THE JOHNSON COMPANY, INC.

Environmental Sciences and Engineering

APR 20 10 38 AM '95

HAZARDOUS MATERIALS MANAGEMENT SECTION

April 18, 1995

#95-1766

Mr. Elden Dube
Bank of Woodstock
P.O. Box 30
Woodstock, Vermont

Re: Additional Soil Sampling and Laboratory Analysis
Rogers' Tire and Auto Service, Route 5, Bradford, Vermont
JCO # 1-2351-1 (054)

Dear Elden:

As requested by the Vermont Department of Environmental Conservation Sites Management Section (SMS), on April 7, 1995, The Johnson Company collected a soil sample from under the former location of a 275-gallon underground storage tank (UST) at the above referenced property.

The soil sample was collected using a backhoe. A total of 12 soil samples were collected and screened for volatile organic compounds using a photoionization detector (PID). The screening was conducted using a plastic bag headspace method, where the samples were placed into resealable plastic bags. The bagged samples were warmed up under the heater of a running vehicle and, after approximately 15 to 30 minutes, the PID was inserted into the top of the bag to read the concentration of organic vapors. The PID used was a Thermo Electron Model 580B Organic Vapor Meter. The PID was calibrated on site using zero air and 101.5 ppm isobutylene span gas immediately prior to the commencement of the excavation work.

The soils encountered during the excavation work were primarily fine sand. The results of the headspace screening were as follows:

PID HEADSPACE READINGS
ROGERS TIRE AND AUTO SERVICE
ROUTE 5, BRADFORD, VERMONT

SAMPLE DEPTH (inches)	PID HEADSPACE READING (parts per million)
20 ~ 1.7'	17
36	42
60 ~ 5' bgs	115
60 (south sidewall)	4.7
60 (north sidewall)	3.5
72 ~ 6' bgs	35
84	11.9
108	3.7

Civil, Environmental Engineering, Hydrogeology, Water Supply & Water Use Design, Pesticide Data Management, Risk Base Corrective Action Services
Soil & Water Science, On-Site Wastewater Disposal, Rivers and Lakes, Solid Waste Operations
100 State Street, Montpelier, VT 05602 ■ (802) 229-1880, Fax (802) 229-5876

PID HEADSPACE READINGS ROGERS TIRE AND AUTO SERVICE ROUTE 5, BRADFORD, VERMONT	
SAMPLE DEPTH (inches)	PID HEADSPACE READING (parts per million)
120	2.7
123	2.8
144	2.2
150	1.7

The soil sample collected for laboratory analysis was taken from a depth of 150 inches. The sample was collected from the bucket of the backhoe. Care was taken to assure that the sample did not contact the backhoe bucket, and that the sample was not exposed to the outside air for more time than was necessary for the sample collection. The sample was immediately placed in a cooler on ice and was sent, under chain of custody, to Scitest Laboratory in Randolph, Vermont. It was shipped on Vermont Transit from Montpelier and received at Scitest at 4:15 pm on April 7.

Analysis of the sample included EPA Method 8260 for volatile organic compounds and modified ASTM Method D3328-78 for total petroleum hydrocarbons. This hydrocarbon fingerprinting method, which is roughly equivalent to EPA Method 8100, was conducted at Groundwater Analytical Laboratory in Buzzards Bay, Massachusetts.

The results of the laboratory analysis of this soil sample by both analytical methods were below the method detection limits. Copies of the laboratory reports are attached.

A small area of stained soils were noted approximately 75 feet northeast of the building, and two PID headspace samples were collected from this area. One sample was from within the upper 2 inches, and the second was from approximately 10 inches below the ground surface in soils that were not visibly stained. The staining extended to approximately 2 inches deep. The PID headspace readings obtained from these samples were 0.5 ppm from the upper sample and 0.0 ppm from the lower sample. This area does not appear to present an environmental concern to the property.

It has been agreed that the floor drains in the facility will be permanently sealed with concrete. Property owner Steve Rogers will have this completed soon.

Based on the results of this soil sample analysis, The Johnson Company recommends that no additional investigation of this property be conducted at this time. It is apparent that the release of petroleum products from this UST is limited to a small area, and that no sensitive receptors are threatened by the release. We recommend, by copy of this letter, that the site be placed on "Site Management Activity Completed" status by the SMS.

Please do not hesitate to call if you have any questions.

Sincerely,

THE JOHNSON COMPANY, INC.

By: Bradley A. Wheeler

Bradley A. Wheeler, CPSS
Senior Scientist

cc: Matt Moran, VT SMS
Steve Rodgers
George Huntington

Reviewed by: GBJ
I:\PROJECTS\1-2351-1\SOILSAMP.LTR April 18, 1995 13:24 BAW

SCITEST
LABORATORY SERVICES
P.O. Box 339
Randolph, Vermont 05060-0339
(802) 728-6313

LABORATORY REPORT

CLIENT:	The Johnson Company		
ADDRESS:	100 State Street Montpelier, VT 05602	LABORATORY NO:	5-0841
		PROJECT NO:	78611
		DATE OF SAMPLE:	4/7/95
SITE:	Rogers, Bradford	DATE OF RECEIPT:	4/7/95
ATTENTION:	Bradley Wheeler	DATE OF ANALYSIS:	4/12/95
MATRIX:	Soil	DATE OF REPORT:	4/14/95

All results in micrograms per kilogram (ppb) dry weight.

PARAMETER	SS 101	PQL	PARAMETER	SS 101	PQL
Dichlorodifluoromethane	BPQL	5.0	1,3-Dichloropropane	BPQL	5.0
Chloromethane	BPQL	5.0	2-Hexanone	BPQL	25
Vinyl Chloride	BPQL	5.0	Dibromochloromethane	BPQL	5.0
Bromomethane	BPQL	5.0	1,2-Dibromomethane (EDB)	BPQL	5.0
Chloroethane	BPQL	5.0	Chlorobenzene	BPQL	5.0
Trichlorofluoromethane	BPQL	5.0	1,1,1,2-Tetrachloroethane	BPQL	5.0
1,1-Dichloroethylene	BPQL	5.0	Ethylbenzene	BPQL	5.0
Acetone	BPQL	25	m & p-Xylene	BPQL	10
Methylene Chloride	BPQL	5.0	o-Xylene	BPQL	10
Methyl tertiary Butyl Ether	BPQL	5.0	Styrene	BPQL	5.0
t-1,2-Dichloroethylene	BPQL	5.0	Bromoform	BPQL	5.0
1,1-Dichloroethane	BPQL	5.0	Isopropylbenzene	BPQL	5.0
c-1-2,-Dichloroethylene	BPQL	5.0	Bromobenzene	BPQL	5.0
2, 2-Dichloropropane	BPQL	5.0	1,2,3-Trichloropropane	BPQL	5.0
Methyl Ethyl Ketone (2-But)	BPQL	25	1,1,2,2-Tetrachloroethane	BPQL	5.0
Bromochloromethane	BPQL	5.0	n-Propylbenzene	BPQL	5.0
Chloroform	BPQL	5.0	2-Chlorotoluene	BPQL	5.0
1,1,1-Trichloroethane	BPQL	5.0	4-Chlorotoluene	BPQL	5.0
Carbon Tetrachloride	BPQL	5.0	1,3,5-Trimethylbenzene	BPQL	5.0
1,1-Dichloropropene	BPQL	5.0	tert-Butylbenzene	BPQL	5.0
Benzene	BPQL	5.0	1,2,4-Trimethylbenzene	BPQL	5.0
1,2-Dichloroethane	BPQL	5.0	sec-Butylbenzene	BPQL	5.0
Trichloroethylene	BPQL	5.0	1,3-Dichlorobenzene	BPQL	5.0
1,2-Dichloropropane	BPQL	5.0	1,4-Dichlorobenzene	BPQL	5.0
Dibromomethane	BPQL	5.0	p-Isopropyltoluene	BPQL	5.0
Bromodichloromethane	BPQL	5.0	1,2-Dichlorobenzene	BPQL	5.0
cis-1,3-Dichloropropene	BPQL	5.0	n-Butylbenzene	BPQL	5.0
Methyl Isobutyl Ketone (4M2P)	BPQL	25	1,2-Dibr-3-clpropane (DBCP)	BPQL	10
Toluene	BPQL	5.0	1,2,4-Trichlorobenzene	BPQL	5.0
trans-1,3-Dichloropropene	BPQL	5.0	Hexachlorobutadiene	BPQL	5.0
1,1,2-Trichloroethane	BPQL	5.0	Naphthalene	BPQL	5.0
Tetrachloroethylene	BPQL	5.0	1,2,3-Trichlorobenzene	BPQL	5.0

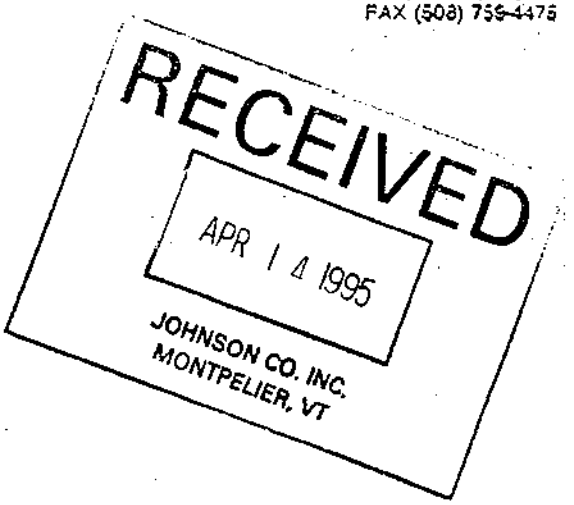
EPA Method 8260, SW-846, 3rd ed., Rev. 1, July, 1992.
BPQL = Below Practical Quantitation Limit (PQL).
% solid 95.0%

Respectfully submitted,
SCITEST, INC.

Roderick J. Lamothe
Laboratory Director

GROUNDWATER ANALYTICAL

Groundwater Analytical, Inc.
228 Main Street
Buzzards Bay, MA 02532
Telephone (508) 759-4441
FAX (508) 759-4475



April 13, 1995

Ms. Joanne Wood
Scitest, Inc.
P.O. Box 339
Route 66
Randolph, VT 05060

Dear Joanne:

Enclosed is the Hydrocarbon Fingerprint Analysis performed for project number 5-0841, sampled on 04-07-95. This project was processed for Rush turnaround.

A brief description of the Quality Assurance/Quality Control procedures employed by Groundwater Analytical, and a statement of our state certifications are contained within the report. This letter authorizes the release of the analytical results and should be considered a part of this report.

Should you have any questions concerning this report, please do not hesitate to contact me.

Sincerely,

Jonathan R. Sanford
Vice President

JRS/cac
Enclosures

GROUNDWATER ANALYTICAL

ASTM METHOD D3328-78 (Modified)
Hydrocarbon Fingerprinting (GC/FID)

Field ID: 5-0841
Project: 5-0841
Client: Scitest
Cont/Prsv: 500ml Glass/Cool
Matrix: Soil Percent Moisture: 4 %

Lab ID: 10387-01
Batch ID: HF-0534-X
Sampled: 04-07-95
Received: 04-10-95
Extracted: 04-11-95
Analyzed: 04-12-95

Qualitative Identification

None

Quantification

PARAMETER	CONCENTRATION (mg/Kg)	REPORTING LIMIT (mg/Kg)
Total Petroleum Hydrocarbons	BRL	5.1

QC SURROGATE COMPOUND	SPIKED	MEASURED	RECOVERY	QC LIMITS
o-Terphenyl	0.68	0.59	86 %	60 - 140 %

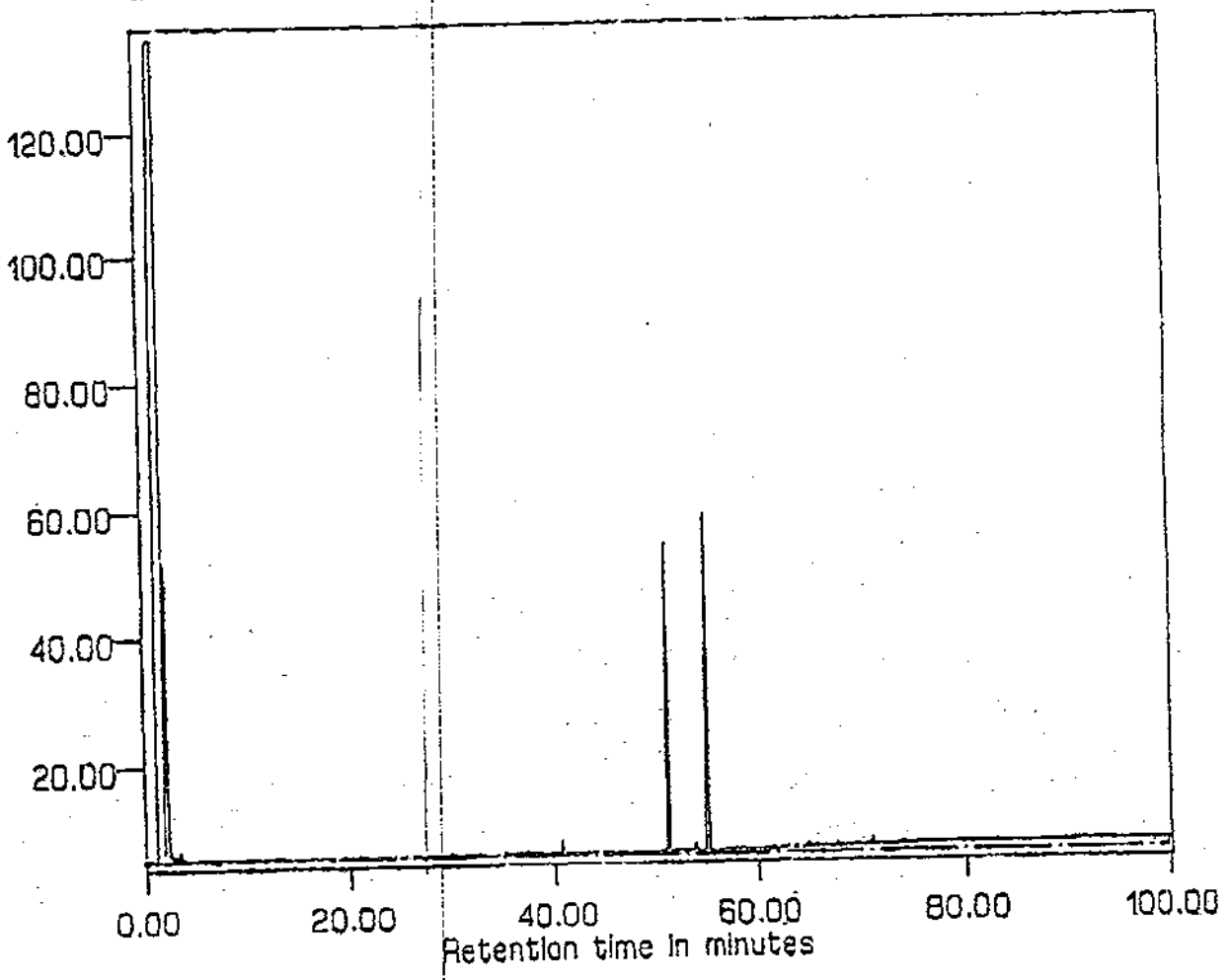
BRL = Below Reporting Limit. Calculations based on dry sample weight. Method References: Method D3328-78 (Modified) - Comparison of Waterborne Petroleum Oils by Gas Chromatography, Volume 11.02 Water, American Society for Testing and Materials, Reapproved (1982). Adapted for solids by Method 3540 (Modified) - Soxhlet Extraction, Test Methods for Evaluating Solid Waste, US EPA SW-846, Third Edition (1986).

GROUNDWATER ANALYTICAL

ASTM METHOD D3328-78 (Modified)
Hydrocarbon Fingerprinting (GC/FID)

Lab ID: 10387-01

HYDROCARBONS LABORATORY



GROUNDWATER ANALYTICAL

QUALITY ASSURANCE
Project Narrative

Project: 5-0841
Client: Scitest

Lab ID: 10387
Received: 04-10-95

A. Physical Condition of Sample(s)

This project was received by the laboratory in satisfactory condition. The sample(s) were received undamaged in appropriate containers with the correct preservation.

B. Project Documentation

This project was accompanied by satisfactory Chain of Custody documentation. All sample container label(s) agreed with the Chain of Custody.

C. Analysis of Sample(s)

No analytical anomalies or non-conformances were noted by the laboratory during the processing of these samples. All data contained within this report is released without qualification.