GRIFFIN INTERNATIONAL INC

JUN 30 8 31 AM '99

June 29, 1999

Mr. Chuck Schwer
State of Vermont
Department of Environmental Conservation
Waste Management Division
103 South Main Street / West Building
Waterbury, VT 05671-0404

RE: Site Investigation at Advantage Automotive, 56 North Winooski Avenue, Burlington, VT (VTDEC Site #95-1751)

Dear Mr. Schwer:

Enclosed please find Griffin's Site Investigation Report for Advantage Automotive in Burlington. This report presents the findings from the drilling and groundwater sampling conducted this spring.

Please forward this report to the appropriate site manager in your office. If you have any questions concerning this project, please call.

Sincerely,

Kevin McGraw
Hydrogeologist

Enclosure

cc: Mr. Carl Ruprecht, S. B. Collins (w/out enclosure)
GI Project #79841296

P.O. Box 943 • Williston, VT 05495 • Phone/Fax 802-865-4288
59 Clinton Street • Plattsburgh, NY 12901 • 518-562-4666 • Fax 518-561-6832

REPORT ON THE INVESTIGATION OF SUBSURFACE PETROLEUM CONTAMINATION
at
ADVANTAGE AUTOMOTIVE
56 NORTH WINOOSKI AVENUE
BURLINGTON, VERMONT

June 10, 1999

Prepared for:

S.B. Collins, Inc.
P.O. Box 671
St. Albans, VT 05478-0671

Prepared by:

P.O. Box 943
Williston, Vermont 05495
(802) 865-4288

Griffin Project #: 79841296

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APPENDICES

I. INTRODUCTION

This report summarizes the investigation of subsurface petroleum contamination at Advantage Automotive located at the intersection of North Winooski Avenue and Grant Street in Burlington, Vermont (see Site Location Map and Area Map, Appendix A). The following investigation has been conducted to define more clearly the degree and extent of petroleum contamination which was detected in the soils at this site during the removal of three (3) 10,000-gallon gasoline underground storage tanks (USTs) in July, 1998. Included in the report are the findings from the hollow-stem auger drilling along with the results of subsequent groundwater sampling conducted at the property. This work has been completed for S. B. Collins, Inc. by Griffin International, Inc. (Griffin) in accordance with the approved Site Assessment Work Plan and Cost Estimate dated January 22, 1999.

II. HISTORICAL BACKGROUND

On July 22, 1998, three (3) 10,000-gallon gasoline USTs were removed from the subsurface at Advantage Automotive. The USTs were located on the west side of the Advantage Automotive building. The former locations of the tanks are shown on the Site Map in Appendix A.

Environmental Products and Services of Burlington, Vermont, cleaned the tanks and Perry's Excavating of Georgia, Vermont, excavated the tanks. Griffin was on-site to perform the tank closure site assessment. Upon removal, the USTs were observed to be in poor condition with major pitting on the exterior and numerous holes identified in each. Piping associated with the USTs was found to be in fair condition. Volatile organic compounds (VOCs) were detected in the soils surrounding the tank using an HNu Model PI-101 portable photoionization device (PID) equipped with a 10.2 eV bulb. A peak PID reading of 158 parts per million (ppm) was measured and the average PID reading was 92 ppm. Groundwater was encountered at approximately 7.5 feet below grade during the removal of the tank. Soils at the depth of the water table were found to be contaminated indicating that the groundwater in the area had likely been impacted by the release of gasoline. Griffin submitted a tank closure report (Ref. 1), dated July 23, 1998, to the Vermont Department of Environmental Conservation (VTDEC).

In response to the soil and groundwater contamination detected during the removal of the USTs, the VTDEC requested additional work to determine the severity of contamination in a letter to S. B. Collins dated December 17, 1998. Griffin submitted a Site Assessment Work Plan and Cost Estimate to the VTDEC, dated January 22, 1999. The VTDEC approved of this work plan in a letter to S. B. Collins dated February 12, 1999. The following report presents the findings from Griffin's Site Investigation conducted in March and April, 1999.

III. SITE DESCRIPTION

Advantage Automotive is situated at 56 North Winooski Avenue at the intersection with Grant Street. Lake Champlain is located approximately one-half mile to the west of the property. Local terrain is generally level. Based on the Burlington topographic map and the proximity of Lake Champlain, groundwater flow beneath the site was estimated to be to the west. The elevation of the site is approximately 240 feet above mean sea level.

This property is located in an urban setting surrounded primarily by residences. Several businesses/restaurants are also located within one block of the site. The area, including Advantage Automotive, is served by the municipal water supply. No private drinking wells were observed on the property or in the area.

According to the *Surficial Geologic Map of Vermont*, the overburden deposits in the surrounding area consist of pebbly marine sand (Ref. 2). Actual subsurface materials consist of poorly graded fine or medium sand. According to the *Centennial Geologic Map of Vermont* (Ref. 3), the overburden deposits at the site are underlain by Monkton Quartzite.

IV. SUBSURFACE INVESTIGATION

On March 31, 1999, four monitoring wells were installed by T&K Drilling, Inc. using a truck-mounted hollow-stem auger drill rig. The monitoring wells, designated MW1 through MW4, were installed to help define the degree and extent of petroleum contamination in the vicinity of the former gasoline USTs. MW1, MW2, MW3 and MW4 were installed on the north, west, south, and east sides of the former tank pit, respectively. The boring for MW2 was drilled in the presumed downgradient direction from the source area. MW4 was installed in an area that was presumably upgradient from the source area. The locations of the wells are shown on the Site Map in Appendix A.

Split-spoon samples were obtained in each boring at five-foot intervals. Soil samples were screened for VOCs using an HNU (Model PI-101) photoionization device equipped with a 10.2 eV bulb. In addition, soil characteristics were recorded in detailed boring logs by the supervising Griffin Hydrogeologist.

In the borings for all four monitoring wells, poorly graded sand was observed from just below grade to 17 feet below grade. In general, the sand grain size decreased with depth from fine or medium sand in the 5'-7' split-spoon sample to very fine or fine sand in the 15'-17' split-spoon sample. Groundwater was encountered in each boring at approximately eight feet below grade. Petroleum odors were not observed in any of the soils retrieved from the borings for MW1, MW3, or MW4. Petroleum odors were, however, observed in the soils from the MW2 boring. A maximum PID reading of 160 ppm was recorded for the soil sample collected at a depth of 15 to 17 feet below grade in this boring.

The screens in all four monitoring wells were set from 5 to 15 feet below grade. The monitoring wells were constructed with two-inch diameter, Schedule 40 PVC riser and 0.010" slotted screen. A silica sand pack was placed around the screened portion of each well and a bentonite seal was placed in the annulus immediately above the sand pack. To complete the construction of each of the monitoring wells, a road box was set in concrete at grade level. In addition, a locking well cap was placed on each monitoring well. The boring logs and well construction details for these wells are included in Appendix B.

V. WATER LEVELS AND WATER QUALITY

A. Water Table Elevations

Water table elevation measurements were collected from the monitoring wells on April 6, 1999. In addition, the monitoring wells were surveyed in azimuth and elevation relative to the top-of-casing elevation of MW4 which has been assigned an arbitrary elevation of 100.00 feet. The depth-to-water measurement for each well has been subtracted from the top-of-casing elevation to obtain the relative water table elevation in each well. Liquid level monitoring data are presented in Appendix C.

Water table elevations have been plotted and contoured to illustrate the estimated gradient and direction of groundwater flow beneath the site (see Groundwater Contour Map, Appendix A). According to these data, groundwater is estimated to be flowing to the west at a hydraulic gradient of 0.025.

B. Water Quality

Griffin collected groundwater samples at the site on April 6, 1999. The groundwater samples were analyzed for petroleum compounds by EPA Method 8021B. The analytical results have been plotted to show the distribution of contamination across the site (see Contaminant Concentration Map, Appendix A).

Toluene was detected at a concentration of 1.2 parts per billion (ppb) in the groundwater sample collected from MW1. This concentration is below the Vermont Groundwater Enforcement Standard (VGES) of 1,000 ppb for this compound. No other target petroleum compounds were detected in the MW1 groundwater sample.

Relatively low concentrations of petroleum compounds were detected in the groundwater sample collected from MW2. Benzene, MTBE, naphthalene, and the two trimethylbenzene compounds were detected in this sample at concentrations in excess of their respective VGESs.

The two trimethylbenzene compounds and naphthalene were detected in the sample from MW3 at concentrations in excess of their respective VGESs. Benzene, toluene, and MTBE were not detected in this sample.

Very low dissolved concentrations were detected in the groundwater sample collected from MW4. In this sample, the trimethylbenzenes and benzene were detected at concentrations in excess of their respective VGESs.

A groundwater quality summary for this sampling event is presented in Appendix D. The Endyne laboratory analytical report is also included in this appendix.

The trip blank and duplicate sample analytical results indicate that proper quality assurance and quality control were maintained during the sampling and analysis.

VI. RECEPTOR RISK ASSESSMENT

A receptor risk assessment was conducted to identify potential receptors of the petroleum contamination detected at Advantage Automotive. A visual survey was conducted at the time of monitoring well installation and during the UST closure inspection. A determination of the potential risk to identified receptors was conducted based on proximity, groundwater flow direction and gradient, and contaminant concentration levels.

Water Supplies

As outlined in Section III of this report, the area in the vicinity of Advantage Automotive is served by the municipal water system. Burlington obtains its water from Lake Champlain which is located approximately one-half mile west of the site. Given its distance from the subject site and the low dissolved contaminant concentrations detected in the groundwater beneath the site, this public water supply is not likely at risk from the contamination observed at Advantage Automotive.

Buildings in the Vicinity

The Advantage Automotive station does not have a basement for the potential accumulation of petroleum vapors. The adjacent apartment building to the south has a basement. This building is located approximately 10 feet south of the former tank pit. This basement could not be screened for petroleum vapors on the day of drilling or sampling since the building entrance was locked. Based on the estimated groundwater flow direction to the west and the low levels of groundwater contamination detected in MW3, the basement of this building is at low risk of impact. In addition, it should be noted that petroleum odors were not observed in the soils from the MW3 boring, located directly adjacent to this building. This observation also suggests that there is likely little risk posed to the indoor air of this building.

Surface Water

Lake Champlain is the nearest surface water to the site, located approximately one-half mile to the west. Because of the large distance between the site and the lake, it is unlikely that there is a significant risk of impact as a result of subsurface petroleum contamination at Advantage Automotive.

Subsurface Utilities

Two storm drains in the vicinity of the N. Winooski Ave./Grant St. intersection were identified as potential receptors. The locations of these storm drains are shown on the Site Map in Appendix A. These drains were screened for VOCs using the PID on the day of well installation. No elevated levels of VOCs were detected in these two locations. Based on the level of contamination detected in the soils and groundwater at this site, the risk to this potential subsurface receptor is likely minimal.

VII. CONCLUSIONS

Based on the investigation at this site, Griffin has reached the following conclusions:

1. In each of the four soil borings, poorly graded fine or medium sand was observed. Adsorbed petroleum contamination was detected in one of the four soil borings (MW2) advanced for this site investigation.

2. The water table elevation beneath the site, as measured using the interface probe, was approximately 9 feet below grade. Based on the water table elevation data collected in April, 1999, groundwater beneath the site appears to be flowing west at a hydraulic gradient of 0.025.

3. Very low levels of dissolved petroleum contamination were detected in the groundwater samples collected from the monitoring wells at the site. The Vermont Groundwater Enforcement Standards for various target compounds were exceeded in the samples collected from MW2, MW3, and MW4. Low contaminant concentrations detected in these wells suggest that significant dissolved contamination is not migrating offsite to the west.

4. The risk assessment for this site has determined that there is likely little threat to any of the identified potential receptors in the area.

VIII. RECOMMENDATIONS

Based on the above conclusions, Griffin does not recommend any additional subsurface investigation at this site. However, due to the presence of dissolved groundwater contamination above VGESs, Griffin recommends implementation of a semi-annual groundwater monitoring program to monitor the fluctuation in contaminant concentrations in the groundwater beneath the site. During each semi-annual monitoring event, water table elevations should be measured in each well prior to sampling. Groundwater from the four monitoring wells should be sampled and analyzed for petroleum compounds by EPA Method 8021B.

At the conclusion of each monitoring event, a semi-annual groundwater monitoring report should be prepared and submitted to the VTDEC. This report will include a groundwater contour map, a contaminant concentration map, current and historical groundwater analytical data, conclusions and recommendations. The first semi-annual monitoring should occur in October, 1999. Groundwater monitoring should continue at the site until the concentrations of 8021B target compounds are all below the Vermont Groundwater Enforcement Standards.

NO

- quarterly monitoring 1st year start in April 1999
  next sample date July '99
- check basement of Appt. next to MW-3

REFERENCES

1. Griffin International, Inc., July 23, 1998, Tank Closure Inspection Report for Advantage Automotive, Burlington, Vermont.

2. Doll, Charles G., ed., 1970, *Surficial Geologic Map of Vermont*, State of Vermont.

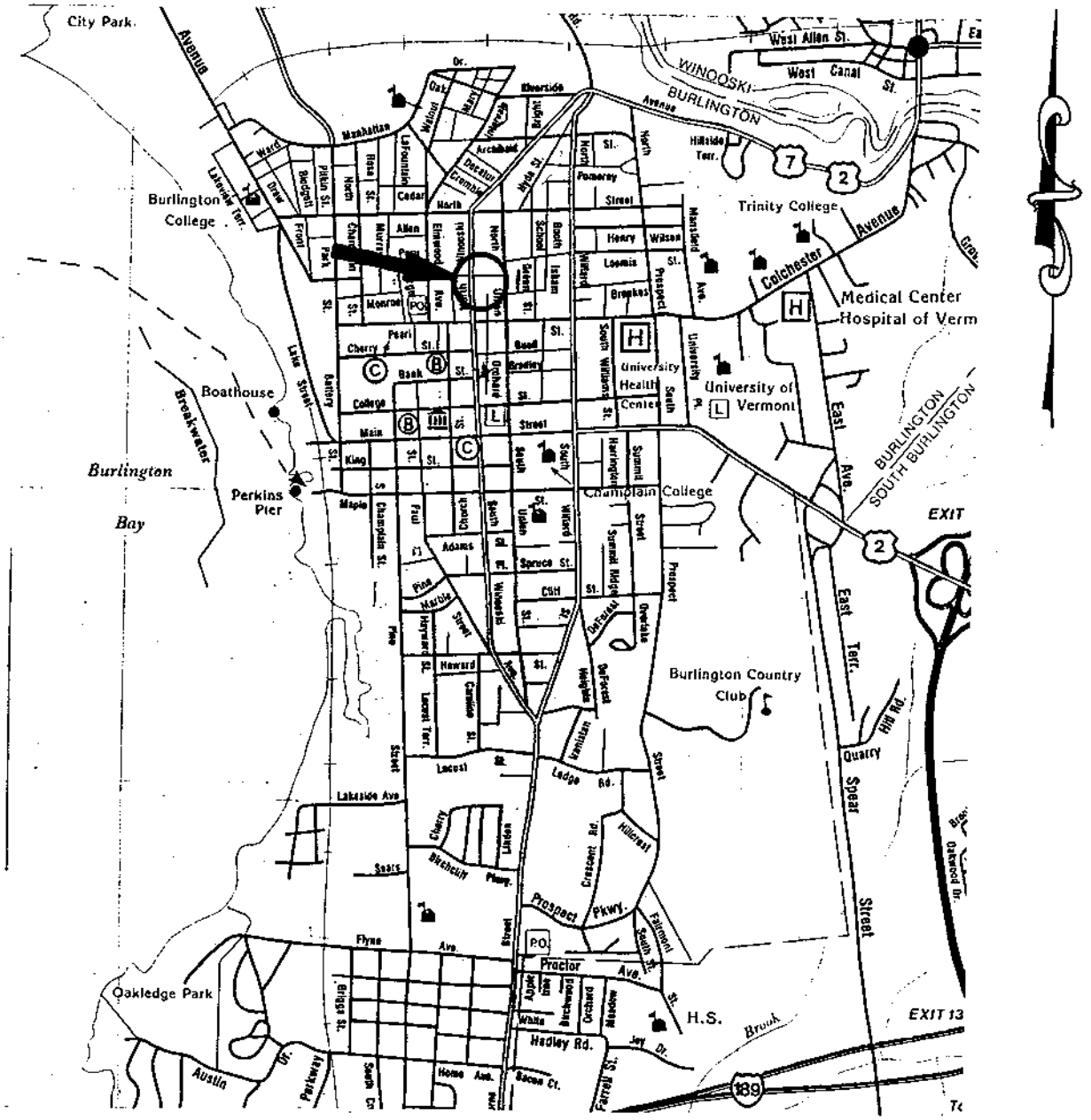
3. Doll, Charles G., ed., 1961, *Centennial Geologic Map of Vermont*, State of Vermont.

APPENDICES

APPENDIX A

Maps

Site Location Map
Area Map
Site Map
Groundwater Contour Map
Contaminant Concentration Map



SOURCE: NORTHERN CARTOGRAPHIC VERMONT CITY MAPS–BURLINGTON, VERMONT

JOB #:79841296

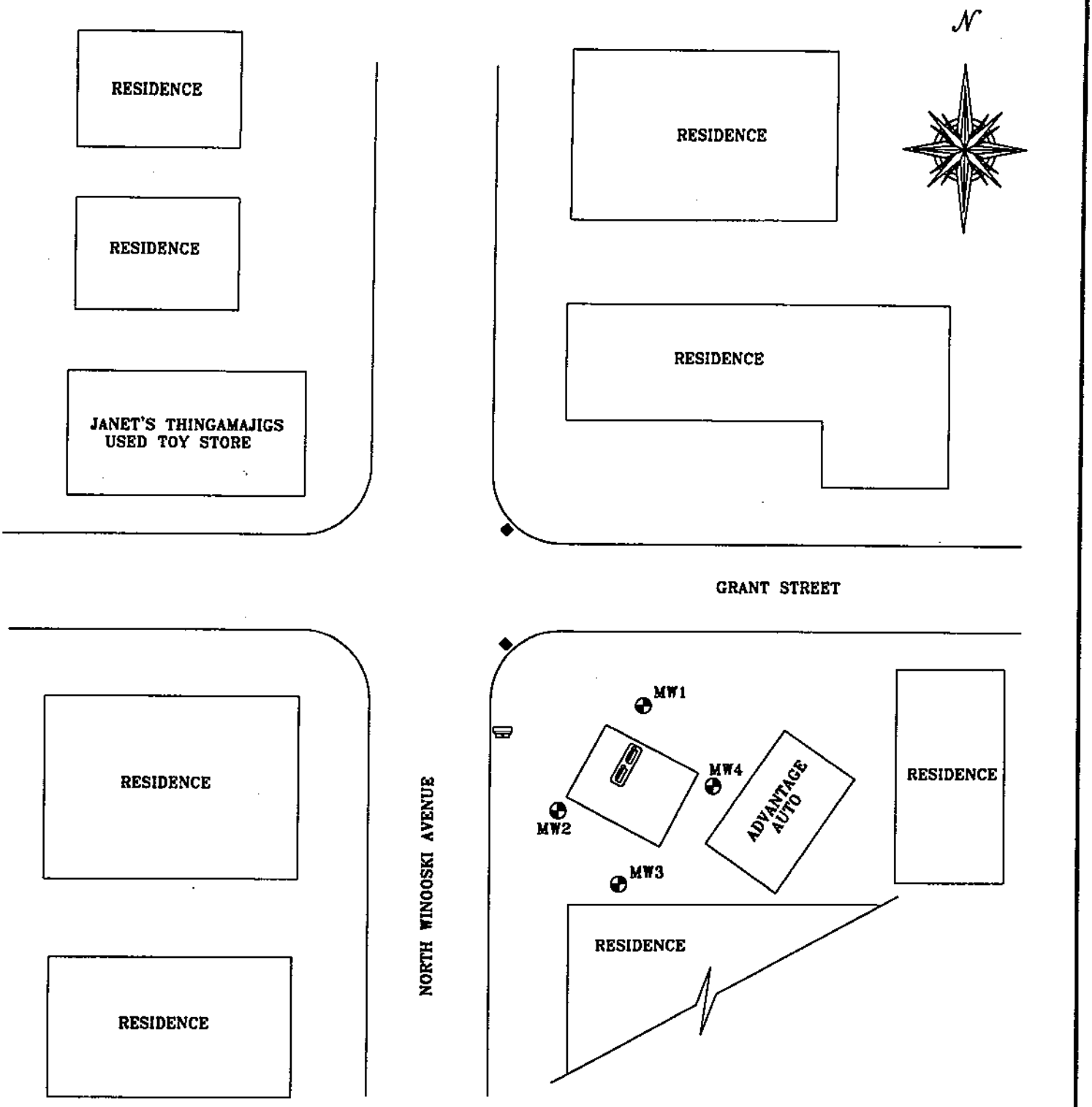
GRIFFIN INTERNATIONAL INC

ADVANTAGE AUTOMOTIVE

56 NORTH WINOOSKI AVENUE
BURLINGTON, VERMONT

SITE LOCATION MAP

DATE: 4/2/99	DWG.#:1	SCALE: SHOWN	DRN.:SB	APP.:KM



JOB #: 79841296

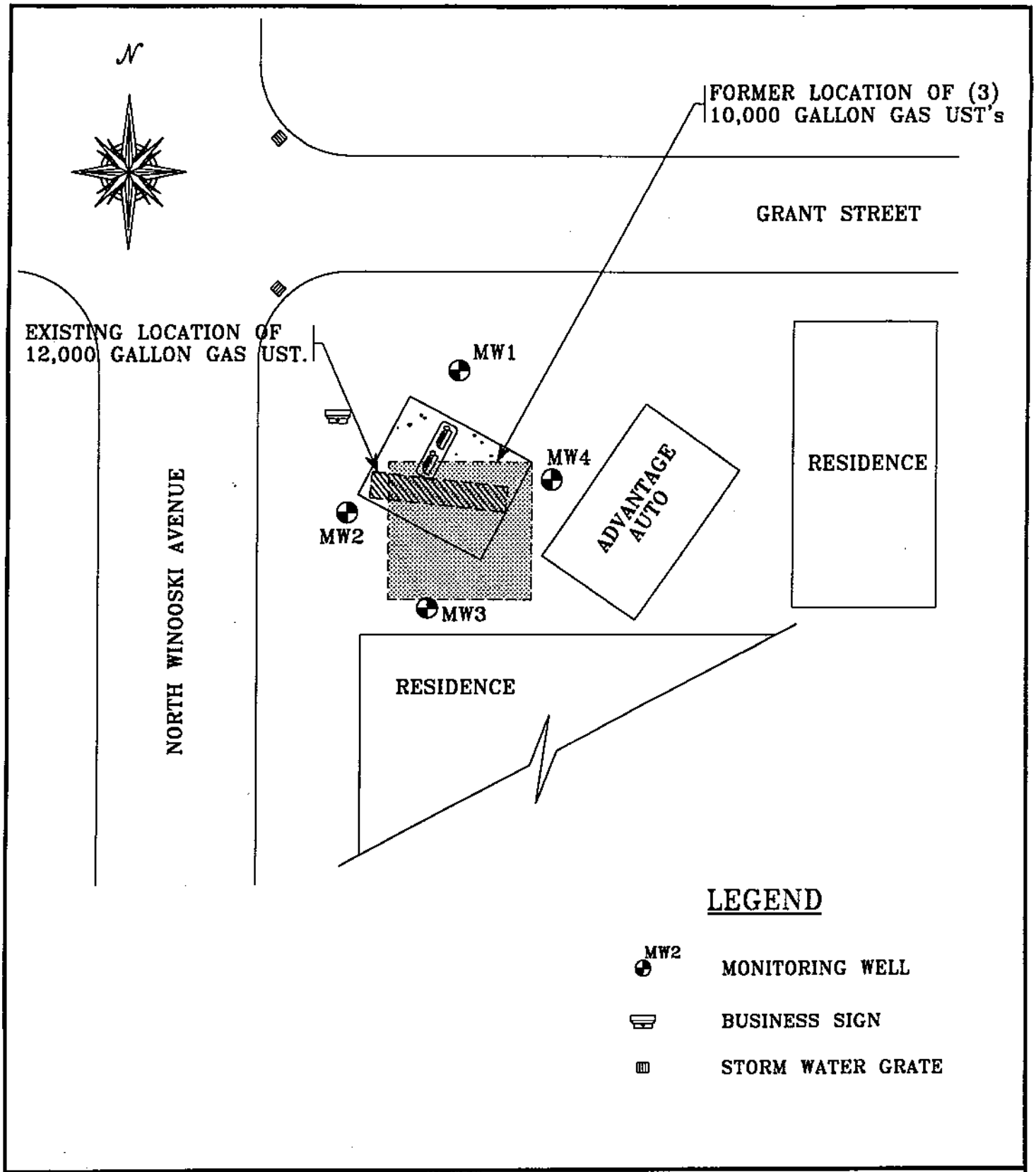
GRIFFIN INTERNATIONAL INC

ADVANTAGE AUTOMOTIVE

56 NORTH WINOOSKI AVENUE
BURLINGTON, VERMONT

AREA MAP

DATE: 4/2/99	DWG.#:2	SCALE: NTS	DRN.:SB	APP.:KM



JOB #: 79841296

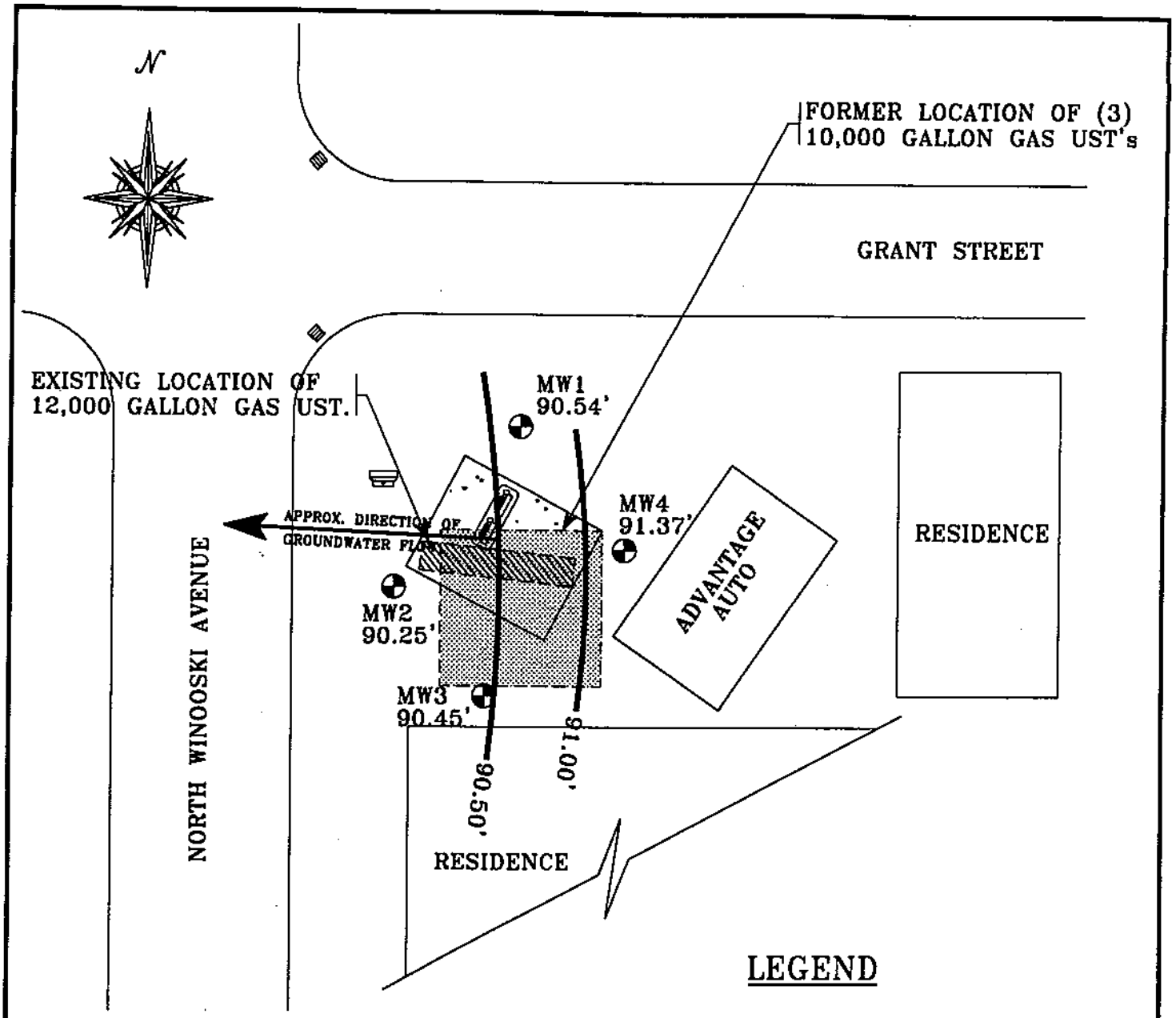
GRIFFIN INTERNATIONAL INC

ADVANTAGE AUTOMOTIVE

56 NORTH WINOOSKI AVENUE
BURLINGTON, VERMONT

SITE MAP

DATE: 6/1/99	DWG.#:3	SCALE: 1"=30'	DRN.:SB	APP.:KM



LEGEND

MW2 90.25'	MONITORING WELL AND WATER TABLE ELEVATION IN FEET
91.00'	GROUNDWATER CONTOUR IN FEET (DASHED WHERE INFERRED)
	BUSINESS SIGN
	STORM WATER GRATE

JOB #: 79841296

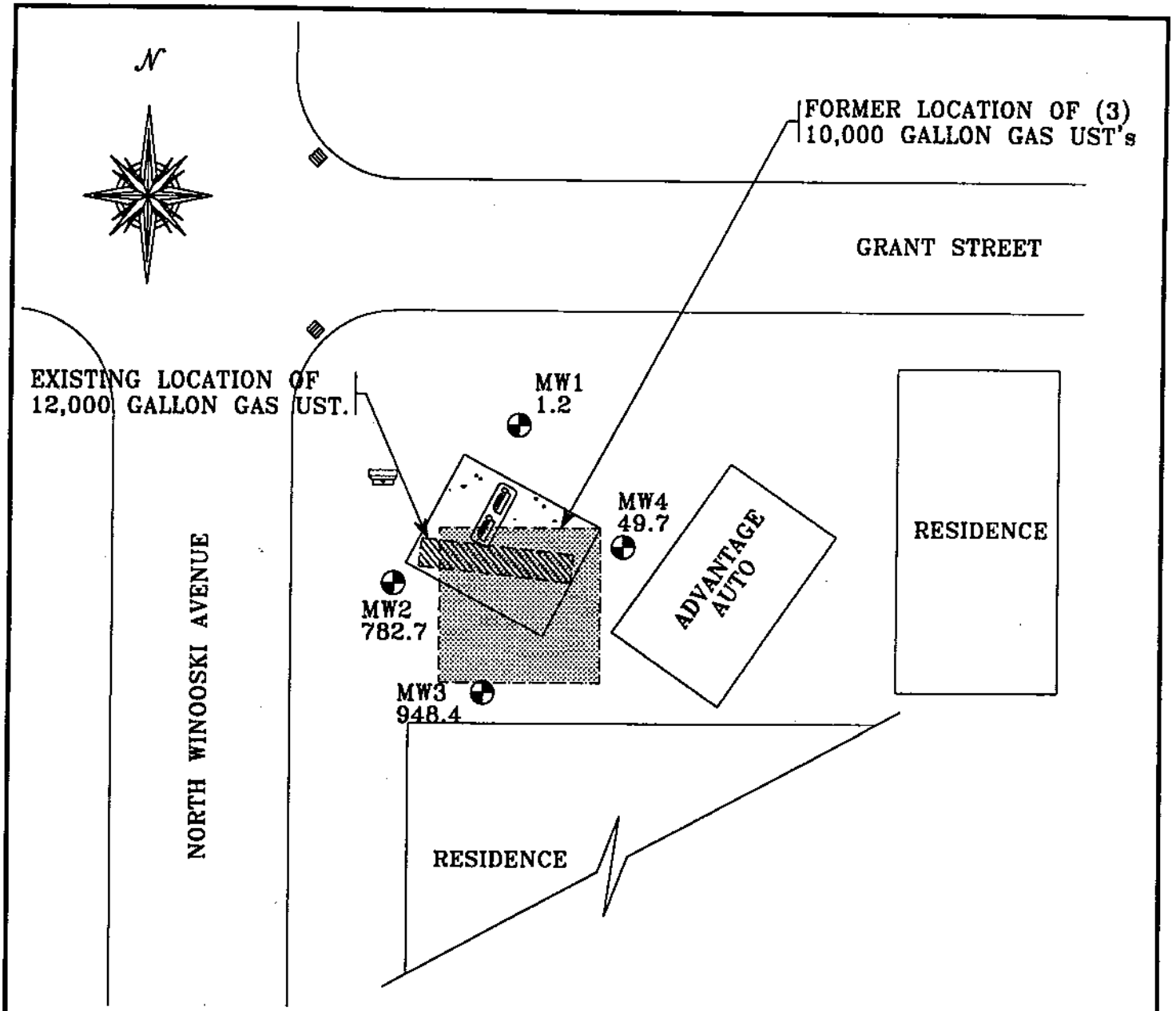
GRIFFIN INTERNATIONAL INC

ADVANTAGE AUTOMOTIVE

56 NORTH WINOOSKI AVENUE
BURLINGTON, VERMONT

GROUNDWATER CONTOUR MAP
MEASUREMENT DATE: 4/6/99

DATE: 6/1/99	DWG.#:4	SCALE: 1"=30'	DRN.:SB	APP.:KM



LEGEND

MW2 782.7	MONITORING WELL AND TOTAL 8021B VOCs (ppb)
	BUSINESS SIGN
	STORM WATER GRATE

GRIFFIN INTERNATIONAL INC

JOB #: 79841296

ADVANTAGE AUTOMOTIVE

56 NORTH WINOOSKI AVENUE
BURLINGTON, VERMONT

CONTAMINANT CONCENTRATION MAP
SAMPLE DATE: 4/6/99

DATE: 6/1/99	DWG.#:5	SCALE: 1"=30'	DRN.:SB	APP.:KM

APPENDIX B

Well Logs

PROJECT ADVANTAGE AUTOMOTIVE

LOCATION 56 N. WINOOSKI AVENUE, BURLINGTON, VERMONT

DATE DRILLED 3/31/99 TOTAL DEPTH OF HOLE 17.0'

DIAMETER 4.25"

SCREEN DIA. 2" LENGTH 10.0' SLOT SIZE 0.010"

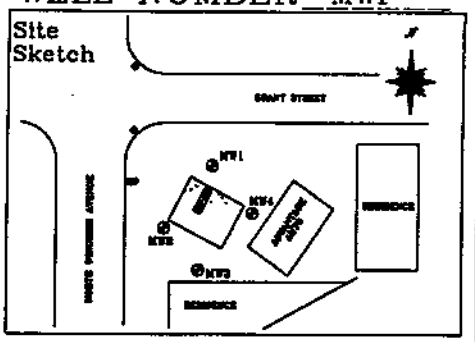
CASING DIA. 2" LENGTH 4.5' TYPE sch 40 pvc

DRILLING CO. T&K DRILLING METHOD HSA

DRILLER ALAN TOMMILA LOG BY K. McGRAW

WELL NUMBER MW1

Site Sketch



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
		LOCKING WELL CAP			
		CONCRETE			
1			0'-2' 0.6 ppm	POORLY GRADED SAND (SP)- 100% fine sand, weak cementation, brown, dry, no petroleum odor.	1
2		NATIVE BACKFILL			2
3					3
4		BENTONITE			4
5		WELL RISER			5
6			5'-7' 11/12/14/21	No recovery.	6
7					7
8				8.0' WATER TABLE	8
9		SAND PACK			9
10					10
11			10'-12' 15/16/20/21 0.8 ppm	POORLY GRADED SAND (SP)- 100% fine sand, moderate cementation, brown, wet, no petroleum odor.	11
12		WELL SCREEN			12
13					13
14					14
15		BOTTOM CAP			15
16			15'-17' 13/19/17/18 0.6 ppm	POORLY GRADED SAND (SP)- 100% very fine sand, moderate cementation, olive brown, wet, no petroleum odor.	16
17					17
18		UNDISTURBED NATIVE SOIL		BASE OF WELL AT 15' END OF EXPLORATION AT 17'	18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

PROJECT ADVANTAGE AUTOMOTIVE

LOCATION 56 N. WINOOSKI AVENUE, BURLINGTON, VERMONT

DATE DRILLED 3/31/99 TOTAL DEPTH OF HOLE 17.0'

DIAMETER 4.25"

SCREEN DIA. 2" LENGTH 10.0' SLOT SIZE 0.010"

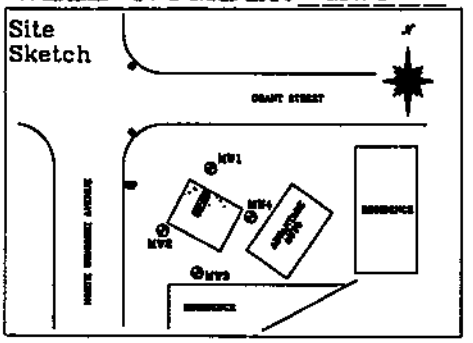
CASING DIA. 2" LENGTH 4.5' TYPE sch 40 pvc

DRILLING CO. T&K DRILLING METHOD HSA

DRILLER ALAN TOMMILA LOG BY K. McGRAW

WELL NUMBER MW2

Site Sketch



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			0'-2' 0.2 ppm	POORLY GRADED SAND (SP)- 100% fine to medium sand, weak cementation, dark brown, dry, no petroleum odor.	1
2		NATIVE BACKFILL			2
3					3
4		BENTONITE			4
5		WELL RISER			5
6			5'-7' 2/4/6/7	POORLY GRADED SAND (SP)- 100% medium sand, weak cementation, rusty brown, moist.	6
7					7
8				8.0' WATER TABLE ▼	8
9		SAND PACK			9
10					10
11			10'-12' 9/14/18/19 80 ppm	POORLY GRADED SAND (SP)- 100% fine sand, moderate cementation, olive gray, wet, petroleum odor.	11
12		WELL SCREEN			12
13					13
14		BOTTOM CAP			14
15					15
16			15'-17' 7/7/12/15 160 ppm	POORLY GRADED SAND (SP)- 100% very fine sand, moderate cementation, olive gray wet, petroleum odor.	16
17		UNDISTURBED NATIVE SOIL			17
18				BASE OF WELL AT 15' END OF EXPLORATION AT 17'	18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

PROJECT ADVANTAGE AUTOMOTIVE

LOCATION 56 N. WINOOSKI AVENUE, BURLINGTON, VERMONT

DATE DRILLED 3/31/99 TOTAL DEPTH OF HOLE 17.0'

DIAMETER 4.25"

SCREEN DIA. 2" LENGTH 10.0' SLOT SIZE 0.010"

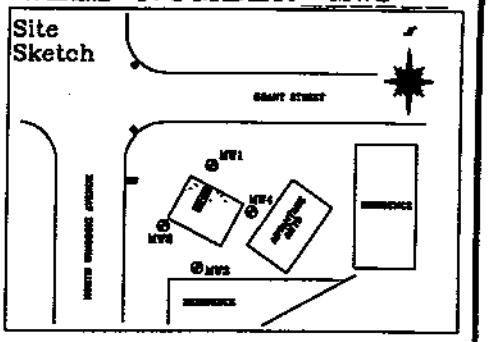
CASING DIA. 2" LENGTH 4.5' TYPE sch 40 pvc

DRILLING CO. T&K DRILLING METHOD HSA

DRILLER ALAN TOMMILA LOG BY K. McGRAW

WELL NUMBER MW3

Site Sketch



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			0'-2' 0.4 ppm	POORLY GRADED SAND (SP)- 100% fine sand, brown, moist, no petroleum odor.	1
2		NATIVE BACKFILL			2
3		BENTONITE			3
4					4
5		WELL RISER			5
6			5'-7' 2/1/2/3 0.2 ppm	POORLY GRADED SAND (SP)- 100% fine sand, weak cementation, brown, dry, no petroleum odor.	6
7					7
8				8.0' WATER TABLE ▼	8
9		SAND PACK			9
10					10
11			10'-12' 16/10/18/20 1.6 ppm	POORLY GRADED SAND (SP)- 100% very fine to fine sand, moderate cementation, olive gray, wet, no petroleum odor.	11
12		WELL SCREEN			12
13					13
14		BOTTOM CAP			14
15					15
16			15'-17' 10/21/26/30 1.4 ppm	POORLY GRADED SAND (SP)- 100% very fine to fine sand, moderate cementation, brown wet, no petroleum odor.	16
17		UNDISTURBED NATIVE SOIL		BASE OF WELL AT 15' END OF EXPLORATION AT 17'	17
18					18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

PROJECT ADVANTAGE AUTOMOTIVE

LOCATION 56 N. WINOOSKI AVENUE, BURLINGTON, VERMONT

DATE DRILLED 3/31/99 TOTAL DEPTH OF HOLE 17.0'

DIAMETER 4.25"

SCREEN DIA. 2" LENGTH 10.0' SLOT SIZE 0.010"

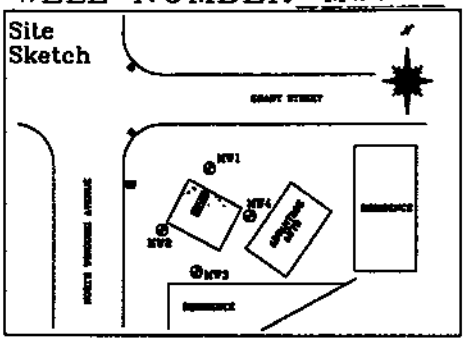
CASING DIA. 2" LENGTH 4.5' TYPE sch 40 pvc

DRILLING CO. T&K DRILLING METHOD HSA

DRILLER ALAN TOMMILA LOG BY K. McGRAW

WELL NUMBER MW4

Site Sketch



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			0'-2' 0.2 ppm	POORLY GRADED SAND (SP)- 100% fine sand, weak cementation, brown, dry, no petroleum odor.	1
2		NATIVE BACKFILL			2
3		BENTONITE			3
4					4
5		WELL RISER			5
6			5'-7' 3/4/6/7 0.2 ppm	POORLY GRADED SAND (SP)- 100% medium sand, weak cementation, reddish brown, moist, no petroleum odor.	6
7					7
8				8.0' WATER TABLE ▼	8
9		SAND PACK			9
10					10
11			10'-12' 9/13/14/13 0.8 ppm	POORLY GRADED SAND (SP)- 100% fine sand, moderate cementation, olive gray, wet, no petroleum odor.	11
12		WELL SCREEN			12
13					13
14		BOTTOM CAP			14
15					15
16			15'-17' 7/10/16/14 1.4 ppm	POORLY GRADED SAND (SP)- 100% fine sand, moderate cementation, olive gray wet, no petroleum odor.	16
17		UNDISTURBED NATIVE SOIL			17
18				BASE OF WELL AT 15' END OF EXPLORATION AT 17'	18
19					19
20					20
21					21
22					22
23					23
24					24
25					25

APPENDIX C

Liquid Level Monitoring Data

Liquid Level Monitoring Data
Avantage Automotive, Burlington, VT

4/6/99

Well I.D.	Top of Casing Elevation	Depth To Product	Depth To Water	Product Thickness	Specific Gravity Of Product	Water Equivalent	Corrected Depth To Water	Corrected Water Table Elevation
MW-1	99.60		9.06					90.54
MW-2	98.90		8.65					90.25
MW-3	99.30		8.85					90.45
MW-4	100.00		8.63					91.37

All Values Reported in Feet
Top-of-Casing Elevations Measured in Feet Relative to MW-4 set at 100.00'
Survey conducted by Griffin International, Inc. on 3/31/99.

APPENDIX D

Groundwater Quality Summary

Laboratory Report

Groundwater Quality Summary
Advantage Automotive
Burlington, Vermont

4/6/99

PARAMETER	Sample Point MW-1	MW-2	MW-3	MW-4	VGES
MTBE	ND	50.4	ND	ND	40.
Benzene	ND	16.0	ND	7.0	5.
Toluene	1.2	48.7	ND	2.3	1,000.
Ethylbenzene	ND	37.7	5.1	4.7	700.
Xylenes	ND	151.	111.	9.6	10,000.
1,3,5-trimethylbenzene	ND	197.	207.	6.6	4.
1,2,4-trimethylbenzene	ND	242.	543.	8.4	5.
Naphthalene	ND	39.9	82.3	11.1	20.
Total 8021B VOCs	**1.2**	**782.7**	**948.4**	**49.7**	-

All Values Reported in ug/L (ppb)
VGES - Vermont Groundwater Enforcement Standard
ND - None Detected
TBQ - Trace Below Quantitation Limit

ENDYNE, INC.

Laboratory Services

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

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: Advantage Auto/#79841296
REPORT DATE: April 16, 1999
DATE SAMPLED: April 6, 1999

ORDER ID: 1860
REF.#: 136,447 - 136,452

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

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FAX 879-7103

EPA METHOD 8021B--PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: Advantage Auto/#79841296
CLIENT PROJ. #: 79841296

DATE RECEIVED: April 7, 1999
REPORT DATE: April 16, 1999
ORDER ID: 1860

Ref. #:	136,447	136,448	136,449	136,450	136,451
Site:	Trip Blank	MW-1	MW-2	Duplicate	MW-3
Date Sampled:	4/6/99	4/6/99	4/6/99	4/6/99	4/6/99
Time Sampled:	9:30	1:10	1:30	1:30	1:50
Sampler:	K. McGraw	K. McGraw	K. McGraw	K. McGraw	K. McGraw
Date Analyzed:	4/14/99	4/14/99	4/15/99	4/15/99	4/15/99
UIP Count:	0	>10	>10	>10	>10
Dil. Factor (%):	100	100	20	20	20
Surr % Rec. (%):	95	97	95	97	99
Parameter	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)	Conc. (ug/L)
MTBE	<10	<10	50.4	52.1	<50
Benzene	<1	<1	16.0	16.9	<5
Toluene	<1	1.2	48.7	51.6	<5
Ethylbenzene	<1	<1	37.7	42.2	5.1
Xylenes	<1	<1	151.	164.	111.
1,3,5 Trimethyl Benzene	<1	<1	197.	210.	207.
1,2,4 Trimethyl Benzene	<1	<1	242.	269.	543.
Naphthalene	<1	<1	39.9	43.5	82.3

Ref. #:	136,452
Site:	MW-4
Date Sampled:	4/6/99
Time Sampled:	2:05
Sampler:	K. McGraw
Date Analyzed:	4/14/99
UIP Count:	>10
Dil. Factor (%):	100
Surr % Rec. (%):	97
Parameter	Conc. (ug/L)
MTBE	<10
Benzene	7.0
Toluene	2.3
Ethylbenzene	4.7
Xylenes	9.6
1,3,5 Trimethyl Benzene	6.6
1,2,4 Trimethyl Benzene	8.4
Naphthalene	11.1

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

Job # 79341276

30725
1-Ors

Project Name: Advantage Automotive Site Location: Burlington, VT	Reporting Address: Griffin	Billing Address: S. B. Collins P.O. Box 671, St. Albans, VT 05478
Endyne Project Number: 1860	Company: Griffin Contact Name/Phone #: Kevin McGraw/565-4288	Sampler Name: Kevin McGraw Phone #: 865-4288

Lab #	Sample Location	Matrix	GRAB	COMP	Date/Time 4/6/99	Sample Containers No.	Sample Containers Type/Size	Field Results/Remarks	Analysis Required	Sample Preservation	Rush
136447	Trip Blank	H_2O	✓		9:30	2	40mL		8021B	HCl	
136448	MW-1		✓		13:10						
136449	MW-2		✓		13:30						
136450	Duplicate		✓		13:30						
136451	MW-3		✓		13:50						
136452	MW-4		✓		14:05						

Relinquished by: Signature Kevin McGraw	Received by: Signature Tina DeSorbo	Date/Time 4-7-99 10:25
Relinquished by: Signature Tina DeSorbo	Received by: Signature John Smith	Date/Time 4/7/99 10:25 Am

New York State Project: Yes ____ No ____

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	TCLP (Specify: volatiles, semi-volatiles, metals, pesticides, herbicides)										
30	Other (Specify):										