnson Co. (Assumed Reference datum).
2. BTOC = Below Top of Casing
3. N.R. = No Reading. A borehole headspace reading was not collected since this well consisted entirely of a screened interval.
4. OW-2 was renamed MW-1 following completion of the groundwater flow net. Similarly, OW-3 was renamed MW-3.
5. N.S. = Not Surveyed. MW-2 was offset approximately 5 feet east of OW-1. The TOC was not surveyed this date. Groundwater elevation data for flow net was collected from OW-1.

The groundwater contour map is shown on Figure 2. The direction of groundwater flow as measured from the observation and temporary monitoring locations is towards the southeast. The gradient (slope) of the water table is 0.009 feet/foot. Due to slow recovery in these wells and because they were screened significantly below the watertable, groundwater elevations from TMW-1 and TMW-2 were not utilized in the groundwater contour map.

Based upon the calculated groundwater flow direction, The Johnson Company utilized the observation well locations OW-2, and OW-3 as permanent monitoring wells MW-1, and MW-3, respectively. MW-1 serves as the upgradient well, and MW-3 serves as the downgradient well with respect to groundwater flow beneath the former UST area. An additional monitoring well, (MW-2) was installed by stepping off of observation well location OW-1 approximately 5 feet toward the former pump island (Figure 2). This well was installed to characterize the groundwater on the west side of the former pump island. Table 3 summarizes the construction details of each of the sampling wells.

TABLE 3
SUMMARY TABLE - MONITORING WELLS

Location	Bottom of Well	Top of Screen	Bottom of Screen	Stick Up
TMW-1	19.8	18.1	19.1	1.9
TMW-2	5.4	4.0	5.0	1.0
MW-1	7.9	2.9	7.6	2.1
MW-2	7.2	2.2	6.9	2.8
MW-3	8.8	3.8	8.5	1.2
All measurements in feet from the ground surface				

The temporary monitoring wells were installed as a pair, in order to facilitate water quality information from two discrete depths at a location nearest the former pump island. Since the water level in TMW-1 never completely stabilized, no vertical hydraulic gradient information could be determined from the pair of wells.

3.3 WATER QUALITY SAMPLING well development

Groundwater samples were collected following installation of all temporary and permanent monitoring wells May 12, 1998. Samples were collected from the permanent monitoring wells (MW-1,2,3) using dedicated PVC bailers. The samples from TMW-1,2 were collected using a peristaltic pump connected to the polyethylene tubing. All samples were collected in two 40 milliliter (mL) glass vials, and preserved in the field with hydrochloric acid (HCl). A Trip Blank and a Duplicate sample accompanied the sample group for QA/QC purposes. The samples were stored chilled in a sealed ice chest overnight at The Johnson Company for delivery to the laboratory the next day (May 13).

3.3.1 *Laboratory Results*

The samples were delivered under chain of custody to Endyne Inc. Environmental Laboratories, Williston, Vermont. The samples were received by Endyne in good order May 13, 1998 and analyzed May 14, 1998. Preliminary results were received by The Johnson Company May 15, 1998. A copy of Endyne's report is included as Attachment B of this report.

The results of the May 12 water sample analyses reported by Endyne show that of the five locations, only the upgradient well MW-1 was reported with a detectable compound (toluene at 2.2 μg/L). However, the toluene reported in this well is far below the Vermont Groundwater Preventive Action Level of 500 μg/L. No other compounds as tested for by EPA Method 8020 were reported present above the analytical method limits.

4.0 CONCLUSION AND SUMMARY

Soil boring/monitoring well installation, soil field screening, depth to water level measurements, and groundwater sampling were performed May 12, 1998 by The Johnson Company at the Coca-Cola Facility in Colchester, Vermont. The focus of the soil and groundwater investigation was to ascertain if the previously indicated impacts to the soils noted during a UST Closure assessment April 23, extended into the groundwater. This investigation has resulted in the following findings:

- The underlying stratigraphy beneath, and in the abutting area of the former USTs is characterized by typically transmissive fine to medium sands with no immediate impeding layers evident;
- The former UST and pump island area is characterized with a shallow water table (approximately 3.5- 4 feet bgs) from which petroleum impacts, if still present, would be readily detected;
- Groundwater flow direction is toward the southeast at a gradient of 0.009 feet/foot (based upon May 12, 1998 measurements);
- Soil field screen measurements with the OVM as measured in soil bag headspace were recorded no higher than 9 ppm. The Vermont Guidance document for management of petroleum contaminated soils lists 10 ppm as the action level for further management of soils;
- No groundwater impacts in excess of Vermont Groundwater Protection Rule and Strategy Enforcement Standards or Preventive Action Levels have been indicated, which suggests that no impacts to groundwater have occurred;

4.1 RECOMMENDATION

The Johnson Company recommends no further environmental actions in association with this property except for the designation of Sites Management Activity Complete (SMAC) status for this Site. The costs of removing and disposing of the petroleum contaminated soils and the cost of this investigation are eligible for reimbursement by the Vermont Petroleum Cleanup Fund as specified in the May 12, 1998 fax from Charles Schwer and the May 15, 1998 letter from John Schmelzer (included in Attachment C). If costs exceed $10,000 deductible

5.0 REFERENCES

The Johnson Company, 1998, Letter Report to the Vermont Underground Storage Tank Division re: UST Closure Assessment April 23, 1998 at the Coca Cola Facility, 46 Hercules Drive, Colchester Vermont.

Stewart, McClintock, 1970, Surficial Geology of Vermont Map

Doll, 1961, Centennial Bedrock Geology Map of Vermont

Vermont Sites Management Section, May 12, 1998. Fax document from Sites Management Section to The Johnson Company, Inc.

Vermont Sites Management Section, May 15, 1998. Letter from Sites Management Section to The Johnson Company, Inc.

Attachment A

Well Logs

The Johnson Company, Inc.
Environmental Sciences and Engineering
100 State Street
Montpelier, Vermont 05602

DRILLING LOG
WELL # MW-1

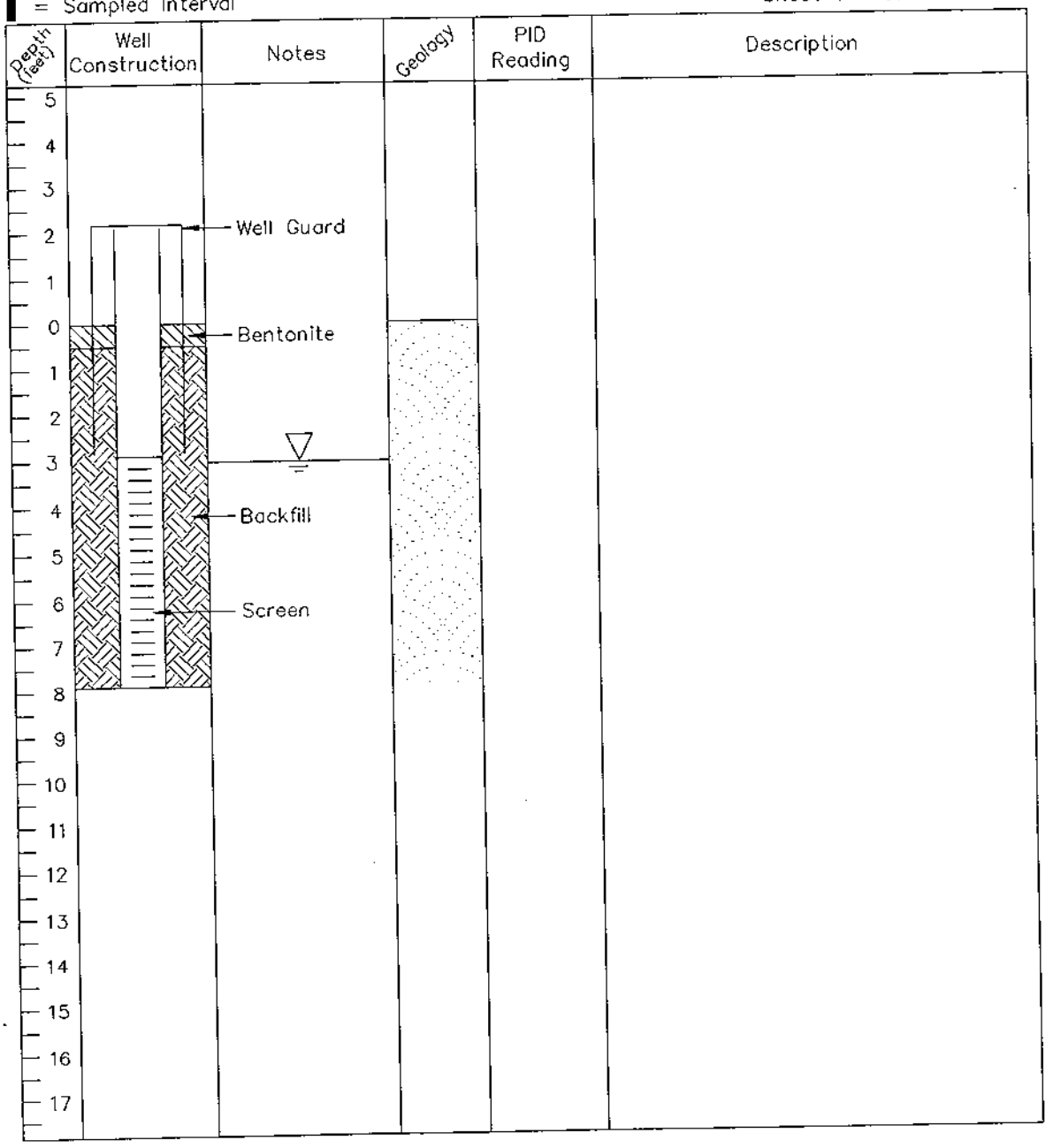
Project: CocaCola Facility
Location: Colchester, VT
Job # 3-0328-1
Logged By: JRB
Date Drilled: 5/12/98
Driller: JCO
Drill Method: Solid Stem Auger

Casing Type: PVC
Casing Diameter: 1.0 in.
Casing Length: 5.0 ft.
Screen Type: PVC
Screen Diameter: 1.0 in.
Screen Length: 5.0 ft.
Slot Size: 0.010

Total Pipe: 10.0 ft.
Stick Up: 2.1 ft.
Total Hole Depth: 7.9 ft.
Well Guard Length: 5.0 ft.
Initial Water Level: 3.0 ft.
Surface Elevation: —
T.O.C. Elevation: 101.57

▌ = Sampled Interval

Sheet 1 of 1



The Johnson Company, Inc.
Environmental Sciences and Engineering
100 State Street
Montpelier, Vermont 05602

DRILLING LOG
WELL # MW-2

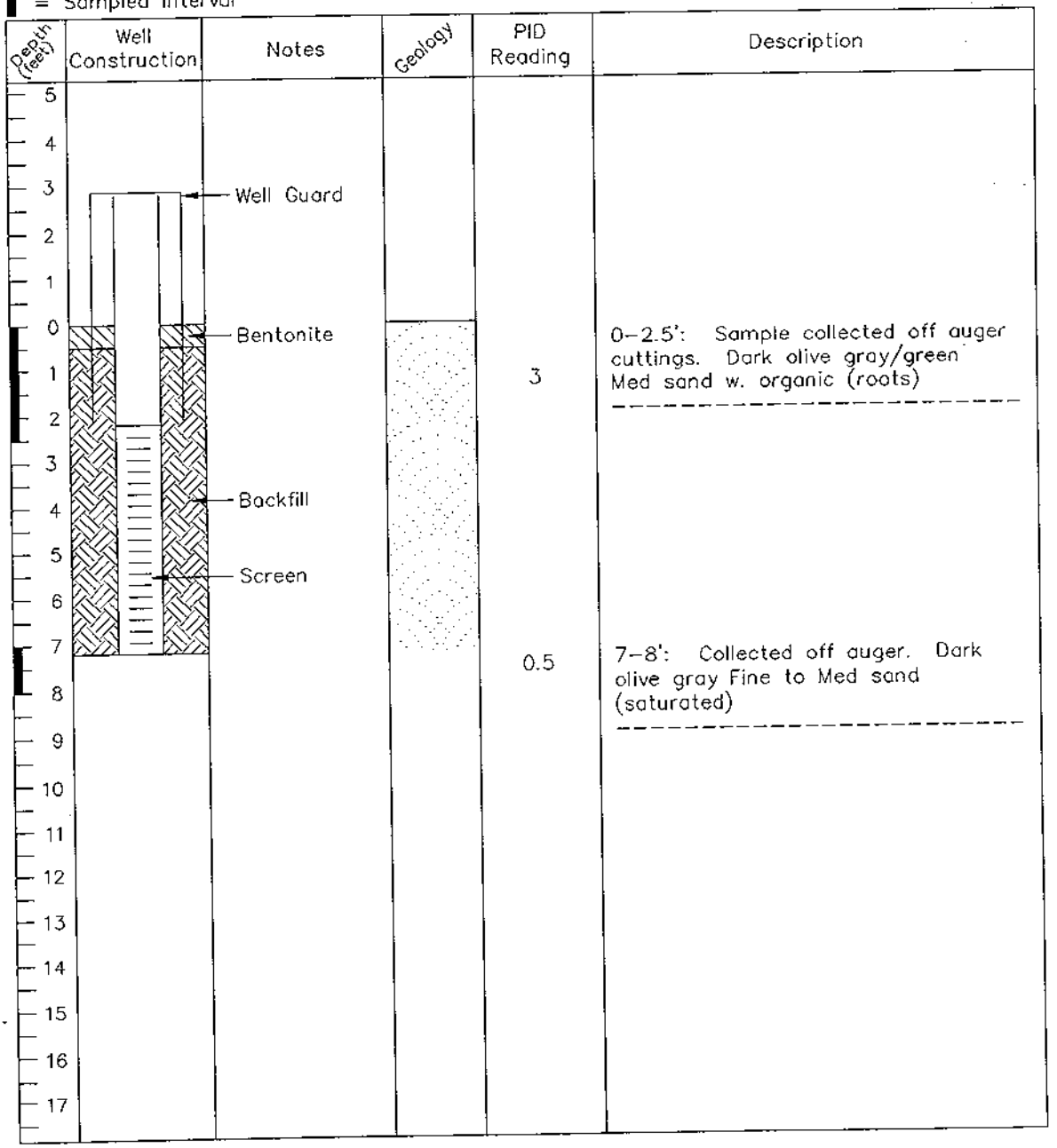
Project: CocaCola Facility
Location: Colchester, VT
Job # 3-0328-1
Logged By: JRB
Date Drilled: 5/12/98
Driller: JCO
Drill Method: Solid Stem Auger

Casing Type: PVC
Casing Diameter: 1.0 in.
Casing Length: 5.0 ft.
Screen Type: PVC
Screen Diameter: 1.0 in.
Screen Length: 5.0 ft.
Slot Size: 0.010

Total Pipe: 10.0 ft.
Stick Up: 2.8 ft.
Total Hole Depth: 7.2 ft.
Well Guard Length: 5.0 ft.
Initial Water Level: None
Surface Elevation: –
T.O.C. Elevation: –

■ = Sampled Interval

Sheet 1 of 1



The Johnson Company, Inc.
Environmental Sciences and Engineering
100 State Street
Montpelier, Vermont 05602

DRILLING LOG
WELL # MW-3

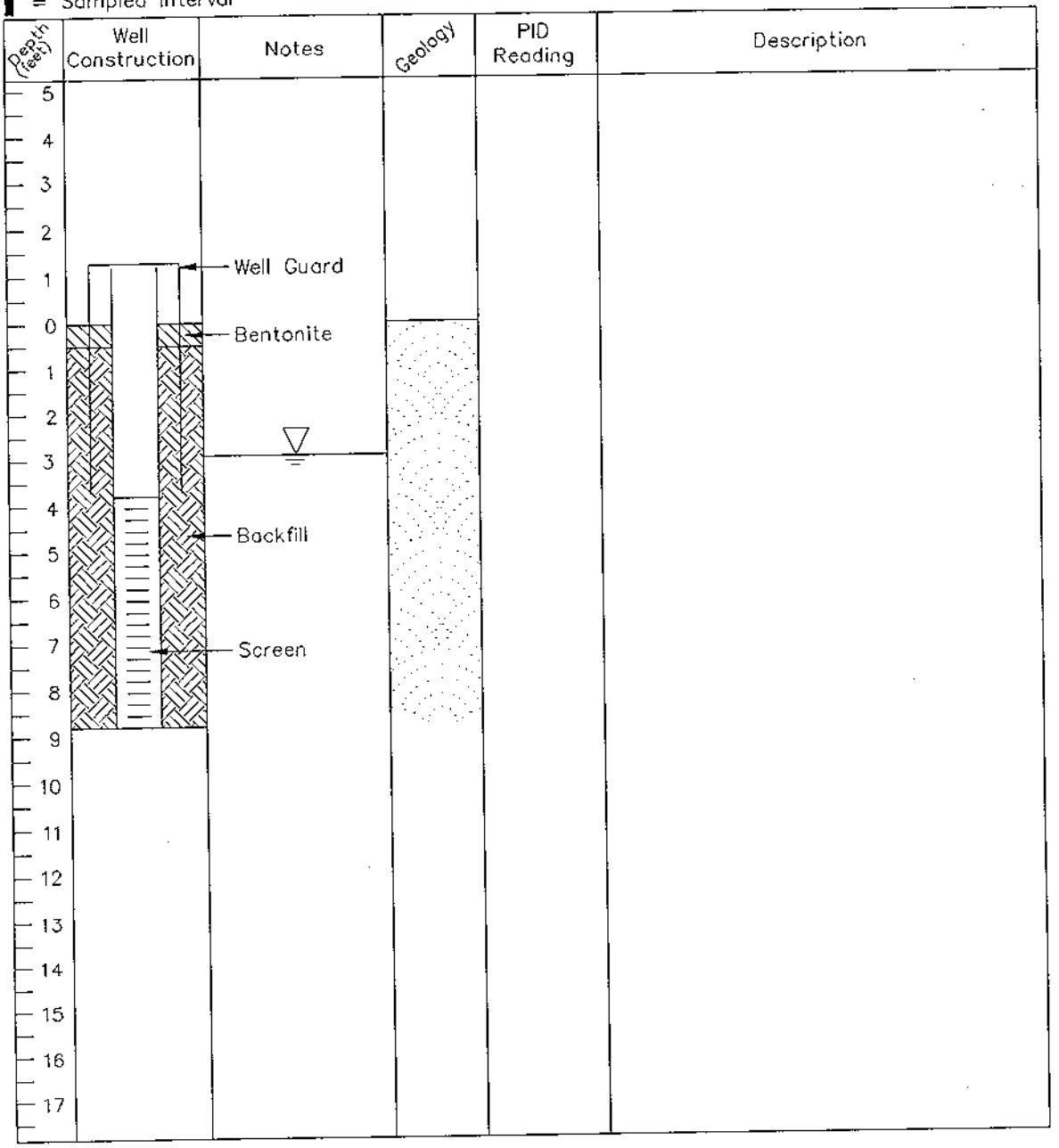
Project: CocaCola
Location: Colchester, VT
Job # 3-0328-1
Logged By: JRB
Date Drilled: 5/12/98
Driller: JCO
Drill Method: Solid Stem Auger

Casing Type: PVC
Casing Diameter: 1.0 in.
Casing Length: 5.0 ft.
Screen Type: PVC
Screen Diameter: 1.0 in.
Screen Length: 5.0 ft.
Slot Size: 0.010

Total Pipe: 10.0 ft.
Stick Up: 1.2 ft.
Total Hole Depth: 8.8 ft.
Well Guard Length: 5.0 ft.
Initial Water Level: 2.9 ft.
Surface Elevation: –
T.O.C. Elevation: 99.53

▌ = Sampled Interval

Sheet 1 of 1



The Johnson Company, Inc.
Environmental Sciences and Engineering
100 State Street
Montpelier, Vermont 05602

DRILLING LOG
WELL # TMW-1

Project: CocaCola Facility
Location: Colchester, VT
Job # 3-0328-1
Logged By: JRB
Date Drilled: 5/12/98
Driller: JCO
Drill Method: Envirocore

Casing Type: Sched80 Steel
Casing Diameter: 0.8 in.
Casing Length: 20.0 ft.
Screen Type: Solinst SS
Screen Diameter: 1.0 in.
Screen Length: 1.4 ft.
Slot Size: mesh

Total Pipe: 21.4 ft.
Stick Up: 1.9 ft.
Total Hole Depth: 19.5 ft.
Well Guard Length: 0.0 ft.
Initial Water Level: 16.3 ft.
Surface Elevation: -
T.O.C. Elevation: 101.61

■ = Sampled Interval

Sheet 1 of 1

Depth (feet)	Well Construction	Notes	Geology	PID Reading	Description
5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40				2	0-4.5': 1.6' Recovery. Fine to Med brown Sand. Collected soil bag sample from 4-4.5'
				9	4.5-9.5': 1.2' Recovery. Saturated olive gray/green fine to Med Sand. Collected soil bag sample from 9-9.5'
				1.5	9.5-14': 2.0' Recovery. Heaving sands prohibit any deeper sampling than 14'. Saturated Med to Coars gray sand. Collected soil bag sample from 13.5 - 14'

The Johnson Company, Inc.
Environmental Sciences and Engineering
100 State Street
Montpelier, Vermont 05602

DRILLING LOG
WELL # TMW-2

Project: CocaCola Facility
Location: Colchester, VT
Job # 3-0328-1
Logged By: JRB
Date Drilled: 5/12/98
Driller: JCO
Drill Method: Envirocore

Casing Type: Sched80
Casing Diameter: 0.8 in.
Casing Length: 5.0 ft.
Screen Type: SS
Screen Diameter: 1.0 in.
Screen Length: 1.0 ft.
Slot Size: mesh

Total Pipe: 6.4 ft.
Stick Up: 1.0 ft.
Total Hole Depth: 5.4 ft.
Well Guard Length: 0.0 ft.
Initial Water Level: 3.3 ft.
Surface Elevation: –
T.O.C. Elevation: 100.67

▌ = Sampled Interval

Sheet 1 of 1

Depth (feet)	Well Construction	Notes	Geology	PID Reading	Description
5					
4.5					
4					
3.5					
3					
2.5					
2					
1.5					
1					
0.5					
0					SEE TMW-1 DESCRIPTIONS
0.5					
1					
1.5					
2					
2.5					
3					
3.5					
4					
4.5					
5					
5.5					
6					

Attachment B

Analytical Report

ORB 3-0328-1 DMM

ENDYNE, INC.
Laboratory Services
32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: The Johnson Company, Inc.
PROJECT NAME: Coca Cola
REPORT DATE: May 14, 1998
DATE SAMPLED: May 12, 1998

PROJECT CODE: JOCO1643
REF.#: 120,605 - 120,611

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated sample preservation with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

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

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures

ENDYNE, INC.

Laboratory Services

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

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: The Johnson Company, Inc.
PROJECT NAME: Coca Cola
CLIENT PROJ. #: 3-0328-1

DATE RECEIVED: May 13, 1998
REPORT DATE: May 14, 1998
PROJECT CODE: JOCO1643

Ref. #:	120,605	120,606	120,607	120,608	120,609
Site:	MW1	MW2	MW3	TMW1	TMW2
Date Sampled:	5/12/98	5/12/98	5/12/98	5/12/98	5/12/98
Time Sampled:	15:30	16:55	16:15	16:41	17:07
Sampler:	B. Osborne	B. Osborne	B. Osborne	B. Osborne	B. Osborne
Date Analyzed:	5/14/98	5/14/98	5/14/98	5/14/98	5/14/98
UIP Count:	0	0	0	0	0
Dil. Factor (%):	100	100	100	100	100
Surr % Rec. (%):	95	97	96	97	101
Parameter	**Conc. (ug/L)**	**Conc. (ug/L)**	**Conc. (ug/L)**	**Conc. (ug/L)**	**Conc. (ug/L)**
Benzene	<1	<1	<1	<1	<1
Chlorobenzene	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	<1	<1	<1	<1	<1
Ethylbenzene	<1	<1	<1	<1	<1
Toluene	2.2	<1	<1	<1	<1
Xylenes	<1	<1	<1	<1	<1
MTBE	<10	<10	<10	<10	<10

Ref. #:	120,610	120,611			
Site:	Trip Blank	TMW2 Dup			
Date Sampled:	5/12/98	5/12/98			
Time Sampled:	NI	17:15			
Sampler:	B. Osborne	B. Osborne			
Date Analyzed:	5/14/98	5/14/98			
UIP Count:	0	0			
Dil. Factor (%):	100	100			
Surr % Rec. (%):	100	90			
Parameter	**Conc. (ug/L)**	**Conc. (ug/L)**			
Benzene	<1	<1			
Chlorobenzene	<1	<1			
1,2-Dichlorobenzene	<1	<1			
1,3-Dichlorobenzene	<1	<1			
1,4-Dichlorobenzene	<1	<1			
Ethylbenzene	<1	<1			
Toluene	<1	<1			
Xylenes	<1	<1			
MTBE	<10	<10			

Note: UIP = Unidentified Peaks TBQ = Trace Below Quantitation NI = Not Indicated

ENDYNE, INC.

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333

CHAIN-OF-CUSTODY RECORD

27097

Project Name: Colchester 3-0378-1 Site Location: Coca Cola	Reporting Address: JOHNSON CO 100 STATE ST - MONTPELIER VT	Billing Address: Same
Endyne Project Number: JOC01643	Company: JCO Contact Name/Phone #: JBowes / D Maynard	Sampler Name: Bob Osborne Phone #: 802 229-4600

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
120,605	MW1	Water	✓		5/12/98 15:30	2	40mL		8020	HCl	
120,606	MW2				16:55	2					
120,607	MW3				16:15	2					
120,608	TMW1				16:41						
120,609	TMW2				17:07						
120,610	TRIP BLANK										
120,608	TMW2 DUP		✓		5/12/98 17:15	3	~~20/40~~		✓	HCl	
							2-20,	1-40			

Relinquished by: Signature: [signature] — Received by: Signature: Tommy R Bowes — Date/Time: 5/13/98 F:04

Relinquished by: Signature: Tommy R Bowes — Received by: Signature: Jason Woodard — Date/Time: 5/13/98 1:54 PM

New York State Project: Yes ____ No X

Requested Analyses

1	pH	6	TKN	11	Total Solids	16	Metals (Specify)	21	EPA 624	26	EPA 8270 B/N or Acid
2	Chloride	7	Total P	12	TSS	17	Coliform (Specify)	22	EPA 625 B/N or A	X	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
4	Nitrite N	9	BOD,	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

Attachment C

Communication From the
Vermont Waste Management Division

THE JOHNSON COMPANY, INC.
Environmental Sciences and Engineering
100 State Street, Montpelier, Vermont 05602
Phone: (802) 229-4600
FAX: (802) 229-5876

FACSIMILE COVER PAGE

May 7, 1998

TO:	Charles Schwer		
COMPANY:	Vermont Waste Management Section		
FAX #:	241-3296	TELEPHONE #:	241-3888
FROM:	Don Maynard		286
JCO #:	3-0328-2	PHONE CODE:	241

NUMBER OF PAGES, INCLUDING COVER PAGE: 2

Please call Harriet if there are any problems with this transmission.

Message

Dear Chuck:

Attached please find a copy of the Site Investigation Expressway Notification Form for the 46 Hercules Drive property in Colchester (UST Facility Number 6559660). We plan to install monitoring wells at the Site on Tuesday, May 12, 1998.

Pursuant to our telephone conversation today, we understand there are three options for dealing with the approximately 60 cubic yards of contaminated soils temporarily stockpiled on-site. The first option is that the Petroleum Clean-up Fund (PCF) will pay for off-site disposal of 60 cubic yards of soil (at a rate of $60-75 per cubic yard) if the groundwater is not contaminated. The second option is that the PCF will pay approximately $1,600-2,000 for on-site polyencapsulated treatment of the 60 yards of soil (whether groundwater is contaminated or not). Finally, we understand that you have given approval to replace the 60 cubic yards of petroleum contaminated soils below the ground surface in the area from which they were removed.

Please confirm this summary of our conversation and your approval of the Expressway process for this Site.

Sincerely,
The Johnson Company, Inc.
By:

Donald M. Maynard, CG, PE
Project Geologist

CC Robert Barrett

Reviewed By: BAW
I:\PROJECTS\3-0328-2\CHUCKFAX.5-7 May 7, 1998 MMD

Post-it® Fax Note 7671 | Date 5/12/98 | # of pages ▶ 1

To Don Maynard | From Chuck Schwer

Co./Dept. JCO | Co. VT DEC

Phone # | Phone #

Fax # | Fax #

RECEIVED
MAY 12 1998
JOHNSON CO. INC.
MONTPELIER, VT

3-0328-1
DMM

Waste Management Division
103 South Main Street/West Office
Waterbury, Vermont 05671-0404
(802) 241-3888, FAX (802) 241-3296

SITE INVESTIGATION EXPRESSWAY NOTIFICATION FORM

Site Owner: COCA COLA NORTHERN NEWENGLAND

Site Name, Town: 46 HERCULES DRIVE UST ID#5559660 COLCHESTER

X Yes, this site will participate in the Site Investigation Expressway Process.

___ No, this site will not participate in the Site Investigation Expressway Process.

If yes, please complete the checklist below:

✓ Contamination present in soils above action levels X Yes ___ No

If yes, summarize levels: UP TO 365 PPMV OVA/GC READINGS WERE MEASURED SOILS WERE REMOVED UNTIL LESS THAN 5 PPMV READINGS

✓ Free product observed ___ Yes X No

✓ Groundwater contamination observed X Yes ___ No

✓ Surface water contamination observed ___ Yes X No

✓ Suspected release of hazardous substances X Yes ___ No

If yes, please explain: DIESEL AND GASOLINE SUSPECTED RELEASED FROM UST PIPING NEAR SERVICE ISLAND AND FROM OVERFILLING

✓ Affected receptors X Yes ___ No

If yes, please identify receptors including names and addresses of third party receptors: SOILS AND SUSPECTED SHALLOW AQUIFER GROUNDWATER

Please provide an estimated date of when you expect to submit Site Investigation Report: JUNE 15, 1998

Owner's Signature/Date: 5-7-98 Consultant's Signature/Date: 4-28-98

The SMS has reviewed this expressway notification form and approves / disapproves of this action.

SMS Signature/Date: Chuck Schwer 5/12/98

Approved plan as detailed in JCO 5/7/98 facsimile

JRB. Fax to LAURA - ESMI
phone 603 783 0228
Fax 603 783-0104.

State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
RELAY SERVICE FOR THE HEARING IMPAIRED
1-800-253-0191 TDD>Voice
1-800-253-0195 Voice>TDD

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
Waste Management Division
103 South Main Street / West Building
Waterbury, Vermont 05671-0404
802-241-3886
Fax 802-241-3296
john.schmeltzer@[illegible]anr.state.vt.us

May 15, 1998

DONALD MAYNARD
THE JOHNSON COMPANY INC
100 STATE STREET
MONTPELIER VT 05602

RE: Removal of 60 cubic yards of soil at 46 Hercules Drive (Coca Cola Facility)
Colchester, Vermont

Dear Mr. Maynard:

The Sites Management Section (SMS) has reviewed your submittal dated May 15, 1998. In this submittal, you included analytical results for samples from five monitoring wells at the site. The results show no target volatile organic compounds (VOCs) at concentrations above the Vermont Groundwater Enforcement Standards (VGES). The highest VOC concentration was toluene at 2.2 parts per billion in MW-1, which is an upgradient well. In our phone conversation on May 15, 1998, you stated with this analytical data and information collected from the tank closure, there is sufficient evidence that the subsurface contamination was sufficiently removed. Given the above information, the SMS agrees with this conclusion.

In your submittal, you requested approval for the soil to be sent to the ESMI facility in New Hampshire. The SMS has no objections sending the sixty cubic yards of contaminated soil to the ESMI facility, if the transportation and disposal of the soils meet New Hampshire regulations and that the soil meets the acceptance criteria of the facility. Either a certificate of destruction from the batch facility or a bill of lading from the hauling company must be submitted to the SMS proving that the soil was disposed at the facility. The SMS considers these costs to apply toward the $10,000 deductible for the Petroleum Cleanup Fund (PCF), if the following conditions are met:

- The cost to transport and dispose of the 60 cubic yards of contaminated soil does not exceed $4,500.
- The tank closure and site investigation reports confirm the subsurface conditions described by the Johnson Company through verbal and fax communication.

(Over)

- The owner or permittee of the underground storage tank(s) does not hold private insurance that would otherwise provide coverage for this situation.

If you have any questions, please do not hesitate to call me at (802) 241-3886.

Sincerely,

John Schmeltzer, Site Project Manager
Sites Management Section

B03282

State of Vermont

Department of Fish and Wildlife
Department of Forests, Parks and Recreation
Department of Environmental Conservation
State Geologist
RELAY SERVICE FOR THE HEARING IMPAIRED
1-800-253-0191 TDD>Voice
1-800-253-0195 Voice>TDD

AGENCY OF NATURAL RESOURCES
Department of Environmental Conservation
Waste Management Division
103 South Main Street / West Building
Waterbury, Vermont 05671-0404
switchboard (802) 241-3888
facsimile (802) 241-3296

FACSIMILE

Date: 5/13/98
Pages: 3 (including cover page)

PLEASE DELIVER ACCOMPANYING MATERIAL TO:

Name: Don Maynard
Fax #:

COMMENTS:

letter attached

From: John Schmid/Fred
Phone#:

3-0328-2
DMM

Environmental Soil Management, Inc.

(603) 783-0228
FAX (603) 783-0104

TELEFAX COVER SHEET

TO: Don Maynard COMPANY:

FAX: 802-224-5876 PHONE:

FROM: Laura

DATE: 5-19-98 TIME:

NUMBER OF PAGES (including cover sheet): 2

MESSAGE: Don - Attached please find the project Summary report for the Coca-Cola project. Any questions please call me Thank you.

Laura

If there is a problem with this fax transmission, please call (603) 783-0228 for assistance.

67 International Drive, Loudon, NH 03301 • (603) 783-0226 • Fax (603) 783-0104

MAY 19 98 TUE 4:30 PM E.S.M.I. FAX NO. 603 783 0104

PROJECT SUMMARY REPORT OF

Job No. : : 1119

Reporting FROM : 05-01-98 00:00 TO : 05-19-98 23:59

DATE : 05-19-98
TIME : 16:25:14

Date	Trans-action #	Truck No. :	Gross lb	Tare lb	NET TONS	Cust. Name :	Description
05-18-98	115035	1DEY	079580	036500	21.54	COCA COLA	COCA-COLA COLCHE
05-18-98	115036	1H	077660	032620	22.52	COCA COLA	COCA-COLA COLCHE
05-18-98	115037	1W0J	082120	036020	23.05	COCA COLA	COCA-COLA COLCHE
05-18-98	115038	1BEN	088400	035660	26.37	COCA COLA	COCA-COLA COLCHE
TOTALS :			327760	140800	93.48		

MARK
Coleman

COCA COLA
COLCHESTER
UST FACILITY #
6559660

#

DMM

Environmental Soil Management, Inc.

(603) 783-0228
FAX (603) 783-0104

TELEFAX COVER SHEET

TO: Brad Wheeler COMPANY:

FAX: 802-229-5676 PHONE:

FROM: Laura

DATE: 4.29 TIME:

NUMBER OF PAGES (including cover sheet): 3

MESSAGE: Letter to the State of Vermont on the behalf of Coca Cola

If there is a problem with this fax transmission, please call (603) 783-0228 for assistance.

67 International Drive, Loudon, NH 03301 • (603) 783-0228 • Fax (603) 783-0104

ESMI
ENVIRONMENTAL SOIL MANAGEMENT INC.

April 29, 1998

Mr Brad Wheeler
Johnson Company
100 State Street
Montpelier, VT 05602

Dear Wheeler:

As you requested, I am submitting information regarding analytical requirements for contaminated soil acceptance at Environmental Soil Management, Incorporated (ESMI). ESMI requires that a composite sample be formed for each 200 tons of material to be shipped to ESMI. The composite sample should be formed by combining 8 grab samples of the subject soil. If the soil quantity exceeds 4000 tons, the sampling frequency changes to one composite sample per 500 tons above 4000 tons. For soils contaminated with No. 2 fuel oil, each representative composite sample should be analyzed for total petroleum hydrocarbons (TPH) by modified method 8100 (SW-846) or a comparable GC/FID method. The attached Generator Waste Profile and Material Analytical Requirements provides detailed information regarding soil acceptance.

If approved for treatment at ESMI, soils are received into a totally enclosed storage building. The building has a concrete floor underlain by a leak detection system. Preprocessing takes place inside the storage building and includes: screening oversized materials, removal of plastic tarps and other debris and crushing to a uniform size of 2 inches minus. From the storage building the soils are fed via a conveyor belt to the thermal desorption plant. Contaminants are removed by volatilization in a rotary dryer and destroyed in a thermal oxidizer. Particulate matter are removed in a baghouse. The attached Facility Description provides further detail on the plant design and operation.

After treatment, soils are stockpiled by batch, sampled and analyzed to ensure that all contaminants of concern have been removed to below permitted treatment standards. If soils do not meet treatment standards, they are retreated on-site. If treatment standards are achieved, the soil is reused as clean fill. Permit restrictions exist for the reuse of the treated soils and include the following:

- within a 100 year floodplain,
- within the recharge area of a sole source drinking water aquifer,
- within 500 feet of drinking water supply well
- within areas that are designated as habitats for endangered species, and
- on playgrounds

67 International Drive, Loudon, NH 03301 • (603) 783-0228 • Fax (603) 783-0104

Mr. Brad Wheeler
Johnson Company

Soils meeting treatment standards are available for reuse for many applications (except as noted above), including, but not limited to:

- road base material,
- backfill at the site of origin,
- general construction fill, and
- sub-base material under any impermeable cover

Soils treated by ESMI have been reused in a variety of applications. The following highlights a few of the reuses:

- general fill for the construction of fairways at a golf course,
- backfill and grading material at New Hampshire DOT sites,
- screening segregation of aggregated material (2" minus stone),
- return of soil for restoration of military installations,
- return of soil to meet specification of restrictive site treatment standards, and
- return of soil to original site of excavation/remediation for backfill.

Currently, the majority of our treated soils are being used as fill for the construction of fairways at the Loudon Country Club.

If you have any further questions regarding ESMI, please give me a call at 800-950-7645.

Sincerely,

Christine Nardini/B

Christine Nardini
Technical Manager

- Fax Cover Sheet -

Date: 4/29/98

Pages: 3

To: Brad Wheeler

Fax Phone: 802-229-5876

From: Laura

Subject: Brad, attached please find a quote for the Coca-Cola project.

The letter of intent for the State of VT will follow under separate cover.

If you have any questions, please contact me at this office.

Thank you,

Laura

ESMI
ENVIRONMENTAL SOIL MANAGEMENT INC.

Quotation for Services

Wednesday, April 29, 1998

Company: Johnson Company
Address: 100 State Street
Montpelier, VT 05602

Site Name: Coca-Cola Plant
Colchester, VT

Contact: Brad Wheeler

Services. The following services shall be provided at the following rates:
Transportation, Storage and Thermal Treatment

$42.00 per processed ton of (describe): Gasoline/Diesel contaminated soils (Approx. 90 ton)

Other Services:

$N/A for (describe):

Sales tax and other tariffs and fees are not included in the above pricing, and will be added to customer's invoice.

Disposition of Treated Waste Materials. ESMI shall manage the treated waste materials as follows:

***Materials will become the property of ESMI ***

This Quotation for Services is valid for a period of 30 days.

67 International Drive, Loudon, NH 03301 • (603) 783-0228 • Fax (603) 783-0104

ESMI Material Analytical Requirements

Analytical requirements for waste acceptance at ESMI are dependent on site history and contaminant. See Section III of the Generator Waste Profile. Deviation from prescribed sampling protocols, analytical parameters or methods may require re-sampling or re-analyzing. The following lists the minimum analytical requirements by contaminant. Additional analyses may be required after site history review.

CONTAMINANT	TPH	TOTAL VOCS*	TOTAL SVOCS*	TOTAL METALS*	PCBS	IGN	REACTIVE Cn/S
SW-846 METHOD	GC/FID	8260	8270	RCRA 8	8080	1010	CHPT. 7
Gasoline	X						
Diesel, jet fuel, kerosene #2 fuel oil, virgin oils	X						
#4 and #6 fuel oils	X	X**	X**				
Used oils, lubricants and greases	X	X		X		X	
Electrical oils	X				X		
Coal tars, coal, pitch, tar	X	X	X	X			X
Unused petroluem solvents	X	X	X			X	
Used petroleum solvents	X	X	X	X		X	
Waxes, esters, amides	X	X	X				
Unused animal, vegetable and tall oils	X						
Used animal, vegetable and tall oils	X			X			

*If the total concentration of any constituent exceeds the TCLP hazardous waste level by the ratio 20:1, TCLP analysis for that constituent is required.

**Frequency required for these tests is one per 500 tons.

Environmental Soil Management, Inc.
67 International Drive, Loudon, NH 03301
800 950-7645 Customer Service (All Regions)
603-783-0228 Customer Service (Local)
603 783 0104 FAX

ESMI
ENVIRONMENTAL SOIL MANAGEMENT INC.

ENDYNE, INC.

Laboratory Services

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

LABORATORY REPORT

Post-it® Fax Note 7671	Date	# of pages ▶ 1
To Brad Wheeler	From EHBC	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

DATE: April 30, 1998
CLIENT: The Johnson Company, Inc.
PROJECT: Coco-Cola
PROJECT CODE: JOCO2403
COLLECTED BY: TRO
DATE SAMPLED: April 28, 1998
DATE RECEIVED: April 28, 1998

Parameter	Reference Number
	119,797
Flashpoint (Degrees Fahrenheit)	>158.

Sample ID:

119,797: Comp-101; 0830

Reviewed by:

ENDYNE, INC.

Laboratory Services

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

LABORATORY REPORT

TOTAL PETROLEUM HYDROCARBONS (TPH) BY MODIFIED EPA METHOD 8100

DATE: April 29, 1998
CLIENT: The Johnson Company
PROJECT: Coca-Cola
PROJECT CODE: JOCO1401
COLLECTED BY: TRO
DATE SAMPLED: April 28, 1998
DATE RECEIVED: April 28, 1998

Post-it® Fax Note 7671	Date	# of pages ▶ 2
To Brad Wheeler	From GBL	
Co./Dept.	Co.	
Phone #	Phone #	
Fax #	Fax #	

Reference #	Sample ID	Concentration as received(mg/kg)[1]
119,795	Comp-101; 0830	250.

Notes:

1 Values quantitated based on the response of #2 Fuel Oil. Method detection limit is 5.0 mg/kg.

ENDYNE, INC.

Laboratory Services

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

LABORATORY REPORT

TOTAL PETROLEUM HYDROCARBONS (TPH) BY MODIFIED EPA METHOD 8015

DATE: April 29, 1998
CLIENT: The Johnson Company
PROJECT: Coca-Cola
PROJECT CODE: JOCO1402
COLLECTED BY: T.R.O.
DATE SAMPLED: April 28, 1998
DATE RECEIVED: April 28, 1998

Reference #	Sample ID	Concentration as received(mg/kg)[1]
119,796	Comp-101; 0830	144.

Notes:

1 Value quantitated based on the response of gasoline. Method detection limit is 1.0 mg/kg.