

OCT 06 1993



October 4, 1993

Mr. Charles B. Schwer, Supervisor
Sites Management Section
VT DEC
103 South Main Street/West Building
Waterbury, VT 05671-0404

Re: Petroleum Contamination at Northern Rent A Car, South Burlington, VT
(Site #93-1406)

Dear Mr. Schwer:

The attached report has been prepared in response the site investigation performed at Northern Rent A Car in accordance with the Work Plan approved by your letter to Mr. Tony Fagnoli, Northern Rent A Car, dated July 30, 1993 regarding the subject site. Mr. Tony has reviewed and approved this report and I am forwarding it at his request. If you have questions please call.

Sincerely,

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

Peter Schuyler
President

Encl.

c. Mr. Tony Fagnoli, Northern Rent A Car, w/o encl.

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

SITE LOCATION:

**NORTHERN RENT-A-CAR
1890 WILLISTON ROAD
SOUTH BURLINGTON, VT 05403
VT DEC SITE #93-1406**

September 19, 1993

PREPARED FOR:

**NORTHERN RENT-A-CAR
P.O. BOX 2145
SOUTH BURLINGTON, VT 05403**

PREPARED BY:

**GRIFFIN INTERNATIONAL, INC.
2B DORSET LANE
WILLISTON, VT 05495
(802) 879-7708**

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I. INTRODUCTION

This report details the investigation of subsurface petroleum contamination in the vicinity of three former underground storage tanks (USTs) at Northern Rent-A-Car in South Burlington, Vermont. The investigation was conducted in accordance with a work plan prepared by Griffin International and approved by the Vermont Department of Environmental Conservation (DEC) on July 30, 1993 for Northern Rent-A-Car.

The investigation has been conducted to determine the degree and extent of subsurface contamination at this site and to assess the risk that the contamination poses to nearby sensitive receptors. Subsurface petroleum contamination was detected at this site during removal of USTs on June 16, 1993. Specifically, volatile organic compounds (VOCs) were detected in the soils in the vicinity of the three former USTs.

All contaminated soils detected at the time of the UST removals were returned to the excavation site. No contaminated soils are stockpiled at this site.

A report of the UST removal inspection was prepared by Griffin in June, 1993, and was submitted to the DEC in June. This report indicated that residual soil contamination was present after removal of the three USTs.

The DEC requested that this investigation be conducted after a review of the UST removal report. The DEC request is contained in a letter from Mr. Charles B. Schwer, of the DEC, to Mr. Tony Fagnoli, Northern Rent-A-Car, dated July 6, 1993.

This investigation consisted of groundwater sampling and analysis of three monitoring wells installed at the time of UST removal, determination of the direction of groundwater flow across the site, determination of the relative extent of subsurface contamination, determination of the risk to surrounding receptors and conclusions/recommendations. Data obtained from this investigation indicate that the residual contamination at this site does not pose a significant risk to the environment or to the health and safety of nearby populations.

II. SITE BACKGROUND

A. Site History

This developed site has been used as a maintenance facility for Northern Rent-A-Car, (Avis) for its existence. The site is used as the administrative office for the company and also as a facility to perform maintenance on rental cars and to clean and prepare them for rentals. Consumer vehicle pickup and return is performed at another facility. The facility maintained three 4000 gallon gasoline USTs which were used to fuel rental cars up until the time of their removal. The USTs were removed to as part of a tank

upgrade. One 10,000 gallon gasoline tank was installed in place of the three USTs outside the area of the former UST pit.

The UST closure was inspected by Griffin International. At the time of the UST closure, three monitoring wells were installed with a back hoe under Griffin's supervision. Two were installed in the backfill for the three USTs removed and the third was installed in a presumed downgradient location that had been excavated to better determine the extent of the contamination detected in the UST pit. A report of the closure was prepared by Griffin and submitted to Northern Rent-A-Car and to the DEC.

In response to petroleum contaminated soils detected during the UST removal, the DEC requested that a subsurface investigation be conducted. Northern Rent-A-Car contracted Griffin to conduct the investigation in July 1993.

B. Site Description.

Northern Rent-A-Car is located adjacent to the Burlington Airport along US Route 2 in South Burlington, Vermont. See Site Location Map of Appendix A. The general area has indications of being a former wetland and there is significant evidence of cat tails and other wet lands plants in the immediate area. Area drainage likely empties into Muddy Brook approximately one half mile east. The developed area along US Route 2 resides on approximately ten to twelve feet of fill in the area of Northern Rent-A-Car. The elevation of the site is approximately 300 feet above sea level. Excavations at the site to depths of about twelve feet were entirely in fill and consisted of construction debris (concrete, rebar, old planks) and cleared vegetation such as rotting brush and trees. The general underlying geology at the site is mapped as of pebbly marine sand overlying calcareous bedrock.

Northern Rent-A-Car is constructed on a cement slab. All discharges from the building are directed to the municipal sewer system. Water is municipally supplied and emanates from Lake Champlain. The neighboring properties in this area are all commercial in nature and consist of a newly constructed, not yet fully occupied, building to the west, the Burlington Airport to the north, rental storage sheds to the northeast, a car dealer to the southeast, Route 2 generally running approximately east-west with various commercial businesses to the south of Route 2. All buildings in this area are constructed on concrete slabs and are served by municipal water and sewer.

III. INVESTIGATIVE PROCEDURES

A. Monitoring Well Installation

A total of three monitoring wells currently exist on the site. All three were installed under Griffin supervision at the time of the UST removal. Two were installed during backfilling of contaminated soils during the UST removal. The third was installed in the

backfill of a test hole dug near the former USTs which showed no contamination when field screened with a PID. The wells were constructed of two inch diameter, 0.010 in slotted well screen and riser pipe extending to slightly below grade. The three wells are completed with flush mounted road boxes. Two are in a paved area and the third is adjacent to the new UST in the lawn. Appendix B contains well logs with soil characteristics, VOC concentrations and well construction details.

MW-1 is located at the northeast corner of the former UST pit adjacent to the former fuel pump in an area that exhibited no soil contamination. This well is approximately twelve feet deep. MW-2 is located at the southwest end of the UST pit excavation in an area that exhibited soil contamination. This monitoring well is also approximately 12 feet deep. These two wells were installed in backfill from the former UST pit.

MW-3 is located south of the former UST pit in an area that was excavated to help determine the extent of contamination at the site. This well is located in an area where no contamination was detected and is downgradient of the contamination detected in the UST pit. The soils encountered in this location were entirely fill. Considerable old concrete and rebar was encountered for the depth of the excavation. The construction debris was interspersed with a mixture of gravel, sand and top soil.

B. Groundwater Flow Direction, Gradient Determination

On August 13, 1993, Griffin measured water table elevations in each on-site monitoring well for preparation of the Groundwater Flow Direction and Contaminant Distribution Map in Appendix A. Groundwater was present in each well, at depths of 5.2 to 6 feet below ground level. Water table elevations were measured relative to a benchmark (Top of Casing (TOC) of MW-1) which was assigned an arbitrary elevation of 100 feet. The data indicates that groundwater beneath the site is flowing in a southwest direction, toward Route 2, at a hydraulic gradient of approximately 1%.

C. Groundwater Sampling and Analysis

On August 13, 1993 the three monitoring wells on-site had groundwater samples collected for analysis to EPA Method 602. Trip blank, equipment blank and duplicate samples were also collected for quality control/quality assurance (QA/QC). Analytical results of these samples indicate that good QA/QC standards were maintained during sample collection and analysis. The analytical data indicates that BTEX concentrations in the vicinity of the former UST pit are low with exception of xylene in MW-2 which was disproportional high, 20,000 parts per billion (ppb). The xylene in MW -2 exceeds the Vermont Health Advisory Limit of 400 ppb. No MTBE was detected in the groundwater and no benzene was detected in any of the monitoring wells. Xylene was also detected in MW-1 at 450 ppb, slightly above the Vermont Health Advisory Limit.

Results of the groundwater quality analyses are shown in a Table contained on the Groundwater Flow Direction and Contaminant Distribution Map in Appendix A.

IV. RISK ASSESSMENT

As part of this investigation, Griffin has conducted an assessment of the risk that the subsurface petroleum contamination found at Northern Rent-A-Car poses to potential receptors. Potential area receptors have been identified and studied relative to the impact the contamination detected will have on them. Identification of the sensitive receptors included a visual inspection of the area around Northern Rent-A-Car and an interview with the owner of Northern Rent-A-Car. All data collected during this investigation has been used to determine the potential impact to receptors.

The potential receptors identified consist of:

Northern Rent-A-Car building
Immediate area low lying wet areas

As indicated by reports from Northern Rent-A-Car personnel, there have not been petroleum odors in the office portion of their building. The remainder of the building is used for vehicle maintenance and naturally has occasional petroleum odors present. The building is built on a cement slab. It appears that the risk to Northern Rent-A-Car is acceptable. In several visits to Northern Rent-A-Car by Griffin personnel, no petroleum odors have been detected.

The groundwater flow in the area of the former underground storage tanks is southwest, away from the Northern Rent-A-Car building. The surface water flow in drainage ditches on either side of Northern Rent-A-Car is also southwest and enters culverts which presumably empty into the local storm sewer system. The wet areas around Northern Rent-A-Car reside in the northeast direction from the former UST location. Observation of area surface waters in the wet area in several locations did not indicate any petroleum contamination. Given the relative position of the wet areas and the former UST location and, considering the groundwater flow direction, it is unlikely that the low wet areas will be impacted.

The apparent receptor for groundwater in the area is Muddy Brook which is located approximately one half mile to the east. The distance to the brook, coupled with the expected dilution of any contamination over that distance, make impact to the brook unlikely.

None of the area buildings have basements. This also lessens the possibility that vapors would enter any of the buildings.

There are no residential dwellings in close proximity to Northern Rent-A-Car.

Therefore, it is not thought that the contamination detected will have a significant effect on any of the area receptors.

V. DETERMINATION OF THE NEED FOR TREATMENT AND/OR LONG TERM MONITORING

Based on the data collected and the conclusion that the area receptors will not likely be affected by residual contamination at this site, it is not felt that any type of active treatment or remediation is warranted.

It is felt that the site should be monitored again in six months to determine changes in water quality. Based on the results of water sampling and analysis in six months, decisions can be made as to the longer term need for continued monitoring.

VI. CONCLUSIONS

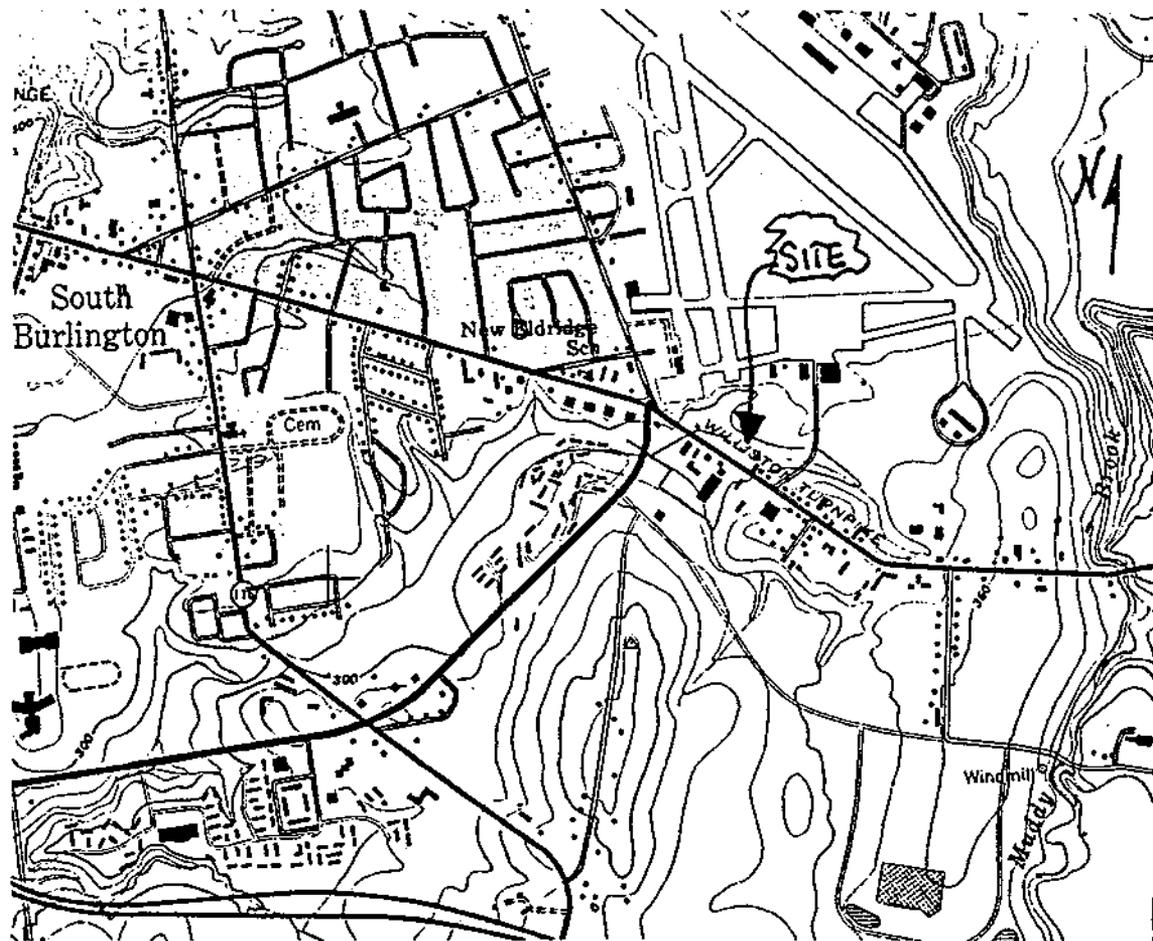
1. There was a release of petroleum from the former UST system at Northern Rent-A-Car. The amount and duration of the release are unknown. The three former USTs were in good condition and did not appear to be the source of the release. The most likely cause of the release is from piping leading to the fuel pump as observed during the UST removals.
2. The release has resulted in contamination of the soils in the Vadose zone and groundwater in the vicinity of the former UST system. The contamination exists in both dissolved and adsorbed phases. No free phase contamination has been detected.
3. The source of the release, the UST system, has been removed from the site and replaced with a new UST system containing leak detection devices.
4. Soils at the site consist of sandy construction fill to a depth of at least twelve feet. Groundwater is present at approximately five to six feet below grade and flows towards the southwest at a 1% gradient.
5. The fact that no contamination was detected in the one downgradient well and a minor amount of contamination was detected in the most upgradient well indicates that the contamination is not widespread and that it has not migrated significantly.
6. Considering that the likely source has been removed and the lack of contaminant migration to date, it is likely that the existing contaminant levels in the vicinity of the former USTs will decrease over time, due to the natural processes of dilution, dispersion and degradation.
7. Residual subsurface contamination at this site does not appear to pose significant threats to area receptors.

VII. RECOMMENDATIONS

Based on the data collected and the conclusions drawn, Griffin presents the following recommendations:

1. To adequately document the continued degradation of subsurface petroleum contamination at this site, it is recommended that another round of groundwater samples be collected and analyzed to EPA Method 602 from the three existing monitoring wells in six months.
2. During the sampling event, groundwater levels in the three wells should be measured for use in confirming groundwater flow direction.
3. If conditions remain unchanged after the next sampling round, the site should be considered for site closure..

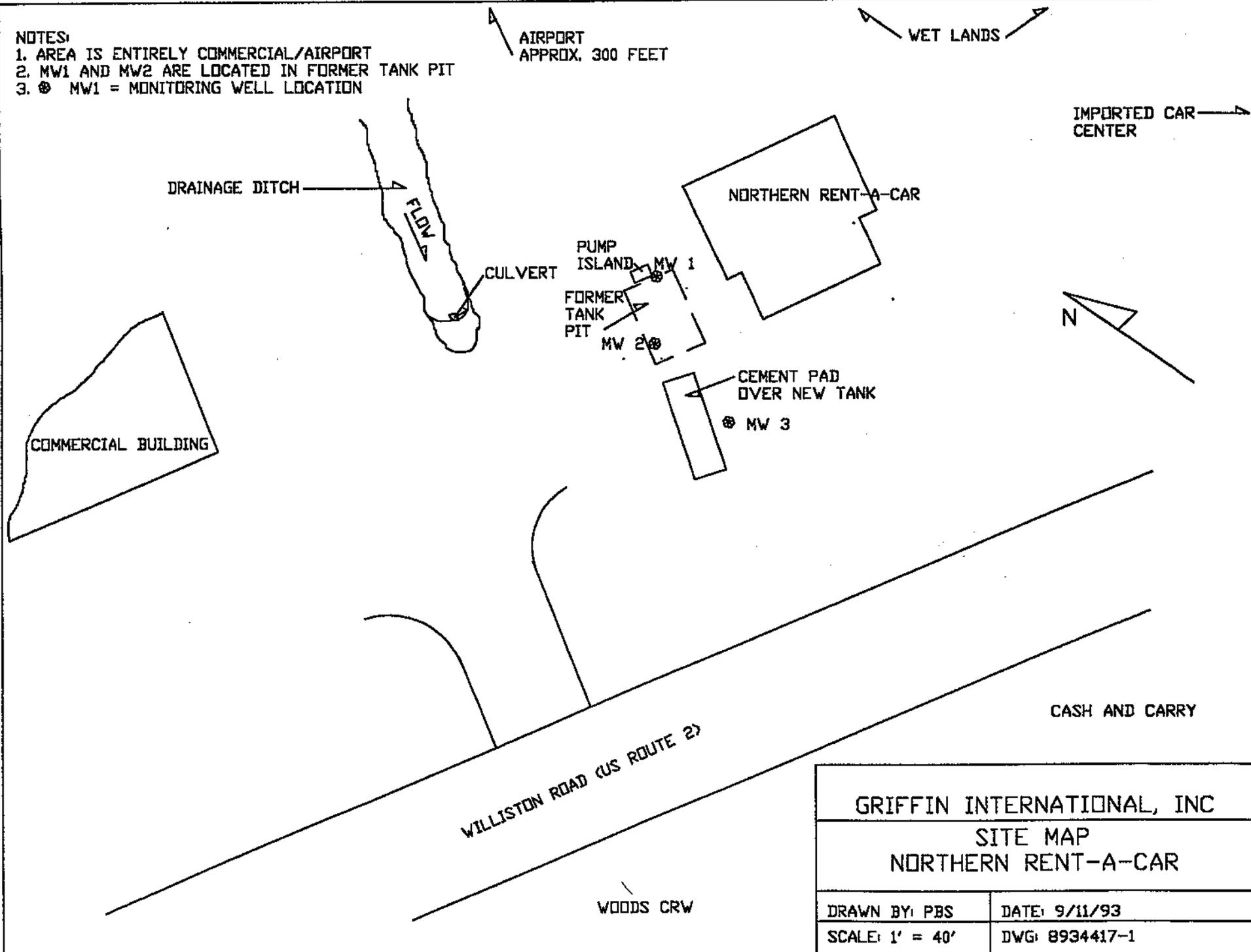
APPENDIX A
SITE MAPS



SITE LOCATION MAP
NORTHERN RENT A CAR
SOURCE:
USGS BURLINGTON, VT QUAD
PHOTOREVISED 1987

NOTES:

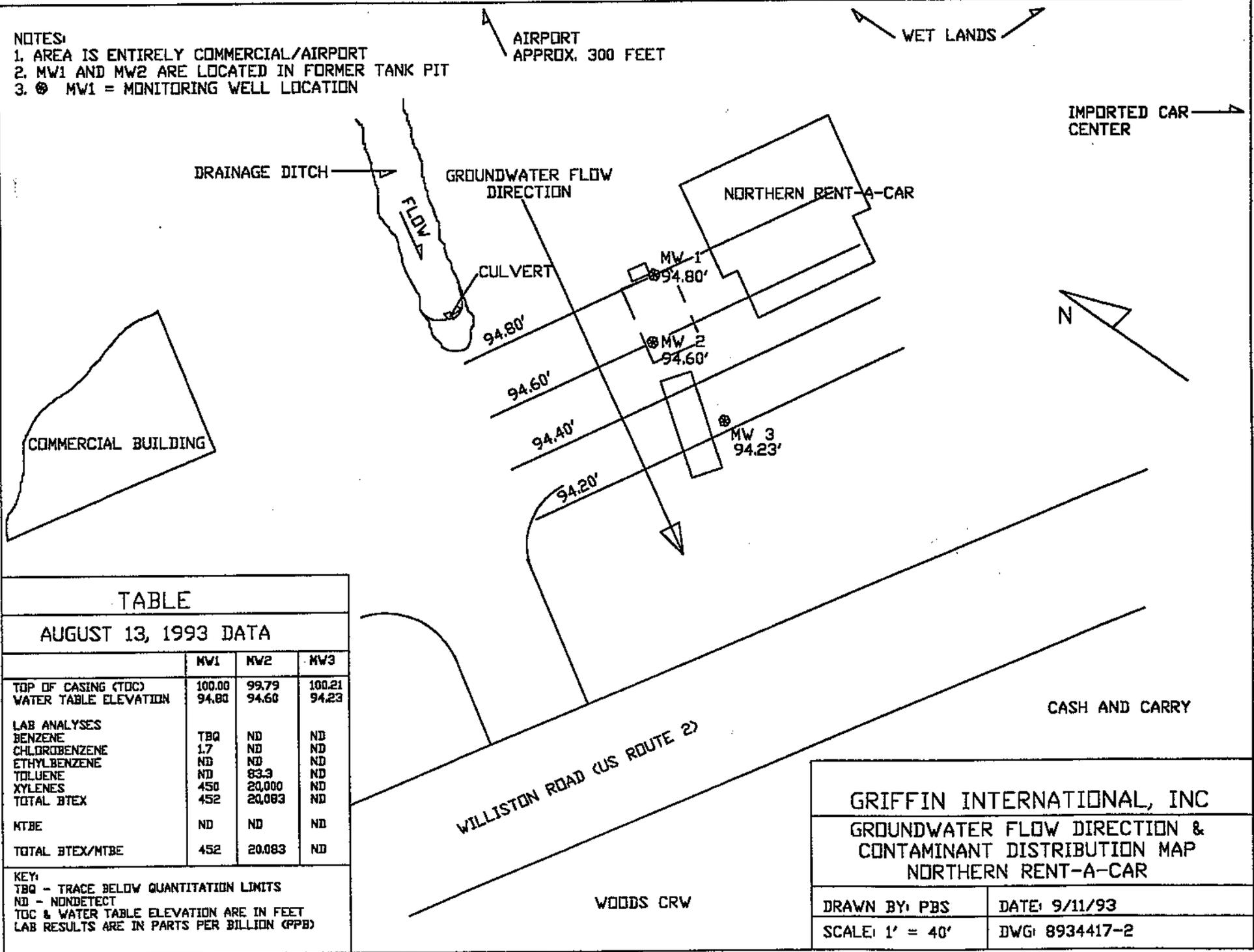
- 1. AREA IS ENTIRELY COMMERCIAL/AIRPORT
- 2. MW1 AND MW2 ARE LOCATED IN FORMER TANK PIT
- 3. ⊗ MW1 = MONITORING WELL LOCATION



GRIFFIN INTERNATIONAL, INC	
SITE MAP	
NORTHERN RENT-A-CAR	
DRAWN BY: PBS	DATE: 9/11/93
SCALE: 1' = 40'	DWG: 8934417-1

NOTES:

1. AREA IS ENTIRELY COMMERCIAL/AIRPORT
2. MW1 AND MW2 ARE LOCATED IN FORMER TANK PIT
3. ⊗ MW1 = MONITORING WELL LOCATION



TABLE

AUGUST 13, 1993 DATA

	MW1	MW2	MW3
TOP OF CASING (TDC)	100.00	99.79	100.21
WATER TABLE ELEVATION	94.80	94.60	94.23
LAB ANALYSES			
BENZENE	TBQ	ND	ND
CHLOROBENZENE	1.7	ND	ND
ETHYLBENZENE	ND	ND	ND
TOLUENE	ND	83.3	ND
XYLENES	450	20,000	ND
TOTAL BTEX	452	20,083	ND
MTBE	ND	ND	ND
TOTAL BTEX/MTBE	452	20,083	ND

KEY:
 TBQ - TRACE BELOW QUANTITATION LIMITS
 ND - NONDETECT
 TDC & WATER TABLE ELEVATION ARE IN FEET
 LAB RESULTS ARE IN PARTS PER BILLION (PPB)

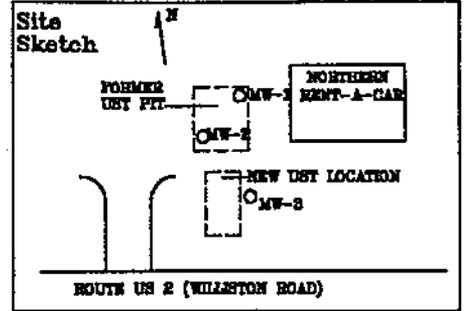
GRIFFIN INTERNATIONAL, INC	
GROUNDWATER FLOW DIRECTION & CONTAMINANT DISTRIBUTION MAP NORTHERN RENT-A-CAR	
DRAWN BY: PBS	DATE: 9/11/93
SCALE: 1' = 40'	DWG: 8934417-2

APPENDIX B

WELL LOGS

PROJECT Northern Rent-A-Car
 LOCATION South Burlington, Vermont
 DATE DRILLED 6/16/93 TOTAL DEPTH OF HOLE 12.0'
 DIAMETER Backhoe Installed
 SCREEN DIA 2" LENGTH 7.5' SLOT SIZE 0.010"
 CASING DIA 2" LENGTH 4' TYPE PVC
 DRILLING CO. C. A. Ryder DRILLING METHOD Backhoe
 DRILLER _____ LOG BY P. Schuyler

WELL NUMBER MW1

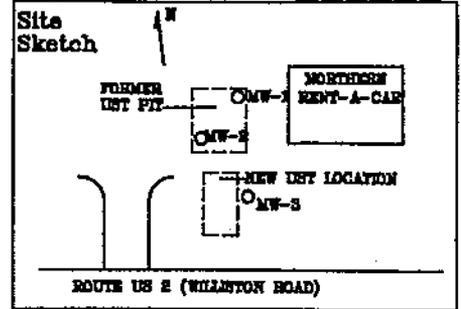


GRIFFIN INTERNATIONAL, INC

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			0
1		ASPHALT			1
2		LOCKING WELL CAP	0' - 11.5' 0.2PPM	0' - 12' FILL CONSISTING OF SILTY BROWN SAND, PEA STONE, SOME GRAVEL	2
3		BENTONITE			3
4		WELL RISER			4
5				▽ WATER TABLE	5
6		BACKFILL		▽ APPROXIMATE	6
7		WELL SCREEN			7
8					8
9					9
10					10
11		BOTTOM CAP			11
12		NATIVE SOIL		BASE OF WELL AT 12.0'	12
13				END OF EXPLORATION AT 12.0'	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
26					26

PROJECT Northern Rent-A-Car
 LOCATION South Burlington, Vermont
 DATE DRILLED 6/16/93 TOTAL DEPTH OF HOLE 10.0'
 DIAMETER Backhoe Installed
 SCREEN DIA. 2" LENGTH 7.5' SLOT SIZE 0.010"
 CASING DIA. 2" LENGTH 2' TYPE PVC
 DRILLING CO. C. A. Ryder DRILLING METHOD Backhoe
 DRILLER _____ LOG BY P. Schuyler

WELL NUMBER MW2

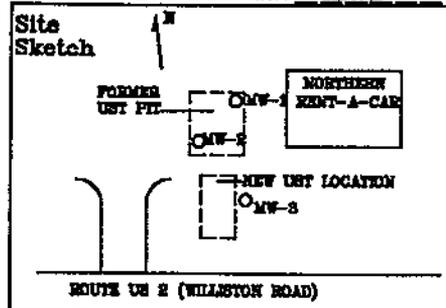


GRIFFIN INTERNATIONAL, INC

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				0
0	ASPHALT		0' - 1', 0.1ppm SLIGHT ODOR	0' - 8', FILL CONSISTING OF SILTY BROWN SAND, PEA STONE, SOME GRAVEL	0
1	LOCKING WELL CAP				1
2					2
3	BENTONITE		3' - 4', 160ppm STRONG GASOLINE ODOR		3
4	WELL RISER				4
5	BACKFILL			▽ WATER TABLE	5
6				▽ APPROXIMATE	6
7	WELL SCREEN		5' - 9', 200-250ppm STRONG GASOLINE ODOR		7
8					8
9	BOTTOM CAP			8' - 10', FILL CONSISTING OF ROTTED WOOD, BLACK LOAM	9
10	NATIVE SOIL			BASE OF WELL AT 10.0'	10
10				END OF EXPLORATION AT 10.0'	10
11					11
12					12
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
26					26

PROJECT Northern Rent-A-Car
 LOCATION South Burlington, Vermont
 DATE DRILLED 6/16/93 TOTAL DEPTH OF HOLE 12.0'
 DIAMETER Backhoe Installed
 SCREEN DIA. 2" LENGTH 7.5' SLOT SIZE 0.010"
 CASING DIA. 2" LENGTH 4' TYPE PVC
 DRILLING CO. C. A. Ryder DRILLING METHOD Backhoe
 DRILLER _____ LOG BY P. Schuyler

WELL NUMBER MW3



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			0
1		LOCKING WELL CAP	0' - 11.5' 0.2PPM	0' - 12', FILL CONSISTING OF SILTY, FINE BROWN SAND WITH SMALL POCKETS OF GRAY CLAY AND CONSIDERABLE REBAR, METALS AND CONCRETE INTERSPERSED	1
2					2
3		BENTONITE			3
4		WELL RISER			4
5		BACKFILL			5
6				▽ WATER TABLE ≈ APPROXIMATE	6
7		WELL SCREEN			7
8					8
9					9
10					10
11		BOTTOM CAP			11
12		NATIVE SOIL		BASE OF WELL AT 12.0' END OF EXPLORATION AT 12.0'	12
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
26					26

APPENDIX C
LIQUID LEVEL DATA

APPENDIX D
LABORATORY RESULTS



ENDYNE, INC.

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Laboratory Services

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

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: Northern Rent-A-Car
REPORT DATE: August 27, 1993
DATE SAMPLED: August 13, 1993

PROJECT CODE: GINR1089
REF.#: 50,006 - 50,011

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.

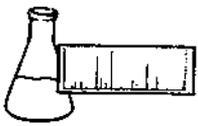
Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

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,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures



ENDYNE, INC.

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1993

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: Northern Rent-A-Car
REPORT DATE: August 27, 1993
DATE SAMPLED: August 13, 1993
DATE RECEIVED: August 13, 1993
ANALYSIS DATE: August 25, 1993

PROJECT CODE: GINR1089
REF.#: 50,006
STATION: Trip Blank
TIME SAMPLED: 12:05
SAMPLER: B. Schuyler

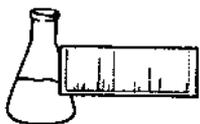
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 106%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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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: Northern Rent-A-Car
REPORT DATE: August 27, 1993
DATE SAMPLED: August 13, 1993
DATE RECEIVED: August 13, 1993
ANALYSIS DATE: August 25, 1993

PROJECT CODE: GINR1089
REF.#: 50,007
STATION: MW3
TIME SAMPLED: 1:55
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
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: 0

NOTES:

1 None detected



RECEIVED SEP 2 1993

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: Northern Rent-A-Car
REPORT DATE: August 27, 1993
DATE SAMPLED: August 13, 1993
DATE RECEIVED: August 13, 1993
ANALYSIS DATE: August 27, 1993

PROJECT CODE: GINR1089
REF.#: 50,008
STATION: MW2
TIME SAMPLED: 2:05
SAMPLER: B. Schuyler

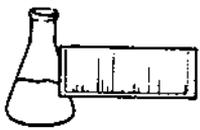
<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	50	ND ²
Chlorobenzene	50	ND
1,2-Dichlorobenzene	50	ND
1,3-Dichlorobenzene	50	ND
1,4-Dichlorobenzene	50	ND
Ethylbenzene	50	ND
Toluene	50	83.3
Xylenes	50	20,000.
MTBE	500	ND

Bromobenzene Surrogate Recovery: 98%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 20

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 2% dilution.
- 2 None detected



ENDYNE, INC.

RECEIVED SEP 2 1993

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: Northern Rent-A-Car
REPORT DATE: August 27, 1993
DATE SAMPLED: August 13, 1993
DATE RECEIVED: August 13, 1993
ANALYSIS DATE: August 25, 1993

PROJECT CODE: GINR1089
REF.#: 50,009
STATION: Equip. Blank
TIME SAMPLED: 2:15
SAMPLER: B. Schuyler

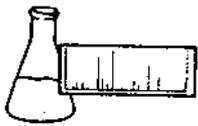
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 104%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



ENDYNE, INC.

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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: Northern Rent-A-Car
REPORT DATE: August 27, 1993
DATE SAMPLED: August 13, 1993
DATE RECEIVED: August 13, 1993
ANALYSIS DATE: August 25, 1993

PROJECT CODE: GINR1089
REF.#: 50,010
STATION: MW1
TIME SAMPLED: 2:30
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	TBQ ¹¹
Chlorobenzene	1	ND ²
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	TBQ
Xylenes	1	402.
MTBE	10	ND

Bromobenzene Surrogate Recovery: 94%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >25

NOTES:

- 1 Trace below quantitation limits
- 2 None detected



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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: Northern Rent-A-Car
REPORT DATE: August 27, 1993
DATE SAMPLED: August 13, 1993
DATE RECEIVED: August 13, 1993
ANALYSIS DATE: August 26, 1993

PROJECT CODE: GINR1089
REF.#: 50,011
STATION: Duplicate of MW1
TIME SAMPLED: 2:30
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	TBQ ¹
Chlorobenzene	1	1.7
1,2-Dichlorobenzene	1	ND ²
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	TBQ
Xylenes	1	450.
MTBE	10	ND

Bromobenzene Surrogate Recovery: 100%

NUMBER OF UNIDENTIFIED PEAKS FOUND: >25

NOTES:

- 1 Trace below quantitation limits
- 2 None detected

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

CHAIN-OF-CUSTODY RECORD

007254

Project Name: Northern Rent-A-Car Site Location: S. Burlington, VT	Reporting Address: Griffin	Billing Address: Griffin
Endyne Project Number: GINR1089	Company: Contact Name/Phone #: Peter Schuyler	Sampler Name: Becca Schuyler Phone #:

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				
50,006	Trip Blank	H ₂ O	X		8-13-93 12:05	2	40mL		602	HCL	
50,007	MW 3	↓	↓		1:55	↓	↓		↓	↓	
50,008	MW 2	↓	↓		2:05	↓	↓		↓	↓	
50,009	Equip. Blank	↓	↓		2:15	↓	↓		↓	↓	
50,010	MW 1	↓	↓		2:30	↓	↓		↓	↓	
50,011	Duplicate of MW 1	↓	↓		2:30	↓	↓		↓	↓	

Relinquished by: Signature <i>Becca Schuyler</i>	Received by: Signature <i>[Signature]</i>	Date/Time 8/13/93 3:20 PM
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 ₅	14	Turbidity	19	BTEX	24	EPA 608 Pest/PCB		
5	Nitrate N	10	Alkalinity	15	Conductivity	20	EPA 601/602	25	EPA 8240		
29	TCCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										

RECEIVED SEP 2 1993

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

CHAIN-OF-CUSTODY RECORD

007254

Project Name: <i>N. Main Road Area</i>	Reporting Address: <i>Griffin</i>	Billing Address: <i>Griffin</i>
Site Location: <i>W. Burlington, VT</i>	Company: <i>Peter Schuyler</i>	Sampler Name: <i>Becca Schuyler</i>
Endyne Project Number:	Contact Name/Phone #: <i>Peter Schuyler</i>	Phone #:

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>Tap Blank</i>	<i>H₂O</i>	<i>X</i>		<i>8-13-93</i>	<i>2</i>	<i>4/6mL</i>		<i>602</i>	<i>HCL</i>	
	<i>MW 3</i>	<i>↓</i>	<i>↓</i>		<i>1:55</i>	<i>↓</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	
	<i>MW 2</i>	<i>↓</i>	<i>↓</i>		<i>2:05</i>	<i>↓</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	
	<i>Equip. Blank</i>	<i>↓</i>	<i>↓</i>		<i>2:15</i>	<i>↓</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	
	<i>MW 1</i>	<i>↓</i>	<i>↓</i>		<i>2:30</i>	<i>↓</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	
	<i>Duplicate of MW 1</i>	<i>↓</i>	<i>↓</i>		<i>2:30</i>	<i>↓</i>	<i>↓</i>		<i>↓</i>	<i>↓</i>	

Relinquished by: Signature <i>Becca Schuyler</i>	Received by: Signature <i>Peter Schuyler</i>	Date/Time <i>8/13/93 3:20 pm</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
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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):										