



October 3, 1994

Mr. Chuck Schwer  
Vermont ANR/DEC  
Hazardous Materials Management Division  
103 South Main Street/West Building  
Waterbury, VT 05671-0404

RE: Site Assessment at the Howard Johnson Complex owned by Cashman-Cairnie, Inc. in  
White River Junction, Vermont (Vermont UST Facility #2092)

Dear Mr. Schwer:

Please find the enclosed report on the site assessment for the above referenced site. Please note that this investigation was conducted under the "Site Investigation Expressway" procedure. Please call me if you have any questions regarding the investigation at this site or if you are in need of additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Erik C. Sandblom", with a long horizontal flourish extending to the right.

Erik C. Sandblom  
Engineer

Enclosure

cc: Mr. Gordon Brown, Cashman-Cairnie, Inc. (w/o enclosure)

**REPORT ON THE INVESTIGATION OF SUBSURFACE  
PETROLEUM CONTAMINATION**

**SEPTEMBER 26, 1994**

**Site Location:**

**HOWARD JOHNSON COMPLEX  
U.S. ROUTE 5  
WHITE RIVER JUNCTION, VERMONT  
(VT UST Facility #2092)**

**Prepared For:**

**CASHMAN-CAIRNIE, INC.  
HOWARD JOHNSON COMPLEX  
U.S. ROUTE 5  
WHITE RIVER JUNCTION, VERMONT**

**Prepared By:**

***GRIFFIN INTERNATIONAL*  
P.O. Box 943 / 19 Commerce Lane  
Williston, Vermont 05495  
(802) 865-4288**

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## **I. INTRODUCTION**

The following report details the environmental site assessment conducted at the Howard Johnson Complex located in White River Junction, Vermont. This assessment has been conducted by Griffin International (Griffin) through the Site Investigation "Expressway" procedure for Cashman-Cairnie, Inc., owner of the Howard Johnson Complex. Notification that Cashman-Cairnie opted to participate in the Site Investigation Expressway Process was made to the Vermont Department of Environmental Conservation (DEC) in the Site Investigation Expressway Notification that accompanied Griffin's July 12, 1994 tank pull report for the removal of an 8,000 gallon fuel oil tank at this site.

This site assessment included the installation of one groundwater monitoring well, the subsequent sampling and analysis of the groundwater, determination of groundwater flow at the site from data collected from monitoring well at the subject site and at adjacent sites, and an assessment of potential receptors to petroleum contamination.

## **II. SITE BACKGROUND**

On July 11, 1994, Griffin inspected the removal of an 8,000 gallon underground storage tank (UST) used to store No. 2 fuel oil. During the inspection, soil and groundwater in the excavation were observed to have been impacted by petroleum contamination. As a result of this discovery, Mr. Gordon Brown, President of Cashman-Cairnie, opted to enter the Site Investigation Expressway. Griffin International then conducted a site assessment in accordance with its August, 1994 work plan which complies with Vermont DEC site assessment guidelines. The results of this site assessment are contained in this report.

The Howard Johnson's Complex is located on Route 5 in White River Junction, Vermont (see Site Location Map in Appendix A) in a commercially zoned district. The site is bounded to the northeast by Bob's Citgo, to the north by Route 5, to the northwest by White River Texaco Food Mart, and to the west by Frederick Johnson Pianos, Inc., a former auto parts store, and a video rental store. The site is served by the Town of Hartford municipal sewer and water systems. There is no on-site water supply or septic system. Storm water runoff from the mostly paved property drains to a small stream that runs under the subject property through a 48-inch culvert (see site map in Appendix B).

## **III. INVESTIGATIVE PROCEDURES**

### **A. Monitoring Well Installation**

On August 22, 1994, a groundwater monitoring well (MW-1) was installed in the location of the UST which was removed in July of 1994. Initially, the well was to be located approximately 25 feet downgradient of the former tank location, according to the Griffin work plan dated August, 1994, however, shallow bedrock encountered in three separate locations to the east of the former

tank basin made it impossible to install a well in adequate groundwater. Therefore the well was installed directly in the former tank basin. The location of the well is displayed on the site map in Appendix B.

The monitoring well was installed by Green Mountain Boring of Barre, Vermont with the use of a 4.25 inch inner diameter hollow stem auger drill rig under the direct supervision of Griffin. Two foot long soil samples were collected with the use of a split spoon sampler at five foot intervals. Soil types from each split spoon were noted and logged in detail. Each soil sample was screened for volatile organic compounds (VOCs) with an portable H-Nu PI-101 photoionization detector (PID).

The monitoring well was installed to a depth of 12 feet below the ground surface. It is constructed with nine feet of factory slotted, two inch diameter PVC pipe with a slot size of 0.010 inch, positioned approximately three feet above the water table to six feet below the water table. The well was completed with a two inch Schedule 40 PVC riser to just below the ground surface. The annulus between the well screen and the bore hole was filled in with appropriately sized silica sand to approximately one foot above the well screen where it was sealed with a 1.5 foot thick bentonite clay plug. A water-tight cap was placed at the top of each well and a flush-mounted manhole cover installed for protection. All wells were installed in accordance with Griffin protocols which comply with State and Industry standards. A detailed well log is included in Appendix C at the end of this report.

The geology encountered while drilling the soil boring for the monitoring well was clean sand fill from grade to approximately 5 feet. At 5 to 6 feet below grade, wet silty sands were encountered. A slight petroleum sheen was observed on the wet soils. When screened with a PID a VOC concentration of 2.0 parts per million (ppm) was detected. Brown silty sand continued to be present until approximately 10 feet below grade. From 10 to 14 feet below the ground surface, gray colored silt with a slight petroleum odor was encountered. The water table was at six feet below grade in the open hole.

## **B. Determination of Groundwater Flow**

Once the monitoring well was installed, it was allowed to stabilize for a period of approximately one week. After this period, the depth to water was measured in the new well (MW-1) in addition to existing monitoring wells at the neighboring Bob's Citgo (CMW) and the Route 5 Texaco Food Mart (TMW). All depth to water measurements were taken with the use of a Keck interface probe. These measurements were subtracted from the top of casing elevations, which were determined relative to an arbitrary datum of 100 feet at top of the casing for MW-1, to determine the water table elevation at each of the wells. From this data, the groundwater contours were interpolated onto the site map and the groundwater direction and gradient determined.

From the water level measurements summarized in Appendix E and the groundwater contour map displayed in Appendix B, the calculated groundwater flow for August 30, 1994 was due east at a

gradient of 2.6%. This flow pattern is very likely given the local unconsolidated soil types and surface water drainage patterns to the Connecticut River.

### **C. Groundwater Sampling and Analysis**

Immediately following depth to water measurements on August 30, 1994, a sample of the groundwater was collected from MW-1. In addition, a trip blank and duplicate sample was collected to ensure that adequate quality assurance and quality control (QA/QC) were maintained during sample collection and analysis. The samples were collected in accordance to Griffin's groundwater sampling protocol which complies with Industry and State standards. No free petroleum product was observed in the well. The sample was analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), common constituents found in petroleum products, and MTBE, a common gasoline additive, per EPA Method 602. Results of the laboratory analysis is summarized in Appendix D.

The results of the analysis indicate that none of the compounds tested for in the analysis were detected in the water sample collected from MW-1. In addition, results of the trip blank and duplicate sample indicate that adequate QA/QC were maintained during the sample collection and analysis.

### **D. Sensitive Receptor Risk Assessment**

During site visits to the Howard Johnson's Complex, a receptor survey was conducted to determine known and potential sensitive receptors to potential petroleum contamination from the former tank system. Below is a summary of observations made during these site visits.

#### *The Culvert Stream*

A small stream flows underneath the site to the east and exits on the east side of Ballardvale Drive. The location of the culvert is approximately 190 feet to the north of the former location of the fuel oil UST. Given the low level and small amount of contamination detected during the tank removal, the lack of petroleum contamination detected in the groundwater, and the distance between the stream and the former location of the tank, it is not likely that the stream is at risk of impact from petroleum hydrocarbons detected in the soils during the tank removal and the well drilling.

At the time of the tank removal inspection, Griffin personnel inspected the stream at the point where the stream discharges from the culvert. No visible sheening or other signs of petroleum contamination was observed (i.e. stained soils, stressed vegetation, petroleum odor). The storm drains in the Howard Johnson Complex parking lot that drain to the underground portion of the stream were screened with a PID. No VOCs were detected.

### *Buildings in the Vicinity*

The closest building downgradient of the tank basin, and therefore, the most likely receptor, is the Howard Johnson's Restaurant. The restaurant building is constructed of concrete blocks with a small concrete block crawl space beneath the main floor. The building is located approximately 40 feet from the tank basin. Again, given the low level of petroleum hydrocarbons detected in the tank basin, the building is not likely to be at risk of petroleum vapor impact. At the time of the tank removal, the ambient air in the restaurant was screened with a PID and no VOCs were detected.

### *Water Supplies*

All of the buildings in the vicinity of the Howard Johnson's Complex are served by the town of Hartford municipal water and sewer. The closest known water supply well to the site is approximately three miles in distance from the site. Therefore, there appear to be no water supplies potentially at risk of impact from the low level of petroleum detected in the soil at the Howard Johnson Complex.

## **IV. CONCLUSIONS**

Based on the data collected from the Howard Johnson's Complex and vicinity in White River Junction, Vermont, the following conclusions can be made.

- 1) A very low level of residual volatile organic compounds exists in the tank basin soils of a former No. 2 fuel oil UST at the site. This contamination is evidently limited to the soil based on a groundwater sample taken from the tank basin that was non-detect for petroleum VOCs. The concentration of VOCs detected in the soils (2.0 ppm) is less than the action limit as contained in the *Agency Guidelines for Handling Petroleum Contaminated Soil and Carbon Media*, which is 10 ppm for diesel and No. 2 fuel oil. Due to the low concentrations and the limited amount of detected contamination, it is most likely the result of small amounts of product that has been spilled while filling the tank.
- 2) Soils located across the site most likely consist primarily of fill over silt and fluvial deposits from the Connecticut River. Areas to the east of the tank basin have relatively shallow bedrock (3 to 6 feet below grade) with no water table.
- 3) With the removal of the UST, any petroleum hydrocarbons detected in the ground are residual, with no continued source, and will therefore likely decrease to non detectable limits over time through the natural processes of degradation, volatilization, and dispersion.
- 4) There do not appear to be any receptors at risk of impact to petroleum contamination from the 8,000 gallon fuel oil UST basin at the site.

## V. RECOMMENDATIONS

Based on the above conclusions, Griffin recommends the following action concerning petroleum contamination at the Howard Johnson Complex in White River Junction, Vermont.

- 1) Due to the low level of petroleum contamination detected in the soils, the lack of detectable concentrations of contaminants in the groundwater, and the lack of risk to potential receptors, Griffin recommends no further action at this site. If the site has been placed on the Vermont DEC Active Hazardous Sites List, then it should be considered for Site Management Activity Completed (SMAC) and removed from the Vermont DEC Active Hazardous Sites List based on the following criteria taken from the Vermont DEC SMAC Checklist:

- a) The source(s), nature and extent has been adequately defined.

The source of the contamination detected in the soil and in the groundwater at the site was from a former heating oil storage system. The contamination detected is likely from fuel oil that was stored in the old USTs. The extent of contamination has been defined as being limited to the soil in the immediate vicinity of the former USTs.

- b) Source(s) has been removed, remediated, or adequately contained.

The UST was removed in July of 1994 with no replacement. A groundwater monitoring well in the former tank basin (MW-1), which has not shown evidence of containing detectable concentrations of contaminants, indicates that the contamination is contained in the soils in the immediate vicinity of the former USTs. There is no longer a source of contamination.

- c) Levels of contaminants in soil and groundwater shall be stable, falling, or non-detectable.

Based on the groundwater sampling and analysis that occurred at the site in August of 1994, the levels of contaminants in the monitoring well on site are non-detectable. As the source of the contamination no longer exists at the site, soil contamination will most likely decrease over time due to the natural processes of degradation, dilution, and dispersion.

- d) Groundwater enforcement standards are met on entire property.

According to the analytical results of the sample collected from the groundwater monitoring well on-site, the compounds tested for in the groundwater are well below Vermont Drinking Water Standards.

- e) Soil guideline levels are met. If not, engineering or institutional controls are in place.

When the UST was removed in July of 1994, VOCs were detected in the soils when screened with a PID. These soils remained in the ground. None of the buildings in the vicinity have been impacted or are likely to be impacted based on the building construction, low level of contamination, and proximity between the tank basin and surrounding buildings. The vicinity in which contamination was detected is paved as well as most of the site.

- f) No unacceptable threat to human health or the environment exists on-site.

Due to the low level of contaminants detected in the soil, and the lack of significant risk to potential receptors, and to engineering controls described in (e) above, any residual contamination that may be left in soils at the site would no appear to pose an unreasonable risk to health, safety, or the environment.

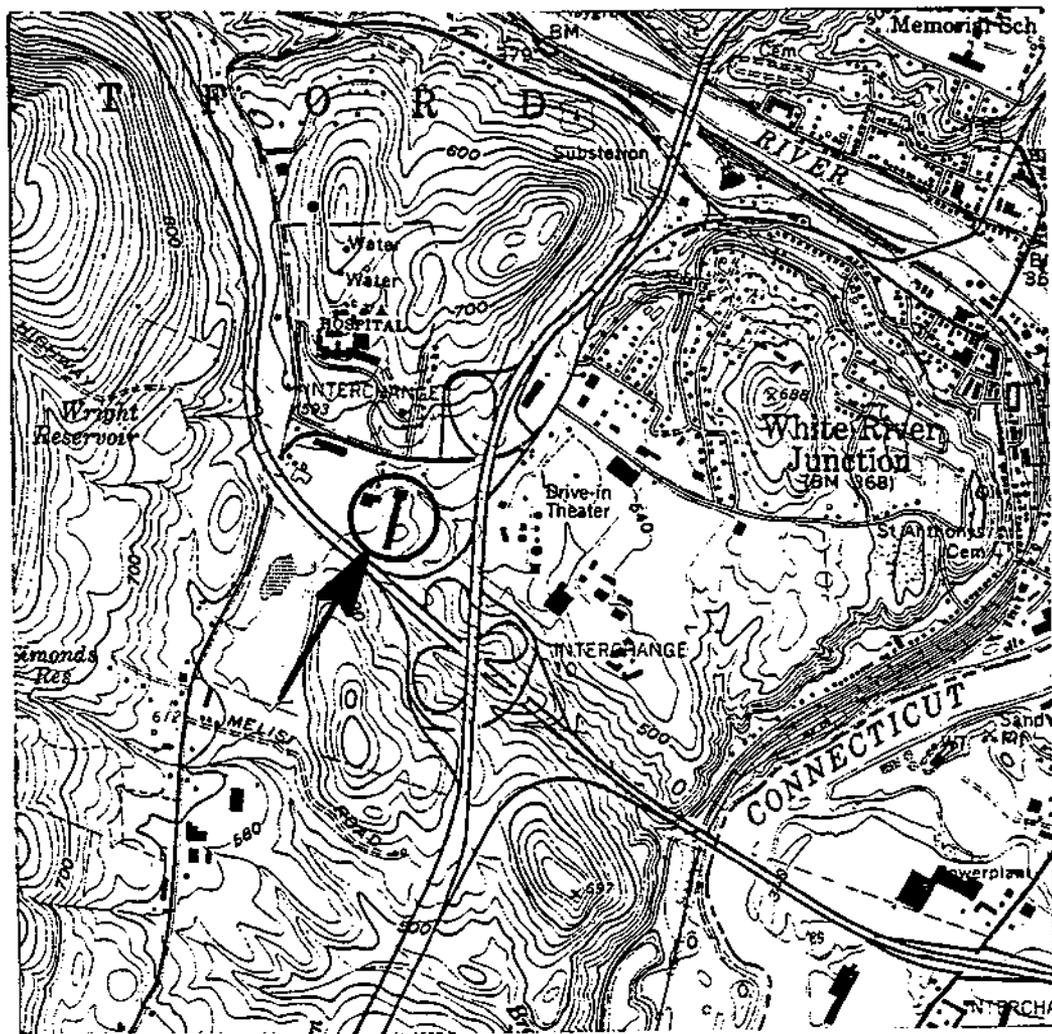
- g) Site meets RCRA requirements.

The Howard Johnson's Complex is not in violation of the Resource Conservation and Recovery Act (RCRA) as defined in 40 CFR 264.

- h) Site meets CERCLA requirements.

The Howard Johnson's Complex is not in violation of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) as defined in 40 CFR 300.

**APPENDIX A**  
**SITE LOCATION MAP**



JOB #: 494567  
 SOURCE: USGS- HANOVER N.H.-VT. QUADRANGLE PHOTOREVISED 1988.



**HOWARD JOHNSON COMPLEX**  
**WHITE RIVER JUNCTION, VERMONT**  
**SITE LOCATION MAP**

DATE 5/27/94	DWG # 1	SCALE: 1:24000	DRN: SE	APP: DV
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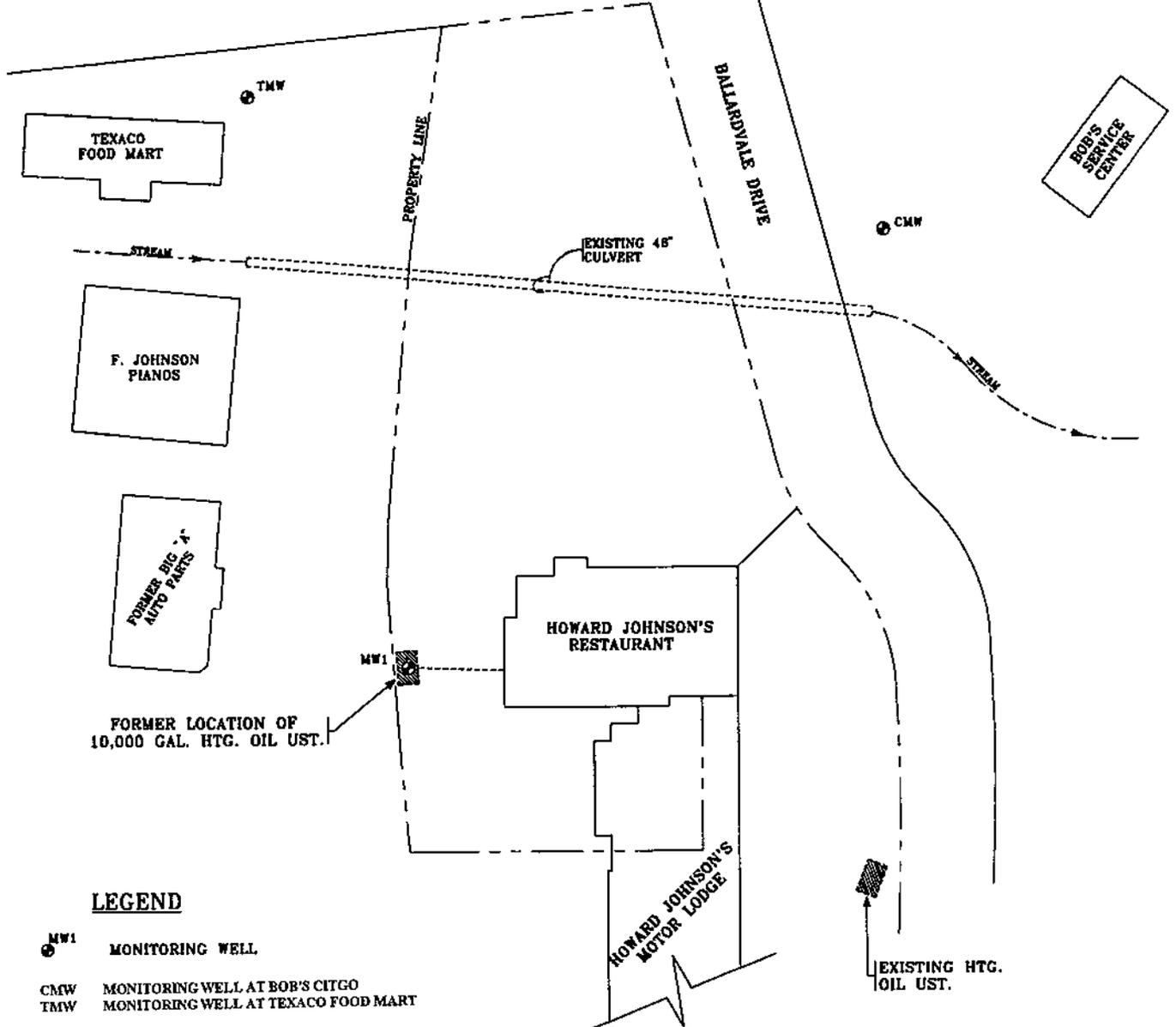
**APPENDIX B**

**SITE MAPS**

- 1) Site Map**
- 2) Groundwater Contour Map**



U.S. ROUTE 5



**LEGEND**

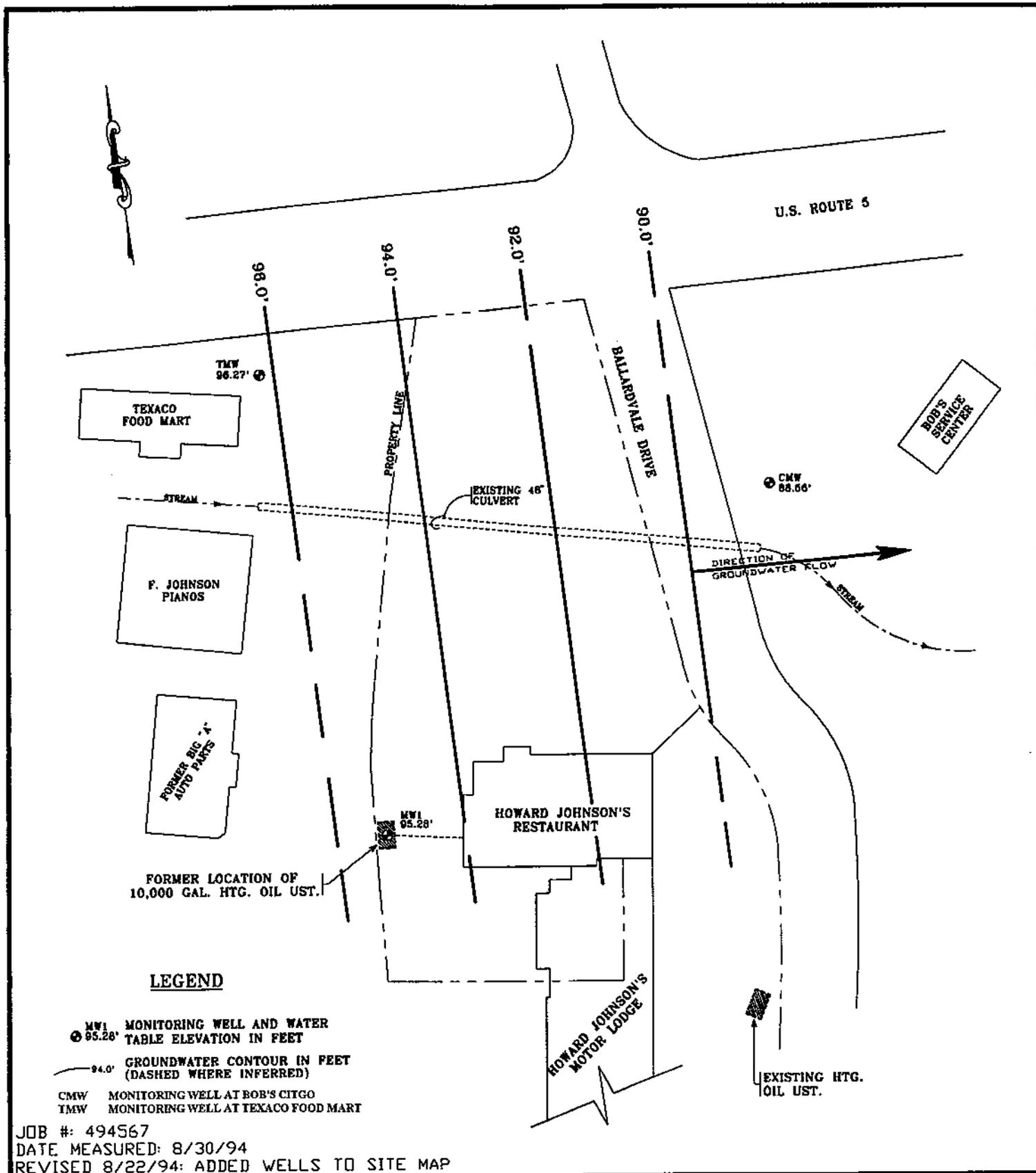
- MW1 MONITORING WELL
- CMW MONITORING WELL AT BOB'S CITGO
- TMW MONITORING WELL AT TEXACO FOOD MART

JOB #: 494567  
REVISED 8/22/94: ADDED WELLS TO SITE MAP



**HOWARD JOHNSON COMPLEX**  
**WHITE RIVER JUNCTION, VERMONT**  
**SITE MAP**

DATE: 9/20/94	DWG.#: 2	SCALE: 1"=80'	DRN.: SB	APP:ES
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**LEGEND**

- MW1 MONITORING WELL AND WATER  
93.28' TABLE ELEVATION IN FEET
- 94.0' GROUNDWATER CONTOUR IN FEET  
(DASHED WHERE INFERRED)
- CMW MONITORING WELL AT BOB'S CITGO
- TMW MONITORING WELL AT TEXACO FOOD MART

JOB #: 494567  
 DATE MEASURED: 8/30/94  
 REVISED 8/22/94: ADDED WELLS TO SITE MAP

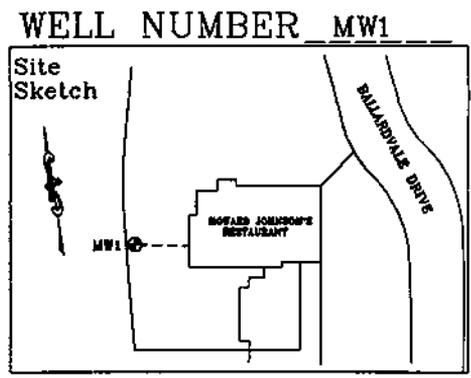


**HOWARD JOHNSON COMPLEX**  
**WHITE RIVER JUNCTION, VERMONT**  
**GROUNDWATER CONTOUR MAP**

DATE: 9/20/94	DWG.#: 3	SCALE: 1"=80'	DRN.: SB	APP.:ES
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**APPENDIX C**  
**MONITORING WELL LOGS**

PROJECT HOWARD JOHNSON COMPLEX  
 LOCATION WHITE RIVER JUNCTION, VERMONT  
 DATE DRILLED 8/22/94 TOTAL DEPTH OF HOLE 13'  
 DIAMETER \_\_\_\_\_  
 SCREEN DIA. 2" LENGTH 9' SLOT SIZE 0.010"  
 CASING DIA. 2" LENGTH 2.5' TYPE sch 40 pvc  
 DRILLING CO. GMB DRILLING METHOD HSA  
 DRILLER \_\_\_\_\_ LOG BY E. HODGES



GRIFFIN INTERNATIONAL, INC

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION/SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)	DEPTH IN FEET
0	ROAD BOX LOCKING WELL CAP CONCRETE				0
1	BENTONITE			SAND FILL	1
2	WELL RISER				2
3					3
4					4
5	SAND PACK				5
6			5'-7' - 17/3/2/100 2 ppm	Wet silty SAND, slight petroleum sheening present.	6
7				6.0' WATER TABLE	7
8	WELL SCREEN				8
9					9
10				Grayish brown sandy SILT, slight petroleum odor.	10
11	BOTTOM CAP				11
12					12
13	UNDISTURBED NATIVE SOIL			BASE OF WELL AT 12' END OF EXPLORATION AT 13'	13
14					14
15					15
16					16
17					17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

**APPENDIX D**

**GROUNDWATER QUALITY SUMMARY DATA**

**Groundwater Quality Summary  
Howard Johnson Complex  
White River Junction, Vermont**

**Monitoring Well 1 (MW-1)**

PARAMETER	Date of Sample Collection			Vermont Drinking Water Standards
	8/30/94			
Benzene	ND			5.0*
Chlorobenzene	ND			100*
1,2-DCB	ND			600*
1,3-DCB	ND			600**
1,4-DCB	ND			75*
Ethylbenzene	ND			700*
Toluene	ND			1,000*
Xylenes	ND			10,000*
Total BTEX	ND			
MTBE	ND			40**
BTEX + MTBE	ND			

**Vermont Drinking Water Standards and  
Quality Assurance and Control Samples**

Sample Date: August 30, 1994

PARAMETER	Equipment Blank	Trip Blank	Duplicate (MW1)	Vermont Drinking Water Standards
Benzene		ND	ND	5.0*
Chlorobenzene		ND	ND	100*
1,2-DCB	No	ND	ND	600*
1,3-DCB	Equip	ND	ND	600**
1,4-DCB	Blank	ND	ND	75*
Ethylbenzene	Collected	ND	ND	700*
Toluene		ND	ND	1,000*
Xylenes		ND	ND	10,000*
Total BTEX		ND	ND	-
MTBE		ND	ND	40**
BTEX + MTBE		ND	ND	-

ND - None Detected

All Values Reported in ug/L (ppb)

TBQ - Trace Below Quantitation Limits

**APPENDIX E**

**GROUNDWATER LEVEL DATA**

9/22/94

**Liquid Level Monitoring Data  
Howard Johnson Complex  
White River Junction, Vermont**

**Monitoring Date:  
30-Aug-94**

Well I.D.	Well Depth	Top of Casing Elevation	Depth to Product	Depth to Water	Product Thickness	Specific Gravity of Product	Hydro Equivalent	Corrected Depth to Water	Corrected Water Table Elevation
MW-1	12.0	100.00	-	4.72	-	-	-	4.72	95.28
CMW	-	99.67	-	11.11	-	-	-	11.11	88.56
TMW	-	103.64	-	7.37	-	-	-	7.37	96.27

Notes: All values reported in feet.

**APPENDIX F**

**LABORATORY ANALYSIS REPORTS**



Laboratory Services

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

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International  
PROJECT NAME: Cashman-Carnie  
REPORT DATE: September 8, 1994  
DATE SAMPLED: August 30, 1994

PROJECT CODE: GICC1489  
REF.#: 63,820 - 63,822

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated samples were preserved 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,

A handwritten signature in black ink, appearing to read "H. Locker", written over a white background.

Harry B. Locker, Ph.D.  
Laboratory Director

enclosures



Laboratory Services

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

LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Griffin International  
PROJECT NAME: Cashman-Carnie  
REPORT DATE: September 8, 1994  
DATE SAMPLED: August 30, 1994  
DATE RECEIVED: August 31, 1994  
ANALYSIS DATE: September 7, 1994

PROJECT CODE: GICC1489  
REF.#: 63,820  
STATION: MW-1  
TIME SAMPLED: 10:35  
SAMPLER: J. Bernhard

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND <sup>1</sup>
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 104%

NUMBER OF UNIDENTIFIED PEAKS FOUND: > 10

NOTES:

1 None detected



Laboratory Services

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

LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Griffin International  
PROJECT NAME: Cashman-Carnie  
REPORT DATE: September 8, 1994  
DATE SAMPLED: August 30, 1994  
DATE RECEIVED: August 31, 1994  
ANALYSIS DATE: September 7, 1994

PROJECT CODE: GICC1489  
REF.#: 63,821  
STATION: Duplicate (MW-1)  
TIME SAMPLED: 10:35  
SAMPLER: J. Bernhard

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND <sup>1</sup>
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 97%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >10

NOTES:

1 None detected



Laboratory Services

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

LABORATORY REPORT

EPA METHOD 602--PURGEABLE AROMATICS

CLIENT: Griffin International  
PROJECT NAME: Cashman-Carnie  
REPORT DATE: September 8, 1994  
DATE SAMPLED: August 30, 1994  
DATE RECEIVED: August 31, 1994  
ANALYSIS DATE: September 7, 1994

PROJECT CODE: GICC1489  
REF.#: 63,822  
STATION: Trip Blank  
TIME SAMPLED: 7:45  
SAMPLER: J. Bernhard

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND <sup>1</sup>
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 99%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected

ENDYNE, INC. 1994



Laboratory Services

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

EPA METHOD 602 LABORATORY REPORT

MATRIX SPIKE AND DUPLICATE LABORATORY CONTROL DATA

CLIENT: Griffin International  
PROJECT NAME: Cashman-Carnie  
REPORT DATE: September 8, 1994  
DATE SAMPLED: August 30, 1994  
DATE RECEIVED: August 31, 1994  
ANALYSIS DATE: September 7, 1994

PROJECT CODE: GICC1489  
REF.#: 63,820  
STATION: MW-1  
TIME SAMPLED: 10:35  
SAMPLER: J. Bernhard

<u>Parameter</u>	<u>Sample(ug/L)</u>	<u>Spike(ug/L)</u>	<u>Dup1(ug/L)</u>	<u>Dup2(ug/L)</u>	<u>Avg % Rec</u>
Benzene	ND <sup>1</sup>	10	11.0	11.3	112%
Toluene	ND	10	10.5	10.7	106%
Ethylbenzene	ND	10	10.2	10.4	103%
Xylenes	ND	30	31.0	31.5	104%

NOTES:

1 None detected

**CHAIN-OF-CUSTODY RECORD**

12-1-91

Project Name: <i>Cashman - Carnie</i>	Reporting Address: <i>Griffin</i>	Billing Address: <i>Griffin</i>
Site Location: <i>White River Jct., VT</i>		
Endyne Project Number: <i>GICC 1489</i>	Company: <i>Griffin</i>	Sampler Name: <i>J. Beinhart</i>
	Contact Name/Phone #: <i>865-4288</i>	Phone #: <i>same</i>

Lab #	Sample Location	Matrix	G R A B	C O M P	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
<i>63820</i>	<i>MW-1</i>	<i>H<sub>2</sub>O</i>	<i>X</i>		<i>10:35</i>	<i>2</i>	<i>40m</i>		<i>602</i>	<i>HCl</i>	
<i>63821</i>	<i>Duplicate (MW-1)</i>	<i>↓</i>	<i>↓</i>		<i>10:35</i>	<i>↓</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	
<i>63822</i>	<i>Trip Blank</i>	<i>↓</i>	<i>↓</i>		<i>07:45</i>	<i>↓</i>	<i>↓</i>				

Relinquished by: Signature <i>John B. C.</i>	Received by: Signature <i>Jim Wetmore</i>	Date/Time <i>7/31/91 11:05 am</i>
Relinquished by: Signature	Received by: Signature	Date/Time

**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	27	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 <sub>5</sub>	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):										

**CHAIN-OF-CUSTODY RECORD**

12042

Project Name: <i>Crafton</i>	Reporting Address: <i>Crafton</i>	Billing Address: <i>Crafton</i>
Site Location: <i>White Hill Rd., VT</i>		
Endyne Project Number:	Company: <i>Crafton</i>	Sampler Name: <i>J. Goodwood</i>
	Contact Name/Phone #: <i>805 4288</i>	Phone #: <i>Seneca</i>

Lab #	Sample Location	Matrix	G R A B	C O M P	Date/Time	Sample Containers		Field Results/Remarks	Analysis Required	Sample Preservation	Rush
						No.	Type/Size				
	<i>MW-1</i>	<i>H<sub>2</sub>O</i>	<i>Y</i>		<i>10:35</i>	<i>2</i>	<i>40ml</i>		<i>602</i>	<i>11C1</i>	
	<i>Duplicate (MW-1)</i>	<i>↓</i>	<i>↓</i>		<i>10:35</i>	<i>↓</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	
	<i>Field Blank</i>	<i>↓</i>	<i>↓</i>		<i>07:45</i>	<i>↓</i>	<i>↓</i>				

Relinquished by: Signature <i>[Signature]</i>	Received by: Signature <i>[Signature]</i>	Date/Time <i>11/1/91 11:05 AM</i>
Relinquished by: Signature	Received by: Signature	Date/Time

**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	27	EPA 8010/8020
3	Ammonia N	8	Total Diss. P	13	TDS	18	COD	23	EPA 418.1	28	EPA 8080 Pest/PCB
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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):										

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