MMA, INC.
CONSULTING ENGINEERS

2304 BEL-AIRE COURT
GREEN BAY, WI 54304-5017
PHONE: 920/592-9606 FAX: 920/592-9613

October 29, 2004

Ms. Kristin Du Fresne, Hydrogeologist
State of Wisconsin Department of Natural Resources
P. O. Box 10448
Green Bay, WI 54307-0448

Re: Additional Soil Analytical Results

Subject Sites:	University Cleaners	Former University Cleaners
	1608 University Avenue	1620 University Avenue
	Green Bay, WI 54302	Green Bay, WI 54302
	BRRTS Case No. 02-05-233555	BRRTS Case No. 02-05-321297

Dear Ms. Du Fresne:

On behalf of Mr. David Charles, RP for the above referenced DERF sites, we are providing the results of the soil sampling conducted at the subject site on October 8, 2004. The sampling was conducted in accordance with our September 27, 2004 meeting.

The sites are located at 1608 and 1620 University Avenue in the City of Green Bay, Brown County, Wisconsin.

Site Background

The 1608 University Avenue site is currently being used as a "dry store". The site was used as a dry cleaning operation until circa November 2000. The dry cleaning operation is a licensed facility. The dry cleaning business was previously located at 1620 University Avenue before relocating to 1608 University Avenue. The 1620 University Avenue site closed prior to October 1997. The 1620 University Avenue site was never licensed.

In addition, a Standard Gasoline Station once operated from the 1608 University Avenue site. An UST system was located at the Standard Gasoline Station to store gasoline for retail sale. The petroleum contamination resulting from the activities at the Standard Gasoline Station was investigated under WDNR BRRTS Case No. 03-05-216499 and closed on February 26, 2003 with a "no further action" letter.

In February 1999, Northern Environmental completed a limited Phase II ESA at the subject sites to determine the impact the former UST storage tank system and the dry cleaners had on the subject sites. According to Northern Environmental's *Site Investigation Status Update, Chlorinated Solvent Release, University Cleaners, 1608 and 1620 University Avenue* dated February 10, 2000, the results of the Phase II ESA identified petroleum and solvent contamination in the groundwater at the sites.

Northern Environmental was retained by Ms. Gale Charles, the former owner of the subject sites, to investigate the contamination discovered at the subject sites. As part of that work, Northern Environmental conducted fifteen soil borings at the sites. Six of the borings were converted into groundwater monitoring wells and one soil boring was converted into a piezometer.

Summary of the Additional Investigation

Three geoprobes were conducted by GHD, Inc. at the site on October 8, 2004. The geoprobes were drilled to approximately 6-feet below ground level in order to collect a soil sample. A copy of the *Soil Boring Logs* and *Boring Abandonment Forms* will be provided under separate cover letter.

Summary of Soil Contamination

Based on the results of VOC analysis of the soil samples collected by Northern Environmental and MMA, INC., two plumes of chlorinated solvent contamination are documented to exist in the soil at the site. The analytical results for the soil samples collected from GP-26 and GP-27 confirmed that there are two separate and distinct plumes of soil contamination at the subject sites.

Table No. 1 – *Analytical Results for Soil Samples*, included in Attachment "B", summarizes the analytical results for the soil samples collected at the site. The soil at the site is contaminated with lead (petroleum) and benzene (petroleum) in excess of NR 720 Soil Standards. In addition, the soil is contaminated with significant levels of tetrachloroethylene (solvent) and trichloroethene (solvent). The petroleum contamination in the soil is a result of the petroleum activities at the subject site. The petroleum contamination resulting from the LUST site was investigated under WDNR BRRTS Case No. 03-05-216499. The LUST case was closed on February 26, 2003.

The soil sample collected from GP-34 contained detections of tetrachloroethylene and the soil sample collected from GP-36 contained significant detections of tetrachloroethylene and trichloroethylene. The solvent plume resulting from dry cleaning activities at 1620 University Avenue, exists primarily to the west, south and southeast of the existing building. Solvent contaminated soil has been documented to exist to the east, on American Food Groups property. The solvent plume resulting from dry cleaning activities at 1608 University Avenue, exists primarily to the south and west of the existing building. Figure No. 1 – *Areal Extent of Soil Contamination*, included in Attachment "A", details the areal extent of soil contamination at the sites.

The degree and extent of chlorinated solvent contamination in the soil is adequately defined by the investigation conducted at the subject site. A copy of the analytical results and chains of custody are provided in Appendix "C".

Closing Comments

The degree and extent of soil and groundwater contamination is adequately defined at the site. Figure No. 2 – *Areal Extent of Groundwater Contamination*, included in Attachment "A", details the extent of groundwater contamination at the subject sites. As such, we are requesting to end the investigation of the site and submit a RAOR for remediation of the contamination at the site. The RAOR will include the preferred alternative of "hot spot" removal and continued monitoring. MMA, INC. is in the process of determining if American Food Groups (AFG) will accept a deed restriction as a closure option at their site. Once we receive a decision from AFG, we can submit the RAOR.

If you have any questions, or if any additional information is needed, please feel free to contact our office at your convenience.

Sincerely,

MMA, INC.

John M. Maas, P.E.
Project Manager

JMM/ak

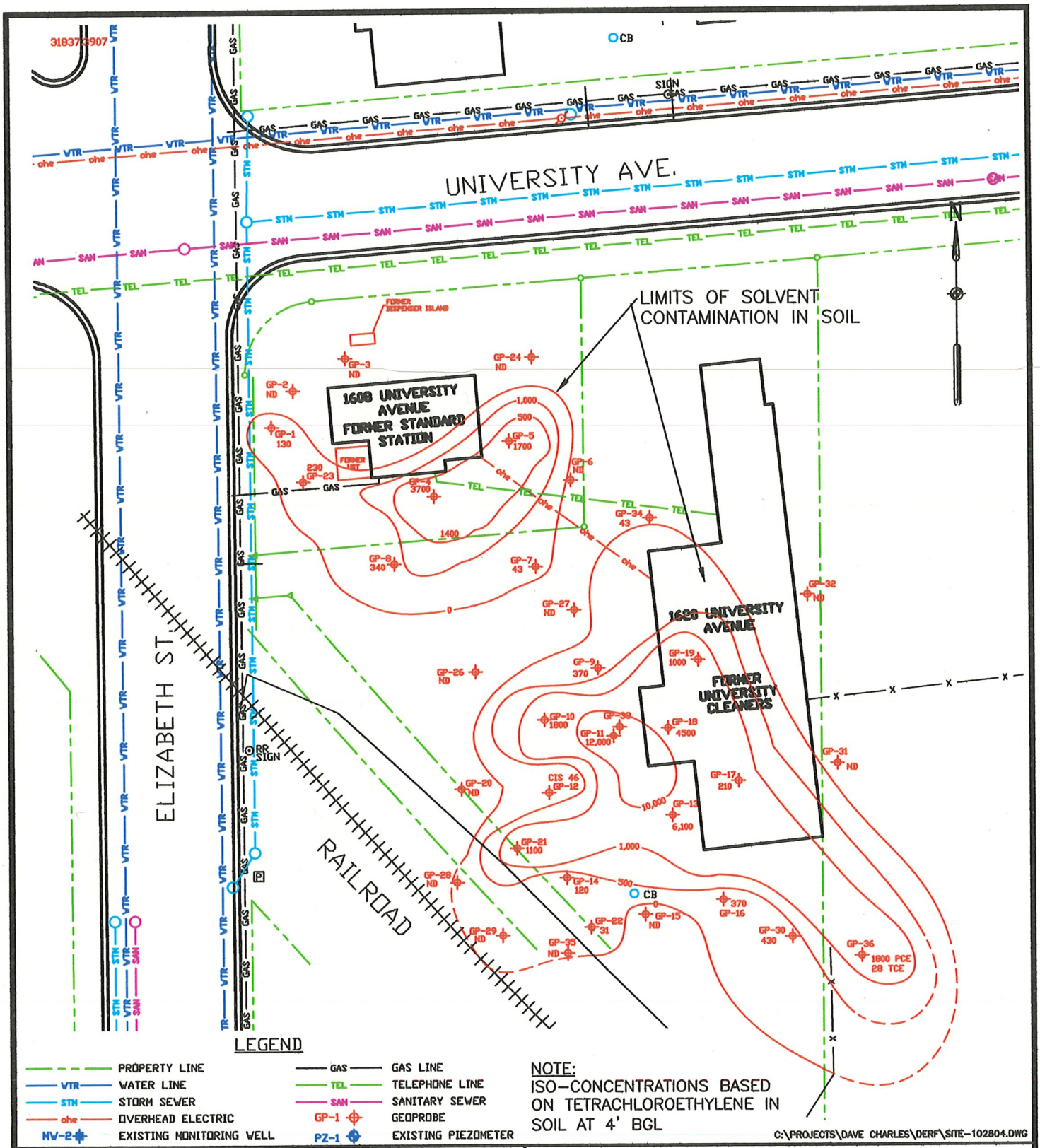
Attachments

cc: Mr. Dave Charles, RP

ATTACHMENT "A"

FIGURES AND MAPS

Figure No. 1 – *Areal Extent Soil Contamination*
Figure No. 2 – *Areal Extent Groundwater Contamination*

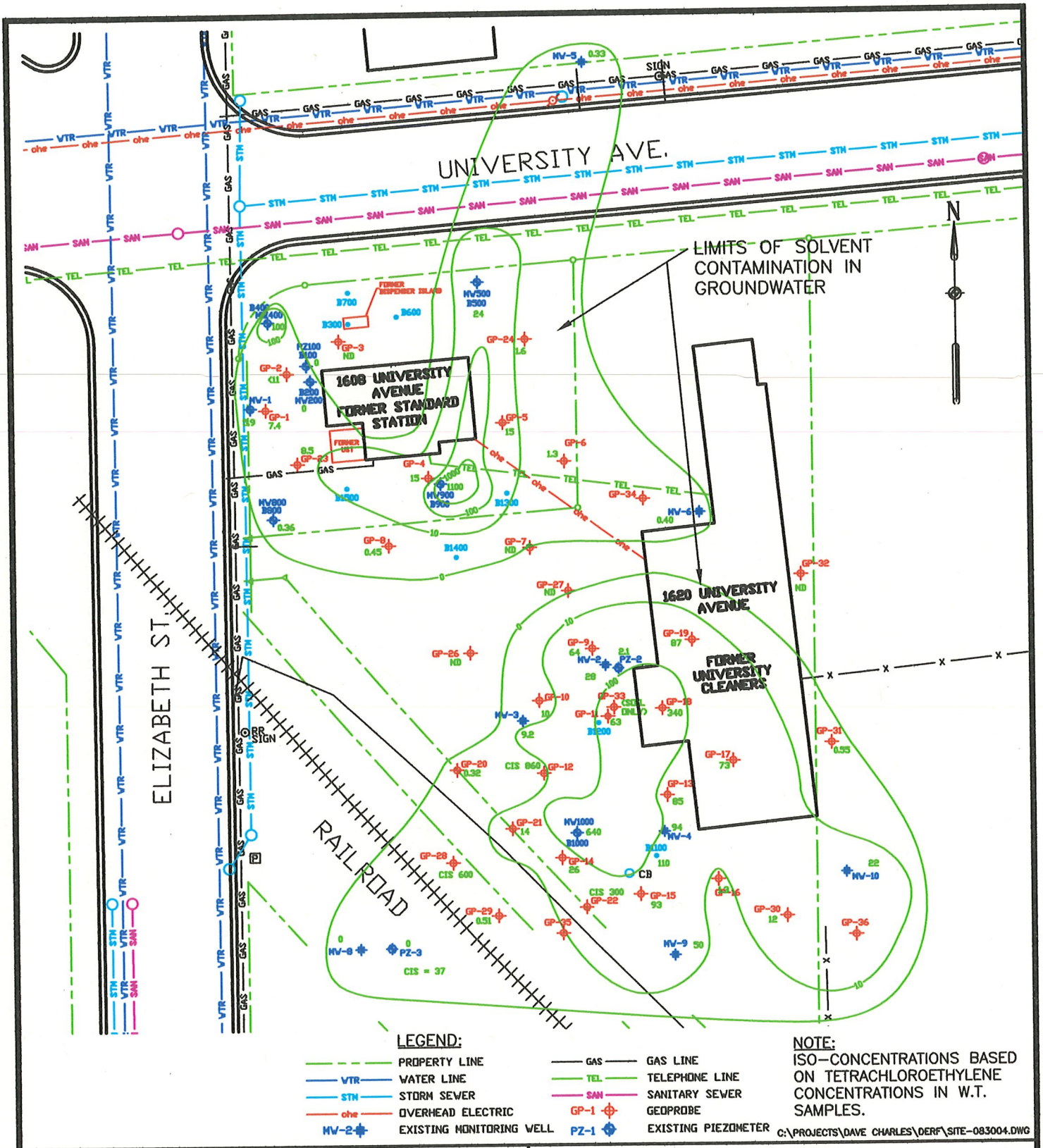


AREAL EXTENT OF SOIL CONTAMINATION

MR. DAVE CHARLES D/B/A
UNIVERSITY CLEANERS
1608 & 1620 UNIVERSITY AVE.
GREEN BAY, WISCONSIN

MMA, INC.
CONSULTING ENGINEERS
2304 Bel-Aire Court
Green Bay, WI 54304-5017
Phone: 920/592-9606 Fax: 920/592-9613

SCALE:	1" = 50'	DRAWN BY:	SMM	FIGURE NUMBER: 1
DATE:	OCT. 2004	REVIEWED BY:	JMM	



AREAL EXTENT OF GROUNDWATER CONTAMINATION (AUGUST 2004)

MR. DAVE CHARLES D/B/A
UNIVERSITY CLEANERS
1608 & 1620 UNIVERSITY AVE.
GREEN BAY, WISCONSIN

MMA, INC.
CONSULTING ENGINEERS
2304 Bel-Aire Court
Green Bay, WI 54304-5017
Phone: 920/592-9606 Fax: 920/592-9613

SCALE: 1" = 50'	DRAWN BY: SMM	FIGURE NUMBER: 2
DATE: AUG. 2004	REVIEWED BY: JMM	

ATTACHMENT "B"

TABLES

TABLE NO. 1

UNIVERSITY CLEANERS – 1608 and 1620 UNIVERSITY AVENUE

ANALYTICAL RESULTS FOR SOIL SAMPLES

Sample ID	Date	Depth (ft.)	DRO mg/kg	GRO mg/kg	Lead mg/kg	Benzene ug/kg	n-Butyl-benzene ug/kg	sec-Butyl-benzene ug/kg	Ethyl-benzene ug/kg	cis-1,2 Dichloro ethene ug/kg	Iso-propyl-benzene ug/kg	Naph-thalene ug/kg	n-Propyl-benzene ug/kg	Tetra-chloro-ethene ug/kg	Tri-chloro-ethene ug/kg	Toluene ug/kg	Total Tri-methyl benzenes ug/kg	Total Xylenes ug/kg
Northern Environmental																		
S101	12/2/99	2.5-4.5	<10	<10	<6	**37**	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
S301	12/2/99	2.5-4.5	92	63	**60**	<25	3100	790	130	<25	490	1300	410	<25	<25	45	6700	1510
S401	12/2/99	2.5-4.5	<10	<10	<6	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
S501	12/2/99	2.5-4.5	<10	<10	<6	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
S601	12/2/99	2.5-4.5	<10	<10	<6	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
S701	12/2/99	2.5-4.5	<10	<10	<6	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
S801	12/2/99	2.5-4.5	<10	<10	<6	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
S901	12/2/99	2.5-4.5	<10	<10	<6	<25	<25	<25	<25	<25	<25	<25	<25	**1400**	<25	<25	<25	<75
S1501	12/2/99	2.5-4.5	<10	<10	<6	<25	<25	<25	<25	<25	<25	<25	<25	**29**	<25	<25	<25	<75
MMA, INC.																		
GP-1	5/22/01	4-6	<10	<10	19 J	**230**	87	<25	420	<25	<25	<25	69	**130**	<25	890	530	1480
GP-2	5/22/01	6-8	44	53	<6	<25	520	430	100	<25	220	140	230	<25	<25	<25	350	189
GP-2	5/22/01	11-13	<10	<10	<6	<25	<25	<25	250	<25	45	<25	45	**63**	<25	<25	432	3310
GP-3	5/22/01	4-6	<10	<10	<6	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	63
GP-4	5/22/01	4-6	15	<10	<6	<25	<25	<25	130	<25	<25	<25	<25	**3700**	<25	<25	<25	278
GP-5	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**1700**	<25	<25	<25	<75
GP-6	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
GP-7	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**43**	<25	<25	<25	<75
GP-8	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**340**	<25	<25	<25	<75
GP-9	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**370**	<25	<25	<25	<75
GP-10	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**1800**	**170**	<25	<25	<75
GP-11	11/9/01	4-6				<130	<130	<130	<130	<25	<130	<130	<130	**22000**	**130**	<130	<130	<380
GP-11	11/9/01	6-8				<250	<250	<250	<250	<25	<250	<250	<250	**12000**	**1500**	<250	<250	<750
GP-12	11/9/01	4-6				<25	<25	<25	<25	**46**	<25	<25	<25	<25	<25	<25	<25	<75
GP-13	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**6100**	**32**	<25	<25	<75
GP-13	11/9/01	6-8				<25	<25	<25	<25	<25	<25	<25	<25	**4400**	**530**	<25	<25	<75
GP-14	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**120**	<25	<25	<25	<75
GP-15	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
GP-16	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**370**	**30**	<25	<25	<75
GP-17	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**2100**	<25	<25	<25	<75
NR 720			100/ 250	100/ 250	50/500	5.5			2900			400[A]				1500		4100

TABLE NO. 1, cont.

Sample ID	Date	Depth (ft.)	DRO mg/kg	GRO mg/kg	Lead mg/kg	Benzene ug/kg	n-Butyl-benzene ug/kg	sec-Butyl-benzene ug/kg	Ethyl-benzene ug/kg	cis-1,2 Dichloro ethene ug/kg	Iso-propyl-benzene ug/kg	Naph-thalene ug/kg	n-Propyl-benzene ug/kg	Tetra-chloro-ethene ug/kg	Tri-chloro-ethene ug/kg	Toluene ug/kg	Total Tri-methyl benzenes ug/kg	Total Xylenes ug/kg
GP-18	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**4500**	<25	<25	<25	<75
GP-18	11/9/01	6-8				<25	<25	<25	<25	<25	<25	<25	<25	**6600**	**120**	<25	<25	<75
GP-19	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**1000**	<25	<25	<25	<75
GP-20	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<75
GP-21	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**1100**	**29**	<25	<25	<75
GP-22	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**31**	<25	<25	<25	<75
GP-23	11/9/01	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**230**	<25	<25	<25	<75
GP-24	9/8/03	4-6				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<50
GP-26	9/8/03	5-7				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<50
GP-27	9/8/03	4-6				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<50
GP-28	9/8/03	4-6				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<50
GP-29	9/8/03	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**51**	<25	<25	<25	<50
GP-30	9/8/03	4-6				<25	<25	<25	<25	<25	<25	<25	<25	**430**	<25	<25	<25	<50
GP-31	9/8/03	4-6				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<50
GP-32	9/8/03	4-6				<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<50
GP-33	9/8/03	Sample collected for TCLP-Volatiles (PCE = 11 ppb)																
GP-34	10/8/04	4-6				<15	<17	<20	<17	<13	<21	<20	<23	**43**	<15	<13	<22	<44
GP-35	10/8/04	4-6				<15	<17	<20	<17	<13	<21	<20	<23	<14	<15	<13	<22	<44
GP-36	10/8/04	4-6				<15	<17	<20	<17	<13	<21	<20	<23	**1800**	**28**	<13	<22	<44
NR 720			100/ 250	100/ 250	50/50 0	5.5			2900			400[A]				1500		4100

[A] *DRAFT* PAH Limits

Blank – Not analyzed for

Shaded – Significant Results

J = Analyte detected between limit of detection (LOD) and limit of quantitation (LOQ)

Sample collected from GP-33 was analyzed as TCLP Volatiles

ATTACHMENT "C"

LABORATORY ANALYTICAL RESULTS

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

NLS Project: 85069
NLS Customer: 21255

Client: MMA Inc
Attn: John Maas
2304 Bel-Aire Court
Green Bay,WI 54304 1507

Fax: 920 592 9613 Phone: 920 592 9606

Project: Former University Cleaners

Soil, GP-34 NLS ID: 352855
Ref. Line COC Soil, GP-34 Matrix: SO
Collected: 10/08/04 00:00 Received: 10/09/04

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	75.6	%	1	0.10*		10/11/04	ASTM D2216	721026460
VOCs (solid) by EPA 8260	see attached					10/15/04	SW846 8260	721026460

Soil, GP-35 NLS ID: 352856
Ref. Line COC Soil, GP-35 Matrix: SO
Collected: 10/08/04 00:00 Received: 10/09/04

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	79.8	%	1	0.10*		10/13/04	ASTM D2216	721026460
VOCs (solid) by EPA 8260	see attached					10/22/04	SW846 8260	721026460

Soil, GP-36 NLS ID: 352857
Ref. Line COC Soil, GP-36 Matrix: SO
Collected: 10/08/04 00:00 Received: 10/09/04

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	64.9	%	1	0.10*		10/11/04	ASTM D2216	721026460
VOCs (solid) by EPA 8260	see attached					10/22/04	SW846 8260	721026460

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution.

LOD = Limit of Detection LOQ = Limit of Quantitation ND = Not Detected 1000 ug/L = 1 mg/L
DWB = Dry Weight Basis NA = Not Applicable %DWB = (mg/kg DWB) / 10000
MCL = Maximum Contaminant Levels for Drinking Water Samples

Reviewed by:

Authorized by:
R. T. Krueger
President

ANALYTICAL RESULTS: VOC's by EPA 8260 - Methanol - (Saturn 2000)

Customer: MMA Inc **NLS Project: 85069**
Project Description: Former University Cleaners
Project Title: **Template: SATS** **Printed: 10/25/2004 08:39**

Sample: 352855 **Soil, GP-34** **Collected: 10/08/04** **Analyzed: 10/15/04 -**

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
Benzene	ND	ug/kg	1	15	50
Bromobenzene	ND	ug/kg	1	13	42
Bromochloromethane	ND	ug/kg	1	20	66
Bromodichloromethane	ND	ug/kg	1	15	50
Bromoform	ND	ug/kg	1	23	75
Bromomethane	ND	ug/kg	1	200	200
n-Butylbenzene	ND	ug/kg	1	17	57
sec-Butylbenzene	ND	ug/kg	1	20	67
tert-Butylbenzene	ND	ug/kg	1	30	99
Carbon Tetrachloride	ND	ug/kg	1	12	39
Chlorobenzene	ND	ug/kg	1	17	55
Chloroethane	ND	ug/kg	1	200	200
Chloroform	ND	ug/kg	1	11	37
Chloromethane	ND	ug/kg	1	13	44
2-Chlorotoluene	ND	ug/kg	1	18	59
4-Chlorotoluene	ND	ug/kg	1	17	55
Dibromochloromethane	ND	ug/kg	1	14	47
1,2-Dibromo-3-Chloropropane	ND	ug/kg	1	16	52
1,2-Dibromoethane	ND	ug/kg	1	15	49
Dibromomethane	ND	ug/kg	1	23	75
1,2-Dichlorobenzene	ND	ug/kg	1	21	71
1,3-Dichlorobenzene	ND	ug/kg	1	13	43
1,4-Dichlorobenzene	ND	ug/kg	1	14	48
Dichlorodifluoromethane	ND	ug/kg	1	14	46
1,1-Dichloroethane	ND	ug/kg	1	12	40
1,2-Dichloroethane	ND	ug/kg	1	22	75
1,1-Dichloroethene	ND	ug/kg	1	17	56
cis-1,2-Dichloroethene	ND	ug/kg	1	13	44
trans-1,2-Dichloroethene	ND	ug/kg	1	17	57
1,2-Dichloropropane	ND	ug/kg	1	20	67
1,3-Dichloropropane	ND	ug/kg	1	13	44
2,2-Dichloropropane	ND	ug/kg	1	24	80
1,1-Dichloropropene	ND	ug/kg	1	11	35
cis-1,3-Dichloropropene	ND	ug/kg	1	19	64
trans-1,3-Dichloropropene	ND	ug/kg	1	15	50
Ethylbenzene	ND	ug/kg	1	17	57
Hexachlorobutadiene	ND	ug/kg	1	19	63
Isopropylbenzene	ND	ug/kg	1	21	71
p-Isopropyltoluene	ND	ug/kg	1	16	52
Methylene chloride	ND	ug/kg	1	14	47
Naphthalene	ND	ug/kg	1	20	68
n-Propylbenzene	ND	ug/kg	1	23	77
ortho-Xylene	ND	ug/kg	1	19	62
Styrene	ND	ug/kg	1	19	62
1,1,1,2-Tetrachloroethane	ND	ug/kg	1	18	60
1,1,2,2-Tetrachloroethane	ND	ug/kg	1	10	33
Tetrachloroethene	[43]	ug/kg	1	14	48
Toluene	ND	ug/kg	1	13	44
1,2,3-Trichlorobenzene	ND	ug/kg	1	21	70

ANALYTICAL RESULTS: VOC's by EPA 8260 - Methanol - (Saturn 2000)

Customer: MMA Inc NLS Project: 85069

Project Description: Former University Cleaners

Project Title: Template: SATS Printed: 10/25/2004 08:39

Sample: 352855 Soil, GP-34 **Collected: 10/08/04** **Analyzed: 10/15/04 -**

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
1,2,4-Trichlorobenzene	ND	ug/kg	1	24	79
1,1,1-Trichloroethane	ND	ug/kg	1	10	35
1,1,2-Trichloroethane	ND	ug/kg	1	21	69
Trichloroethene	ND	ug/kg	1	15	49
Trichlorofluoromethane	ND	ug/kg	1	12	39
1,2,3-Trichloropropane	ND	ug/kg	1	22	73
1,2,4-Trimethylbenzene	ND	ug/kg	1	22	72
1,3,5-Trimethylbenzene	ND	ug/kg	1	18	62
Vinyl chloride	ND	ug/kg	1	18	61
meta,para-Xylene	ND	ug/kg	1	44	150
MTBE	ND	ug/kg	1	15	48
Isopropyl Ether	ND	ug/kg	1	11	36
Dibromofluoromethane (SURR**)	93%				
Toluene-d8 (SURR**)	105%				
1-Bromo-4-Fluorobenzene (SURR**)	102%				

Matrix Spike recovery for Chloromethane was below in-house QC limits.

ANALYTICAL RESULTS: VOC's by EPA 8260 - Methanol - (Saturn 2000)

Customer: MMA Inc **NLS Project: 85069**
Project Description: Former University Cleaners
Project Title: **Template: SATS** **Printed: 10/25/2004 08:39**

Sample: 352856 **Soil, GP-35** **Collected: 10/08/04** **Analyzed: 10/22/04 -**

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
Benzene	ND	ug/kg	1	15	50
Bromobenzene	ND	ug/kg	1	13	42
Bromochloromethane	ND	ug/kg	1	20	66
Bromodichloromethane	ND	ug/kg	1	15	50
Bromoform	ND	ug/kg	1	23	75
Bromomethane	ND	ug/kg	1	200	200
n-Butylbenzene	ND	ug/kg	1	17	57
sec-Butylbenzene	ND	ug/kg	1	20	67
tert-Butylbenzene	ND	ug/kg	1	30	99
Carbon Tetrachloride	ND	ug/kg	1	12	39
Chlorobenzene	ND	ug/kg	1	17	55
Chloroethane	ND	ug/kg	1	200	200
Chloroform	ND	ug/kg	1	11	37
Chloromethane	ND	ug/kg	1	13	44
2-Chlorotoluene	ND	ug/kg	1	18	59
4-Chlorotoluene	ND	ug/kg	1	17	55
Dibromochloromethane	ND	ug/kg	1	14	47
1,2-Dibromo-3-Chloropropane	ND	ug/kg	1	16	52
1,2-Dibromoethane	ND	ug/kg	1	15	49
Dibromomethane	ND	ug/kg	1	23	75
1,2-Dichlorobenzene	ND	ug/kg	1	21	71
1,3-Dichlorobenzene	ND	ug/kg	1	13	43
1,4-Dichlorobenzene	ND	ug/kg	1	14	48
Dichlorodifluoromethane	ND	ug/kg	1	14	46
1,1-Dichloroethane	ND	ug/kg	1	12	40
1,2-Dichloroethane	ND	ug/kg	1	22	75
1,1-Dichloroethene	ND	ug/kg	1	17	56
cis-1,2-Dichloroethene	ND	ug/kg	1	13	44
trans-1,2-Dichloroethene	ND	ug/kg	1	17	57
1,2-Dichloropropane	ND	ug/kg	1	20	67
1,3-Dichloropropane	ND	ug/kg	1	13	44
2,2-Dichloropropane	ND	ug/kg	1	24	80
1,1-Dichloropropene	ND	ug/kg	1	11	35
cis-1,3-Dichloropropene	ND	ug/kg	1	19	64
trans-1,3-Dichloropropene	ND	ug/kg	1	15	50
Ethylbenzene	ND	ug/kg	1	17	57
Hexachlorobutadiene	ND	ug/kg	1	19	63
Isopropylbenzene	ND	ug/kg	1	21	71
p-Isopropyltoluene	ND	ug/kg	1	16	52
Methylene chloride	ND	ug/kg	1	14	47
Naphthalene	ND	ug/kg	1	20	68
n-Propylbenzene	ND	ug/kg	1	23	77
ortho-Xylene	ND	ug/kg	1	19	62
Styrene	ND	ug/kg	1	19	62
1,1,1,2-Tetrachloroethane	ND	ug/kg	1	18	60
1,1,2,2-Tetrachloroethane	ND	ug/kg	1	10	33
Tetrachloroethene	ND	ug/kg	1	14	48
Toluene	ND	ug/kg	1	13	44
1,2,3-Trichlorobenzene	ND	ug/kg	1	21	70

ANALYTICAL RESULTS: VOC's by EPA 8260 - Methanol - (Saturn 2000)

Customer: MMA Inc NLS Project: 85069

Project Description: Former University Cleaners

Project Title: Template: SATS Printed: 10/25/2004 08:39

Sample: 352856 Soil, GP-35 **Collected: 10/08/04** **Analyzed: 10/22/04 -**

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
1,2,4-Trichlorobenzene	ND	ug/kg	1	24	79
1,1,1-Trichloroethane	ND	ug/kg	1	10	35
1,1,2-Trichloroethane	ND	ug/kg	1	21	69
Trichloroethene	ND	ug/kg	1	15	49
Trichlorofluoromethane	ND	ug/kg	1	12	39
1,2,3-Trichloropropane	ND	ug/kg	1	22	73
1,2,4-Trimethylbenzene	ND	ug/kg	1	22	72
1,3,5-Trimethylbenzene	ND	ug/kg	1	18	62
Vinyl chloride	ND	ug/kg	1	18	61
meta,para-Xylene	ND	ug/kg	1	44	150
MTBE	ND	ug/kg	1	15	48
Isopropyl Ether	ND	ug/kg	1	11	36
Dibromofluoromethane (SURR**)	99%				
Toluene-d8 (SURR**)	110%				
1-Bromo-4-Fluorobenzene (SURR**)	102%				

Check standard recovery was outside QC limits for 1,2,3-Trichloropropane at 70%.

Matrix Spike and Matrix Spike Duplicate recoveries for Meta/Para and Ortho Xylene were below in-house control limits..

ANALYTICAL RESULTS: VOC's by EPA 8260 - Methanol - (Saturn 2000)

Customer: MMA Inc NLS Project: 85069

Project Description: Former University Cleaners

Project Title: Template: SATS Printed: 10/25/2004 08:39

Sample: 352857 Soil, GP-36 **Collected: 10/08/04** **Analyzed: 10/22/04 -**

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
Benzene	ND	ug/kg	1	15	50
Bromobenzene	ND	ug/kg	1	13	42
Bromochloromethane	ND	ug/kg	1	20	66
Bromodichloromethane	ND	ug/kg	1	15	50
Bromoform	ND	ug/kg	1	23	75
Bromomethane	ND	ug/kg	1	200	200
n-Butylbenzene	ND	ug/kg	1	17	57
sec-Butylbenzene	ND	ug/kg	1	20	67
tert-Butylbenzene	ND	ug/kg	1	30	99
Carbon Tetrachloride	ND	ug/kg	1	12	39
Chlorobenzene	ND	ug/kg	1	17	55
Chloroethane	ND	ug/kg	1	200	200
Chloroform	ND	ug/kg	1	11	37
Chloromethane	ND	ug/kg	1	13	44
2-Chlorotoluene	ND	ug/kg	1	18	59
4-Chlorotoluene	ND	ug/kg	1	17	55
Dibromochloromethane	ND	ug/kg	1	14	47
1,2-Dibromo-3-Chloropropane	ND	ug/kg	1	16	52
1,2-Dibromoethane	ND	ug/kg	1	15	49
Dibromomethane	ND	ug/kg	1	23	75
1,2-Dichlorobenzene	ND	ug/kg	1	21	71
1,3-Dichlorobenzene	ND	ug/kg	1	13	43
1,4-Dichlorobenzene	ND	ug/kg	1	14	48
Dichlorodifluoromethane	ND	ug/kg	1	14	46
1,1-Dichloroethane	ND	ug/kg	1	12	40
1,2-Dichloroethane	ND	ug/kg	1	22	75
1,1-Dichloroethene	ND	ug/kg	1	17	56
cis-1,2-Dichloroethene	ND	ug/kg	1	13	44
trans-1,2-Dichloroethene	ND	ug/kg	1	17	57
1,2-Dichloropropane	ND	ug/kg	1	20	67
1,3-Dichloropropane	ND	ug/kg	1	13	44
2,2-Dichloropropane	ND	ug/kg	1	24	80
1,1-Dichloropropene	ND	ug/kg	1	11	35
cis-1,3-Dichloropropene	ND	ug/kg	1	19	64
trans-1,3-Dichloropropene	ND	ug/kg	1	15	50
Ethylbenzene	ND	ug/kg	1	17	57
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Methylene chloride	ND	ug/kg	1	14	47
Naphthalene	ND	ug/kg	1	20	68
n-Propylbenzene	ND	ug/kg	1	23	77
ortho-Xylene	ND	ug/kg	1	19	62
Styrene	ND	ug/kg	1	19	62
1,1,1,2-Tetrachloroethane	ND	ug/kg	1	18	60
1,1,2,2-Tetrachloroethane	ND	ug/kg	1	10	33
Tetrachloroethene	1800	ug/kg	1	14	48
Toluene	ND	ug/kg	1	13	44
1,2,3-Trichlorobenzene	ND	ug/kg	1	21	70

ANALYTICAL RESULTS: VOC's by EPA 8260 - Methanol - (Saturn 2000)

Customer: MMA Inc NLS Project: 85069

Project Description: Former University Cleaners

Project Title: Template: SATS Printed: 10/25/2004 08:39

Sample: 352857 Soil, GP-36 Collected: 10/08/04 Analyzed: 10/22/04 -

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ
1,2,4-Trichlorobenzene	ND	ug/kg	1	24	79
1,1,1-Trichloroethane	ND	ug/kg	1	10	35
1,1,2-Trichloroethane	ND	ug/kg	1	21	69
Trichloroethene	[28]	ug/kg	1	15	49
Trichlorofluoromethane	ND	ug/kg	1	12	39
1,2,3-Trichloropropane	ND	ug/kg	1	22	73
1,2,4-Trimethylbenzene	ND	ug/kg	1	22	72
1,3,5-Trimethylbenzene	ND	ug/kg	1	18	62
Vinyl chloride	ND	ug/kg	1	18	61
meta,para-Xylene	ND	ug/kg	1	44	150
MTBE	ND	ug/kg	1	15	48
Isopropyl Ether	ND	ug/kg	1	11	36
Dibromofluoromethane (SURR**)	102%				
Toluene-d8 (SURR**)	115%				
1-Bromo-4-Fluorobenzene (SURR**)	99%				

Check standard recovery was outside QC limits for 1,2,3-Trichloropropane at 70%.

Matrix Spike and Matrix Spike Duplicate recoveries for Meta/Para and Ortho Xylene were below in-house control limits..

** Surrogates are used to evaluate a method's Quality Control.

MMA, INC.
Consulting Engineers
2304 Bel-Aire Court P.O. Box 11507
Green Bay, WI 54304-1507
Phone: (414) 592-9606

Mail Results To:	MMA, INC. 2304 Bel-Aire Court Green Bay, WI 54304

Special Handling Request
☐ Rush Analysis Date Required: _____
☒ Normal Turn Around

Chain of Custody Record

Laboratory: Northern Lake Service
Project Name: Former University Cleaners
Project Contact: John Mays
Project Number:
Sampled By: Dan Goldbach

Sample ID	Date	Time	Bottle Total	Sample Type	Preservation Type	Analysis Required	Comments
GP-34	10-8-04	(4'-6')	2 gl/4oz	soil		VOC / % solids	352855
GP-35	10-8-04	(4'-6')	2 gl/4oz	soil		VOC / % solids	352856
GP-36	10-8-04	(4'-6')	2 gl/4oz	soil		VOC / % solids	352857

Relinquished By	Date	Time	Received By	Date	Time
1) Dan Goldbach	10-8-04	3:20pm	[illegible]	10/9/04	1025
2)					
3)					
4)					

Temperature of Contents
0w.2c Degrees C
ok Conditions of Seals
_____ Conditions of Contents

Received in Laboratory By: _____