

ATTACHMENT 4

LABORATORY ANALYTICAL DATA REPORTS



Work Order: 1311817

Project Name:

RACER - Van Buren Landfill (R2330009)

The Mannik & Smith Group, Inc.

Frank Biehl

2365 Haggerty Road South

Suite 100

Canton, MI 48188

(734) 397-3100

27-Nov-2013



Certificate No: MN 532786



27-Nov-2013

Frank Biehl
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **RACER - Van Buren Landfill (R2330009)**

Work Order: **1311817**

Dear Frank,

ALS Environmental received 14 samples on 15-Nov-2013 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 109.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Beamish".

Electronically approved by: Tom Beamish

Tom Beamish
Senior Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

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Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1311817

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1311817-01	W-R2330009-111213-ACN-001	Groundwater		11/12/13 09:50	11/15/13 08:00	☐
1311817-02	W-R2330009-111213-ACN-002	Groundwater		11/12/13 11:35	11/15/13 08:00	☐
1311817-03	W-R2330009-111213-ACN-003	Groundwater		11/12/13 13:05	11/15/13 08:00	☐
1311817-04	W-R2330009-111213-ACN-004	Groundwater		11/12/13 14:45	11/15/13 08:00	☐
1311817-05	W-R2330009-111213-ACN-005	Groundwater		11/12/13 15:00	11/15/13 08:00	☐
1311817-06	W-R2330009-111313-ACN-006	Groundwater		11/13/13 09:40	11/15/13 08:00	☐
1311817-07	W-R2330009-111313-ACN-007	Groundwater		11/13/13 11:05	11/15/13 08:00	☐
1311817-08	W-R2330009-111313-ACN-008	Groundwater		11/13/13 12:25	11/15/13 08:00	☐
1311817-09	W-R2330009-111313-ACN-009	Groundwater		11/13/13 17:00	11/15/13 08:00	☐
1311817-10	W-R2330009-111313-ACN-010	Groundwater		11/13/13 13:10	11/15/13 08:00	☐
1311817-11	W-R2330009-111313-ACN-011	Groundwater		11/13/13 15:00	11/15/13 08:00	☐
1311817-12	W-R2330009-111413-ACN-012	Groundwater		11/14/13 10:05	11/15/13 08:00	☐
1311817-13	W-R2330009-111413-ACN-013	Groundwater		11/14/13 11:15	11/15/13 08:00	☐
1311817-14	Trip Blank	Water		11/13/13	11/15/13 08:00	☐

Client: The Mannik & Smith Group, Inc.
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WorkOrder: 1311817

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

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Case Narrative**Analytical Comments:**

Batch 53439, Method SVO_8270_W, Sample 1311817-12B: One or more SVOC surrogate recoveries are low due to matrix interference.

Batch R131098, Method VOC_8260_W, Sample 1311817-05A: One or more VOC surrogate recoveries were above the upper control limits. The sample was non-detect, therefore, no qualification is needed.

QC Comments:

Batch 53387, Method SVO_8270_W, Sample SLCSW1-53387: The LCS recovery was below the lower control limit. The sample results may be biased low for Hexachlorocyclopentadiene.

Batch 53439, Method SVO_8270_W, Sample 1311817-11B MSD: The matrix spike duplicate recovery was outside of the control limit. However, the matrix spike recovery and the RPD between the MS and MSD were in control. No qualification is required for 2,4,6-Trichlorophenol and 2-Chloronaphthalene.

Batch R131098, Method VOC_8260_W, Sample VLCSW2-131122: The LCS recovery was outside of the upper control limit but within the Sporadic Marginal Exceedence limit. No qualification is necessary for 4-Methyl-2-pentanone.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-001
Collection Date: 11/12/13 09:50 AM

Work Order: 1311817
Lab ID: 1311817-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID: 53488</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 18:56
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID: 53454</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:06
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: CES
<u>BatchID: 53491</u>							
Aluminum	0.73		0.00078	0.050	mg/L	1	11/22/13 21:51
Antimony	0.00066	J	0.000036	0.0020	mg/L	1	11/22/13 21:51
Arsenic	0.0010	J	0.00058	0.0050	mg/L	1	11/22/13 21:51
Barium	0.038	J	0.000063	0.10	mg/L	1	11/22/13 21:51
Beryllium	0.00013	J	0.000082	0.0010	mg/L	1	11/22/13 21:51
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 21:51
Chromium	0.0031	J	0.00027	0.010	mg/L	1	11/22/13 21:51
Cobalt	0.0012	J	0.000041	0.020	mg/L	1	11/22/13 21:51
Copper	0.0030	J	0.00053	0.0040	mg/L	1	11/22/13 21:51
Iron	1.6		0.0053	0.20	mg/L	1	11/22/13 21:51
Lead	0.0013	J	0.000051	0.0030	mg/L	1	11/22/13 21:51
Manganese	0.075		0.000054	0.050	mg/L	1	11/22/13 21:51
Nickel	0.0048	J	0.00025	0.020	mg/L	1	11/22/13 21:51
Selenium	0.0011	J	0.00064	0.0050	mg/L	1	11/22/13 21:51
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 21:51
Thallium	0.00024	J	0.000062	0.0020	mg/L	1	11/22/13 21:51
Vanadium	0.0021	J	0.00016	0.0040	mg/L	1	11/22/13 21:51
Zinc	0.0086	J	0.00048	0.050	mg/L	1	11/22/13 21:51
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: CES
<u>BatchID: 53491</u>							
Aluminum	0.022	J	0.00078	0.050	mg/L	1	11/22/13 21:57
Antimony	0.00030	J	0.000036	0.0020	mg/L	1	11/22/13 21:57
Arsenic	0.00065	J	0.00058	0.0050	mg/L	1	11/22/13 21:57
Barium	0.047	J	0.000063	0.10	mg/L	1	11/22/13 21:57
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 21:57
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 21:57
Chromium	0.00040	J	0.00027	0.010	mg/L	1	11/22/13 21:57
Cobalt	0.00091	J	0.000041	0.020	mg/L	1	11/22/13 21:57
Copper	0.00082	J	0.00053	0.0040	mg/L	1	11/22/13 21:57
Iron	0.15	J	0.0053	0.20	mg/L	1	11/22/13 21:57

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

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Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-001
Collection Date: 11/12/13 09:50 AM

Work Order: 1311817
Lab ID: 1311817-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	11/22/13 21:57
Manganese	0.060		0.000054	0.050	mg/L	1	11/22/13 21:57
Nickel	0.0032	J	0.00025	0.020	mg/L	1	11/22/13 21:57
Selenium	0.00083	J	0.00064	0.0050	mg/L	1	11/22/13 21:57
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 21:57
Thallium	U		0.000062	0.0020	mg/L	1	11/22/13 21:57
Vanadium	U		0.00016	0.0040	mg/L	1	11/22/13 21:57
Zinc	0.0031	J	0.00048	0.050	mg/L	1	11/22/13 21:57

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 11/18/13

Analyst: HL

BatchID: 53387

1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 15:43
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 15:43
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 15:43
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 15:43
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 15:43
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 15:43
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 15:43
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 15:43
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 15:43
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 15:43
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 15:43
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 15:43
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 15:43
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 15:43
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 15:43
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 15:43
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 15:43
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 15:43
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 15:43
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 15:43
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 15:43
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 15:43
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 15:43
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 15:43
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 15:43
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 15:43
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 15:43
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 15:43
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 15:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-001
Collection Date: 11/12/13 09:50 AM

Work Order: 1311817
Lab ID: 1311817-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 15:43
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 15:43
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 15:43
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 15:43
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 15:43
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 15:43
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 15:43
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 15:43
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 15:43
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/18/13 15:43
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 15:43
Caprolactam	U		4.7	10	µg/L	1	11/18/13 15:43
Carbazole	U		0.16	10	µg/L	1	11/18/13 15:43
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 15:43
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 15:43
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 15:43
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 15:43
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 15:43
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 15:43
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 15:43
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 15:43
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 15:43
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 15:43
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 15:43
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 15:43
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 15:43
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 15:43
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 15:43
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 15:43
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 15:43
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 15:43
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 15:43
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 15:43
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 15:43
Phenol	U		0.32	5.0	µg/L	1	11/18/13 15:43
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 15:43
Surr: 2,4,6-Tribromophenol	65.6			32-115	%REC	1	11/18/13 15:43
Surr: 2-Fluorobiphenyl	64.8			32-100	%REC	1	11/18/13 15:43
Surr: 2-Fluorophenol	34.4			22-59	%REC	1	11/18/13 15:43
Surr: 4-Terphenyl-d14	80.1			23-112	%REC	1	11/18/13 15:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

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Sample ID: W-R2330009-111213-ACN-001
Collection Date: 11/12/13 09:50 AM

Work Order: 1311817
Lab ID: 1311817-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	67.8			31-93	%REC	1	11/18/13 15:43
Surr: Phenol-d6	21.1			13-36	%REC	1	11/18/13 15:43
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 04:56
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 04:56
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 04:56
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 04:56
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 04:56
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 04:56
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 04:56
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 04:56
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 04:56
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 04:56
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 04:56
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 04:56
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 04:56
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 04:56
2-Butanone	U		0.64	25	µg/L	1	11/23/13 04:56
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 04:56
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 04:56
Acetone	U		3.0	50	µg/L	1	11/23/13 04:56
Benzene	U		0.14	1.0	µg/L	1	11/23/13 04:56
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 04:56
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 04:56
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 04:56
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 04:56
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 04:56
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 04:56
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 04:56
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 04:56
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 04:56
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 04:56
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 04:56
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 04:56
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 04:56
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 04:56
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 04:56
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 04:56

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
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Sample ID: W-R2330009-111213-ACN-001
Collection Date: 11/12/13 09:50 AM

Work Order: 1311817
Lab ID: 1311817-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 04:56
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 04:56
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 04:56
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 04:56
Styrene	U		0.12	1.0	µg/L	1	11/23/13 04:56
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 04:56
Toluene	U		0.13	1.0	µg/L	1	11/23/13 04:56
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 04:56
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 04:56
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 04:56
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 04:56
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 04:56
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 04:56
Surr: 1,2-Dichloroethane-d4	108			70-120	%REC	1	11/23/13 04:56
Surr: 4-Bromofluorobenzene	93.2			75-120	%REC	1	11/23/13 04:56
Surr: Dibromofluoromethane	108			85-115	%REC	1	11/23/13 04:56
Surr: Toluene-d8	95.5			85-120	%REC	1	11/23/13 04:56
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 11/17/13		Analyst: JB
BatchID: 53386							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-002
Collection Date: 11/12/13 11:35 AM

Work Order: 1311817
Lab ID: 1311817-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470		Prep: SW7470 / 11/20/13		Analyst: LR
<u>BatchID: 53488</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 18:58
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 11/19/13		Analyst: LR
<u>BatchID: 53454</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:08
METALS BY ICP-MS			SW6020A		Prep: SW3005A / 11/20/13		Analyst: CES
<u>BatchID: 53491</u>							
Aluminum	0.19		0.00078	0.050	mg/L	1	11/22/13 22:02
Antimony	0.00033	J	0.000036	0.0020	mg/L	1	11/22/13 22:02
Arsenic	0.0033	J	0.00058	0.0050	mg/L	1	11/22/13 22:02
Barium	0.26		0.000063	0.10	mg/L	1	11/22/13 22:02
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 22:02
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 22:02
Chromium	0.0011	J	0.00027	0.010	mg/L	1	11/22/13 22:02
Cobalt	0.0010	J	0.000041	0.020	mg/L	1	11/22/13 22:02
Copper	0.0021	J	0.00053	0.0040	mg/L	1	11/22/13 22:02
Iron	3.8		0.0053	0.20	mg/L	1	11/22/13 22:02
Lead	0.00030	J	0.000051	0.0030	mg/L	1	11/22/13 22:02
Manganese	0.038	J	0.000054	0.050	mg/L	1	11/22/13 22:02
Nickel	0.0064	J	0.00025	0.020	mg/L	1	11/22/13 22:02
Selenium	0.0056		0.00064	0.0050	mg/L	1	11/22/13 22:02
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 22:02
Thallium	U		0.000062	0.0020	mg/L	1	11/22/13 22:02
Vanadium	0.00088	J	0.00016	0.0040	mg/L	1	11/22/13 22:02
Zinc	0.0043	J	0.00048	0.050	mg/L	1	11/22/13 22:02
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 11/20/13		Analyst: CES
<u>BatchID: 53491</u>							
Aluminum	0.0041	J	0.00078	0.050	mg/L	1	11/22/13 22:08
Antimony	0.00031	J	0.000036	0.0020	mg/L	1	11/22/13 22:08
Arsenic	0.0037	J	0.00058	0.0050	mg/L	1	11/22/13 22:08
Barium	0.30		0.000063	0.10	mg/L	1	11/22/13 22:08
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 22:08
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 22:08
Chromium	0.00046	J	0.00027	0.010	mg/L	1	11/22/13 22:08
Cobalt	0.0013	J	0.000041	0.020	mg/L	1	11/22/13 22:08
Copper	0.0013	J	0.00053	0.0040	mg/L	1	11/22/13 22:08
Iron	3.9		0.0053	0.20	mg/L	1	11/22/13 22:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-002
Collection Date: 11/12/13 11:35 AM

Work Order: 1311817
Lab ID: 1311817-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	11/22/13 22:08
Manganese	0.036	J	0.000054	0.050	mg/L	1	11/22/13 22:08
Nickel	0.0066	J	0.00025	0.020	mg/L	1	11/22/13 22:08
Selenium	0.0050	J	0.00064	0.0050	mg/L	1	11/22/13 22:08
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 22:08
Thallium	U		0.000062	0.0020	mg/L	1	11/22/13 22:08
Vanadium	0.00032	J	0.00016	0.0040	mg/L	1	11/22/13 22:08
Zinc	0.0026	J	0.00048	0.050	mg/L	1	11/22/13 22:08

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 11/18/13

Analyst: HL

BatchID: 53387

1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 18:22
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 18:22
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 18:22
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 18:22
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 18:22
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 18:22
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 18:22
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 18:22
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 18:22
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 18:22
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 18:22
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 18:22
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 18:22
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 18:22
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 18:22
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 18:22
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 18:22
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 18:22
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 18:22
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 18:22
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 18:22
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 18:22
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 18:22
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 18:22
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 18:22
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 18:22
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 18:22
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 18:22
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 18:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-002
Collection Date: 11/12/13 11:35 AM

Work Order: 1311817
Lab ID: 1311817-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 18:22
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 18:22
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 18:22
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 18:22
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 18:22
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 18:22
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 18:22
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 18:22
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 18:22
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/18/13 18:22
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 18:22
Caprolactam	U		4.7	10	µg/L	1	11/18/13 18:22
Carbazole	U		0.16	10	µg/L	1	11/18/13 18:22
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 18:22
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 18:22
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 18:22
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 18:22
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 18:22
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 18:22
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 18:22
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 18:22
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 18:22
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 18:22
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 18:22
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 18:22
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 18:22
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 18:22
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 18:22
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 18:22
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 18:22
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 18:22
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 18:22
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 18:22
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 18:22
Phenol	U		0.32	5.0	µg/L	1	11/18/13 18:22
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 18:22
Surr: 2,4,6-Tribromophenol	79.4			32-115	%REC	1	11/18/13 18:22
Surr: 2-Fluorobiphenyl	67.3			32-100	%REC	1	11/18/13 18:22
Surr: 2-Fluorophenol	32.9			22-59	%REC	1	11/18/13 18:22
Surr: 4-Terphenyl-d14	58.5			23-112	%REC	1	11/18/13 18:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-002
Collection Date: 11/12/13 11:35 AM

Work Order: 1311817
Lab ID: 1311817-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	73.3			31-93	%REC	1	11/18/13 18:22
Surr: Phenol-d6	21.6			13-36	%REC	1	11/18/13 18:22
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 05:20
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 05:20
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 05:20
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 05:20
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 05:20
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 05:20
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 05:20
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 05:20
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 05:20
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 05:20
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 05:20
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 05:20
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 05:20
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 05:20
2-Butanone	U		0.64	25	µg/L	1	11/23/13 05:20
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 05:20
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 05:20
Acetone	U		3.0	50	µg/L	1	11/23/13 05:20
Benzene	U		0.14	1.0	µg/L	1	11/23/13 05:20
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 05:20
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 05:20
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 05:20
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 05:20
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 05:20
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 05:20
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 05:20
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 05:20
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 05:20
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 05:20
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 05:20
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 05:20
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 05:20
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 05:20
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 05:20
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 05:20

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-002
Collection Date: 11/12/13 11:35 AM

Work Order: 1311817
Lab ID: 1311817-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 05:20
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 05:20
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 05:20
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 05:20
Styrene	U		0.12	1.0	µg/L	1	11/23/13 05:20
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 05:20
Toluene	U		0.13	1.0	µg/L	1	11/23/13 05:20
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 05:20
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 05:20
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 05:20
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 05:20
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 05:20
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 05:20
Surr: 1,2-Dichloroethane-d4	107			70-120	%REC	1	11/23/13 05:20
Surr: 4-Bromofluorobenzene	89.4			75-120	%REC	1	11/23/13 05:20
Surr: Dibromofluoromethane	108			85-115	%REC	1	11/23/13 05:20
Surr: Toluene-d8	96.6			85-120	%REC	1	11/23/13 05:20
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 11/17/13		Analyst: JB
BatchID: 53386							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-003
Collection Date: 11/12/13 01:05 PM

Work Order: 1311817
Lab ID: 1311817-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID:</u> 53488							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:00
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID:</u> 53454							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:10
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: CES
<u>BatchID:</u> 53491							
Aluminum	0.49		0.00078	0.050	mg/L	1	11/22/13 22:14
Antimony	0.00023	J	0.000036	0.0020	mg/L	1	11/22/13 22:14
Arsenic	0.0017	J	0.00058	0.0050	mg/L	1	11/22/13 22:14
Barium	0.46		0.000063	0.10	mg/L	1	11/22/13 22:14
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 22:14
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 22:14
Chromium	0.0029	J	0.00027	0.010	mg/L	1	11/22/13 22:14
Cobalt	0.0022	J	0.000041	0.020	mg/L	1	11/22/13 22:14
Copper	0.0014	J	0.00053	0.0040	mg/L	1	11/22/13 22:14
Iron	16		0.0053	0.20	mg/L	1	11/22/13 22:14
Lead	0.0012	J	0.000051	0.0030	mg/L	1	11/22/13 22:14
Manganese	0.096		0.000054	0.050	mg/L	1	11/22/13 22:14
Nickel	0.0084	J	0.00025	0.020	mg/L	1	11/22/13 22:14
Selenium	U		0.00064	0.0050	mg/L	1	11/22/13 22:14
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 22:14
Thallium	U		0.000062	0.0020	mg/L	1	11/22/13 22:14
Vanadium	0.0021	J	0.00016	0.0040	mg/L	1	11/22/13 22:14
Zinc	0.0075	J	0.00048	0.050	mg/L	1	11/22/13 22:14
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID:</u> 53491							
Aluminum	0.010	J	0.00078	0.050	mg/L	1	11/24/13 18:03
Antimony	0.00019	J	0.000036	0.0020	mg/L	1	11/24/13 18:03
Arsenic	0.0011	J	0.00058	0.0050	mg/L	1	11/24/13 18:03
Barium	0.46		0.000063	0.10	mg/L	1	11/24/13 18:03
Beryllium	U		0.000082	0.0010	mg/L	1	11/24/13 18:03
Cadmium	0.00034	J	0.000045	0.0010	mg/L	1	11/25/13 13:44
Chromium	0.00078	J	0.00027	0.010	mg/L	1	11/24/13 18:03
Cobalt	0.0020	J	0.000041	0.020	mg/L	1	11/24/13 18:03
Copper	0.00065	J	0.00053	0.0040	mg/L	1	11/24/13 18:03
Iron	15		0.0053	0.20	mg/L	1	11/24/13 18:03

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-003
Collection Date: 11/12/13 01:05 PM

Work Order: 1311817
Lab ID: 1311817-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	11/24/13 18:03
Manganese	0.070		0.000054	0.050	mg/L	1	11/24/13 18:03
Nickel	0.0047	J	0.00025	0.020	mg/L	1	11/24/13 18:03
Selenium	U		0.00064	0.0050	mg/L	1	11/24/13 18:03
Silver	U		0.000042	0.00020	mg/L	1	11/24/13 18:03
Thallium	U		0.000062	0.0020	mg/L	1	11/24/13 18:03
Vanadium	0.00094	J	0.00016	0.0040	mg/L	1	11/24/13 18:03
Zinc	0.0028	J	0.00048	0.050	mg/L	1	11/24/13 18:03

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 11/18/13

Analyst: HL

BatchID: 53387

1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 18:54
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 18:54
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 18:54
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 18:54
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 18:54
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 18:54
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 18:54
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 18:54
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 18:54
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 18:54
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 18:54
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 18:54
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 18:54
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 18:54
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 18:54
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 18:54
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 18:54
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 18:54
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 18:54
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 18:54
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 18:54
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 18:54
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 18:54
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 18:54
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 18:54
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 18:54
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 18:54
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 18:54
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 18:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-003
Collection Date: 11/12/13 01:05 PM

Work Order: 1311817
Lab ID: 1311817-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 18:54
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 18:54
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 18:54
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 18:54
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 18:54
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 18:54
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 18:54
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 18:54
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 18:54
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/18/13 18:54
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 18:54
Caprolactam	U		4.7	10	µg/L	1	11/18/13 18:54
Carbazole	U		0.16	10	µg/L	1	11/18/13 18:54
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 18:54
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 18:54
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 18:54
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 18:54
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 18:54
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 18:54
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 18:54
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 18:54
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 18:54
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 18:54
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 18:54
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 18:54
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 18:54
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 18:54
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 18:54
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 18:54
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 18:54
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 18:54
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 18:54
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 18:54
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 18:54
Phenol	U		0.32	5.0	µg/L	1	11/18/13 18:54
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 18:54
Surr: 2,4,6-Tribromophenol	84.2			32-115	%REC	1	11/18/13 18:54
Surr: 2-Fluorobiphenyl	71.0			32-100	%REC	1	11/18/13 18:54
Surr: 2-Fluorophenol	42.1			22-59	%REC	1	11/18/13 18:54
Surr: 4-Terphenyl-d14	74.3			23-112	%REC	1	11/18/13 18:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-003
Collection Date: 11/12/13 01:05 PM

Work Order: 1311817
Lab ID: 1311817-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	74.4			31-93	%REC	1	11/18/13 18:54
Surr: Phenol-d6	27.0			13-36	%REC	1	11/18/13 18:54
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 05:45
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 05:45
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 05:45
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 05:45
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 05:45
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 05:45
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 05:45
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 05:45
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 05:45
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 05:45
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 05:45
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 05:45
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 05:45
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 05:45
2-Butanone	U		0.64	25	µg/L	1	11/23/13 05:45
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 05:45
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 05:45
Acetone	U		3.0	50	µg/L	1	11/23/13 05:45
Benzene	U		0.14	1.0	µg/L	1	11/23/13 05:45
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 05:45
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 05:45
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 05:45
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 05:45
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 05:45
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 05:45
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 05:45
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 05:45
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 05:45
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 05:45
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 05:45
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 05:45
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 05:45
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 05:45
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 05:45
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 05:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-003
Collection Date: 11/12/13 01:05 PM

Work Order: 1311817
Lab ID: 1311817-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 05:45
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 05:45
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 05:45
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 05:45
Styrene	U		0.12	1.0	µg/L	1	11/23/13 05:45
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 05:45
Toluene	U		0.13	1.0	µg/L	1	11/23/13 05:45
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 05:45
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 05:45
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 05:45
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 05:45
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 05:45
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 05:45
Surr: 1,2-Dichloroethane-d4	108			70-120	%REC	1	11/23/13 05:45
Surr: 4-Bromofluorobenzene	91.3			75-120	%REC	1	11/23/13 05:45
Surr: Dibromofluoromethane	107			85-115	%REC	1	11/23/13 05:45
Surr: Toluene-d8	98.1			85-120	%REC	1	11/23/13 05:45
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 11/17/13		Analyst: JB
BatchID: 53386							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-004
Collection Date: 11/12/13 02:45 PM

Work Order: 1311817
Lab ID: 1311817-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID: 53488</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:09
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID: 53454</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:12
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID: 53491</u>							
Aluminum	0.42		0.0016	0.10	mg/L	2	11/25/13 16:43
Antimony	0.00026	J	0.000072	0.0040	mg/L	2	11/24/13 18:09
Arsenic	0.040		0.0012	0.010	mg/L	2	11/24/13 18:09
Barium	1.4		0.00013	0.20	mg/L	2	11/24/13 18:09
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 18:09
Cadmium	0.00098	J	0.000090	0.0020	mg/L	2	11/25/13 13:50
Chromium	0.0026	J	0.00054	0.020	mg/L	2	11/24/13 18:09
Cobalt	0.0026	J	0.000082	0.040	mg/L	2	11/24/13 18:09
Copper	0.0035	J	0.0011	0.0080	mg/L	2	11/24/13 18:09
Iron	6.5		0.011	0.40	mg/L	2	11/24/13 18:09
Lead	0.0049	J	0.00010	0.0060	mg/L	2	11/24/13 18:09
Manganese	0.081	J	0.00011	0.10	mg/L	2	11/24/13 18:09
Nickel	0.0063	J	0.00051	0.040	mg/L	2	11/24/13 18:09
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 18:09
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 18:09
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 18:09
Vanadium	0.0025	J	0.00033	0.0080	mg/L	2	11/24/13 18:09
Zinc	0.011	J	0.00096	0.10	mg/L	2	11/24/13 18:09
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID: 53491</u>							
Aluminum	0.013	J	0.0016	0.10	mg/L	2	11/24/13 18:14
Antimony	0.00020	J	0.000072	0.0040	mg/L	2	11/24/13 18:14
Arsenic	0.038		0.0012	0.010	mg/L	2	11/24/13 18:14
Barium	1.3		0.00013	0.20	mg/L	2	11/24/13 18:14
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 18:14
Cadmium	0.00057	J	0.000090	0.0020	mg/L	2	11/25/13 13:56
Chromium	0.0029	J	0.00054	0.020	mg/L	2	11/24/13 18:14
Cobalt	0.0026	J	0.000082	0.040	mg/L	2	11/24/13 18:14
Copper	U		0.0011	0.0080	mg/L	2	11/24/13 18:14
Iron	5.9		0.011	0.40	mg/L	2	11/24/13 18:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-004
Collection Date: 11/12/13 02:45 PM

Work Order: 1311817
Lab ID: 1311817-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.00010	0.0060	mg/L	2	11/24/13 18:14
Manganese	0.071	J	0.00011	0.10	mg/L	2	11/24/13 18:14
Nickel	0.0059	J	0.00051	0.040	mg/L	2	11/24/13 18:14
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 18:14
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 18:14
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 18:14
Vanadium	0.0013	J	0.00033	0.0080	mg/L	2	11/24/13 18:14
Zinc	0.0024	J	0.00096	0.10	mg/L	2	11/24/13 18:14
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 11/18/13		Analyst: HL	
<u>BatchID: 53387</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 19:26
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 19:26
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 19:26
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 19:26
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 19:26
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 19:26
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 19:26
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 19:26
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 19:26
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 19:26
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 19:26
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 19:26
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 19:26
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 19:26
3,3' -Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 19:26
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 19:26
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 19:26
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 19:26
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 19:26
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 19:26
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 19:26
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 19:26
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 19:26
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 19:26
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 19:26
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 19:26
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 19:26
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 19:26
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 19:26

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-004
Collection Date: 11/12/13 02:45 PM

Work Order: 1311817
Lab ID: 1311817-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 19:26
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 19:26
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 19:26
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 19:26
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 19:26
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 19:26
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 19:26
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 19:26
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 19:26
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/18/13 19:26
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 19:26
Caprolactam	U		4.7	10	µg/L	1	11/18/13 19:26
Carbazole	U		0.16	10	µg/L	1	11/18/13 19:26
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 19:26
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 19:26
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 19:26
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 19:26
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 19:26
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 19:26
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 19:26
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 19:26
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 19:26
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 19:26
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 19:26
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 19:26
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 19:26
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 19:26
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 19:26
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 19:26
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 19:26
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 19:26
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 19:26
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 19:26
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 19:26
Phenol	U		0.32	5.0	µg/L	1	11/18/13 19:26
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 19:26
Surr: 2,4,6-Tribromophenol	83.9			32-115	%REC	1	11/18/13 19:26
Surr: 2-Fluorobiphenyl	65.7			32-100	%REC	1	11/18/13 19:26
Surr: 2-Fluorophenol	39.8			22-59	%REC	1	11/18/13 19:26
Surr: 4-Terphenyl-d14	72.9			23-112	%REC	1	11/18/13 19:26

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-004
Collection Date: 11/12/13 02:45 PM

Work Order: 1311817
Lab ID: 1311817-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	68.8			31-93	%REC	1	11/18/13 19:26
Surr: Phenol-d6	26.1			13-36	%REC	1	11/18/13 19:26
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:09
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 06:09
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:09
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 06:09
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 06:09
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 06:09
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 06:09
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 06:09
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 06:09
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 06:09
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:09
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 06:09
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 06:09
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 06:09
2-Butanone	U		0.64	25	µg/L	1	11/23/13 06:09
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 06:09
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 06:09
Acetone	15	J	3.0	50	µg/L	1	11/23/13 06:09
Benzene	U		0.14	1.0	µg/L	1	11/23/13 06:09
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 06:09
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 06:09
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 06:09
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 06:09
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 06:09
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 06:09
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 06:09
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 06:09
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 06:09
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 06:09
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 06:09
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 06:09
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 06:09
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 06:09
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 06:09
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 06:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-004
Collection Date: 11/12/13 02:45 PM

Work Order: 1311817
Lab ID: 1311817-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 06:09
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 06:09
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 06:09
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 06:09
Styrene	U		0.12	1.0	µg/L	1	11/23/13 06:09
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 06:09
Toluene	U		0.13	1.0	µg/L	1	11/23/13 06:09
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 06:09
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 06:09
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 06:09
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 06:09
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 06:09
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 06:09
Surr: 1,2-Dichloroethane-d4	108			70-120	%REC	1	11/23/13 06:09
Surr: 4-Bromofluorobenzene	91.5			75-120	%REC	1	11/23/13 06:09
Surr: Dibromofluoromethane	98.4			85-115	%REC	1	11/23/13 06:09
Surr: Toluene-d8	96.2			85-120	%REC	1	11/23/13 06:09
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 11/17/13	Analyst: JB
BatchID: 53386							
Cyanide, Amenable	0.0016	J	0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-005
Collection Date: 11/12/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID:</u> 53488							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:11
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID:</u> 53454							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:20
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID:</u> 53491							
Aluminum	0.098	J	0.0016	0.10	mg/L	2	11/25/13 14:01
Antimony	0.00012	J	0.000072	0.0040	mg/L	2	11/24/13 18:20
Arsenic	0.0037	J	0.0012	0.010	mg/L	2	11/24/13 18:20
Barium	0.42		0.00013	0.20	mg/L	2	11/24/13 18:20
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 18:20
Cadmium	0.00050	J	0.000090	0.0020	mg/L	2	11/25/13 14:01
Chromium	0.0013	J	0.00054	0.020	mg/L	2	11/24/13 18:20
Cobalt	0.0016	J	0.000082	0.040	mg/L	2	11/24/13 18:20
Copper	0.0016	J	0.0011	0.0080	mg/L	2	11/24/13 18:20
Iron	7.7		0.011	0.40	mg/L	2	11/24/13 18:20
Lead	0.00034	J	0.00010	0.0060	mg/L	2	11/24/13 18:20
Manganese	0.20		0.00011	0.10	mg/L	2	11/24/13 18:20
Nickel	0.0076	J	0.00051	0.040	mg/L	2	11/24/13 18:20
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 18:20
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 18:20
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 18:20
Vanadium	0.0015	J	0.00033	0.0080	mg/L	2	11/24/13 18:20
Zinc	0.0032	J	0.00096	0.10	mg/L	2	11/24/13 18:20
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID:</u> 53491							
Aluminum	0.0084	J	0.0016	0.10	mg/L	2	11/24/13 18:26
Antimony	0.00013	J	0.000072	0.0040	mg/L	2	11/24/13 18:26
Arsenic	0.0036	J	0.0012	0.010	mg/L	2	11/24/13 18:26
Barium	0.44		0.00013	0.20	mg/L	2	11/24/13 18:26
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 18:26
Cadmium	0.00049	J	0.000090	0.0020	mg/L	2	11/25/13 14:12
Chromium	0.0020	J	0.00054	0.020	mg/L	2	11/24/13 18:26
Cobalt	0.0018	J	0.000082	0.040	mg/L	2	11/24/13 18:26
Copper	0.0015	J	0.0011	0.0080	mg/L	2	11/24/13 18:26
Iron	7.5		0.011	0.40	mg/L	2	11/24/13 18:26

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-005
Collection Date: 11/12/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.00010	0.0060	mg/L	2	11/24/13 18:26
Manganese	0.21		0.00011	0.10	mg/L	2	11/24/13 18:26
Nickel	0.0079	J	0.00051	0.040	mg/L	2	11/24/13 18:26
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 18:26
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 18:26
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 18:26
Vanadium	0.00089	J	0.00033	0.0080	mg/L	2	11/24/13 18:26
Zinc	0.0024	J	0.00096	0.10	mg/L	2	11/24/13 18:26

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 11/18/13

Analyst: HL

BatchID: 53387

1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 19:58
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 19:58
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 19:58
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 19:58
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 19:58
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 19:58
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 19:58
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 19:58
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 19:58
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 19:58
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 19:58
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 19:58
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 19:58
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 19:58
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 19:58
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 19:58
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 19:58
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 19:58
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 19:58
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 19:58
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 19:58
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 19:58
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 19:58
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 19:58
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 19:58
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 19:58
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 19:58
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 19:58
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 19:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-005
Collection Date: 11/12/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 19:58
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 19:58
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 19:58
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 19:58
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 19:58
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 19:58
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 19:58
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 19:58
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 19:58
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/18/13 19:58
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 19:58
Caprolactam	U		4.7	10	µg/L	1	11/18/13 19:58
Carbazole	U		0.16	10	µg/L	1	11/18/13 19:58
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 19:58
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 19:58
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 19:58
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 19:58
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 19:58
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 19:58
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 19:58
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 19:58
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 19:58
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 19:58
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 19:58
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 19:58
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 19:58
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 19:58
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 19:58
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 19:58
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 19:58
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 19:58
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 19:58
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 19:58
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 19:58
Phenol	U		0.32	5.0	µg/L	1	11/18/13 19:58
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 19:58
Surr: 2,4,6-Tribromophenol	77.9			32-115	%REC	1	11/18/13 19:58
Surr: 2-Fluorobiphenyl	68.7			32-100	%REC	1	11/18/13 19:58
Surr: 2-Fluorophenol	32.9			22-59	%REC	1	11/18/13 19:58
Surr: 4-Terphenyl-d14	57.0			23-112	%REC	1	11/18/13 19:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-005
Collection Date: 11/12/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	71.4			31-93	%REC	1	11/18/13 19:58
Surr: Phenol-d6	21.5			13-36	%REC	1	11/18/13 19:58
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:33
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 06:33
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:33
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 06:33
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 06:33
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 06:33
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 06:33
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 06:33
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 06:33
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 06:33
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:33
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 06:33
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 06:33
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 06:33
2-Butanone	U		0.64	25	µg/L	1	11/23/13 06:33
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 06:33
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 06:33
Acetone	U		3.0	50	µg/L	1	11/23/13 06:33
Benzene	U		0.14	1.0	µg/L	1	11/23/13 06:33
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 06:33
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 06:33
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 06:33
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 06:33
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 06:33
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 06:33
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 06:33
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 06:33
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 06:33
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 06:33
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 06:33
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 06:33
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 06:33
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 06:33
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 06:33
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 06:33

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111213-ACN-005
Collection Date: 11/12/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 06:33
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 06:33
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 06:33
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 06:33
Styrene	U		0.12	1.0	µg/L	1	11/23/13 06:33
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 06:33
Toluene	U		0.13	1.0	µg/L	1	11/23/13 06:33
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 06:33
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 06:33
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 06:33
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 06:33
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 06:33
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 06:33
Surr: 1,2-Dichloroethane-d4	114			70-120	%REC	1	11/23/13 06:33
Surr: 4-Bromofluorobenzene	95.5			75-120	%REC	1	11/23/13 06:33
Surr: Dibromofluoromethane	118	S		85-115	%REC	1	11/23/13 06:33
Surr: Toluene-d8	90.7			85-120	%REC	1	11/23/13 06:33
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 11/17/13	Analyst: JB
BatchID: 53386							
Cyanide, Amenable	0.0015	J	0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-006
Collection Date: 11/13/13 09:40 AM

Work Order: 1311817
Lab ID: 1311817-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470				
<u>BatchID:</u> 53488							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:13
MERCURY BY CVAA (DISSOLVED)							
			SW7470				
<u>BatchID:</u> 53454							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:22
METALS BY ICP-MS							
			SW6020A				
<u>BatchID:</u> 53491							
Aluminum	0.021	J	0.0016	0.10	mg/L	2	11/24/13 18:31
Antimony	0.00058	J	0.000072	0.0040	mg/L	2	11/24/13 18:31
Arsenic	0.0070	J	0.0012	0.010	mg/L	2	11/24/13 18:31
Barium	0.37		0.00013	0.20	mg/L	2	11/24/13 18:31
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 18:31
Cadmium	0.0012	J	0.000090	0.0020	mg/L	2	11/25/13 14:18
Chromium	0.0013	J	0.00054	0.020	mg/L	2	11/24/13 18:31
Cobalt	0.0036	J	0.000082	0.040	mg/L	2	11/24/13 18:31
Copper	0.0024	J	0.0011	0.0080	mg/L	2	11/24/13 18:31
Iron	5.7		0.011	0.40	mg/L	2	11/24/13 18:31
Lead	0.00031	J	0.00010	0.0060	mg/L	2	11/24/13 18:31
Manganese	0.49		0.00011	0.10	mg/L	2	11/24/13 18:31
Nickel	0.014	J	0.00051	0.040	mg/L	2	11/24/13 18:31
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 18:31
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 18:31
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 18:31
Vanadium	0.0022	J	0.00033	0.0080	mg/L	2	11/24/13 18:31
Zinc	0.022	J	0.00096	0.10	mg/L	2	11/24/13 18:31
METALS BY ICP-MS (DISSOLVED)							
			SW6020A				
<u>BatchID:</u> 53491							
Aluminum	0.0069	J	0.0016	0.10	mg/L	2	11/24/13 18:37
Antimony	0.00057	J	0.000072	0.0040	mg/L	2	11/24/13 18:37
Arsenic	0.0064	J	0.0012	0.010	mg/L	2	11/24/13 18:37
Barium	0.38		0.00013	0.20	mg/L	2	11/24/13 18:37
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 18:37
Cadmium	0.00092	J	0.000090	0.0020	mg/L	2	11/25/13 14:23
Chromium	0.0013	J	0.00054	0.020	mg/L	2	11/24/13 18:37
Cobalt	0.0041	J	0.000082	0.040	mg/L	2	11/24/13 18:37
Copper	0.0015	J	0.0011	0.0080	mg/L	2	11/24/13 18:37
Iron	5.6		0.011	0.40	mg/L	2	11/24/13 18:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-006
Collection Date: 11/13/13 09:40 AM

Work Order: 1311817
Lab ID: 1311817-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.00010	0.0060	mg/L	2	11/24/13 18:37
Manganese	0.48		0.00011	0.10	mg/L	2	11/24/13 18:37
Nickel	0.014	J	0.00051	0.040	mg/L	2	11/24/13 18:37
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 18:37
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 18:37
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 18:37
Vanadium	0.0023	J	0.00033	0.0080	mg/L	2	11/24/13 18:37
Zinc	0.0066	J	0.00096	0.10	mg/L	2	11/24/13 18:37

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 11/18/13

Analyst: HL

BatchID: 53387

1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 20:30
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 20:30
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 20:30
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 20:30
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 20:30
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 20:30
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 20:30
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 20:30
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 20:30
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 20:30
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 20:30
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 20:30
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 20:30
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 20:30
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 20:30
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 20:30
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 20:30
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 20:30
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 20:30
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 20:30
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 20:30
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 20:30
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 20:30
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 20:30
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 20:30
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 20:30
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 20:30
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 20:30
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 20:30

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-006
Collection Date: 11/13/13 09:40 AM

Work Order: 1311817
Lab ID: 1311817-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 20:30
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 20:30
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 20:30
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 20:30
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 20:30
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 20:30
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 20:30
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 20:30
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 20:30
Bis(2-ethylhexyl)phthalate	0.18	J	0.15	5.0	µg/L	1	11/18/13 20:30
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 20:30
Caprolactam	U		4.7	10	µg/L	1	11/18/13 20:30
Carbazole	U		0.16	10	µg/L	1	11/18/13 20:30
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 20:30
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 20:30
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 20:30
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 20:30
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 20:30
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 20:30
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 20:30
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 20:30
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 20:30
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 20:30
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 20:30
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 20:30
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 20:30
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 20:30
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 20:30
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 20:30
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 20:30
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 20:30
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 20:30
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 20:30
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 20:30
Phenol	U		0.32	5.0	µg/L	1	11/18/13 20:30
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 20:30
Surr: 2,4,6-Tribromophenol	81.4			32-115	%REC	1	11/18/13 20:30
Surr: 2-Fluorobiphenyl	42.9			32-100	%REC	1	11/18/13 20:30
Surr: 2-Fluorophenol	36.4			22-59	%REC	1	11/18/13 20:30
Surr: 4-Terphenyl-d14	73.6			23-112	%REC	1	11/18/13 20:30

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-006
Collection Date: 11/13/13 09:40 AM

Work Order: 1311817
Lab ID: 1311817-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	63.9			31-93	%REC	1	11/18/13 20:30
Surr: Phenol-d6	23.9			13-36	%REC	1	11/18/13 20:30
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:57
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 06:57
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:57
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 06:57
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 06:57
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 06:57
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 06:57
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 06:57
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 06:57
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 06:57
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 06:57
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 06:57
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 06:57
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 06:57
2-Butanone	U		0.64	25	µg/L	1	11/23/13 06:57
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 06:57
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 06:57
Acetone	12	J	3.0	50	µg/L	1	11/23/13 06:57
Benzene	U		0.14	1.0	µg/L	1	11/23/13 06:57
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 06:57
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 06:57
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 06:57
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 06:57
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 06:57
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 06:57
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 06:57
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 06:57
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 06:57
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 06:57
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 06:57
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 06:57
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 06:57
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 06:57
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 06:57
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 06:57

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-006
Collection Date: 11/13/13 09:40 AM

Work Order: 1311817
Lab ID: 1311817-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 06:57
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 06:57
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 06:57
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 06:57
Styrene	U		0.12	1.0	µg/L	1	11/23/13 06:57
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 06:57
Toluene	U		0.13	1.0	µg/L	1	11/23/13 06:57
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 06:57
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 06:57
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 06:57
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 06:57
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 06:57
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 06:57
Surr: 1,2-Dichloroethane-d4	112			70-120	%REC	1	11/23/13 06:57
Surr: 4-Bromofluorobenzene	93.1			75-120	%REC	1	11/23/13 06:57
Surr: Dibromofluoromethane	112			85-115	%REC	1	11/23/13 06:57
Surr: Toluene-d8	95.6			85-120	%REC	1	11/23/13 06:57
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 11/17/13	Analyst: JB
BatchID: 53386							
Cyanide, Amenable	0.0037	J	0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-007
Collection Date: 11/13/13 11:05 AM

Work Order: 1311817
Lab ID: 1311817-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID: 53488</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:15
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID: 53454</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:24
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID: 53491</u>							
Aluminum	0.089		0.00078	0.050	mg/L	1	11/24/13 20:12
Antimony	0.00016	J	0.000036	0.0020	mg/L	1	11/24/13 20:12
Arsenic	0.00079	J	0.00058	0.0050	mg/L	1	11/24/13 20:12
Barium	1.6		0.000063	0.10	mg/L	1	11/24/13 20:12
Beryllium	U		0.000082	0.0010	mg/L	1	11/24/13 20:12
Cadmium	0.00033	J	0.000045	0.0010	mg/L	1	11/24/13 20:12
Chromium	0.0010	J	0.00027	0.010	mg/L	1	11/24/13 20:12
Cobalt	0.0015	J	0.000041	0.020	mg/L	1	11/24/13 20:12
Copper	0.0015	J	0.00053	0.0040	mg/L	1	11/24/13 20:12
Iron	12		0.0053	0.20	mg/L	1	11/24/13 20:12
Lead	0.00026	J	0.000051	0.0030	mg/L	1	11/24/13 20:12
Manganese	0.21		0.000054	0.050	mg/L	1	11/24/13 20:12
Nickel	0.0045	J	0.00025	0.020	mg/L	1	11/24/13 20:12
Selenium	U		0.00064	0.0050	mg/L	1	11/24/13 20:12
Silver	U		0.000042	0.00020	mg/L	1	11/24/13 20:12
Thallium	0.00012	J	0.000062	0.0020	mg/L	1	11/24/13 20:12
Vanadium	0.0013	J	0.00016	0.0040	mg/L	1	11/24/13 20:12
Zinc	0.0034	J	0.00048	0.050	mg/L	1	11/24/13 20:12
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID: 53491</u>							
Aluminum	0.0069	J	0.00078	0.050	mg/L	1	11/24/13 20:18
Antimony	0.00016	J	0.000036	0.0020	mg/L	1	11/24/13 20:18
Arsenic	0.00085	J	0.00058	0.0050	mg/L	1	11/24/13 20:18
Barium	1.5		0.000063	0.10	mg/L	1	11/24/13 20:18
Beryllium	U		0.000082	0.0010	mg/L	1	11/24/13 20:18
Cadmium	0.00068	J	0.000045	0.0010	mg/L	1	11/24/13 20:18
Chromium	0.00099	J	0.00027	0.010	mg/L	1	11/24/13 20:18
Cobalt	0.0019	J	0.000041	0.020	mg/L	1	11/24/13 20:18
Copper	0.0013	J	0.00053	0.0040	mg/L	1	11/24/13 20:18
Iron	12		0.0053	0.20	mg/L	1	11/24/13 20:18

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-007
Collection Date: 11/13/13 11:05 AM

Work Order: 1311817
Lab ID: 1311817-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	11/24/13 20:18
Manganese	0.19		0.000054	0.050	mg/L	1	11/24/13 20:18
Nickel	0.0047	J	0.00025	0.020	mg/L	1	11/24/13 20:18
Selenium	U		0.00064	0.0050	mg/L	1	11/24/13 20:18
Silver	U		0.000042	0.00020	mg/L	1	11/24/13 20:18
Thallium	U		0.000062	0.0020	mg/L	1	11/24/13 20:18
Vanadium	0.00097	J	0.00016	0.0040	mg/L	1	11/24/13 20:18
Zinc	0.0022	J	0.00048	0.050	mg/L	1	11/24/13 20:18
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 11/18/13		Analyst: HL	
<u>BatchID: 53387</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 21:02
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 21:02
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 21:02
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 21:02
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 21:02
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 21:02
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 21:02
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 21:02
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 21:02
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 21:02
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 21:02
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 21:02
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 21:02
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 21:02
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 21:02
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 21:02
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 21:02
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 21:02
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 21:02
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 21:02
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 21:02
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 21:02
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 21:02
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 21:02
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 21:02
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 21:02
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 21:02
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 21:02
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 21:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-007
Collection Date: 11/13/13 11:05 AM

Work Order: 1311817
Lab ID: 1311817-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 21:02
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 21:02
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 21:02
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 21:02
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 21:02
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 21:02
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 21:02
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 21:02
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 21:02
Bis(2-ethylhexyl)phthalate	0.24	J	0.15	5.0	µg/L	1	11/18/13 21:02
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 21:02
Caprolactam	U		4.7	10	µg/L	1	11/18/13 21:02
Carbazole	U		0.16	10	µg/L	1	11/18/13 21:02
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 21:02
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 21:02
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 21:02
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 21:02
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 21:02
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 21:02
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 21:02
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 21:02
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 21:02
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 21:02
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 21:02
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 21:02
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 21:02
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 21:02
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 21:02
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 21:02
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 21:02
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 21:02
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 21:02
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 21:02
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 21:02
Phenol	U		0.32	5.0	µg/L	1	11/18/13 21:02
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 21:02
Surr: 2,4,6-Tribromophenol	83.8			32-115	%REC	1	11/18/13 21:02
Surr: 2-Fluorobiphenyl	71.9			32-100	%REC	1	11/18/13 21:02
Surr: 2-Fluorophenol	40.1			22-59	%REC	1	11/18/13 21:02
Surr: 4-Terphenyl-d14	70.7			23-112	%REC	1	11/18/13 21:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-007
Collection Date: 11/13/13 11:05 AM

Work Order: 1311817
Lab ID: 1311817-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	73.5			31-93	%REC	1	11/18/13 21:02
Surr: Phenol-d6	24.9			13-36	%REC	1	11/18/13 21:02
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 07:21
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 07:21
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 07:21
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 07:21
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 07:21
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 07:21
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 07:21
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 07:21
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 07:21
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 07:21
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 07:21
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 07:21
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 07:21
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 07:21
2-Butanone	U		0.64	25	µg/L	1	11/23/13 07:21
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 07:21
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 07:21
Acetone	U		3.0	50	µg/L	1	11/23/13 07:21
Benzene	U		0.14	1.0	µg/L	1	11/23/13 07:21
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 07:21
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 07:21
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 07:21
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 07:21
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 07:21
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 07:21
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 07:21
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 07:21
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 07:21
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 07:21
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 07:21
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 07:21
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 07:21
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 07:21
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 07:21
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 07:21

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-007
Collection Date: 11/13/13 11:05 AM

Work Order: 1311817
Lab ID: 1311817-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 07:21
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 07:21
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 07:21
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 07:21
Styrene	U		0.12	1.0	µg/L	1	11/23/13 07:21
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 07:21
Toluene	U		0.13	1.0	µg/L	1	11/23/13 07:21
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 07:21
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 07:21
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 07:21
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 07:21
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 07:21
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 07:21
Surr: 1,2-Dichloroethane-d4	114			70-120	%REC	1	11/23/13 07:21
Surr: 4-Bromofluorobenzene	91.6			75-120	%REC	1	11/23/13 07:21
Surr: Dibromofluoromethane	112			85-115	%REC	1	11/23/13 07:21
Surr: Toluene-d8	97.3			85-120	%REC	1	11/23/13 07:21
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 11/17/13		Analyst: JB
BatchID: 53386							
Cyanide, Amenable	0.0012	J	0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-008
Collection Date: 11/13/13 12:25 PM

Work Order: 1311817
Lab ID: 1311817-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID: 53488</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:17
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID: 53454</u>							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:30
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID: 53491</u>							
Aluminum	0.026	J	0.0016	0.10	mg/L	2	11/24/13 20:24
Antimony	0.00024	J	0.000072	0.0040	mg/L	2	11/24/13 20:24
Arsenic	0.010		0.0012	0.010	mg/L	2	11/24/13 20:24
Barium	1.9		0.00013	0.20	mg/L	2	11/24/13 20:24
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 20:24
Cadmium	0.0017	J	0.000090	0.0020	mg/L	2	11/24/13 20:24
Chromium	0.0037	J	0.00054	0.020	mg/L	2	11/24/13 20:24
Cobalt	0.0033	J	0.000082	0.040	mg/L	2	11/24/13 20:24
Copper	0.0018	J	0.0011	0.0080	mg/L	2	11/24/13 20:24
Iron	23		0.011	0.40	mg/L	2	11/24/13 20:24
Lead	0.0028	J	0.00010	0.0060	mg/L	2	11/24/13 20:24
Manganese	0.46		0.00011	0.10	mg/L	2	11/24/13 20:24
Nickel	0.0081	J	0.00051	0.040	mg/L	2	11/24/13 20:24
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 20:24
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 20:24
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 20:24
Vanadium	0.0030	J	0.00033	0.0080	mg/L	2	11/24/13 20:24
Zinc	0.0070	J	0.00096	0.10	mg/L	2	11/24/13 20:24
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID: 53491</u>							
Aluminum	0.012	J	0.0016	0.10	mg/L	2	11/24/13 20:29
Antimony	0.00023	J	0.000072	0.0040	mg/L	2	11/24/13 20:29
Arsenic	0.0097	J	0.0012	0.010	mg/L	2	11/24/13 20:29
Barium	1.9		0.00013	0.20	mg/L	2	11/24/13 20:29
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 20:29
Cadmium	0.0014	J	0.000090	0.0020	mg/L	2	11/24/13 20:29
Chromium	0.0027	J	0.00054	0.020	mg/L	2	11/24/13 20:29
Cobalt	0.0038	J	0.000082	0.040	mg/L	2	11/24/13 20:29
Copper	0.0011	J	0.0011	0.0080	mg/L	2	11/24/13 20:29
Iron	21		0.011	0.40	mg/L	2	11/24/13 20:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-008
Collection Date: 11/13/13 12:25 PM

Work Order: 1311817
Lab ID: 1311817-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.00016	J	0.00010	0.0060	mg/L	2	11/24/13 20:29
Manganese	0.48		0.00011	0.10	mg/L	2	11/24/13 20:29
Nickel	0.0081	J	0.00051	0.040	mg/L	2	11/24/13 20:29
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 20:29
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 20:29
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 20:29
Vanadium	0.0021	J	0.00033	0.0080	mg/L	2	11/24/13 20:29
Zinc	0.0034	J	0.00096	0.10	mg/L	2	11/24/13 20:29
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 11/18/13		Analyst: HL	
<u>BatchID: 53387</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 21:34
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 21:34
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 21:34
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 21:34
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 21:34
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 21:34
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 21:34
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 21:34
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 21:34
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 21:34
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 21:34
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 21:34
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 21:34
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 21:34
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 21:34
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 21:34
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 21:34
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 21:34
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 21:34
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 21:34
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 21:34
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 21:34
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 21:34
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 21:34
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 21:34
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 21:34
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 21:34
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 21:34
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 21:34

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-008
Collection Date: 11/13/13 12:25 PM

Work Order: 1311817
Lab ID: 1311817-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 21:34
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 21:34
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 21:34
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 21:34
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 21:34
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 21:34
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 21:34
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 21:34
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 21:34
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/18/13 21:34
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 21:34
Caprolactam	U		4.7	10	µg/L	1	11/18/13 21:34
Carbazole	0.28	J	0.16	10	µg/L	1	11/18/13 21:34
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 21:34
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 21:34
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 21:34
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 21:34
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 21:34
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 21:34
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 21:34
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 21:34
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 21:34
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 21:34
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 21:34
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 21:34
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 21:34
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 21:34
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 21:34
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 21:34
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 21:34
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 21:34
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 21:34
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 21:34
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 21:34
Phenol	U		0.32	5.0	µg/L	1	11/18/13 21:34
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 21:34
Surr: 2,4,6-Tribromophenol	87.6			32-115	%REC	1	11/18/13 21:34
Surr: 2-Fluorobiphenyl	72.1			32-100	%REC	1	11/18/13 21:34
Surr: 2-Fluorophenol	41.3			22-59	%REC	1	11/18/13 21:34
Surr: 4-Terphenyl-d14	75.4			23-112	%REC	1	11/18/13 21:34

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-008
Collection Date: 11/13/13 12:25 PM

Work Order: 1311817
Lab ID: 1311817-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	75.3			31-93	%REC	1	11/18/13 21:34
Surr: Phenol-d6	26.8			13-36	%REC	1	11/18/13 21:34
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 07:45
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 07:45
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 07:45
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 07:45
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 07:45
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 07:45
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 07:45
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 07:45
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 07:45
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 07:45
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 07:45
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 07:45
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 07:45
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 07:45
2-Butanone	U		0.64	25	µg/L	1	11/23/13 07:45
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 07:45
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 07:45
Acetone	16	J	3.0	50	µg/L	1	11/23/13 07:45
Benzene	13		0.14	1.0	µg/L	1	11/23/13 07:45
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 07:45
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 07:45
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 07:45
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 07:45
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 07:45
Chlorobenzene	36		0.12	1.0	µg/L	1	11/23/13 07:45
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 07:45
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 07:45
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 07:45
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 07:45
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 07:45
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 07:45
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 07:45
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 07:45
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 07:45
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 07:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-008
Collection Date: 11/13/13 12:25 PM

Work Order: 1311817
Lab ID: 1311817-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 07:45
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 07:45
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 07:45
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 07:45
Styrene	U		0.12	1.0	µg/L	1	11/23/13 07:45
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 07:45
Toluene	U		0.13	1.0	µg/L	1	11/23/13 07:45
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 07:45
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 07:45
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 07:45
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 07:45
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 07:45
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 07:45
Surr: 1,2-Dichloroethane-d4	109			70-120	%REC	1	11/23/13 07:45
Surr: 4-Bromofluorobenzene	93.2			75-120	%REC	1	11/23/13 07:45
Surr: Dibromofluoromethane	111			85-115	%REC	1	11/23/13 07:45
Surr: Toluene-d8	95.2			85-120	%REC	1	11/23/13 07:45
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 11/17/13	Analyst: JB
BatchID: 53386							
Cyanide, Amenable	0.0019	J	0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-009
Collection Date: 11/13/13 05:00 PM

Work Order: 1311817
Lab ID: 1311817-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID:</u> 53488							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:19
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID:</u> 53454							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:33
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID:</u> 53491							
Aluminum	0.026	J	0.0016	0.10	mg/L	2	11/24/13 20:35
Antimony	0.00023	J	0.000072	0.0040	mg/L	2	11/24/13 20:35
Arsenic	0.010		0.0012	0.010	mg/L	2	11/24/13 20:35
Barium	1.9		0.00013	0.20	mg/L	2	11/24/13 20:35
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 20:35
Cadmium	0.0017	J	0.000090	0.0020	mg/L	2	11/24/13 20:35
Chromium	0.0029	J	0.00054	0.020	mg/L	2	11/24/13 20:35
Cobalt	0.0034	J	0.000082	0.040	mg/L	2	11/24/13 20:35
Copper	0.0014	J	0.0011	0.0080	mg/L	2	11/24/13 20:35
Iron	23		0.011	0.40	mg/L	2	11/24/13 20:35
Lead	0.0028	J	0.00010	0.0060	mg/L	2	11/24/13 20:35
Manganese	0.45		0.00011	0.10	mg/L	2	11/24/13 20:35
Nickel	0.0080	J	0.00051	0.040	mg/L	2	11/24/13 20:35
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 20:35
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 20:35
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 20:35
Vanadium	0.0030	J	0.00033	0.0080	mg/L	2	11/24/13 20:35
Zinc	0.0038	J	0.00096	0.10	mg/L	2	11/24/13 20:35
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/20/13	Analyst: ML
<u>BatchID:</u> 53491							
Aluminum	0.0088	J	0.0016	0.10	mg/L	2	11/24/13 20:42
Antimony	0.00020	J	0.000072	0.0040	mg/L	2	11/24/13 20:42
Arsenic	0.0092	J	0.0012	0.010	mg/L	2	11/24/13 20:42
Barium	1.9		0.00013	0.20	mg/L	2	11/24/13 20:42
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 20:42
Cadmium	0.0017	J	0.000090	0.0020	mg/L	2	11/24/13 20:42
Chromium	0.0026	J	0.00054	0.020	mg/L	2	11/24/13 20:42
Cobalt	0.0034	J	0.000082	0.040	mg/L	2	11/24/13 20:42
Copper	0.0011	J	0.0011	0.0080	mg/L	2	11/24/13 20:42
Iron	21		0.011	0.40	mg/L	2	11/24/13 20:42

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-009
Collection Date: 11/13/13 05:00 PM

Work Order: 1311817
Lab ID: 1311817-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.00018	J	0.00010	0.0060	mg/L	2	11/24/13 20:42
Manganese	0.47		0.00011	0.10	mg/L	2	11/24/13 20:42
Nickel	0.0082	J	0.00051	0.040	mg/L	2	11/24/13 20:42
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 20:42
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 20:42
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 20:42
Vanadium	0.0023	J	0.00033	0.0080	mg/L	2	11/24/13 20:42
Zinc	0.0050	J	0.00096	0.10	mg/L	2	11/24/13 20:42

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 11/18/13

Analyst: HL

BatchID: 53387

1,1'-Biphenyl	U	0.095	10	µg/L	1	11/18/13 22:05
2,4,5-Trichlorophenol	U	0.25	5.0	µg/L	1	11/18/13 22:05
2,4,6-Trichlorophenol	U	0.27	4.0	µg/L	1	11/18/13 22:05
2,4-Dichlorophenol	U	0.22	10	µg/L	1	11/18/13 22:05
2,4-Dimethylphenol	U	1.8	5.0	µg/L	1	11/18/13 22:05
2,4-Dinitrophenol	U	0.67	25	µg/L	1	11/18/13 22:05
2,4-Dinitrotoluene	U	0.27	5.0	µg/L	1	11/18/13 22:05
2,6-Dinitrotoluene	U	0.23	5.0	µg/L	1	11/18/13 22:05
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	11/18/13 22:05
2-Chlorophenol	U	0.32	10	µg/L	1	11/18/13 22:05
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	11/18/13 22:05
2-Methylphenol	U	0.20	10	µg/L	1	11/18/13 22:05
2-Nitroaniline	U	0.34	25	µg/L	1	11/18/13 22:05
2-Nitrophenol	U	0.28	5.0	µg/L	1	11/18/13 22:05
3,3'-Dichlorobenzidine	U	3.9	1.0	µg/L	1	11/18/13 22:05
3-Nitroaniline	U	0.34	25	µg/L	1	11/18/13 22:05
4,6-Dinitro-2-methylphenol	U	1.2	20	µg/L	1	11/18/13 22:05
4-Bromophenyl phenyl ether	U	0.23	5.0	µg/L	1	11/18/13 22:05
4-Chloro-3-methylphenol	U	0.31	5.0	µg/L	1	11/18/13 22:05
4-Chloroaniline	U	0.32	10	µg/L	1	11/18/13 22:05
4-Chlorophenyl phenyl ether	U	0.23	5.0	µg/L	1	11/18/13 22:05
4-Methylphenol	U	0.20	10	µg/L	1	11/18/13 22:05
4-Nitroaniline	U	0.30	25	µg/L	1	11/18/13 22:05
4-Nitrophenol	U	0.51	25	µg/L	1	11/18/13 22:05
Acenaphthene	U	0.11	5.0	µg/L	1	11/18/13 22:05
Acenaphthylene	U	0.12	5.0	µg/L	1	11/18/13 22:05
Acetophenone	U	0.090	5.0	µg/L	1	11/18/13 22:05
Anthracene	U	0.72	5.0	µg/L	1	11/18/13 22:05
Atrazine	U	0.13	5.0	µg/L	1	11/18/13 22:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-009
Collection Date: 11/13/13 05:00 PM

Work Order: 1311817
Lab ID: 1311817-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 22:05
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 22:05
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 22:05
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 22:05
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 22:05
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 22:05
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 22:05
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 22:05
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 22:05
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/18/13 22:05
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 22:05
Caprolactam	U		4.7	10	µg/L	1	11/18/13 22:05
Carbazole	U		0.16	10	µg/L	1	11/18/13 22:05
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 22:05
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 22:05
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 22:05
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 22:05
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 22:05
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 22:05
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 22:05
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 22:05
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 22:05
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 22:05
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 22:05
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 22:05
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 22:05
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 22:05
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 22:05
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 22:05
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 22:05
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 22:05
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 22:05
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 22:05
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 22:05
Phenol	U		0.32	5.0	µg/L	1	11/18/13 22:05
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 22:05
Surr: 2,4,6-Tribromophenol	84.1			32-115	%REC	1	11/18/13 22:05
Surr: 2-Fluorobiphenyl	70.7			32-100	%REC	1	11/18/13 22:05
Surr: 2-Fluorophenol	40.2			22-59	%REC	1	11/18/13 22:05
Surr: 4-Terphenyl-d14	70.2			23-112	%REC	1	11/18/13 22:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-009
Collection Date: 11/13/13 05:00 PM

Work Order: 1311817
Lab ID: 1311817-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	73.7			31-93	%REC	1	11/18/13 22:05
Surr: Phenol-d6	25.8			13-36	%REC	1	11/18/13 22:05
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:09
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 08:09
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:09
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 08:09
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 08:09
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 08:09
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 08:09
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 08:09
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 08:09
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 08:09
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:09
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 08:09
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 08:09
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 08:09
2-Butanone	U		0.64	25	µg/L	1	11/23/13 08:09
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 08:09
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 08:09
Acetone	16	J	3.0	50	µg/L	1	11/23/13 08:09
Benzene	12		0.14	1.0	µg/L	1	11/23/13 08:09
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 08:09
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 08:09
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 08:09
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 08:09
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 08:09
Chlorobenzene	35		0.12	1.0	µg/L	1	11/23/13 08:09
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 08:09
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 08:09
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 08:09
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 08:09
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 08:09
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 08:09
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 08:09
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 08:09
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 08:09
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 08:09

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-009
Collection Date: 11/13/13 05:00 PM

Work Order: 1311817
Lab ID: 1311817-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 08:09
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 08:09
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 08:09
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 08:09
Styrene	U		0.12	1.0	µg/L	1	11/23/13 08:09
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 08:09
Toluene	U		0.13	1.0	µg/L	1	11/23/13 08:09
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 08:09
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 08:09
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 08:09
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 08:09
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 08:09
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 08:09
Surr: 1,2-Dichloroethane-d4	110			70-120	%REC	1	11/23/13 08:09
Surr: 4-Bromofluorobenzene	92.7			75-120	%REC	1	11/23/13 08:09
Surr: Dibromofluoromethane	112			85-115	%REC	1	11/23/13 08:09
Surr: Toluene-d8	94.6			85-120	%REC	1	11/23/13 08:09
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 11/17/13	Analyst: JB
BatchID: 53386							
Cyanide, Amenable	0.0023	J	0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-010
Collection Date: 11/13/13 01:10 PM

Work Order: 1311817
Lab ID: 1311817-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470				
<u>BatchID:</u> 53488							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:21
MERCURY BY CVAA (DISSOLVED)							
			SW7470				
<u>BatchID:</u> 53454							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:35
METALS BY ICP-MS							
			SW6020A				
<u>BatchID:</u> 53491							
Aluminum	0.0027	J	0.00078	0.050	mg/L	1	11/22/13 21:22
Antimony	U		0.000036	0.0020	mg/L	1	11/22/13 21:22
Arsenic	U		0.00058	0.0050	mg/L	1	11/22/13 21:22
Barium	0.00014	J	0.000063	0.10	mg/L	1	11/22/13 21:22
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 21:22
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 21:22
Chromium	0.0014	J	0.00027	0.010	mg/L	1	11/22/13 21:22
Cobalt	U		0.000041	0.020	mg/L	1	11/22/13 21:22
Copper	0.00066	J	0.00053	0.0040	mg/L	1	11/22/13 21:22
Iron	0.14	J	0.0053	0.20	mg/L	1	11/22/13 21:22
Lead	U		0.000051	0.0030	mg/L	1	11/22/13 21:22
Manganese	0.0024	J	0.000054	0.050	mg/L	1	11/22/13 21:22
Nickel	0.00085	J	0.00025	0.020	mg/L	1	11/22/13 21:22
Selenium	U		0.00064	0.0050	mg/L	1	11/22/13 21:22
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 21:22
Thallium	U		0.000062	0.0020	mg/L	1	11/22/13 21:22
Vanadium	U		0.00016	0.0040	mg/L	1	11/22/13 21:22
Zinc	0.018	J	0.00048	0.050	mg/L	1	11/22/13 21:22
METALS BY ICP-MS (DISSOLVED)							
			SW6020A				
<u>BatchID:</u> 53491							
Aluminum	0.0010	J	0.00078	0.050	mg/L	1	11/24/13 03:05
Antimony	U		0.000036	0.0020	mg/L	1	11/24/13 03:05
Arsenic	U		0.00058	0.0050	mg/L	1	11/24/13 03:05
Barium	0.000090	J	0.000063	0.10	mg/L	1	11/24/13 03:05
Beryllium	U		0.000082	0.0010	mg/L	1	11/24/13 03:05
Cadmium	0.00052	J	0.000045	0.0010	mg/L	1	11/24/13 20:47
Chromium	U		0.00027	0.010	mg/L	1	11/24/13 03:05
Cobalt	U		0.000041	0.020	mg/L	1	11/24/13 03:05
Copper	U		0.00053	0.0040	mg/L	1	11/24/13 20:47
Iron	0.011	J	0.0053	0.20	mg/L	1	11/24/13 03:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-010
Collection Date: 11/13/13 01:10 PM

Work Order: 1311817
Lab ID: 1311817-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	11/24/13 03:05
Manganese	0.00022	J	0.000054	0.050	mg/L	1	11/24/13 03:05
Nickel	U		0.00025	0.020	mg/L	1	11/24/13 03:05
Selenium	U		0.00064	0.0050	mg/L	1	11/24/13 03:05
Silver	U		0.000042	0.00020	mg/L	1	11/24/13 03:05
Thallium	0.000077	J	0.000062	0.0020	mg/L	1	11/24/13 03:05
Vanadium	U		0.00016	0.0040	mg/L	1	11/24/13 03:05
Zinc	0.0012	J	0.00048	0.050	mg/L	1	11/24/13 20:47

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 11/18/13

Analyst: HL

BatchID: 53387

1,1'-Biphenyl	U		0.095	10	µg/L	1	11/18/13 22:37
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/18/13 22:37
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/18/13 22:37
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/18/13 22:37
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/18/13 22:37
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/18/13 22:37
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/18/13 22:37
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/18/13 22:37
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/18/13 22:37
2-Chlorophenol	U		0.32	10	µg/L	1	11/18/13 22:37
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/18/13 22:37
2-Methylphenol	U		0.20	10	µg/L	1	11/18/13 22:37
2-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 22:37
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/18/13 22:37
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/18/13 22:37
3-Nitroaniline	U		0.34	25	µg/L	1	11/18/13 22:37
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/18/13 22:37
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 22:37
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/18/13 22:37
4-Chloroaniline	U		0.32	10	µg/L	1	11/18/13 22:37
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/18/13 22:37
4-Methylphenol	U		0.20	10	µg/L	1	11/18/13 22:37
4-Nitroaniline	U		0.30	25	µg/L	1	11/18/13 22:37
4-Nitrophenol	U		0.51	25	µg/L	1	11/18/13 22:37
Acenaphthene	U		0.11	5.0	µg/L	1	11/18/13 22:37
Acenaphthylene	U		0.12	5.0	µg/L	1	11/18/13 22:37
Acetophenone	U		0.090	5.0	µg/L	1	11/18/13 22:37
Anthracene	U		0.72	5.0	µg/L	1	11/18/13 22:37
Atrazine	U		0.13	5.0	µg/L	1	11/18/13 22:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-010
Collection Date: 11/13/13 01:10 PM

Work Order: 1311817
Lab ID: 1311817-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/18/13 22:37
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/18/13 22:37
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/18/13 22:37
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/18/13 22:37
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/18/13 22:37
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/18/13 22:37
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/18/13 22:37
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/18/13 22:37
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/18/13 22:37
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/18/13 22:37
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/18/13 22:37
Caprolactam	U		4.7	10	µg/L	1	11/18/13 22:37
Carbazole	U		0.16	10	µg/L	1	11/18/13 22:37
Chrysene	U		0.71	1.0	µg/L	1	11/18/13 22:37
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/18/13 22:37
Dibenzofuran	U		0.28	4.0	µg/L	1	11/18/13 22:37
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/18/13 22:37
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/18/13 22:37
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/18/13 22:37
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/18/13 22:37
Fluoranthene	U		0.77	1.0	µg/L	1	11/18/13 22:37
Fluorene	U		0.10	5.0	µg/L	1	11/18/13 22:37
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/18/13 22:37
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/18/13 22:37
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/18/13 22:37
Hexachloroethane	U		0.47	5.0	µg/L	1	11/18/13 22:37
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/18/13 22:37
Isophorone	U		0.30	5.0	µg/L	1	11/18/13 22:37
Naphthalene	U		0.12	5.0	µg/L	1	11/18/13 22:37
Nitrobenzene	U		0.33	3.0	µg/L	1	11/18/13 22:37
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/18/13 22:37
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/18/13 22:37
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/18/13 22:37
Phenanthrene	U		0.86	2.0	µg/L	1	11/18/13 22:37
Phenol	U		0.32	5.0	µg/L	1	11/18/13 22:37
Pyrene	U		0.65	5.0	µg/L	1	11/18/13 22:37
Surr: 2,4,6-Tribromophenol	61.9			32-115	%REC	1	11/18/13 22:37
Surr: 2-Fluorobiphenyl	61.7			32-100	%REC	1	11/18/13 22:37
Surr: 2-Fluorophenol	37.7			22-59	%REC	1	11/18/13 22:37
Surr: 4-Terphenyl-d14	82.9			23-112	%REC	1	11/18/13 22:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-010
Collection Date: 11/13/13 01:10 PM

Work Order: 1311817
Lab ID: 1311817-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	64.2			31-93	%REC	1	11/18/13 22:37
Surr: Phenol-d6	24.1			13-36	%REC	1	11/18/13 22:37
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:34
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 08:34
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:34
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 08:34
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 08:34
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 08:34
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 08:34
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 08:34
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 08:34
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 08:34
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:34
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 08:34
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 08:34
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 08:34
2-Butanone	U		0.64	25	µg/L	1	11/23/13 08:34
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 08:34
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 08:34
Acetone	U		3.0	50	µg/L	1	11/23/13 08:34
Benzene	U		0.14	1.0	µg/L	1	11/23/13 08:34
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 08:34
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 08:34
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 08:34
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 08:34
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 08:34
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 08:34
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 08:34
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 08:34
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 08:34
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 08:34
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 08:34
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 08:34
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 08:34
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 08:34
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 08:34
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 08:34

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-010
Collection Date: 11/13/13 01:10 PM

Work Order: 1311817
Lab ID: 1311817-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 08:34
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 08:34
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 08:34
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 08:34
Styrene	U		0.12	1.0	µg/L	1	11/23/13 08:34
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 08:34
Toluene	U		0.13	1.0	µg/L	1	11/23/13 08:34
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 08:34
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 08:34
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 08:34
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 08:34
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 08:34
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 08:34
Surr: 1,2-Dichloroethane-d4	113			70-120	%REC	1	11/23/13 08:34
Surr: 4-Bromofluorobenzene	92.2			75-120	%REC	1	11/23/13 08:34
Surr: Dibromofluoromethane	111			85-115	%REC	1	11/23/13 08:34
Surr: Toluene-d8	95.6			85-120	%REC	1	11/23/13 08:34
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 11/17/13	Analyst: JB
BatchID: 53386							
Cyanide, Amenable	0.011		0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-011
Collection Date: 11/13/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID:</u> 53488							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:23
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID:</u> 53454							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:37
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/21/13	Analyst: ML
<u>BatchID:</u> 53533							
Aluminum	0.20		0.0016	0.10	mg/L	2	11/24/13 16:52
Antimony	0.00016	J	0.000072	0.0040	mg/L	2	11/24/13 16:52
Arsenic	0.0054	J	0.0012	0.010	mg/L	2	11/24/13 16:52
Barium	0.52		0.00013	0.20	mg/L	2	11/24/13 16:52
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 16:52
Cadmium	0.00025	J	0.000090	0.0020	mg/L	2	11/25/13 13:33
Chromium	0.0018	J	0.00054	0.020	mg/L	2	11/24/13 16:52
Cobalt	0.0017	J	0.000082	0.040	mg/L	2	11/24/13 16:52
Copper	0.0014	J	0.0011	0.0080	mg/L	2	11/24/13 16:52
Iron	18		0.011	0.40	mg/L	2	11/24/13 16:52
Lead	0.00055	J	0.00010	0.0060	mg/L	2	11/24/13 16:52
Manganese	0.43		0.00011	0.10	mg/L	2	11/24/13 16:52
Nickel	0.0085	J	0.00051	0.040	mg/L	2	11/24/13 16:52
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 16:52
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 16:52
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 16:52
Vanadium	0.0016	J	0.00033	0.0080	mg/L	2	11/24/13 16:52
Zinc	0.0037	J	0.00096	0.10	mg/L	2	11/24/13 16:52
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/21/13	Analyst: ML
<u>BatchID:</u> 53533							
Aluminum	0.16		0.0016	0.10	mg/L	2	11/24/13 16:58
Antimony	0.00014	J	0.000072	0.0040	mg/L	2	11/24/13 16:58
Arsenic	0.0055	J	0.0012	0.010	mg/L	2	11/24/13 16:58
Barium	0.52		0.00013	0.20	mg/L	2	11/24/13 16:58
Beryllium	U		0.00016	0.0020	mg/L	2	11/24/13 16:58
Cadmium	0.00043	J	0.000090	0.0020	mg/L	2	11/25/13 13:38
Chromium	0.0022	J	0.00054	0.020	mg/L	2	11/24/13 16:58
Cobalt	0.0017	J	0.000082	0.040	mg/L	2	11/24/13 16:58
Copper	0.0013	J	0.0011	0.0080	mg/L	2	11/24/13 16:58
Iron	18		0.011	0.40	mg/L	2	11/24/13 16:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-011
Collection Date: 11/13/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.00041	J	0.00010	0.0060	mg/L	2	11/24/13 16:58
Manganese	0.43		0.00011	0.10	mg/L	2	11/24/13 16:58
Nickel	0.0085	J	0.00051	0.040	mg/L	2	11/24/13 16:58
Selenium	U		0.0013	0.010	mg/L	2	11/24/13 16:58
Silver	U		0.000084	0.00040	mg/L	2	11/24/13 16:58
Thallium	U		0.00012	0.0040	mg/L	2	11/24/13 16:58
Vanadium	0.0016	J	0.00033	0.0080	mg/L	2	11/24/13 16:58
Zinc	0.0033	J	0.00096	0.10	mg/L	2	11/24/13 16:58

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 11/19/13

Analyst: HL

BatchID: 53439

1,1'-Biphenyl	U	0.095	10	µg/L	1	11/20/13 19:53
2,4,5-Trichlorophenol	U	0.25	5.0	µg/L	1	11/20/13 19:53
2,4,6-Trichlorophenol	U	0.27	4.0	µg/L	1	11/20/13 19:53
2,4-Dichlorophenol	U	0.22	10	µg/L	1	11/20/13 19:53
2,4-Dimethylphenol	U	1.8	5.0	µg/L	1	11/20/13 19:53
2,4-Dinitrophenol	U	0.67	25	µg/L	1	11/20/13 19:53
2,4-Dinitrotoluene	U	0.27	5.0	µg/L	1	11/20/13 19:53
2,6-Dinitrotoluene	U	0.23	5.0	µg/L	1	11/20/13 19:53
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	11/20/13 19:53
2-Chlorophenol	U	0.32	10	µg/L	1	11/20/13 19:53
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	11/20/13 19:53
2-Methylphenol	U	0.20	10	µg/L	1	11/20/13 19:53
2-Nitroaniline	U	0.34	25	µg/L	1	11/20/13 19:53
2-Nitrophenol	U	0.28	5.0	µg/L	1	11/20/13 19:53
3,3'-Dichlorobenzidine	U	3.9	1.0	µg/L	1	11/20/13 19:53
3-Nitroaniline	U	0.34	25	µg/L	1	11/20/13 19:53
4,6-Dinitro-2-methylphenol	U	1.2	20	µg/L	1	11/20/13 19:53
4-Bromophenyl phenyl ether	U	0.23	5.0	µg/L	1	11/20/13 19:53
4-Chloro-3-methylphenol	U	0.31	5.0	µg/L	1	11/20/13 19:53
4-Chloroaniline	U	0.32	10	µg/L	1	11/20/13 19:53
4-Chlorophenyl phenyl ether	U	0.23	5.0	µg/L	1	11/20/13 19:53
4-Methylphenol	U	0.20	10	µg/L	1	11/20/13 19:53
4-Nitroaniline	U	0.30	25	µg/L	1	11/20/13 19:53
4-Nitrophenol	U	0.51	25	µg/L	1	11/20/13 19:53
Acenaphthene	U	0.11	5.0	µg/L	1	11/20/13 19:53
Acenaphthylene	U	0.12	5.0	µg/L	1	11/20/13 19:53
Acetophenone	U	0.090	5.0	µg/L	1	11/20/13 19:53
Anthracene	U	0.72	5.0	µg/L	1	11/20/13 19:53
Atrazine	U	0.13	5.0	µg/L	1	11/20/13 19:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-011
Collection Date: 11/13/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	11/20/13 19:53
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/20/13 19:53
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/20/13 19:53
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/20/13 19:53
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/20/13 19:53
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/20/13 19:53
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/20/13 19:53
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/20/13 19:53
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/20/13 19:53
Bis(2-ethylhexyl)phthalate	0.47	J	0.15	5.0	µg/L	1	11/20/13 19:53
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/20/13 19:53
Caprolactam	U		4.7	10	µg/L	1	11/20/13 19:53
Carbazole	U		0.16	10	µg/L	1	11/20/13 19:53
Chrysene	U		0.71	1.0	µg/L	1	11/20/13 19:53
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/20/13 19:53
Dibenzofuran	U		0.28	4.0	µg/L	1	11/20/13 19:53
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/20/13 19:53
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/20/13 19:53
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/20/13 19:53
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/20/13 19:53
Fluoranthene	U		0.77	1.0	µg/L	1	11/20/13 19:53
Fluorene	U		0.10	5.0	µg/L	1	11/20/13 19:53
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/20/13 19:53
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/20/13 19:53
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/20/13 19:53
Hexachloroethane	U		0.47	5.0	µg/L	1	11/20/13 19:53
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/20/13 19:53
Isophorone	U		0.30	5.0	µg/L	1	11/20/13 19:53
Naphthalene	U		0.12	5.0	µg/L	1	11/20/13 19:53
Nitrobenzene	U		0.33	3.0	µg/L	1	11/20/13 19:53
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/20/13 19:53
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/20/13 19:53
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/20/13 19:53
Phenanthrene	U		0.86	2.0	µg/L	1	11/20/13 19:53
Phenol	U		0.32	5.0	µg/L	1	11/20/13 19:53
Pyrene	U		0.65	5.0	µg/L	1	11/20/13 19:53
Surr: 2,4,6-Tribromophenol	87.6			32-115	%REC	1	11/20/13 19:53
Surr: 2-Fluorobiphenyl	67.6			32-100	%REC	1	11/20/13 19:53
Surr: 2-Fluorophenol	39.6			22-59	%REC	1	11/20/13 19:53
Surr: 4-Terphenyl-d14	75.1			23-112	%REC	1	11/20/13 19:53

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-011
Collection Date: 11/13/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	68.5			31-93	%REC	1	11/20/13 19:53
Surr: Phenol-d6	22.6			13-36	%REC	1	11/20/13 19:53
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:58
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 08:58
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:58
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 08:58
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 08:58
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 08:58
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 08:58
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 08:58
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 08:58
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 08:58
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 08:58
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 08:58
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 08:58
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 08:58
2-Butanone	U		0.64	25	µg/L	1	11/23/13 08:58
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 08:58
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 08:58
Acetone	U		3.0	50	µg/L	1	11/23/13 08:58
Benzene	4.6		0.14	1.0	µg/L	1	11/23/13 08:58
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 08:58
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 08:58
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 08:58
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 08:58
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 08:58
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 08:58
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 08:58
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 08:58
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 08:58
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 08:58
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 08:58
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 08:58
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 08:58
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 08:58
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 08:58
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 08:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111313-ACN-011
Collection Date: 11/13/13 03:00 PM

Work Order: 1311817
Lab ID: 1311817-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 08:58
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 08:58
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 08:58
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 08:58
Styrene	U		0.12	1.0	µg/L	1	11/23/13 08:58
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 08:58
Toluene	U		0.13	1.0	µg/L	1	11/23/13 08:58
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 08:58
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 08:58
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 08:58
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 08:58
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 08:58
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 08:58
Surr: 1,2-Dichloroethane-d4	112			70-120	%REC	1	11/23/13 08:58
Surr: 4-Bromofluorobenzene	93.5			75-120	%REC	1	11/23/13 08:58
Surr: Dibromofluoromethane	112			85-115	%REC	1	11/23/13 08:58
Surr: Toluene-d8	97.0			85-120	%REC	1	11/23/13 08:58
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 11/18/13		Analyst: JB
BatchID: <u>53431</u>							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-012
Collection Date: 11/14/13 10:05 AM

Work Order: 1311817
Lab ID: 1311817-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470				
<u>BatchID:</u> 53488							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:25
MERCURY BY CVAA (DISSOLVED)							
			SW7470				
<u>BatchID:</u> 53454							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:39
METALS BY ICP-MS							
			SW6020A				
<u>BatchID:</u> 53533							
Aluminum	0.043	J	0.00078	0.050	mg/L	1	11/22/13 20:08
Antimony	0.00016	J	0.000036	0.0020	mg/L	1	11/22/13 20:08
Arsenic	0.059		0.00058	0.0050	mg/L	1	11/22/13 20:08
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 20:08
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 20:08
Chromium	0.0020	J	0.00027	0.010	mg/L	1	11/22/13 20:08
Cobalt	0.0017	J	0.000041	0.020	mg/L	1	11/22/13 20:08
Copper	U		0.00053	0.0040	mg/L	1	11/22/13 20:08
Iron	30		0.0053	0.20	mg/L	1	11/22/13 20:08
Lead	0.00030	J	0.000051	0.0030	mg/L	1	11/22/13 20:08
Manganese	0.40		0.000054	0.050	mg/L	1	11/22/13 20:08
Nickel	0.0069	J	0.00025	0.020	mg/L	1	11/22/13 20:08
Selenium	U		0.00064	0.0050	mg/L	1	11/22/13 20:08
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 20:08
Thallium	0.00014	J	0.000062	0.0020	mg/L	1	11/22/13 20:08
Vanadium	0.0015	J	0.00016	0.0040	mg/L	1	11/22/13 20:08
Zinc	0.0037	J	0.00048	0.050	mg/L	1	11/22/13 20:08
<u>BatchID:</u> 53533							
Barium	2.1		0.00063	1.0	mg/L	10	11/24/13 17:12
METALS BY ICP-MS (DISSOLVED)							
			SW6020A				
<u>BatchID:</u> 53533							
Aluminum	0.0047	J	0.00078	0.050	mg/L	1	11/22/13 20:13
Antimony	0.00017	J	0.000036	0.0020	mg/L	1	11/22/13 20:13
Arsenic	0.060		0.00058	0.0050	mg/L	1	11/22/13 20:13
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 20:13
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 20:13
Chromium	0.0010	J	0.00027	0.010	mg/L	1	11/22/13 20:13
Cobalt	0.0017	J	0.000041	0.020	mg/L	1	11/22/13 20:13
Copper	U		0.00053	0.0040	mg/L	1	11/22/13 20:13
Iron	29		0.0053	0.20	mg/L	1	11/22/13 20:13

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-012
Collection Date: 11/14/13 10:05 AM

Work Order: 1311817
Lab ID: 1311817-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000083	J	0.000051	0.0030	mg/L	1	11/22/13 20:13
Manganese	0.34		0.000054	0.050	mg/L	1	11/22/13 20:13
Nickel	0.0063	J	0.00025	0.020	mg/L	1	11/22/13 20:13
Selenium		U	0.00064	0.0050	mg/L	1	11/22/13 20:13
Silver		U	0.000042	0.00020	mg/L	1	11/22/13 20:13
Thallium		U	0.000062	0.0020	mg/L	1	11/22/13 20:13
Vanadium	0.0015	J	0.00016	0.0040	mg/L	1	11/22/13 20:13
Zinc	0.0025	J	0.00048	0.050	mg/L	1	11/22/13 20:13
<u>BatchID: 53533</u>							
Barium	2.2		0.00063	1.0	mg/L	10	11/24/13 17:17
SEMI-VOLATILE ORGANIC COMPOUNDS		SW8270		Prep: SW3510 / 11/19/13		Analyst: HL	
<u>BatchID: 53439</u>							
1,1'-Biphenyl		U	0.095	10	µg/L	1	11/20/13 20:56
2,4,5-Trichlorophenol		U	0.25	5.0	µg/L	1	11/20/13 20:56
2,4,6-Trichlorophenol		U	0.27	4.0	µg/L	1	11/20/13 20:56
2,4-Dichlorophenol		U	0.22	10	µg/L	1	11/20/13 20:56
2,4-Dimethylphenol		U	1.8	5.0	µg/L	1	11/20/13 20:56
2,4-Dinitrophenol		U	0.67	25	µg/L	1	11/20/13 20:56
2,4-Dinitrotoluene		U	0.27	5.0	µg/L	1	11/20/13 20:56
2,6-Dinitrotoluene		U	0.23	5.0	µg/L	1	11/20/13 20:56
2-Chloronaphthalene		U	0.13	5.0	µg/L	1	11/20/13 20:56
2-Chlorophenol		U	0.32	10	µg/L	1	11/20/13 20:56
2-Methylnaphthalene		U	0.13	5.0	µg/L	1	11/20/13 20:56
2-Methylphenol		U	0.20	10	µg/L	1	11/20/13 20:56
2-Nitroaniline		U	0.34	25	µg/L	1	11/20/13 20:56
2-Nitrophenol		U	0.28	5.0	µg/L	1	11/20/13 20:56
3,3' -Dichlorobenzidine		U	3.9	1.0	µg/L	1	11/20/13 20:56
3-Nitroaniline		U	0.34	25	µg/L	1	11/20/13 20:56
4,6-Dinitro-2-methylphenol		U	1.2	20	µg/L	1	11/20/13 20:56
4-Bromophenyl phenyl ether		U	0.23	5.0	µg/L	1	11/20/13 20:56
4-Chloro-3-methylphenol		U	0.31	5.0	µg/L	1	11/20/13 20:56
4-Chloroaniline		U	0.32	10	µg/L	1	11/20/13 20:56
4-Chlorophenyl phenyl ether		U	0.23	5.0	µg/L	1	11/20/13 20:56
4-Methylphenol		U	0.20	10	µg/L	1	11/20/13 20:56
4-Nitroaniline		U	0.30	25	µg/L	1	11/20/13 20:56
4-Nitrophenol		U	0.51	25	µg/L	1	11/20/13 20:56
Acenaphthene		U	0.11	5.0	µg/L	1	11/20/13 20:56
Acenaphthylene		U	0.12	5.0	µg/L	1	11/20/13 20:56
Acetophenone		U	0.090	5.0	µg/L	1	11/20/13 20:56

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-012
Collection Date: 11/14/13 10:05 AM

Work Order: 1311817
Lab ID: 1311817-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Anthracene	U		0.72	5.0	µg/L	1	11/20/13 20:56
Atrazine	U		0.13	5.0	µg/L	1	11/20/13 20:56
Benzaldehyde	U		0.46	10	µg/L	1	11/20/13 20:56
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/20/13 20:56
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/20/13 20:56
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/20/13 20:56
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/20/13 20:56
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/20/13 20:56
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/20/13 20:56
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/20/13 20:56
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/20/13 20:56
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/20/13 20:56
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/20/13 20:56
Caprolactam	U		4.7	10	µg/L	1	11/20/13 20:56
Carbazole	U		0.16	10	µg/L	1	11/20/13 20:56
Chrysene	U		0.71	1.0	µg/L	1	11/20/13 20:56
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/20/13 20:56
Dibenzofuran	U		0.28	4.0	µg/L	1	11/20/13 20:56
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/20/13 20:56
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/20/13 20:56
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/20/13 20:56
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/20/13 20:56
Fluoranthene	U		0.77	1.0	µg/L	1	11/20/13 20:56
Fluorene	U		0.10	5.0	µg/L	1	11/20/13 20:56
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/20/13 20:56
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/20/13 20:56
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/20/13 20:56
Hexachloroethane	U		0.47	5.0	µg/L	1	11/20/13 20:56
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/20/13 20:56
Isophorone	U		0.30	5.0	µg/L	1	11/20/13 20:56
Naphthalene	U		0.12	5.0	µg/L	1	11/20/13 20:56
Nitrobenzene	U		0.33	3.0	µg/L	1	11/20/13 20:56
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/20/13 20:56
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/20/13 20:56
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/20/13 20:56
Phenanthrene	U		0.86	2.0	µg/L	1	11/20/13 20:56
Phenol	U		0.32	5.0	µg/L	1	11/20/13 20:56
Pyrene	U		0.65	5.0	µg/L	1	11/20/13 20:56
Surr: 2,4,6-Tribromophenol	55.4			32-115	%REC	1	11/20/13 20:56
Surr: 2-Fluorobiphenyl	54.3			32-100	%REC	1	11/20/13 20:56

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-012
Collection Date: 11/14/13 10:05 AM

Work Order: 1311817
Lab ID: 1311817-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	23.2			22-59	%REC	1	11/20/13 20:56
Surr: 4-Terphenyl-d14	16.5	S		23-112	%REC	1	11/20/13 20:56
Surr: Nitrobenzene-d5	58.7			31-93	%REC	1	11/20/13 20:56
Surr: Phenol-d6	14.5			13-36	%REC	1	11/20/13 20:56

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R131098

1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 09:22
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 09:22
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 09:22
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 09:22
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 09:22
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 09:22
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 09:22
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 09:22
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 09:22
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 09:22
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 09:22
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 09:22
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 09:22
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 09:22
2-Butanone	U		0.64	25	µg/L	1	11/23/13 09:22
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 09:22
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 09:22
Acetone	U		3.0	50	µg/L	1	11/23/13 09:22
Benzene	U		0.14	1.0	µg/L	1	11/23/13 09:22
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 09:22
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 09:22
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 09:22
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 09:22
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 09:22
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 09:22
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 09:22
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 09:22
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 09:22
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 09:22
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 09:22
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 09:22
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 09:22
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 09:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-012
Collection Date: 11/14/13 10:05 AM

Work Order: 1311817
Lab ID: 1311817-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 09:22
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 09:22
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 09:22
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 09:22
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 09:22
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 09:22
Styrene	U		0.12	1.0	µg/L	1	11/23/13 09:22
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 09:22
Toluene	U		0.13	1.0	µg/L	1	11/23/13 09:22
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 09:22
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 09:22
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 09:22
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 09:22
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 09:22
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 09:22
Surr: 1,2-Dichloroethane-d4	111			70-120	%REC	1	11/23/13 09:22
Surr: 4-Bromofluorobenzene	89.8			75-120	%REC	1	11/23/13 09:22
Surr: Dibromofluoromethane	110			85-115	%REC	1	11/23/13 09:22
Surr: Toluene-d8	96.2			85-120	%REC	1	11/23/13 09:22
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 11/18/13	Analyst: JB
BatchID: 53431							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-013
Collection Date: 11/14/13 11:15 AM

Work Order: 1311817
Lab ID: 1311817-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 11/20/13	Analyst: LR
<u>BatchID:</u> 53488							
Mercury	U		0.00010	0.00020	mg/L	1	11/20/13 19:27
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 11/19/13	Analyst: LR
<u>BatchID:</u> 53454							
Mercury	U		0.00010	0.00020	mg/L	1	11/19/13 15:47
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 11/21/13	Analyst: CES
<u>BatchID:</u> 53533							
Aluminum	0.033	J	0.00078	0.050	mg/L	1	11/22/13 20:19
Antimony	0.00019	J	0.000036	0.0020	mg/L	1	11/22/13 20:19
Arsenic	0.028		0.00058	0.0050	mg/L	1	11/22/13 20:19
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 20:19
Cadmium	U		0.000045	0.0010	mg/L	1	11/22/13 20:19
Chromium	0.0020	J	0.00027	0.010	mg/L	1	11/22/13 20:19
Cobalt	0.0031	J	0.000041	0.020	mg/L	1	11/22/13 20:19
Copper	0.00062	J	0.00053	0.0040	mg/L	1	11/22/13 20:19
Iron	21		0.0053	0.20	mg/L	1	11/22/13 20:19
Lead	0.00017	J	0.000051	0.0030	mg/L	1	11/22/13 20:19
Manganese	0.086		0.000054	0.050	mg/L	1	11/22/13 20:19
Nickel	0.0077	J	0.00025	0.020	mg/L	1	11/22/13 20:19
Selenium	U		0.00064	0.0050	mg/L	1	11/22/13 20:19
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 20:19
Thallium	U		0.000062	0.0020	mg/L	1	11/22/13 20:19
Vanadium	0.0017	J	0.00016	0.0040	mg/L	1	11/22/13 20:19
Zinc	0.0034	J	0.00048	0.050	mg/L	1	11/22/13 20:19
<u>BatchID:</u> 53533							
Barium	2.2		0.00063	1.0	mg/L	10	11/24/13 17:46
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 11/21/13	Analyst: CES
<u>BatchID:</u> 53533							
Aluminum	0.0048	J	0.00078	0.050	mg/L	1	11/22/13 20:25
Antimony	0.00021	J	0.000036	0.0020	mg/L	1	11/22/13 20:25
Arsenic	0.027		0.00058	0.0050	mg/L	1	11/22/13 20:25
Beryllium	U		0.000082	0.0010	mg/L	1	11/22/13 20:25
Cadmium	0.00012	J	0.000045	0.0010	mg/L	1	11/22/13 20:25
Chromium	0.0025	J	0.00027	0.010	mg/L	1	11/22/13 20:25
Cobalt	0.0037	J	0.000041	0.020	mg/L	1	11/22/13 20:25
Copper	U		0.00053	0.0040	mg/L	1	11/22/13 20:25
Iron	21		0.0053	0.20	mg/L	1	11/22/13 20:25

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-013
Collection Date: 11/14/13 11:15 AM

Work Order: 1311817
Lab ID: 1311817-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	11/22/13 20:25
Manganese	0.090		0.000054	0.050	mg/L	1	11/22/13 20:25
Nickel	0.0082	J	0.00025	0.020	mg/L	1	11/22/13 20:25
Selenium	U		0.00064	0.0050	mg/L	1	11/22/13 20:25
Silver	U		0.000042	0.00020	mg/L	1	11/22/13 20:25
Thallium	U		0.000062	0.0020	mg/L	1	11/22/13 20:25
Vanadium	0.0018	J	0.00016	0.0040	mg/L	1	11/22/13 20:25
Zinc	0.0034	J	0.00048	0.050	mg/L	1	11/22/13 20:25
<u>BatchID: 53533</u>							
Barium	2.2		0.00063	1.0	mg/L	10	11/24/13 17:51
SEMI-VOLATILE ORGANIC COMPOUNDS		SW8270		Prep: SW3510 / 11/19/13		Analyst: HL	
<u>BatchID: 53439</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	11/20/13 21:28
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	11/20/13 21:28
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	11/20/13 21:28
2,4-Dichlorophenol	U		0.22	10	µg/L	1	11/20/13 21:28
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	11/20/13 21:28
2,4-Dinitrophenol	U		0.67	25	µg/L	1	11/20/13 21:28
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	11/20/13 21:28
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	11/20/13 21:28
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	11/20/13 21:28
2-Chlorophenol	U		0.32	10	µg/L	1	11/20/13 21:28
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	11/20/13 21:28
2-Methylphenol	U		0.20	10	µg/L	1	11/20/13 21:28
2-Nitroaniline	U		0.34	25	µg/L	1	11/20/13 21:28
2-Nitrophenol	U		0.28	5.0	µg/L	1	11/20/13 21:28
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	11/20/13 21:28
3-Nitroaniline	U		0.34	25	µg/L	1	11/20/13 21:28
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	11/20/13 21:28
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/20/13 21:28
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	11/20/13 21:28
4-Chloroaniline	U		0.32	10	µg/L	1	11/20/13 21:28
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	11/20/13 21:28
4-Methylphenol	U		0.20	10	µg/L	1	11/20/13 21:28
4-Nitroaniline	U		0.30	25	µg/L	1	11/20/13 21:28
4-Nitrophenol	U		0.51	25	µg/L	1	11/20/13 21:28
Acenaphthene	U		0.11	5.0	µg/L	1	11/20/13 21:28
Acenaphthylene	U		0.12	5.0	µg/L	1	11/20/13 21:28
Acetophenone	U		0.090	5.0	µg/L	1	11/20/13 21:28

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-013
Collection Date: 11/14/13 11:15 AM

Work Order: 1311817
Lab ID: 1311817-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Anthracene	U		0.72	5.0	µg/L	1	11/20/13 21:28
Atrazine	U		0.13	5.0	µg/L	1	11/20/13 21:28
Benzaldehyde	U		0.46	10	µg/L	1	11/20/13 21:28
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	11/20/13 21:28
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	11/20/13 21:28
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	11/20/13 21:28
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	11/20/13 21:28
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	11/20/13 21:28
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	11/20/13 21:28
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	11/20/13 21:28
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	11/20/13 21:28
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	11/20/13 21:28
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	11/20/13 21:28
Caprolactam	U		4.7	10	µg/L	1	11/20/13 21:28
Carbazole	U		0.16	10	µg/L	1	11/20/13 21:28
Chrysene	U		0.71	1.0	µg/L	1	11/20/13 21:28
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	11/20/13 21:28
Dibenzofuran	U		0.28	4.0	µg/L	1	11/20/13 21:28
Diethyl phthalate	U		0.24	5.0	µg/L	1	11/20/13 21:28
Dimethyl phthalate	U		0.27	5.0	µg/L	1	11/20/13 21:28
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	11/20/13 21:28
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	11/20/13 21:28
Fluoranthene	U		0.77	1.0	µg/L	1	11/20/13 21:28
Fluorene	U		0.10	5.0	µg/L	1	11/20/13 21:28
Hexachlorobenzene	U		0.22	0.50	µg/L	1	11/20/13 21:28
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	11/20/13 21:28
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	11/20/13 21:28
Hexachloroethane	U		0.47	5.0	µg/L	1	11/20/13 21:28
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	11/20/13 21:28
Isophorone	U		0.30	5.0	µg/L	1	11/20/13 21:28
Naphthalene	U		0.12	5.0	µg/L	1	11/20/13 21:28
Nitrobenzene	U		0.33	3.0	µg/L	1	11/20/13 21:28
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	11/20/13 21:28
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	11/20/13 21:28
Pentachlorophenol	U		0.22	1.0	µg/L	1	11/20/13 21:28
Phenanthrene	U		0.86	2.0	µg/L	1	11/20/13 21:28
Phenol	U		0.32	5.0	µg/L	1	11/20/13 21:28
Pyrene	U		0.65	5.0	µg/L	1	11/20/13 21:28
Surr: 2,4,6-Tribromophenol	92.2			32-115	%REC	1	11/20/13 21:28
Surr: 2-Fluorobiphenyl	64.6			32-100	%REC	1	11/20/13 21:28

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-013
Collection Date: 11/14/13 11:15 AM

Work Order: 1311817
Lab ID: 1311817-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	31.7			22-59	%REC	1	11/20/13 21:28
Surr: 4-Terphenyl-d14	68.4			23-112	%REC	1	11/20/13 21:28
Surr: Nitrobenzene-d5	58.5			31-93	%REC	1	11/20/13 21:28
Surr: Phenol-d6	19.8			13-36	%REC	1	11/20/13 21:28
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R131098							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 09:46
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 09:46
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 09:46
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 09:46
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 09:46
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 09:46
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 09:46
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 09:46
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 09:46
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 09:46
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 09:46
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 09:46
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 09:46
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 09:46
2-Butanone	U		0.64	25	µg/L	1	11/23/13 09:46
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 09:46
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 09:46
Acetone	6.9	J	3.0	50	µg/L	1	11/23/13 09:46
Benzene	0.81	J	0.14	1.0	µg/L	1	11/23/13 09:46
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 09:46
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 09:46
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 09:46
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 09:46
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 09:46
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 09:46
Chloroethane	9.9		0.25	5.0	µg/L	1	11/23/13 09:46
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 09:46
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 09:46
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 09:46
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 09:46
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 09:46
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 09:46
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 09:46

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-111413-ACN-013
Collection Date: 11/14/13 11:15 AM

Work Order: 1311817
Lab ID: 1311817-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 09:46
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 09:46
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 09:46
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 09:46
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 09:46
Methylene chloride	U		0.75	5.0	µg/L	1	11/23/13 09:46
Styrene	U		0.12	1.0	µg/L	1	11/23/13 09:46
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 09:46
Toluene	U		0.13	1.0	µg/L	1	11/23/13 09:46
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 09:46
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 09:46
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 09:46
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 09:46
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 09:46
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 09:46
Surr: 1,2-Dichloroethane-d4	112			70-120	%REC	1	11/23/13 09:46
Surr: 4-Bromofluorobenzene	91.2			75-120	%REC	1	11/23/13 09:46
Surr: Dibromofluoromethane	111			85-115	%REC	1	11/23/13 09:46
Surr: Toluene-d8	95.8			85-120	%REC	1	11/23/13 09:46
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 11/18/13	Analyst: JB
BatchID: 53431							
Cyanide, Amenable	0.0044	J	0.0010	0.0050	mg/L	1	11/19/13 09:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: Trip Blank
Collection Date: 11/13/13

Work Order: 1311817
Lab ID: 1311817-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260				Analyst: RS
<u>BatchID: R131098</u>							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 03:44
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	11/23/13 03:44
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	11/23/13 03:44
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	11/23/13 03:44
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	11/23/13 03:44
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 03:44
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	11/23/13 03:44
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	11/23/13 03:44
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	11/23/13 03:44
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	11/23/13 03:44
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	11/23/13 03:44
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	11/23/13 03:44
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 03:44
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	11/23/13 03:44
2-Butanone	U		0.64	25	µg/L	1	11/23/13 03:44
2-Hexanone	U		0.19	50	µg/L	1	11/23/13 03:44
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	11/23/13 03:44
Acetone	U		3.0	50	µg/L	1	11/23/13 03:44
Benzene	U		0.14	1.0	µg/L	1	11/23/13 03:44
Bromodichloromethane	U		0.22	1.0	µg/L	1	11/23/13 03:44
Bromoform	U		0.18	1.0	µg/L	1	11/23/13 03:44
Bromomethane	U		0.38	5.0	µg/L	1	11/23/13 03:44
Carbon disulfide	U		0.26	5.0	µg/L	1	11/23/13 03:44
Carbon tetrachloride	U		0.16	1.0	µg/L	1	11/23/13 03:44
Chlorobenzene	U		0.12	1.0	µg/L	1	11/23/13 03:44
Chloroethane	U		0.25	5.0	µg/L	1	11/23/13 03:44
Chloroform	U		0.15	1.0	µg/L	1	11/23/13 03:44
Chloromethane	U		0.29	5.0	µg/L	1	11/23/13 03:44
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	11/23/13 03:44
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	11/23/13 03:44
Cyclohexane	U		0.20	1.0	µg/L	1	11/23/13 03:44
Dibromochloromethane	U		0.12	5.0	µg/L	1	11/23/13 03:44
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	11/23/13 03:44
Ethylbenzene	U		0.12	1.0	µg/L	1	11/23/13 03:44
Isopropylbenzene	U		0.11	5.0	µg/L	1	11/23/13 03:44
Methyl acetate	U		0.76	10	µg/L	1	11/23/13 03:44
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	11/23/13 03:44

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 27-Nov-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: Trip Blank
Collection Date: 11/13/13

Work Order: 1311817
Lab ID: 1311817-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.19	1.0	µg/L	1	11/23/13 03:44
Methylene chloride	6.1	J	0.75	10	µg/L	1	11/23/13 03:44
Styrene	U		0.12	1.0	µg/L	1	11/23/13 03:44
Tetrachloroethene	U		0.098	1.0	µg/L	1	11/23/13 03:44
Toluene	U		0.13	1.0	µg/L	1	11/23/13 03:44
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	11/23/13 03:44
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	11/23/13 03:44
Trichloroethene	U		0.16	1.0	µg/L	1	11/23/13 03:44
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	11/23/13 03:44
Vinyl chloride	U		0.15	1.0	µg/L	1	11/23/13 03:44
Xylenes, Total	U		0.30	3.0	µg/L	1	11/23/13 03:44
Surr: 1,2-Dichloroethane-d4	108			70-120	%REC	1	11/23/13 03:44
Surr: 4-Bromofluorobenzene	91.4			75-120	%REC	1	11/23/13 03:44
Surr: Dibromofluoromethane	108			85-115	%REC	1	11/23/13 03:44
Surr: Toluene-d8	96.4			85-120	%REC	1	11/23/13 03:44

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53454** Instrument ID **HG1** Method: **SW7470**

MBLK		Sample ID: MBLK-53454-53454				Units: mg/L		Analysis Date: 11/19/13 03:02 PM		
Client ID:		Run ID: HG1_131119A				SeqNo: 2545223		Prep Date: 11/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS		Sample ID: LCS-53454-53454				Units: mg/L		Analysis Date: 11/19/13 03:04 PM		
Client ID:		Run ID: HG1_131119A				SeqNo: 2545224		Prep Date: 11/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001977 0.00020 0.002 0 98.8 80-120 0

MS		Sample ID: 1311817-07EMS				Units: mg/L		Analysis Date: 11/19/13 03:26 PM		
Client ID: W-R2330009-111313-ACN-007		Run ID: HG1_131119A				SeqNo: 2545236		Prep Date: 11/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.00204 0.00020 0.002 -0.000012 103 75-125 0

MSD		Sample ID: 1311817-07EMSD				Units: mg/L		Analysis Date: 11/19/13 03:28 PM		
Client ID: W-R2330009-111313-ACN-007		Run ID: HG1_131119A				SeqNo: 2545237		Prep Date: 11/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002007 0.00020 0.002 -0.000012 101 75-125 0.00204 1.63 20

The following samples were analyzed in this batch:

1311817-01E	1311817-02E	1311817-03E
1311817-04E	1311817-05E	1311817-06E
1311817-07E	1311817-08E	1311817-09E
1311817-10E	1311817-11E	1311817-12E
1311817-13E		

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53488** Instrument ID **HG1** Method: **SW7470**

MBLK				Sample ID: MBLK-53488-53488				Units: mg/L			Analysis Date: 11/20/13 06:44 PM			
Client ID:				Run ID: HG1_131120A				SeqNo: 2547432			Prep Date: 11/20/13		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS		Sample ID: LCS-53488-53488				Units: mg/L		Analysis Date: 11/20/13 06:46 PM		
Client ID:		Run ID: HG1_131120A		SeqNo: 2547433		Prep Date: 11/20/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002006 0.00020 0.002 0 100 80-120 0

MS				Sample ID: 1311817-13DMS				Units: mg/L		Analysis Date: 11/20/13 07:35 PM													
Client ID: W-R2330009-111413-ACN-013				Run ID: HG1_131120A				SeqNo: 2547491		Prep Date: 11/20/13		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Mercury 0.002051 0.00020 0.002 0.000001 102 75-125 0

MSD					Sample ID: 1311817-13DMSD					Units: mg/L		Analysis Date: 11/20/13 07:37 PM			
Client ID: W-R2330009-111413-ACN-013					Run ID: HG1_131120A					SeqNo: 2547492		Prep Date: 11/20/13		DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002037 0.00020 0.002 0.000001 102 75-125 0.002051 0.685 20

The following samples were analyzed in this batch:

1311817-01D	1311817-02D	1311817-03D
1311817-04D	1311817-05D	1311817-06D
1311817-07D	1311817-08D	1311817-09D
1311817-10D	1311817-11D	1311817-12D
1311817-13D		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53491** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-53491-53491				Units: mg/L		Analysis Date: 11/22/13 08:54 PM		
Client ID:		Run ID: ICPMS2_131122A				SeqNo: 2551167		Prep Date: 11/20/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	U	0.010								
Antimony	U	0.0050								
Arsenic	U	0.0050								
Barium	0.000123	0.0050								J
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	0.0007701	0.0050								J
Cobalt	U	0.0050								
Copper	U	0.0050								
Lead	U	0.0050								
Manganese	0.001253	0.0050								J
Nickel	0.0002712	0.0050								J
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0050								
Vanadium	U	0.0050								
Zinc	0.001162	0.010								J

MBLK		Sample ID: MBLK-53491-53491				Units: mg/L		Analysis Date: 11/24/13 05:57 PM		
Client ID:		Run ID: ICPMS2_131124A				SeqNo: 2552958		Prep Date: 11/20/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	U	0.080								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53491** Instrument ID **ICPMS2** Method: **SW6020A**

LCS				Sample ID: LCS-53491-53491		Units: mg/L		Analysis Date: 11/22/13 08:59 PM		
Client ID:			Run ID: ICPMS2_131122A		SeqNo: 2551168		Prep Date: 11/20/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09925	0.010	0.1	0	99.2	80-120		0		
Antimony	0.09748	0.0050	0.1	0	97.5	80-120		0		
Arsenic	0.09815	0.0050	0.1	0	98.2	80-120		0		
Barium	0.09902	0.0050	0.1	0	99	80-120		0		
Beryllium	0.1017	0.0020	0.1	0	102	80-120		0		
Cadmium	0.09847	0.0020	0.1	0	98.5	80-120		0		
Chromium	0.09819	0.0050	0.1	0	98.2	80-120		0		
Cobalt	0.09886	0.0050	0.1	0	98.9	80-120		0		
Copper	0.09907	0.0050	0.1	0	99.1	80-120		0		
Iron	10.18	0.080	10	0	102	80-120		0		B
Lead	0.1042	0.0050	0.1	0	104	80-120		0		
Manganese	0.1028	0.0050	0.1	0	103	80-120		0		
Nickel	0.1012	0.0050	0.1	0	101	80-120		0		
Selenium	0.09738	0.0050	0.1	0	97.4	80-120		0		
Silver	0.1066	0.0050	0.1	0	107	80-120		0		
Thallium	0.1003	0.0050	0.1	0	100	80-120		0		
Vanadium	0.1022	0.0050	0.1	0	102	80-120		0		
Zinc	0.1023	0.010	0.1	0	102	80-120		0		

MS				Sample ID: 1311817-10DMS		Units: mg/L		Analysis Date: 11/22/13 09:34 PM		
Client ID: W-R2330009-111313-ACN-010			Run ID: ICPMS2_131122A		SeqNo: 2551174		Prep Date: 11/20/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1039	0.010	0.1	0.00272	101	75-125		0		
Antimony	0.09727	0.0050	0.1	0	97.3	75-125		0		
Arsenic	0.09691	0.0050	0.1	0	96.9	75-125		0		
Barium	0.09835	0.0050	0.1	0.000143	98.2	75-125		0		
Beryllium	0.1016	0.0020	0.1	0	102	75-125		0		
Cadmium	0.09767	0.0020	0.1	0	97.7	75-125		0		
Chromium	0.09766	0.0050	0.1	0.001449	96.2	75-125		0		
Cobalt	0.09709	0.0050	0.1	0	97.1	75-125		0		
Copper	0.0993	0.0050	0.1	0.0006583	98.6	75-125		0		
Iron	10.02	0.080	10	0.1358	98.8	75-125		0		
Manganese	0.1005	0.0050	0.1	0.002362	98.1	75-125		0		
Nickel	0.09978	0.0050	0.1	0.0008516	98.9	75-125		0		
Selenium	0.09627	0.0050	0.1	0	96.3	75-125		0		
Silver	0.1062	0.0050	0.1	0	106	75-125		0		
Vanadium	0.1006	0.0050	0.1	0	101	75-125		0		
Zinc	0.1168	0.010	0.1	0.01757	99.2	75-125		0		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53491** Instrument ID **ICPMS2** Method: **SW6020A**

MS				Sample ID: 1311817-10DMS				Units: mg/L		Analysis Date: 11/23/13 10:40 PM													
Client ID: W-R2330009-111313-ACN-010				Run ID: ICPMS2_131123A				SeqNo: 2552189		Prep Date: 11/20/13		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Lead	0.1025	0.0050	0.1	0	102	75-125	0			
Thallium	0.09692	0.0050	0.1	0	96.9	75-125	0			

MSD				Sample ID: 1311817-10DMSD				Units: mg/L		Analysis Date: 11/22/13 09:40 PM			
Client ID: W-R2330009-111313-ACN-010				Run ID: ICPMS2_131122A				SeqNo: 2551175		Prep Date: 11/20/13		DF: 1	

Aluminum	0.1004	0.010	0.1	0.00272	97.7	75-125	0.1039	3.43	20
Antimony	0.09698	0.0050	0.1	0	97	75-125	0.09727	0.299	20
Arsenic	0.09745	0.0050	0.1	0	97.4	75-125	0.09691	0.556	20
Barium	0.09666	0.0050	0.1	0.000143	96.5	75-125	0.09835	1.73	20
Beryllium	0.1003	0.0020	0.1	0	100	75-125	0.1016	1.29	20
Cadmium	0.09719	0.0020	0.1	0	97.2	75-125	0.09767	0.493	20
Chromium	0.09772	0.0050	0.1	0.001449	96.3	75-125	0.09766	0.0614	20
Cobalt	0.09663	0.0050	0.1	0	96.6	75-125	0.09709	0.475	20
Copper	0.09853	0.0050	0.1	0.0006583	97.9	75-125	0.0993	0.778	20
Iron	10.02	0.080	10	0.1358	98.8	75-125	10.02	0	20
Manganese	0.1009	0.0050	0.1	0.002362	98.5	75-125	0.1005	0.397	20
Nickel	0.09964	0.0050	0.1	0.0008516	98.8	75-125	0.09978	0.14	20
Selenium	0.09479	0.0050	0.1	0	94.8	75-125	0.09627	1.55	20
Silver	0.1057	0.0050	0.1	0	106	75-125	0.1062	0.472	20
Vanadium	0.09939	0.0050	0.1	0	99.4	75-125	0.1006	1.21	20
Zinc	0.1161	0.010	0.1	0.01757	98.5	75-125	0.1168	0.601	20

MSD					Sample ID: 1311817-10DMSD					Units: mg/L		Analysis Date: 11/23/13 10:46 PM			
Client ID: W-R2330009-111313-ACN-010					Run ID: ICPMS2_131123A					SeqNo: 2552191		Prep Date: 11/20/13		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				

Lead	0.1015	0.0050	0.1	0	102	75-125	0.1025	0.98	20
Thallium	0.09687	0.0050	0.1	0	96.9	75-125	0.09692	0.0516	20

The following samples were analyzed in this batch:

1311817-01D	1311817-01E	1311817-02D
1311817-02E	1311817-03D	1311817-03E
1311817-04D	1311817-04E	1311817-05D
1311817-05E	1311817-06D	1311817-06E
1311817-07D	1311817-07E	1311817-08D
1311817-08E	1311817-09D	1311817-09E
1311817-10D	1311817-10E	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53533** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-53533-53533				Units: mg/L		Analysis Date: 11/22/13 01:33 PM		
Client ID:		Run ID: ICPMS2_131122A				SeqNo: 2550675		Prep Date: 11/21/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	U	0.010								
Antimony	0.0001271	0.0050								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	0.0003965	0.0050								J
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	0.07247	0.080								J
Lead	U	0.0050								
Manganese	0.0009111	0.0050								J
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0050								
Vanadium	U	0.0050								
Zinc	0.0009542	0.010								J

LCS		Sample ID: LCS-53533-53533				Units: mg/L		Analysis Date: 11/22/13 01:55 PM		
Client ID:		Run ID: ICPMS2_131122A				SeqNo: 2550679		Prep Date: 11/21/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09437	0.010	0.1	0	94.4	80-120	0			
Antimony	0.09883	0.0050	0.1	0	98.8	80-120	0			
Arsenic	0.09394	0.0050	0.1	0	93.9	80-120	0			
Barium	0.0946	0.0050	0.1	0	94.6	80-120	0			
Beryllium	0.1031	0.0020	0.1	0	103	80-120	0			
Cadmium	0.09868	0.0020	0.1	0	98.7	80-120	0			
Chromium	0.09399	0.0050	0.1	0	94	80-120	0			
Cobalt	0.09644	0.0050	0.1	0	96.4	80-120	0			
Copper	0.09457	0.0050	0.1	0	94.6	80-120	0			
Iron	9.693	0.080	10	0	96.9	80-120	0			
Lead	0.09609	0.0050	0.1	0	96.1	80-120	0			
Manganese	0.09675	0.0050	0.1	0	96.8	80-120	0			
Nickel	0.09366	0.0050	0.1	0	93.7	80-120	0			
Selenium	0.09333	0.0050	0.1	0	93.3	80-120	0			
Silver	0.1068	0.0050	0.1	0	107	80-120	0			
Thallium	0.0914	0.0050	0.1	0	91.4	80-120	0			
Vanadium	0.09717	0.0050	0.1	0	97.2	80-120	0			
Zinc	0.09979	0.010	0.1	0	99.8	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53533** Instrument ID **ICPMS2** Method: **SW6020A**

MS				Sample ID: 13111059-06AMS			Units: mg/L		Analysis Date: 11/22/13 03:20 PM		
Client ID:		Run ID: ICPMS2_131122A			SeqNo: 2550860		Prep Date: 11/21/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.9022	0.10	1	0.007988	89.4	75-125		0			
Antimony	1.031	0.050	1	0.03993	99.1	75-125		0			
Arsenic	1.001	0.050	1	-0.001577	100	75-125		0			
Barium	1.828	0.050	1	0.8467	98.1	75-125		0			
Beryllium	1.019	0.020	1	-0.0006776	102	75-125		0			
Cadmium	0.9556	0.020	1	-0.0002113	95.6	75-125		0			
Chromium	0.9619	0.050	1	0.02303	93.9	75-125		0			
Cobalt	0.9163	0.050	1	0.005276	91.1	75-125		0			
Copper	0.9488	0.050	1	0.02828	92.1	75-125		0			
Iron	94.4	0.80	100	0.2627	94.1	75-125		0			
Lead	0.9704	0.050	1	0.006088	96.4	75-125		0			
Manganese	0.9409	0.050	1	-0.003146	94.4	75-125		0			
Nickel	0.9732	0.050	1	0.06965	90.4	75-125		0			
Selenium	1.045	0.050	1	0.02604	102	75-125		0			
Silver	1.025	0.050	1	-0.00005803	103	75-125		0			
Thallium	0.9221	0.050	1	-0.00257	92.5	75-125		0			
Vanadium	1.026	0.050	1	0.03917	98.7	75-125		0			
Zinc	0.9607	0.10	1	0.02258	93.8	75-125		0			

MSD					Sample ID: 13111059-06AMSD		Units: mg/L		Analysis Date: 11/22/13 03:25 PM		
Client ID:			Run ID: ICPMS2_131122A			SeqNo: 2550861		Prep Date: 11/21/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.9129	0.10	1	0.007988	90.5	75-125	0.9022	1.18	20		
Antimony	1.027	0.050	1	0.03993	98.7	75-125	1.031	0.389	20		
Arsenic	0.9913	0.050	1	-0.001577	99.3	75-125	1.001	0.974	20		
Barium	1.791	0.050	1	0.8467	94.4	75-125	1.828	2.04	20		
Beryllium	1.018	0.020	1	-0.0006776	102	75-125	1.019	0.0982	20		
Cadmium	0.9536	0.020	1	-0.0002113	95.4	75-125	0.9556	0.21	20		
Chromium	0.957	0.050	1	0.02303	93.4	75-125	0.9619	0.511	20		
Cobalt	0.9328	0.050	1	0.005276	92.8	75-125	0.9163	1.78	20		
Copper	0.9497	0.050	1	0.02828	92.1	75-125	0.9488	0.0948	20		
Iron	95.22	0.80	100	0.2627	95	75-125	94.4	0.865	20		
Lead	0.9702	0.050	1	0.006088	96.4	75-125	0.9704	0.0206	20		
Manganese	0.9502	0.050	1	-0.003146	95.3	75-125	0.9409	0.984	20		
Nickel	0.9826	0.050	1	0.06965	91.3	75-125	0.9732	0.961	20		
Selenium	1.035	0.050	1	0.02604	101	75-125	1.045	0.962	20		
Silver	1.019	0.050	1	-0.00005803	102	75-125	1.025	0.587	20		
Thallium	0.9284	0.050	1	-0.00257	93.1	75-125	0.9221	0.681	20		
Vanadium	1.048	0.050	1	0.03917	101	75-125	1.026	2.12	20		
Zinc	0.9666	0.10	1	0.02258	94.4	75-125	0.9607	0.612	20		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53533** Instrument ID **ICPMS2** Method: **SW6020A**

The following samples were analyzed in this batch:

1311817-11D	1311817-11E	1311817-12D
1311817-12E	1311817-13D	1311817-13E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53387** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKW1-53387-53387				Units: µg/L		Analysis Date: 11/18/13 04:15 PM		
Client ID:		Run ID: SVMS4_131118A				SeqNo: 2544762		Prep Date: 11/18/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	5.0								
2,4,5-Trichlorophenol	U	5.0								
2,4,6-Trichlorophenol	U	5.0								
2,4-Dichlorophenol	U	10								
2,4-Dimethylphenol	U	5.0								
2,4-Dinitrophenol	U	5.0								
2,4-Dinitrotoluene	U	5.0								
2,6-Dinitrotoluene	U	5.0								
2-Chloronaphthalene	U	5.0								
2-Chlorophenol	U	5.0								
2-Methylnaphthalene	U	5.0								
2-Methylphenol	U	5.0								
2-Nitroaniline	U	20								
2-Nitrophenol	U	5.0								
3,3'-Dichlorobenzidine	U	5.0								
3-Nitroaniline	U	20								
4,6-Dinitro-2-methylphenol	U	20								
4-Bromophenyl phenyl ether	U	5.0								
4-Chloro-3-methylphenol	U	5.0								
4-Chloroaniline	U	20								
4-Chlorophenyl phenyl ether	U	5.0								
4-Methylphenol	U	5.0								
4-Nitroaniline	U	20								
4-Nitrophenol	U	20								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Acetophenone	U	1.0								
Anthracene	U	5.0								
Atrazine	U	1.0								
Benzaldehyde	U	1.0								
Benzo(a)anthracene	U	5.0								
Benzo(a)pyrene	U	5.0								
Benzo(b)fluoranthene	U	5.0								
Benzo(g,h,i)perylene	U	5.0								
Benzo(k)fluoranthene	U	5.0								
Bis(2-chloroethoxy)methane	U	5.0								
Bis(2-chloroethyl)ether	U	5.0								
Bis(2-chloroisopropyl)ether	U	5.0								
Bis(2-ethylhexyl)phthalate	U	5.0								
Butyl benzyl phthalate	U	5.0								
Caprolactam	U	10								
Carbazole	U	10								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 53387		Instrument ID SVMS4		Method: SW8270				
Chrysene	U	5.0						
Dibenzo(a,h)anthracene	U	5.0						
Dibenzofuran	U	5.0						
Diethyl phthalate	U	20						
Dimethyl phthalate	U	20						
Di-n-butyl phthalate	U	5.0						
Di-n-octyl phthalate	U	5.0						
Fluoranthene	U	5.0						
Fluorene	U	5.0						
Hexachlorobenzene	U	5.0						
Hexachlorobutadiene	U	5.0						
Hexachlorocyclopentadiene	U	20						
Hexachloroethane	U	5.0						
Indeno(1,2,3-cd)pyrene	U	5.0						
Isophorone	U	5.0						
Naphthalene	U	5.0						
Nitrobenzene	U	5.0						
N-Nitrosodi-n-propylamine	U	5.0						
N-Nitrosodiphenylamine	U	5.0						
Pentachlorophenol	U	20						
Phenanthrene	U	5.0						
Phenol	U	5.0						
Pyrene	U	5.0						
<i>Surr: 2,4,6-Tribromophenol</i>	30.29	0	50	0	60.6	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	35.6	0	50	0	71.2	32-100	0	
<i>Surr: 2-Fluorophenol</i>	19.81	0	50	0	39.6	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	43.47	0	50	0	86.9	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	36.64	0	50	0	73.3	31-93	0	
<i>Surr: Phenol-d6</i>	12.05	0	50	0	24.1	13-36	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53387** Instrument ID **SVMS4** Method: **SW8270**

LCS		Sample ID: SLCSW1-53387-53387				Units: µg/L		Analysis Date: 11/18/13 02:06 PM		
Client ID:		Run ID: SVMS4_131118A				SeqNo: 2544758		Prep Date: 11/18/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	12.28	5.0	20	0	61.4	50-110	0			
2,4,6-Trichlorophenol	12.71	5.0	20	0	63.6	50-115	0			
2,4-Dichlorophenol	13.3	10	20	0	66.5	50-105	0			
2,4-Dimethylphenol	12.15	5.0	20	0	60.8	30-110	0			
2,4-Dinitrophenol	11.04	5.0	20	0	55.2	15-140	0			
2,4-Dinitrotoluene	15.11	5.0	20	0	75.6	50-120	0			
2,6-Dinitrotoluene	14.26	5.0	20	0	71.3	50-115	0			
2-Chloronaphthalene	12.38	5.0	20	0	61.9	50-105	0			
2-Chlorophenol	12.04	5.0	20	0	60.2	35-105	0			
2-Methylnaphthalene	12.69	5.0	20	0	63.4	45-105	0			
2-Methylphenol	10.64	5.0	20	0	53.2	40-110	0			
2-Nitroaniline	15.1	20	20	0	75.5	50-115	0			J
2-Nitrophenol	13.66	5.0	20	0	68.3	40-115	0			
3-Nitroaniline	14.31	20	20	0	71.6	20-125	0			J
4,6-Dinitro-2-methylphenol	13.71	20	20	0	68.6	40-130	0			J
4-Bromophenyl phenyl ether	13.98	5.0	20	0	69.9	50-115	0			
4-Chloro-3-methylphenol	13.04	5.0	20	0	65.2	45-110	0			
4-Chloroaniline	19.01	20	20	0	95	15-110	0			J
4-Chlorophenyl phenyl ether	13.42	5.0	20	0	67.1	50-110	0			
4-Methylphenol	8.62	5.0	20	0	43.1	30-110	0			
4-Nitroaniline	16.73	20	20	0	83.6	35-150	0			J
4-Nitrophenol	4.07	20	20	0	20.4	1-58	0			J
Acenaphthene	13.25	5.0	20	0	66.2	45-110	0			
Acenaphthylene	12.76	5.0	20	0	63.8	50-105	0			
Anthracene	14.79	5.0	20	0	74	55-110	0			
Benzo(a)anthracene	15.88	5.0	20	0	79.4	55-110	0			
Benzo(a)pyrene	15.01	5.0	20	0	75	55-110	0			
Benzo(b)fluoranthene	14.79	5.0	20	0	74	45-120	0			
Benzo(g,h,i)perylene	16.18	5.0	20	0	80.9	40-125	0			
Benzo(k)fluoranthene	14.68	5.0	20	0	73.4	45-125	0			
Bis(2-chloroethoxy)methane	13.62	5.0	20	0	68.1	45-105	0			
Bis(2-chloroethyl)ether	13.21	5.0	20	0	66	35-110	0			
Bis(2-chloroisopropyl)ether	13.82	5.0	20	0	69.1	25-130	0			
Bis(2-ethylhexyl)phthalate	16.46	5.0	20	0	82.3	40-125	0			
Butyl benzyl phthalate	17.78	5.0	20	0	88.9	45-115	0			
Carbazole	15.23	10	20	0	76.2	50-150	0			
Chrysene	14.85	5.0	20	0	74.2	55-110	0			
Dibenzo(a,h)anthracene	15.71	5.0	20	0	78.6	40-125	0			
Dibenzofuran	12.72	5.0	20	0	63.6	55-105	0			
Diethyl phthalate	14.49	20	20	0	72.4	40-120	0			J
Dimethyl phthalate	13.37	20	20	0	66.8	25-125	0			J
Di-n-butyl phthalate	16.81	5.0	20	0	84	55-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 53387		Instrument ID SVMS4		Method: SW8270				
Di-n-octyl phthalate	15.91	5.0	20	0	79.6	35-135	0	
Fluoranthene	16.87	5.0	20	0	84.4	55-115	0	
Fluorene	13.83	5.0	20	0	69.2	50-110	0	
Hexachlorobenzene	15.74	5.0	20	0	78.7	50-110	0	
Hexachlorobutadiene	12	5.0	20	0	60	25-105	0	
Hexachlorocyclopentadiene	4.83	20	20	0	24.2	25-105	0	JS
Hexachloroethane	13.25	5.0	20	0	66.2	30-95	0	
Indeno(1,2,3-cd)pyrene	15.88	5.0	20	0	79.4	45-125	0	
Isophorone	13.54	5.0	20	0	67.7	50-110	0	
Naphthalene	12.16	5.0	20	0	60.8	40-100	0	
Nitrobenzene	13.3	5.0	20	0	66.5	45-110	0	
N-Nitrosodi-n-propylamine	14.65	5.0	20	0	73.2	35-130	0	
N-Nitrosodiphenylamine	16.61	5.0	20	0	83	50-110	0	
Pentachlorophenol	9.75	20	20	0	48.8	40-115	0	J
Phenanthrene	14.92	5.0	20	0	74.6	50-115	0	
Phenol	5.16	5.0	20	0	25.8	12-43	0	
Pyrene	14.7	5.0	20	0	73.5	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>32.1</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>64.2</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>31.59</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>63.2</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>17.6</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>35.2</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>40.68</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>81.4</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>32.78</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>65.6</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>11.34</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>22.7</i>	<i>13-36</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53387** Instrument ID **SVMS4** Method: **SW8270**

MS				Sample ID: 1311817-01B MS			Units: µg/L		Analysis Date: 11/18/13 02:39 PM	
Client ID: W-R2330009-111213-ACN-001				Run ID: SVMS4_131118A			SeqNo: 2544759		Prep Date: 11/18/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	126	50	200	0	63	50-110	0			
2,4,6-Trichlorophenol	130.6	50	200	0	65.3	50-115	0			
2,4-Dichlorophenol	136.9	100	200	0	68.4	50-105	0			
2,4-Dimethylphenol	126.1	50	200	0	63	30-110	0			
2,4-Dinitrophenol	121	50	200	0	60.5	15-140	0			
2,4-Dinitrotoluene	155	50	200	0	77.5	50-120	0			
2,6-Dinitrotoluene	147.3	50	200	0	73.6	50-115	0			
2-Chloronaphthalene	126.9	50	200	0	63.4	50-105	0			
2-Chlorophenol	127.1	50	200	0	63.6	35-105	0			
2-Methylnaphthalene	129.1	50	200	0	64.6	45-105	0			
2-Methylphenol	114.3	50	200	0	57.2	40-110	0			
2-Nitroaniline	154.2	200	200	0	77.1	50-115	0			J
2-Nitrophenol	139.5	50	200	0	69.8	40-115	0			
3-Nitroaniline	155.8	200	200	0	77.9	20-125	0			J
4,6-Dinitro-2-methylphenol	142.1	200	200	0	71	40-130	0			J
4-Bromophenyl phenyl ether	143.3	50	200	0	71.6	50-115	0			
4-Chloro-3-methylphenol	137	50	200	0	68.5	45-110	0			
4-Chloroaniline	203	200	200	0	102	15-110	0			
4-Chlorophenyl phenyl ether	137	50	200	0	68.5	50-110	0			
4-Methylphenol	93	50	200	0	46.5	30-110	0			
4-Nitroaniline	179.3	200	200	0	89.6	35-150	0			J
4-Nitrophenol	42.6	200	200	0	21.3	1-58	0			J
Acenaphthene	134.8	50	200	0	67.4	45-110	0			
Acenaphthylene	129.1	50	200	0	64.6	50-105	0			
Anthracene	151.8	50	200	0	75.9	55-110	0			
Benzo(a)anthracene	161.8	50	200	0	80.9	55-110	0			
Benzo(a)pyrene	153.1	50	200	0	76.6	55-110	0			
Benzo(b)fluoranthene	147.5	50	200	0	73.8	45-120	0			
Benzo(g,h,i)perylene	165.7	50	200	0	82.8	40-125	0			
Benzo(k)fluoranthene	154.2	50	200	0	77.1	45-125	0			
Bis(2-chloroethoxy)methane	139.9	50	200	0	70	45-105	0			
Bis(2-chloroethyl)ether	135.5	50	200	0	67.8	35-110	0			
Bis(2-chloroisopropyl)ether	142.9	50	200	0	71.4	25-130	0			
Bis(2-ethylhexyl)phthalate	168.2	50	200	0	84.1	40-125	0			
Butyl benzyl phthalate	183.1	50	200	0	91.6	45-115	0			
Carbazole	155.6	100	200	0	77.8	50-150	0			
Chrysene	151.7	50	200	0	75.8	55-110	0			
Dibenzo(a,h)anthracene	159.5	50	200	0	79.8	40-125	0			
Dibenzofuran	128.7	50	200	0	64.4	55-105	0			
Diethyl phthalate	148.1	200	200	0	74	40-120	0			J
Dimethyl phthalate	136.8	200	200	0	68.4	25-125	0			J
Di-n-butyl phthalate	171	50	200	0	85.5	55-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 53387		Instrument ID SVMS4		Method: SW8270				
Di-n-octyl phthalate	161.8	50	200	0	80.9	35-135	0	
Fluoranthene	171.9	50	200	0	86	55-115	0	
Fluorene	141.8	50	200	0	70.9	50-110	0	
Hexachlorobenzene	161.1	50	200	0	80.6	50-110	0	
Hexachlorobutadiene	121	50	200	0	60.5	25-105	0	
Hexachlorocyclopentadiene	51.2	200	200	0	25.6	25-105	0	J
Hexachloroethane	132.6	50	200	0	66.3	30-95	0	
Indeno(1,2,3-cd)pyrene	161.5	50	200	0	80.8	45-125	0	
Isophorone	138.5	50	200	0	69.2	50-110	0	
Naphthalene	124.4	50	200	0	62.2	40-100	0	
Nitrobenzene	137.5	50	200	0	68.8	45-110	0	
N-Nitrosodi-n-propylamine	150.2	50	200	0	75.1	35-130	0	
N-Nitrosodiphenylamine	170.7	50	200	0	85.4	50-110	0	
Pentachlorophenol	106.2	200	200	0	53.1	40-115	0	J
Phenanthrene	152.7	50	200	0	76.4	50-115	0	
Phenol	53.7	50	200	0	26.8	12-43	0	
Pyrene	149	50	200	0	74.5	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	337.4	0	500	0	67.5	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	322.3	0	500	0	64.5	32-100	0	
<i>Surr: 2-Fluorophenol</i>	189.2	0	500	0	37.8	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	427.5	0	500	0	85.5	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	337.5	0	500	0	67.5	31-93	0	
<i>Surr: Phenol-d6</i>	119.3	0	500	0	23.9	13-36	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53387** Instrument ID **SVMS4** Method: **SW8270**

MSD				Sample ID: 1311817-01B MSD			Units: µg/L		Analysis Date: 11/18/13 03:11 PM	
Client ID: W-R2330009-111213-ACN-001				Run ID: SVMS4_131118A			SeqNo: 2544760		Prep Date: 11/18/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	136.6	50	200	0	68.3	50-110	126	8.07	30	
2,4,6-Trichlorophenol	144.5	50	200	0	72.2	50-115	130.6	10.1	30	
2,4-Dichlorophenol	148.7	100	200	0	74.4	50-105	136.9	8.26	30	
2,4-Dimethylphenol	143	50	200	0	71.5	30-110	126.1	12.6	30	
2,4-Dinitrophenol	116.8	50	200	0	58.4	15-140	121	3.53	30	
2,4-Dinitrotoluene	166.8	50	200	0	83.4	50-120	155	7.33	30	
2,6-Dinitrotoluene	159.2	50	200	0	79.6	50-115	147.3	7.77	30	
2-Chloronaphthalene	138.5	50	200	0	69.2	50-105	126.9	8.74	30	
2-Chlorophenol	132	50	200	0	66	35-105	127.1	3.78	30	
2-Methylnaphthalene	141.7	50	200	0	70.8	45-105	129.1	9.31	30	
2-Methylphenol	119	50	200	0	59.5	40-110	114.3	4.03	30	
2-Nitroaniline	168.5	200	200	0	84.2	50-115	154.2	0	30	J
2-Nitrophenol	151.4	50	200	0	75.7	40-115	139.5	8.18	30	
3-Nitroaniline	152.8	200	200	0	76.4	20-125	155.8	0	30	J
4,6-Dinitro-2-methylphenol	148.6	200	200	0	74.3	40-130	142.1	0	30	J
4-Bromophenyl phenyl ether	154.8	50	200	0	77.4	50-115	143.3	7.72	30	
4-Chloro-3-methylphenol	147.8	50	200	0	73.9	45-110	137	7.58	30	
4-Chloroaniline	216.4	200	200	0	108	15-110	203	6.39	30	
4-Chlorophenyl phenyl ether	149.5	50	200	0	74.8	50-110	137	8.73	30	
4-Methylphenol	96.4	50	200	0	48.2	30-110	93	3.59	30	
4-Nitroaniline	176.1	200	200	0	88	35-150	179.3	0	30	J
4-Nitrophenol	43.4	200	200	0	21.7	1-58	42.6	0	0	J
Acenaphthene	148.1	50	200	0	74	45-110	134.8	9.4	30	
Acenaphthylene	140	50	200	0	70	50-105	129.1	8.1	30	
Anthracene	162.3	50	200	0	81.2	55-110	151.8	6.69	30	
Benzo(a)anthracene	167.4	50	200	0	83.7	55-110	161.8	3.4	30	
Benzo(a)pyrene	161	50	200	0	80.5	55-110	153.1	5.03	30	
Benzo(b)fluoranthene	153.2	50	200	0	76.6	45-120	147.5	3.79	30	
Benzo(g,h,i)perylene	172.7	50	200	0	86.4	40-125	165.7	4.14	30	
Benzo(k)fluoranthene	162.1	50	200	0	81	45-125	154.2	5	30	
Bis(2-chloroethoxy)methane	155.1	50	200	0	77.6	45-105	139.9	10.3	30	
Bis(2-chloroethyl)ether	145.8	50	200	0	72.9	35-110	135.5	7.32	30	
Bis(2-chloroisopropyl)ether	156.1	50	200	0	78	25-130	142.9	8.83	30	
Bis(2-ethylhexyl)phthalate	174.2	50	200	0	87.1	40-125	168.2	3.5	30	
Butyl benzyl phthalate	191.6	50	200	0	95.8	45-115	183.1	4.54	30	
Carbazole	163.5	100	200	0	81.8	50-150	155.6	4.95	30	
Chrysene	157.4	50	200	0	78.7	55-110	151.7	3.69	30	
Dibenzo(a,h)anthracene	168.5	50	200	0	84.2	40-125	159.5	5.49	30	
Dibenzofuran	141.7	50	200	0	70.8	55-105	128.7	9.62	30	
Diethyl phthalate	159.3	200	200	0	79.6	40-120	148.1	0	30	J
Dimethyl phthalate	149.8	200	200	0	74.9	25-125	136.8	0	30	J
Di-n-butyl phthalate	180.5	50	200	0	90.2	55-115	171	5.41	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 53387		Instrument ID SVMS4		Method: SW8270					
Di-n-octyl phthalate	171.2	50	200	0	85.6	35-135	161.8	5.65	30
Fluoranthene	179.9	50	200	0	90	55-115	171.9	4.55	30
Fluorene	153.6	50	200	0	76.8	50-110	141.8	7.99	30
Hexachlorobenzene	174.2	50	200	0	87.1	50-110	161.1	7.81	30
Hexachlorobutadiene	130.5	50	200	0	65.2	25-105	121	7.55	30
Hexachlorocyclopentadiene	60	200	200	0	30	25-105	51.2	0	30 J
Hexachloroethane	141	50	200	0	70.5	30-95	132.6	6.14	30
Indeno(1,2,3-cd)pyrene	169.5	50	200	0	84.8	45-125	161.5	4.83	30
Isophorone	153.1	50	200	0	76.6	50-110	138.5	10	30
Naphthalene	135.5	50	200	0	67.8	40-100	124.4	8.54	30
Nitrobenzene	147.9	50	200	0	74	45-110	137.5	7.29	30
N-Nitrosodi-n-propylamine	167	50	200	0	83.5	35-130	150.2	10.6	30
N-Nitrosodiphenylamine	185.2	50	200	0	92.6	50-110	170.7	8.15	30
Pentachlorophenol	106.8	200	200	0	53.4	40-115	106.2	0	30 J
Phenanthrene	164.3	50	200	0	82.2	50-115	152.7	7.32	30
Phenol	53	50	200	0	26.5	12-43	53.7	1.31	30
Pyrene	156	50	200	0	78	50-130	149	4.59	30
<i>Surr: 2,4,6-Tribromophenol</i>	<i>354.7</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>70.9</i>	<i>38-115</i>	<i>337.4</i>	<i>5</i>	<i>40</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>357.2</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>71.4</i>	<i>32-100</i>	<i>322.3</i>	<i>10.3</i>	<i>40</i>
<i>Surr: 2-Fluorophenol</i>	<i>181.4</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>36.3</i>	<i>22-59</i>	<i>189.2</i>	<i>4.21</i>	<i>40</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>425.2</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>85</i>	<i>23-112</i>	<i>427.5</i>	<i>0.539</i>	<i>40</i>
<i>Surr: Nitrobenzene-d5</i>	<i>359.8</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>72</i>	<i>31-93</i>	<i>337.5</i>	<i>6.4</i>	<i>40</i>
<i>Surr: Phenol-d6</i>	<i>115.5</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>23.1</i>	<i>13-36</i>	<i>119.3</i>	<i>3.24</i>	<i>40</i>

The following samples were analyzed in this batch:

1311817-01B	1311817-02B	1311817-03B
1311817-04B	1311817-05B	1311817-06B
1311817-07B	1311817-08B	1311817-09B
1311817-10B		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53439** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKW1-53439-53439				Units: µg/L		Analysis Date: 11/20/13 07:22 PM		
Client ID:		Run ID: SVMS4_131120A				SeqNo: 2547709		Prep Date: 11/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	5.0								
2,4,5-Trichlorophenol	U	5.0								
2,4,6-Trichlorophenol	U	5.0								
2,4-Dichlorophenol	U	10								
2,4-Dimethylphenol	U	5.0								
2,4-Dinitrophenol	U	5.0								
2,4-Dinitrotoluene	U	5.0								
2,6-Dinitrotoluene	U	5.0								
2-Chloronaphthalene	U	5.0								
2-Chlorophenol	U	5.0								
2-Methylnaphthalene	U	5.0								
2-Methylphenol	U	5.0								
2-Nitroaniline	U	20								
2-Nitrophenol	U	5.0								
3,3'-Dichlorobenzidine	U	5.0								
3-Nitroaniline	U	20								
4,6-Dinitro-2-methylphenol	U	20								
4-Bromophenyl phenyl ether	U	5.0								
4-Chloro-3-methylphenol	U	5.0								
4-Chloroaniline	U	20								
4-Chlorophenyl phenyl ether	U	5.0								
4-Methylphenol	U	5.0								
4-Nitroaniline	U	20								
4-Nitrophenol	U	20								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Acetophenone	U	1.0								
Anthracene	U	5.0								
Atrazine	U	1.0								
Benzaldehyde	U	1.0								
Benzo(a)anthracene	U	5.0								
Benzo(a)pyrene	U	5.0								
Benzo(b)fluoranthene	U	5.0								
Benzo(g,h,i)perylene	U	5.0								
Benzo(k)fluoranthene	U	5.0								
Bis(2-chloroethoxy)methane	U	5.0								
Bis(2-chloroethyl)ether	U	5.0								
Bis(2-chloroisopropyl)ether	U	5.0								
Bis(2-ethylhexyl)phthalate	U	5.0								
Butyl benzyl phthalate	U	5.0								
Caprolactam	U	10								
Carbazole	U	10								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
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QC BATCH REPORT

Batch ID: 53439		Instrument ID SVMS4		Method: SW8270				
Chrysene	U	5.0						
Dibenzo(a,h)anthracene	U	5.0						
Dibenzofuran	U	5.0						
Diethyl phthalate	U	20						
Dimethyl phthalate	U	20						
Di-n-butyl phthalate	U	5.0						
Di-n-octyl phthalate	U	5.0						
Fluoranthene	U	5.0						
Fluorene	U	5.0						
Hexachlorobenzene	U	5.0						
Hexachlorobutadiene	U	5.0						
Hexachlorocyclopentadiene	U	20						
Hexachloroethane	U	5.0						
Indeno(1,2,3-cd)pyrene	U	5.0						
Isophorone	U	5.0						
Naphthalene	U	5.0						
Nitrobenzene	U	5.0						
N-Nitrosodi-n-propylamine	U	5.0						
N-Nitrosodiphenylamine	U	5.0						
Pentachlorophenol	U	20						
Phenanthrene	U	5.0						
Phenol	U	5.0						
Pyrene	U	5.0						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>29.12</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>58.2</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>30.59</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>61.2</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>17.51</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>35</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>45.41</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>90.8</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>31.08</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>62.2</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>9.87</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>19.7</i>	<i>13-36</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53439** Instrument ID **SVMS4** Method: **SW8270**

LCS		Sample ID: SLCSW1-53439-53439				Units: µg/L		Analysis Date: 11/20/13 05:47 PM		
Client ID:		Run ID: SVMS4_131120A				SeqNo: 2547702		Prep Date: 11/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	11.38	5.0	20	0	56.9	50-110	0			
2,4,6-Trichlorophenol	11.8	5.0	20	0	59	50-115	0			
2,4-Dichlorophenol	13.52	10	20	0	67.6	50-105	0			
2,4-Dimethylphenol	10.48	5.0	20	0	52.4	30-110	0			
2,4-Dinitrophenol	12.49	5.0	20	0	62.4	15-140	0			
2,4-Dinitrotoluene	15.55	5.0	20	0	77.8	50-120	0			
2,6-Dinitrotoluene	14.73	5.0	20	0	73.6	50-115	0			
2-Chloronaphthalene	13.26	5.0	20	0	66.3	50-105	0			
2-Chlorophenol	12.37	5.0	20	0	61.8	35-105	0			
2-Methylnaphthalene	13.13	5.0	20	0	65.6	45-105	0			
2-Methylphenol	10.73	5.0	20	0	53.6	40-110	0			
2-Nitroaniline	15.3	20	20	0	76.5	50-115	0			J
2-Nitrophenol	13.83	5.0	20	0	69.2	40-115	0			
3-Nitroaniline	12.67	20	20	0	63.4	20-125	0			J
4,6-Dinitro-2-methylphenol	15.31	20	20	0	76.6	40-130	0			J
4-Bromophenyl phenyl ether	14.09	5.0	20	0	70.4	50-115	0			
4-Chloro-3-methylphenol	12.67	5.0	20	0	63.4	45-110	0			
4-Chloroaniline	15.87	20	20	0	79.4	15-110	0			J
4-Chlorophenyl phenyl ether	13.56	5.0	20	0	67.8	50-110	0			
4-Methylphenol	8.47	5.0	20	0	42.4	30-110	0			
4-Nitroaniline	14.3	20	20	0	71.5	35-150	0			J
4-Nitrophenol	6.67	20	20	0	33.4	1-58	0			J
Acenaphthene	13.64	5.0	20	0	68.2	45-110	0			
Acenaphthylene	13.35	5.0	20	0	66.8	50-105	0			
Anthracene	15.36	5.0	20	0	76.8	55-110	0			
Benzo(a)anthracene	16.48	5.0	20	0	82.4	55-110	0			
Benzo(a)pyrene	15.16	5.0	20	0	75.8	55-110	0			
Benzo(b)fluoranthene	14.21	5.0	20	0	71	45-120	0			
Benzo(g,h,i)perylene	14.96	5.0	20	0	74.8	40-125	0			
Benzo(k)fluoranthene	15.48	5.0	20	0	77.4	45-125	0			
Bis(2-chloroethoxy)methane	13.6	5.0	20	0	68	45-105	0			
Bis(2-chloroethyl)ether	14.87	5.0	20	0	74.4	35-110	0			
Bis(2-chloroisopropyl)ether	12.88	5.0	20	0	64.4	25-130	0			
Bis(2-ethylhexyl)phthalate	16.6	5.0	20	0	83	40-125	0			
Butyl benzyl phthalate	18.09	5.0	20	0	90.4	45-115	0			
Carbazole	15.31	10	20	0	76.6	50-150	0			
Chrysene	16.33	5.0	20	0	81.6	55-110	0			
Dibenzo(a,h)anthracene	15.19	5.0	20	0	76	40-125	0			
Dibenzofuran	13.56	5.0	20	0	67.8	55-105	0			
Diethyl phthalate	16.67	20	20	0	83.4	40-120	0			J
Dimethyl phthalate	13.89	20	20	0	69.4	25-125	0			J
Di-n-butyl phthalate	16.63	5.0	20	0	83.2	55-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 53439		Instrument ID SVMS4		Method: SW8270				
Di-n-octyl phthalate	15.92	5.0	20	0	79.6	35-135	0	
Fluoranthene	16.76	5.0	20	0	83.8	55-115	0	
Fluorene	14.27	5.0	20	0	71.4	50-110	0	
Hexachlorobenzene	14.94	5.0	20	0	74.7	50-110	0	
Hexachlorobutadiene	11.86	5.0	20	0	59.3	25-105	0	
Hexachlorocyclopentadiene	9.92	20	20	0	49.6	25-105	0	J
Hexachloroethane	13.09	5.0	20	0	65.4	30-95	0	
Indeno(1,2,3-cd)pyrene	15.29	5.0	20	0	76.4	45-125	0	
Isophorone	13.46	5.0	20	0	67.3	50-110	0	
Naphthalene	12.54	5.0	20	0	62.7	40-100	0	
Nitrobenzene	13.93	5.0	20	0	69.6	45-110	0	
N-Nitrosodi-n-propylamine	14.27	5.0	20	0	71.4	35-130	0	
N-Nitrosodiphenylamine	16.15	5.0	20	0	80.8	50-110	0	
Pentachlorophenol	14.62	20	20	0	73.1	40-115	0	J
Phenanthrene	15.39	5.0	20	0	77	50-115	0	
Phenol	4.96	5.0	20	0	24.8	12-43	0	J
Pyrene	15.59	5.0	20	0	78	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	31.65	0	50	0	63.3	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	33.37	0	50	0	66.7	32-100	0	
<i>Surr: 2-Fluorophenol</i>	17.43	0	50	0	34.9	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	43.76	0	50	0	87.5	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	32.85	0	50	0	65.7	31-93	0	
<i>Surr: Phenol-d6</i>	11.12	0	50	0	22.2	13-36	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53439** Instrument ID **SVMS4** Method: **SW8270**

MS				Sample ID: 1311817-11B MS			Units: µg/L		Analysis Date: 11/20/13 06:18 PM	
Client ID: W-R2330009-111313-ACN-011				Run ID: SVMS4_131120A			SeqNo: 2547704		Prep Date: 11/19/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	119.8	50	200	0	59.9	50-110	0			
2,4,6-Trichlorophenol	119.6	50	200	0	59.8	50-115	0			
2,4-Dichlorophenol	131.3	100	200	0	65.6	50-105	0			
2,4-Dimethylphenol	106.6	50	200	0	53.3	30-110	0			
2,4-Dinitrophenol	138.6	50	200	0	69.3	15-140	0			
2,4-Dinitrotoluene	148.3	50	200	0	74.2	50-120	0			
2,6-Dinitrotoluene	140.8	50	200	0	70.4	50-115	0			
2-Chloronaphthalene	124.3	50	200	0	62.2	50-105	0			
2-Chlorophenol	123.1	50	200	0	61.6	35-105	0			
2-Methylnaphthalene	125.6	50	200	0	62.8	45-105	0			
2-Methylphenol	108.8	50	200	0	54.4	40-110	0			
2-Nitroaniline	146	200	200	0	73	50-115	0			J
2-Nitrophenol	132.4	50	200	0	66.2	40-115	0			
3-Nitroaniline	140.6	200	200	0	70.3	20-125	0			J
4,6-Dinitro-2-methylphenol	151.7	200	200	0	75.8	40-130	0			J
4-Bromophenyl phenyl ether	134.4	50	200	0	67.2	50-115	0			
4-Chloro-3-methylphenol	128.3	50	200	0	64.2	45-110	0			
4-Chloroaniline	169.7	200	200	0	84.8	15-110	0			J
4-Chlorophenyl phenyl ether	129.4	50	200	0	64.7	50-110	0			
4-Methylphenol	85.9	50	200	0	43	30-110	0			
4-Nitroaniline	166.6	200	200	0	83.3	35-150	0			J
4-Nitrophenol	78.4	200	200	0	39.2	1-58	0			J
Acenaphthene	129.4	50	200	0	64.7	45-110	0			
Acenaphthylene	125.9	50	200	0	63	50-105	0			
Anthracene	146.7	50	200	0	73.4	55-110	0			
Benzo(a)anthracene	154.1	50	200	0	77	55-110	0			
Benzo(a)pyrene	141.5	50	200	0	70.8	55-110	0			
Benzo(b)fluoranthene	133	50	200	0	66.5	45-120	0			
Benzo(g,h,i)perylene	145.9	50	200	0	73	40-125	0			
Benzo(k)fluoranthene	142.4	50	200	0	71.2	45-125	0			
Bis(2-chloroethoxy)methane	128.9	50	200	0	64.4	45-105	0			
Bis(2-chloroethyl)ether	128.4	50	200	0	64.2	35-110	0			
Bis(2-chloroisopropyl)ether	121.8	50	200	0	60.9	25-130	0			
Bis(2-ethylhexyl)phthalate	155.7	50	200	0.47	77.6	40-125	0			
Butyl benzyl phthalate	168.8	50	200	0	84.4	45-115	0			
Carbazole	159.2	100	200	0.15	79.5	50-150	0			
Chrysene	152.2	50	200	0	76.1	55-110	0			
Dibenzo(a,h)anthracene	142.6	50	200	0	71.3	40-125	0			
Dibenzofuran	128.4	50	200	0	64.2	55-105	0			
Diethyl phthalate	161.6	200	200	0	80.8	40-120	0			J
Dimethyl phthalate	133.3	200	200	0	66.6	25-125	0			J
Di-n-butyl phthalate	156	50	200	0	78	55-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 53439		Instrument ID SVMS4		Method: SW8270				
Di-n-octyl phthalate	146.9	50	200	0	73.4	35-135	0	
Fluoranthene	155.7	50	200	0	77.8	55-115	0	
Fluorene	135.8	50	200	0	67.9	50-110	0	
Hexachlorobenzene	141.6	50	200	0	70.8	50-110	0	
Hexachlorobutadiene	111.5	50	200	0	55.8	25-105	0	
Hexachlorocyclopentadiene	102.1	200	200	0	51	25-105	0	J
Hexachloroethane	123	50	200	0	61.5	30-95	0	
Indeno(1,2,3-cd)pyrene	143.9	50	200	0	72	45-125	0	
Isophorone	126.5	50	200	0	63.2	50-110	0	
Naphthalene	119.8	50	200	0	59.9	40-100	0	
Nitrobenzene	132.4	50	200	0	66.2	45-110	0	
N-Nitrosodi-n-propylamine	135.5	50	200	0	67.8	35-130	0	
N-Nitrosodiphenylamine	154.4	50	200	0	77.2	50-110	0	
Pentachlorophenol	173.1	200	200	0	86.6	40-115	0	J
Phenanthrene	146.6	50	200	0	73.3	50-115	0	
Phenol	46.8	50	200	0	23.4	12-43	0	J
Pyrene	148.4	50	200	0	74.2	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	334.1	0	500	0	66.8	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	318.4	0	500	0	63.7	32-100	0	
<i>Surr: 2-Fluorophenol</i>	171.1	0	500	0	34.2	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	431.5	0	500	0	86.3	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	314.6	0	500	0	62.9	31-93	0	
<i>Surr: Phenol-d6</i>	105.5	0	500	0	21.1	13-36	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53439** Instrument ID **SVMS4** Method: **SW8270**

MSD				Sample ID: 1311817-11B MSD			Units: µg/L		Analysis Date: 11/20/13 06:50 PM		
Client ID: W-R2330009-111313-ACN-011			Run ID: SVMS4_131120A			SeqNo: 2547707		Prep Date: 11/19/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
2,4,5-Trichlorophenol	100.8	50	200	0	50.4	50-110	119.8	17.2	30		
2,4,6-Trichlorophenol	98.4	50	200	0	49.2	50-115	119.6	19.4	30	S	
2,4-Dichlorophenol	102.3	100	200	0	51.2	50-105	131.3	24.8	30		
2,4-Dimethylphenol	78.1	50	200	0	39	30-110	106.6	30.9	30	R	
2,4-Dinitrophenol	132.6	50	200	0	66.3	15-140	138.6	4.42	30		
2,4-Dinitrotoluene	144.6	50	200	0	72.3	50-120	148.3	2.53	30		
2,6-Dinitrotoluene	128.9	50	200	0	64.4	50-115	140.8	8.82	30		
2-Chloronaphthalene	98.5	50	200	0	49.2	50-105	124.3	23.2	30	S	
2-Chlorophenol	96.1	50	200	0	48	35-105	123.1	24.6	30		
2-Methylnaphthalene	97.2	50	200	0	48.6	45-105	125.6	25.5	30		
2-Methylphenol	86.4	50	200	0	43.2	40-110	108.8	23	30		
2-Nitroaniline	132.9	200	200	0	66.4	50-115	146	0	30	J	
2-Nitrophenol	102.3	50	200	0	51.2	40-115	132.4	25.6	30		
3-Nitroaniline	138.3	200	200	0	69.2	20-125	140.6	0	30	J	
4,6-Dinitro-2-methylphenol	146.3	200	200	0	73.2	40-130	151.7	0	30	J	
4-Bromophenyl phenyl ether	126.7	50	200	0	63.4	50-115	134.4	5.9	30		
4-Chloro-3-methylphenol	109.1	50	200	0	54.6	45-110	128.3	16.2	30		
4-Chloroaniline	134.5	200	200	0	67.2	15-110	169.7	0	30	J	
4-Chlorophenyl phenyl ether	113.6	50	200	0	56.8	50-110	129.4	13	30		
4-Methylphenol	71.6	50	200	0	35.8	30-110	85.9	18.2	30		
4-Nitroaniline	162	200	200	0	81	35-150	166.6	0	30	J	
4-Nitrophenol	76.4	200	200	0	38.2	1-58	78.4	0	0	J	
Acenaphthene	106.2	50	200	0	53.1	45-110	129.4	19.7	30		
Acenaphthylene	102.2	50	200	0	51.1	50-105	125.9	20.8	30		
Anthracene	141	50	200	0	70.5	55-110	146.7	3.96	30		
Benzo(a)anthracene	152.1	50	200	0	76	55-110	154.1	1.31	30		
Benzo(a)pyrene	142	50	200	0	71	55-110	141.5	0.353	30		
Benzo(b)fluoranthene	133	50	200	0	66.5	45-120	133	0	30		
Benzo(g,h,i)perylene	148.9	50	200	0	74.4	40-125	145.9	2.04	30		
Benzo(k)fluoranthene	142.7	50	200	0	71.4	45-125	142.4	0.21	30		
Bis(2-chloroethoxy)methane	101.3	50	200	0	50.6	45-105	128.9	24	30		
Bis(2-chloroethyl)ether	103.2	50	200	0	51.6	35-110	128.4	21.8	30		
Bis(2-chloroisopropyl)ether	95	50	200	0	47.5	25-130	121.8	24.7	30		
Bis(2-ethylhexyl)phthalate	156.1	50	200	0.47	77.8	40-125	155.7	0.257	30		
Butyl benzyl phthalate	168.2	50	200	0	84.1	45-115	168.8	0.356	30		
Carbazole	156.4	100	200	0.15	78.1	50-150	159.2	1.77	30		
Chrysene	150.2	50	200	0	75.1	55-110	152.2	1.32	30		
Dibenzo(a,h)anthracene	144.7	50	200	0	72.4	40-125	142.6	1.46	30		
Dibenzofuran	108.7	50	200	0	54.4	55-105	128.4	16.6	30	S	
Diethyl phthalate	155.6	200	200	0	77.8	40-120	161.6	0	30	J	
Dimethyl phthalate	122.8	200	200	0	61.4	25-125	133.3	0	30	J	
Di-n-butyl phthalate	155.8	50	200	0	77.9	55-115	156	0.128	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 53439		Instrument ID SVMS4		Method: SW8270					
Di-n-octyl phthalate	149.7	50	200	0	74.8	35-135	146.9	1.89	30
Fluoranthene	155.8	50	200	0	77.9	55-115	155.7	0.0642	30
Fluorene	120.9	50	200	0	60.4	50-110	135.8	11.6	30
Hexachlorobenzene	133.2	50	200	0	66.6	50-110	141.6	6.11	30
Hexachlorobutadiene	86.3	50	200	0	43.2	25-105	111.5	25.5	30
Hexachlorocyclopentadiene	87.8	200	200	0	43.9	25-105	102.1	0	30 J
Hexachloroethane	95.8	50	200	0	47.9	30-95	123	24.9	30
Indeno(1,2,3-cd)pyrene	145.9	50	200	0	73	45-125	143.9	1.38	30
Isophorone	100.8	50	200	0	50.4	50-110	126.5	22.6	30
Naphthalene	92.9	50	200	0	46.4	40-100	119.8	25.3	30
Nitrobenzene	103.4	50	200	0	51.7	45-110	132.4	24.6	30
N-Nitrosodi-n-propylamine	107.1	50	200	0	53.6	35-130	135.5	23.4	30
N-Nitrosodiphenylamine	148.7	50	200	0	74.4	50-110	154.4	3.76	30
Pentachlorophenol	172.6	200	200	0	86.3	40-115	173.1	0	30 J
Phenanthrene	141.7	50	200	0	70.8	50-115	146.6	3.4	30
Phenol	38.7	50	200	0	19.4	12-43	46.8	0	30 J
Pyrene	144.5	50	200	0	72.2	50-130	148.4	2.66	30
<i>Surr: 2,4,6-Tribromophenol</i>	313.9	0	500	0	62.8	38-115	334.1	6.23	40
<i>Surr: 2-Fluorobiphenyl</i>	246.8	0	500	0	49.4	32-100	318.4	25.3	40
<i>Surr: 2-Fluorophenol</i>	137.8	0	500	0	27.6	22-59	171.1	21.6	40
<i>Surr: 4-Terphenyl-d14</i>	411.6	0	500	0	82.3	23-112	431.5	4.72	40
<i>Surr: Nitrobenzene-d5</i>	244.7	0	500	0	48.9	31-93	314.6	25	40
<i>Surr: Phenol-d6</i>	85.8	0	500	0	17.2	13-36	105.5	20.6	40

The following samples were analyzed in this batch:

1311817-11B	1311817-12B	1311817-13B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R131098** Instrument ID **VMS9** Method: **SW8260**

MBLK		Sample ID: VBK2-131122-R131098				Units: µg/L		Analysis Date: 11/23/13 03:20 AM		
Client ID:		Run ID: VMS9_131122B				SeqNo: 2551542		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1,2-Trichlorotrifluoroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2-Dibromo-3-chloropropane	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	2.0								
1,3-Dichlorobenzene	U	2.0								
1,4-Dichlorobenzene	U	2.0								
2-Butanone	U	5.0								
2-Hexanone	U	5.0								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	20								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.5								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	5.0								
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	2.0								
Methyl tert-butyl ether	U	5.0								
Methylcyclohexane	U	5.0								
Methylene chloride	U	5.0								
Styrene	U	1.0								
Tetrachloroethene	U	2.0								
Toluene	U	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R131098	Instrument ID VMS9	Method: SW8260						
trans-1,2-Dichloroethene	U	1.0						
trans-1,3-Dichloropropene	U	1.0						
Trichloroethene	U	1.0						
Trichlorofluoromethane	U	1.0						
Vinyl chloride	U	1.0						
Xylenes, Total	U	3.0						
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>21.32</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>107</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>18.63</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>93.2</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>21.25</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>106</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.42</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.1</i>	<i>85-120</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R131098** Instrument ID **VMS9** Method: **SW8260**

LCS				Sample ID: VLCSW2-131122-R131098			Units: µg/L		Analysis Date: 11/23/13 02:07 AM	
Client ID:				Run ID: VMS9_131122B			SeqNo: 2551541		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.22	1.0	20	0	111	65-130	0			
1,1,2,2-Tetrachloroethane	23.04	1.0	20	0	115	65-130	0			
1,1,2-Trichloroethane	21.53	1.0	20	0	108	75-125	0			
1,1-Dichloroethane	25.84	1.0	20	0	129	70-135	0			
1,1-Dichloroethene	23.41	1.0	20	0	117	70-130	0			
1,2,4-Trichlorobenzene	21.35	1.0	20	0	107	65-135	0			
1,2-Dibromo-3-chloropropane	20.77	1.0	20	0	104	50-130	0			
1,2-Dibromoethane	23.01	1.0	20	0	115	80-120	0			
1,2-Dichlorobenzene	21.22	1.0	20	0	106	70-120	0			
1,2-Dichloroethane	23.63	1.0	20	0	118	70-130	0			
1,2-Dichloropropane	22.75	2.0	20	0	114	75-125	0			
1,3-Dichlorobenzene	21.18	2.0	20	0	106	75-125	0			
1,4-Dichlorobenzene	20.95	2.0	20	0	105	75-125	0			
2-Butanone	22.76	5.0	20	0	114	30-150	0			
2-Hexanone	19.54	5.0	20	0	97.7	55-130	0			
4-Methyl-2-pentanone	28.04	5.0	20	0	140	60-135	0			S
Acetone	27.06	20	20	0	135	40-140	0			
Benzene	21.51	1.0	20	0	108	80-120	0			
Bromodichloromethane	23.68	1.0	20	0	118	75-120	0			
Bromoform	21.03	1.0	20	0	105	70-130	0			
Bromomethane	24.54	1.0	20	0	123	30-145	0			
Carbon disulfide	26.1	2.5	20	0	130	35-165	0			
Carbon tetrachloride	20	1.0	20	0	100	65-140	0			
Chlorobenzene	21.24	1.0	20	0	106	80-120	0			
Chloroethane	19.74	1.0	20	0	98.7	60-135	0			
Chloroform	22.45	1.0	20	0	112	65-135	0			
Chloromethane	22.07	1.0	20	0	110	70-125	0			
cis-1,2-Dichloroethene	22.19	1.0	20	0	111	70-125	0			
cis-1,3-Dichloropropene	22.09	1.0	20	0	110	70-130	0			
Dibromochloromethane	20.16	1.0	20	0	101	60-135	0			
Dichlorodifluoromethane	22.99	1.0	20	0	115	30-155	0			
Ethylbenzene	21.52	1.0	20	0	108	75-125	0			
Isopropylbenzene	20.27	1.0	20	0	101	75-125	0			
Methyl tert-butyl ether	23.33	5.0	20	0	117	65-125	0			
Methylene chloride	25.35	5.0	20	0	127	55-140	0			
Styrene	21.34	1.0	20	0	107	65-135	0			
Tetrachloroethene	19.63	2.0	20	0	98.2	45-150	0			
Toluene	21.03	1.0	20	0	105	75-120	0			
trans-1,2-Dichloroethene	25.12	1.0	20	0	126	60-140	0			
trans-1,3-Dichloropropene	22.37	1.0	20	0	112	55-140	0			
Trichloroethene	20.99	1.0	20	0	105	70-125	0			
Trichlorofluoromethane	21.4	1.0	20	0	107	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R131098		Instrument ID VMS9		Method: SW8260			
Vinyl chloride	21.85	1.0	20	0	109	50-145	0
Xylenes, Total	65.68	3.0	60	0	109	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.42</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>102</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>21.06</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>105</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>20.56</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>103</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.92</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.6</i>	<i>85-120</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R131098** Instrument ID **VMS9** Method: **SW8260**

MS Sample ID: 1311937-07A MS				Units: µg/L		Analysis Date: 11/23/13 11:47 AM				
Client ID:		Run ID: VMS9_131122B		SeqNo: 2551557		Prep Date:		DF: 100		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	2336	100	2000	0	117	65-130	0			
1,1,2,2-Tetrachloroethane	2630	100	2000	0	132	65-130	0			S
1,1,2-Trichloroethane	2460	100	2000	0	123	75-125	0			
1,1-Dichloroethane	3913	100	2000	0	196	70-135	0			S
1,1-Dichloroethene	4040	100	2000	0	202	70-130	0			S
1,2,4-Trichlorobenzene	2121	100	2000	0	106	65-135	0			
1,2-Dibromo-3-chloropropane	2149	100	2000	0	107	50-130	0			
1,2-Dibromoethane	2586	100	2000	0	129	80-120	0			S
1,2-Dichlorobenzene	2278	100	2000	0	114	70-120	0			
1,2-Dichloroethane	2672	100	2000	0	134	70-130	0			S
1,2-Dichloropropane	2595	200	2000	0	130	75-125	0			S
1,3-Dichlorobenzene	2289	200	2000	0	114	75-125	0			
1,4-Dichlorobenzene	2241	200	2000	0	112	75-125	0			
2-Butanone	2455	500	2000	0	123	30-150	0			
2-Hexanone	1943	500	2000	0	97.2	55-130	0			
4-Methyl-2-pentanone	2910	500	2000	0	146	60-135	0			S
Acetone	4876	2,000	2000	0	244	40-140	0			S
Benzene	2372	100	2000	0	119	80-120	0			
Bromodichloromethane	2682	100	2000	0	134	75-120	0			S
Bromoform	2259	100	2000	0	113	70-130	0			
Bromomethane	2433	100	2000	0	122	30-145	0			
Carbon disulfide	3825	250	2000	0	191	35-165	0			S
Carbon tetrachloride	1998	100	2000	0	99.9	65-140	0			
Chlorobenzene	2301	100	2000	0	115	80-120	0			
Chloroethane	3184	100	2000	0	159	60-135	0			S
Chloroform	2510	100	2000	0	126	65-135	0			
Chloromethane	2284	100	2000	0	114	70-125	0			
cis-1,2-Dichloroethene	2426	100	2000	0	121	70-125	0			
cis-1,3-Dichloropropene	2276	100	2000	0	114	70-130	0			
Dibromochloromethane	2169	100	2000	0	108	60-135	0			
Dichlorodifluoromethane	2577	100	2000	0	129	30-155	0			
Ethylbenzene	2298	100	2000	0	115	75-125	0			
Isopropylbenzene	2189	100	2000	0	109	75-125	0			
Methyl tert-butyl ether	3494	500	2000	0	175	65-125	0			S
Methylene chloride	4420	500	2000	0	221	55-140	0			S
Styrene	2362	100	2000	0	118	65-135	0			
Tetrachloroethene	2197	200	2000	0	110	45-150	0			
Toluene	2289	100	2000	0	114	75-120	0			
trans-1,2-Dichloroethene	4048	100	2000	0	202	60-140	0			S
trans-1,3-Dichloropropene	2289	100	2000	0	114	55-140	0			
Trichloroethene	2330	100	2000	0	116	70-125	0			
Trichlorofluoromethane	3151	100	2000	0	158	60-145	0			S

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R131098	Instrument ID VMS9		Method: SW8260				
Vinyl chloride	2427	100	2000	0	121	50-145	0
Xylenes, Total	7151	300	6000	0	119	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	2201	0	2000	0	110	70-120	0
<i>Surr: 4-Bromofluorobenzene</i>	2158	0	2000	0	108	75-120	0
<i>Surr: Dibromofluoromethane</i>	2192	0	2000	0	110	85-115	0
<i>Surr: Toluene-d8</i>	1982	0	2000	0	99.1	85-120	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R131098** Instrument ID **VMS9** Method: **SW8260**

MSD				Sample ID: 1311937-07A MSD				Units: µg/L		Analysis Date: 11/23/13 12:12 PM	
Client ID:			Run ID: VMS9_131122B			SeqNo: 2551558		Prep Date:		DF: 100	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	2321	100	2000	0	116	65-130	2336	0.644	30		
1,1,2,2-Tetrachloroethane	2540	100	2000	0	127	65-130	2630	3.48	30		
1,1,2-Trichloroethane	2419	100	2000	0	121	75-125	2460	1.68	30		
1,1-Dichloroethane	3250	100	2000	0	162	70-135	3913	18.5	30	S	
1,1-Dichloroethene	3619	100	2000	0	181	70-130	4040	11	30	S	
1,2,4-Trichlorobenzene	2294	100	2000	0	115	65-135	2121	7.84	30		
1,2-Dibromo-3-chloropropane	2253	100	2000	0	113	50-130	2149	4.73	30		
1,2-Dibromoethane	2593	100	2000	0	130	80-120	2586	0.27	30	S	
1,2-Dichlorobenzene	2294	100	2000	0	115	70-120	2278	0.7	30		
1,2-Dichloroethane	2653	100	2000	0	133	70-130	2672	0.714	30	S	
1,2-Dichloropropane	2505	200	2000	0	125	75-125	2595	3.53	30	S	
1,3-Dichlorobenzene	2299	200	2000	0	115	75-125	2289	0.436	30		
1,4-Dichlorobenzene	2339	200	2000	0	117	75-125	2241	4.28	30		
2-Butanone	2426	500	2000	0	121	30-150	2455	1.19	30		
2-Hexanone	2099	500	2000	0	105	55-130	1943	7.72	30		
4-Methyl-2-pentanone	2964	500	2000	0	148	60-135	2910	1.84	30	S	
Acetone	4822	2,000	2000	0	241	40-140	4876	1.11	30	S	
Benzene	2377	100	2000	0	119	80-120	2372	0.211	30		
Bromodichloromethane	2634	100	2000	0	132	75-120	2682	1.81	30	S	
Bromoform	2250	100	2000	0	112	70-130	2259	0.399	30		
Bromomethane	2555	100	2000	0	128	30-145	2433	4.89	30		
Carbon disulfide	3689	250	2000	0	184	35-165	3825	3.62	30	S	
Carbon tetrachloride	2044	100	2000	0	102	65-140	1998	2.28	30		
Chlorobenzene	2277	100	2000	0	114	80-120	2301	1.05	30		
Chloroethane	3138	100	2000	0	157	60-135	3184	1.46	30	S	
Chloroform	2422	100	2000	0	121	65-135	2510	3.57	30		
Chloromethane	2243	100	2000	0	112	70-125	2284	1.81	30		
cis-1,2-Dichloroethene	2332	100	2000	0	117	70-125	2426	3.95	30		
cis-1,3-Dichloropropene	2280	100	2000	0	114	70-130	2276	0.176	30		
Dibromochloromethane	2149	100	2000	0	107	60-135	2169	0.926	30		
Dichlorodifluoromethane	2408	100	2000	0	120	30-155	2577	6.78	30		
Ethylbenzene	2293	100	2000	0	115	75-125	2298	0.218	30		
Isopropylbenzene	2171	100	2000	0	109	75-125	2189	0.826	30		
Methyl tert-butyl ether	3194	500	2000	0	160	65-125	3494	8.97	30	S	
Methylene chloride	4200	500	2000	0	210	55-140	4420	5.1	30	S	
Styrene	2361	100	2000	0	118	65-135	2362	0.0423	30		
Tetrachloroethene	2142	200	2000	0	107	45-150	2197	2.54	30		
Toluene	2258	100	2000	0	113	75-120	2289	1.36	30		
trans-1,2-Dichloroethene	3642	100	2000	0	182	60-140	4048	10.6	30	S	
trans-1,3-Dichloropropene	2264	100	2000	0	113	55-140	2289	1.1	30		
Trichloroethene	2302	100	2000	0	115	70-125	2330	1.21	30		
Trichlorofluoromethane	3047	100	2000	0	152	60-145	3151	3.36	30	S	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R131098	Instrument ID VMS9			Method: SW8260					
Vinyl chloride	2387	100	2000	0	119	50-145	2427	1.66	30
Xylenes, Total	7104	300	6000	0	118	75-130	7151	0.659	30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>2140</i>	<i>0</i>	<i>2000</i>	<i>0</i>	<i>107</i>	<i>70-120</i>	<i>2201</i>	<i>2.81</i>	<i>30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>2135</i>	<i>0</i>	<i>2000</i>	<i>0</i>	<i>107</i>	<i>75-120</i>	<i>2158</i>	<i>1.07</i>	<i>30</i>
<i>Surr: Dibromofluoromethane</i>	<i>2120</i>	<i>0</i>	<i>2000</i>	<i>0</i>	<i>106</i>	<i>85-115</i>	<i>2192</i>	<i>3.34</i>	<i>30</i>
<i>Surr: Toluene-d8</i>	<i>2030</i>	<i>0</i>	<i>2000</i>	<i>0</i>	<i>102</i>	<i>85-120</i>	<i>1982</i>	<i>2.39</i>	<i>30</i>

The following samples were analyzed in this batch:

1311817-01A	1311817-02A	1311817-03A
1311817-04A	1311817-05A	1311817-06A
1311817-07A	1311817-08A	1311817-09A
1311817-10A	1311817-11A	1311817-12A
1311817-13A	1311817-14A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53386** Instrument ID **LACHAT** Method: **SW9012A**

MBLK		Sample ID: MBLK-53386-53386				Units: mg/L		Analysis Date: 11/19/13 09:37 AM		
Client ID:		Run ID: LACHAT_131119C				SeqNo: 2544651		Prep Date: 11/17/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable U 0.0050

LCS		Sample ID: LCS-53386-53386				Units: mg/L		Analysis Date: 11/19/13 09:37 AM		
Client ID:		Run ID: LACHAT_131119C				SeqNo: 2544652		Prep Date: 11/17/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2363 0.0050 0.25 0 94.5 83-120 0

MS		Sample ID: 1311817-01C MS				Units: mg/L		Analysis Date: 11/19/13 09:37 AM		
Client ID: W-R2330009-111213-ACN-001		Run ID: LACHAT_131119C				SeqNo: 2544654		Prep Date: 11/17/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2449 0.0050 0.25 0 98 70-130 0

MSD		Sample ID: 1311817-01C MSD				Units: mg/L		Analysis Date: 11/19/13 09:37 AM		
Client ID: W-R2330009-111213-ACN-001		Run ID: LACHAT_131119C				SeqNo: 2544655		Prep Date: 11/17/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2496 0.0050 0.25 0 99.8 70-130 0.2449 1.9 30

The following samples were analyzed in this batch:

1311817-01C	1311817-02C	1311817-03C
1311817-04C	1311817-05C	1311817-06C
1311817-07C	1311817-08C	1311817-09C
1311817-10C		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1311817
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **53431** Instrument ID **LACHAT** Method: **SW9012A**

MBLK		Sample ID: MBLK-53431-53431				Units: mg/L		Analysis Date: 11/19/13 09:37 AM		
Client ID:		Run ID: LACHAT_131119E		SeqNo: 2544699		Prep Date: 11/18/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	U	0.0050								

LCS		Sample ID: LCS-53431-53431				Units: mg/L		Analysis Date: 11/19/13 09:37 AM		
Client ID:		Run ID: LACHAT_131119E		SeqNo: 2544700		Prep Date: 11/18/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.2506	0.0050	0.25	0	100	83-120	0			

The following samples were analyzed in this batch:

1311817-11C	1311817-12C	1311817-13C
-------------	-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



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Cincinnati, OH
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+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
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Chain of Custody Form

Page 1 of 2

COC ID: **93180**

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

ALS Project Manager: TBS

ALS Work Order #: 1311817

Customer Information		Project Information		Parameter/Method Request for Analysis												
Purchase Order		Project Name	Van Buren Landfill	A	VOCs											
Work Order		Project Number	R2330009	B	SVOCs											
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs											
Send Report To	Mike Friedoff, Frank Biehl	Invoice Attn	Accounts Payable	D	Cyanide - total											
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable											
				F	Metals (Including Hg) - total											
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	Moisture											
Phone	(734) 397-3100	Phone		H	Metals (Including Hg) - dissolved <u>Field Filtered</u>											
Fax	(734) 397-3131	Fax		I												
e-Mail Address		e-Mail Address		J												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W-R2330009-111213-ACN-001	11-12-13	0950	GW	1,2,4	8	X	X			X	X		X			F
2	W-R2330009-111213-ACN-002	11-12-13	1135	GW	1,2,4	8	X	X			X	X		X			F
3	W-R2330009-111213-ACN-003	11-12-13	1305	GW	1,2,4	8	X	X			X	X		X			F
4	W-R2330009-111213-ACN-004	11-12-13	1445	GW	1,2,4	8	X	X			X	X		X			F
5	W-R2330009-111213-ACN-005	11-12-13	1500	GW	1,2,4	8	X	X			X	X		X			F
6	W-R2330009-111313-ACN-006	11-13-13	0940	GW	1,2,4	8	X	X			X	X		X			F
7	W-R2330009-111313-ACN-007	11-13-13	1105	GW	1,2,4	8	X	X			X	X		X			F
8	W-R2330009-111313-ACN-008	11-13-13	1225	GW	1,2,4	8	X	X			X	X		X			F
9	W-R2330009-111313-ACN-009	11-13-13	1700	GW	1,2,4	8	X	X			X	X		X			F
10	W-R2330009-111313-ACN-010	11-13-13	1310	GW	1,2,4	8	X	X			X	X		X			F

Sampler(s) Please Print & Sign <u>Adam Neal</u>		Shipment Method <u>Courier</u>		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour				Results Due Date: <u>11/15/13</u>			
Relinquished by: <u>MSG</u>	Date: <u>11-13-13</u>	Time: <u>1700</u>	Received by: <u>MSG Fridge</u>	Notes: <u>Rel: 11/14/13 1900</u>				<u>11/15/13 0800</u>			
Relinquished by: <u>MSG Fridge</u>	Date: <u>11-14-13</u>	Time: <u>1630</u>	Received by (Laboratory): <u>MSG</u>	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)					
Logged by (Laboratory): <u>DFS</u>	Date: <u>11/15/13</u>	Time: <u>0900</u>	Checked by (Laboratory): <u>TBS</u>		<u>2.8°C</u> <u>3.0°C</u>	☒ Level II Std QC ☐ Level III Std QC/Raw Data ☐ Level IV SW846/CLP ☐ Other					
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035											

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

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Environmental

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Chain of Custody Form

Page 2 of 2

COC ID: 93179

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information		Project Information		ALS Project Manager: <u>TB3</u> ALS Work Order #: <u>131817</u>													
				Parameter/Method Request for Analysis													
Purchase Order		Project Name	Van Buren Landfill	A	VOCs												
Work Order		Project Number	<u>R2330009</u>	B	SVOCs												
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs												
Send Report To	<u>Mike Friedoff, Frank Biehl</u>	Invoice Attn	Accounts Payable	D	Cyanide - total												
Address	2365 Haggerly Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable												
				F	Metals (Including Hg) - total												
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	Moisture												
Phone	(734) 397-3100	Phone		H	Metals (Including Hg) - dissolved <u>Field Filtered</u>												
Fax	(734) 397-3131	Fax		I													
e-Mail Address		e-Mail Address		J													

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
11	W-R2330009-111313-ACN-011	11-13-13	1500	GW	1,2,4	8	X	X			X	X		X			F
12	W-R2330009-111413-ACN-012	11-14-13	1005	GW	1,2,4	8	X	X			X	X		X			F
13	W-R2330009-111413-ACN-013	11-14-13	1115	GW	1,2,4	8	X	X			X	X		X			F
14	Trip Blanks	—	0000	GW	1	3	X										
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <u>Adam Neal</u>		Shipment Method <u>Carrier</u>		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour				Results Due Date: <u>11/15/13</u>		
Relinquished by: <u>MSA</u>	Date: <u>11-13-13</u>	Time: <u>1700</u>	Received by: <u>MSA Fridge</u>		Notes: <u>DEC. 11/14/13 11:00 AM 2020</u>					
Relinquished by: <u>MSA Fridge</u>	Date: <u>11-14-13</u>	Time: <u>1630</u>	Received by (Laboratory): <u>MSA</u>		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)			
Logged by (Laboratory): <u>MSA</u>	Date: <u>11/15/13</u>	Time: <u>0900</u>	Checked by (Laboratory): <u>TB3</u>			<u>28 °C</u>	☒ Level II Std QC ☐ TRRP CheckList			
						<u>30 °C</u>	☐ Level III Std QC/Raw Data ☐ TRRP Level IV			
							☐ Level IV SW846/CLP			
							☐ Other			

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **15-Nov-13 08:00**

Work Order: **1311817**

Received by: **DS**

Checklist completed by <u><i>Diane Shaw</i></u>	15-Nov-13	Reviewed by: <u><i>Tom Bramish</i></u>	15-Nov-13
eSignature	Date	eSignature	Date

Matrices: Groundwater

Carrier name: City Transfer

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Sample(s) received on ice?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>2.8 c, 3.0 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>11/15/2013 9:09:44 AM</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Work Order: 1312452

Project Name:

RACER - Van Buren Landfill (R2330009)

The Mannik & Smith Group, Inc.

Frank Biehl

2365 Haggerty Road South

Suite 100

Canton, MI 48188

(734) 397-3100

20-Dec-2013



Certificate No: MN 532786



20-Dec-2013

Frank Biehl
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **RACER - Van Buren Landfill (R2330009)**

Work Order: **1312452**

Dear Frank,

ALS Environmental received 13 samples on 10-Dec-2013 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 100.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Beamish".

Electronically approved by: Tom Beamish

Tom Beamish
Senior Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

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RIGHT SOLUTIONS RIGHT PARTNER

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1312452

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1312452-01	S-R2330009-120313-RD-001	Soil		12/03/13 10:40	12/10/13 09:00	☐
1312452-02	S-R2330009-120313-RD-002	Soil		12/03/13 14:30	12/10/13 09:00	☐
1312452-03	S-R2330009-120413-RD-003	Soil		12/04/13 10:00	12/10/13 09:00	☐
1312452-04	W-R2330009-120513-RD-001	Water		12/05/13 10:15	12/10/13 09:00	☐
1312452-05	S-R2330009-120413-RD-004	Soil		12/04/13 12:44	12/10/13 09:00	☐
1312452-06	W-R2330009-120513-RD-002	Water		12/05/13 11:20	12/10/13 09:00	☐
1312452-07	S-R2330009-120513-RD-005	Soil		12/05/13 13:15	12/10/13 09:00	☐
1312452-08	W-R2330009-120513-RD-003	Water		12/05/13 15:00	12/10/13 09:00	☐
1312452-09	S-R2330009-120613-RD-006	Soil		12/06/13 12:15	12/10/13 09:00	☒
1312452-10	W-R2330009-120613-RD-004	Water		12/06/13 12:45	12/10/13 09:00	☐
1312452-11	S-R2330009-120613-RD-007	Soil		12/06/13 14:00	12/10/13 09:00	☒
1312452-12	W-R2330009-120613-RD-005	Water		12/06/13 14:50	12/10/13 09:00	☐
1312452-13	Trip Blank	Water		12/05/13	12/10/13 09:00	☐

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
WorkOrder: 1312452

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
µg/L	Micrograms per Liter
mg/Kg-dry	Milligrams per Kilogram Dry Weight
mg/L	Milligrams per Liter

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1312452

Case Narrative**Analytical Comments:**

Batch 54152, Method SVO_8270_S, Sample 1312452-02B: One or more SVOC surrogate recoveries are unavailable due to sample matrix interference. Target analytes were not affected by the interference. No qualification is necessary.

QC Comments:

Batch 54043, Method SVO_8270_W, Sample SLCSW1-54043: The LCS recovery was above the upper control limit. The sample results may be biased high for 4-Chloroaniline and Carbazole.

Batch 54152, Method SVO_8270_S, Sample 1312452-07B MSD: The MS and/or MSD recovery was above the upper control limit. The corresponding result in the parent sample may be biased high for 2-Methylphenol.

Batch 54070, Method VOC_8260_S, Sample LCS-54070: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 4-Methyl-2-pentanone.

Batch R132304, Method VOC_8260_W, Sample VLCSW2-131211: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for Bromomethane.

Batch R132376, Method VOC_8260_W, Sample VLCSW2-131212: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 1,2- Dibromoethane and 4-Methyl-2-pentanone.

Batch 54158, Method CN_9012_S, Sample 1312452-02B MS: The MS and/or MSD recovery was below the lower control limit. The corresponding result in the parent sample may be biased low for Total Cyanide.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-001
Collection Date: 12/03/13 10:40 AM

Work Order: 1312452
Lab ID: 1312452-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7471			Prep: SW7471 / 12/16/13	Analyst: LR
BatchID: 54151							
Mercury	0.054		0.00083	0.017	mg/Kg-dry	1	12/16/13 14:24
METALS BY ICP-MS			SW6020A			Prep: SW3050B / 12/16/13	Analyst: ML
BatchID: 54205							
Antimony	14		0.0075	1.9	mg/Kg-dry	5	12/17/13 03:05
Arsenic	18		0.26	0.75	mg/Kg-dry	5	12/17/13 03:05
Beryllium	0.29	J	0.015	0.75	mg/Kg-dry	5	12/17/13 03:05
Cadmium	6.9		0.0075	0.75	mg/Kg-dry	5	12/17/13 03:05
Chromium	27		0.31	1.9	mg/Kg-dry	5	12/17/13 03:05
Cobalt	14		0.0075	1.9	mg/Kg-dry	5	12/17/13 03:05
Iron	31,000		6.3	30	mg/Kg-dry	5	12/17/13 03:05
Manganese	320		0.17	1.9	mg/Kg-dry	5	12/17/13 03:05
Nickel	330		0.19	1.9	mg/Kg-dry	5	12/17/13 03:05
Selenium	1.6		0.24	1.5	mg/Kg-dry	5	12/17/13 03:05
Silver	0.74	J	0.0075	0.75	mg/Kg-dry	5	12/17/13 03:05
Thallium	0.12	J	0.045	1.9	mg/Kg-dry	5	12/17/13 03:05
Vanadium	18		0.11	1.9	mg/Kg-dry	5	12/17/13 03:05
BatchID: 54205							
Barium	630		0.53	19	mg/Kg-dry	50	12/17/13 15:52
Copper	380		3.7	19	mg/Kg-dry	50	12/17/13 15:52
Lead	1,100		0.075	19	mg/Kg-dry	50	12/17/13 15:52
Zinc	2,600		1.6	38	mg/Kg-dry	50	12/17/13 15:52
BatchID: 54205							
Aluminum	6,000		47	380	mg/Kg-dry	500	12/18/13 13:32
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270			Prep: SW3541 / 12/13/13	Analyst: HL
BatchID: 54152							
1,1'-Biphenyl	150	J	57	3,800	µg/Kg-dry	10	12/16/13 18:39
2,4,5-Trichlorophenol	U		95	1,800	µg/Kg-dry	10	12/16/13 18:39
2,4,6-Trichlorophenol	U		64	1,800	µg/Kg-dry	10	12/16/13 18:39
2,4-Dichlorophenol	U		110	1,800	µg/Kg-dry	10	12/16/13 18:39
2,4-Dimethylphenol	U		610	3,800	µg/Kg-dry	10	12/16/13 18:39
2,4-Dinitrophenol	U		340	7,600	µg/Kg-dry	10	12/16/13 18:39
2,4-Dinitrotoluene	U		120	1,800	µg/Kg-dry	10	12/16/13 18:39
2,6-Dinitrotoluene	U		200	1,800	µg/Kg-dry	10	12/16/13 18:39
2-Chloronaphthalene	U		18	920	µg/Kg-dry	10	12/16/13 18:39
2-Chlorophenol	U		110	1,800	µg/Kg-dry	10	12/16/13 18:39
2-Methylnaphthalene	320	J	32	920	µg/Kg-dry	10	12/16/13 18:39

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-001
Collection Date: 12/03/13 10:40 AM

Work Order: 1312452
Lab ID: 1312452-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Methylphenol	U		160	1,800	µg/Kg-dry	10	12/16/13 18:39
2-Nitroaniline	U		150	7,600	µg/Kg-dry	10	12/16/13 18:39
2-Nitrophenol	U		130	1,800	µg/Kg-dry	10	12/16/13 18:39
3,3'-Dichlorobenzidine	U		4,700	7,600	µg/Kg-dry	10	12/16/13 18:39
3-Nitroaniline	U		130	7,600	µg/Kg-dry	10	12/16/13 18:39
4,6-Dinitro-2-methylphenol	U		320	3,800	µg/Kg-dry	10	12/16/13 18:39
4-Bromophenyl phenyl ether	U		100	1,800	µg/Kg-dry	10	12/16/13 18:39
4-Chloro-3-methylphenol	U		88	1,800	µg/Kg-dry	10	12/16/13 18:39
4-Chloroaniline	U		110	3,800	µg/Kg-dry	10	12/16/13 18:39
4-Chlorophenyl phenyl ether	U		110	1,800	µg/Kg-dry	10	12/16/13 18:39
4-Methylphenol	U		180	1,800	µg/Kg-dry	10	12/16/13 18:39
4-Nitroaniline	U		110	7,600	µg/Kg-dry	10	12/16/13 18:39
4-Nitrophenol	U		76	7,600	µg/Kg-dry	10	12/16/13 18:39
Acenaphthene	460		11	340	µg/Kg-dry	10	12/16/13 18:39
Acenaphthylene	270	J	14	340	µg/Kg-dry	10	12/16/13 18:39
Acetophenone	U		57	3,800	µg/Kg-dry	10	12/16/13 18:39
Anthracene	4,000		15	340	µg/Kg-dry	10	12/16/13 18:39
Atrazine	U		120	570	µg/Kg-dry	10	12/16/13 18:39
Benzaldehyde	U		150	3,800	µg/Kg-dry	10	12/16/13 18:39
Benzo(a)anthracene	12,000		15	340	µg/Kg-dry	10	12/16/13 18:39
Benzo(a)pyrene	9,500		25	340	µg/Kg-dry	10	12/16/13 18:39
Benzo(b)fluoranthene	11,000		22	340	µg/Kg-dry	10	12/16/13 18:39
Benzo(g,h,i)perylene	5,500		30	340	µg/Kg-dry	10	12/16/13 18:39
Benzo(k)fluoranthene	4,800		16	340	µg/Kg-dry	10	12/16/13 18:39
Bis(2-chloroethoxy)methane	U		120	1,800	µg/Kg-dry	10	12/16/13 18:39
Bis(2-chloroethyl)ether	U		120	1,800	µg/Kg-dry	10	12/16/13 18:39
Bis(2-chloroisopropyl)ether	U		160	1,800	µg/Kg-dry	10	12/16/13 18:39
Bis(2-ethylhexyl)phthalate	U		120	3,800	µg/Kg-dry	10	12/16/13 18:39
Butyl benzyl phthalate	U		140	1,800	µg/Kg-dry	10	12/16/13 18:39
Caprolactam	U		170	3,800	µg/Kg-dry	10	12/16/13 18:39
Carbazole	230	J	110	1,800	µg/Kg-dry	10	12/16/13 18:39
Chrysene	11,000		18	340	µg/Kg-dry	10	12/16/13 18:39
Dibenzo(a,h)anthracene	1,700		28	340	µg/Kg-dry	10	12/16/13 18:39
Dibenzofuran	570	J	120	1,800	µg/Kg-dry	10	12/16/13 18:39
Diethyl phthalate	U		120	3,800	µg/Kg-dry	10	12/16/13 18:39
Dimethyl phthalate	U		130	3,800	µg/Kg-dry	10	12/16/13 18:39
Di-n-butyl phthalate	U		55	3,800	µg/Kg-dry	10	12/16/13 18:39
Di-n-octyl phthalate	U		120	1,800	µg/Kg-dry	10	12/16/13 18:39
Fluoranthene	20,000		27	340	µg/Kg-dry	10	12/16/13 18:39
Fluorene	1,300		26	340	µg/Kg-dry	10	12/16/13 18:39

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-001
Collection Date: 12/03/13 10:40 AM

Work Order: 1312452
Lab ID: 1312452-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorobenzene	U		110	1,800	µg/Kg-dry	10	12/16/13 18:39
Hexachlorobutadiene	U		130	570	µg/Kg-dry	10	12/16/13 18:39
Hexachlorocyclopentadiene	U		120	3,800	µg/Kg-dry	10	12/16/13 18:39
Hexachloroethane	U		180	1,800	µg/Kg-dry	10	12/16/13 18:39
Indeno(1,2,3-cd)pyrene	5,200		25	340	µg/Kg-dry	10	12/16/13 18:39
Isophorone	U		130	1,800	µg/Kg-dry	10	12/16/13 18:39
Naphthalene	570		28	340	µg/Kg-dry	10	12/16/13 18:39
Nitrobenzene	U		150	1,800	µg/Kg-dry	10	12/16/13 18:39
N-Nitrosodi-n-propylamine	U		150	1,800	µg/Kg-dry	10	12/16/13 18:39
N-Nitrosodiphenylamine	U		680	1,800	µg/Kg-dry	10	12/16/13 18:39
Pentachlorophenol	U		74	230	µg/Kg-dry	10	12/16/13 18:39
Phenanthrene	17,000		15	340	µg/Kg-dry	10	12/16/13 18:39
Phenol	U		130	1,800	µg/Kg-dry	10	12/16/13 18:39
Pyrene	16,000		26	340	µg/Kg-dry	10	12/16/13 18:39
Surr: 2,4,6-Tribromophenol	74.8			34-140	%REC	10	12/16/13 18:39
Surr: 2-Fluorobiphenyl	66.6			12-100	%REC	10	12/16/13 18:39
Surr: 2-Fluorophenol	60.6			33-117	%REC	10	12/16/13 18:39
Surr: 4-Terphenyl-d14	86.8			25-137	%REC	10	12/16/13 18:39
Surr: Nitrobenzene-d5	58.0			37-107	%REC	10	12/16/13 18:39
Surr: Phenol-d6	54.6			40-106	%REC	10	12/16/13 18:39
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/3/13		Analyst: RS
BatchID: 54070							
1,1,1-Trichloroethane	U		13	34	µg/Kg-dry	1	12/12/13 23:14
1,1,2,2-Tetrachloroethane	U		15	34	µg/Kg-dry	1	12/12/13 23:14
1,1,2-Trichloroethane	U		12	34	µg/Kg-dry	1	12/12/13 23:14
1,1,2-Trichlorotrifluoroethane	U		13	34	µg/Kg-dry	1	12/12/13 23:14
1,1-Dichloroethane	U		13	34	µg/Kg-dry	1	12/12/13 23:14
1,1-Dichloroethene	U		14	34	µg/Kg-dry	1	12/12/13 23:14
1,2,4-Trichlorobenzene	U		18	34	µg/Kg-dry	1	12/12/13 23:14
1,2-Dibromo-3-chloropropane	U		17	34	µg/Kg-dry	1	12/12/13 23:14
1,2-Dibromoethane	U		14	34	µg/Kg-dry	1	12/12/13 23:14
1,2-Dichlorobenzene	U		14	34	µg/Kg-dry	1	12/12/13 23:14
1,2-Dichloroethane	U		16	34	µg/Kg-dry	1	12/12/13 23:14
1,2-Dichloropropane	U		11	34	µg/Kg-dry	1	12/12/13 23:14
1,3-Dichlorobenzene	U		14	34	µg/Kg-dry	1	12/12/13 23:14
1,4-Dichlorobenzene	U		13	34	µg/Kg-dry	1	12/12/13 23:14
2-Butanone	U		85	230	µg/Kg-dry	1	12/12/13 23:14
2-Hexanone	U		8.4	34	µg/Kg-dry	1	12/12/13 23:14
4-Methyl-2-pentanone	U		12	34	µg/Kg-dry	1	12/12/13 23:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-001
Collection Date: 12/03/13 10:40 AM

Work Order: 1312452
Lab ID: 1312452-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Acetone	U		73	110	µg/Kg-dry	1	12/12/13 23:14
Benzene	420		14	34	µg/Kg-dry	1	12/12/13 23:14
Bromodichloromethane	U		7.7	34	µg/Kg-dry	1	12/12/13 23:14
Bromoform	U		6.8	34	µg/Kg-dry	1	12/12/13 23:14
Bromomethane	U		13	86	µg/Kg-dry	1	12/12/13 23:14
Carbon disulfide	U		17	34	µg/Kg-dry	1	12/12/13 23:14
Carbon tetrachloride	U		9.8	34	µg/Kg-dry	1	12/12/13 23:14
Chloroethane	U		73	110	µg/Kg-dry	1	12/12/13 23:14
Chloroform	U		14	34	µg/Kg-dry	1	12/12/13 23:14
Chloromethane	U		19	110	µg/Kg-dry	1	12/12/13 23:14
cis-1,2-Dichloroethene	U		14	34	µg/Kg-dry	1	12/12/13 23:14
cis-1,3-Dichloropropene	U		12	34	µg/Kg-dry	1	12/12/13 23:14
Cyclohexane	120	J	15	130	µg/Kg-dry	1	12/12/13 23:14
Dibromochloromethane	U		6.4	34	µg/Kg-dry	1	12/12/13 23:14
Dichlorodifluoromethane	U		16	34	µg/Kg-dry	1	12/12/13 23:14
Ethylbenzene	110		13	34	µg/Kg-dry	1	12/12/13 23:14
Isopropylbenzene	230		15	34	µg/Kg-dry	1	12/12/13 23:14
Methyl acetate	140	J	46	230	µg/Kg-dry	1	12/12/13 23:14
Methyl tert-butyl ether	U		15	34	µg/Kg-dry	1	12/12/13 23:14
Methylcyclohexane	130	J	16	130	µg/Kg-dry	1	12/12/13 23:14
Methylene chloride	U		13	34	µg/Kg-dry	1	12/12/13 23:14
Styrene	U		13	34	µg/Kg-dry	1	12/12/13 23:14
Tetrachloroethene	U		15	34	µg/Kg-dry	1	12/12/13 23:14
Toluene	330		13	34	µg/Kg-dry	1	12/12/13 23:14
trans-1,2-Dichloroethene	U		11	34	µg/Kg-dry	1	12/12/13 23:14
trans-1,3-Dichloropropene	U		12	34	µg/Kg-dry	1	12/12/13 23:14
Trichloroethene	U		16	34	µg/Kg-dry	1	12/12/13 23:14
Trichlorofluoromethane	U		9.5	34	µg/Kg-dry	1	12/12/13 23:14
Vinyl chloride	U		16	34	µg/Kg-dry	1	12/12/13 23:14
Xylenes, Total	310		41	100	µg/Kg-dry	1	12/12/13 23:14
Surr: 1,2-Dichloroethane-d4	95.0			70-130	%REC	1	12/12/13 23:14
Surr: 4-Bromofluorobenzene	99.0			70-130	%REC	1	12/12/13 23:14
Surr: Dibromofluoromethane	79.7			70-130	%REC	1	12/12/13 23:14
Surr: Toluene-d8	104			70-130	%REC	1	12/12/13 23:14
BatchID: 54070							
Chlorobenzene	7,600		28	69	µg/Kg-dry	2	12/13/13 21:12
Surr: 1,2-Dichloroethane-d4	93.0			70-130	%REC	2	12/13/13 21:12
Surr: 4-Bromofluorobenzene	93.1			70-130	%REC	2	12/13/13 21:12
Surr: Dibromofluoromethane	95.3			70-130	%REC	2	12/13/13 21:12
Surr: Toluene-d8	96.4			70-130	%REC	2	12/13/13 21:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-001
Collection Date: 12/03/13 10:40 AM

Work Order: 1312452
Lab ID: 1312452-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
CYANIDE, TOTAL <u>BatchID: 54158</u>			SW9012A		Prep: SW9012A / 12/13/13		Analyst: JB
Cyanide, Total	0.036	J	0.030	0.57	mg/Kg-dry	1	12/16/13 11:17
MOISTURE <u>BatchID: R132211</u>			A2540 G				Analyst: MEB
Moisture	13		0.025	0.050	% of sample	1	12/10/13 15:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-002
Collection Date: 12/03/13 02:30 PM

Work Order: 1312452
Lab ID: 1312452-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7471			Prep: SW7471 / 12/16/13	Analyst: LR
BatchID: 54151							
Mercury	0.35		0.0018	0.036	mg/Kg-dry	2	12/16/13 14:53
METALS BY ICP-MS			SW6020A			Prep: SW3050B / 12/16/13	Analyst: ML
BatchID: 54205							
Antimony	24		0.0096	2.4	mg/Kg-dry	5	12/17/13 03:11
Arsenic	34		0.33	0.96	mg/Kg-dry	5	12/17/13 03:11
Beryllium	0.55	J	0.019	0.96	mg/Kg-dry	5	12/17/13 03:11
Cadmium	12		0.0096	0.96	mg/Kg-dry	5	12/17/13 03:11
Chromium	62		0.39	2.4	mg/Kg-dry	5	12/17/13 03:11
Cobalt	14		0.0096	2.4	mg/Kg-dry	5	12/17/13 03:11
Manganese	810		0.21	2.4	mg/Kg-dry	5	12/17/13 03:11
Nickel	160		0.24	2.4	mg/Kg-dry	5	12/17/13 03:11
Selenium	2.3		0.31	1.9	mg/Kg-dry	5	12/17/13 03:11
Silver	3.6		0.0096	0.96	mg/Kg-dry	5	12/17/13 03:11
Thallium	U		0.058	2.4	mg/Kg-dry	5	12/17/13 03:11
Vanadium	20		0.14	2.4	mg/Kg-dry	5	12/17/13 03:11
BatchID: 54205							
Barium	1,400		0.67	24	mg/Kg-dry	50	12/17/13 15:57
Copper	1,100		4.7	24	mg/Kg-dry	50	12/17/13 15:57
Iron	90,000		80	390	mg/Kg-dry	50	12/17/13 15:57
Lead	5,900		0.096	24	mg/Kg-dry	50	12/17/13 15:57
Zinc	3,400		2.0	48	mg/Kg-dry	50	12/17/13 15:57
BatchID: 54205							
Aluminum	12,000		61	480	mg/Kg-dry	500	12/18/13 13:38
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270			Prep: SW3541 / 12/13/13	Analyst: HL
BatchID: 54152							
1,1'-Biphenyl	290	J	240	16,000	µg/Kg-dry	10	12/16/13 20:12
2,4,5-Trichlorophenol	U		400	7,700	µg/Kg-dry	10	12/16/13 20:12
2,4,6-Trichlorophenol	U		270	7,700	µg/Kg-dry	10	12/16/13 20:12
2,4-Dichlorophenol	U		470	7,700	µg/Kg-dry	10	12/16/13 20:12
2,4-Dimethylphenol	U		2,600	16,000	µg/Kg-dry	10	12/16/13 20:12
2,4-Dinitrophenol	U		1,400	32,000	µg/Kg-dry	10	12/16/13 20:12
2,4-Dinitrotoluene	U		510	7,700	µg/Kg-dry	10	12/16/13 20:12
2,6-Dinitrotoluene	U		830	7,700	µg/Kg-dry	10	12/16/13 20:12
2-Chloronaphthalene	U		75	3,800	µg/Kg-dry	10	12/16/13 20:12
2-Chlorophenol	U		480	7,700	µg/Kg-dry	10	12/16/13 20:12
2-Methylnaphthalene	400	J	130	3,800	µg/Kg-dry	10	12/16/13 20:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-002
Collection Date: 12/03/13 02:30 PM

Work Order: 1312452
Lab ID: 1312452-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Methylphenol	U		650	7,700	µg/Kg-dry	10	12/16/13 20:12
2-Nitroaniline	U		620	32,000	µg/Kg-dry	10	12/16/13 20:12
2-Nitrophenol	U		540	7,700	µg/Kg-dry	10	12/16/13 20:12
3,3'-Dichlorobenzidine	U		20,000	32,000	µg/Kg-dry	10	12/16/13 20:12
3-Nitroaniline	U		540	32,000	µg/Kg-dry	10	12/16/13 20:12
4,6-Dinitro-2-methylphenol	U		1,300	16,000	µg/Kg-dry	10	12/16/13 20:12
4-Bromophenyl phenyl ether	U		430	7,700	µg/Kg-dry	10	12/16/13 20:12
4-Chloro-3-methylphenol	U		370	7,700	µg/Kg-dry	10	12/16/13 20:12
4-Chloroaniline	U		480	16,000	µg/Kg-dry	10	12/16/13 20:12
4-Chlorophenyl phenyl ether	U		470	7,700	µg/Kg-dry	10	12/16/13 20:12
4-Methylphenol	5,500	J	770	7,700	µg/Kg-dry	10	12/16/13 20:12
4-Nitroaniline	U		440	32,000	µg/Kg-dry	10	12/16/13 20:12
4-Nitrophenol	U		320	32,000	µg/Kg-dry	10	12/16/13 20:12
Acenaphthene	U		48	1,400	µg/Kg-dry	10	12/16/13 20:12
Acenaphthylene	U		58	1,400	µg/Kg-dry	10	12/16/13 20:12
Acetophenone	U		240	16,000	µg/Kg-dry	10	12/16/13 20:12
Anthracene	290	J	63	1,400	µg/Kg-dry	10	12/16/13 20:12
Atrazine	U		490	2,400	µg/Kg-dry	10	12/16/13 20:12
Benzaldehyde	U		610	16,000	µg/Kg-dry	10	12/16/13 20:12
Benzo(a)anthracene	U		63	1,400	µg/Kg-dry	10	12/16/13 20:12
Benzo(a)pyrene	260	J	100	1,400	µg/Kg-dry	10	12/16/13 20:12
Benzo(b)fluoranthene	350	J	94	1,400	µg/Kg-dry	10	12/16/13 20:12
Benzo(g,h,i)perylene	220	J	130	1,400	µg/Kg-dry	10	12/16/13 20:12
Benzo(k)fluoranthene	U		68	1,400	µg/Kg-dry	10	12/16/13 20:12
Bis(2-chloroethoxy)methane	U		500	7,700	µg/Kg-dry	10	12/16/13 20:12
Bis(2-chloroethyl)ether	U		500	7,700	µg/Kg-dry	10	12/16/13 20:12
Bis(2-chloroisopropyl)ether	U		670	7,700	µg/Kg-dry	10	12/16/13 20:12
Bis(2-ethylhexyl)phthalate	3,000	J	520	16,000	µg/Kg-dry	10	12/16/13 20:12
Butyl benzyl phthalate	U		600	7,700	µg/Kg-dry	10	12/16/13 20:12
Caprolactam	U		700	16,000	µg/Kg-dry	10	12/16/13 20:12
Carbazole	U		480	7,700	µg/Kg-dry	10	12/16/13 20:12
Chrysene	550	J	76	1,400	µg/Kg-dry	10	12/16/13 20:12
Dibenzo(a,h)anthracene	160	J	120	1,400	µg/Kg-dry	10	12/16/13 20:12
Dibenzofuran	U		500	7,700	µg/Kg-dry	10	12/16/13 20:12
Diethyl phthalate	U		510	16,000	µg/Kg-dry	10	12/16/13 20:12
Dimethyl phthalate	U		540	16,000	µg/Kg-dry	10	12/16/13 20:12
Di-n-butyl phthalate	500	J	230	16,000	µg/Kg-dry	10	12/16/13 20:12
Di-n-octyl phthalate	U		520	7,700	µg/Kg-dry	10	12/16/13 20:12
Fluoranthene	630	J	110	1,400	µg/Kg-dry	10	12/16/13 20:12
Fluorene	U		110	1,400	µg/Kg-dry	10	12/16/13 20:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-002
Collection Date: 12/03/13 02:30 PM

Work Order: 1312452
Lab ID: 1312452-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorobenzene	U		450	7,700	µg/Kg-dry	10	12/16/13 20:12
Hexachlorobutadiene	U		540	2,400	µg/Kg-dry	10	12/16/13 20:12
Hexachlorocyclopentadiene	U		500	16,000	µg/Kg-dry	10	12/16/13 20:12
Hexachloroethane	U		750	7,700	µg/Kg-dry	10	12/16/13 20:12
Indeno(1,2,3-cd)pyrene	220	J	110	1,400	µg/Kg-dry	10	12/16/13 20:12
Isophorone	U		540	7,700	µg/Kg-dry	10	12/16/13 20:12
Naphthalene	420	J	120	1,400	µg/Kg-dry	10	12/16/13 20:12
Nitrobenzene	U		620	7,700	µg/Kg-dry	10	12/16/13 20:12
N-Nitrosodi-n-propylamine	U		610	7,700	µg/Kg-dry	10	12/16/13 20:12
N-Nitrosodiphenylamine	U		2,900	7,700	µg/Kg-dry	10	12/16/13 20:12
Pentachlorophenol	U		310	960	µg/Kg-dry	10	12/16/13 20:12
Phenanthrene	U		64	1,400	µg/Kg-dry	10	12/16/13 20:12
Phenol	2,600	J	550	7,700	µg/Kg-dry	10	12/16/13 20:12
Pyrene	560	J	110	1,400	µg/Kg-dry	10	12/16/13 20:12
Surr: 2,4,6-Tribromophenol	141	S		34-140	%REC	10	12/16/13 20:12
Surr: 2-Fluorobiphenyl	25.6			12-100	%REC	10	12/16/13 20:12
Surr: 2-Fluorophenol	48.8			33-117	%REC	10	12/16/13 20:12
Surr: 4-Terphenyl-d14	96.8			25-137	%REC	10	12/16/13 20:12
Surr: Nitrobenzene-d5	64.8			37-107	%REC	10	12/16/13 20:12
Surr: Phenol-d6	16.0	S		40-106	%REC	10	12/16/13 20:12
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/3/13		Analyst: RS
BatchID: 54070							
1,1,1-Trichloroethane	U		14	37	µg/Kg-dry	1	12/12/13 23:39
1,1,2,2-Tetrachloroethane	U		16	37	µg/Kg-dry	1	12/12/13 23:39
1,1,2-Trichloroethane	U		13	37	µg/Kg-dry	1	12/12/13 23:39
1,1,2-Trichlorotrifluoroethane	U		14	37	µg/Kg-dry	1	12/12/13 23:39
1,1-Dichloroethane	U		13	37	µg/Kg-dry	1	12/12/13 23:39
1,1-Dichloroethene	U		15	37	µg/Kg-dry	1	12/12/13 23:39
1,2,4-Trichlorobenzene	U		19	37	µg/Kg-dry	1	12/12/13 23:39
1,2-Dibromo-3-chloropropane	U		18	37	µg/Kg-dry	1	12/12/13 23:39
1,2-Dibromoethane	U		14	37	µg/Kg-dry	1	12/12/13 23:39
1,2-Dichlorobenzene	U		15	37	µg/Kg-dry	1	12/12/13 23:39
1,2-Dichloroethane	U		17	37	µg/Kg-dry	1	12/12/13 23:39
1,2-Dichloropropane	U		12	37	µg/Kg-dry	1	12/12/13 23:39
1,3-Dichlorobenzene	U		15	37	µg/Kg-dry	1	12/12/13 23:39
1,4-Dichlorobenzene	U		14	37	µg/Kg-dry	1	12/12/13 23:39
2-Butanone	460	J	91	460	µg/Kg-dry	1	12/12/13 23:39
2-Hexanone	U		9.0	37	µg/Kg-dry	1	12/12/13 23:39
4-Methyl-2-pentanone	U		12	37	µg/Kg-dry	1	12/12/13 23:39

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-002
Collection Date: 12/03/13 02:30 PM

Work Order: 1312452
Lab ID: 1312452-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Acetone	290	J	78	290	µg/Kg-dry	1	12/12/13 23:39
Benzene	49		15	37	µg/Kg-dry	1	12/12/13 23:39
Bromodichloromethane	U		8.2	37	µg/Kg-dry	1	12/12/13 23:39
Bromoform	U		7.2	37	µg/Kg-dry	1	12/12/13 23:39
Bromomethane	U		14	92	µg/Kg-dry	1	12/12/13 23:39
Carbon disulfide	85	J	18	85	µg/Kg-dry	1	12/12/13 23:39
Carbon tetrachloride	U		10	37	µg/Kg-dry	1	12/12/13 23:39
Chlorobenzene	40		15	37	µg/Kg-dry	1	12/12/13 23:39
Chloroethane	U		78	120	µg/Kg-dry	1	12/12/13 23:39
Chloroform	U		15	37	µg/Kg-dry	1	12/12/13 23:39
Chloromethane	U		20	120	µg/Kg-dry	1	12/12/13 23:39
cis-1,2-Dichloroethene	U		15	37	µg/Kg-dry	1	12/12/13 23:39
cis-1,3-Dichloropropene	U		13	37	µg/Kg-dry	1	12/12/13 23:39
Cyclohexane	U		16	37	µg/Kg-dry	1	12/12/13 23:39
Dibromochloromethane	U		6.8	37	µg/Kg-dry	1	12/12/13 23:39
Dichlorodifluoromethane	U		17	37	µg/Kg-dry	1	12/12/13 23:39
Ethylbenzene	140		14	37	µg/Kg-dry	1	12/12/13 23:39
Isopropylbenzene	70		16	37	µg/Kg-dry	1	12/12/13 23:39
Methyl acetate	150	J	49	240	µg/Kg-dry	1	12/12/13 23:39
Methyl tert-butyl ether	U		16	37	µg/Kg-dry	1	12/12/13 23:39
Methylcyclohexane	U		17	37	µg/Kg-dry	1	12/12/13 23:39
Methylene chloride	U		14	37	µg/Kg-dry	1	12/12/13 23:39
Styrene	U		14	37	µg/Kg-dry	1	12/12/13 23:39
Tetrachloroethene	U		16	37	µg/Kg-dry	1	12/12/13 23:39
Toluene	270		14	37	µg/Kg-dry	1	12/12/13 23:39
trans-1,2-Dichloroethene	U		11	37	µg/Kg-dry	1	12/12/13 23:39
trans-1,3-Dichloropropene	U		12	37	µg/Kg-dry	1	12/12/13 23:39
Trichloroethene	U		17	37	µg/Kg-dry	1	12/12/13 23:39
Trichlorofluoromethane	U		10	37	µg/Kg-dry	1	12/12/13 23:39
Vinyl chloride	U		17	37	µg/Kg-dry	1	12/12/13 23:39
Xylenes, Total	320		43	110	µg/Kg-dry	1	12/12/13 23:39
Surr: 1,2-Dichloroethane-d4	112			70-130	%REC	1	12/12/13 23:39
Surr: 4-Bromofluorobenzene	94.4			70-130	%REC	1	12/12/13 23:39
Surr: Dibromofluoromethane	87.0			70-130	%REC	1	12/12/13 23:39
Surr: Toluene-d8	97.2			70-130	%REC	1	12/12/13 23:39
CYANIDE, TOTAL			SW9012A			Prep: SW9012A / 12/13/13	Analyst: JB
BatchID: 54158							
Cyanide, Total	0.38	J	0.031	0.61	mg/Kg-dry	1	12/16/13 11:17
MOISTURE			A2540 G				Analyst: MEB

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120313-RD-002
Collection Date: 12/03/13 02:30 PM

Work Order: 1312452
Lab ID: 1312452-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
BatchID: <u>R132211</u>							
Moisture	18		0.025	0.050	% of sample	1	12/10/13 15:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-003
Collection Date: 12/04/13 10:00 AM

Work Order: 1312452
Lab ID: 1312452-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7471			Prep: SW7471 / 12/16/13	Analyst: LR
BatchID: 54190							
Mercury	0.13		0.00081	0.016	mg/Kg-dry	1	12/16/13 23:53
METALS BY ICP-MS			SW6020A			Prep: SW3050B / 12/16/13	Analyst: ML
BatchID: 54205							
Antimony	4.2		0.0081	2.0	mg/Kg-dry	5	12/17/13 03:17
Arsenic	9.0		0.28	0.81	mg/Kg-dry	5	12/17/13 03:17
Barium	340		0.057	2.0	mg/Kg-dry	5	12/17/13 03:17
Beryllium	0.30	J	0.016	0.81	mg/Kg-dry	5	12/17/13 03:17
Cadmium	4.0		0.0081	0.81	mg/Kg-dry	5	12/17/13 03:17
Chromium	28		0.33	2.0	mg/Kg-dry	5	12/17/13 03:17
Cobalt	10		0.0081	2.0	mg/Kg-dry	5	12/17/13 03:17
Copper	380		0.40	2.0	mg/Kg-dry	5	12/17/13 03:17
Iron	27,000		6.8	33	mg/Kg-dry	5	12/17/13 03:17
Lead	590		0.0081	2.0	mg/Kg-dry	5	12/17/13 03:17
Manganese	460		0.18	2.0	mg/Kg-dry	5	12/17/13 03:17
Nickel	190		0.20	2.0	mg/Kg-dry	5	12/17/13 03:17
Selenium	1.2	J	0.26	1.6	mg/Kg-dry	5	12/17/13 03:17
Silver	1.2		0.0081	0.81	mg/Kg-dry	5	12/17/13 03:17
Thallium	0.089	J	0.049	2.0	mg/Kg-dry	5	12/17/13 03:17
Vanadium	21		0.12	2.0	mg/Kg-dry	5	12/17/13 03:17
BatchID: 54205							
Zinc	730		1.7	41	mg/Kg-dry	50	12/17/13 16:03
BatchID: 54205							
Aluminum	6,900		51	410	mg/Kg-dry	500	12/18/13 13:44
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270			Prep: SW3541 / 12/13/13	Analyst: HL
BatchID: 54152							
1,1'-Biphenyl	110	J	57	3,800	µg/Kg-dry	10	12/16/13 19:10
2,4,5-Trichlorophenol	U		95	1,800	µg/Kg-dry	10	12/16/13 19:10
2,4,6-Trichlorophenol	U		64	1,800	µg/Kg-dry	10	12/16/13 19:10
2,4-Dichlorophenol	U		110	1,800	µg/Kg-dry	10	12/16/13 19:10
2,4-Dimethylphenol	U		610	3,800	µg/Kg-dry	10	12/16/13 19:10
2,4-Dinitrophenol	U		340	7,500	µg/Kg-dry	10	12/16/13 19:10
2,4-Dinitrotoluene	U		120	1,800	µg/Kg-dry	10	12/16/13 19:10
2,6-Dinitrotoluene	U		200	1,800	µg/Kg-dry	10	12/16/13 19:10
2-Chloronaphthalene	U		18	920	µg/Kg-dry	10	12/16/13 19:10
2-Chlorophenol	U		110	1,800	µg/Kg-dry	10	12/16/13 19:10
2-Methylnaphthalene	310	J	32	920	µg/Kg-dry	10	12/16/13 19:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-003
Collection Date: 12/04/13 10:00 AM

Work Order: 1312452
Lab ID: 1312452-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Methylphenol	U		150	1,800	µg/Kg-dry	10	12/16/13 19:10
2-Nitroaniline	U		150	7,500	µg/Kg-dry	10	12/16/13 19:10
2-Nitrophenol	U		130	1,800	µg/Kg-dry	10	12/16/13 19:10
3,3'-Dichlorobenzidine	U		4,700	7,500	µg/Kg-dry	10	12/16/13 19:10
3-Nitroaniline	U		130	7,500	µg/Kg-dry	10	12/16/13 19:10
4,6-Dinitro-2-methylphenol	U		320	3,800	µg/Kg-dry	10	12/16/13 19:10
4-Bromophenyl phenyl ether	U		100	1,800	µg/Kg-dry	10	12/16/13 19:10
4-Chloro-3-methylphenol	U		88	1,800	µg/Kg-dry	10	12/16/13 19:10
4-Chloroaniline	U		110	3,800	µg/Kg-dry	10	12/16/13 19:10
4-Chlorophenyl phenyl ether	U		110	1,800	µg/Kg-dry	10	12/16/13 19:10
4-Methylphenol	270	J	180	1,800	µg/Kg-dry	10	12/16/13 19:10
4-Nitroaniline	U		110	7,500	µg/Kg-dry	10	12/16/13 19:10
4-Nitrophenol	U		75	7,500	µg/Kg-dry	10	12/16/13 19:10
Acenaphthene	130	J	11	340	µg/Kg-dry	10	12/16/13 19:10
Acenaphthylene	65	J	14	340	µg/Kg-dry	10	12/16/13 19:10
Acetophenone	260	J	57	3,800	µg/Kg-dry	10	12/16/13 19:10
Anthracene	340	J	15	340	µg/Kg-dry	10	12/16/13 19:10
Atrazine	U		120	570	µg/Kg-dry	10	12/16/13 19:10
Benzaldehyde	U		150	3,800	µg/Kg-dry	10	12/16/13 19:10
Benzo(a)anthracene	780		15	340	µg/Kg-dry	10	12/16/13 19:10
Benzo(a)pyrene	920		25	340	µg/Kg-dry	10	12/16/13 19:10
Benzo(b)fluoranthene	1,300		22	340	µg/Kg-dry	10	12/16/13 19:10
Benzo(g,h,i)perylene	630		30	340	µg/Kg-dry	10	12/16/13 19:10
Benzo(k)fluoranthene	610		16	340	µg/Kg-dry	10	12/16/13 19:10
Bis(2-chloroethoxy)methane	U		120	1,800	µg/Kg-dry	10	12/16/13 19:10
Bis(2-chloroethyl)ether	U		120	1,800	µg/Kg-dry	10	12/16/13 19:10
Bis(2-chloroisopropyl)ether	U		160	1,800	µg/Kg-dry	10	12/16/13 19:10
Bis(2-ethylhexyl)phthalate	920	J	120	3,800	µg/Kg-dry	10	12/16/13 19:10
Butyl benzyl phthalate	400	J	140	1,800	µg/Kg-dry	10	12/16/13 19:10
Caprolactam	U		170	3,800	µg/Kg-dry	10	12/16/13 19:10
Carbazole	U		110	1,800	µg/Kg-dry	10	12/16/13 19:10
Chrysene	1,100		18	340	µg/Kg-dry	10	12/16/13 19:10
Dibenzo(a,h)anthracene	190	J	28	340	µg/Kg-dry	10	12/16/13 19:10
Dibenzofuran	130	J	120	1,800	µg/Kg-dry	10	12/16/13 19:10
Diethyl phthalate	U		120	3,800	µg/Kg-dry	10	12/16/13 19:10
Dimethyl phthalate	U		130	3,800	µg/Kg-dry	10	12/16/13 19:10
Di-n-butyl phthalate	200	J	55	3,800	µg/Kg-dry	10	12/16/13 19:10
Di-n-octyl phthalate	U		120	1,800	µg/Kg-dry	10	12/16/13 19:10
Fluoranthene	2,400		27	340	µg/Kg-dry	10	12/16/13 19:10
Fluorene	190	J	26	340	µg/Kg-dry	10	12/16/13 19:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-003
Collection Date: 12/04/13 10:00 AM

Work Order: 1312452
Lab ID: 1312452-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorobenzene	U		110	1,800	µg/Kg-dry	10	12/16/13 19:10
Hexachlorobutadiene	U		130	570	µg/Kg-dry	10	12/16/13 19:10
Hexachlorocyclopentadiene	U		120	3,800	µg/Kg-dry	10	12/16/13 19:10
Hexachloroethane	U		180	1,800	µg/Kg-dry	10	12/16/13 19:10
Indeno(1,2,3-cd)pyrene	560		25	340	µg/Kg-dry	10	12/16/13 19:10
Isophorone	U		130	1,800	µg/Kg-dry	10	12/16/13 19:10
Naphthalene	370		28	340	µg/Kg-dry	10	12/16/13 19:10
Nitrobenzene	U		150	1,800	µg/Kg-dry	10	12/16/13 19:10
N-Nitrosodi-n-propylamine	U		150	1,800	µg/Kg-dry	10	12/16/13 19:10
N-Nitrosodiphenylamine	U		680	1,800	µg/Kg-dry	10	12/16/13 19:10
Pentachlorophenol	U		73	230	µg/Kg-dry	10	12/16/13 19:10
Phenanthrene	1,400		15	340	µg/Kg-dry	10	12/16/13 19:10
Phenol	470	J	130	1,800	µg/Kg-dry	10	12/16/13 19:10
Pyrene	1,800		26	340	µg/Kg-dry	10	12/16/13 19:10
Surr: 2,4,6-Tribromophenol	79.2			34-140	%REC	10	12/16/13 19:10
Surr: 2-Fluorobiphenyl	68.8			12-100	%REC	10	12/16/13 19:10
Surr: 2-Fluorophenol	60.2			33-117	%REC	10	12/16/13 19:10
Surr: 4-Terphenyl-d14	95.2			25-137	%REC	10	12/16/13 19:10
Surr: Nitrobenzene-d5	64.4			37-107	%REC	10	12/16/13 19:10
Surr: Phenol-d6	60.0			40-106	%REC	10	12/16/13 19:10
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/3/13		Analyst: RS
BatchID: 54070							
1,1,1-Trichloroethane	U		13	34	µg/Kg-dry	1	12/13/13 04:13
1,1,2,2-Tetrachloroethane	U		15	34	µg/Kg-dry	1	12/13/13 04:13
1,1,2-Trichloroethane	U		12	34	µg/Kg-dry	1	12/13/13 04:13
1,1,2-Trichlorotrifluoroethane	U		13	34	µg/Kg-dry	1	12/13/13 04:13
1,1-Dichloroethane	U		13	34	µg/Kg-dry	1	12/13/13 04:13
1,1-Dichloroethene	U		14	34	µg/Kg-dry	1	12/13/13 04:13
1,2,4-Trichlorobenzene	U		18	34	µg/Kg-dry	1	12/13/13 04:13
1,2-Dibromo-3-chloropropane	U		17	34	µg/Kg-dry	1	12/13/13 04:13
1,2-Dibromoethane	U		14	34	µg/Kg-dry	1	12/13/13 04:13
1,2-Dichlorobenzene	290		14	34	µg/Kg-dry	1	12/13/13 04:13
1,2-Dichloroethane	U		16	34	µg/Kg-dry	1	12/13/13 04:13
1,2-Dichloropropane	U		11	34	µg/Kg-dry	1	12/13/13 04:13
1,3-Dichlorobenzene	U		14	34	µg/Kg-dry	1	12/13/13 04:13
1,4-Dichlorobenzene	40		13	34	µg/Kg-dry	1	12/13/13 04:13
2-Butanone	U		85	230	µg/Kg-dry	1	12/13/13 04:13
2-Hexanone	U		8.5	34	µg/Kg-dry	1	12/13/13 04:13
4-Methyl-2-pentanone	U		12	34	µg/Kg-dry	1	12/13/13 04:13

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-003
Collection Date: 12/04/13 10:00 AM

Work Order: 1312452
Lab ID: 1312452-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Acetone	170	J	73	180	µg/Kg-dry	1	12/13/13 04:13
Benzene	56		14	34	µg/Kg-dry	1	12/13/13 04:13
Bromodichloromethane	U		7.7	34	µg/Kg-dry	1	12/13/13 04:13
Bromoform	U		6.8	34	µg/Kg-dry	1	12/13/13 04:13
Bromomethane	U		13	86	µg/Kg-dry	1	12/13/13 04:13
Carbon disulfide	U		17	34	µg/Kg-dry	1	12/13/13 04:13
Carbon tetrachloride	U		9.8	34	µg/Kg-dry	1	12/13/13 04:13
Chlorobenzene	U		14	34	µg/Kg-dry	1	12/13/13 04:13
Chloroethane	U		73	110	µg/Kg-dry	1	12/13/13 04:13
Chloroform	U		14	34	µg/Kg-dry	1	12/13/13 04:13
Chloromethane	U		19	110	µg/Kg-dry	1	12/13/13 04:13
cis-1,2-Dichloroethene	210		14	34	µg/Kg-dry	1	12/13/13 04:13
cis-1,3-Dichloropropene	U		12	34	µg/Kg-dry	1	12/13/13 04:13
Cyclohexane	U		15	34	µg/Kg-dry	1	12/13/13 04:13
Dibromochloromethane	U		6.4	34	µg/Kg-dry	1	12/13/13 04:13
Dichlorodifluoromethane	U		16	34	µg/Kg-dry	1	12/13/13 04:13
Ethylbenzene	2,900		13	34	µg/Kg-dry	1	12/13/13 04:13
Isopropylbenzene	170		15	34	µg/Kg-dry	1	12/13/13 04:13
Methyl acetate	170	J	46	230	µg/Kg-dry	1	12/13/13 04:13
Methyl tert-butyl ether	U		15	34	µg/Kg-dry	1	12/13/13 04:13
Methylcyclohexane	64	J	16	69	µg/Kg-dry	1	12/13/13 04:13
Methylene chloride	U		14	34	µg/Kg-dry	1	12/13/13 04:13
Styrene	U		13	34	µg/Kg-dry	1	12/13/13 04:13
Tetrachloroethene	U		15	34	µg/Kg-dry	1	12/13/13 04:13
Toluene	180		13	34	µg/Kg-dry	1	12/13/13 04:13
trans-1,2-Dichloroethene	U		11	34	µg/Kg-dry	1	12/13/13 04:13
trans-1,3-Dichloropropene	U		12	34	µg/Kg-dry	1	12/13/13 04:13
Trichloroethene	110		16	34	µg/Kg-dry	1	12/13/13 04:13
Trichlorofluoromethane	U		9.5	34	µg/Kg-dry	1	12/13/13 04:13
Vinyl chloride	U		16	34	µg/Kg-dry	1	12/13/13 04:13
Xylenes, Total	7,800		41	100	µg/Kg-dry	1	12/13/13 04:13
Surr: 1,2-Dichloroethane-d4	103			70-130	%REC	1	12/13/13 04:13
Surr: 4-Bromofluorobenzene	91.4			70-130	%REC	1	12/13/13 04:13
Surr: Dibromofluoromethane	95.2			70-130	%REC	1	12/13/13 04:13
Surr: Toluene-d8	92.0			70-130	%REC	1	12/13/13 04:13
CYANIDE, TOTAL			SW9012A			Prep: SW9012A / 12/13/13	Analyst: JB
BatchID: 54158							
Cyanide, Total	0.081	J	0.030	0.58	mg/Kg-dry	1	12/16/13 11:17
MOISTURE			A2540 G				Analyst: MEB

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-003
Collection Date: 12/04/13 10:00 AM

Work Order: 1312452
Lab ID: 1312452-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
BatchID: <u>R132211</u>							
Moisture	13		0.025	0.050	% of sample	1	12/10/13 15:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-001
Collection Date: 12/05/13 10:15 AM

Work Order: 1312452
Lab ID: 1312452-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470			Prep: SW7470 / 12/16/13	Analyst: LR
BatchID: 54186							
Mercury	0.00039		0.00010	0.00020	mg/L	1	12/16/13 17:56
METALS BY ICP-MS			SW6020A			Prep: SW3005A / 12/16/13	Analyst: JDD
BatchID: 54192							
Aluminum	38		0.0078	0.50	mg/L	10	12/17/13 20:22
Antimony	0.013	J	0.00036	0.020	mg/L	10	12/17/13 20:22
Arsenic	0.037	J	0.0058	0.050	mg/L	10	12/17/13 20:22
Barium	2.9		0.00063	1.0	mg/L	10	12/17/13 20:22
Beryllium	0.0017	J	0.00082	0.010	mg/L	10	12/17/13 20:22
Cadmium	0.011		0.00045	0.010	mg/L	10	12/17/13 20:22
Chromium	0.075	J	0.0027	0.10	mg/L	10	12/17/13 20:22
Cobalt	0.038	J	0.00041	0.20	mg/L	10	12/17/13 20:22
Copper	0.32		0.0053	0.040	mg/L	10	12/17/13 20:22
Iron	73		0.053	2.0	mg/L	10	12/17/13 20:22
Lead	1.7		0.00051	0.030	mg/L	10	12/19/13 03:58
Manganese	1.8		0.00054	0.50	mg/L	10	12/17/13 20:22
Nickel	0.086	J	0.0025	0.20	mg/L	10	12/17/13 20:22
Selenium	U		0.0064	0.050	mg/L	10	12/17/13 20:22
Silver	0.0027		0.00042	0.0020	mg/L	10	12/17/13 20:22
Thallium	U		0.00062	0.020	mg/L	10	12/19/13 03:58
Vanadium	0.086		0.0016	0.040	mg/L	10	12/17/13 20:22
Zinc	2.2		0.0048	0.50	mg/L	10	12/17/13 20:22
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270			Prep: SW3510 / 12/11/13	Analyst: HL
BatchID: 54043							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/11/13 21:29
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/11/13 21:29
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/11/13 21:29
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/11/13 21:29
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/11/13 21:29
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/11/13 21:29
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/11/13 21:29
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/11/13 21:29
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/11/13 21:29
2-Chlorophenol	U		0.32	10	µg/L	1	12/11/13 21:29
2-Methylnaphthalene	0.19	J	0.13	5.0	µg/L	1	12/11/13 21:29
2-Methylphenol	U		0.20	10	µg/L	1	12/11/13 21:29
2-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 21:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-001
Collection Date: 12/05/13 10:15 AM

Work Order: 1312452
Lab ID: 1312452-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/11/13 21:29
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/11/13 21:29
3-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 21:29
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/11/13 21:29
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 21:29
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/11/13 21:29
4-Chloroaniline	U		0.32	10	µg/L	1	12/11/13 21:29
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 21:29
4-Methylphenol	0.41	J	0.20	10	µg/L	1	12/11/13 21:29
4-Nitroaniline	U		0.30	25	µg/L	1	12/11/13 21:29
4-Nitrophenol	U		0.51	25	µg/L	1	12/11/13 21:29
Acenaphthene	0.54	J	0.11	5.0	µg/L	1	12/11/13 21:29
Acenaphthylene	U		0.12	5.0	µg/L	1	12/11/13 21:29
Acetophenone	0.22	J	0.090	5.0	µg/L	1	12/11/13 21:29
Anthracene	U		0.72	5.0	µg/L	1	12/11/13 21:29
Atrazine	U		0.13	5.0	µg/L	1	12/11/13 21:29
Benzaldehyde	0.79	J	0.46	10	µg/L	1	12/11/13 21:29
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/11/13 21:29
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/11/13 21:29
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/11/13 21:29
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/11/13 21:29
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/11/13 21:29
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/11/13 21:29
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/11/13 21:29
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/11/13 21:29
Bis(2-ethylhexyl)phthalate	1.6	J	0.15	5.0	µg/L	1	12/11/13 21:29
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/11/13 21:29
Caprolactam	U		4.7	10	µg/L	1	12/11/13 21:29
Carbazole	U		0.16	10	µg/L	1	12/11/13 21:29
Chrysene	U		0.71	1.0	µg/L	1	12/11/13 21:29
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/11/13 21:29
Dibenzofuran	0.41	J	0.28	4.0	µg/L	1	12/11/13 21:29
Diethyl phthalate	0.35	J	0.24	5.0	µg/L	1	12/11/13 21:29
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/11/13 21:29
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	12/11/13 21:29
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/11/13 21:29
Fluoranthene	U		0.77	1.0	µg/L	1	12/11/13 21:29
Fluorene	0.94	J	0.10	5.0	µg/L	1	12/11/13 21:29
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/11/13 21:29
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/11/13 21:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-001
Collection Date: 12/05/13 10:15 AM

Work Order: 1312452
Lab ID: 1312452-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/11/13 21:29
Hexachloroethane	U		0.47	5.0	µg/L	1	12/11/13 21:29
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/11/13 21:29
Isophorone	U		0.30	5.0	µg/L	1	12/11/13 21:29
Naphthalene	0.21	J	0.12	5.0	µg/L	1	12/11/13 21:29
Nitrobenzene	U		0.33	3.0	µg/L	1	12/11/13 21:29
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/11/13 21:29
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/11/13 21:29
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/11/13 21:29
Phenanthrene	U		0.86	2.0	µg/L	1	12/11/13 21:29
Phenol	0.44	J	0.32	5.0	µg/L	1	12/11/13 21:29
Pyrene	U		0.65	5.0	µg/L	1	12/11/13 21:29
Surr: 2,4,6-Tribromophenol	79.7			32-115	%REC	1	12/11/13 21:29
Surr: 2-Fluorobiphenyl	72.0			32-100	%REC	1	12/11/13 21:29
Surr: 2-Fluorophenol	41.0			22-59	%REC	1	12/11/13 21:29
Surr: 4-Terphenyl-d14	65.9			23-112	%REC	1	12/11/13 21:29
Surr: Nitrobenzene-d5	65.0			31-93	%REC	1	12/11/13 21:29
Surr: Phenol-d6	25.5			13-36	%REC	1	12/11/13 21:29
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132376							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/13/13 04:37
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/13/13 04:37
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/13/13 04:37
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/13/13 04:37
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/13/13 04:37
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 04:37
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/13/13 04:37
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/13/13 04:37
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/13/13 04:37
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/13/13 04:37
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/13/13 04:37
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/13/13 04:37
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/13/13 04:37
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/13/13 04:37
2-Butanone	U		0.64	25	µg/L	1	12/13/13 04:37
2-Hexanone	U		0.19	50	µg/L	1	12/13/13 04:37
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/13/13 04:37
Acetone	U		3.0	50	µg/L	1	12/13/13 04:37
Benzene	6.7		0.14	1.0	µg/L	1	12/13/13 04:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-001
Collection Date: 12/05/13 10:15 AM

Work Order: 1312452
Lab ID: 1312452-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/13/13 04:37
Bromoform	U		0.18	1.0	µg/L	1	12/13/13 04:37
Bromomethane	U		0.38	5.0	µg/L	1	12/13/13 04:37
Carbon disulfide	U		0.26	5.0	µg/L	1	12/13/13 04:37
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/13/13 04:37
Chlorobenzene	0.71	J	0.12	1.0	µg/L	1	12/13/13 04:37
Chloroethane	U		0.25	5.0	µg/L	1	12/13/13 04:37
Chloroform	U		0.15	1.0	µg/L	1	12/13/13 04:37
Chloromethane	U		0.29	5.0	µg/L	1	12/13/13 04:37
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/13/13 04:37
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/13/13 04:37
Cyclohexane	U		0.20	1.0	µg/L	1	12/13/13 04:37
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/13/13 04:37
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/13/13 04:37
Ethylbenzene	1.4		0.12	1.0	µg/L	1	12/13/13 04:37
Isopropylbenzene	2.5	J	0.11	5.0	µg/L	1	12/13/13 04:37
Methyl acetate	U		0.76	10	µg/L	1	12/13/13 04:37
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/13/13 04:37
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/13/13 04:37
Methylene chloride	U		0.75	5.0	µg/L	1	12/13/13 04:37
Styrene	U		0.12	1.0	µg/L	1	12/13/13 04:37
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/13/13 04:37
Toluene	0.44	J	0.13	1.0	µg/L	1	12/13/13 04:37
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 04:37
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/13/13 04:37
Trichloroethene	U		0.16	1.0	µg/L	1	12/13/13 04:37
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/13/13 04:37
Vinyl chloride	U		0.15	1.0	µg/L	1	12/13/13 04:37
Xylenes, Total	4.2		0.30	3.0	µg/L	1	12/13/13 04:37
Surr: 1,2-Dichloroethane-d4	101			70-120	%REC	1	12/13/13 04:37
Surr: 4-Bromofluorobenzene	97.7			75-120	%REC	1	12/13/13 04:37
Surr: Dibromofluoromethane	100			85-115	%REC	1	12/13/13 04:37
Surr: Toluene-d8	99.4			85-120	%REC	1	12/13/13 04:37
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/13/13	Analyst: JB
BatchID: 54140							
Cyanide, Amenable	0.0069		0.0010	0.0050	mg/L	1	12/16/13 11:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-004
Collection Date: 12/04/13 12:44 PM

Work Order: 1312452
Lab ID: 1312452-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7471		Prep: SW7471 / 12/16/13		Analyst: LR
BatchID: 54190							
Mercury	0.0091	J	0.00083	0.017	mg/Kg-dry	1	12/16/13 23:56
METALS BY ICP-MS			SW6020A		Prep: SW3050B / 12/16/13		Analyst: ML
BatchID: 54205							
Antimony	0.73	J	0.0078	1.9	mg/Kg-dry	5	12/17/13 03:22
Arsenic	2.7		0.26	0.78	mg/Kg-dry	5	12/17/13 03:22
Barium	34		0.054	1.9	mg/Kg-dry	5	12/17/13 03:22
Beryllium	0.12	J	0.016	0.78	mg/Kg-dry	5	12/17/13 03:22
Cadmium	1.7		0.0078	0.78	mg/Kg-dry	5	12/17/13 03:22
Chromium	10		0.32	1.9	mg/Kg-dry	5	12/17/13 03:22
Cobalt	3.3		0.0078	1.9	mg/Kg-dry	5	12/17/13 03:22
Copper	25		0.38	1.9	mg/Kg-dry	5	12/17/13 16:09
Iron	21,000		6.5	31	mg/Kg-dry	5	12/17/13 03:22
Lead	270		0.0078	1.9	mg/Kg-dry	5	12/17/13 03:22
Manganese	230		0.17	1.9	mg/Kg-dry	5	12/17/13 03:22
Nickel	15		0.19	1.9	mg/Kg-dry	5	12/17/13 03:22
Selenium	0.55	J	0.25	1.6	mg/Kg-dry	5	12/17/13 03:22
Silver	0.18	J	0.0078	0.78	mg/Kg-dry	5	12/17/13 03:22
Thallium	0.063	J	0.047	1.9	mg/Kg-dry	5	12/17/13 03:22
Vanadium	8.9		0.12	1.9	mg/Kg-dry	5	12/17/13 03:22
Zinc	130		0.16	3.9	mg/Kg-dry	5	12/17/13 03:22
BatchID: 54205							
Aluminum	2,500		4.9	39	mg/Kg-dry	50	12/18/13 13:50
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270		Prep: SW3541 / 12/13/13		Analyst: HL
BatchID: 54152							
1,1'-Biphenyl	U		5.9	390	µg/Kg-dry	1	12/17/13 12:57
2,4,5-Trichlorophenol	U		9.8	190	µg/Kg-dry	1	12/17/13 12:57
2,4,6-Trichlorophenol	U		6.6	190	µg/Kg-dry	1	12/17/13 12:57
2,4-Dichlorophenol	U		11	190	µg/Kg-dry	1	12/17/13 12:57
2,4-Dimethylphenol	U		63	390	µg/Kg-dry	1	12/17/13 12:57
2,4-Dinitrophenol	U		36	780	µg/Kg-dry	1	12/17/13 12:57
2,4-Dinitrotoluene	U		13	190	µg/Kg-dry	1	12/17/13 12:57
2,6-Dinitrotoluene	U		20	190	µg/Kg-dry	1	12/17/13 12:57
2-Chloronaphthalene	U		1.9	95	µg/Kg-dry	1	12/17/13 12:57
2-Chlorophenol	U		12	190	µg/Kg-dry	1	12/17/13 12:57
2-Methylnaphthalene	32	J	3.3	95	µg/Kg-dry	1	12/17/13 12:57
2-Methylphenol	25	J	16	190	µg/Kg-dry	1	12/17/13 12:57

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-004
Collection Date: 12/04/13 12:44 PM

Work Order: 1312452
Lab ID: 1312452-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitroaniline	U		15	780	µg/Kg-dry	1	12/17/13 12:57
2-Nitrophenol	U		13	190	µg/Kg-dry	1	12/17/13 12:57
3,3'-Dichlorobenzidine	U		490	780	µg/Kg-dry	1	12/17/13 12:57
3-Nitroaniline	U		13	780	µg/Kg-dry	1	12/17/13 12:57
4,6-Dinitro-2-methylphenol	U		33	390	µg/Kg-dry	1	12/17/13 12:57
4-Bromophenyl phenyl ether	U		11	190	µg/Kg-dry	1	12/17/13 12:57
4-Chloro-3-methylphenol	U		9.1	190	µg/Kg-dry	1	12/17/13 12:57
4-Chloroaniline	U		12	390	µg/Kg-dry	1	12/17/13 12:57
4-Chlorophenyl phenyl ether	U		12	190	µg/Kg-dry	1	12/17/13 12:57
4-Methylphenol	740		19	190	µg/Kg-dry	1	12/17/13 12:57
4-Nitroaniline	U		11	780	µg/Kg-dry	1	12/17/13 12:57
4-Nitrophenol	U		7.8	780	µg/Kg-dry	1	12/17/13 12:57
Acenaphthene	53		1.2	35	µg/Kg-dry	1	12/17/13 12:57
Acenaphthylene	U		1.4	35	µg/Kg-dry	1	12/17/13 12:57
Acetophenone	36	J	5.9	390	µg/Kg-dry	1	12/17/13 12:57
Anthracene	14	J	1.6	35	µg/Kg-dry	1	12/17/13 12:57
Atrazine	U		12	59	µg/Kg-dry	1	12/17/13 12:57
Benzaldehyde	26	J	15	390	µg/Kg-dry	1	12/17/13 12:57
Benzo(a)anthracene	U		1.6	35	µg/Kg-dry	1	12/17/13 12:57
Benzo(a)pyrene	U		2.6	35	µg/Kg-dry	1	12/17/13 12:57
Benzo(b)fluoranthene	U		2.3	35	µg/Kg-dry	1	12/17/13 12:57
Benzo(g,h,i)perylene	U		3.1	35	µg/Kg-dry	1	12/17/13 12:57
Benzo(k)fluoranthene	U		1.7	35	µg/Kg-dry	1	12/17/13 12:57
Bis(2-chloroethoxy)methane	U		12	190	µg/Kg-dry	1	12/17/13 12:57
Bis(2-chloroethyl)ether	U		12	190	µg/Kg-dry	1	12/17/13 12:57
Bis(2-chloroisopropyl)ether	U		17	190	µg/Kg-dry	1	12/17/13 12:57
Bis(2-ethylhexyl)phthalate	510		13	390	µg/Kg-dry	1	12/17/13 12:57
Butyl benzyl phthalate	U		15	190	µg/Kg-dry	1	12/17/13 12:57
Caprolactam	U		17	390	µg/Kg-dry	1	12/17/13 12:57
Carbazole	U		12	190	µg/Kg-dry	1	12/17/13 12:57
Chrysene	38		1.9	35	µg/Kg-dry	1	12/17/13 12:57
Dibenzo(a,h)anthracene	U		2.9	35	µg/Kg-dry	1	12/17/13 12:57
Dibenzofuran	21	J	12	190	µg/Kg-dry	1	12/17/13 12:57
Diethyl phthalate	120	J	12	390	µg/Kg-dry	1	12/17/13 12:57
Dimethyl phthalate	U		13	390	µg/Kg-dry	1	12/17/13 12:57
Di-n-butyl phthalate	20	J	5.7	390	µg/Kg-dry	1	12/17/13 12:57
Di-n-octyl phthalate	U		13	190	µg/Kg-dry	1	12/17/13 12:57
Fluoranthene	62		2.8	35	µg/Kg-dry	1	12/17/13 12:57
Fluorene	48		2.6	35	µg/Kg-dry	1	12/17/13 12:57
Hexachlorobenzene	U		11	190	µg/Kg-dry	1	12/17/13 12:57

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-004
Collection Date: 12/04/13 12:44 PM

Work Order: 1312452
Lab ID: 1312452-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorobutadiene	U		13	59	µg/Kg-dry	1	12/17/13 12:57
Hexachlorocyclopentadiene	U		12	390	µg/Kg-dry	1	12/17/13 12:57
Hexachloroethane	U		18	190	µg/Kg-dry	1	12/17/13 12:57
Indeno(1,2,3-cd)pyrene	U		2.6	35	µg/Kg-dry	1	12/17/13 12:57
Isophorone	U		13	190	µg/Kg-dry	1	12/17/13 12:57
Naphthalene	60		2.9	35	µg/Kg-dry	1	12/17/13 12:57
Nitrobenzene	U		15	190	µg/Kg-dry	1	12/17/13 12:57
N-Nitrosodi-n-propylamine	U		15	190	µg/Kg-dry	1	12/17/13 12:57
N-Nitrosodiphenylamine	U		70	190	µg/Kg-dry	1	12/17/13 12:57
Pentachlorophenol	U		7.6	24	µg/Kg-dry	1	12/17/13 12:57
Phenanthrene	8.7	J	1.6	35	µg/Kg-dry	1	12/17/13 12:57
Phenol	37	J	13	190	µg/Kg-dry	1	12/17/13 12:57
Pyrene	78		2.7	35	µg/Kg-dry	1	12/17/13 12:57
Surr: 2,4,6-Tribromophenol	90.0			34-140	%REC	1	12/17/13 12:57
Surr: 2-Fluorobiphenyl	78.2			12-100	%REC	1	12/17/13 12:57
Surr: 2-Fluorophenol	78.6			33-117	%REC	1	12/17/13 12:57
Surr: 4-Terphenyl-d14	94.0			25-137	%REC	1	12/17/13 12:57
Surr: Nitrobenzene-d5	70.9			37-107	%REC	1	12/17/13 12:57
Surr: Phenol-d6	83.0			40-106	%REC	1	12/17/13 12:57
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/3/13		Analyst: RS
BatchID: 54070							
1,1,1-Trichloroethane	U		14	36	µg/Kg-dry	1	12/12/13 22:24
1,1,2,2-Tetrachloroethane	U		16	36	µg/Kg-dry	1	12/12/13 22:24
1,1,2-Trichloroethane	U		13	36	µg/Kg-dry	1	12/12/13 22:24
1,1,2-Trichlorotrifluoroethane	U		13	36	µg/Kg-dry	1	12/12/13 22:24
1,1-Dichloroethane	U		13	36	µg/Kg-dry	1	12/12/13 22:24
1,1-Dichloroethene	U		15	36	µg/Kg-dry	1	12/12/13 22:24
1,2,4-Trichlorobenzene	U		19	36	µg/Kg-dry	1	12/12/13 22:24
1,2-Dibromo-3-chloropropane	U		18	36	µg/Kg-dry	1	12/12/13 22:24
1,2-Dibromoethane	U		14	36	µg/Kg-dry	1	12/12/13 22:24
1,2-Dichlorobenzene	U		14	36	µg/Kg-dry	1	12/12/13 22:24
1,2-Dichloroethane	U		17	36	µg/Kg-dry	1	12/12/13 22:24
1,2-Dichloropropane	U		12	36	µg/Kg-dry	1	12/12/13 22:24
1,3-Dichlorobenzene	U		15	36	µg/Kg-dry	1	12/12/13 22:24
1,4-Dichlorobenzene	U		14	36	µg/Kg-dry	1	12/12/13 22:24
2-Butanone	U		90	240	µg/Kg-dry	1	12/12/13 22:24
2-Hexanone	U		8.9	36	µg/Kg-dry	1	12/12/13 22:24
4-Methyl-2-pentanone	U		12	36	µg/Kg-dry	1	12/12/13 22:24
Acetone	U		77	120	µg/Kg-dry	1	12/12/13 22:24

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-004
Collection Date: 12/04/13 12:44 PM

Work Order: 1312452
Lab ID: 1312452-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	U		15	36	µg/Kg-dry	1	12/12/13 22:24
Bromodichloromethane	U		8.1	36	µg/Kg-dry	1	12/12/13 22:24
Bromoform	U		7.1	36	µg/Kg-dry	1	12/12/13 22:24
Bromomethane	U		14	91	µg/Kg-dry	1	12/12/13 22:24
Carbon disulfide	U		18	36	µg/Kg-dry	1	12/12/13 22:24
Carbon tetrachloride	U		10	36	µg/Kg-dry	1	12/12/13 22:24
Chlorobenzene	45		15	36	µg/Kg-dry	1	12/12/13 22:24
Chloroethane	U		77	120	µg/Kg-dry	1	12/12/13 22:24
Chloroform	U		15	36	µg/Kg-dry	1	12/12/13 22:24
Chloromethane	U		20	120	µg/Kg-dry	1	12/12/13 22:24
cis-1,2-Dichloroethene	U		15	36	µg/Kg-dry	1	12/12/13 22:24
cis-1,3-Dichloropropene	U		12	36	µg/Kg-dry	1	12/12/13 22:24
Cyclohexane	U		16	36	µg/Kg-dry	1	12/12/13 22:24
Dibromochloromethane	U		6.7	36	µg/Kg-dry	1	12/12/13 22:24
Dichlorodifluoromethane	U		16	36	µg/Kg-dry	1	12/12/13 22:24
Ethylbenzene	U		13	36	µg/Kg-dry	1	12/12/13 22:24
Isopropylbenzene	U		16	36	µg/Kg-dry	1	12/12/13 22:24
Methyl acetate	U		49	240	µg/Kg-dry	1	12/12/13 22:24
Methyl tert-butyl ether	U		15	36	µg/Kg-dry	1	12/12/13 22:24
Methylcyclohexane	U		17	36	µg/Kg-dry	1	12/12/13 22:24
Methylene chloride	U		14	36	µg/Kg-dry	1	12/12/13 22:24
Styrene	U		13	36	µg/Kg-dry	1	12/12/13 22:24
Tetrachloroethene	U		16	36	µg/Kg-dry	1	12/12/13 22:24
Toluene	U		14	36	µg/Kg-dry	1	12/12/13 22:24
trans-1,2-Dichloroethene	U		11	36	µg/Kg-dry	1	12/12/13 22:24
trans-1,3-Dichloropropene	U		12	36	µg/Kg-dry	1	12/12/13 22:24
Trichloroethene	U		17	36	µg/Kg-dry	1	12/12/13 22:24
Trichlorofluoromethane	U		10	36	µg/Kg-dry	1	12/12/13 22:24
Vinyl chloride	U		16	36	µg/Kg-dry	1	12/12/13 22:24
Xylenes, Total	U		43	110	µg/Kg-dry	1	12/12/13 22:24
Surr: 1,2-Dichloroethane-d4	110			70-130	%REC	1	12/12/13 22:24
Surr: 4-Bromofluorobenzene	99.8			70-130	%REC	1	12/12/13 22:24
Surr: Dibromofluoromethane	89.3			70-130	%REC	1	12/12/13 22:24
Surr: Toluene-d8	104			70-130	%REC	1	12/12/13 22:24

CYANIDE, TOTAL

SW9012A

Prep: SW9012A / 12/13/13

Analyst: JB

BatchID: 54158

Cyanide, Total	U		0.031	0.60	mg/Kg-dry	1	12/16/13 11:17
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MOISTURE

A2540 G

Analyst: MEB

BatchID: R132211

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120413-RD-004
Collection Date: 12/04/13 12:44 PM

Work Order: 1312452
Lab ID: 1312452-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Moisture	17		0.025	0.050	% of sample	1	12/10/13 15:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-002
Collection Date: 12/05/13 11:20 AM

Work Order: 1312452
Lab ID: 1312452-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/16/13	Analyst: LR
BatchID: <u>54186</u>							
Mercury	U		0.00010	0.00020	mg/L	1	12/16/13 16:41
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/16/13	Analyst: JDD
BatchID: <u>54192</u>							
Aluminum	1.9		0.0078	0.50	mg/L	10	12/17/13 20:28
Antimony	0.0022	J	0.00036	0.020	mg/L	10	12/17/13 20:28
Arsenic	U		0.0058	0.050	mg/L	10	12/17/13 20:28
Barium	1.0		0.00063	1.0	mg/L	10	12/17/13 20:28
Beryllium	U		0.00082	0.010	mg/L	10	12/17/13 20:28
Cadmium	U		0.00045	0.010	mg/L	10	12/17/13 20:28
Chromium	0.0081	J	0.0027	0.10	mg/L	10	12/17/13 20:28
Cobalt	0.0043	J	0.00041	0.20	mg/L	10	12/17/13 20:28
Copper	0.040	J	0.0053	0.040	mg/L	10	12/17/13 20:28
Iron	16		0.053	2.0	mg/L	10	12/17/13 20:28
Lead	0.059		0.00051	0.030	mg/L	10	12/19/13 04:03
Manganese	0.55		0.00054	0.50	mg/L	10	12/17/13 20:28
Nickel	0.020	J	0.0025	0.20	mg/L	10	12/17/13 20:28
Selenium	U		0.0064	0.050	mg/L	10	12/17/13 20:28
Silver	U		0.00042	0.0020	mg/L	10	12/17/13 20:28
Thallium	U		0.00062	0.020	mg/L	10	12/19/13 04:03
Vanadium	0.0040	J	0.0016	0.040	mg/L	10	12/17/13 20:28
Zinc	0.21	J	0.0048	0.50	mg/L	10	12/17/13 20:28
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 12/11/13	Analyst: HL
BatchID: <u>54043</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/11/13 22:00
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/11/13 22:00
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/11/13 22:00
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/11/13 22:00
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/11/13 22:00
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/11/13 22:00
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/11/13 22:00
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/11/13 22:00
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/11/13 22:00
2-Chlorophenol	U		0.32	10	µg/L	1	12/11/13 22:00
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/11/13 22:00
2-Methylphenol	U		0.20	10	µg/L	1	12/11/13 22:00
2-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 22:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-002
Collection Date: 12/05/13 11:20 AM

Work Order: 1312452
Lab ID: 1312452-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/11/13 22:00
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/11/13 22:00
3-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 22:00
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/11/13 22:00
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 22:00
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/11/13 22:00
4-Chloroaniline	U		0.32	10	µg/L	1	12/11/13 22:00
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 22:00
4-Methylphenol	U		0.20	10	µg/L	1	12/11/13 22:00
4-Nitroaniline	U		0.30	25	µg/L	1	12/11/13 22:00
4-Nitrophenol	U		0.51	25	µg/L	1	12/11/13 22:00
Acenaphthene	0.12	J	0.11	5.0	µg/L	1	12/11/13 22:00
Acenaphthylene	U		0.12	5.0	µg/L	1	12/11/13 22:00
Acetophenone	U		0.090	5.0	µg/L	1	12/11/13 22:00
Anthracene	U		0.72	5.0	µg/L	1	12/11/13 22:00
Atrazine	U		0.13	5.0	µg/L	1	12/11/13 22:00
Benzaldehyde	0.51	J	0.46	10	µg/L	1	12/11/13 22:00
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/11/13 22:00
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/11/13 22:00
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/11/13 22:00
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/11/13 22:00
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/11/13 22:00
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/11/13 22:00
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/11/13 22:00
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/11/13 22:00
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/11/13 22:00
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/11/13 22:00
Caprolactam	U		4.7	10	µg/L	1	12/11/13 22:00
Carbazole	U		0.16	10	µg/L	1	12/11/13 22:00
Chrysene	U		0.71	1.0	µg/L	1	12/11/13 22:00
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/11/13 22:00
Dibenzofuran	U		0.28	4.0	µg/L	1	12/11/13 22:00
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/11/13 22:00
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/11/13 22:00
Di-n-butyl phthalate	0.14	J	0.14	5.0	µg/L	1	12/11/13 22:00
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/11/13 22:00
Fluoranthene	U		0.77	1.0	µg/L	1	12/11/13 22:00
Fluorene	U		0.10	5.0	µg/L	1	12/11/13 22:00
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/11/13 22:00
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/11/13 22:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-002
Collection Date: 12/05/13 11:20 AM

Work Order: 1312452
Lab ID: 1312452-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene		U	0.18	5.0	µg/L	1	12/11/13 22:00
Hexachloroethane		U	0.47	5.0	µg/L	1	12/11/13 22:00
Indeno(1,2,3-cd)pyrene		U	0.69	2.0	µg/L	1	12/11/13 22:00
Isophorone		U	0.30	5.0	µg/L	1	12/11/13 22:00
Naphthalene		U	0.12	5.0	µg/L	1	12/11/13 22:00
Nitrobenzene		U	0.33	3.0	µg/L	1	12/11/13 22:00
N-Nitrosodi-n-propylamine		U	0.32	5.0	µg/L	1	12/11/13 22:00
N-Nitrosodiphenylamine		U	0.81	5.0	µg/L	1	12/11/13 22:00
Pentachlorophenol		U	0.22	1.0	µg/L	1	12/11/13 22:00
Phenanthrene		U	0.86	2.0	µg/L	1	12/11/13 22:00
Phenol		U	0.32	5.0	µg/L	1	12/11/13 22:00
Pyrene		U	0.65	5.0	µg/L	1	12/11/13 22:00
Surr: 2,4,6-Tribromophenol	79.2			32-115	%REC	1	12/11/13 22:00
Surr: 2-Fluorobiphenyl	71.0			32-100	%REC	1	12/11/13 22:00
Surr: 2-Fluorophenol	42.0			22-59	%REC	1	12/11/13 22:00
Surr: 4-Terphenyl-d14	72.7			23-112	%REC	1	12/11/13 22:00
Surr: Nitrobenzene-d5	67.2			31-93	%REC	1	12/11/13 22:00
Surr: Phenol-d6	26.3			13-36	%REC	1	12/11/13 22:00
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132376							
1,1,1-Trichloroethane		U	0.11	1.0	µg/L	1	12/13/13 05:02
1,1,2,2-Tetrachloroethane		U	0.21	1.0	µg/L	1	12/13/13 05:02
1,1,2-Trichloroethane		U	0.11	1.0	µg/L	1	12/13/13 05:02
1,1,2-Trichlorotrifluoroethane		U	0.40	1.0	µg/L	1	12/13/13 05:02
1,1-Dichloroethane		U	0.14	1.0	µg/L	1	12/13/13 05:02
1,1-Dichloroethene		U	0.12	1.0	µg/L	1	12/13/13 05:02
1,2,4-Trichlorobenzene		U	0.096	5.0	µg/L	1	12/13/13 05:02
1,2-Dibromo-3-chloropropane		U	0.35	1.0	µg/L	1	12/13/13 05:02
1,2-Dibromoethane		U	0.14	1.0	µg/L	1	12/13/13 05:02
1,2-Dichlorobenzene		U	0.17	1.0	µg/L	1	12/13/13 05:02
1,2-Dichloroethane		U	0.11	1.0	µg/L	1	12/13/13 05:02
1,2-Dichloropropane		U	0.12	1.0	µg/L	1	12/13/13 05:02
1,3-Dichlorobenzene		U	0.15	1.0	µg/L	1	12/13/13 05:02
1,4-Dichlorobenzene		U	0.15	1.0	µg/L	1	12/13/13 05:02
2-Butanone		U	0.64	25	µg/L	1	12/13/13 05:02
2-Hexanone		U	0.19	50	µg/L	1	12/13/13 05:02
4-Methyl-2-pentanone		U	0.20	50	µg/L	1	12/13/13 05:02
Acetone		U	3.0	50	µg/L	1	12/13/13 05:02
Benzene		U	0.14	1.0	µg/L	1	12/13/13 05:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-002
Collection Date: 12/05/13 11:20 AM

Work Order: 1312452
Lab ID: 1312452-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/13/13 05:02
Bromoform	U		0.18	1.0	µg/L	1	12/13/13 05:02
Bromomethane	U		0.38	5.0	µg/L	1	12/13/13 05:02
Carbon disulfide	U		0.26	5.0	µg/L	1	12/13/13 05:02
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/13/13 05:02
Chlorobenzene	0.72	J	0.12	1.0	µg/L	1	12/13/13 05:02
Chloroethane	U		0.25	5.0	µg/L	1	12/13/13 05:02
Chloroform	U		0.15	1.0	µg/L	1	12/13/13 05:02
Chloromethane	U		0.29	5.0	µg/L	1	12/13/13 05:02
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/13/13 05:02
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/13/13 05:02
Cyclohexane	U		0.20	1.0	µg/L	1	12/13/13 05:02
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/13/13 05:02
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/13/13 05:02
Ethylbenzene	U		0.12	1.0	µg/L	1	12/13/13 05:02
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/13/13 05:02
Methyl acetate	U		0.76	10	µg/L	1	12/13/13 05:02
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/13/13 05:02
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/13/13 05:02
Methylene chloride	U		0.75	5.0	µg/L	1	12/13/13 05:02
Styrene	U		0.12	1.0	µg/L	1	12/13/13 05:02
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/13/13 05:02
Toluene	U		0.13	1.0	µg/L	1	12/13/13 05:02
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 05:02
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/13/13 05:02
Trichloroethene	U		0.16	1.0	µg/L	1	12/13/13 05:02
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/13/13 05:02
Vinyl chloride	U		0.15	1.0	µg/L	1	12/13/13 05:02
Xylenes, Total	U		0.30	3.0	µg/L	1	12/13/13 05:02
Surr: 1,2-Dichloroethane-d4	102			70-120	%REC	1	12/13/13 05:02
Surr: 4-Bromofluorobenzene	98.4			75-120	%REC	1	12/13/13 05:02
Surr: Dibromofluoromethane	101			85-115	%REC	1	12/13/13 05:02
Surr: Toluene-d8	101			85-120	%REC	1	12/13/13 05:02
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/13/13	Analyst: JB
BatchID: 54140							
Cyanide, Amenable	0.0036	J	0.0010	0.0050	mg/L	1	12/16/13 11:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120513-RD-005
Collection Date: 12/05/13 01:15 PM

Work Order: 1312452
Lab ID: 1312452-07
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 12/16/13	Analyst: LR
<u>BatchID: 54190</u>							
Mercury	0.0048	J	0.00076	0.015	mg/Kg-dry	1	12/16/13 23:58
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 12/16/13	Analyst: ML
<u>BatchID: 54205</u>							
Antimony	0.086	J	0.0087	2.2	mg/Kg-dry	5	12/17/13 03:28
Arsenic	2.9		0.30	0.87	mg/Kg-dry	5	12/17/13 03:28
Barium	8.3		0.061	2.2	mg/Kg-dry	5	12/17/13 03:28
Beryllium	0.11	J	0.017	0.87	mg/Kg-dry	5	12/17/13 03:28
Cadmium	0.066	J	0.0087	0.87	mg/Kg-dry	5	12/17/13 03:28
Chromium	4.5		0.36	2.2	mg/Kg-dry	5	12/17/13 03:28
Cobalt	1.9	J	0.0087	2.2	mg/Kg-dry	5	12/17/13 03:28
Copper	6.7		0.43	2.2	mg/Kg-dry	5	12/17/13 16:15
Iron	5,100		7.2	35	mg/Kg-dry	5	12/17/13 03:28
Lead	6.7		0.0087	2.2	mg/Kg-dry	5	12/17/13 03:28
Manganese	170		0.19	2.2	mg/Kg-dry	5	12/17/13 03:28
Nickel	6.3		0.22	2.2	mg/Kg-dry	5	12/17/13 03:28
Selenium	0.45	J	0.28	1.7	mg/Kg-dry	5	12/17/13 03:28
Silver	U		0.0087	0.87	mg/Kg-dry	5	12/17/13 03:28
Thallium	U		0.052	2.2	mg/Kg-dry	5	12/17/13 03:28
Vanadium	8.0		0.13	2.2	mg/Kg-dry	5	12/17/13 03:28
Zinc	19		0.18	4.4	mg/Kg-dry	5	12/17/13 03:28
<u>BatchID: 54205</u>							
Aluminum	1,800		5.5	44	mg/Kg-dry	50	12/18/13 13:56
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 12/13/13	Analyst: HL
<u>BatchID: 54152</u>							
1,1'-Biphenyl	U		5.8	390	µg/Kg-dry	1	12/16/13 17:05
2,4,5-Trichlorophenol	U		9.7	190	µg/Kg-dry	1	12/16/13 17:05
2,4,6-Trichlorophenol	U		6.6	190	µg/Kg-dry	1	12/16/13 17:05
2,4-Dichlorophenol	U		11	190	µg/Kg-dry	1	12/16/13 17:05
2,4-Dimethylphenol	U		62	390	µg/Kg-dry	1	12/16/13 17:05
2,4-Dinitrophenol	U		35	770	µg/Kg-dry	1	12/16/13 17:05
2,4-Dinitrotoluene	U		12	190	µg/Kg-dry	1	12/16/13 17:05
2,6-Dinitrotoluene	U		20	190	µg/Kg-dry	1	12/16/13 17:05
2-Chloronaphthalene	U		1.8	94	µg/Kg-dry	1	12/16/13 17:05
2-Chlorophenol	U		12	190	µg/Kg-dry	1	12/16/13 17:05
2-Methylnaphthalene	U		3.2	94	µg/Kg-dry	1	12/16/13 17:05
2-Methylphenol	U		16	190	µg/Kg-dry	1	12/16/13 17:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120513-RD-005
Collection Date: 12/05/13 01:15 PM

Work Order: 1312452
Lab ID: 1312452-07
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitroaniline	U		15	770	µg/Kg-dry	1	12/16/13 17:05
2-Nitrophenol	U		13	190	µg/Kg-dry	1	12/16/13 17:05
3,3'-Dichlorobenzidine	U		480	770	µg/Kg-dry	1	12/16/13 17:05
3-Nitroaniline	U		13	770	µg/Kg-dry	1	12/16/13 17:05
4,6-Dinitro-2-methylphenol	U		32	390	µg/Kg-dry	1	12/16/13 17:05
4-Bromophenyl phenyl ether	U		11	190	µg/Kg-dry	1	12/16/13 17:05
4-Chloro-3-methylphenol	U		9.0	190	µg/Kg-dry	1	12/16/13 17:05
4-Chloroaniline	U		12	390	µg/Kg-dry	1	12/16/13 17:05
4-Chlorophenyl phenyl ether	U		11	190	µg/Kg-dry	1	12/16/13 17:05
4-Methylphenol	U		19	190	µg/Kg-dry	1	12/16/13 17:05
4-Nitroaniline	U		11	770	µg/Kg-dry	1	12/16/13 17:05
4-Nitrophenol	U		7.7	770	µg/Kg-dry	1	12/16/13 17:05
Acenaphthene	U		1.2	35	µg/Kg-dry	1	12/16/13 17:05
Acenaphthylene	U		1.4	35	µg/Kg-dry	1	12/16/13 17:05
Acetophenone	U		5.8	390	µg/Kg-dry	1	12/16/13 17:05
Anthracene	4.7	J	1.5	35	µg/Kg-dry	1	12/16/13 17:05
Atrazine	U		12	58	µg/Kg-dry	1	12/16/13 17:05
Benzaldehyde	U		15	390	µg/Kg-dry	1	12/16/13 17:05
Benzo(a)anthracene	U		1.5	35	µg/Kg-dry	1	12/16/13 17:05
Benzo(a)pyrene	4.7	J	2.5	35	µg/Kg-dry	1	12/16/13 17:05
Benzo(b)fluoranthene	6.2	J	2.3	35	µg/Kg-dry	1	12/16/13 17:05
Benzo(g,h,i)perylene	4.7	J	3.1	35	µg/Kg-dry	1	12/16/13 17:05
Benzo(k)fluoranthene	U		1.6	35	µg/Kg-dry	1	12/16/13 17:05
Bis(2-chloroethoxy)methane	U		12	190	µg/Kg-dry	1	12/16/13 17:05
Bis(2-chloroethyl)ether	U		12	190	µg/Kg-dry	1	12/16/13 17:05
Bis(2-chloroisopropyl)ether	U		16	190	µg/Kg-dry	1	12/16/13 17:05
Bis(2-ethylhexyl)phthalate	19	J	13	390	µg/Kg-dry	1	12/16/13 17:05
Butyl benzyl phthalate	U		15	190	µg/Kg-dry	1	12/16/13 17:05
Caprolactam	U		17	390	µg/Kg-dry	1	12/16/13 17:05
Carbazole	U		12	190	µg/Kg-dry	1	12/16/13 17:05
Chrysene	U		1.9	35	µg/Kg-dry	1	12/16/13 17:05
Dibenzo(a,h)anthracene	U		2.9	35	µg/Kg-dry	1	12/16/13 17:05
Dibenzofuran	U		12	190	µg/Kg-dry	1	12/16/13 17:05
Diethyl phthalate	U		12	390	µg/Kg-dry	1	12/16/13 17:05
Dimethyl phthalate	U		13	390	µg/Kg-dry	1	12/16/13 17:05
Di-n-butyl phthalate	7.4	J	5.6	390	µg/Kg-dry	1	12/16/13 17:05
Di-n-octyl phthalate	U		13	190	µg/Kg-dry	1	12/16/13 17:05
Fluoranthene	8.6	J	2.7	35	µg/Kg-dry	1	12/16/13 17:05
Fluorene	U		2.6	35	µg/Kg-dry	1	12/16/13 17:05
Hexachlorobenzene	U		11	190	µg/Kg-dry	1	12/16/13 17:05

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120513-RD-005
Collection Date: 12/05/13 01:15 PM

Work Order: 1312452
Lab ID: 1312452-07
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorobutadiene	U		13	58	µg/Kg-dry	1	12/16/13 17:05
Hexachlorocyclopentadiene	U		12	390	µg/Kg-dry	1	12/16/13 17:05
Hexachloroethane	U		18	190	µg/Kg-dry	1	12/16/13 17:05
Indeno(1,2,3-cd)pyrene	U		2.6	35	µg/Kg-dry	1	12/16/13 17:05
Isophorone	U		13	190	µg/Kg-dry	1	12/16/13 17:05
Naphthalene	U		2.9	35	µg/Kg-dry	1	12/16/13 17:05
Nitrobenzene	U		15	190	µg/Kg-dry	1	12/16/13 17:05
N-Nitrosodi-n-propylamine	U		15	190	µg/Kg-dry	1	12/16/13 17:05
N-Nitrosodiphenylamine	U		69	190	µg/Kg-dry	1	12/16/13 17:05
Pentachlorophenol	U		7.5	23	µg/Kg-dry	1	12/16/13 17:05
Phenanthrene	U		1.6	35	µg/Kg-dry	1	12/16/13 17:05
Phenol	U		13	190	µg/Kg-dry	1	12/16/13 17:05
Pyrene	7.8	J	2.6	35	µg/Kg-dry	1	12/16/13 17:05
Surr: 2,4,6-Tribromophenol	74.5			34-140	%REC	1	12/16/13 17:05
Surr: 2-Fluorobiphenyl	80.2			12-100	%REC	1	12/16/13 17:05
Surr: 2-Fluorophenol	86.7			33-117	%REC	1	12/16/13 17:05
Surr: 4-Terphenyl-d14	88.0			25-137	%REC	1	12/16/13 17:05
Surr: Nitrobenzene-d5	78.4			37-107	%REC	1	12/16/13 17:05
Surr: Phenol-d6	87.2			40-106	%REC	1	12/16/13 17:05
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/3/13		Analyst: RS
BatchID: 54070							
1,1,1-Trichloroethane	U		13	35	µg/Kg-dry	1	12/12/13 22:49
1,1,2,2-Tetrachloroethane	U		16	35	µg/Kg-dry	1	12/12/13 22:49
1,1,2-Trichloroethane	U		12	35	µg/Kg-dry	1	12/12/13 22:49
1,1,2-Trichlorotrifluoroethane	U		13	35	µg/Kg-dry	1	12/12/13 22:49
1,1-Dichloroethane	U		13	35	µg/Kg-dry	1	12/12/13 22:49
1,1-Dichloroethene	U		15	35	µg/Kg-dry	1	12/12/13 22:49
1,2,4-Trichlorobenzene	U		18	35	µg/Kg-dry	1	12/12/13 22:49
1,2-Dibromo-3-chloropropane	U		17	35	µg/Kg-dry	1	12/12/13 22:49
1,2-Dibromoethane	U		14	35	µg/Kg-dry	1	12/12/13 22:49
1,2-Dichlorobenzene	U		14	35	µg/Kg-dry	1	12/12/13 22:49
1,2-Dichloroethane	U		17	35	µg/Kg-dry	1	12/12/13 22:49
1,2-Dichloropropane	U		12	35	µg/Kg-dry	1	12/12/13 22:49
1,3-Dichlorobenzene	U		14	35	µg/Kg-dry	1	12/12/13 22:49
1,4-Dichlorobenzene	U		13	35	µg/Kg-dry	1	12/12/13 22:49
2-Butanone	U		87	240	µg/Kg-dry	1	12/12/13 22:49
2-Hexanone	U		8.7	35	µg/Kg-dry	1	12/12/13 22:49
4-Methyl-2-pentanone	U		12	35	µg/Kg-dry	1	12/12/13 22:49
Acetone	U		75	120	µg/Kg-dry	1	12/12/13 22:49

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120513-RD-005
Collection Date: 12/05/13 01:15 PM

Work Order: 1312452
Lab ID: 1312452-07
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	U		14	35	µg/Kg-dry	1	12/12/13 22:49
Bromodichloromethane	U		7.9	35	µg/Kg-dry	1	12/12/13 22:49
Bromoform	U		7.0	35	µg/Kg-dry	1	12/12/13 22:49
Bromomethane	U		14	88	µg/Kg-dry	1	12/12/13 22:49
Carbon disulfide	U		17	35	µg/Kg-dry	1	12/12/13 22:49
Carbon tetrachloride	U		10	35	µg/Kg-dry	1	12/12/13 22:49
Chlorobenzene	U		14	35	µg/Kg-dry	1	12/12/13 22:49
Chloroethane	U		75	120	µg/Kg-dry	1	12/12/13 22:49
Chloroform	U		15	35	µg/Kg-dry	1	12/12/13 22:49
Chloromethane	U		20	120	µg/Kg-dry	1	12/12/13 22:49
cis-1,2-Dichloroethene	U		14	35	µg/Kg-dry	1	12/12/13 22:49
cis-1,3-Dichloropropene	U		12	35	µg/Kg-dry	1	12/12/13 22:49
Cyclohexane	U		16	35	µg/Kg-dry	1	12/12/13 22:49
Dibromochloromethane	U		6.5	35	µg/Kg-dry	1	12/12/13 22:49
Dichlorodifluoromethane	U		16	35	µg/Kg-dry	1	12/12/13 22:49
Ethylbenzene	U		13	35	µg/Kg-dry	1	12/12/13 22:49
Isopropylbenzene	U		15	35	µg/Kg-dry	1	12/12/13 22:49
Methyl acetate	U		47	240	µg/Kg-dry	1	12/12/13 22:49
Methyl tert-butyl ether	U		15	35	µg/Kg-dry	1	12/12/13 22:49
Methylcyclohexane	U		16	35	µg/Kg-dry	1	12/12/13 22:49
Methylene chloride	U		14	35	µg/Kg-dry	1	12/12/13 22:49
Styrene	U		13	35	µg/Kg-dry	1	12/12/13 22:49
Tetrachloroethene	U		16	35	µg/Kg-dry	1	12/12/13 22:49
Toluene	U		13	35	µg/Kg-dry	1	12/12/13 22:49
trans-1,2-Dichloroethene	U		11	35	µg/Kg-dry	1	12/12/13 22:49
trans-1,3-Dichloropropene	U		12	35	µg/Kg-dry	1	12/12/13 22:49
Trichloroethene	U		16	35	µg/Kg-dry	1	12/12/13 22:49
Trichlorofluoromethane	U		9.7	35	µg/Kg-dry	1	12/12/13 22:49
Vinyl chloride	U		16	35	µg/Kg-dry	1	12/12/13 22:49
Xylenes, Total	U		42	110	µg/Kg-dry	1	12/12/13 22:49
Surr: 1,2-Dichloroethane-d4	104			70-130	%REC	1	12/12/13 22:49
Surr: 4-Bromofluorobenzene	92.8			70-130	%REC	1	12/12/13 22:49
Surr: Dibromofluoromethane	88.2			70-130	%REC	1	12/12/13 22:49
Surr: Toluene-d8	96.6			70-130	%REC	1	12/12/13 22:49

CYANIDE, TOTAL

SW9012A

Prep: SW9012A / 12/13/13

Analyst: JB

BatchID: 54158

Cyanide, Total	0.084	J	0.030	0.58	mg/Kg-dry	1	12/16/13 11:17
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MOISTURE

A2540 G

Analyst: MEB

BatchID: R132211

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-120513-RD-005
Collection Date: 12/05/13 01:15 PM

Work Order: 1312452
Lab ID: 1312452-07
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Moisture	15		0.025	0.050	% of sample	1	12/10/13 15:10

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-003
Collection Date: 12/05/13 03:00 PM

Work Order: 1312452
Lab ID: 1312452-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/16/13	Analyst: LR
<u>BatchID: 54186</u>							
Mercury	0.00012	J	0.00010	0.00020	mg/L	1	12/16/13 16:44
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/16/13	Analyst: JDD
<u>BatchID: 54192</u>							
Aluminum	32		0.0078	0.50	mg/L	10	12/17/13 20:33
Antimony	0.0028	J	0.00036	0.020	mg/L	10	12/17/13 20:33
Arsenic	0.072		0.0058	0.050	mg/L	10	12/17/13 20:33
Barium	0.88	J	0.00063	1.0	mg/L	10	12/17/13 20:33
Beryllium	0.0018	J	0.00082	0.010	mg/L	10	12/17/13 20:33
Cadmium	U		0.00045	0.010	mg/L	10	12/17/13 20:33
Chromium	0.13		0.0027	0.10	mg/L	10	12/17/13 20:33
Cobalt	0.040	J	0.00041	0.20	mg/L	10	12/17/13 20:33
Copper	0.15		0.0053	0.040	mg/L	10	12/17/13 20:33
Iron	86		0.053	2.0	mg/L	10	12/17/13 20:33
Lead	0.086		0.00051	0.030	mg/L	10	12/19/13 04:09
Manganese	1.6		0.00054	0.50	mg/L	10	12/17/13 20:33
Nickel	0.13	J	0.0025	0.20	mg/L	10	12/17/13 20:33
Selenium	0.012	J	0.0064	0.050	mg/L	10	12/17/13 20:33
Silver	U		0.00042	0.0020	mg/L	10	12/17/13 20:33
Thallium	0.00096	J	0.00062	0.020	mg/L	10	12/19/13 04:09
Vanadium	0.093		0.0016	0.040	mg/L	10	12/17/13 20:33
Zinc	0.42	J	0.0048	0.50	mg/L	10	12/17/13 20:33
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 12/11/13	Analyst: HL
<u>BatchID: 54043</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/11/13 22:31
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/11/13 22:31
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/11/13 22:31
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/11/13 22:31
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/11/13 22:31
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/11/13 22:31
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/11/13 22:31
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/11/13 22:31
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/11/13 22:31
2-Chlorophenol	U		0.32	10	µg/L	1	12/11/13 22:31
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/11/13 22:31
2-Methylphenol	U		0.20	10	µg/L	1	12/11/13 22:31
2-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 22:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-003
Collection Date: 12/05/13 03:00 PM

Work Order: 1312452
Lab ID: 1312452-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/11/13 22:31
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/11/13 22:31
3-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 22:31
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/11/13 22:31
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 22:31
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/11/13 22:31
4-Chloroaniline	U		0.32	10	µg/L	1	12/11/13 22:31
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 22:31
4-Methylphenol	U		0.20	10	µg/L	1	12/11/13 22:31
4-Nitroaniline	U		0.30	25	µg/L	1	12/11/13 22:31
4-Nitrophenol	U		0.51	25	µg/L	1	12/11/13 22:31
Acenaphthene	U		0.11	5.0	µg/L	1	12/11/13 22:31
Acenaphthylene	U		0.12	5.0	µg/L	1	12/11/13 22:31
Acetophenone	U		0.090	5.0	µg/L	1	12/11/13 22:31
Anthracene	U		0.72	5.0	µg/L	1	12/11/13 22:31
Atrazine	U		0.13	5.0	µg/L	1	12/11/13 22:31
Benzaldehyde	U		0.46	10	µg/L	1	12/11/13 22:31
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/11/13 22:31
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/11/13 22:31
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/11/13 22:31
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/11/13 22:31
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/11/13 22:31
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/11/13 22:31
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/11/13 22:31
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/11/13 22:31
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/11/13 22:31
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/11/13 22:31
Caprolactam	U		4.7	10	µg/L	1	12/11/13 22:31
Carbazole	U		0.16	10	µg/L	1	12/11/13 22:31
Chrysene	U		0.71	1.0	µg/L	1	12/11/13 22:31
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/11/13 22:31
Dibenzofuran	U		0.28	4.0	µg/L	1	12/11/13 22:31
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/11/13 22:31
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/11/13 22:31
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	12/11/13 22:31
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/11/13 22:31
Fluoranthene	U		0.77	1.0	µg/L	1	12/11/13 22:31
Fluorene	U		0.10	5.0	µg/L	1	12/11/13 22:31
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/11/13 22:31
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/11/13 22:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-003
Collection Date: 12/05/13 03:00 PM

Work Order: 1312452
Lab ID: 1312452-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/11/13 22:31
Hexachloroethane	U		0.47	5.0	µg/L	1	12/11/13 22:31
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/11/13 22:31
Isophorone	U		0.30	5.0	µg/L	1	12/11/13 22:31
Naphthalene	U		0.12	5.0	µg/L	1	12/11/13 22:31
Nitrobenzene	U		0.33	3.0	µg/L	1	12/11/13 22:31
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/11/13 22:31
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/11/13 22:31
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/11/13 22:31
Phenanthrene	U		0.86	2.0	µg/L	1	12/11/13 22:31
Phenol	U		0.32	5.0	µg/L	1	12/11/13 22:31
Pyrene	U		0.65	5.0	µg/L	1	12/11/13 22:31
Surr: 2,4,6-Tribromophenol	77.8			32-115	%REC	1	12/11/13 22:31
Surr: 2-Fluorobiphenyl	67.6			32-100	%REC	1	12/11/13 22:31
Surr: 2-Fluorophenol	38.8			22-59	%REC	1	12/11/13 22:31
Surr: 4-Terphenyl-d14	69.4			23-112	%REC	1	12/11/13 22:31
Surr: Nitrobenzene-d5	63.4			31-93	%REC	1	12/11/13 22:31
Surr: Phenol-d6	23.2			13-36	%REC	1	12/11/13 22:31
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132376							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/13/13 05:26
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/13/13 05:26
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/13/13 05:26
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/13/13 05:26
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/13/13 05:26
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 05:26
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/13/13 05:26
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/13/13 05:26
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/13/13 05:26
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/13/13 05:26
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/13/13 05:26
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/13/13 05:26
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/13/13 05:26
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/13/13 05:26
2-Butanone	U		0.64	25	µg/L	1	12/13/13 05:26
2-Hexanone	U		0.19	50	µg/L	1	12/13/13 05:26
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/13/13 05:26
Acetone	U		3.0	50	µg/L	1	12/13/13 05:26
Benzene	2.4		0.14	1.0	µg/L	1	12/13/13 05:26

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-003
Collection Date: 12/05/13 03:00 PM

Work Order: 1312452
Lab ID: 1312452-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/13/13 05:26
Bromoform	U		0.18	1.0	µg/L	1	12/13/13 05:26
Bromomethane	U		0.38	5.0	µg/L	1	12/13/13 05:26
Carbon disulfide	U		0.26	5.0	µg/L	1	12/13/13 05:26
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/13/13 05:26
Chlorobenzene	U		0.12	1.0	µg/L	1	12/13/13 05:26
Chloroethane	U		0.25	5.0	µg/L	1	12/13/13 05:26
Chloroform	U		0.15	1.0	µg/L	1	12/13/13 05:26
Chloromethane	U		0.29	5.0	µg/L	1	12/13/13 05:26
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/13/13 05:26
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/13/13 05:26
Cyclohexane	U		0.20	1.0	µg/L	1	12/13/13 05:26
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/13/13 05:26
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/13/13 05:26
Ethylbenzene	U		0.12	1.0	µg/L	1	12/13/13 05:26
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/13/13 05:26
Methyl acetate	U		0.76	10	µg/L	1	12/13/13 05:26
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/13/13 05:26
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/13/13 05:26
Methylene chloride	U		0.75	5.0	µg/L	1	12/13/13 05:26
Styrene	U		0.12	1.0	µg/L	1	12/13/13 05:26
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/13/13 05:26
Toluene	U		0.13	1.0	µg/L	1	12/13/13 05:26
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 05:26
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/13/13 05:26
Trichloroethene	U		0.16	1.0	µg/L	1	12/13/13 05:26
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/13/13 05:26
Vinyl chloride	U		0.15	1.0	µg/L	1	12/13/13 05:26
Xylenes, Total	U		0.30	3.0	µg/L	1	12/13/13 05:26
Surr: 1,2-Dichloroethane-d4	103			70-120	%REC	1	12/13/13 05:26
Surr: 4-Bromofluorobenzene	96.4			75-120	%REC	1	12/13/13 05:26
Surr: Dibromofluoromethane	100			85-115	%REC	1	12/13/13 05:26
Surr: Toluene-d8	99.8			85-120	%REC	1	12/13/13 05:26
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/13/13	Analyst: JB
BatchID: 54140							
Cyanide, Amenable	0.031		0.0010	0.0050	mg/L	1	12/16/13 11:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-004
Collection Date: 12/06/13 12:45 PM

Work Order: 1312452
Lab ID: 1312452-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470			Prep: SW7470 / 12/16/13	Analyst: LR
BatchID: 54186							
Mercury	0.00030		0.00010	0.00020	mg/L	1	12/16/13 16:53
METALS BY ICP-MS			SW6020A			Prep: SW3005A / 12/16/13	Analyst: JDD
BatchID: 54192							
Aluminum	67		0.0078	0.50	mg/L	10	12/17/13 20:39
Antimony	0.0026	J	0.00036	0.020	mg/L	10	12/17/13 20:39
Arsenic	0.13		0.0058	0.050	mg/L	10	12/17/13 20:39
Barium	0.86	J	0.00063	1.0	mg/L	10	12/17/13 20:39
Beryllium	0.0035	J	0.00082	0.010	mg/L	10	12/17/13 20:39
Cadmium	0.0029	J	0.00045	0.010	mg/L	10	12/17/13 20:39
Chromium	0.13		0.0027	0.10	mg/L	10	12/17/13 20:39
Cobalt	0.077	J	0.00041	0.20	mg/L	10	12/17/13 20:39
Copper	0.22		0.0053	0.040	mg/L	10	12/17/13 20:39
Iron	190		0.053	2.0	mg/L	10	12/17/13 20:39
Lead	0.15		0.00051	0.030	mg/L	10	12/19/13 04:14
Manganese	4.1		0.00054	0.50	mg/L	10	12/17/13 20:39
Nickel	0.21		0.0025	0.20	mg/L	10	12/17/13 20:39
Selenium	0.0098	J	0.0064	0.050	mg/L	10	12/17/13 20:39
Silver	0.00053	J	0.00042	0.0020	mg/L	10	12/17/13 20:39
Thallium	0.0024	J	0.00062	0.020	mg/L	10	12/19/13 04:14
Vanadium	0.20		0.0016	0.040	mg/L	10	12/17/13 20:39
Zinc	0.58		0.0048	0.50	mg/L	10	12/17/13 20:39
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270			Prep: SW3510 / 12/11/13	Analyst: HL
BatchID: 54043							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/11/13 23:02
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/11/13 23:02
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/11/13 23:02
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/11/13 23:02
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/11/13 23:02
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/11/13 23:02
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/11/13 23:02
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/11/13 23:02
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/11/13 23:02
2-Chlorophenol	U		0.32	10	µg/L	1	12/11/13 23:02
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/11/13 23:02
2-Methylphenol	U		0.20	10	µg/L	1	12/11/13 23:02
2-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 23:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-004
Collection Date: 12/06/13 12:45 PM

Work Order: 1312452
Lab ID: 1312452-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/11/13 23:02
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/11/13 23:02
3-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 23:02
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/11/13 23:02
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 23:02
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/11/13 23:02
4-Chloroaniline	U		0.32	10	µg/L	1	12/11/13 23:02
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 23:02
4-Methylphenol	U		0.20	10	µg/L	1	12/11/13 23:02
4-Nitroaniline	U		0.30	25	µg/L	1	12/11/13 23:02
4-Nitrophenol	U		0.51	25	µg/L	1	12/11/13 23:02
Acenaphthene	U		0.11	5.0	µg/L	1	12/11/13 23:02
Acenaphthylene	U		0.12	5.0	µg/L	1	12/11/13 23:02
Acetophenone	U		0.090	5.0	µg/L	1	12/11/13 23:02
Anthracene	U		0.72	5.0	µg/L	1	12/11/13 23:02
Atrazine	U		0.13	5.0	µg/L	1	12/11/13 23:02
Benzaldehyde	U		0.46	10	µg/L	1	12/11/13 23:02
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/11/13 23:02
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/11/13 23:02
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/11/13 23:02
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/11/13 23:02
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/11/13 23:02
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/11/13 23:02
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/11/13 23:02
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/11/13 23:02
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/11/13 23:02
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/11/13 23:02
Caprolactam	U		4.7	10	µg/L	1	12/11/13 23:02
Carbazole	U		0.16	10	µg/L	1	12/11/13 23:02
Chrysene	U		0.71	1.0	µg/L	1	12/11/13 23:02
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/11/13 23:02
Dibenzofuran	U		0.28	4.0	µg/L	1	12/11/13 23:02
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/11/13 23:02
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/11/13 23:02
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	12/11/13 23:02
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/11/13 23:02
Fluoranthene	U		0.77	1.0	µg/L	1	12/11/13 23:02
Fluorene	U		0.10	5.0	µg/L	1	12/11/13 23:02
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/11/13 23:02
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/11/13 23:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-004
Collection Date: 12/06/13 12:45 PM

Work Order: 1312452
Lab ID: 1312452-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/11/13 23:02
Hexachloroethane	U		0.47	5.0	µg/L	1	12/11/13 23:02
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/11/13 23:02
Isophorone	U		0.30	5.0	µg/L	1	12/11/13 23:02
Naphthalene	U		0.12	5.0	µg/L	1	12/11/13 23:02
Nitrobenzene	U		0.33	3.0	µg/L	1	12/11/13 23:02
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/11/13 23:02
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/11/13 23:02
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/11/13 23:02
Phenanthrene	U		0.86	2.0	µg/L	1	12/11/13 23:02
Phenol	U		0.32	5.0	µg/L	1	12/11/13 23:02
Pyrene	U		0.65	5.0	µg/L	1	12/11/13 23:02
Surr: 2,4,6-Tribromophenol	70.3			32-115	%REC	1	12/11/13 23:02
Surr: 2-Fluorobiphenyl	68.0			32-100	%REC	1	12/11/13 23:02
Surr: 2-Fluorophenol	41.3			22-59	%REC	1	12/11/13 23:02
Surr: 4-Terphenyl-d14	76.6			23-112	%REC	1	12/11/13 23:02
Surr: Nitrobenzene-d5	63.1			31-93	%REC	1	12/11/13 23:02
Surr: Phenol-d6	25.3			13-36	%REC	1	12/11/13 23:02
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132376							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/13/13 05:51
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/13/13 05:51
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/13/13 05:51
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/13/13 05:51
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/13/13 05:51
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 05:51
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/13/13 05:51
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/13/13 05:51
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/13/13 05:51
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/13/13 05:51
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/13/13 05:51
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/13/13 05:51
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/13/13 05:51
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/13/13 05:51
2-Butanone	U		0.64	25	µg/L	1	12/13/13 05:51
2-Hexanone	U		0.19	50	µg/L	1	12/13/13 05:51
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/13/13 05:51
Acetone	U		3.0	50	µg/L	1	12/13/13 05:51
Benzene	U		0.14	1.0	µg/L	1	12/13/13 05:51

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-004
Collection Date: 12/06/13 12:45 PM

Work Order: 1312452
Lab ID: 1312452-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/13/13 05:51
Bromoform	U		0.18	1.0	µg/L	1	12/13/13 05:51
Bromomethane	U		0.38	5.0	µg/L	1	12/13/13 05:51
Carbon disulfide	U		0.26	5.0	µg/L	1	12/13/13 05:51
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/13/13 05:51
Chlorobenzene	U		0.12	1.0	µg/L	1	12/13/13 05:51
Chloroethane	U		0.25	5.0	µg/L	1	12/13/13 05:51
Chloroform	U		0.15	1.0	µg/L	1	12/13/13 05:51
Chloromethane	U		0.29	5.0	µg/L	1	12/13/13 05:51
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/13/13 05:51
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/13/13 05:51
Cyclohexane	U		0.20	1.0	µg/L	1	12/13/13 05:51
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/13/13 05:51
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/13/13 05:51
Ethylbenzene	U		0.12	1.0	µg/L	1	12/13/13 05:51
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/13/13 05:51
Methyl acetate	U		0.76	10	µg/L	1	12/13/13 05:51
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/13/13 05:51
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/13/13 05:51
Methylene chloride	U		0.75	5.0	µg/L	1	12/13/13 05:51
Styrene	U		0.12	1.0	µg/L	1	12/13/13 05:51
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/13/13 05:51
Toluene	0.29	J	0.13	1.0	µg/L	1	12/13/13 05:51
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 05:51
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/13/13 05:51
Trichloroethene	U		0.16	1.0	µg/L	1	12/13/13 05:51
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/13/13 05:51
Vinyl chloride	U		0.15	1.0	µg/L	1	12/13/13 05:51
Xylenes, Total	U		0.30	3.0	µg/L	1	12/13/13 05:51
Surr: 1,2-Dichloroethane-d4	104			70-120	%REC	1	12/13/13 05:51
Surr: 4-Bromofluorobenzene	98.4			75-120	%REC	1	12/13/13 05:51
Surr: Dibromofluoromethane	99.8			85-115	%REC	1	12/13/13 05:51
Surr: Toluene-d8	100			85-120	%REC	1	12/13/13 05:51
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/13/13	Analyst: JB
BatchID: 54140							
Cyanide, Amenable	0.0092		0.0010	0.0050	mg/L	1	12/16/13 11:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-005
Collection Date: 12/06/13 02:50 PM

Work Order: 1312452
Lab ID: 1312452-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470			Prep: SW7470 / 12/16/13	Analyst: LR
BatchID: 54186							
Mercury	0.00095		0.00010	0.00020	mg/L	1	12/16/13 16:56
METALS BY ICP-MS			SW6020A			Prep: SW3005A / 12/16/13	Analyst: JDD
BatchID: 54192							
Antimony	0.0026	J	0.00036	0.020	mg/L	10	12/17/13 20:44
Arsenic	0.47		0.0058	0.050	mg/L	10	12/17/13 20:44
Barium	1.3		0.00063	1.0	mg/L	10	12/17/13 20:44
Beryllium	0.0098	J	0.00082	0.010	mg/L	10	12/17/13 20:44
Cadmium	0.013		0.00045	0.010	mg/L	10	12/17/13 20:44
Chromium	0.54		0.0027	0.10	mg/L	10	12/17/13 20:44
Cobalt	0.27		0.00041	0.20	mg/L	10	12/17/13 20:44
Copper	0.70		0.0053	0.040	mg/L	10	12/17/13 20:44
Iron	520		0.053	2.0	mg/L	10	12/17/13 20:44
Lead	0.44		0.00051	0.030	mg/L	10	12/19/13 04:20
Manganese	9.2		0.00054	0.50	mg/L	10	12/17/13 20:44
Nickel	1.1		0.0025	0.20	mg/L	10	12/17/13 20:44
Selenium	0.027	J	0.0064	0.050	mg/L	10	12/17/13 20:44
Silver	0.0017	J	0.00042	0.0020	mg/L	10	12/17/13 20:44
Thallium	0.0063	J	0.00062	0.020	mg/L	10	12/19/13 04:20
Vanadium	0.59		0.0016	0.040	mg/L	10	12/17/13 20:44
Zinc	1.7		0.0048	0.50	mg/L	10	12/17/13 20:44
BatchID: 54192							
Aluminum	250		0.078	5.0	mg/L	100	12/19/13 04:25
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270			Prep: SW3510 / 12/11/13	Analyst: HL
BatchID: 54043							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/11/13 23:33
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/11/13 23:33
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/11/13 23:33
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/11/13 23:33
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/11/13 23:33
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/11/13 23:33
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/11/13 23:33
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/11/13 23:33
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/11/13 23:33
2-Chlorophenol	U		0.32	10	µg/L	1	12/11/13 23:33
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/11/13 23:33
2-Methylphenol	U		0.20	10	µg/L	1	12/11/13 23:33

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-005
Collection Date: 12/06/13 02:50 PM

Work Order: 1312452
Lab ID: 1312452-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 23:33
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/11/13 23:33
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/11/13 23:33
3-Nitroaniline	U		0.34	25	µg/L	1	12/11/13 23:33
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/11/13 23:33
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 23:33
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/11/13 23:33
4-Chloroaniline	U		0.32	10	µg/L	1	12/11/13 23:33
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/11/13 23:33
4-Methylphenol	U		0.20	10	µg/L	1	12/11/13 23:33
4-Nitroaniline	U		0.30	25	µg/L	1	12/11/13 23:33
4-Nitrophenol	U		0.51	25	µg/L	1	12/11/13 23:33
Acenaphthene	U		0.11	5.0	µg/L	1	12/11/13 23:33
Acenaphthylene	U		0.12	5.0	µg/L	1	12/11/13 23:33
Acetophenone	U		0.090	5.0	µg/L	1	12/11/13 23:33
Anthracene	U		0.72	5.0	µg/L	1	12/11/13 23:33
Atrazine	U		0.13	5.0	µg/L	1	12/11/13 23:33
Benzaldehyde	U		0.46	10	µg/L	1	12/11/13 23:33
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/11/13 23:33
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/11/13 23:33
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/11/13 23:33
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/11/13 23:33
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/11/13 23:33
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/11/13 23:33
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/11/13 23:33
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/11/13 23:33
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/11/13 23:33
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/11/13 23:33
Caprolactam	U		4.7	10	µg/L	1	12/11/13 23:33
Carbazole	U		0.16	10	µg/L	1	12/11/13 23:33
Chrysene	U		0.71	1.0	µg/L	1	12/11/13 23:33
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/11/13 23:33
Dibenzofuran	U		0.28	4.0	µg/L	1	12/11/13 23:33
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/11/13 23:33
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/11/13 23:33
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	12/11/13 23:33
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/11/13 23:33
Fluoranthene	U		0.77	1.0	µg/L	1	12/11/13 23:33
Fluorene	U		0.10	5.0	µg/L	1	12/11/13 23:33
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/11/13 23:33

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-005
Collection Date: 12/06/13 02:50 PM

Work Order: 1312452
Lab ID: 1312452-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/11/13 23:33
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/11/13 23:33
Hexachloroethane	U		0.47	5.0	µg/L	1	12/11/13 23:33
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/11/13 23:33
Isophorone	U		0.30	5.0	µg/L	1	12/11/13 23:33
Naphthalene	U		0.12	5.0	µg/L	1	12/11/13 23:33
Nitrobenzene	U		0.33	3.0	µg/L	1	12/11/13 23:33
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/11/13 23:33
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/11/13 23:33
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/11/13 23:33
Phenanthrene	U		0.86	2.0	µg/L	1	12/11/13 23:33
Phenol	U		0.32	5.0	µg/L	1	12/11/13 23:33
Pyrene	U		0.65	5.0	µg/L	1	12/11/13 23:33
Surr: 2,4,6-Tribromophenol	67.0			32-115	%REC	1	12/11/13 23:33
Surr: 2-Fluorobiphenyl	65.4			32-100	%REC	1	12/11/13 23:33
Surr: 2-Fluorophenol	38.8			22-59	%REC	1	12/11/13 23:33
Surr: 4-Terphenyl-d14	78.2			23-112	%REC	1	12/11/13 23:33
Surr: Nitrobenzene-d5	60.3			31-93	%REC	1	12/11/13 23:33
Surr: Phenol-d6	23.6			13-36	%REC	1	12/11/13 23:33

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: BG

BatchID: R132376

1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/13/13 06:15
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/13/13 06:15
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/13/13 06:15
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/13/13 06:15
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/13/13 06:15
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 06:15
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/13/13 06:15
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/13/13 06:15
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/13/13 06:15
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/13/13 06:15
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/13/13 06:15
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/13/13 06:15
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/13/13 06:15
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/13/13 06:15
2-Butanone	U		0.64	25	µg/L	1	12/13/13 06:15
2-Hexanone	U		0.19	50	µg/L	1	12/13/13 06:15
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/13/13 06:15
Acetone	U		3.0	50	µg/L	1	12/13/13 06:15

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-005
Collection Date: 12/06/13 02:50 PM

Work Order: 1312452
Lab ID: 1312452-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	U		0.14	1.0	µg/L	1	12/13/13 06:15
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/13/13 06:15
Bromoform	U		0.18	1.0	µg/L	1	12/13/13 06:15
Bromomethane	U		0.38	5.0	µg/L	1	12/13/13 06:15
Carbon disulfide	U		0.26	5.0	µg/L	1	12/13/13 06:15
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/13/13 06:15
Chlorobenzene	U		0.12	1.0	µg/L	1	12/13/13 06:15
Chloroethane	U		0.25	5.0	µg/L	1	12/13/13 06:15
Chloroform	U		0.15	1.0	µg/L	1	12/13/13 06:15
Chloromethane	U		0.29	5.0	µg/L	1	12/13/13 06:15
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/13/13 06:15
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/13/13 06:15
Cyclohexane	U		0.20	1.0	µg/L	1	12/13/13 06:15
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/13/13 06:15
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/13/13 06:15
Ethylbenzene	U		0.12	1.0	µg/L	1	12/13/13 06:15
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/13/13 06:15
Methyl acetate	U		0.76	10	µg/L	1	12/13/13 06:15
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/13/13 06:15
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/13/13 06:15
Methylene chloride	U		0.75	5.0	µg/L	1	12/13/13 06:15
Styrene	U		0.12	1.0	µg/L	1	12/13/13 06:15
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/13/13 06:15
Toluene	0.48	J	0.13	1.0	µg/L	1	12/13/13 06:15
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/13/13 06:15
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/13/13 06:15
Trichloroethene	U		0.16	1.0	µg/L	1	12/13/13 06:15
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/13/13 06:15
Vinyl chloride	U		0.15	1.0	µg/L	1	12/13/13 06:15
Xylenes, Total	U		0.30	3.0	µg/L	1	12/13/13 06:15
Surr: 1,2-Dichloroethane-d4	104			70-120	%REC	1	12/13/13 06:15
Surr: 4-Bromofluorobenzene	98.0			75-120	%REC	1	12/13/13 06:15
Surr: Dibromofluoromethane	103			85-115	%REC	1	12/13/13 06:15
Surr: Toluene-d8	100			85-120	%REC	1	12/13/13 06:15
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/13/13	Analyst: JB
BatchID: 54140							
Cyanide, Amenable	0.046		0.0010	0.0050	mg/L	1	12/16/13 11:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: Trip Blank
Collection Date: 12/05/13

Work Order: 1312452
Lab ID: 1312452-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260				Analyst: BG
<u>BatchID: R132304</u>							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/11/13 20:37
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/11/13 20:37
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/11/13 20:37
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/11/13 20:37
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/11/13 20:37
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/11/13 20:37
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/11/13 20:37
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/11/13 20:37
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/11/13 20:37
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/11/13 20:37
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/11/13 20:37
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/11/13 20:37
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/11/13 20:37
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/11/13 20:37
2-Butanone	U		0.64	25	µg/L	1	12/11/13 20:37
2-Hexanone	U		0.19	50	µg/L	1	12/11/13 20:37
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/11/13 20:37
Acetone	U		3.0	50	µg/L	1	12/11/13 20:37
Benzene	U		0.14	1.0	µg/L	1	12/11/13 20:37
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/11/13 20:37
Bromoform	U		0.18	1.0	µg/L	1	12/11/13 20:37
Bromomethane	U		0.38	5.0	µg/L	1	12/11/13 20:37
Carbon disulfide	U		0.26	5.0	µg/L	1	12/11/13 20:37
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/11/13 20:37
Chlorobenzene	U		0.12	1.0	µg/L	1	12/11/13 20:37
Chloroethane	U		0.25	5.0	µg/L	1	12/11/13 20:37
Chloroform	U		0.15	1.0	µg/L	1	12/11/13 20:37
Chloromethane	U		0.29	5.0	µg/L	1	12/11/13 20:37
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/11/13 20:37
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/11/13 20:37
Cyclohexane	U		0.20	1.0	µg/L	1	12/11/13 20:37
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/11/13 20:37
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/11/13 20:37
Ethylbenzene	U		0.12	1.0	µg/L	1	12/11/13 20:37
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/11/13 20:37
Methyl acetate	U		0.76	10	µg/L	1	12/11/13 20:37
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/11/13 20:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 20-Dec-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: Trip Blank
Collection Date: 12/05/13

Work Order: 1312452
Lab ID: 1312452-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/11/13 20:37
Methylene chloride	U		0.75	5.0	µg/L	1	12/11/13 20:37
Styrene	U		0.12	1.0	µg/L	1	12/11/13 20:37
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/11/13 20:37
Toluene	U		0.13	1.0	µg/L	1	12/11/13 20:37
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/11/13 20:37
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/11/13 20:37
Trichloroethene	U		0.16	1.0	µg/L	1	12/11/13 20:37
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/11/13 20:37
Vinyl chloride	U		0.15	1.0	µg/L	1	12/11/13 20:37
Xylenes, Total	U		0.30	3.0	µg/L	1	12/11/13 20:37
Surr: 1,2-Dichloroethane-d4	94.0			70-120	%REC	1	12/11/13 20:37
Surr: 4-Bromofluorobenzene	99.7			75-120	%REC	1	12/11/13 20:37
Surr: Dibromofluoromethane	97.8			85-115	%REC	1	12/11/13 20:37
Surr: Toluene-d8	89.8			85-120	%REC	1	12/11/13 20:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: The Mannik & Smith Group, Inc.

QC BATCH REPORT

Work Order: 1312452

Project: RACER - Van Buren Landfill (R2330009)

Batch ID: 54151

Instrument ID HG1

Method: SW7471

MBLK		Sample ID: MBLK-54151-54151				Units: mg/Kg		Analysis Date: 12/16/13 01:18 PM		
Client ID:		Run ID: HG1_131216A				SeqNo: 2580785		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.020

LCS		Sample ID: LCS-54151-54151				Units: mg/Kg		Analysis Date: 12/16/13 01:20 PM		
Client ID:		Run ID: HG1_131216A				SeqNo: 2580786		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1767 0.020 0.1665 0 106 80-120 0

MS		Sample ID: 1312565-03BMS				Units: mg/Kg		Analysis Date: 12/16/13 01:29 PM		
Client ID:		Run ID: HG1_131216A				SeqNo: 2580790		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1691 0.018 0.1465 0.007945 110 75-125 0

MSD		Sample ID: 1312565-03BMSD				Units: mg/Kg		Analysis Date: 12/16/13 01:31 PM		
Client ID:		Run ID: HG1_131216A				SeqNo: 2580791		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.1586 0.017 0.1433 0.007945 105 75-125 0.1691 6.38 35

The following samples were analyzed in this batch:

1312452-01B 1312452-02B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54186** Instrument ID **HG1** Method: **SW7470**

MBLK	Sample ID: MBLK-54186-54186					Units: mg/L		Analysis Date: 12/16/13 04:37 PM		
Client ID:	Run ID: HG1_131216A				SeqNo: 2581625		Prep Date: 12/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS	Sample ID: LCS-54186-54186					Units: mg/L		Analysis Date: 12/16/13 04:39 PM		
Client ID:	Run ID: HG1_131216A				SeqNo: 2581626		Prep Date: 12/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.00205 0.00020 0.002 0 102 80-120 0

MS	Sample ID: 1312750-01AMS					Units: mg/L		Analysis Date: 12/16/13 05:28 PM		
Client ID:	Run ID: HG1_131216A				SeqNo: 2581647		Prep Date: 12/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002095 0.00020 0.002 -0.000015 106 75-125 0

MSD	Sample ID: 1312750-01AMSD					Units: mg/L		Analysis Date: 12/16/13 05:30 PM		
Client ID:	Run ID: HG1_131216A				SeqNo: 2581682		Prep Date: 12/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002108 0.00020 0.002 -0.000015 106 75-125 0.002095 0.619 20

The following samples were analyzed in this batch:

1312452-04D	1312452-06D	1312452-08D
1312452-10D	1312452-12D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54190** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-54190-54190				Units: mg/Kg		Analysis Date: 12/16/13 11:49 PM		
Client ID:			Run ID: HG1_131216A		SeqNo: 2581701		Prep Date: 12/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.020

LCS				Sample ID: LCS-54190-54190				Units: mg/Kg			Analysis Date: 12/16/13 11:51 PM		
Client ID:				Run ID: HG1_131216A				SeqNo: 2581702		Prep Date: 12/16/13		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

Mercury 0.1808 0.020 0.1665 0 109 80-120 0

MS				Sample ID: 1312611-11AMS				Units: mg/Kg			Analysis Date: 12/17/13 12:27 AM												
Client ID:				Run ID: HG1_131216A				SeqNo: 2581717		Prep Date: 12/16/13		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Mercury 0.1494 0.015 0.125 0.0136 109 75-125 0

MSD				Sample ID: 1312611-11AMSD				Units: mg/Kg			Analysis Date: 12/17/13 12:30 AM												
Client ID:				Run ID: HG1_131216A				SeqNo: 2581718		Prep Date: 12/16/13		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Mercury 0.15 0.015 0.1223 0.0136 112 75-125 0.1494 0.376 35

The following samples were analyzed in this batch:

1312452-03B	1312452-05B	1312452-07B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54192** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-54192-54192				Units: mg/L		Analysis Date: 12/17/13 07:22 PM		
Client ID:		Run ID: ICPMS2_131217A				SeqNo: 2583667		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0009665	0.010								J
Antimony	0.0000784	0.0050								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	0.009893	0.080								J
Lead	U	0.0050								
Manganese	0.0001485	0.0050								J
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0050								
Vanadium	0.000208	0.0050								J
Zinc	0.000831	0.010								J

LCS		Sample ID: LCS-54192-54192				Units: mg/L		Analysis Date: 12/17/13 07:27 PM		
Client ID:		Run ID: ICPMS2_131217A				SeqNo: 2583668		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09485	0.010	0.1	0	94.8	80-120	0			
Antimony	0.09595	0.0050	0.1	0	96	80-120	0			
Arsenic	0.09539	0.0050	0.1	0	95.4	80-120	0			
Barium	0.09439	0.0050	0.1	0	94.4	80-120	0			
Beryllium	0.09145	0.0020	0.1	0	91.4	80-120	0			
Cadmium	0.09219	0.0020	0.1	0	92.2	80-120	0			
Chromium	0.08939	0.0050	0.1	0	89.4	80-120	0			
Cobalt	0.09459	0.0050	0.1	0	94.6	80-120	0			
Copper	0.09115	0.0050	0.1	0	91.2	80-120	0			
Iron	9.167	0.080	10	0	91.7	80-120	0			
Lead	0.09022	0.0050	0.1	0	90.2	80-120	0			
Manganese	0.09309	0.0050	0.1	0	93.1	80-120	0			
Nickel	0.0902	0.0050	0.1	0	90.2	80-120	0			
Selenium	0.09424	0.0050	0.1	0	94.2	80-120	0			
Silver	0.08951	0.0050	0.1	0	89.5	80-120	0			
Vanadium	0.09508	0.0050	0.1	0	95.1	80-120	0			
Zinc	0.09318	0.010	0.1	0	93.2	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54192** Instrument ID **ICPMS2** Method: **SW6020A**

LCS		Sample ID: LCS-54192-54192				Units: mg/L		Analysis Date: 12/18/13 12:04 PM		
Client ID:		Run ID: ICPMS2_131218A				SeqNo: 2585044		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Thallium	0.09223	0.0050	0.1	0	92.2	80-120	0			

MS		Sample ID: 1312663-01AMS				Units: mg/L		Analysis Date: 12/17/13 10:57 PM		
Client ID:		Run ID: ICPMS2_131217A				SeqNo: 2583726		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.035	0.10	1	0	104	75-125	0			
Antimony	0.9906	0.050	1	0	99.1	75-125	0			
Arsenic	1.018	0.050	1	0	102	75-125	0			
Barium	1.864	0.050	1	0	186	75-125	0			S
Beryllium	0.9439	0.020	1	0	94.4	75-125	0			
Cadmium	0.9573	0.020	1	0	95.7	75-125	0			
Chromium	0.9335	0.050	1	0	93.4	75-125	0			
Cobalt	0.9814	0.050	1	0	98.1	75-125	0			
Copper	0.9417	0.050	1	0	94.2	75-125	0			
Iron	95.07	0.80	100	0	95.1	75-125	0			
Lead	0.9416	0.050	1	0	94.2	75-125	0			
Manganese	0.9584	0.050	1	0	95.8	75-125	0			
Nickel	0.9736	0.050	1	0	97.4	75-125	0			
Selenium	1.05	0.050	1	0	105	75-125	0			
Silver	0.8876	0.050	1	0	88.8	75-125	0			
Thallium	0.8627	0.050	1	0	86.3	75-125	0			
Vanadium	1.011	0.050	1	0	101	75-125	0			
Zinc	0.9634	0.10	1	0	96.3	75-125	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54192** Instrument ID **ICPMS2** Method: **SW6020A**

MSD		Sample ID: 1312663-01AMSD				Units: mg/L		Analysis Date: 12/17/13 11:02 PM		
Client ID:		Run ID: ICPMS2_131217A				SeqNo: 2583728		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.027	0.10	1	0	103	75-125	0			
Antimony	0.9989	0.050	1	0	99.9	75-125	0			
Arsenic	1.029	0.050	1	0	103	75-125	0			
Barium	1.908	0.050	1	0	191	75-125	0			S
Beryllium	0.9639	0.020	1	0	96.4	75-125	0			
Cadmium	0.9646	0.020	1	0	96.5	75-125	0			
Chromium	0.9403	0.050	1	0	94	75-125	0			
Cobalt	0.9846	0.050	1	0	98.5	75-125	0			
Copper	0.941	0.050	1	0	94.1	75-125	0			
Iron	95.65	0.80	100	0	95.6	75-125	0			
Lead	0.9457	0.050	1	0	94.6	75-125	0			
Manganese	0.9592	0.050	1	0	95.9	75-125	0			
Nickel	0.9752	0.050	1	0	97.5	75-125	0			
Selenium	1.048	0.050	1	0	105	75-125	0			
Silver	0.8959	0.050	1	0	89.6	75-125	0			
Thallium	0.8684	0.050	1	0	86.8	75-125	0			
Vanadium	1.023	0.050	1	0	102	75-125	0			
Zinc	0.9637	0.10	1	0	96.4	75-125	0			

The following samples were analyzed in this batch:

1312452-04D	1312452-06D	1312452-08D
1312452-10D	1312452-12D	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54205** Instrument ID **ICPMS1** Method: **SW6020A**

Sample ID: MBLK-54205-54205				Units: mg/Kg			Analysis Date: 12/17/13 02:42 AM			
Client ID:		Run ID: ICPMS1_131216A			SeqNo: 2582066		Prep Date: 12/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.25								
Arsenic	U	0.25								
Barium	U	0.25								
Beryllium	U	0.10								
Cadmium	U	0.10								
Chromium	U	0.25								
Cobalt	U	0.25								
Iron	U	4.0								
Lead	U	0.25								
Manganese	U	0.25								
Nickel	U	0.25								
Selenium	U	0.25								
Silver	U	0.25								
Thallium	U	0.25								
Vanadium	U	0.25								
Zinc	U	0.50								

MBLK		Sample ID: MBLK-54205-54205					Units: mg/Kg		Analysis Date: 12/17/13 03:07 PM		
Client ID:			Run ID: ICPMS1_131217A				SeqNo: 2583232		Prep Date: 12/16/13		DF: 1
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper		U	0.25								

MBLK		Sample ID: MBLK-54205-54205					Units: mg/Kg		Analysis Date: 12/18/13 02:19 PM		
Client ID:			Run ID: ICPMS1_131218A			SeqNo: 2585855		Prep Date: 12/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.1299	0.50								J	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54205** Instrument ID **ICPMS1** Method: **SW6020A**

LCS Sample ID: LCS-54205-54205				Units: mg/Kg			Analysis Date: 12/17/13 02:48 AM			
Client ID:		Run ID: ICPMS1_131216A		SeqNo: 2582075		Prep Date: 12/16/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	4.674	0.25	5	0	93.5	80-120	0			
Arsenic	4.6	0.25	5	0	92	80-120	0			
Barium	4.722	0.25	5	0	94.4	80-120	0			
Beryllium	4.604	0.10	5	0	92.1	80-120	0			
Cadmium	4.705	0.10	5	0	94.1	80-120	0			
Chromium	4.75	0.25	5	0	95	80-120	0			
Cobalt	4.779	0.25	5	0	95.6	80-120	0			
Iron	477.8	4.0	500	0	95.6	80-120	0			
Lead	4.83	0.25	5	0	96.6	80-120	0			
Manganese	4.756	0.25	5	0	95.1	80-120	0			
Nickel	4.756	0.25	5	0	95.1	80-120	0			
Selenium	4.266	0.25	5	0	85.3	80-120	0			
Silver	4.758	0.25	5	0	95.2	80-120	0			
Thallium	4.67	0.25	5	0	93.4	80-120	0			
Vanadium	4.834	0.25	5	0	96.7	80-120	0			
Zinc	4.54	0.50	5	0	90.8	80-120	0			

LCS Sample ID: LCS-54205-54205				Units: mg/Kg			Analysis Date: 12/17/13 03:13 PM			
Client ID:		Run ID: ICPMS1_131217A		SeqNo: 2583233		Prep Date: 12/16/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	4.658	0.25	5	0	93.2	80-120	0			

LCS Sample ID: LCS-54205-54205				Units: mg/Kg			Analysis Date: 12/18/13 02:25 PM			
Client ID:		Run ID: ICPMS1_131218A		SeqNo: 2585856		Prep Date: 12/16/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	4.964	0.50	5	0	99.3	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54205** Instrument ID **ICPMS1** Method: **SW6020A**

MS				Sample ID: 1312547-05CMS			Units: mg/Kg		Analysis Date: 12/17/13 05:26 AM	
Client ID:				Run ID: ICPMS1_131216A			SeqNo: 2582126		Prep Date: 12/16/13	
									DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	3.579	1.7	6.72	0.1336	51.3	75-125	0			S
Arsenic	18.96	1.7	6.72	22.21	-48.3	75-125	0			S
Barium	141.5	1.7	6.72	124.8	249	75-125	0			SO
Beryllium	6.069	0.67	6.72	0.4565	83.5	75-125	0			
Cadmium	7.03	0.67	6.72	0.2201	101	75-125	0			
Chromium	29.55	1.7	6.72	15.43	210	75-125	0			S
Cobalt	16.07	1.7	6.72	9.853	92.5	75-125	0			
Copper	29.2	1.7	6.72	19.16	149	75-125	0			S
Iron	27150	27	672	24490	395	75-125	0			SO
Lead	21.08	1.7	6.72	14.99	90.5	75-125	0			
Manganese	2976	1.7	6.72	1122	27600	75-125	0			SEO
Nickel	35.48	1.7	6.72	26.42	135	75-125	0			S
Selenium	7.429	1.7	6.72	1.03	95.2	75-125	0			
Silver	6.341	1.7	6.72	0.0212	94	75-125	0			
Thallium	6.868	1.7	6.72	0.3193	97.4	75-125	0			
Vanadium	56.79	1.7	6.72	29.25	410	75-125	0			SO
Zinc	78.86	3.4	6.72	63.46	229	75-125	0			SO

MS				Sample ID: 1312547-05CMS			Units: mg/Kg		Analysis Date: 12/18/13 02:08 PM	
Client ID:				Run ID: ICPMS1_131218A			SeqNo: 2585853		Prep Date: 12/16/13	
									DF: 50	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	17830	34	6.72	9747	120000	75-125	0			SO

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54205** Instrument ID **ICPMS1** Method: **SW6020A**

MSD				Sample ID: 1312547-05CMSD		Units: mg/Kg		Analysis Date: 12/17/13 05:32 AM		
Client ID:			Run ID: ICPMS1_131216A		SeqNo:2582127		Prep Date: 12/16/13		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	3.59	1.7	6.748	0.1336	51.2	75-125	3.579	0.31	25	S
Arsenic	17.61	1.7	6.748	22.21	-68	75-125	18.96	7.35	25	S
Barium	114.9	1.7	6.748	124.8	-146	75-125	141.5	20.7	25	SO
Beryllium	5.759	0.67	6.748	0.4565	78.6	75-125	6.069	5.23	25	
Cadmium	6.67	0.67	6.748	0.2201	95.6	75-125	7.03	5.25	25	
Chromium	30.16	1.7	6.748	15.43	218	75-125	29.55	2.03	25	S
Cobalt	14.6	1.7	6.748	9.853	70.4	75-125	16.07	9.56	25	S
Copper	27.72	1.7	6.748	19.16	127	75-125	29.2	5.23	25	S
Iron	23660	27	674.8	24490	-123	75-125	27150	13.7	25	SO
Lead	17.73	1.7	6.748	14.99	40.6	75-125	21.08	17.2	25	S
Manganese	1390	1.7	6.748	1122	3980	75-125	2976	72.6	25	SREO
Nickel	30.85	1.7	6.748	26.42	65.5	75-125	35.48	14	25	S
Selenium	7.088	1.7	6.748	1.03	89.8	75-125	7.429	4.7	25	
Silver	6.123	1.7	6.748	0.0212	90.4	75-125	6.341	3.49	25	
Thallium	6.538	1.7	6.748	0.3193	92.2	75-125	6.868	4.92	25	
Vanadium	50.67	1.7	6.748	29.25	318	75-125	56.79	11.4	25	SO
Zinc	66.13	3.4	6.748	63.46	39.5	75-125	78.86	17.6	25	SO

MSD					Sample ID: 1312547-05CMSD				Units: mg/Kg		Analysis Date: 12/18/13 02:14 PM	
Client ID:			Run ID: ICPMS1_131218A			SeqNo: 2585854		Prep Date: 12/16/13		DF: 50		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Aluminum	16490	34	6.748	9747	100000	75-125	17830	7.78	25	SO		

The following samples were analyzed in this batch:

1312452-01B	1312452-02B	1312452-03B
1312452-05B	1312452-07B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54043** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKW1-54043-54043				Units: µg/L		Analysis Date: 12/11/13 03:33 PM		
Client ID:		Run ID: SVMS4_131211A				SeqNo: 2575880		Prep Date: 12/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	5.0								
2,4,5-Trichlorophenol	U	5.0								
2,4,6-Trichlorophenol	U	5.0								
2,4-Dichlorophenol	U	10								
2,4-Dimethylphenol	U	5.0								
2,4-Dinitrophenol	U	5.0								
2,4-Dinitrotoluene	U	5.0								
2,6-Dinitrotoluene	U	5.0								
2-Chloronaphthalene	U	5.0								
2-Chlorophenol	U	5.0								
2-Methylnaphthalene	U	5.0								
2-Methylphenol	U	5.0								
2-Nitroaniline	U	20								
2-Nitrophenol	U	5.0								
3,3'-Dichlorobenzidine	U	5.0								
3-Nitroaniline	U	20								
4,6-Dinitro-2-methylphenol	U	20								
4-Bromophenyl phenyl ether	U	5.0								
4-Chloro-3-methylphenol	U	5.0								
4-Chloroaniline	U	20								
4-Chlorophenyl phenyl ether	U	5.0								
4-Methylphenol	U	5.0								
4-Nitroaniline	U	20								
4-Nitrophenol	U	20								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Acetophenone	U	1.0								
Anthracene	U	5.0								
Atrazine	U	1.0								
Benzaldehyde	U	1.0								
Benzo(a)anthracene	U	5.0								
Benzo(a)pyrene	U	5.0								
Benzo(b)fluoranthene	U	5.0								
Benzo(g,h,i)perylene	U	5.0								
Benzo(k)fluoranthene	U	5.0								
Bis(2-chloroethoxy)methane	U	5.0								
Bis(2-chloroethyl)ether	U	5.0								
Bis(2-chloroisopropyl)ether	U	5.0								
Bis(2-ethylhexyl)phthalate	U	5.0								
Butyl benzyl phthalate	U	5.0								
Caprolactam	U	10								
Carbazole	U	10								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54043		Instrument ID SVMS4		Method: SW8270				
Chrysene	U	5.0						
Dibenzo(a,h)anthracene	U	5.0						
Dibenzofuran	U	5.0						
Diethyl phthalate	U	20						
Dimethyl phthalate	U	20						
Di-n-butyl phthalate	U	5.0						
Di-n-octyl phthalate	U	5.0						
Fluoranthene	U	5.0						
Fluorene	U	5.0						
Hexachlorobenzene	U	5.0						
Hexachlorobutadiene	U	5.0						
Hexachlorocyclopentadiene	U	20						
Hexachloroethane	U	5.0						
Indeno(1,2,3-cd)pyrene	U	5.0						
Isophorone	U	5.0						
Naphthalene	U	5.0						
Nitrobenzene	U	5.0						
N-Nitrosodi-n-propylamine	U	5.0						
N-Nitrosodiphenylamine	U	5.0						
Pentachlorophenol	U	20						
Phenanthrene	U	5.0						
Phenol	U	5.0						
Pyrene	U	5.0						
<i>Surr: 2,4,6-Tribromophenol</i>	33.5	0	50	0	67	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	35.7	0	50	0	71.4	32-100	0	
<i>Surr: 2-Fluorophenol</i>	20.79	0	50	0	41.6	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	40.55	0	50	0	81.1	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	33.36	0	50	0	66.7	31-93	0	
<i>Surr: Phenol-d6</i>	12.06	0	50	0	24.1	13-36	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54043** Instrument ID **SVMS4** Method: **SW8270**

LCS		Sample ID: SLCSW1-54043-54043				Units: µg/L		Analysis Date: 12/11/13 03:02 PM		
Client ID:		Run ID: SVMS4_131211A				SeqNo: 2575879		Prep Date: 12/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	15	5.0	20	0	75	50-110	0			
2,4,6-Trichlorophenol	14.59	5.0	20	0	73	50-115	0			
2,4-Dichlorophenol	13.53	10	20	0	67.6	50-105	0			
2,4-Dimethylphenol	11	5.0	20	0	55	30-110	0			
2,4-Dinitrophenol	12.27	5.0	20	0	61.4	15-140	0			
2,4-Dinitrotoluene	15.88	5.0	20	0	79.4	50-120	0			
2,6-Dinitrotoluene	15.66	5.0	20	0	78.3	50-115	0			
2-Chloronaphthalene	14.28	5.0	20	0	71.4	50-105	0			
2-Chlorophenol	12.34	5.0	20	0	61.7	35-105	0			
2-Methylnaphthalene	14.17	5.0	20	0	70.8	45-105	0			
2-Methylphenol	10.29	5.0	20	0	51.4	40-110	0			
2-Nitroaniline	14.62	20	20	0	73.1	50-115	0			J
2-Nitrophenol	14.54	5.0	20	0	72.7	40-115	0			
3-Nitroaniline	11.19	20	20	0	56	20-125	0			J
4,6-Dinitro-2-methylphenol	14.28	20	20	0	71.4	40-130	0			J
4-Bromophenyl phenyl ether	15.3	5.0	20	0	76.5	50-115	0			
4-Chloro-3-methylphenol	13.43	5.0	20	0	67.2	45-110	0			
4-Chloroaniline	22.34	20	20	0	112	15-110	0			S
4-Chlorophenyl phenyl ether	14.25	5.0	20	0	71.2	50-110	0			
4-Methylphenol	8.9	5.0	20	0	44.5	30-110	0			
4-Nitroaniline	10.94	20	20	0	54.7	35-150	0			J
4-Nitrophenol	4.36	20	20	0	21.8	1-58	0			J
Acenaphthene	14.45	5.0	20	0	72.2	45-110	0			
Acenaphthylene	14.64	5.0	20	0	73.2	50-105	0			
Anthracene	15.81	5.0	20	0	79	55-110	0			
Benzo(a)anthracene	16.69	5.0	20	0	83.4	55-110	0			
Benzo(a)pyrene	20.76	5.0	20	0	104	55-110	0			
Benzo(b)fluoranthene	18.99	5.0	20	0	95	45-120	0			
Benzo(g,h,i)perylene	22.64	5.0	20	0	113	40-125	0			
Benzo(k)fluoranthene	21.09	5.0	20	0	105	45-125	0			
Bis(2-chloroethoxy)methane	14.24	5.0	20	0	71.2	45-105	0			
Bis(2-chloroethyl)ether	13.69	5.0	20	0	68.4	35-110	0			
Bis(2-chloroisopropyl)ether	13.8	5.0	20	0	69	25-130	0			
Bis(2-ethylhexyl)phthalate	17.11	5.0	20	0	85.6	40-125	0			
Butyl benzyl phthalate	14.94	5.0	20	0	74.7	45-115	0			
Carbazole	33.16	10	20	0	166	50-150	0			S
Chrysene	16.05	5.0	20	0	80.2	55-110	0			
Dibenzo(a,h)anthracene	20.99	5.0	20	0	105	40-125	0			
Dibenzofuran	14.81	5.0	20	0	74	55-105	0			
Diethyl phthalate	15.51	20	20	0	77.6	40-120	0			J
Dimethyl phthalate	14.63	20	20	0	73.2	25-125	0			J
Di-n-butyl phthalate	15.95	5.0	20	0	79.8	55-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54043		Instrument ID SVMS4		Method: SW8270				
Di-n-octyl phthalate	20.68	5.0	20	0	103	35-135	0	
Fluoranthene	16.61	5.0	20	0	83	55-115	0	
Fluorene	15.18	5.0	20	0	75.9	50-110	0	
Hexachlorobenzene	14.97	5.0	20	0	74.8	50-110	0	
Hexachlorobutadiene	14.33	5.0	20	0	71.6	25-105	0	
Hexachlorocyclopentadiene	9.83	20	20	0	49.2	25-105	0	J
Hexachloroethane	14.95	5.0	20	0	74.8	30-95	0	
Indeno(1,2,3-cd)pyrene	22.14	5.0	20	0	111	45-125	0	
Isophorone	14.81	5.0	20	0	74	50-110	0	
Naphthalene	14.14	5.0	20	0	70.7	40-100	0	
Nitrobenzene	15.37	5.0	20	0	76.8	45-110	0	
N-Nitrosodi-n-propylamine	14.87	5.0	20	0	74.4	35-130	0	
N-Nitrosodiphenylamine	16.94	5.0	20	0	84.7	50-110	0	
Pentachlorophenol	14.21	20	20	0	71	40-115	0	J
Phenanthrene	17.34	5.0	20	0	86.7	50-115	0	
Phenol	5.13	5.0	20	0	25.6	12-43	0	
Pyrene	15.41	5.0	20	0	77	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	36.91	0	50	0	73.8	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	36.57	0	50	0	73.1	32-100	0	
<i>Surr: 2-Fluorophenol</i>	17.25	0	50	0	34.5	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	39.75	0	50	0	79.5	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	37.79	0	50	0	75.6	31-93	0	
<i>Surr: Phenol-d6</i>	10.54	0	50	0	21.1	13-36	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54043** Instrument ID **SVMS4** Method: **SW8270**

MS				Sample ID: 1312477-03A MS			Units: µg/L		Analysis Date: 12/11/13 06:21 PM	
Client ID:				Run ID: SVMS4_131211A			SeqNo: 2575881		Prep Date: 12/11/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	303.4	100	400	0	75.8	50-110	0			
2,4,6-Trichlorophenol	286.4	100	400	0	71.6	50-115	0			
2,4-Dichlorophenol	265.4	200	400	0	66.4	50-105	0			
2,4-Dimethylphenol	234.2	100	400	0	58.6	30-110	0			
2,4-Dinitrophenol	223.6	100	400	0	55.9	15-140	0			
2,4-Dinitrotoluene	308.2	100	400	0	77	50-120	0			
2,6-Dinitrotoluene	303.2	100	400	0	75.8	50-115	0			
2-Chloronaphthalene	271.8	100	400	0	68	50-105	0			
2-Chlorophenol	268.6	100	400	0	67.2	35-105	0			
2-Methylnaphthalene	269.4	100	400	2	66.8	45-105	0			
2-Methylphenol	220	100	400	0	55	40-110	0			
2-Nitroaniline	292.2	400	400	0	73	50-115	0			J
2-Nitrophenol	280.8	100	400	0	70.2	40-115	0			
3-Nitroaniline	270.8	400	400	0	67.7	20-125	0			J
4,6-Dinitro-2-methylphenol	266.8	400	400	0	66.7	40-130	0			J
4-Bromophenyl phenyl ether	303	100	400	0	75.8	50-115	0			
4-Chloro-3-methylphenol	264.2	100	400	0	66	45-110	0			
4-Chloroaniline	447	400	400	0	112	15-110	0			S
4-Chlorophenyl phenyl ether	288.6	100	400	0	72.2	50-110	0			
4-Methylphenol	193.2	100	400	0	48.3	30-110	0			
4-Nitroaniline	264.4	400	400	0	66.1	35-150	0			J
4-Nitrophenol	91.8	400	400	0	23	1-58	0			J
Acenaphthene	282.4	100	400	0	70.6	45-110	0			
Acenaphthylene	283.4	100	400	0	70.8	50-105	0			
Anthracene	315.6	100	400	0	78.9	55-110	0			
Benzo(a)anthracene	335.6	100	400	0	83.9	55-110	0			
Benzo(a)pyrene	401	100	400	0	100	55-110	0			
Benzo(b)fluoranthene	388.4	100	400	0	97.1	45-120	0			
Benzo(g,h,i)perylene	448.6	100	400	0	112	40-125	0			
Benzo(k)fluoranthene	428.6	100	400	0	107	45-125	0			
Bis(2-chloroethoxy)methane	271.8	100	400	0	68	45-105	0			
Bis(2-chloroethyl)ether	271.4	100	400	0	67.8	35-110	0			
Bis(2-chloroisopropyl)ether	250.6	100	400	0	62.6	25-130	0			
Bis(2-ethylhexyl)phthalate	363.8	100	400	0	91	40-125	0			
Butyl benzyl phthalate	314.4	100	400	6.8	76.9	45-115	0			
Carbazole	681	200	400	0	170	50-150	0			S
Chrysene	322.2	100	400	0	80.6	55-110	0			
Dibenzo(a,h)anthracene	395	100	400	0	98.8	40-125	0			
Dibenzofuran	285.8	100	400	0	71.4	55-105	0			
Diethyl phthalate	312.8	400	400	0	78.2	40-120	0			J
Dimethyl phthalate	286.6	400	400	0	71.6	25-125	0			J
Di-n-butyl phthalate	325.6	100	400	3.2	80.6	55-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54043		Instrument ID SVMS4		Method: SW8270				
Di-n-octyl phthalate	408.2	100	400	5.2	101	35-135	0	
Fluoranthene	335.6	100	400	0	83.9	55-115	0	
Fluorene	305.8	100	400	0	76.4	50-110	0	
Hexachlorobenzene	310	100	400	0	77.5	50-110	0	
Hexachlorobutadiene	257.8	100	400	0	64.4	25-105	0	
Hexachlorocyclopentadiene	195.6	400	400	0	48.9	25-105	0	J
Hexachloroethane	272.4	100	400	0	68.1	30-95	0	
Indeno(1,2,3-cd)pyrene	439.4	100	400	0	110	45-125	0	
Isophorone	260.8	100	400	0	65.2	50-110	0	
Naphthalene	267.2	100	400	0	66.8	40-100	0	
Nitrobenzene	282	100	400	0	70.5	45-110	0	
N-Nitrosodi-n-propylamine	275.8	100	400	0	69	35-130	0	
N-Nitrosodiphenylamine	349.8	100	400	0	87.4	50-110	0	
Pentachlorophenol	293.6	400	400	0	73.4	40-115	0	J
Phenanthrene	345.8	100	400	0	86.4	50-115	0	
Phenol	111.2	100	400	0	27.8	12-43	0	
Pyrene	316	100	400	0	79	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>718.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>71.8</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>700.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>70</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>384.4</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>38.4</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>841.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>84.1</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>653.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>65.3</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>230.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>23.1</i>	<i>13-36</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54043** Instrument ID **SVMS4** Method: **SW8270**

MSD				Sample ID: 1312477-03A MSD				Units: µg/L		Analysis Date: 12/11/13 06:53 PM	
Client ID:		Run ID: SVMS4_131211A			SeqNo: 2575882		Prep Date: 12/11/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
2,4,5-Trichlorophenol	268.4	100	400	0	67.1	50-110	303.4	12.2	30		
2,4,6-Trichlorophenol	250.6	100	400	0	62.6	50-115	286.4	13.3	30		
2,4-Dichlorophenol	226.2	200	400	0	56.6	50-105	265.4	15.9	30		
2,4-Dimethylphenol	201.6	100	400	0	50.4	30-110	234.2	15	30		
2,4-Dinitrophenol	213.2	100	400	0	53.3	15-140	223.6	4.76	30		
2,4-Dinitrotoluene	281.2	100	400	0	70.3	50-120	308.2	9.16	30		
2,6-Dinitrotoluene	271.4	100	400	0	67.8	50-115	303.2	11.1	30		
2-Chloronaphthalene	238.2	100	400	0	59.6	50-105	271.8	13.2	30		
2-Chlorophenol	227.2	100	400	0	56.8	35-105	268.6	16.7	30		
2-Methylnaphthalene	232	100	400	2	57.5	45-105	269.4	14.9	30		
2-Methylphenol	191.2	100	400	0	47.8	40-110	220	14	30		
2-Nitroaniline	259.2	400	400	0	64.8	50-115	292.2	0	30	J	
2-Nitrophenol	240.8	100	400	0	60.2	40-115	280.8	15.3	30		
3-Nitroaniline	257.4	400	400	0	64.4	20-125	270.8	0	30	J	
4,6-Dinitro-2-methylphenol	247.6	400	400	0	61.9	40-130	266.8	0	30	J	
4-Bromophenyl phenyl ether	271.8	100	400	0	68	50-115	303	10.9	30		
4-Chloro-3-methylphenol	232.4	100	400	0	58.1	45-110	264.2	12.8	30		
4-Chloroaniline	403.8	400	400	0	101	15-110	447	10.2	30		
4-Chlorophenyl phenyl ether	251.6	100	400	0	62.9	50-110	288.6	13.7	30		
4-Methylphenol	167.4	100	400	0	41.8	30-110	193.2	14.3	30		
4-Nitroaniline	251.4	400	400	0	62.8	35-150	264.4	0	30	J	
4-Nitrophenol	87	400	400	0	21.8	1-58	91.8	0	0	J	
Acenaphthene	245.8	100	400	0	61.4	45-110	282.4	13.9	30		
Acenaphthylene	249	100	400	0	62.2	50-105	283.4	12.9	30		
Anthracene	289.2	100	400	0	72.3	55-110	315.6	8.73	30		
Benzo(a)anthracene	312.4	100	400	0	78.1	55-110	335.6	7.16	30		
Benzo(a)pyrene	373.4	100	400	0	93.4	55-110	401	7.13	30		
Benzo(b)fluoranthene	366.4	100	400	0	91.6	45-120	388.4	5.83	30		
Benzo(g,h,i)perylene	418.4	100	400	0	105	40-125	448.6	6.97	30		
Benzo(k)fluoranthene	385.2	100	400	0	96.3	45-125	428.6	10.7	30		
Bis(2-chloroethoxy)methane	237.2	100	400	0	59.3	45-105	271.8	13.6	30		
Bis(2-chloroethyl)ether	230.6	100	400	0	57.6	35-110	271.4	16.3	30		
Bis(2-chloroisopropyl)ether	217.8	100	400	0	54.4	25-130	250.6	14	30		
Bis(2-ethylhexyl)phthalate	334	100	400	0	83.5	40-125	363.8	8.54	30		
Butyl benzyl phthalate	294	100	400	6.8	71.8	45-115	314.4	6.71	30		
Carbazole	649.2	200	400	0	162	50-150	681	4.78	30	S	
Chrysene	302.2	100	400	0	75.6	55-110	322.2	6.41	30		
Dibenzo(a,h)anthracene	365.2	100	400	0	91.3	40-125	395	7.84	30		
Dibenzofuran	249.6	100	400	0	62.4	55-105	285.8	13.5	30		
Diethyl phthalate	285.4	400	400	0	71.4	40-120	312.8	0	30	J	
Dimethyl phthalate	258	400	400	0	64.5	25-125	286.6	0	30	J	
Di-n-butyl phthalate	305.6	100	400	3.2	75.6	55-115	325.6	6.34	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54043	Instrument ID SVMS4			Method: SW8270					
Di-n-octyl phthalate	379.8	100	400	5.2	93.6	35-135	408.2	7.21	30
Fluoranthene	312.8	100	400	0	78.2	55-115	335.6	7.03	30
Fluorene	268	100	400	0	67	50-110	305.8	13.2	30
Hexachlorobenzene	282.2	100	400	0	70.6	50-110	310	9.39	30
Hexachlorobutadiene	217.6	100	400	0	54.4	25-105	257.8	16.9	30
Hexachlorocyclopentadiene	162	400	400	0	40.5	25-105	195.6	0	30 J
Hexachloroethane	231.2	100	400	0	57.8	30-95	272.4	16.4	30
Indeno(1,2,3-cd)pyrene	405	100	400	0	101	45-125	439.4	8.15	30
Isophorone	230.8	100	400	0	57.7	50-110	260.8	12.2	30
Naphthalene	227.2	100	400	0	56.8	40-100	267.2	16.2	30
Nitrobenzene	240.2	100	400	0	60	45-110	282	16	30
N-Nitrosodi-n-propylamine	245	100	400	0	61.2	35-130	275.8	11.8	30
N-Nitrosodiphenylamine	311.4	100	400	0	77.8	50-110	349.8	11.6	30
Pentachlorophenol	272.8	400	400	0	68.2	40-115	293.6	0	30 J
Phenanthrene	313.8	100	400	0	78.4	50-115	345.8	9.7	30
Phenol	96.8	100	400	0	24.2	12-43	111.2	0	30 J
Pyrene	295.2	100	400	0	73.8	50-130	316	6.81	30
<i>Surr: 2,4,6-Tribromophenol</i>	644.6	0	1000	0	64.5	38-115	718.2	10.8	40
<i>Surr: 2-Fluorobiphenyl</i>	621	0	1000	0	62.1	32-100	700.2	12	40
<i>Surr: 2-Fluorophenol</i>	326	0	1000	0	32.6	22-59	384.4	16.4	40
<i>Surr: 4-Terphenyl-d14</i>	793.6	0	1000	0	79.4	23-112	841.2	5.82	40
<i>Surr: Nitrobenzene-d5</i>	569.4	0	1000	0	56.9	31-93	653.2	13.7	40
<i>Surr: Phenol-d6</i>	194.2	0	1000	0	19.4	13-36	230.6	17.1	40

The following samples were analyzed in this batch:

1312452-04B	1312452-06B	1312452-08B
1312452-10B	1312452-12B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54152** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKS1-54152-54152				Units: µg/Kg		Analysis Date: 12/16/13 12:11 PM		
Client ID:		Run ID: SVMS4_131216A		SeqNo: 2582422		Prep Date: 12/13/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	330								
2,4,5-Trichlorophenol	U	160								
2,4,6-Trichlorophenol	U	160								
2,4-Dichlorophenol	U	160								
2,4-Dimethylphenol	U	330								
2,4-Dinitrophenol	U	660								
2,4-Dinitrotoluene	U	160								
2,6-Dinitrotoluene	U	160								
2-Chloronaphthalene	U	6.7								
2-Chlorophenol	U	160								
2-Methylnaphthalene	U	6.7								
2-Methylphenol	U	160								
2-Nitroaniline	U	660								
2-Nitrophenol	U	160								
3,3'-Dichlorobenzidine	U	660								
3-Nitroaniline	U	660								
4,6-Dinitro-2-methylphenol	U	330								
4-Bromophenyl phenyl ether	U	160								
4-Chloro-3-methylphenol	U	160								
4-Chloroaniline	U	660								
4-Chlorophenyl phenyl ether	U	160								
4-Methylphenol	U	160								
4-Nitroaniline	U	660								
4-Nitrophenol	U	660								
Acenaphthene	U	6.7								
Acenaphthylene	U	6.7								
Acetophenone	U	330								
Anthracene	U	6.7								
Atrazine	U	330								
Benzaldehyde	U	330								
Benzo(a)anthracene	U	6.7								
Benzo(a)pyrene	U	6.7								
Benzo(b)fluoranthene	U	6.7								
Benzo(g,h,i)perylene	U	6.7								
Benzo(k)fluoranthene	U	6.7								
Bis(2-chloroethoxy)methane	U	160								
Bis(2-chloroethyl)ether	U	160								
Bis(2-chloroisopropyl)ether	U	160								
Bis(2-ethylhexyl)phthalate	U	330								
Butyl benzyl phthalate	U	160								
Caprolactam	U	330								
Carbazole	U	160								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54152		Instrument ID SVMS4		Method: SW8270				
Chrysene	U	6.7						
Dibenzo(a,h)anthracene	U	6.7						
Dibenzofuran	U	160						
Diethyl phthalate	U	330						
Dimethyl phthalate	U	330						
Di-n-butyl phthalate	5.667	330						J
Di-n-octyl phthalate	U	160						
Fluoranthene	U	6.7						
Fluorene	U	6.7						
Hexachlorobenzene	U	160						
Hexachlorobutadiene	U	160						
Hexachlorocyclopentadiene	U	330						
Hexachloroethane	U	160						
Indeno(1,2,3-cd)pyrene	U	6.7						
Isophorone	U	160						
Naphthalene	U	6.7						
Nitrobenzene	U	160						
N-Nitrosodi-n-propylamine	U	160						
N-Nitrosodiphenylamine	U	160						
Pentachlorophenol	U	330						
Phenanthrene	U	6.7						
Phenol	U	160						
Pyrene	U	6.7						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1101</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>66.1</i>	<i>34-140</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>1390</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>83.4</i>	<i>12-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>1453</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>87.2</i>	<i>33-117</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>1540</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>92.4</i>	<i>25-137</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>1387</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>83.2</i>	<i>37-107</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>1494</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>89.7</i>	<i>40-106</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54152** Instrument ID **SVMS4** Method: **SW8270**

LCS Sample ID: SLCSS1-54152-54152				Units: µg/Kg			Analysis Date: 12/16/13 11:40 AM			
Client ID:		Run ID: SVMS4_131216A			SeqNo: 2582419		Prep Date: 12/13/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	544	160	666.7	0	81.6	50-110	0			
2,4,6-Trichlorophenol	495.7	160	666.7	0	74.3	45-110	0			
2,4-Dichlorophenol	558.3	160	666.7	0	83.7	45-110	0			
2,4-Dimethylphenol	465.3	330	666.7	0	69.8	30-105	0			
2,4-Dinitrophenol	474.3	660	666.7	0	71.1	15-130	0			J
2,4-Dinitrotoluene	612	160	666.7	0	91.8	50-115	0			
2,6-Dinitrotoluene	624.3	160	666.7	0	93.6	50-110	0			
2-Chloronaphthalene	577	6.7	666.7	0	86.5	45-105	0			
2-Chlorophenol	588.3	160	666.7	0	88.2	45-105	0			
2-Methylnaphthalene	578.7	6.7	666.7	0	86.8	45-105	0			
2-Methylphenol	584	160	666.7	0	87.6	40-105	0			
2-Nitroaniline	599.3	660	666.7	0	89.9	45-120	0			J
2-Nitrophenol	553	160	666.7	0	82.9	40-110	0			
3-Nitroaniline	314	660	666.7	0	47.1	25-150	0			J
4-Bromophenyl phenyl ether	608.7	160	666.7	0	91.3	45-115	0			
4-Chloro-3-methylphenol	584.3	160	666.7	0	87.6	45-115	0			
4-Chloroaniline	366.3	660	666.7	0	54.9	15-110	0			J
4-Chlorophenyl phenyl ether	562.3	160	666.7	0	84.3	45-110	0			
4-Methylphenol	553	160	666.7	0	82.9	40-105	0			
4-Nitroaniline	354.3	660	666.7	0	53.1	35-150	0			J
4-Nitrophenol	550.3	660	666.7	0	82.5	15-140	0			J
Acenaphthene	566.3	6.7	666.7	0	84.9	45-110	0			
Acenaphthylene	587	6.7	666.7	0	88	45-105	0			
Anthracene	605.7	6.7	666.7	0	90.8	55-105	0			
Benzo(a)anthracene	694	6.7	666.7	0	104	50-110	0			
Benzo(a)pyrene	649	6.7	666.7	0	97.3	50-110	0			
Benzo(b)fluoranthene	669.3	6.7	666.7	0	100	45-115	0			
Benzo(g,h,i)perylene	676	6.7	666.7	0	101	40-125	0			
Benzo(k)fluoranthene	621.7	6.7	666.7	0	93.2	45-115	0			
Bis(2-chloroethoxy)methane	563.3	160	666.7	0	84.5	45-110	0			
Bis(2-chloroethyl)ether	546	160	666.7	0	81.9	40-105	0			
Bis(2-chloroisopropyl)ether	506	160	666.7	0	75.9	20-115	0			
Bis(2-ethylhexyl)phthalate	699.3	330	666.7	0	105	45-125	0			
Butyl benzyl phthalate	640.3	160	666.7	0	96	50-125	0			
Carbazole	876.3	160	666.7	0	131	50-150	0			
Chrysene	622.7	6.7	666.7	0	93.4	55-110	0			
Dibenzo(a,h)anthracene	695.7	6.7	666.7	0	104	40-125	0			
Dibenzofuran	576.3	160	666.7	0	86.4	50-105	0			
Diethyl phthalate	618.3	330	666.7	0	92.7	50-115	0			
Dimethyl phthalate	618.7	330	666.7	0	92.8	50-110	0			
Di-n-butyl phthalate	644	330	666.7	0	96.6	55-110	0			
Di-n-octyl phthalate	646.7	160	666.7	0	97	40-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54152		Instrument ID SVMS4		Method: SW8270			
Fluoranthene	657	6.7	666.7	0	98.5	55-115	0
Fluorene	579	6.7	666.7	0	86.8	50-110	0
Hexachlorobenzene	588.3	160	666.7	0	88.2	45-120	0
Hexachlorobutadiene	576.3	160	666.7	0	86.4	40-115	0
Hexachlorocyclopentadiene	398	330	666.7	0	59.7	40-115	0
Hexachloroethane	563.3	160	666.7	0	84.5	35-110	0
Indeno(1,2,3-cd)pyrene	683	6.7	666.7	0	102	40-120	0
Isophorone	579	160	666.7	0	86.8	45-110	0
Naphthalene	558	6.7	666.7	0	83.7	40-105	0
Nitrobenzene	590.3	160	666.7	0	88.5	40-115	0
N-Nitrosodi-n-propylamine	595	160	666.7	0	89.2	40-115	0
N-Nitrosodiphenylamine	674.7	160	666.7	0	101	50-115	0
Pentachlorophenol	451	330	666.7	0	67.6	25-120	0
Phenanthrene	672.7	6.7	666.7	0	101	50-110	0
Phenol	589	160	666.7	0	88.3	40-100	0
Pyrene	632.3	6.7	666.7	0	94.8	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1274</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>76.5</i>	<i>34-140</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>1347</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>80.8</i>	<i>12-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>1406</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>84.4</i>	<i>33-117</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>1552</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>93.1</i>	<i>25-137</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>1340</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>80.4</i>	<i>37-107</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>1400</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>84</i>	<i>40-106</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54152** Instrument ID **SVMS4** Method: **SW8270**

MS				Sample ID: 1312452-07B MS			Units: µg/Kg		Analysis Date: 12/16/13 01:26 PM	
Client ID: S-R2330009-120513-RD-005				Run ID: SVMS4_131216A			SeqNo: 2582424		Prep Date: 12/13/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1085	320	1323	0	82	50-110	0			
2,4,6-Trichlorophenol	1002	320	1323	0	75.7	45-110	0			
2,4-Dichlorophenol	1105	320	1323	0	83.5	45-110	0			
2,4-Dimethylphenol	936.6	650	1323	0	70.8	30-105	0			
2,4-Dinitrophenol	909.5	1,300	1323	0	68.7	15-130	0			J
2,4-Dinitrotoluene	1154	320	1323	0	87.2	50-115	0			
2,6-Dinitrotoluene	1210	320	1323	0	91.4	50-110	0			
2-Chloronaphthalene	1142	13	1323	0	86.3	45-105	0			
2-Chlorophenol	1182	320	1323	0	89.3	45-105	0			
2-Methylnaphthalene	1114	13	1323	0	84.2	45-105	0			
2-Methylphenol	1223	320	1323	0	92.4	40-105	0			
2-Nitroaniline	1172	1,300	1323	0	88.6	45-120	0			J
2-Nitrophenol	1094	320	1323	0	82.7	40-110	0			
3-Nitroaniline	789.1	1,300	1323	0	59.6	25-110	0			J
4-Bromophenyl phenyl ether	1185	320	1323	0	89.6	45-115	0			
4-Chloro-3-methylphenol	1141	320	1323	0	86.2	45-115	0			
4-Chloroaniline	707.1	1,300	1323	0	53.4	15-110	0			J
4-Chlorophenyl phenyl ether	1091	320	1323	0	82.4	45-110	0			
4-Methylphenol	1124	320	1323	0	85	40-105	0			
4-Nitroaniline	910.2	1,300	1323	0	68.8	35-150	0			J
4-Nitrophenol	1009	1,300	1323	0	76.2	15-140	0			J
Acenaphthene	1113	13	1323	0	84.1	45-110	0			
Acenaphthylene	1151	13	1323	0	87	45-105	0			
Anthracene	1150	13	1323	3.975	86.6	55-105	0			
Benzo(a)anthracene	1273	13	1323	0	96.2	50-110	0			
Benzo(a)pyrene	1206	13	1323	3.975	90.8	50-110	0			
Benzo(b)fluoranthene	1208	13	1323	5.3	90.9	45-115	0			
Benzo(g,h,i)perylene	1239	13	1323	3.975	93.3	40-125	0			
Benzo(k)fluoranthene	1171	13	1323	0	88.5	45-115	0			
Bis(2-chloroethoxy)methane	1132	320	1323	0	85.5	45-110	0			
Bis(2-chloroethyl)ether	1098	320	1323	0	83	40-105	0			
Bis(2-chloroisopropyl)ether	1037	320	1323	0	78.4	20-115	0			
Bis(2-ethylhexyl)phthalate	1284	650	1323	16.56	95.8	45-125	0			
Butyl benzyl phthalate	1182	320	1323	0	89.3	50-125	0			
Carbazole	1679	320	1323	0	127	50-150	0			
Chrysene	1151	13	1323	0	87	55-110	0			
Dibenzo(a,h)anthracene	1280	13	1323	0	96.7	40-125	0			
Dibenzofuran	1134	320	1323	0	85.7	50-105	0			
Diethyl phthalate	1167	650	1323	0	88.2	50-115	0			
Dimethyl phthalate	1191	650	1323	0	90	50-110	0			
Di-n-butyl phthalate	1189	650	1323	6.294	89.4	55-110	0			
Di-n-octyl phthalate	1191	320	1323	0	90	40-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54152		Instrument ID SVMS4		Method: SW8270			
Fluoranthene	1233	13	1323	7.288	92.6	55-115	0
Fluorene	1136	13	1323	0	85.8	50-110	0
Hexachlorobenzene	1121	320	1323	0	84.7	45-120	0
Hexachlorobutadiene	1113	320	1323	0	84.1	40-115	0
Hexachlorocyclopentadiene	719.7	650	1323	0	54.4	40-115	0
Hexachloroethane	1130	320	1323	0	85.4	35-110	0
Indeno(1,2,3-cd)pyrene	1255	13	1323	0	94.9	40-120	0
Isophorone	1167	320	1323	0	88.2	45-110	0
Naphthalene	1099	13	1323	0	83.1	40-105	0
Nitrobenzene	1161	320	1323	0	87.7	40-115	0
N-Nitrosodi-n-propylamine	1208	320	1323	0	91.3	40-115	0
N-Nitrosodiphenylamine	1287	320	1323	0	97.2	50-115	0
Pentachlorophenol	914.1	650	1323	0	69.1	25-120	0
Phenanthrene	1284	13	1323	0	97	50-110	0
Phenol	1123	320	1323	0	84.9	40-100	0
Pyrene	1171	13	1323	6.625	88	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	2487	0	3307	0	75.2	34-140	0
<i>Surr: 2-Fluorobiphenyl</i>	2665	0	3307	0	80.6	12-100	0
<i>Surr: 2-Fluorophenol</i>	2842	0	3307	0	85.9	33-117	0
<i>Surr: 4-Terphenyl-d14</i>	2900	0	3307	0	87.7	25-137	0
<i>Surr: Nitrobenzene-d5</i>	2662	0	3307	0	80.5	37-107	0
<i>Surr: Phenol-d6</i>	2830	0	3307	0	85.6	40-106	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54152** Instrument ID **SVMS4** Method: **SW8270**

MSD				Sample ID: 1312452-07B MSD			Units: µg/Kg		Analysis Date: 12/16/13 01:57 PM	
Client ID: S-R2330009-120513-RD-005				Run ID: SVMS4_131216A			SeqNo: 2582425		Prep Date: 12/13/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1120	300	1267	0	88.4	50-110	1085	3.22	30	
2,4,6-Trichlorophenol	998.7	300	1267	0	78.8	45-110	1002	0.345	30	
2,4-Dichlorophenol	1087	300	1267	0	85.8	45-110	1105	1.57	30	
2,4-Dimethylphenol	910	630	1267	0	71.8	30-105	936.6	2.89	30	
2,4-Dinitrophenol	818.1	1,300	1267	0	64.5	15-130	909.5	0	30	J
2,4-Dinitrotoluene	1174	300	1267	0	92.6	50-115	1154	1.71	30	
2,6-Dinitrotoluene	1203	300	1267	0	94.9	50-110	1210	0.589	30	
2-Chloronaphthalene	1102	13	1267	0	86.9	45-105	1142	3.54	30	
2-Chlorophenol	1118	300	1267	0	88.2	45-105	1182	5.59	30	
2-Methylnaphthalene	1079	13	1267	0	85.1	45-105	1114	3.23	30	
2-Methylphenol	1509	300	1267	0	119	40-105	1223	21	30	S
2-Nitroaniline	1153	1,300	1267	0	91	45-120	1172	0	30	J
2-Nitrophenol	1061	300	1267	0	83.7	40-110	1094	3.03	30	
3-Nitroaniline	857.4	1,300	1267	0	67.6	25-110	789.1	0	30	J
4-Bromophenyl phenyl ether	1185	300	1267	0	93.5	45-115	1185	0.0314	30	
4-Chloro-3-methylphenol	1149	300	1267	0	90.7	45-115	1141	0.739	30	
4-Chloroaniline	723	1,300	1267	0	57	15-110	707.1	0	30	J
4-Chlorophenyl phenyl ether	1072	300	1267	0	84.5	45-110	1091	1.78	30	
4-Methylphenol	1041	300	1267	0	82.1	40-105	1124	7.7	30	
4-Nitroaniline	1058	1,300	1267	0	83.4	35-150	910.2	0	30	J
4-Nitrophenol	1049	1,300	1267	0	82.7	15-140	1009	0	30	J
Acenaphthene	1073	13	1267	0	84.7	45-110	1113	3.64	30	
Acenaphthylene	1106	13	1267	0	87.3	45-105	1151	3.95	30	
Anthracene	1153	13	1267	3.975	90.7	55-105	1150	0.318	30	
Benzo(a)anthracene	1306	13	1267	0	103	50-110	1273	2.59	30	
Benzo(a)pyrene	1225	13	1267	3.975	96.3	50-110	1206	1.57	30	
Benzo(b)fluoranthene	1201	13	1267	5.3	94.3	45-115	1208	0.638	30	
Benzo(g,h,i)perylene	1262	13	1267	3.975	99.2	40-125	1239	1.82	30	
Benzo(k)fluoranthene	1227	13	1267	0	96.8	45-115	1171	4.62	30	
Bis(2-chloroethoxy)methane	1063	300	1267	0	83.8	45-110	1132	6.3	30	
Bis(2-chloroethyl)ether	1053	300	1267	0	83.1	40-105	1098	4.17	30	
Bis(2-chloroisopropyl)ether	1032	300	1267	0	81.4	20-115	1037	0.476	30	
Bis(2-ethylhexyl)phthalate	1307	630	1267	16.56	102	45-125	1284	1.8	30	
Butyl benzyl phthalate	1201	300	1267	0	94.8	50-125	1182	1.63	30	
Carbazole	1632	300	1267	0	129	50-150	1679	2.84	30	
Chrysene	1177	13	1267	0	92.8	55-110	1151	2.22	30	
Dibenzo(a,h)anthracene	1310	13	1267	0	103	40-125	1280	2.31	30	
Dibenzofuran	1102	300	1267	0	86.9	50-105	1134	2.84	30	
Diethyl phthalate	1184	630	1267	0	93.4	50-115	1167	1.44	30	
Dimethyl phthalate	1173	630	1267	0	92.5	50-110	1191	1.55	30	
Di-n-butyl phthalate	1202	630	1267	6.294	94.3	55-110	1189	1.12	30	
Di-n-octyl phthalate	1203	300	1267	0	94.9	40-130	1191	1.06	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54152		Instrument ID SVMS4		Method: SW8270					
Fluoranthene	1248	13	1267	7.288	97.9	55-115	1233	1.19	30
Fluorene	1122	13	1267	0	88.5	50-110	1136	1.2	30
Hexachlorobenzene	1124	300	1267	0	88.6	45-120	1121	0.266	30
Hexachlorobutadiene	1084	300	1267	0	85.5	40-115	1113	2.58	30
Hexachlorocyclopentadiene	614	630	1267	0	48.4	40-115	719.7	0	30 J
Hexachloroethane	1041	300	1267	0	82.1	35-110	1130	8.17	30
Indeno(1,2,3-cd)pyrene	1285	13	1267	0	101	40-120	1255	2.33	30
Isophorone	1098	300	1267	0	86.6	45-110	1167	6.12	30
Naphthalene	1055	13	1267	0	83.2	40-105	1099	4.11	30
Nitrobenzene	1127	300	1267	0	88.9	40-115	1161	2.99	30
N-Nitrosodi-n-propylamine	1107	300	1267	0	87.3	40-115	1208	8.71	30
N-Nitrosodiphenylamine	1308	300	1267	0	103	50-115	1287	1.65	30
Pentachlorophenol	981.6	630	1267	0	77.4	25-120	914.1	7.11	30
Phenanthrene	1288	13	1267	0	102	50-110	1284	0.339	30
Phenol	1098	300	1267	0	86.6	40-100	1123	2.25	30
Pyrene	1193	13	1267	6.625	93.6	45-125	1171	1.79	30
<i>Surr: 2,4,6-Tribromophenol</i>	2613	0	3168	0	82.5	34-140	2487	4.92	40
<i>Surr: 2-Fluorobiphenyl</i>	2578	0	3168	0	81.4	12-100	2665	3.33	40
<i>Surr: 2-Fluorophenol</i>	2703	0	3168	0	85.3	33-117	2842	5.02	40
<i>Surr: 4-Terphenyl-d14</i>	2918	0	3168	0	92.1	25-137	2900	0.626	40
<i>Surr: Nitrobenzene-d5</i>	2560	0	3168	0	80.8	37-107	2662	3.92	40
<i>Surr: Phenol-d6</i>	2732	0	3168	0	86.2	40-106	2830	3.5	40

The following samples were analyzed in this batch:

1312452-01B	1312452-02B	1312452-03B
1312452-05B	1312452-07B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54070** Instrument ID **VMS6** Method: **SW8260B**

MBLK				Sample ID: MBLK-54070-54070			Units: µg/Kg		Analysis Date: 12/11/13 02:10 PM		
Client ID:			Run ID: VMS6_131211A			SeqNo: 2575744		Prep Date: 12/03/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	U	30									
1,1,2,2-Tetrachloroethane	U	30									
1,1,2-Trichloroethane	U	30									
1,1,2-Trichlorotrifluoroethane	U	30									
1,1-Dichloroethane	U	30									
1,1-Dichloroethene	U	30									
1,2,4-Trichlorobenzene	U	30									
1,2-Dibromo-3-chloropropane	U	30									
1,2-Dibromoethane	U	30									
1,2-Dichlorobenzene	U	30									
1,2-Dichloroethane	U	30									
1,2-Dichloropropane	U	30									
1,3-Dichlorobenzene	U	30									
1,4-Dichlorobenzene	U	30									
2-Butanone	U	200									
2-Hexanone	U	30									
4-Methyl-2-pentanone	U	30									
Acetone	U	100									
Benzene	U	30									
Bromodichloromethane	U	30									
Bromoform	U	30									
Bromomethane	U	75									
Carbon disulfide	U	30									
Carbon tetrachloride	U	30									
Chlorobenzene	U	30									
Chloroethane	U	100									
Chloroform	U	30									
Chloromethane	U	100									
cis-1,2-Dichloroethene	U	30									
cis-1,3-Dichloropropene	U	30									
Cyclohexane	U	30									
Dibromochloromethane	U	30									
Dichlorodifluoromethane	U	30									
Ethylbenzene	U	30									
Isopropylbenzene	U	30									
Methyl acetate	U	200									
Methyl tert-butyl ether	U	30									
Methylcyclohexane	U	30									
Methylene chloride	U	30									
Styrene	U	30									
Tetrachloroethene	U	30									
Toluene	U	30									

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54070		Instrument ID VMS6		Method: SW8260B				
trans-1,2-Dichloroethene		U	30					
trans-1,3-Dichloropropene		U	30					
Trichloroethene		U	30					
Trichlorofluoromethane		U	30					
Vinyl chloride		U	30					
Xylenes, Total		U	90					
<i>Surr: 1,2-Dichloroethane-d4</i>		<i>1016</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>102</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>		<i>987.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.8</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>		<i>895</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>89.5</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>		<i>1046</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>105</i>	<i>70-130</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54070** Instrument ID **VMS6** Method: **SW8260B**

LCS Sample ID: LCS-54070-54070				Units: µg/Kg			Analysis Date: 12/11/13 12:56 PM			
Client ID:		Run ID: VMS6_131211A		SeqNo: 2575743		Prep Date: 12/03/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	983	30	1000	0	98.3	70-135	0			
1,1,2,2-Tetrachloroethane	1070	30	1000	0	107	55-130	0			
1,1,2-Trichloroethane	995.5	30	1000	0	99.6	60-125	0			
1,1-Dichloroethane	954.5	30	1000	0	95.4	75-125	0			
1,1-Dichloroethene	972.5	30	1000	0	97.2	65-135	0			
1,2,4-Trichlorobenzene	1019	30	1000	0	102	65-130	0			
1,2-Dibromo-3-chloropropane	874.5	30	1000	0	87.4	40-135	0			
1,2-Dibromoethane	1072	30	1000	0	107	70-125	0			
1,2-Dichlorobenzene	1017	30	1000	0	102	75-120	0			
1,2-Dichloroethane	990	30	1000	0	99	70-135	0			
1,2-Dichloropropane	912.5	30	1000	0	91.2	70-120	0			
1,3-Dichlorobenzene	1032	30	1000	0	103	70-125	0			
1,4-Dichlorobenzene	988.5	30	1000	0	98.8	70-125	0			
2-Butanone	944.5	200	1000	0	94.4	30-160	0			
2-Hexanone	1212	30	1000	0	121	45-145	0			
4-Methyl-2-pentanone	1512	30	1000	0	151	45-145	0			S
Acetone	853.5	100	1000	0	85.4	20-160	0			
Benzene	1005	30	1000	0	100	75-125	0			
Bromodichloromethane	874	30	1000	0	87.4	70-130	0			
Bromoform	779	30	1000	0	77.9	55-135	0			
Bromomethane	965	75	1000	0	96.5	30-160	0			
Carbon disulfide	1028	30	1000	0	103	45-160	0			
Carbon tetrachloride	893.5	30	1000	0	89.4	65-135	0			
Chlorobenzene	996	30	1000	0	99.6	75-125	0			
Chloroethane	836.5	100	1000	0	83.6	40-155	0			
Chloroform	971	30	1000	0	97.1	70-125	0			
Chloromethane	829	100	1000	0	82.9	50-130	0			
cis-1,2-Dichloroethene	981	30	1000	0	98.1	65-125	0			
cis-1,3-Dichloropropene	915.5	30	1000	0	91.6	70-125	0			
Dibromochloromethane	726	30	1000	0	72.6	65-135	0			
Dichlorodifluoromethane	606	30	1000	0	60.6	35-135	0			
Ethylbenzene	1033	30	1000	0	103	75-125	0			
Isopropylbenzene	1037	30	1000	0	104	75-130	0			
Methyl tert-butyl ether	1048	30	1000	0	105	75-125	0			
Methylene chloride	946.5	30	1000	0	94.6	55-145	0			
Styrene	1050	30	1000	0	105	75-125	0			
Tetrachloroethene	982.5	30	1000	0	98.2	64-140	0			
Toluene	1018	30	1000	0	102	70-125	0			
trans-1,2-Dichloroethene	1030	30	1000	0	103	65-135	0			
trans-1,3-Dichloropropene	940.5	30	1000	0	94	65-125	0			
Trichloroethene	951	30	1000	0	95.1	75-125	0			
Trichlorofluoromethane	871.5	30	1000	0	87.2	25-185	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54070	Instrument ID VMS6		Method: SW8260B				
Vinyl chloride	876.5	30	1000	0	87.6	60-125	0
Xylenes, Total	3080	90	3000	0	103	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1026</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>103</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>995</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.5</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>1010</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>1020</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>102</i>	<i>70-130</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54070** Instrument ID **VMS6** Method: **SW8260B**

MS				Sample ID: 1312547-05A MS			Units: µg/Kg		Analysis Date: 12/13/13 04:37 AM	
Client ID:				Run ID: VMS6_131212B			SeqNo: 2577314		Prep Date: 12/03/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	983	30	1000	0	98.3	70-135	0			
1,1,2,2-Tetrachloroethane	1093	30	1000	0	109	55-130	0			
1,1,2-Trichloroethane	793	30	1000	0	79.3	60-125	0			
1,1-Dichloroethane	923.5	30	1000	0	92.4	75-125	0			
1,1-Dichloroethene	942.5	30	1000	0	94.2	65-135	0			
1,2,4-Trichlorobenzene	955	30	1000	0	95.5	65-130	0			
1,2-Dibromo-3-chloropropane	682.5	30	1000	0	68.2	40-135	0			
1,2-Dibromoethane	1094	30	1000	0	109	70-125	0			
1,2-Dichlorobenzene	938.5	30	1000	0	93.8	75-120	0			
1,2-Dichloroethane	1032	30	1000	0	103	70-135	0			
1,2-Dichloropropane	905	30	1000	0	90.5	70-120	0			
1,3-Dichlorobenzene	988.5	30	1000	0	98.8	70-125	0			
1,4-Dichlorobenzene	960	30	1000	0	96	70-125	0			
2-Butanone	954.5	200	1000	0	95.4	30-160	0			
2-Hexanone	1013	30	1000	0	101	45-145	0			
4-Methyl-2-pentanone	1445	30	1000	0	144	45-145	0			
Acetone	932.5	100	1000	0	93.2	20-160	0			
Benzene	1032	30	1000	0	103	75-125	0			
Bromodichloromethane	794.5	30	1000	0	79.4	70-130	0			
Bromoform	681.5	30	1000	0	68.2	55-135	0			
Bromomethane	221.5	75	1000	0	22.2	30-160	0			S
Carbon disulfide	811.5	30	1000	0	81.2	45-160	0			
Carbon tetrachloride	857	30	1000	0	85.7	65-135	0			
Chlorobenzene	986.5	30	1000	0	98.6	75-125	0			
Chloroethane	669	100	1000	0	66.9	40-155	0			
Chloroform	961.5	30	1000	0	96.2	70-125	0			
Chloromethane	756.5	100	1000	0	75.6	50-130	0			
cis-1,2-Dichloroethene	927.5	30	1000	0	92.8	65-125	0			
cis-1,3-Dichloropropene	804	30	1000	0	80.4	70-125	0			
Dibromochloromethane	652	30	1000	0	65.2	65-135	0			
Dichlorodifluoromethane	598	30	1000	0	59.8	35-135	0			
Ethylbenzene	1120	30	1000	121	99.9	75-125	0			
Isopropylbenzene	1892	30	1000	1354	53.8	75-130	0			S
Methyl tert-butyl ether	1054	30	1000	0	105	75-125	0			
Methylene chloride	881.5	30	1000	0	88.2	55-145	0			
Styrene	1130	30	1000	0	113	75-125	0			
Tetrachloroethene	957	30	1000	0	95.7	64-140	0			
Toluene	1008	30	1000	0	101	70-125	0			
trans-1,2-Dichloroethene	1004	30	1000	0	100	65-135	0			
trans-1,3-Dichloropropene	818.5	30	1000	0	81.8	65-125	0			
Trichloroethene	952.5	30	1000	0	95.2	75-125	0			
Trichlorofluoromethane	856.5	30	1000	0	85.6	25-185	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54070		Instrument ID VMS6		Method: SW8260B			
Vinyl chloride	789.5	30	1000	0	79	60-125	0
Xylenes, Total	3307	90	3000	29.5	109	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1080</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>108</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>1056</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>106</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>1026</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>103</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>1122</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>112</i>	<i>70-130</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54070** Instrument ID **VMS6** Method: **SW8260B**

MSD				Sample ID: 1312547-05A MSD			Units: µg/Kg		Analysis Date: 12/13/13 05:02 AM	
Client ID:				Run ID: VMS6_131212B			SeqNo: 2577316		Prep Date: 12/03/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	904	30	1000	0	90.4	70-135	983	8.37	30	
1,1,2,2-Tetrachloroethane	1218	30	1000	0	122	55-130	1093	10.8	30	
1,1,2-Trichloroethane	818	30	1000	0	81.8	60-125	793	3.1	30	
1,1-Dichloroethane	837.5	30	1000	0	83.8	75-125	923.5	9.77	30	
1,1-Dichloroethene	918.5	30	1000	0	91.8	65-135	942.5	2.58	30	
1,2,4-Trichlorobenzene	945	30	1000	0	94.5	65-130	955	1.05	30	
1,2-Dibromo-3-chloropropane	668.5	30	1000	0	66.8	40-135	682.5	2.07	30	
1,2-Dibromoethane	1062	30	1000	0	106	70-125	1094	2.97	30	
1,2-Dichlorobenzene	910.5	30	1000	0	91	75-120	938.5	3.03	30	
1,2-Dichloroethane	1068	30	1000	0	107	70-135	1032	3.38	30	
1,2-Dichloropropane	966.5	30	1000	0	96.6	70-120	905	6.57	30	
1,3-Dichlorobenzene	1004	30	1000	0	100	70-125	988.5	1.51	30	
1,4-Dichlorobenzene	961.5	30	1000	0	96.2	70-125	960	0.156	30	
2-Butanone	873.5	200	1000	0	87.4	30-160	954.5	8.86	30	
2-Hexanone	1054	30	1000	0	105	45-145	1013	4.01	30	
4-Methyl-2-pentanone	1522	30	1000	0	152	45-145	1445	5.22	30	S
Acetone	1007	100	1000	0	101	20-160	932.5	7.68	30	
Benzene	1030	30	1000	0	103	75-125	1032	0.243	30	
Bromodichloromethane	946.5	30	1000	0	94.6	70-130	794.5	17.5	30	
Bromoform	659.5	30	1000	0	66	55-135	681.5	3.28	30	
Bromomethane	273.5	75	1000	0	27.4	30-160	221.5	21	30	S
Carbon disulfide	773	30	1000	0	77.3	45-160	811.5	4.86	30	
Carbon tetrachloride	866.5	30	1000	0	86.6	65-135	857	1.1	30	
Chlorobenzene	970.5	30	1000	0	97	75-125	986.5	1.64	30	
Chloroethane	579.5	100	1000	0	58	40-155	669	14.3	30	
Chloroform	848	30	1000	0	84.8	70-125	961.5	12.5	30	
Chloromethane	654.5	100	1000	0	65.4	50-130	756.5	14.5	30	
cis-1,2-Dichloroethene	824	30	1000	0	82.4	65-125	927.5	11.8	30	
cis-1,3-Dichloropropene	876.5	30	1000	0	87.6	70-125	804	8.63	30	
Dibromochloromethane	624	30	1000	0	62.4	65-135	652	4.39	30	S
Dichlorodifluoromethane	585	30	1000	0	58.5	35-135	598	2.2	30	
Ethylbenzene	1093	30	1000	121	97.2	75-125	1120	2.44	30	
Isopropylbenzene	1870	30	1000	1354	51.6	75-130	1892	1.17	30	S
Methyl tert-butyl ether	1014	30	1000	0	101	75-125	1054	3.92	30	
Methylene chloride	870	30	1000	0	87	55-145	881.5	1.31	30	
Styrene	1054	30	1000	0	105	75-125	1130	6.96	30	
Tetrachloroethene	928	30	1000	0	92.8	64-140	957	3.08	30	
Toluene	1092	30	1000	0	109	70-125	1008	8.05	30	
trans-1,2-Dichloroethene	901	30	1000	0	90.1	65-135	1004	10.8	30	
trans-1,3-Dichloropropene	822.5	30	1000	0	82.2	65-125	818.5	0.488	30	
Trichloroethene	900.5	30	1000	0	90	75-125	952.5	5.61	30	
Trichlorofluoromethane	789.5	30	1000	0	79	25-185	856.5	8.14	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54070	Instrument ID VMS6			Method: SW8260B					
Vinyl chloride	724.5	30	1000	0	72.4	60-125	789.5	8.59	30
Xylenes, Total	3041	90	3000	29.5	100	75-125	3307	8.38	30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1092</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>109</i>	<i>70-130</i>	<i>1080</i>	<i>1.15</i>	<i>30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>1077</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>108</i>	<i>70-130</i>	<i>1056</i>	<i>1.92</i>	<i>30</i>
<i>Surr: Dibromofluoromethane</i>	<i>970</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97</i>	<i>70-130</i>	<i>1026</i>	<i>5.66</i>	<i>30</i>
<i>Surr: Toluene-d8</i>	<i>1260</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>126</i>	<i>70-130</i>	<i>1122</i>	<i>11.7</i>	<i>30</i>

The following samples were analyzed in this batch:

1312452-01A	1312452-02A	1312452-03A
1312452-05A	1312452-07A	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132304** Instrument ID **VMS7** Method: **SW8260**

MBLK		Sample ID: VBK2-131211-R132304				Units: µg/L		Analysis Date: 12/11/13 08:12 PM		
Client ID:		Run ID: VMS7_131211B				SeqNo: 2576210		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1,2-Trichlorotrifluoroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2-Dibromo-3-chloropropane	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	2.0								
1,3-Dichlorobenzene	U	2.0								
1,4-Dichlorobenzene	U	2.0								
2-Butanone	U	5.0								
2-Hexanone	U	5.0								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	20								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.5								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	5.0								
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	2.0								
Methyl tert-butyl ether	U	5.0								
Methylcyclohexane	U	5.0								
Methylene chloride	U	5.0								
Styrene	U	1.0								
Tetrachloroethene	U	2.0								
Toluene	U	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132304	Instrument ID VMS7	Method: SW8260						
trans-1,2-Dichloroethene	U	1.0						
trans-1,3-Dichloropropene	U	1.0						
Trichloroethene	U	1.0						
Trichlorofluoromethane	U	1.0						
Vinyl chloride	U	1.0						
Xylenes, Total	U	3.0						
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>18.85</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>94.2</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.98</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.9</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>19.63</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.2</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>18.28</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>91.4</i>	<i>85-120</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132304** Instrument ID **VMS7** Method: **SW8260**

LCS				Sample ID: VLCSW2-131211-R132304			Units: µg/L		Analysis Date: 12/11/13 06:58 PM	
Client ID:				Run ID: VMS7_131211B			SeqNo: 2576209		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.65	1.0	20	0	103	65-130	0			
1,1,2,2-Tetrachloroethane	16.95	1.0	20	0	84.8	65-130	0			
1,1,2-Trichloroethane	18.18	1.0	20	0	90.9	75-125	0			
1,1-Dichloroethane	20.77	1.0	20	0	104	70-135	0			
1,1-Dichloroethene	20.67	1.0	20	0	103	70-130	0			
1,2,4-Trichlorobenzene	23.27	1.0	20	0	116	65-135	0			
1,2-Dibromo-3-chloropropane	15.2	1.0	20	0	76	50-130	0			
1,2-Dibromoethane	19.22	1.0	20	0	96.1	80-120	0			
1,2-Dichlorobenzene	18.66	1.0	20	0	93.3	70-120	0			
1,2-Dichloroethane	19.65	1.0	20	0	98.2	70-130	0			
1,2-Dichloropropane	19.5	2.0	20	0	97.5	75-125	0			
1,3-Dichlorobenzene	18.66	2.0	20	0	93.3	75-125	0			
1,4-Dichlorobenzene	18.98	2.0	20	0	94.9	75-125	0			
2-Butanone	18.58	5.0	20	0	92.9	30-150	0			
2-Hexanone	15.14	5.0	20	0	75.7	55-130	0			
4-Methyl-2-pentanone	21.26	5.0	20	0	106	60-135	0			
Acetone	15.56	20	20	0	77.8	40-140	0			J
Benzene	20.92	1.0	20	0	105	80-120	0			
Bromodichloromethane	18.93	1.0	20	0	94.6	75-120	0			
Bromoform	17.07	1.0	20	0	85.4	70-130	0			
Bromomethane	37.12	1.0	20	0	186	30-145	0			S
Carbon disulfide	21.82	2.5	20	0	109	35-165	0			
Carbon tetrachloride	19.7	1.0	20	0	98.5	65-140	0			
Chlorobenzene	19.44	1.0	20	0	97.2	80-120	0			
Chloroethane	20.3	1.0	20	0	102	60-135	0			
Chloroform	22.1	1.0	20	0	110	65-135	0			
Chloromethane	17.47	1.0	20	0	87.4	70-125	0			
cis-1,2-Dichloroethene	22.15	1.0	20	0	111	70-125	0			
cis-1,3-Dichloropropene	20.68	1.0	20	0	103	70-130	0			
Dibromochloromethane	16.84	1.0	20	0	84.2	60-135	0			
Dichlorodifluoromethane	15.34	1.0	20	0	76.7	30-155	0			
Ethylbenzene	18.89	1.0	20	0	94.4	75-125	0			
Isopropylbenzene	19.37	1.0	20	0	96.8	75-125	0			
Methyl tert-butyl ether	20.77	5.0	20	0	104	65-125	0			
Methylene chloride	20.86	5.0	20	0	104	55-140	0			
Styrene	19.92	1.0	20	0	99.6	65-135	0			
Tetrachloroethene	20.47	2.0	20	0	102	45-150	0			
Toluene	19.68	1.0	20	0	98.4	75-120	0			
trans-1,2-Dichloroethene	21.4	1.0	20	0	107	60-140	0			
trans-1,3-Dichloropropene	18.56	1.0	20	0	92.8	55-140	0			
Trichloroethene	22.37	1.0	20	0	112	70-125	0			
Trichlorofluoromethane	21.58	1.0	20	0	108	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132304	Instrument ID VMS7		Method: SW8260				
Vinyl chloride	19.96	1.0	20	0	99.8	50-145	0
Xylenes, Total	56.24	3.0	60	0	93.7	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>18.62</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>93.1</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.93</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.6</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.73</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.6</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>18.44</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>92.2</i>	<i>85-120</i>	<i>0</i>

The following samples were analyzed in this batch: | 1312452-13A |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132376** Instrument ID **VMS5** Method: **SW8260**

MBLK		Sample ID: VBK2-131212-R132376				Units: µg/L		Analysis Date: 12/13/13 01:46 AM		
Client ID:		Run ID: VMS5_131212B				SeqNo: 2577752		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1,2-Trichlorotrifluoroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2-Dibromo-3-chloropropane	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	2.0								
1,3-Dichlorobenzene	U	2.0								
1,4-Dichlorobenzene	U	2.0								
2-Butanone	U	5.0								
2-Hexanone	U	5.0								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	20								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.5								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	5.0								
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	2.0								
Methyl tert-butyl ether	U	5.0								
Methylcyclohexane	U	5.0								
Methylene chloride	U	5.0								
Styrene	U	1.0								
Tetrachloroethene	U	2.0								
Toluene	U	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132376	Instrument ID VMS5	Method: SW8260						
trans-1,2-Dichloroethene	U	1.0						
trans-1,3-Dichloropropene	U	1.0						
Trichloroethene	U	1.0						
Trichlorofluoromethane	U	1.0						
Vinyl chloride	U	1.0						
Xylenes, Total	U	3.0						
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.4</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>102</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.54</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.7</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>20.33</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>102</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>20.04</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>85-120</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132376** Instrument ID **VMS5** Method: **SW8260**

LCS		Sample ID: VLCSW2-131212-R132376				Units: µg/L		Analysis Date: 12/13/13 12:57 PM		
Client ID:		Run ID: VMS5_131212B				SeqNo: 2577760		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.6	1.0	20	0	113	65-130	0			
1,1,2,2-Tetrachloroethane	22.17	1.0	20	0	111	65-130	0			
1,1,2-Trichloroethane	22.3	1.0	20	0	112	75-125	0			
1,1-Dichloroethane	22.67	1.0	20	0	113	70-135	0			
1,1-Dichloroethene	24.13	1.0	20	0	121	70-130	0			
1,2,4-Trichlorobenzene	17.14	1.0	20	0	85.7	65-135	0			
1,2-Dibromo-3-chloropropane	18.5	1.0	20	0	92.5	50-130	0			
1,2-Dibromoethane	50.46	1.0	20	0	252	80-120	0			S
1,2-Dichlorobenzene	22.13	1.0	20	0	111	70-120	0			
1,2-Dichloroethane	21.41	1.0	20	0	107	70-130	0			
1,2-Dichloropropane	21.47	2.0	20	0	107	75-125	0			
1,3-Dichlorobenzene	22.74	2.0	20	0	114	75-125	0			
1,4-Dichlorobenzene	22.29	2.0	20	0	111	75-125	0			
2-Butanone	22.99	5.0	20	0	115	30-150	0			
2-Hexanone	22.04	5.0	20	0	110	55-130	0			
4-Methyl-2-pentanone	31.66	5.0	20	0	158	60-135	0			S
Acetone	23.47	20	20	0	117	40-140	0			
Benzene	22.16	1.0	20	0	111	80-120	0			
Bromodichloromethane	21.81	1.0	20	0	109	75-120	0			
Bromoform	18.18	1.0	20	0	90.9	70-130	0			
Bromomethane	18.13	1.0	20	0	90.6	30-145	0			
Carbon disulfide	26.85	2.5	20	0	134	35-165	0			
Carbon tetrachloride	19.67	1.0	20	0	98.4	65-140	0			
Chlorobenzene	21.9	1.0	20	0	110	80-120	0			
Chloroethane	20.25	1.0	20	0	101	60-135	0			
Chloroform	22.43	1.0	20	0	112	65-135	0			
Chloromethane	19.97	1.0	20	0	99.8	70-125	0			
cis-1,2-Dichloroethene	22.43	1.0	20	0	112	70-125	0			
cis-1,3-Dichloropropene	22.77	1.0	20	0	114	70-130	0			
Dibromochloromethane	18.55	1.0	20	0	92.8	60-135	0			
Dichlorodifluoromethane	15.27	1.0	20	0	76.4	30-155	0			
Ethylbenzene	23.18	1.0	20	0	116	75-125	0			
Isopropylbenzene	22.44	1.0	20	0	112	75-125	0			
Methyl tert-butyl ether	23.79	5.0	20	0	119	65-125	0			
Methylene chloride	21.55	5.0	20	0	108	55-140	0			
Styrene	22.64	1.0	20	0	113	65-135	0			
Tetrachloroethene	22.4	2.0	20	0	112	45-150	0			
Toluene	22.35	1.0	20	0	112	75-120	0			
trans-1,2-Dichloroethene	24.16	1.0	20	0	121	60-140	0			
trans-1,3-Dichloropropene	19.88	1.0	20	0	99.4	55-140	0			
Trichloroethene	22.49	1.0	20	0	112	70-125	0			
Trichlorofluoromethane	21.31	1.0	20	0	107	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132376	Instrument ID VMS5		Method: SW8260				
Vinyl chloride	20.23	1.0	20	0	101	50-145	0
Xylenes, Total	69.37	3.0	60	0	116	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	20.23	0	20	0	101	70-120	0
<i>Surr: 4-Bromofluorobenzene</i>	20.08	0	20	0	100	75-120	0
<i>Surr: Dibromofluoromethane</i>	20.1	0	20	0	100	85-115	0
<i>Surr: Toluene-d8</i>	20.17	0	20	0	101	85-120	0

The following samples were analyzed in this batch:	1312452-04A	1312452-06A	1312452-08A	
	1312452-10A	1312452-12A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54140** Instrument ID **LACHAT** Method: **SW9012A**

MBLK		Sample ID: MBLK-54140-54140				Units: mg/L		Analysis Date: 12/16/13 11:17 AM		
Client ID:		Run ID: LACHAT_131216B		SeqNo: 2580698		Prep Date: 12/13/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	U	0.0050								

LCS		Sample ID: LCS-54140-54140				Units: mg/L		Analysis Date: 12/16/13 11:17 AM		
Client ID:		Run ID: LACHAT_131216B		SeqNo: 2580699		Prep Date: 12/13/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.2583	0.0050	0.25	0	103	83-120	0			

The following samples were analyzed in this batch:

1312452-04C	1312452-06C	1312452-08C
1312452-10C	1312452-12C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54158** Instrument ID **LACHAT** Method: **SW9012A**

MBLK		Sample ID: MBLK-54158-54158				Units: mg/Kg		Analysis Date: 12/16/13 11:17 AM		
Client ID:		Run ID: LACHAT_131216A				SeqNo: 2580658		Prep Date: 12/13/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.07331	0.50								J

LCS		Sample ID: LCS-54158-54158				Units: mg/Kg		Analysis Date: 12/16/13 11:17 AM		
Client ID:		Run ID: LACHAT_131216A				SeqNo: 2580659		Prep Date: 12/13/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	2.708	0.50	2.5	0	108	85-119	0			

MS		Sample ID: 1312452-02B MS				Units: mg/Kg		Analysis Date: 12/16/13 11:17 AM		
Client ID: S-R2330009-120313-RD-002		Run ID: LACHAT_131216A				SeqNo: 2580662		Prep Date: 12/13/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.7923	0.49	2.47	0.3079	19.6	70-130	0			S

MSD		Sample ID: 1312452-02B MSD				Units: mg/Kg		Analysis Date: 12/16/13 11:17 AM		
Client ID: S-R2330009-120313-RD-002		Run ID: LACHAT_131216A				SeqNo: 2580663		Prep Date: 12/13/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	1.188	0.49	2.451	0.3079	35.9	70-130	0.7923	40	30	SR

The following samples were analyzed in this batch:

1312452-01B	1312452-02B	1312452-03B
1312452-05B	1312452-07B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312452
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132211** Instrument ID **MOIST** Method: **A2540 G**

MBLK					Sample ID: WBLKS-R132211					Units: % of sample			Analysis Date: 12/10/13 03:10 PM				
Client ID:					Run ID: MOIST_131210B					SeqNo: 2573909			Prep Date:			DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC		Control Limit	RPD Ref Value		%RPD	RPD Limit	Qual
Moisture					0.03		0.050										J

LCS		Sample ID: LCS-R132211				Units: % of sample		Analysis Date: 12/10/13 03:10 PM		
Client ID:		Run ID: MOIST_131210B				SeqNo: 2573905		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Moisture	100	0.050	100	0	100	99.5-100.5	0			

DUP					Sample ID: 1312452-05B DUP				Units: % of sample			Analysis Date: 12/10/13 03:10 PM			
Client ID: S-R2330009-120413-RD-004					Run ID: MOIST_131210B				SeqNo: 2573899			Prep Date:		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual				
Moisture		18.22	0.050	0	0	0	0-0	17.15	6.05	20					

DUP					Sample ID: 1312452-07B DUP					Units: % of sample			Analysis Date: 12/10/13 03:10 PM			
Client ID: S-R2330009-120513-RD-005					Run ID: MOIST_131210B					SeqNo: 2573901			Prep Date:		DF: 1	
Analyte					Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		
Moisture					14.55	0.050	0	0	0	0-0	14.97	2.85	20			

The following samples were analyzed in this batch:

1312452-01B	1312452-02B	1312452-03B
1312452-05B	1312452-07B	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.



Cincinnati, OH
+1 513 733 5336

Fort Collins, CO
+1 970 490 1511

Everett, WA
+1 425 356 2600

Holland, MI
+1 616 399 6070

Chain of Custody Form

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+1 304 356 3168

Middletown, PA
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Salt Lake City, UT
+1 801 266 7700

York, PA
+1 717 505 5280

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COC ID: 94667

Environmental

Customer Information				Project Information				ALS Project Manager: <u>103</u> ALS Work Order #: <u>1312452</u>											
Parameter/Method Request for Analysis																			
Purchase Order		Project Name	Van Buren Landfill	A	VOCs														
Work Order		Project Number	R2330009	B	SVOCs														
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs														
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total														
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable														
				F	Metals (Including Hg) - total														
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	Moisture														
Phone	(734) 397-3100	Phone		H	Metals (Including Hg) - dissolved														
Fax	(734) 397-3131	Fax		I															
e-Mail Address		e-Mail Address		J															

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-R2330009-1203B-RD-001	12/03/13	10:40	S	7, -	2, -	X	X			X	X					
2	S-R2330009-1203B-RD-002	12/03/13	14:30	S	7, -	2, -	X	X			X	X					
3	S-R2330009-1204B-RD-003	12/04/13	10:00	S	7, -	2, -	X	X			X	X					
4	W-R2330009-1205B-RD-001	12/05/13	10:15	W	12, 4-	32, 12	X	X			X	X					
5	S-R2330009-1204B-RD-004	12/04/13	12:44	S	7, -	2, -	X	X			X	X					
6	W-R2330009-1205B-RD-002	12/05/13	11:20	W	12, 4-	32, 12	X	X			X	X					#
7	S-R2330009-1205B-RD-005	12/05/13	13:15	S	7, -	2, -	X	X			X	X					#
8	W-R2330009-1205B-RD-003	12/05/13	15:00	W	12, 4-	32, 12	X	X			X	X					
9	S-R2330009-1206B-RD-006	12/06/13	12:15	S	7, -	2, -	X	X			X	X					Hold
10	W-R2330009-1206B-RD-004	12/06/13	12:45	W	12, 4-	32, 12	X	X			X	X					

Sampler(s) Please Print & Sign RAFAL DANIGIER		Shipment Method		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour				Results Due Date:	
Relinquished by: <u>Small</u>		Date: <u>12/06/13</u>	Time: <u>1600</u>	Received by: <u>MSG Refrigerator</u>		Notes: <u>REV. MUE 12/13/13 1400 222 12/13/13 600C</u>			
Relinquished by: <u>MSG Fridge</u>		Date: <u>12/6/13</u>	Time: <u>1300</u>	Received by (Laboratory): <u>[Signature]</u>		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory): <u>DES</u>		Date: <u>12/10/13</u>	Time: <u>0930</u>	Checked by (Laboratory): <u>BS</u>			<u>3.8°C</u>	☒ Level II Std QC ☐ TRRP CheckList ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SWB46/CLP ☐ Other	
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035									

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

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COC ID: 94668

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Customer Information		Project Information		ALS Project Manager: <u>TBS</u> ALS Work Order #: <u>1312452</u>															
				Parameter/Method Request for Analysis															
Purchase Order		Project Name	Van Buren Landfill	A	VOCs														
Work Order		Project Number	R2330009	B	SVOCs														
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs														
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total														
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable														
				F	Metals (Including Hg) - total														
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	Moisture														
Phone	(734) 397-3100	Phone		H	Metals (Including Hg) - dissolved														
Fax	(734) 397-3131	Fax		I															
e-Mail Address		e-Mail Address		J															

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
11	S-R2330009-120613 RD-007	12/06/13	14:00	S	7, -	2, -	X	X			X	X					HOLD
12	W-R2330009-120613 RD-005	12/06/13	14:50	W	1, 2, 4, -	3, 2, 1, 2	X	X			X	X					
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign RAPAL DANIGIER		Shipment Method		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour				Results Due Date:	
Relinquished by: Small	Date: 12/06/13	Time: 1600	Received by: MS6 Refrigerator		Notes: REL: del 12/06/13 1900 279 12/10/13 0900				
Relinquished by: MS6 Fridge	Date: 12/6/13	Time: 1300	Received by (Laboratory):		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)		
Logged by (Laboratory): DPS	Date: 12/10/13	Time: 0930	Checked by (Laboratory): TBS			3.8°C	☒ Level II Std QC ☐ TRRP CheckList ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SW846/GLP ☐ Other		
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035									

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Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **10-Dec-13 09:00**

Work Order: **1312452**

Received by: **DS**

Checklist completed by <u><i>Diane Shaw</i></u>	10-Dec-13	Reviewed by: <u><i>Tom Bramish</i></u>	10-Dec-13
eSignature	Date	eSignature	Date

Matrices: Soil, Water

Carrier name: City Transfer

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Sample(s) received on ice?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>3.8 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/10/2013 9:51:31 AM</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Work Order: 1312747

Project Name:
RACER - Van Buren Landfill (R2330009)

The Mannik & Smith Group, Inc.

Frank Biehl
2365 Haggerty Road South
Suite 100
Canton, MI 48188
(734) 397-3100

12-Feb-2014



Certificate No: MN 532786



12-Feb-2014

Frank Biehl
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **RACER - Van Buren Landfill (R2330009)**

Work Order: **1312747**

Dear Frank,

Revision: **1**

ALS Environmental received 22 samples on 14-Dec-2013 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 138.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Beamish".

Electronically approved by: Tom Beamish

Tom Beamish
Senior Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

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www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1312747

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1312747-01	S-R2330009-120913-AJL-008	Soil		12/09/13 10:43	12/14/13 08:00	☒
1312747-02	W-R2330009-120913-AJL-006	Water		12/09/13 13:35	12/14/13 08:00	☐
1312747-03	S-R2330009-120913-AJL-009	Soil		12/09/13 14:15	12/14/13 08:00	☒
1312747-04	Trip Blank	Soil		12/09/13	12/14/13 08:00	☐
1312747-05	W-R2330009-121013-AJL-007	Water		12/10/13 09:15	12/14/13 08:00	☐
1312747-06	S-R2330009-121013-AJL-010	Soil		12/10/13 09:55	12/14/13 08:00	☒
1312747-07	W-R2330009-121013-AJL-008	Water		12/10/13 11:28	12/14/13 08:00	☐
1312747-08	S-R2330009-121013-AJL-011	Soil		12/10/13 13:15	12/14/13 08:00	☒
1312747-09	W-R2330009-121013-AJL-009	Water		12/10/13 15:30	12/14/13 08:00	☐
1312747-10	S-R2330009-121113-AJL-012	Soil		12/11/13 08:45	12/14/13 08:00	☒
1312747-11	S-R2330009-121113-AJL-013	Soil		12/11/13 08:50	12/14/13 08:00	☒
1312747-12	W-R2330009-121113-AJL-010	Water		12/11/13 10:15	12/14/13 08:00	☐
1312747-13	W-R2330009-121113-AJL-011	Water		12/11/13 10:51	12/14/13 08:00	☐
1312747-14	S-R2330009-121113-AJL-014	Soil		12/11/13 11:28	12/14/13 08:00	☒
1312747-15	W-R2330009-121113-AJL-012	Water		12/11/13 13:05	12/14/13 08:00	☐
1312747-16	W-R2330009-121113-AJL-013	Water		12/11/13 16:13	12/14/13 08:00	☐
1312747-17	W-R2330009-121213-AJL-014	Water		12/12/13 08:56	12/14/13 08:00	☐
1312747-18	W-R2330009-121213-AJL-015	Water		12/12/13 09:45	12/14/13 08:00	☐
1312747-19	S-R2330009-121213-AJL-015	Soil		12/12/13 10:30	12/14/13 08:00	☐
1312747-20	W-R2330009-121213-AJL-016	Water		12/12/13 11:23	12/14/13 08:00	☐
1312747-21	S-R2330009-121213-AJL-016	Soil		12/12/13 12:45	12/14/13 08:00	☐
1312747-22	W-R2330009-121213-AJL-017	Water		12/12/13 13:30	12/14/13 08:00	☐

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
WorkOrder: 1312747

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg	Micrograms per Kilogram
µg/Kg-dry	Micrograms per Kilogram Dry Weight
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1312747

Case Narrative**QC Comments:**

Batch R132913, Method VOC_8260_W, Sample VLCSW2-131220: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 4-Methyl-2-pentanone.

Batch R132913, Method VOC_8260_W, Sample 1312747-12A MS: The MS and/or MSD recovery was below the lower control limit. The corresponding results in the parent sample may be biased low for 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Bromoform, Chlorobenzene, Ethylbenzene, and Isopropylbenzene.

Batch R132917A, Method VOC_8260_W, Sample VLCSW1-131221: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 4-Methyl-2-pentanone.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120913-AJL-006
Collection Date: 12/09/13 01:35 PM

Work Order: 1312747
Lab ID: 1312747-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54266							
Mercury	U		0.00010	0.00020	mg/L	1	12/18/13 18:15
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 15:52
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Aluminum	0.79		0.00078	0.050	mg/L	1	12/23/13 17:57
Antimony	0.00032	J	0.000036	0.0020	mg/L	1	12/23/13 17:57
Arsenic	0.0020	J	0.00058	0.0050	mg/L	1	12/23/13 17:57
Barium	0.033	J	0.000063	0.10	mg/L	1	12/23/13 17:57
Beryllium	U		0.000082	0.0010	mg/L	1	12/23/13 17:57
Cadmium	0.000052	J	0.000045	0.0010	mg/L	1	12/23/13 17:57
Chromium	0.0052	J	0.00027	0.010	mg/L	1	12/23/13 17:57
Cobalt	0.0015	J	0.000041	0.020	mg/L	1	12/23/13 17:57
Copper	0.0029	J	0.00053	0.0040	mg/L	1	12/23/13 17:57
Iron	1.6		0.0053	0.20	mg/L	1	12/23/13 17:57
Lead	0.00079	J	0.000051	0.0030	mg/L	1	12/23/13 17:57
Manganese	0.053		0.000054	0.050	mg/L	1	12/23/13 17:57
Nickel	0.010	J	0.00025	0.020	mg/L	1	12/23/13 17:57
Selenium	0.00077	J	0.00064	0.0050	mg/L	1	12/23/13 17:57
Silver	U		0.000042	0.00020	mg/L	1	12/23/13 17:57
Thallium	U		0.000062	0.0020	mg/L	1	12/23/13 17:57
Vanadium	0.0024	J	0.00016	0.0040	mg/L	1	12/23/13 17:57
Zinc	0.0081	J	0.00048	0.050	mg/L	1	12/23/13 17:57
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.0069	J	0.00078	0.050	mg/L	1	01/02/14 17:56
Antimony	0.00043	J	0.000036	0.0020	mg/L	1	12/31/13 16:17
Arsenic	0.00077	J	0.00058	0.0050	mg/L	1	12/31/13 16:17
Barium	0.034	J	0.000063	0.10	mg/L	1	12/31/13 16:17
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 16:17
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 16:17
Chromium	U		0.00027	0.010	mg/L	1	12/31/13 16:17
Cobalt	0.0022	J	0.000041	0.020	mg/L	1	12/31/13 16:17
Copper	0.0020	J	0.00053	0.0040	mg/L	1	12/31/13 16:17
Iron	0.77		0.0053	0.20	mg/L	1	12/31/13 16:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120913-AJL-006
Collection Date: 12/09/13 01:35 PM

Work Order: 1312747
Lab ID: 1312747-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	12/31/13 16:17
Manganese	0.053		0.000054	0.050	mg/L	1	12/31/13 16:17
Nickel	0.0085	J	0.00025	0.020	mg/L	1	12/31/13 16:17
Selenium	0.00084	J	0.00064	0.0050	mg/L	1	12/31/13 16:17
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 16:17
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 16:17
Vanadium	0.00017	J	0.00016	0.0040	mg/L	1	12/31/13 16:17
Zinc	0.0030	J	0.00048	0.050	mg/L	1	12/31/13 16:17

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 12/16/13

Analyst: HL

BatchID: 54173

1,1'-Biphenyl	U		0.095	10	µg/L	1	12/16/13 20:43
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/16/13 20:43
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/16/13 20:43
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/16/13 20:43
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/16/13 20:43
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/16/13 20:43
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/16/13 20:43
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/16/13 20:43
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/16/13 20:43
2-Chlorophenol	U		0.32	10	µg/L	1	12/16/13 20:43
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/16/13 20:43
2-Methylphenol	U		0.20	10	µg/L	1	12/16/13 20:43
2-Nitroaniline	U		0.34	25	µg/L	1	12/16/13 20:43
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/16/13 20:43
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/16/13 20:43
3-Nitroaniline	U		0.34	25	µg/L	1	12/16/13 20:43
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/16/13 20:43
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/16/13 20:43
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/16/13 20:43
4-Chloroaniline	U		0.32	10	µg/L	1	12/16/13 20:43
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/16/13 20:43
4-Methylphenol	U		0.20	10	µg/L	1	12/16/13 20:43
4-Nitroaniline	U		0.30	25	µg/L	1	12/16/13 20:43
4-Nitrophenol	U		0.51	25	µg/L	1	12/16/13 20:43
Acenaphthene	U		0.11	5.0	µg/L	1	12/16/13 20:43
Acenaphthylene	U		0.12	5.0	µg/L	1	12/16/13 20:43
Acetophenone	U		0.090	5.0	µg/L	1	12/16/13 20:43
Anthracene	U		0.72	5.0	µg/L	1	12/16/13 20:43
Atrazine	U		0.13	5.0	µg/L	1	12/16/13 20:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120913-AJL-006
Collection Date: 12/09/13 01:35 PM

Work Order: 1312747
Lab ID: 1312747-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	12/16/13 20:43
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/16/13 20:43
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/16/13 20:43
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/16/13 20:43
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/16/13 20:43
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/16/13 20:43
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/16/13 20:43
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/16/13 20:43
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/16/13 20:43
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/16/13 20:43
Butyl benzyl phthalate	0.56	J	0.10	5.0	µg/L	1	12/16/13 20:43
Caprolactam	U		4.7	10	µg/L	1	12/16/13 20:43
Carbazole	U		0.16	10	µg/L	1	12/16/13 20:43
Chrysene	U		0.71	1.0	µg/L	1	12/16/13 20:43
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/16/13 20:43
Dibenzofuran	U		0.28	4.0	µg/L	1	12/16/13 20:43
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/16/13 20:43
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/16/13 20:43
Di-n-butyl phthalate	0.23	J	0.14	5.0	µg/L	1	12/16/13 20:43
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/16/13 20:43
Fluoranthene	U		0.77	1.0	µg/L	1	12/16/13 20:43
Fluorene	U		0.10	5.0	µg/L	1	12/16/13 20:43
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/16/13 20:43
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/16/13 20:43
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/16/13 20:43
Hexachloroethane	U		0.47	5.0	µg/L	1	12/16/13 20:43
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/16/13 20:43
Isophorone	U		0.30	5.0	µg/L	1	12/16/13 20:43
Naphthalene	U		0.12	5.0	µg/L	1	12/16/13 20:43
Nitrobenzene	U		0.33	3.0	µg/L	1	12/16/13 20:43
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/16/13 20:43
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/16/13 20:43
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/16/13 20:43
Phenanthrene	U		0.86	2.0	µg/L	1	12/16/13 20:43
Phenol	U		0.32	5.0	µg/L	1	12/16/13 20:43
Pyrene	U		0.65	5.0	µg/L	1	12/16/13 20:43
Surr: 2,4,6-Tribromophenol	62.9			32-115	%REC	1	12/16/13 20:43
Surr: 2-Fluorobiphenyl	76.3			32-100	%REC	1	12/16/13 20:43
Surr: 2-Fluorophenol	44.7			22-59	%REC	1	12/16/13 20:43
Surr: 4-Terphenyl-d14	80.9			23-112	%REC	1	12/16/13 20:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120913-AJL-006
Collection Date: 12/09/13 01:35 PM

Work Order: 1312747
Lab ID: 1312747-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	74.6			31-93	%REC	1	12/16/13 20:43
Surr: Phenol-d6	26.2			13-36	%REC	1	12/16/13 20:43
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/20/13 23:51
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/20/13 23:51
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/20/13 23:51
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/20/13 23:51
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/20/13 23:51
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/20/13 23:51
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/20/13 23:51
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/20/13 23:51
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/20/13 23:51
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/20/13 23:51
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/20/13 23:51
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/20/13 23:51
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/20/13 23:51
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/20/13 23:51
2-Butanone	U		0.64	25	µg/L	1	12/20/13 23:51
2-Hexanone	U		0.19	50	µg/L	1	12/20/13 23:51
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/20/13 23:51
Acetone	U		3.0	50	µg/L	1	12/20/13 23:51
Benzene	U		0.14	1.0	µg/L	1	12/20/13 23:51
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/20/13 23:51
Bromoform	U		0.18	1.0	µg/L	1	12/20/13 23:51
Bromomethane	U		0.38	5.0	µg/L	1	12/20/13 23:51
Carbon disulfide	U		0.26	5.0	µg/L	1	12/20/13 23:51
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/20/13 23:51
Chlorobenzene	U		0.12	1.0	µg/L	1	12/20/13 23:51
Chloroethane	U		0.25	5.0	µg/L	1	12/20/13 23:51
Chloroform	U		0.15	1.0	µg/L	1	12/20/13 23:51
Chloromethane	U		0.29	5.0	µg/L	1	12/20/13 23:51
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/20/13 23:51
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/20/13 23:51
Cyclohexane	U		0.20	1.0	µg/L	1	12/20/13 23:51
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/20/13 23:51
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/20/13 23:51
Ethylbenzene	U		0.12	1.0	µg/L	1	12/20/13 23:51
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/20/13 23:51

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120913-AJL-006
Collection Date: 12/09/13 01:35 PM

Work Order: 1312747
Lab ID: 1312747-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/20/13 23:51
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/20/13 23:51
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/20/13 23:51
Methylene chloride	U		0.75	5.0	µg/L	1	12/20/13 23:51
Styrene	U		0.12	1.0	µg/L	1	12/20/13 23:51
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/20/13 23:51
Toluene	0.31	J	0.13	1.0	µg/L	1	12/20/13 23:51
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/20/13 23:51
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/20/13 23:51
Trichloroethene	U		0.16	1.0	µg/L	1	12/20/13 23:51
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/20/13 23:51
Vinyl chloride	U		0.15	1.0	µg/L	1	12/20/13 23:51
Xylenes, Total	U		0.30	3.0	µg/L	1	12/20/13 23:51
Surr: 1,2-Dichloroethane-d4	103			70-120	%REC	1	12/20/13 23:51
Surr: 4-Bromofluorobenzene	99.2			75-120	%REC	1	12/20/13 23:51
Surr: Dibromofluoromethane	98.6			85-115	%REC	1	12/20/13 23:51
Surr: Toluene-d8	99.2			85-120	%REC	1	12/20/13 23:51
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/16/13		Analyst: JB
BatchID: 54203							
Cyanide, Amenable	0.0023	J	0.0010	0.0050	mg/L	1	12/17/13 11:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: Trip Blank
Collection Date: 12/09/13

Work Order: 1312747
Lab ID: 1312747-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/9/13		Analyst: BG
<u>BatchID: 54220</u>							
1,1,1-Trichloroethane	U		11	30	µg/Kg	1	12/21/13 06:12
1,1,2,2-Tetrachloroethane	U		13	30	µg/Kg	1	12/21/13 06:12
1,1,2-Trichloroethane	U		11	30	µg/Kg	1	12/21/13 06:12
1,1,2-Trichlorotrifluoroethane	U		11	30	µg/Kg	1	12/21/13 06:12
1,1-Dichloroethane	U		11	30	µg/Kg	1	12/21/13 06:12
1,1-Dichloroethene	U		13	30	µg/Kg	1	12/21/13 06:12
1,2,4-Trichlorobenzene	U		16	30	µg/Kg	1	12/21/13 06:12
1,2-Dibromo-3-chloropropane	U		15	30	µg/Kg	1	12/21/13 06:12
1,2-Dibromoethane	U		12	30	µg/Kg	1	12/21/13 06:12
1,2-Dichlorobenzene	U		12	30	µg/Kg	1	12/21/13 06:12
1,2-Dichloroethane	U		14	30	µg/Kg	1	12/21/13 06:12
1,2-Dichloropropane	U		9.9	30	µg/Kg	1	12/21/13 06:12
1,3-Dichlorobenzene	U		12	30	µg/Kg	1	12/21/13 06:12
1,4-Dichlorobenzene	U		11	30	µg/Kg	1	12/21/13 06:12
2-Butanone	U		74	200	µg/Kg	1	12/21/13 06:12
2-Hexanone	U		7.4	30	µg/Kg	1	12/21/13 06:12
4-Methyl-2-pentanone	U		10	30	µg/Kg	1	12/21/13 06:12
Acetone	U		64	100	µg/Kg	1	12/21/13 06:12
Benzene	U		12	30	µg/Kg	1	12/21/13 06:12
Bromodichloromethane	U		6.7	30	µg/Kg	1	12/21/13 06:12
Bromoform	U		5.9	30	µg/Kg	1	12/21/13 06:12
Bromomethane	U		11	75	µg/Kg	1	12/21/13 06:12
Carbon disulfide	U		15	30	µg/Kg	1	12/21/13 06:12
Carbon tetrachloride	U		8.5	30	µg/Kg	1	12/21/13 06:12
Chlorobenzene	U		12	30	µg/Kg	1	12/21/13 06:12
Chloroethane	U		64	100	µg/Kg	1	12/21/13 06:12
Chloroform	U		12	30	µg/Kg	1	12/21/13 06:12
Chloromethane	U		17	100	µg/Kg	1	12/21/13 06:12
cis-1,2-Dichloroethene	U		12	30	µg/Kg	1	12/21/13 06:12
cis-1,3-Dichloropropene	U		10	30	µg/Kg	1	12/21/13 06:12
Cyclohexane	U		13	30	µg/Kg	1	12/21/13 06:12
Dibromochloromethane	U		5.6	30	µg/Kg	1	12/21/13 06:12
Dichlorodifluoromethane	U		14	30	µg/Kg	1	12/21/13 06:12
Ethylbenzene	U		11	30	µg/Kg	1	12/21/13 06:12
Isopropylbenzene	U		13	30	µg/Kg	1	12/21/13 06:12
Methyl acetate	U		40	200	µg/Kg	1	12/21/13 06:12
Methyl tert-butyl ether	U		13	30	µg/Kg	1	12/21/13 06:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: Trip Blank
Collection Date: 12/09/13

Work Order: 1312747
Lab ID: 1312747-04
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		14	30	µg/Kg	1	12/21/13 06:12
Methylene chloride	U		12	30	µg/Kg	1	12/21/13 06:12
Styrene	U		11	30	µg/Kg	1	12/21/13 06:12
Tetrachloroethene	U		13	30	µg/Kg	1	12/21/13 06:12
Toluene	U		11	30	µg/Kg	1	12/21/13 06:12
trans-1,2-Dichloroethene	U		9.2	30	µg/Kg	1	12/21/13 06:12
trans-1,3-Dichloropropene	U		10	30	µg/Kg	1	12/21/13 06:12
Trichloroethene	U		14	30	µg/Kg	1	12/21/13 06:12
Trichlorofluoromethane	U		8.3	30	µg/Kg	1	12/21/13 06:12
Vinyl chloride	U		14	30	µg/Kg	1	12/21/13 06:12
Xylenes, Total	U		35	90	µg/Kg	1	12/21/13 06:12
Surr: 1,2-Dichloroethane-d4	104			70-130	%REC	1	12/21/13 06:12
Surr: 4-Bromofluorobenzene	98.6			70-130	%REC	1	12/21/13 06:12
Surr: Dibromofluoromethane	99.2			70-130	%REC	1	12/21/13 06:12
Surr: Toluene-d8	97.4			70-130	%REC	1	12/21/13 06:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-007
Collection Date: 12/10/13 09:15 AM

Work Order: 1312747
Lab ID: 1312747-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54266							
Mercury	U		0.00010	0.00020	mg/L	1	12/18/13 18:17
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 15:59
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Aluminum	2.1		0.00078	0.050	mg/L	1	12/22/13 15:08
Antimony	0.00054	J	0.000036	0.0020	mg/L	1	12/22/13 15:08
Arsenic	0.0021	J	0.00058	0.0050	mg/L	1	12/22/13 15:08
Barium	0.065	J	0.000063	0.10	mg/L	1	12/22/13 15:08
Beryllium	0.00012	J	0.000082	0.0010	mg/L	1	12/22/13 15:08
Cadmium	0.00020	J	0.000045	0.0010	mg/L	1	12/22/13 15:08
Chromium	0.0046	J	0.00027	0.010	mg/L	1	12/22/13 15:08
Cobalt	0.0096	J	0.000041	0.020	mg/L	1	12/22/13 15:08
Copper	0.0074		0.00053	0.0040	mg/L	1	12/22/13 15:08
Iron	3.5		0.0053	0.20	mg/L	1	12/22/13 15:08
Lead	0.0040		0.000051	0.0030	mg/L	1	12/22/13 15:08
Manganese	0.80		0.000054	0.050	mg/L	1	12/22/13 15:08
Nickel	0.022		0.00025	0.020	mg/L	1	12/22/13 15:08
Selenium	0.00068	J	0.00064	0.0050	mg/L	1	12/22/13 15:08
Silver	U		0.000042	0.00020	mg/L	1	12/22/13 15:08
Thallium	0.00035	J	0.000062	0.0020	mg/L	1	12/22/13 15:08
Vanadium	0.0073		0.00016	0.0040	mg/L	1	12/22/13 15:08
Zinc	0.022	J	0.00048	0.050	mg/L	1	12/22/13 15:08
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.014	J	0.00078	0.050	mg/L	1	01/02/14 18:02
Antimony	0.00037	J	0.000036	0.0020	mg/L	1	12/31/13 16:39
Arsenic	U		0.00058	0.0050	mg/L	1	12/31/13 16:39
Barium	0.049	J	0.000063	0.10	mg/L	1	12/31/13 16:39
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 16:39
Cadmium	0.000064	J	0.000045	0.0010	mg/L	1	12/31/13 16:39
Chromium	U		0.00027	0.010	mg/L	1	12/31/13 16:39
Cobalt	0.0054	J	0.000041	0.020	mg/L	1	12/31/13 16:39
Copper	0.0019	J	0.00053	0.0040	mg/L	1	12/31/13 16:39
Iron	0.15	J	0.0053	0.20	mg/L	1	12/31/13 16:39

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-007
Collection Date: 12/10/13 09:15 AM

Work Order: 1312747
Lab ID: 1312747-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.00011	J	0.000051	0.0030	mg/L	1	12/31/13 16:39
Manganese	0.47		0.000054	0.050	mg/L	1	12/31/13 16:39
Nickel	0.012	J	0.00025	0.020	mg/L	1	12/31/13 16:39
Selenium	0.00068	J	0.00064	0.0050	mg/L	1	12/31/13 16:39
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 16:39
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 16:39
Vanadium	0.00019	J	0.00016	0.0040	mg/L	1	12/31/13 16:39
Zinc	0.0048	J	0.00048	0.050	mg/L	1	12/31/13 16:39

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 12/16/13

Analyst: HL

BatchID: 54173

1,1'-Biphenyl	U	0.095	10	µg/L	1	12/16/13 21:14
2,4,5-Trichlorophenol	U	0.25	5.0	µg/L	1	12/16/13 21:14
2,4,6-Trichlorophenol	U	0.27	4.0	µg/L	1	12/16/13 21:14
2,4-Dichlorophenol	U	0.22	10	µg/L	1	12/16/13 21:14
2,4-Dimethylphenol	U	1.8	5.0	µg/L	1	12/16/13 21:14
2,4-Dinitrophenol	U	0.67	25	µg/L	1	12/16/13 21:14
2,4-Dinitrotoluene	U	0.27	5.0	µg/L	1	12/16/13 21:14
2,6-Dinitrotoluene	U	0.23	5.0	µg/L	1	12/16/13 21:14
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	12/16/13 21:14
2-Chlorophenol	U	0.32	10	µg/L	1	12/16/13 21:14
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	12/16/13 21:14
2-Methylphenol	U	0.20	10	µg/L	1	12/16/13 21:14
2-Nitroaniline	U	0.34	25	µg/L	1	12/16/13 21:14
2-Nitrophenol	U	0.28	5.0	µg/L	1	12/16/13 21:14
3,3'-Dichlorobenzidine	U	3.9	1.0	µg/L	1	12/16/13 21:14
3-Nitroaniline	U	0.34	25	µg/L	1	12/16/13 21:14
4,6-Dinitro-2-methylphenol	U	1.2	20	µg/L	1	12/16/13 21:14
4-Bromophenyl phenyl ether	U	0.23	5.0	µg/L	1	12/16/13 21:14
4-Chloro-3-methylphenol	U	0.31	5.0	µg/L	1	12/16/13 21:14
4-Chloroaniline	U	0.32	10	µg/L	1	12/16/13 21:14
4-Chlorophenyl phenyl ether	U	0.23	5.0	µg/L	1	12/16/13 21:14
4-Methylphenol	U	0.20	10	µg/L	1	12/16/13 21:14
4-Nitroaniline	U	0.30	25	µg/L	1	12/16/13 21:14
4-Nitrophenol	U	0.51	25	µg/L	1	12/16/13 21:14
Acenaphthene	U	0.11	5.0	µg/L	1	12/16/13 21:14
Acenaphthylene	U	0.12	5.0	µg/L	1	12/16/13 21:14
Acetophenone	U	0.090	5.0	µg/L	1	12/16/13 21:14
Anthracene	U	0.72	5.0	µg/L	1	12/16/13 21:14
Atrazine	U	0.13	5.0	µg/L	1	12/16/13 21:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-007
Collection Date: 12/10/13 09:15 AM

Work Order: 1312747
Lab ID: 1312747-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	12/16/13 21:14
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/16/13 21:14
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/16/13 21:14
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/16/13 21:14
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/16/13 21:14
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/16/13 21:14
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/16/13 21:14
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/16/13 21:14
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/16/13 21:14
Bis(2-ethylhexyl)phthalate	0.77	J	0.15	5.0	µg/L	1	12/16/13 21:14
Butyl benzyl phthalate	0.34	J	0.10	5.0	µg/L	1	12/16/13 21:14
Caprolactam	U		4.7	10	µg/L	1	12/16/13 21:14
Carbazole	U		0.16	10	µg/L	1	12/16/13 21:14
Chrysene	U		0.71	1.0	µg/L	1	12/16/13 21:14
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/16/13 21:14
Dibenzofuran	U		0.28	4.0	µg/L	1	12/16/13 21:14
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/16/13 21:14
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/16/13 21:14
Di-n-butyl phthalate	0.25	J	0.14	5.0	µg/L	1	12/16/13 21:14
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/16/13 21:14
Fluoranthene	U		0.77	1.0	µg/L	1	12/16/13 21:14
Fluorene	U		0.10	5.0	µg/L	1	12/16/13 21:14
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/16/13 21:14
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/16/13 21:14
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/16/13 21:14
Hexachloroethane	U		0.47	5.0	µg/L	1	12/16/13 21:14
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/16/13 21:14
Isophorone	U		0.30	5.0	µg/L	1	12/16/13 21:14
Naphthalene	U		0.12	5.0	µg/L	1	12/16/13 21:14
Nitrobenzene	U		0.33	3.0	µg/L	1	12/16/13 21:14
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/16/13 21:14
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/16/13 21:14
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/16/13 21:14
Phenanthrene	U		0.86	2.0	µg/L	1	12/16/13 21:14
Phenol	U		0.32	5.0	µg/L	1	12/16/13 21:14
Pyrene	U		0.65	5.0	µg/L	1	12/16/13 21:14
Surr: 2,4,6-Tribromophenol	61.6			32-115	%REC	1	12/16/13 21:14
Surr: 2-Fluorobiphenyl	74.3			32-100	%REC	1	12/16/13 21:14
Surr: 2-Fluorophenol	40.9			22-59	%REC	1	12/16/13 21:14
Surr: 4-Terphenyl-d14	82.4			23-112	%REC	1	12/16/13 21:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-007
Collection Date: 12/10/13 09:15 AM

Work Order: 1312747
Lab ID: 1312747-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	72.7			31-93	%REC	1	12/16/13 21:14
Surr: Phenol-d6	23.4			13-36	%REC	1	12/16/13 21:14
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 12:17
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 12:17
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 12:17
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 12:17
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 12:17
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 12:17
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 12:17
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 12:17
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 12:17
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 12:17
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 12:17
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 12:17
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 12:17
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 12:17
2-Butanone	U		0.64	25	µg/L	1	12/21/13 12:17
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 12:17
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 12:17
Acetone	U		3.0	50	µg/L	1	12/21/13 12:17
Benzene	U		0.14	1.0	µg/L	1	12/21/13 12:17
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 12:17
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 12:17
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 12:17
Carbon disulfide	U		0.26	5.0	µg/L	1	12/21/13 12:17
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 12:17
Chlorobenzene	U		0.12	1.0	µg/L	1	12/21/13 12:17
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 12:17
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 12:17
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 12:17
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 12:17
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 12:17
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 12:17
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 12:17
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 12:17
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 12:17
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/21/13 12:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-007
Collection Date: 12/10/13 09:15 AM

Work Order: 1312747
Lab ID: 1312747-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 12:17
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 12:17
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 12:17
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 12:17
Styrene	U		0.12	1.0	µg/L	1	12/21/13 12:17
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 12:17
Toluene	U		0.13	1.0	µg/L	1	12/21/13 12:17
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 12:17
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 12:17
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 12:17
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 12:17
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 12:17
Xylenes, Total	U		0.30	3.0	µg/L	1	12/21/13 12:17
Surr: 1,2-Dichloroethane-d4	105			70-120	%REC	1	12/21/13 12:17
Surr: 4-Bromofluorobenzene	101			75-120	%REC	1	12/21/13 12:17
Surr: Dibromofluoromethane	99.4			85-115	%REC	1	12/21/13 12:17
Surr: Toluene-d8	100			85-120	%REC	1	12/21/13 12:17
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/16/13		Analyst: JB
BatchID: 54203							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	12/17/13 11:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

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ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-008
Collection Date: 12/10/13 11:28 AM

Work Order: 1312747
Lab ID: 1312747-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470		Prep: SW7470 / 12/18/13		Analyst: LR
BatchID: 54266							
Mercury	0.00098		0.00010	0.00020	mg/L	1	12/18/13 18:20
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 12/30/13		Analyst: LR
BatchID: 54583							
Mercury		U	0.00010	0.00020	mg/L	1	12/30/13 16:01
METALS BY ICP-MS			SW6020A		Prep: SW3005A / 12/21/13		Analyst: JDD
BatchID: 54396							
Aluminum	120		0.0078	0.50	mg/L	10	12/22/13 15:13
Antimony	0.0028	J	0.00036	0.020	mg/L	10	12/22/13 15:13
Arsenic	0.30		0.0058	0.050	mg/L	10	12/22/13 15:13
Barium	0.73	J	0.00063	1.0	mg/L	10	12/22/13 15:13
Beryllium	0.0059	J	0.00082	0.010	mg/L	10	12/22/13 15:13
Cadmium	0.0040	J	0.00045	0.010	mg/L	10	12/22/13 15:13
Chromium	0.24		0.0027	0.10	mg/L	10	12/22/13 15:13
Cobalt	0.14	J	0.00041	0.20	mg/L	10	12/22/13 15:13
Copper	0.51		0.0053	0.040	mg/L	10	12/22/13 15:13
Iron	310		0.053	2.0	mg/L	10	12/22/13 15:13
Lead	0.25		0.00051	0.030	mg/L	10	12/22/13 15:13
Manganese	5.3		0.00054	0.50	mg/L	10	12/22/13 15:13
Nickel	0.41		0.0025	0.20	mg/L	10	12/22/13 15:13
Selenium	0.013	J	0.0064	0.050	mg/L	10	12/22/13 15:13
Silver	0.00078	J	0.00042	0.0020	mg/L	10	12/22/13 15:13
Thallium	0.0076	J	0.00062	0.020	mg/L	10	12/22/13 15:13
Vanadium	0.38		0.0016	0.040	mg/L	10	12/22/13 15:13
Zinc	1.5		0.0048	0.50	mg/L	10	12/22/13 15:13
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/30/13		Analyst: JDD
BatchID: 54568							
Aluminum	0.023	J	0.00078	0.050	mg/L	1	01/02/14 18:07
Antimony	0.00037	J	0.000036	0.0020	mg/L	1	12/31/13 16:44
Arsenic		U	0.00058	0.0050	mg/L	1	12/31/13 16:44
Barium	0.059	J	0.000063	0.10	mg/L	1	12/31/13 16:44
Beryllium		U	0.000082	0.0010	mg/L	1	12/31/13 16:44
Cadmium	0.000071	J	0.000045	0.0010	mg/L	1	12/31/13 16:44
Chromium		U	0.00027	0.010	mg/L	1	12/31/13 16:44
Cobalt	0.0080	J	0.000041	0.020	mg/L	1	12/31/13 16:44
Copper	0.0023	J	0.00053	0.0040	mg/L	1	12/31/13 16:44
Iron	0.071	J	0.0053	0.20	mg/L	1	12/31/13 16:44

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-008
Collection Date: 12/10/13 11:28 AM

Work Order: 1312747
Lab ID: 1312747-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000072	J	0.000051	0.0030	mg/L	1	12/31/13 16:44
Manganese	0.61		0.000054	0.050	mg/L	1	12/31/13 16:44
Nickel	0.014	J	0.00025	0.020	mg/L	1	12/31/13 16:44
Selenium		U	0.00064	0.0050	mg/L	1	12/31/13 16:44
Silver		U	0.000042	0.00020	mg/L	1	12/31/13 16:44
Thallium		U	0.000062	0.0020	mg/L	1	12/31/13 16:44
Vanadium	0.00020	J	0.00016	0.0040	mg/L	1	12/31/13 16:44
Zinc	0.0040	J	0.00048	0.050	mg/L	1	12/31/13 16:44
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 12/16/13			Analyst: HL
<u>BatchID: 54173</u>							
1,1'-Biphenyl		U	0.095	10	µg/L	1	12/16/13 21:46
2,4,5-Trichlorophenol		U	0.25	5.0	µg/L	1	12/16/13 21:46
2,4,6-Trichlorophenol		U	0.27	4.0	µg/L	1	12/16/13 21:46
2,4-Dichlorophenol		U	0.22	10	µg/L	1	12/16/13 21:46
2,4-Dimethylphenol		U	1.8	5.0	µg/L	1	12/16/13 21:46
2,4-Dinitrophenol		U	0.67	25	µg/L	1	12/16/13 21:46
2,4-Dinitrotoluene		U	0.27	5.0	µg/L	1	12/16/13 21:46
2,6-Dinitrotoluene		U	0.23	5.0	µg/L	1	12/16/13 21:46
2-Chloronaphthalene		U	0.13	5.0	µg/L	1	12/16/13 21:46
2-Chlorophenol		U	0.32	10	µg/L	1	12/16/13 21:46
2-Methylnaphthalene		U	0.13	5.0	µg/L	1	12/16/13 21:46
2-Methylphenol		U	0.20	10	µg/L	1	12/16/13 21:46
2-Nitroaniline		U	0.34	25	µg/L	1	12/16/13 21:46
2-Nitrophenol		U	0.28	5.0	µg/L	1	12/16/13 21:46
3,3'-Dichlorobenzidine		U	3.9	1.0	µg/L	1	12/16/13 21:46
3-Nitroaniline		U	0.34	25	µg/L	1	12/16/13 21:46
4,6-Dinitro-2-methylphenol		U	1.2	20	µg/L	1	12/16/13 21:46
4-Bromophenyl phenyl ether		U	0.23	5.0	µg/L	1	12/16/13 21:46
4-Chloro-3-methylphenol		U	0.31	5.0	µg/L	1	12/16/13 21:46
4-Chloroaniline		U	0.32	10	µg/L	1	12/16/13 21:46
4-Chlorophenyl phenyl ether		U	0.23	5.0	µg/L	1	12/16/13 21:46
4-Methylphenol		U	0.20	10	µg/L	1	12/16/13 21:46
4-Nitroaniline		U	0.30	25	µg/L	1	12/16/13 21:46
4-Nitrophenol		U	0.51	25	µg/L	1	12/16/13 21:46
Acenaphthene		U	0.11	5.0	µg/L	1	12/16/13 21:46
Acenaphthylene		U	0.12	5.0	µg/L	1	12/16/13 21:46
Acetophenone		U	0.090	5.0	µg/L	1	12/16/13 21:46
Anthracene		U	0.72	5.0	µg/L	1	12/16/13 21:46
Atrazine		U	0.13	5.0	µg/L	1	12/16/13 21:46

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-008
Collection Date: 12/10/13 11:28 AM

Work Order: 1312747
Lab ID: 1312747-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	12/16/13 21:46
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/16/13 21:46
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/16/13 21:46
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/16/13 21:46
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/16/13 21:46
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/16/13 21:46
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/16/13 21:46
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/16/13 21:46
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/16/13 21:46
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/16/13 21:46
Butyl benzyl phthalate	0.28	J	0.10	5.0	µg/L	1	12/16/13 21:46
Caprolactam	U		4.7	10	µg/L	1	12/16/13 21:46
Carbazole	U		0.16	10	µg/L	1	12/16/13 21:46
Chrysene	U		0.71	1.0	µg/L	1	12/16/13 21:46
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/16/13 21:46
Dibenzofuran	U		0.28	4.0	µg/L	1	12/16/13 21:46
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/16/13 21:46
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/16/13 21:46
Di-n-butyl phthalate	0.21	J	0.14	5.0	µg/L	1	12/16/13 21:46
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/16/13 21:46
Fluoranthene	U		0.77	1.0	µg/L	1	12/16/13 21:46
Fluorene	U		0.10	5.0	µg/L	1	12/16/13 21:46
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/16/13 21:46
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/16/13 21:46
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/16/13 21:46
Hexachloroethane	U		0.47	5.0	µg/L	1	12/16/13 21:46
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/16/13 21:46
Isophorone	U		0.30	5.0	µg/L	1	12/16/13 21:46
Naphthalene	U		0.12	5.0	µg/L	1	12/16/13 21:46
Nitrobenzene	U		0.33	3.0	µg/L	1	12/16/13 21:46
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/16/13 21:46
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/16/13 21:46
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/16/13 21:46
Phenanthrene	U		0.86	2.0	µg/L	1	12/16/13 21:46
Phenol	U		0.32	5.0	µg/L	1	12/16/13 21:46
Pyrene	U		0.65	5.0	µg/L	1	12/16/13 21:46
Surr: 2,4,6-Tribromophenol	61.4			32-115	%REC	1	12/16/13 21:46
Surr: 2-Fluorobiphenyl	72.4			32-100	%REC	1	12/16/13 21:46
Surr: 2-Fluorophenol	39.1			22-59	%REC	1	12/16/13 21:46
Surr: 4-Terphenyl-d14	81.3			23-112	%REC	1	12/16/13 21:46

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-008
Collection Date: 12/10/13 11:28 AM

Work Order: 1312747
Lab ID: 1312747-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	74.6			31-93	%REC	1	12/16/13 21:46
Surr: Phenol-d6	23.1			13-36	%REC	1	12/16/13 21:46
VOLATILE ORGANIC COMPOUNDS			SW8260	Analyst: BG			
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 12:42
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 12:42
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 12:42
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 12:42
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 12:42
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 12:42
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 12:42
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 12:42
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 12:42
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 12:42
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 12:42
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 12:42
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 12:42
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 12:42
2-Butanone	U		0.64	25	µg/L	1	12/21/13 12:42
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 12:42
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 12:42
Acetone	U		3.0	50	µg/L	1	12/21/13 12:42
Benzene	U		0.14	1.0	µg/L	1	12/21/13 12:42
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 12:42
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 12:42
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 12:42
Carbon disulfide	U		0.26	5.0	µg/L	1	12/21/13 12:42
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 12:42
Chlorobenzene	U		0.12	1.0	µg/L	1	12/21/13 12:42
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 12:42
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 12:42
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 12:42
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 12:42
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 12:42
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 12:42
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 12:42
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 12:42
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 12:42
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/21/13 12:42

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-008
Collection Date: 12/10/13 11:28 AM

Work Order: 1312747
Lab ID: 1312747-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 12:42
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 12:42
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 12:42
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 12:42
Styrene	U		0.12	1.0	µg/L	1	12/21/13 12:42
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 12:42
Toluene	0.37	J	0.13	1.0	µg/L	1	12/21/13 12:42
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 12:42
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 12:42
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 12:42
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 12:42
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 12:42
Xylenes, Total	U		0.30	3.0	µg/L	1	12/21/13 12:42
Surr: 1,2-Dichloroethane-d4	103			70-120	%REC	1	12/21/13 12:42
Surr: 4-Bromofluorobenzene	98.8			75-120	%REC	1	12/21/13 12:42
Surr: Dibromofluoromethane	99.0			85-115	%REC	1	12/21/13 12:42
Surr: Toluene-d8	98.8			85-120	%REC	1	12/21/13 12:42
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/16/13		Analyst: JB
BatchID: 54203							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	12/17/13 11:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-009
Collection Date: 12/10/13 03:30 PM

Work Order: 1312747
Lab ID: 1312747-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54266							
Mercury	0.00051		0.00010	0.00020	mg/L	1	12/18/13 18:22
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 16:04
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Antimony	0.0050	J	0.00036	0.020	mg/L	10	12/22/13 15:19
Arsenic	0.61		0.0058	0.050	mg/L	10	12/22/13 15:19
Barium	0.97	J	0.00063	1.0	mg/L	10	12/22/13 15:19
Beryllium	0.012		0.00082	0.010	mg/L	10	12/22/13 15:19
Cadmium	0.017		0.00045	0.010	mg/L	10	12/22/13 15:19
Chromium	1.0		0.0027	0.10	mg/L	10	12/22/13 15:19
Cobalt	0.31		0.00041	0.20	mg/L	10	12/22/13 15:19
Copper	1.1		0.0053	0.040	mg/L	10	12/22/13 15:19
Iron	700		0.053	2.0	mg/L	10	12/22/13 15:19
Lead	0.64		0.00051	0.030	mg/L	10	12/22/13 15:19
Manganese	14		0.00054	0.50	mg/L	10	12/22/13 15:19
Nickel	1.1		0.0025	0.20	mg/L	10	12/22/13 15:19
Selenium	0.047	J	0.0064	0.050	mg/L	10	12/22/13 15:19
Silver	0.0025		0.00042	0.0020	mg/L	10	12/22/13 15:19
Thallium	0.013	J	0.00062	0.020	mg/L	10	12/22/13 15:19
Vanadium	0.66		0.0016	0.040	mg/L	10	12/22/13 15:19
Zinc	2.9		0.0048	0.50	mg/L	10	12/22/13 15:19
<u>BatchID:</u> 54396							
Aluminum	15		0.078	5.0	mg/L	100	12/23/13 18:02
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.060		0.00078	0.050	mg/L	1	01/02/14 17:34
Antimony	0.022		0.000036	0.0020	mg/L	1	12/31/13 16:50
Arsenic	0.0086		0.00058	0.0050	mg/L	1	12/31/13 16:50
Barium	0.057	J	0.000063	0.10	mg/L	1	12/31/13 16:50
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 16:50
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 16:50
Chromium	U		0.00027	0.010	mg/L	1	12/31/13 16:50
Cobalt	0.0028	J	0.000041	0.020	mg/L	1	12/31/13 16:50
Copper	0.0014	J	0.00053	0.0040	mg/L	1	12/31/13 16:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-009
Collection Date: 12/10/13 03:30 PM

Work Order: 1312747
Lab ID: 1312747-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Iron	1.9		0.0053	0.20	mg/L	1	12/31/13 16:50
Lead	0.00011	J	0.000051	0.0030	mg/L	1	12/31/13 16:50
Manganese	0.092		0.000054	0.050	mg/L	1	12/31/13 16:50
Nickel	0.014	J	0.00025	0.020	mg/L	1	12/31/13 16:50
Selenium	0.00075	J	0.00064	0.0050	mg/L	1	12/31/13 16:50
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 16:50
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 16:50
Vanadium	0.00067	J	0.00016	0.0040	mg/L	1	12/31/13 16:50
Zinc	0.014	J	0.00048	0.050	mg/L	1	12/31/13 16:50

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 12/16/13

Analyst: HL

BatchID: 54173

1,1'-Biphenyl	U	0.095	10	µg/L	1	12/16/13 22:17
2,4,5-Trichlorophenol	U	0.25	5.0	µg/L	1	12/16/13 22:17
2,4,6-Trichlorophenol	U	0.27	4.0	µg/L	1	12/16/13 22:17
2,4-Dichlorophenol	U	0.22	10	µg/L	1	12/16/13 22:17
2,4-Dimethylphenol	U	1.8	5.0	µg/L	1	12/16/13 22:17
2,4-Dinitrophenol	U	0.67	25	µg/L	1	12/16/13 22:17
2,4-Dinitrotoluene	U	0.27	5.0	µg/L	1	12/16/13 22:17
2,6-Dinitrotoluene	U	0.23	5.0	µg/L	1	12/16/13 22:17
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	12/16/13 22:17
2-Chlorophenol	U	0.32	10	µg/L	1	12/16/13 22:17
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	12/16/13 22:17
2-Methylphenol	U	0.20	10	µg/L	1	12/16/13 22:17
2-Nitroaniline	U	0.34	25	µg/L	1	12/16/13 22:17
2-Nitrophenol	U	0.28	5.0	µg/L	1	12/16/13 22:17
3,3'-Dichlorobenzidine	U	3.9	1.0	µg/L	1	12/16/13 22:17
3-Nitroaniline	U	0.34	25	µg/L	1	12/16/13 22:17
4,6-Dinitro-2-methylphenol	U	1.2	20	µg/L	1	12/16/13 22:17
4-Bromophenyl phenyl ether	U	0.23	5.0	µg/L	1	12/16/13 22:17
4-Chloro-3-methylphenol	U	0.31	5.0	µg/L	1	12/16/13 22:17
4-Chloroaniline	U	0.32	10	µg/L	1	12/16/13 22:17
4-Chlorophenyl phenyl ether	U	0.23	5.0	µg/L	1	12/16/13 22:17
4-Methylphenol	U	0.20	10	µg/L	1	12/16/13 22:17
4-Nitroaniline	U	0.30	25	µg/L	1	12/16/13 22:17
4-Nitrophenol	U	0.51	25	µg/L	1	12/16/13 22:17
Acenaphthene	U	0.11	5.0	µg/L	1	12/16/13 22:17
Acenaphthylene	U	0.12	5.0	µg/L	1	12/16/13 22:17
Acetophenone	U	0.090	5.0	µg/L	1	12/16/13 22:17
Anthracene	U	0.72	5.0	µg/L	1	12/16/13 22:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-009
Collection Date: 12/10/13 03:30 PM

Work Order: 1312747
Lab ID: 1312747-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Atrazine	U		0.13	5.0	µg/L	1	12/16/13 22:17
Benzaldehyde	U		0.46	10	µg/L	1	12/16/13 22:17
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/16/13 22:17
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/16/13 22:17
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/16/13 22:17
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/16/13 22:17
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/16/13 22:17
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/16/13 22:17
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/16/13 22:17
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/16/13 22:17
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/16/13 22:17
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/16/13 22:17
Caprolactam	U		4.7	10	µg/L	1	12/16/13 22:17
Carbazole	U		0.16	10	µg/L	1	12/16/13 22:17
Chrysene	U		0.71	1.0	µg/L	1	12/16/13 22:17
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/16/13 22:17
Dibenzofuran	U		0.28	4.0	µg/L	1	12/16/13 22:17
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/16/13 22:17
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/16/13 22:17
Di-n-butyl phthalate	0.16	J	0.14	5.0	µg/L	1	12/16/13 22:17
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/16/13 22:17
Fluoranthene	U		0.77	1.0	µg/L	1	12/16/13 22:17
Fluorene	U		0.10	5.0	µg/L	1	12/16/13 22:17
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/16/13 22:17
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/16/13 22:17
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/16/13 22:17
Hexachloroethane	U		0.47	5.0	µg/L	1	12/16/13 22:17
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/16/13 22:17
Isophorone	U		0.30	5.0	µg/L	1	12/16/13 22:17
Naphthalene	U		0.12	5.0	µg/L	1	12/16/13 22:17
Nitrobenzene	U		0.33	3.0	µg/L	1	12/16/13 22:17
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/16/13 22:17
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/16/13 22:17
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/16/13 22:17
Phenanthrene	U		0.86	2.0	µg/L	1	12/16/13 22:17
Phenol	U		0.32	5.0	µg/L	1	12/16/13 22:17
Pyrene	U		0.65	5.0	µg/L	1	12/16/13 22:17
Surr: 2,4,6-Tribromophenol	61.8			32-115	%REC	1	12/16/13 22:17
Surr: 2-Fluorobiphenyl	74.4			32-100	%REC	1	12/16/13 22:17
Surr: 2-Fluorophenol	49.8			22-59	%REC	1	12/16/13 22:17

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-009
Collection Date: 12/10/13 03:30 PM

Work Order: 1312747
Lab ID: 1312747-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 4-Terphenyl-d14	78.2			23-112	%REC	1	12/16/13 22:17
Surr: Nitrobenzene-d5	75.0			31-93	%REC	1	12/16/13 22:17
Surr: Phenol-d6	31.3			13-36	%REC	1	12/16/13 22:17
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:07
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 01:07
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:07
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 01:07
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 01:07
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 01:07
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 01:07
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 01:07
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 01:07
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 01:07
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:07
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 01:07
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 01:07
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 01:07
2-Butanone	U		0.64	25	µg/L	1	12/21/13 01:07
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 01:07
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 01:07
Acetone	3.2	J	3.0	50	µg/L	1	12/21/13 01:07
Benzene	U		0.14	1.0	µg/L	1	12/21/13 01:07
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 01:07
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 01:07
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 01:07
Carbon disulfide	U		0.26	5.0	µg/L	1	12/21/13 01:07
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 01:07
Chlorobenzene	U		0.12	1.0	µg/L	1	12/21/13 01:07
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 01:07
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 01:07
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 01:07
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 01:07
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 01:07
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 01:07
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 01:07
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 01:07
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 01:07

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121013-AJL-009
Collection Date: 12/10/13 03:30 PM

Work Order: 1312747
Lab ID: 1312747-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/21/13 01:07
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 01:07
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 01:07
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 01:07
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 01:07
Styrene	U		0.12	1.0	µg/L	1	12/21/13 01:07
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 01:07
Toluene	0.28	J	0.13	1.0	µg/L	1	12/21/13 01:07
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 01:07
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 01:07
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 01:07
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 01:07
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 01:07
Xylenes, Total	U		0.30	3.0	µg/L	1	12/21/13 01:07
Surr: 1,2-Dichloroethane-d4	104			70-120	%REC	1	12/21/13 01:07
Surr: 4-Bromofluorobenzene	98.8			75-120	%REC	1	12/21/13 01:07
Surr: Dibromofluoromethane	99.8			85-115	%REC	1	12/21/13 01:07
Surr: Toluene-d8	100			85-120	%REC	1	12/21/13 01:07
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/16/13	Analyst: JB
BatchID: 54203							
Cyanide, Amenable	0.0010	J	0.0010	0.0050	mg/L	1	12/17/13 11:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-010
Collection Date: 12/11/13 10:15 AM

Work Order: 1312747
Lab ID: 1312747-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54266							
Mercury	U		0.00010	0.00020	mg/L	1	12/18/13 18:31
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 16:13
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Aluminum	62		0.0078	0.50	mg/L	10	12/22/13 15:24
Antimony	0.0025	J	0.00036	0.020	mg/L	10	12/22/13 15:24
Arsenic	0.086		0.0058	0.050	mg/L	10	12/22/13 15:24
Barium	0.61	J	0.00063	1.0	mg/L	10	12/22/13 15:24
Beryllium	0.0032	J	0.00082	0.010	mg/L	10	12/22/13 15:24
Cadmium	0.0032	J	0.00045	0.010	mg/L	10	12/22/13 15:24
Chromium	0.29		0.0027	0.10	mg/L	10	12/22/13 15:24
Cobalt	0.057	J	0.00041	0.20	mg/L	10	12/22/13 15:24
Copper	0.22		0.0053	0.040	mg/L	10	12/22/13 15:24
Iron	140		0.053	2.0	mg/L	10	12/22/13 15:24
Lead	0.10		0.00051	0.030	mg/L	10	12/22/13 15:24
Manganese	2.8		0.00054	0.50	mg/L	10	12/22/13 15:24
Nickel	0.21		0.0025	0.20	mg/L	10	12/22/13 15:24
Selenium	0.0094	J	0.0064	0.050	mg/L	10	12/22/13 15:24
Silver	U		0.00042	0.0020	mg/L	10	12/22/13 15:24
Thallium	0.0023	J	0.00062	0.020	mg/L	10	12/22/13 15:24
Vanadium	0.18		0.0016	0.040	mg/L	10	12/22/13 15:24
Zinc	0.68		0.0048	0.50	mg/L	10	12/22/13 15:24
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.022	J	0.00078	0.050	mg/L	1	01/02/14 18:18
Antimony	0.00056	J	0.000036	0.0020	mg/L	1	12/31/13 16:55
Arsenic	0.0021	J	0.00058	0.0050	mg/L	1	12/31/13 16:55
Barium	0.16		0.000063	0.10	mg/L	1	12/31/13 16:55
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 16:55
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 16:55
Chromium	U		0.00027	0.010	mg/L	1	12/31/13 16:55
Cobalt	0.0053	J	0.000041	0.020	mg/L	1	12/31/13 16:55
Copper	0.0028	J	0.00053	0.0040	mg/L	1	12/31/13 16:55
Iron	7.4		0.0053	0.20	mg/L	1	12/31/13 16:55

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-010
Collection Date: 12/11/13 10:15 AM

Work Order: 1312747
Lab ID: 1312747-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	12/31/13 16:55
Manganese	0.31		0.000054	0.050	mg/L	1	12/31/13 16:55
Nickel	0.025		0.00025	0.020	mg/L	1	12/31/13 16:55
Selenium	U		0.00064	0.0050	mg/L	1	12/31/13 16:55
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 16:55
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 16:55
Vanadium	0.00046	J	0.00016	0.0040	mg/L	1	12/31/13 16:55
Zinc	0.019	J	0.00048	0.050	mg/L	1	12/31/13 16:55

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 12/16/13

Analyst: HL

BatchID: 54173

1,1'-Biphenyl	U		0.095	10	µg/L	1	12/16/13 22:48
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/16/13 22:48
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/16/13 22:48
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/16/13 22:48
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/16/13 22:48
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/16/13 22:48
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/16/13 22:48
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/16/13 22:48
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/16/13 22:48
2-Chlorophenol	U		0.32	10	µg/L	1	12/16/13 22:48
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/16/13 22:48
2-Methylphenol	U		0.20	10	µg/L	1	12/16/13 22:48
2-Nitroaniline	U		0.34	25	µg/L	1	12/16/13 22:48
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/16/13 22:48
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/16/13 22:48
3-Nitroaniline	U		0.34	25	µg/L	1	12/16/13 22:48
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/16/13 22:48
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/16/13 22:48
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/16/13 22:48
4-Chloroaniline	U		0.32	10	µg/L	1	12/16/13 22:48
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/16/13 22:48
4-Methylphenol	U		0.20	10	µg/L	1	12/16/13 22:48
4-Nitroaniline	U		0.30	25	µg/L	1	12/16/13 22:48
4-Nitrophenol	U		0.51	25	µg/L	1	12/16/13 22:48
Acenaphthene	U		0.11	5.0	µg/L	1	12/16/13 22:48
Acenaphthylene	U		0.12	5.0	µg/L	1	12/16/13 22:48
Acetophenone	U		0.090	5.0	µg/L	1	12/16/13 22:48
Anthracene	U		0.72	5.0	µg/L	1	12/16/13 22:48
Atrazine	U		0.13	5.0	µg/L	1	12/16/13 22:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-010
Collection Date: 12/11/13 10:15 AM

Work Order: 1312747
Lab ID: 1312747-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	12/16/13 22:48
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/16/13 22:48
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/16/13 22:48
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/16/13 22:48
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/16/13 22:48
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/16/13 22:48
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/16/13 22:48
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/16/13 22:48
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/16/13 22:48
Bis(2-ethylhexyl)phthalate	0.26	J	0.15	5.0	µg/L	1	12/16/13 22:48
Butyl benzyl phthalate	0.28	J	0.10	5.0	µg/L	1	12/16/13 22:48
Caprolactam	U		4.7	10	µg/L	1	12/16/13 22:48
Carbazole	U		0.16	10	µg/L	1	12/16/13 22:48
Chrysene	U		0.71	1.0	µg/L	1	12/16/13 22:48
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/16/13 22:48
Dibenzofuran	U		0.28	4.0	µg/L	1	12/16/13 22:48
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/16/13 22:48
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/16/13 22:48
Di-n-butyl phthalate	0.22	J	0.14	5.0	µg/L	1	12/16/13 22:48
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/16/13 22:48
Fluoranthene	U		0.77	1.0	µg/L	1	12/16/13 22:48
Fluorene	U		0.10	5.0	µg/L	1	12/16/13 22:48
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/16/13 22:48
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/16/13 22:48
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/16/13 22:48
Hexachloroethane	U		0.47	5.0	µg/L	1	12/16/13 22:48
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/16/13 22:48
Isophorone	U		0.30	5.0	µg/L	1	12/16/13 22:48
Naphthalene	U		0.12	5.0	µg/L	1	12/16/13 22:48
Nitrobenzene	U		0.33	3.0	µg/L	1	12/16/13 22:48
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/16/13 22:48
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/16/13 22:48
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/16/13 22:48
Phenanthrene	U		0.86	2.0	µg/L	1	12/16/13 22:48
Phenol	U		0.32	5.0	µg/L	1	12/16/13 22:48
Pyrene	U		0.65	5.0	µg/L	1	12/16/13 22:48
Surr: 2,4,6-Tribromophenol	71.5			32-115	%REC	1	12/16/13 22:48
Surr: 2-Fluorobiphenyl	74.8			32-100	%REC	1	12/16/13 22:48
Surr: 2-Fluorophenol	44.2			22-59	%REC	1	12/16/13 22:48
Surr: 4-Terphenyl-d14	77.1			23-112	%REC	1	12/16/13 22:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-010
Collection Date: 12/11/13 10:15 AM

Work Order: 1312747
Lab ID: 1312747-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	72.7			31-93	%REC	1	12/16/13 22:48
Surr: Phenol-d6	26.4			13-36	%REC	1	12/16/13 22:48
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:33
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 01:33
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:33
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 01:33
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 01:33
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 01:33
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 01:33
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 01:33
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 01:33
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 01:33
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:33
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 01:33
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 01:33
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 01:33
2-Butanone	U		0.64	25	µg/L	1	12/21/13 01:33
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 01:33
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 01:33
Acetone	6.1	J	3.0	50	µg/L	1	12/21/13 01:33
Benzene	U		0.14	1.0	µg/L	1	12/21/13 01:33
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 01:33
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 01:33
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 01:33
Carbon disulfide	0.53	J	0.26	5.0	µg/L	1	12/21/13 01:33
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 01:33
Chlorobenzene	U		0.12	1.0	µg/L	1	12/21/13 01:33
Chloroethane	2.9	J	0.25	5.0	µg/L	1	12/21/13 01:33
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 01:33
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 01:33
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 01:33
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 01:33
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 01:33
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 01:33
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 01:33
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 01:33
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/21/13 01:33

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-010
Collection Date: 12/11/13 10:15 AM

Work Order: 1312747
Lab ID: 1312747-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 01:33
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 01:33
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 01:33
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 01:33
Styrene	U		0.12	1.0	µg/L	1	12/21/13 01:33
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 01:33
Toluene	U		0.13	1.0	µg/L	1	12/21/13 01:33
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 01:33
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 01:33
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 01:33
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 01:33
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 01:33
Xylenes, Total	U		0.30	3.0	µg/L	1	12/21/13 01:33
Surr: 1,2-Dichloroethane-d4	102			70-120	%REC	1	12/21/13 01:33
Surr: 4-Bromofluorobenzene	99.9			75-120	%REC	1	12/21/13 01:33
Surr: Dibromofluoromethane	97.8			85-115	%REC	1	12/21/13 01:33
Surr: Toluene-d8	99.5			85-120	%REC	1	12/21/13 01:33
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/16/13		Analyst: JB
BatchID: 54203							
Cyanide, Amenable	0.0015	J	0.0010	0.0050	mg/L	1	12/17/13 11:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-011
Collection Date: 12/11/13 10:51 AM

Work Order: 1312747
Lab ID: 1312747-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470		Prep: SW7470 / 12/18/13		Analyst: LR
BatchID: 54266							
Mercury	U		0.00010	0.00020	mg/L	1	12/18/13 18:34
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 12/30/13		Analyst: LR
BatchID: 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 16:15
METALS BY ICP-MS			SW6020A		Prep: SW3005A / 12/21/13		Analyst: JDD
BatchID: 54396							
Aluminum	17		0.0078	0.50	mg/L	10	12/22/13 15:30
Antimony	0.0011	J	0.00036	0.020	mg/L	10	12/22/13 15:30
Arsenic	0.018	J	0.0058	0.050	mg/L	10	12/22/13 15:30
Barium	0.30	J	0.00063	1.0	mg/L	10	12/22/13 15:30
Beryllium	U		0.00082	0.010	mg/L	10	12/22/13 15:30
Cadmium	0.00061	J	0.00045	0.010	mg/L	10	12/22/13 15:30
Chromium	0.059	J	0.0027	0.10	mg/L	10	12/22/13 15:30
Cobalt	0.013	J	0.00041	0.20	mg/L	10	12/22/13 15:30
Copper	0.046		0.0053	0.040	mg/L	10	12/22/13 15:30
Iron	38		0.053	2.0	mg/L	10	12/22/13 15:30
Lead	0.019	J	0.00051	0.030	mg/L	10	12/22/13 15:30
Manganese	0.73		0.00054	0.50	mg/L	10	12/22/13 15:30
Nickel	0.053	J	0.0025	0.20	mg/L	10	12/22/13 15:30
Selenium	U		0.0064	0.050	mg/L	10	12/22/13 15:30
Silver	U		0.00042	0.0020	mg/L	10	12/22/13 15:30
Thallium	U		0.00062	0.020	mg/L	10	12/22/13 15:30
Vanadium	0.046		0.0016	0.040	mg/L	10	12/22/13 15:30
Zinc	0.14	J	0.0048	0.50	mg/L	10	12/22/13 15:30
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/30/13		Analyst: JDD
BatchID: 54568							
Aluminum	0.011	J	0.00078	0.050	mg/L	1	01/02/14 18:24
Antimony	0.00048	J	0.000036	0.0020	mg/L	1	12/31/13 17:01
Arsenic	0.0020	J	0.00058	0.0050	mg/L	1	12/31/13 17:01
Barium	0.15		0.000063	0.10	mg/L	1	12/31/13 17:01
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 17:01
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 17:01
Chromium	U		0.00027	0.010	mg/L	1	12/31/13 17:01
Cobalt	0.0047	J	0.000041	0.020	mg/L	1	12/31/13 17:01
Copper	0.0024	J	0.00053	0.0040	mg/L	1	12/31/13 17:01
Iron	4.9		0.0053	0.20	mg/L	1	12/31/13 17:01

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-011
Collection Date: 12/11/13 10:51 AM

Work Order: 1312747
Lab ID: 1312747-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	12/31/13 17:01
Manganese	0.30		0.000054	0.050	mg/L	1	12/31/13 17:01
Nickel	0.024		0.00025	0.020	mg/L	1	12/31/13 17:01
Selenium	U		0.00064	0.0050	mg/L	1	12/31/13 17:01
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 17:01
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 17:01
Vanadium	U		0.00016	0.0040	mg/L	1	12/31/13 17:01
Zinc	0.018	J	0.00048	0.050	mg/L	1	12/31/13 17:01
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 12/16/13			Analyst: HL
<u>BatchID: 54173</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/16/13 23:19
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/16/13 23:19
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/16/13 23:19
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/16/13 23:19
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/16/13 23:19
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/16/13 23:19
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/16/13 23:19
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/16/13 23:19
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/16/13 23:19
2-Chlorophenol	U		0.32	10	µg/L	1	12/16/13 23:19
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/16/13 23:19
2-Methylphenol	U		0.20	10	µg/L	1	12/16/13 23:19
2-Nitroaniline	U		0.34	25	µg/L	1	12/16/13 23:19
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/16/13 23:19
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/16/13 23:19
3-Nitroaniline	U		0.34	25	µg/L	1	12/16/13 23:19
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/16/13 23:19
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/16/13 23:19
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/16/13 23:19
4-Chloroaniline	U		0.32	10	µg/L	1	12/16/13 23:19
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/16/13 23:19
4-Methylphenol	U		0.20	10	µg/L	1	12/16/13 23:19
4-Nitroaniline	U		0.30	25	µg/L	1	12/16/13 23:19
4-Nitrophenol	U		0.51	25	µg/L	1	12/16/13 23:19
Acenaphthene	U		0.11	5.0	µg/L	1	12/16/13 23:19
Acenaphthylene	U		0.12	5.0	µg/L	1	12/16/13 23:19
Acetophenone	U		0.090	5.0	µg/L	1	12/16/13 23:19
Anthracene	U		0.72	5.0	µg/L	1	12/16/13 23:19
Atrazine	U		0.13	5.0	µg/L	1	12/16/13 23:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-011
Collection Date: 12/11/13 10:51 AM

Work Order: 1312747
Lab ID: 1312747-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	12/16/13 23:19
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/16/13 23:19
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/16/13 23:19
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/16/13 23:19
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/16/13 23:19
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/16/13 23:19
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/16/13 23:19
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/16/13 23:19
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/16/13 23:19
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/16/13 23:19
Butyl benzyl phthalate	0.29	J	0.10	5.0	µg/L	1	12/16/13 23:19
Caprolactam	U		4.7	10	µg/L	1	12/16/13 23:19
Carbazole	U		0.16	10	µg/L	1	12/16/13 23:19
Chrysene	U		0.71	1.0	µg/L	1	12/16/13 23:19
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/16/13 23:19
Dibenzofuran	U		0.28	4.0	µg/L	1	12/16/13 23:19
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/16/13 23:19
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/16/13 23:19
Di-n-butyl phthalate	0.19	J	0.14	5.0	µg/L	1	12/16/13 23:19
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/16/13 23:19
Fluoranthene	U		0.77	1.0	µg/L	1	12/16/13 23:19
Fluorene	U		0.10	5.0	µg/L	1	12/16/13 23:19
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/16/13 23:19
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/16/13 23:19
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/16/13 23:19
Hexachloroethane	U		0.47	5.0	µg/L	1	12/16/13 23:19
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/16/13 23:19
Isophorone	U		0.30	5.0	µg/L	1	12/16/13 23:19
Naphthalene	U		0.12	5.0	µg/L	1	12/16/13 23:19
Nitrobenzene	U		0.33	3.0	µg/L	1	12/16/13 23:19
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/16/13 23:19
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/16/13 23:19
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/16/13 23:19
Phenanthrene	U		0.86	2.0	µg/L	1	12/16/13 23:19
Phenol	U		0.32	5.0	µg/L	1	12/16/13 23:19
Pyrene	U		0.65	5.0	µg/L	1	12/16/13 23:19
Surr: 2,4,6-Tribromophenol	70.9			32-115	%REC	1	12/16/13 23:19
Surr: 2-Fluorobiphenyl	75.5			32-100	%REC	1	12/16/13 23:19
Surr: 2-Fluorophenol	49.3			22-59	%REC	1	12/16/13 23:19
Surr: 4-Terphenyl-d14	78.9			23-112	%REC	1	12/16/13 23:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-011
Collection Date: 12/11/13 10:51 AM

Work Order: 1312747
Lab ID: 1312747-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	74.3			31-93	%REC	1	12/16/13 23:19
Surr: Phenol-d6	30.3			13-36	%REC	1	12/16/13 23:19
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:58
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 01:58
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:58
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 01:58
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 01:58
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 01:58
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 01:58
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 01:58
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 01:58
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 01:58
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 01:58
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 01:58
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 01:58
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 01:58
2-Butanone	U		0.64	25	µg/L	1	12/21/13 01:58
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 01:58
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 01:58
Acetone	U		3.0	50	µg/L	1	12/21/13 01:58
Benzene	U		0.14	1.0	µg/L	1	12/21/13 01:58
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 01:58
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 01:58
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 01:58
Carbon disulfide	U		0.26	5.0	µg/L	1	12/21/13 01:58
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 01:58
Chlorobenzene	U		0.12	1.0	µg/L	1	12/21/13 01:58
Chloroethane	4.3	J	0.25	5.0	µg/L	1	12/21/13 01:58
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 01:58
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 01:58
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 01:58
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 01:58
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 01:58
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 01:58
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 01:58
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 01:58
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/21/13 01:58

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-011
Collection Date: 12/11/13 10:51 AM

Work Order: 1312747
Lab ID: 1312747-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 01:58
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 01:58
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 01:58
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 01:58
Styrene	U		0.12	1.0	µg/L	1	12/21/13 01:58
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 01:58
Toluene	U		0.13	1.0	µg/L	1	12/21/13 01:58
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 01:58
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 01:58
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 01:58
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 01:58
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 01:58
Xylenes, Total	U		0.30	3.0	µg/L	1	12/21/13 01:58
Surr: 1,2-Dichloroethane-d4	102			70-120	%REC	1	12/21/13 01:58
Surr: 4-Bromofluorobenzene	97.6			75-120	%REC	1	12/21/13 01:58
Surr: Dibromofluoromethane	99.4			85-115	%REC	1	12/21/13 01:58
Surr: Toluene-d8	98.8			85-120	%REC	1	12/21/13 01:58
CYANIDE, AMENABLE			SW9012A	Prep: SW9012A / 12/18/13			Analyst: JB
BatchID: 54275							
Cyanide, Amenable	0.0013	J	0.0010	0.0050	mg/L	1	12/18/13 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-012
Collection Date: 12/11/13 01:05 PM

Work Order: 1312747
Lab ID: 1312747-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54266							
Mercury	0.00023		0.00010	0.00020	mg/L	1	12/18/13 18:36
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 16:18
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Aluminum	95		0.0078	0.50	mg/L	10	12/22/13 15:36
Antimony	0.0032	J	0.00036	0.020	mg/L	10	12/22/13 15:36
Arsenic	0.21		0.0058	0.050	mg/L	10	12/22/13 15:36
Barium	0.55	J	0.00063	1.0	mg/L	10	12/22/13 15:36
Beryllium	0.0052	J	0.00082	0.010	mg/L	10	12/22/13 15:36
Cadmium	0.0052	J	0.00045	0.010	mg/L	10	12/22/13 15:36
Chromium	0.35		0.0027	0.10	mg/L	10	12/22/13 15:36
Cobalt	0.085	J	0.00041	0.20	mg/L	10	12/22/13 15:36
Copper	0.33		0.0053	0.040	mg/L	10	12/22/13 15:36
Iron	230		0.053	2.0	mg/L	10	12/22/13 15:36
Lead	0.20		0.00051	0.030	mg/L	10	12/22/13 15:36
Manganese	4.1		0.00054	0.50	mg/L	10	12/22/13 15:36
Nickel	0.31		0.0025	0.20	mg/L	10	12/22/13 15:36
Selenium	0.013	J	0.0064	0.050	mg/L	10	12/22/13 15:36
Silver	0.00075	J	0.00042	0.0020	mg/L	10	12/22/13 15:36
Thallium	0.0033	J	0.00062	0.020	mg/L	10	12/22/13 15:36
Vanadium	0.32		0.0016	0.040	mg/L	10	12/22/13 15:36
Zinc	0.80		0.0048	0.50	mg/L	10	12/22/13 15:36
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.031	J	0.00078	0.050	mg/L	1	01/02/14 18:30
Antimony	0.0018	J	0.000036	0.0020	mg/L	1	12/31/13 17:07
Arsenic	0.010		0.00058	0.0050	mg/L	1	12/31/13 17:07
Barium	0.11		0.000063	0.10	mg/L	1	12/31/13 17:07
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 17:07
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 17:07
Chromium	U		0.00027	0.010	mg/L	1	12/31/13 17:07
Cobalt	0.0028	J	0.000041	0.020	mg/L	1	12/31/13 17:07
Copper	0.0021	J	0.00053	0.0040	mg/L	1	12/31/13 17:07
Iron	1.4		0.0053	0.20	mg/L	1	12/31/13 17:07

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-012
Collection Date: 12/11/13 01:05 PM

Work Order: 1312747
Lab ID: 1312747-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	12/31/13 17:07
Manganese	0.18		0.000054	0.050	mg/L	1	12/31/13 17:07
Nickel	0.015	J	0.00025	0.020	mg/L	1	12/31/13 17:07
Selenium	U		0.00064	0.0050	mg/L	1	12/31/13 17:07
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 17:07
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 17:07
Vanadium	0.00049	J	0.00016	0.0040	mg/L	1	12/31/13 17:07
Zinc	0.0042	J	0.00048	0.050	mg/L	1	12/31/13 17:07

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 12/16/13

Analyst: HL

BatchID: 54173

1,1'-Biphenyl	U		0.095	10	µg/L	1	12/17/13 09:48
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/17/13 09:48
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/17/13 09:48
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/17/13 09:48
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/17/13 09:48
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/17/13 09:48
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/17/13 09:48
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/17/13 09:48
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/17/13 09:48
2-Chlorophenol	U		0.32	10	µg/L	1	12/17/13 09:48
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/17/13 09:48
2-Methylphenol	U		0.20	10	µg/L	1	12/17/13 09:48
2-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 09:48
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/17/13 09:48
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/17/13 09:48
3-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 09:48
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/17/13 09:48
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 09:48
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/17/13 09:48
4-Chloroaniline	U		0.32	10	µg/L	1	12/17/13 09:48
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 09:48
4-Methylphenol	U		0.20	10	µg/L	1	12/17/13 09:48
4-Nitroaniline	U		0.30	25	µg/L	1	12/17/13 09:48
4-Nitrophenol	U		0.51	25	µg/L	1	12/17/13 09:48
Acenaphthene	U		0.11	5.0	µg/L	1	12/17/13 09:48
Acenaphthylene	U		0.12	5.0	µg/L	1	12/17/13 09:48
Acetophenone	U		0.090	5.0	µg/L	1	12/17/13 09:48
Anthracene	U		0.72	5.0	µg/L	1	12/17/13 09:48
Atrazine	U		0.13	5.0	µg/L	1	12/17/13 09:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-012
Collection Date: 12/11/13 01:05 PM

Work Order: 1312747
Lab ID: 1312747-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	12/17/13 09:48
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/17/13 09:48
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/17/13 09:48
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/17/13 09:48
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/17/13 09:48
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/17/13 09:48
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/17/13 09:48
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/17/13 09:48
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/17/13 09:48
Bis(2-ethylhexyl)phthalate	0.46	J	0.15	5.0	µg/L	1	12/17/13 09:48
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/17/13 09:48
Caprolactam	U		4.7	10	µg/L	1	12/17/13 09:48
Carbazole	U		0.16	10	µg/L	1	12/17/13 09:48
Chrysene	U		0.71	1.0	µg/L	1	12/17/13 09:48
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/17/13 09:48
Dibenzofuran	U		0.28	4.0	µg/L	1	12/17/13 09:48
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/17/13 09:48
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/17/13 09:48
Di-n-butyl phthalate	0.18	J	0.14	5.0	µg/L	1	12/17/13 09:48
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/17/13 09:48
Fluoranthene	U		0.77	1.0	µg/L	1	12/17/13 09:48
Fluorene	U		0.10	5.0	µg/L	1	12/17/13 09:48
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/17/13 09:48
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/17/13 09:48
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/17/13 09:48
Hexachloroethane	U		0.47	5.0	µg/L	1	12/17/13 09:48
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/17/13 09:48
Isophorone	U		0.30	5.0	µg/L	1	12/17/13 09:48
Naphthalene	U		0.12	5.0	µg/L	1	12/17/13 09:48
Nitrobenzene	U		0.33	3.0	µg/L	1	12/17/13 09:48
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/17/13 09:48
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/17/13 09:48
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/17/13 09:48
Phenanthrene	U		0.86	2.0	µg/L	1	12/17/13 09:48
Phenol	U		0.32	5.0	µg/L	1	12/17/13 09:48
Pyrene	U		0.65	5.0	µg/L	1	12/17/13 09:48
Surr: 2,4,6-Tribromophenol	65.1			32-115	%REC	1	12/17/13 09:48
Surr: 2-Fluorobiphenyl	69.9			32-100	%REC	1	12/17/13 09:48
Surr: 2-Fluorophenol	43.3			22-59	%REC	1	12/17/13 09:48
Surr: 4-Terphenyl-d14	77.1			23-112	%REC	1	12/17/13 09:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-012
Collection Date: 12/11/13 01:05 PM

Work Order: 1312747
Lab ID: 1312747-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	67.3			31-93	%REC	1	12/17/13 09:48
Surr: Phenol-d6	27.0			13-36	%REC	1	12/17/13 09:48
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 02:23
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 02:23
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 02:23
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 02:23
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 02:23
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 02:23
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 02:23
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 02:23
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 02:23
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 02:23
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 02:23
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 02:23
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 02:23
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 02:23
2-Butanone	U		0.64	25	µg/L	1	12/21/13 02:23
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 02:23
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 02:23
Acetone	3.6	J	3.0	50	µg/L	1	12/21/13 02:23
Benzene	U		0.14	1.0	µg/L	1	12/21/13 02:23
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 02:23
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 02:23
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 02:23
Carbon disulfide	0.47	J	0.26	5.0	µg/L	1	12/21/13 02:23
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 02:23
Chlorobenzene	U		0.12	1.0	µg/L	1	12/21/13 02:23
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 02:23
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 02:23
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 02:23
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 02:23
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 02:23
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 02:23
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 02:23
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 02:23
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 02:23
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/21/13 02:23

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-012
Collection Date: 12/11/13 01:05 PM

Work Order: 1312747
Lab ID: 1312747-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 02:23
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 02:23
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 02:23
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 02:23
Styrene	U		0.12	1.0	µg/L	1	12/21/13 02:23
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 02:23
Toluene	U		0.13	1.0	µg/L	1	12/21/13 02:23
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 02:23
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 02:23
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 02:23
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 02:23
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 02:23
Xylenes, Total	U		0.30	3.0	µg/L	1	12/21/13 02:23
Surr: 1,2-Dichloroethane-d4	104			70-120	%REC	1	12/21/13 02:23
Surr: 4-Bromofluorobenzene	97.6			75-120	%REC	1	12/21/13 02:23
Surr: Dibromofluoromethane	99.6			85-115	%REC	1	12/21/13 02:23
Surr: Toluene-d8	98.2			85-120	%REC	1	12/21/13 02:23
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/18/13		Analyst: JB
BatchID: 54275							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	12/18/13 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-013
Collection Date: 12/11/13 04:13 PM

Work Order: 1312747
Lab ID: 1312747-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54266							
Mercury	U		0.00010	0.00020	mg/L	1	12/18/13 18:38
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 16:20
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Aluminum	0.0070	J	0.00078	0.050	mg/L	1	12/22/13 15:41
Antimony	U		0.000036	0.0020	mg/L	1	12/22/13 15:41
Arsenic	U		0.00058	0.0050	mg/L	1	12/22/13 15:41
Barium	0.000085	J	0.000063	0.10	mg/L	1	12/22/13 15:41
Beryllium	U		0.000082	0.0010	mg/L	1	12/22/13 15:41
Cadmium	U		0.000045	0.0010	mg/L	1	12/22/13 15:41
Chromium	U		0.00027	0.010	mg/L	1	12/22/13 15:41
Cobalt	U		0.000041	0.020	mg/L	1	12/22/13 15:41
Copper	0.00072	J	0.00053	0.0040	mg/L	1	12/22/13 15:41
Iron	0.012	J	0.0053	0.20	mg/L	1	12/22/13 15:41
Lead	U		0.000051	0.0030	mg/L	1	12/22/13 15:41
Manganese	0.00013	J	0.000054	0.050	mg/L	1	12/22/13 15:41
Nickel	U		0.00025	0.020	mg/L	1	12/22/13 15:41
Selenium	U		0.00064	0.0050	mg/L	1	12/22/13 15:41
Silver	U		0.000042	0.00020	mg/L	1	12/22/13 15:41
Thallium	U		0.000062	0.0020	mg/L	1	12/22/13 15:41
Vanadium	0.00030	J	0.00016	0.0040	mg/L	1	12/22/13 15:41
Zinc	0.0022	J	0.00048	0.050	mg/L	1	12/22/13 15:41
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.0027	J	0.00078	0.050	mg/L	1	01/02/14 18:35
Antimony	U		0.000036	0.0020	mg/L	1	12/31/13 17:12
Arsenic	U		0.00058	0.0050	mg/L	1	12/31/13 17:12
Barium	0.00011	J	0.000063	0.10	mg/L	1	12/31/13 17:12
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 17:12
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 17:12
Chromium	U		0.00027	0.010	mg/L	1	12/31/13 17:12
Cobalt	0.00014	J	0.000041	0.020	mg/L	1	12/31/13 17:12
Copper	U		0.00053	0.0040	mg/L	1	12/31/13 17:12
Iron	0.010	J	0.0053	0.20	mg/L	1	12/31/13 17:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-013
Collection Date: 12/11/13 04:13 PM

Work Order: 1312747
Lab ID: 1312747-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	12/31/13 17:12
Manganese	0.00031	J	0.000054	0.050	mg/L	1	12/31/13 17:12
Nickel	U		0.00025	0.020	mg/L	1	12/31/13 17:12
Selenium	U		0.00064	0.0050	mg/L	1	12/31/13 17:12
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 17:12
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 17:12
Vanadium	U		0.00016	0.0040	mg/L	1	12/31/13 17:12
Zinc	0.0017	J	0.00048	0.050	mg/L	1	12/31/13 17:12

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 12/16/13

Analyst: HL

BatchID: 54173

1,1'-Biphenyl	U		0.095	10	µg/L	1	12/17/13 10:19
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/17/13 10:19
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/17/13 10:19
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/17/13 10:19
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/17/13 10:19
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/17/13 10:19
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/17/13 10:19
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/17/13 10:19
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/17/13 10:19
2-Chlorophenol	U		0.32	10	µg/L	1	12/17/13 10:19
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/17/13 10:19
2-Methylphenol	U		0.20	10	µg/L	1	12/17/13 10:19
2-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 10:19
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/17/13 10:19
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/17/13 10:19
3-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 10:19
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/17/13 10:19
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 10:19
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/17/13 10:19
4-Chloroaniline	U		0.32	10	µg/L	1	12/17/13 10:19
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 10:19
4-Methylphenol	U		0.20	10	µg/L	1	12/17/13 10:19
4-Nitroaniline	U		0.30	25	µg/L	1	12/17/13 10:19
4-Nitrophenol	U		0.51	25	µg/L	1	12/17/13 10:19
Acenaphthene	U		0.11	5.0	µg/L	1	12/17/13 10:19
Acenaphthylene	U		0.12	5.0	µg/L	1	12/17/13 10:19
Acetophenone	U		0.090	5.0	µg/L	1	12/17/13 10:19
Anthracene	U		0.72	5.0	µg/L	1	12/17/13 10:19
Atrazine	U		0.13	5.0	µg/L	1	12/17/13 10:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-013
Collection Date: 12/11/13 04:13 PM

Work Order: 1312747
Lab ID: 1312747-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	12/17/13 10:19
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/17/13 10:19
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/17/13 10:19
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/17/13 10:19
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/17/13 10:19
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/17/13 10:19
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/17/13 10:19
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/17/13 10:19
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/17/13 10:19
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/17/13 10:19
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/17/13 10:19
Caprolactam	U		4.7	10	µg/L	1	12/17/13 10:19
Carbazole	U		0.16	10	µg/L	1	12/17/13 10:19
Chrysene	U		0.71	1.0	µg/L	1	12/17/13 10:19
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/17/13 10:19
Dibenzofuran	U		0.28	4.0	µg/L	1	12/17/13 10:19
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/17/13 10:19
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/17/13 10:19
Di-n-butyl phthalate	0.16	J	0.14	5.0	µg/L	1	12/17/13 10:19
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/17/13 10:19
Fluoranthene	U		0.77	1.0	µg/L	1	12/17/13 10:19
Fluorene	U		0.10	5.0	µg/L	1	12/17/13 10:19
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/17/13 10:19
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/17/13 10:19
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/17/13 10:19
Hexachloroethane	U		0.47	5.0	µg/L	1	12/17/13 10:19
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/17/13 10:19
Isophorone	U		0.30	5.0	µg/L	1	12/17/13 10:19
Naphthalene	U		0.12	5.0	µg/L	1	12/17/13 10:19
Nitrobenzene	U		0.33	3.0	µg/L	1	12/17/13 10:19
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/17/13 10:19
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/17/13 10:19
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/17/13 10:19
Phenanthrene	U		0.86	2.0	µg/L	1	12/17/13 10:19
Phenol	U		0.32	5.0	µg/L	1	12/17/13 10:19
Pyrene	U		0.65	5.0	µg/L	1	12/17/13 10:19
Surr: 2,4,6-Tribromophenol	66.9			32-115	%REC	1	12/17/13 10:19
Surr: 2-Fluorobiphenyl	70.6			32-100	%REC	1	12/17/13 10:19
Surr: 2-Fluorophenol	40.2			22-59	%REC	1	12/17/13 10:19
Surr: 4-Terphenyl-d14	84.9			23-112	%REC	1	12/17/13 10:19

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-013
Collection Date: 12/11/13 04:13 PM

Work Order: 1312747
Lab ID: 1312747-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	69.3			31-93	%REC	1	12/17/13 10:19
Surr: Phenol-d6	23.5			13-36	%REC	1	12/17/13 10:19
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 02:49
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 02:49
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 02:49
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 02:49
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 02:49
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 02:49
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 02:49
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 02:49
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 02:49
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 02:49
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 02:49
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 02:49
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 02:49
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 02:49
2-Butanone	U		0.64	25	µg/L	1	12/21/13 02:49
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 02:49
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 02:49
Acetone	U		3.0	50	µg/L	1	12/21/13 02:49
Benzene	U		0.14	1.0	µg/L	1	12/21/13 02:49
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 02:49
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 02:49
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 02:49
Carbon disulfide	U		0.26	5.0	µg/L	1	12/21/13 02:49
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 02:49
Chlorobenzene	U		0.12	1.0	µg/L	1	12/21/13 02:49
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 02:49
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 02:49
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 02:49
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 02:49
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 02:49
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 02:49
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 02:49
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 02:49
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 02:49
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/21/13 02:49

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121113-AJL-013
Collection Date: 12/11/13 04:13 PM

Work Order: 1312747
Lab ID: 1312747-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 02:49
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 02:49
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 02:49
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 02:49
Styrene	U		0.12	1.0	µg/L	1	12/21/13 02:49
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 02:49
Toluene	U		0.13	1.0	µg/L	1	12/21/13 02:49
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 02:49
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 02:49
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 02:49
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 02:49
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 02:49
Xylenes, Total	U		0.30	3.0	µg/L	1	12/21/13 02:49
Surr: 1,2-Dichloroethane-d4	106			70-120	%REC	1	12/21/13 02:49
Surr: 4-Bromofluorobenzene	98.4			75-120	%REC	1	12/21/13 02:49
Surr: Dibromofluoromethane	100			85-115	%REC	1	12/21/13 02:49
Surr: Toluene-d8	99.9			85-120	%REC	1	12/21/13 02:49
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/18/13		Analyst: JB
BatchID: 54275							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	12/18/13 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-014
Collection Date: 12/12/13 08:56 AM

Work Order: 1312747
Lab ID: 1312747-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54266							
Mercury	0.00013	J	0.00010	0.00020	mg/L	1	12/18/13 18:43
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 16:22
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Aluminum	7.6		0.0078	0.50	mg/L	10	12/22/13 15:47
Antimony	0.0041	J	0.00036	0.020	mg/L	10	12/22/13 15:47
Arsenic	0.010	J	0.0058	0.050	mg/L	10	12/22/13 15:47
Barium	2.1		0.00063	1.0	mg/L	10	12/22/13 15:47
Beryllium	U		0.00082	0.010	mg/L	10	12/22/13 15:47
Cadmium	0.0028	J	0.00045	0.010	mg/L	10	12/22/13 15:47
Chromium	0.071	J	0.0027	0.10	mg/L	10	12/22/13 15:47
Cobalt	0.012	J	0.00041	0.20	mg/L	10	12/22/13 15:47
Copper	0.090		0.0053	0.040	mg/L	10	12/22/13 15:47
Iron	51		0.053	2.0	mg/L	10	12/22/13 15:47
Lead	0.33		0.00051	0.030	mg/L	10	12/22/13 15:47
Manganese	0.98		0.00054	0.50	mg/L	10	12/22/13 15:47
Nickel	0.051	J	0.0025	0.20	mg/L	10	12/22/13 15:47
Selenium	U		0.0064	0.050	mg/L	10	12/22/13 15:47
Silver	U		0.00042	0.0020	mg/L	10	12/22/13 15:47
Thallium	U		0.00062	0.020	mg/L	10	12/22/13 15:47
Vanadium	0.024	J	0.0016	0.040	mg/L	10	12/22/13 15:47
Zinc	0.47	J	0.0048	0.50	mg/L	10	12/22/13 15:47
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.025	J	0.0078	0.50	mg/L	10	01/02/14 18:41
Antimony	0.00083	J	0.00036	0.020	mg/L	10	01/02/14 18:41
Arsenic	U		0.0058	0.050	mg/L	10	01/02/14 18:41
Barium	1.7		0.00063	1.0	mg/L	10	01/02/14 18:41
Beryllium	U		0.00082	0.010	mg/L	10	01/02/14 18:41
Cadmium	U		0.00045	0.010	mg/L	10	01/02/14 18:41
Chromium	0.0031	J	0.0027	0.10	mg/L	10	01/02/14 18:41
Cobalt	0.0052	J	0.00041	0.20	mg/L	10	01/02/14 18:41
Copper	0.0062	J	0.0053	0.040	mg/L	10	01/02/14 18:41
Iron	22		0.053	2.0	mg/L	10	01/02/14 18:41

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-014
Collection Date: 12/12/13 08:56 AM

Work Order: 1312747
Lab ID: 1312747-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.00051	0.030	mg/L	10	01/02/14 18:41
Manganese	0.58		0.00054	0.50	mg/L	10	01/02/14 18:41
Nickel	0.012	J	0.0025	0.20	mg/L	10	01/02/14 18:41
Selenium	U		0.0064	0.050	mg/L	10	01/02/14 18:41
Silver	U		0.00042	0.0020	mg/L	10	01/02/14 18:41
Thallium	U		0.00062	0.020	mg/L	10	01/02/14 18:41
Vanadium	0.0017	J	0.0016	0.040	mg/L	10	01/02/14 18:41
Zinc	0.018	J	0.0048	0.50	mg/L	10	01/02/14 18:41
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 12/16/13	Analyst: HL
<u>BatchID: 54173</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/17/13 10:51
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/17/13 10:51
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/17/13 10:51
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/17/13 10:51
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/17/13 10:51
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/17/13 10:51
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/17/13 10:51
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/17/13 10:51
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/17/13 10:51
2-Chlorophenol	0.67	J	0.32	10	µg/L	1	12/17/13 10:51
2-Methylnaphthalene	1.6	J	0.13	5.0	µg/L	1	12/17/13 10:51
2-Methylphenol	0.46	J	0.20	10	µg/L	1	12/17/13 10:51
2-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 10:51
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/17/13 10:51
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/17/13 10:51
3-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 10:51
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/17/13 10:51
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 10:51
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/17/13 10:51
4-Chloroaniline	U		0.32	10	µg/L	1	12/17/13 10:51
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 10:51
4-Methylphenol	2.0	J	0.20	10	µg/L	1	12/17/13 10:51
4-Nitroaniline	U		0.30	25	µg/L	1	12/17/13 10:51
4-Nitrophenol	U		0.51	25	µg/L	1	12/17/13 10:51
Acenaphthene	0.60	J	0.11	5.0	µg/L	1	12/17/13 10:51
Acenaphthylene	U		0.12	5.0	µg/L	1	12/17/13 10:51
Acetophenone	1.0	J	0.090	5.0	µg/L	1	12/17/13 10:51
Anthracene	U		0.72	5.0	µg/L	1	12/17/13 10:51
Atrazine	U		0.13	5.0	µg/L	1	12/17/13 10:51

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-014
Collection Date: 12/12/13 08:56 AM

Work Order: 1312747
Lab ID: 1312747-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	1.2	J	0.46	10	µg/L	1	12/17/13 10:51
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/17/13 10:51
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/17/13 10:51
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/17/13 10:51
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/17/13 10:51
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/17/13 10:51
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/17/13 10:51
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/17/13 10:51
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/17/13 10:51
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/17/13 10:51
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/17/13 10:51
Caprolactam	U		4.7	10	µg/L	1	12/17/13 10:51
Carbazole	U		0.16	10	µg/L	1	12/17/13 10:51
Chrysene	U		0.71	1.0	µg/L	1	12/17/13 10:51
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/17/13 10:51
Dibenzofuran	U		0.28	4.0	µg/L	1	12/17/13 10:51
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/17/13 10:51
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/17/13 10:51
Di-n-butyl phthalate	0.26	J	0.14	5.0	µg/L	1	12/17/13 10:51
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/17/13 10:51
Fluoranthene	U		0.77	1.0	µg/L	1	12/17/13 10:51
Fluorene	0.57	J	0.10	5.0	µg/L	1	12/17/13 10:51
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/17/13 10:51
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/17/13 10:51
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/17/13 10:51
Hexachloroethane	U		0.47	5.0	µg/L	1	12/17/13 10:51
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/17/13 10:51
Isophorone	U		0.30	5.0	µg/L	1	12/17/13 10:51
Naphthalene	1.3	J	0.12	5.0	µg/L	1	12/17/13 10:51
Nitrobenzene	U		0.33	3.0	µg/L	1	12/17/13 10:51
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/17/13 10:51
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/17/13 10:51
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/17/13 10:51
Phenanthrene	U		0.86	2.0	µg/L	1	12/17/13 10:51
Phenol	0.36	J	0.32	5.0	µg/L	1	12/17/13 10:51
Pyrene	U		0.65	5.0	µg/L	1	12/17/13 10:51
Surr: 2,4,6-Tribromophenol	85.8			32-115	%REC	1	12/17/13 10:51
Surr: 2-Fluorobiphenyl	78.5			32-100	%REC	1	12/17/13 10:51
Surr: 2-Fluorophenol	51.4			22-59	%REC	1	12/17/13 10:51
Surr: 4-Terphenyl-d14	75.6			23-112	%REC	1	12/17/13 10:51

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-014
Collection Date: 12/12/13 08:56 AM

Work Order: 1312747
Lab ID: 1312747-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	75.7			31-93	%REC	1	12/17/13 10:51
Surr: Phenol-d6	35.5			13-36	%REC	1	12/17/13 10:51
VOLATILE ORGANIC COMPOUNDS			SW8260	Analyst: BG			
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 03:14
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 03:14
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 03:14
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 03:14
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 03:14
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 03:14
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 03:14
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 03:14
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 03:14
1,2-Dichlorobenzene	1.3		0.17	1.0	µg/L	1	12/21/13 03:14
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 03:14
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 03:14
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 03:14
1,4-Dichlorobenzene	2.6		0.15	1.0	µg/L	1	12/21/13 03:14
2-Butanone	U		0.64	25	µg/L	1	12/21/13 03:14
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 03:14
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 03:14
Acetone	4.7	J	3.0	50	µg/L	1	12/21/13 03:14
Benzene	12		0.14	1.0	µg/L	1	12/21/13 03:14
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 03:14
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 03:14
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 03:14
Carbon disulfide	U		0.26	5.0	µg/L	1	12/21/13 03:14
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 03:14
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 03:14
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 03:14
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 03:14
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 03:14
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 03:14
Cyclohexane	0.84	J	0.20	1.0	µg/L	1	12/21/13 03:14
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 03:14
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 03:14
Ethylbenzene	14		0.12	1.0	µg/L	1	12/21/13 03:14
Isopropylbenzene	6.0		0.11	5.0	µg/L	1	12/21/13 03:14
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 03:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-014
Collection Date: 12/12/13 08:56 AM

Work Order: 1312747
Lab ID: 1312747-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 03:14
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 03:14
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 03:14
Styrene	U		0.12	1.0	µg/L	1	12/21/13 03:14
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 03:14
Toluene	39		0.13	1.0	µg/L	1	12/21/13 03:14
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 03:14
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 03:14
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 03:14
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 03:14
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 03:14
Xylenes, Total	74		0.30	3.0	µg/L	1	12/21/13 03:14
Surr: 1,2-Dichloroethane-d4	102			70-120	%REC	1	12/21/13 03:14
Surr: 4-Bromofluorobenzene	101			75-120	%REC	1	12/21/13 03:14
Surr: Dibromofluoromethane	98.0			85-115	%REC	1	12/21/13 03:14
Surr: Toluene-d8	99.0			85-120	%REC	1	12/21/13 03:14
<u>BatchID: R132945</u>							
Chlorobenzene	110		0.60	5.0	µg/L	5	12/21/13 17:50
Surr: 1,2-Dichloroethane-d4	102			70-120	%REC	5	12/21/13 17:50
Surr: 4-Bromofluorobenzene	96.2			75-120	%REC	5	12/21/13 17:50
Surr: Dibromofluoromethane	105			85-115	%REC	5	12/21/13 17:50
Surr: Toluene-d8	96.7			85-120	%REC	5	12/21/13 17:50
<u>BatchID: 54275</u>							
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/18/13	Analyst: JB
Cyanide, Amenable	0.0042	J	0.0010	0.0050	mg/L	1	12/18/13 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-015
Collection Date: 12/12/13 09:45 AM

Work Order: 1312747
Lab ID: 1312747-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470				
BatchID: <u>54609</u>							
Mercury	U		0.00010	0.00020	mg/L	1	12/31/13 19:02
MERCURY BY CVAA (DISSOLVED)							
			SW7470				
BatchID: <u>54583</u>							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 16:25
METALS BY ICP-MS							
			SW6020A				
BatchID: <u>54396</u>							
Aluminum	1.6		0.0078	0.50	mg/L	10	12/22/13 15:53
Antimony	0.0017	J	0.00036	0.020	mg/L	10	12/22/13 15:53
Arsenic	U		0.0058	0.050	mg/L	10	12/22/13 15:53
Barium	1.6		0.00063	1.0	mg/L	10	12/22/13 15:53
Beryllium	U		0.00082	0.010	mg/L	10	12/22/13 15:53
Cadmium	0.0024	J	0.00045	0.010	mg/L	10	12/22/13 15:53
Chromium	0.012	J	0.0027	0.10	mg/L	10	12/22/13 15:53
Cobalt	0.0062	J	0.00041	0.20	mg/L	10	12/22/13 15:53
Copper	0.031	J	0.0053	0.040	mg/L	10	12/22/13 15:53
Iron	30		0.053	2.0	mg/L	10	12/22/13 15:53
Lead	0.12		0.00051	0.030	mg/L	10	12/22/13 15:53
Manganese	0.29	J	0.00054	0.50	mg/L	10	12/22/13 15:53
Nickel	0.031	J	0.0025	0.20	mg/L	10	12/22/13 15:53
Selenium	U		0.0064	0.050	mg/L	10	12/22/13 15:53
Silver	U		0.00042	0.0020	mg/L	10	12/22/13 15:53
Thallium	U		0.00062	0.020	mg/L	10	12/22/13 15:53
Vanadium	0.0024	J	0.0016	0.040	mg/L	10	12/22/13 15:53
Zinc	0.21	J	0.0048	0.50	mg/L	10	12/22/13 15:53
METALS BY ICP-MS (DISSOLVED)							
			SW6020A				
BatchID: <u>54568</u>							
Aluminum	0.021	J	0.0078	0.50	mg/L	10	01/02/14 18:46
Antimony	0.00053	J	0.00036	0.020	mg/L	10	01/02/14 18:46
Arsenic	U		0.0058	0.050	mg/L	10	01/02/14 18:46
Barium	1.5		0.00063	1.0	mg/L	10	01/02/14 18:46
Beryllium	U		0.00082	0.010	mg/L	10	01/02/14 18:46
Cadmium	U		0.00045	0.010	mg/L	10	01/02/14 18:46
Chromium	0.0047	J	0.0027	0.10	mg/L	10	01/02/14 18:46
Cobalt	0.0054	J	0.00041	0.20	mg/L	10	01/02/14 18:46
Copper	U		0.0053	0.040	mg/L	10	01/02/14 18:46
Iron	26		0.053	2.0	mg/L	10	01/02/14 18:46

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-015
Collection Date: 12/12/13 09:45 AM

Work Order: 1312747
Lab ID: 1312747-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.00051	0.030	mg/L	10	01/02/14 18:46
Manganese	0.27	J	0.00054	0.50	mg/L	10	01/02/14 18:46
Nickel	0.019	J	0.0025	0.20	mg/L	10	01/02/14 18:46
Selenium	U		0.0064	0.050	mg/L	10	01/02/14 18:46
Silver	U		0.00042	0.0020	mg/L	10	01/02/14 18:46
Thallium	U		0.00062	0.020	mg/L	10	01/02/14 18:46
Vanadium	0.0024	J	0.0016	0.040	mg/L	10	01/02/14 18:46
Zinc	0.016	J	0.0048	0.50	mg/L	10	01/02/14 18:46
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 12/16/13		Analyst: HL	
BatchID: 54173							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/17/13 11:22
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/17/13 11:22
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/17/13 11:22
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/17/13 11:22
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/17/13 11:22
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/17/13 11:22
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/17/13 11:22
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/17/13 11:22
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/17/13 11:22
2-Chlorophenol	U		0.32	10	µg/L	1	12/17/13 11:22
2-Methylnaphthalene	1.2	J	0.13	5.0	µg/L	1	12/17/13 11:22
2-Methylphenol	U		0.20	10	µg/L	1	12/17/13 11:22
2-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 11:22
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/17/13 11:22
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/17/13 11:22
3-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 11:22
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/17/13 11:22
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 11:22
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/17/13 11:22
4-Chloroaniline	U		0.32	10	µg/L	1	12/17/13 11:22
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 11:22
4-Methylphenol	U		0.20	10	µg/L	1	12/17/13 11:22
4-Nitroaniline	U		0.30	25	µg/L	1	12/17/13 11:22
4-Nitrophenol	U		0.51	25	µg/L	1	12/17/13 11:22
Acenaphthene	U		0.11	5.0	µg/L	1	12/17/13 11:22
Acenaphthylene	U		0.12	5.0	µg/L	1	12/17/13 11:22
Acetophenone	U		0.090	5.0	µg/L	1	12/17/13 11:22
Anthracene	U		0.72	5.0	µg/L	1	12/17/13 11:22
Atrazine	U		0.13	5.0	µg/L	1	12/17/13 11:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-015
Collection Date: 12/12/13 09:45 AM

Work Order: 1312747
Lab ID: 1312747-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	0.85	J	0.46	10	µg/L	1	12/17/13 11:22
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/17/13 11:22
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/17/13 11:22
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/17/13 11:22
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/17/13 11:22
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/17/13 11:22
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/17/13 11:22
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/17/13 11:22
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/17/13 11:22
Bis(2-ethylhexyl)phthalate	0.46	J	0.15	5.0	µg/L	1	12/17/13 11:22
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/17/13 11:22
Caprolactam	U		4.7	10	µg/L	1	12/17/13 11:22
Carbazole	U		0.16	10	µg/L	1	12/17/13 11:22
Chrysene	U		0.71	1.0	µg/L	1	12/17/13 11:22
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/17/13 11:22
Dibenzofuran	U		0.28	4.0	µg/L	1	12/17/13 11:22
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/17/13 11:22
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/17/13 11:22
Di-n-butyl phthalate	0.37	J	0.14	5.0	µg/L	1	12/17/13 11:22
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/17/13 11:22
Fluoranthene	U		0.77	1.0	µg/L	1	12/17/13 11:22
Fluorene	0.17	J	0.10	5.0	µg/L	1	12/17/13 11:22
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/17/13 11:22
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/17/13 11:22
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/17/13 11:22
Hexachloroethane	U		0.47	5.0	µg/L	1	12/17/13 11:22
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/17/13 11:22
Isophorone	U		0.30	5.0	µg/L	1	12/17/13 11:22
Naphthalene	1.0	J	0.12	5.0	µg/L	1	12/17/13 11:22
Nitrobenzene	U		0.33	3.0	µg/L	1	12/17/13 11:22
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/17/13 11:22
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/17/13 11:22
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/17/13 11:22
Phenanthrene	U		0.86	2.0	µg/L	1	12/17/13 11:22
Phenol	U		0.32	5.0	µg/L	1	12/17/13 11:22
Pyrene	U		0.65	5.0	µg/L	1	12/17/13 11:22
Surr: 2,4,6-Tribromophenol	85.5			32-115	%REC	1	12/17/13 11:22
Surr: 2-Fluorobiphenyl	74.7			32-100	%REC	1	12/17/13 11:22
Surr: 2-Fluorophenol	48.3			22-59	%REC	1	12/17/13 11:22
Surr: 4-Terphenyl-d14	74.1			23-112	%REC	1	12/17/13 11:22

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-015
Collection Date: 12/12/13 09:45 AM

Work Order: 1312747
Lab ID: 1312747-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	71.6			31-93	%REC	1	12/17/13 11:22
Surr: Phenol-d6	31.2			13-36	%REC	1	12/17/13 11:22
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 03:39
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 03:39
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 03:39
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 03:39
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 03:39
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 03:39
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 03:39
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 03:39
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 03:39
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 03:39
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 03:39
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 03:39
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 03:39
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 03:39
2-Butanone	U		0.64	25	µg/L	1	12/21/13 03:39
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 03:39
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 03:39
Acetone	U		3.0	50	µg/L	1	12/21/13 03:39
Benzene	1.1		0.14	1.0	µg/L	1	12/21/13 03:39
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 03:39
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 03:39
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 03:39
Carbon disulfide	U		0.26	5.0	µg/L	1	12/21/13 03:39
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 03:39
Chlorobenzene	1.4		0.12	1.0	µg/L	1	12/21/13 03:39
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 03:39
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 03:39
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 03:39
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 03:39
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 03:39
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 03:39
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 03:39
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 03:39
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 03:39
Isopropylbenzene	1.3	J	0.11	5.0	µg/L	1	12/21/13 03:39

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-015
Collection Date: 12/12/13 09:45 AM

Work Order: 1312747
Lab ID: 1312747-18
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 03:39
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 03:39
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 03:39
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 03:39
Styrene	U		0.12	1.0	µg/L	1	12/21/13 03:39
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 03:39
Toluene	0.27	J	0.13	1.0	µg/L	1	12/21/13 03:39
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 03:39
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 03:39
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 03:39
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 03:39
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 03:39
Xylenes, Total	1.0	J	0.30	3.0	µg/L	1	12/21/13 03:39
Surr: 1,2-Dichloroethane-d4	103			70-120	%REC	1	12/21/13 03:39
Surr: 4-Bromofluorobenzene	99.1			75-120	%REC	1	12/21/13 03:39
Surr: Dibromofluoromethane	98.9			85-115	%REC	1	12/21/13 03:39
Surr: Toluene-d8	99.2			85-120	%REC	1	12/21/13 03:39
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/18/13	Analyst: JB
BatchID: 54275							
Cyanide, Amenable	0.0037	J	0.0010	0.0050	mg/L	1	12/18/13 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121213-AJL-015
Collection Date: 12/12/13 10:30 AM

Work Order: 1312747
Lab ID: 1312747-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270		Prep: SW3541 / 12/19/13	Analyst: HL	
<u>BatchID: 54309</u>							
1,1'-Biphenyl	67	J	58	3,900	µg/Kg-dry	10	12/20/13 21:14
2,4,5-Trichlorophenol	U		98	1,900	µg/Kg-dry	10	12/20/13 21:14
2,4,6-Trichlorophenol	U		66	1,900	µg/Kg-dry	10	12/20/13 21:14
2,4-Dichlorophenol	U		110	1,900	µg/Kg-dry	10	12/20/13 21:14
2,4-Dimethylphenol	U		630	3,900	µg/Kg-dry	10	12/20/13 21:14
2,4-Dinitrophenol	U		350	7,800	µg/Kg-dry	10	12/20/13 21:14
2,4-Dinitrotoluene	U		130	1,900	µg/Kg-dry	10	12/20/13 21:14
2,6-Dinitrotoluene	U		200	1,900	µg/Kg-dry	10	12/20/13 21:14
2-Chloronaphthalene	U		18	940	µg/Kg-dry	10	12/20/13 21:14
2-Chlorophenol	U		120	1,900	µg/Kg-dry	10	12/20/13 21:14
2-Methylnaphthalene	110	J	32	940	µg/Kg-dry	10	12/20/13 21:14
2-Methylphenol	U		160	1,900	µg/Kg-dry	10	12/20/13 21:14
2-Nitroaniline	U		150	7,800	µg/Kg-dry	10	12/20/13 21:14
2-Nitrophenol	U		130	1,900	µg/Kg-dry	10	12/20/13 21:14
3,3'-Dichlorobenzidine	U		4,800	7,800	µg/Kg-dry	10	12/20/13 21:14
3-Nitroaniline	U		130	7,800	µg/Kg-dry	10	12/20/13 21:14
4,6-Dinitro-2-methylphenol	U		320	3,900	µg/Kg-dry	10	12/20/13 21:14
4-Bromophenyl phenyl ether	U		110	1,900	µg/Kg-dry	10	12/20/13 21:14
4-Chloro-3-methylphenol	U		91	1,900	µg/Kg-dry	10	12/20/13 21:14
4-Chloroaniline	U		120	3,900	µg/Kg-dry	10	12/20/13 21:14
4-Chlorophenyl phenyl ether	U		110	1,900	µg/Kg-dry	10	12/20/13 21:14
4-Methylphenol	770	J	190	1,900	µg/Kg-dry	10	12/20/13 21:14
4-Nitroaniline	U		110	7,800	µg/Kg-dry	10	12/20/13 21:14
4-Nitrophenol	U		77	7,800	µg/Kg-dry	10	12/20/13 21:14
Acenaphthene	51	J	12	350	µg/Kg-dry	10	12/20/13 21:14
Acenaphthylene	U		14	350	µg/Kg-dry	10	12/20/13 21:14
Acetophenone	U		59	3,900	µg/Kg-dry	10	12/20/13 21:14
Anthracene	55	J	15	350	µg/Kg-dry	10	12/20/13 21:14
Atrazine	U		120	590	µg/Kg-dry	10	12/20/13 21:14
Benzaldehyde	U		150	3,900	µg/Kg-dry	10	12/20/13 21:14
Benzo(a)anthracene	U		15	350	µg/Kg-dry	10	12/20/13 21:14
Benzo(a)pyrene	82	J	25	350	µg/Kg-dry	10	12/20/13 21:14
Benzo(b)fluoranthene	120	J	23	350	µg/Kg-dry	10	12/20/13 21:14
Benzo(g,h,i)perylene	74	J	31	350	µg/Kg-dry	10	12/20/13 21:14
Benzo(k)fluoranthene	70	J	17	350	µg/Kg-dry	10	12/20/13 21:14
Bis(2-chloroethoxy)methane	U		120	1,900	µg/Kg-dry	10	12/20/13 21:14
Bis(2-chloroethyl)ether	U		120	1,900	µg/Kg-dry	10	12/20/13 21:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121213-AJL-015
Collection Date: 12/12/13 10:30 AM

Work Order: 1312747
Lab ID: 1312747-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroisopropyl)ether	U		160	1,900	µg/Kg-dry	10	12/20/13 21:14
Bis(2-ethylhexyl)phthalate	5,600		130	3,900	µg/Kg-dry	10	12/20/13 21:14
Butyl benzyl phthalate	170	J	150	1,900	µg/Kg-dry	10	12/20/13 21:14
Caprolactam	U		170	3,900	µg/Kg-dry	10	12/20/13 21:14
Carbazole	U		120	1,900	µg/Kg-dry	10	12/20/13 21:14
Chrysene	210	J	19	350	µg/Kg-dry	10	12/20/13 21:14
Dibenzo(a,h)anthracene	U		29	350	µg/Kg-dry	10	12/20/13 21:14
Dibenzofuran	U		120	1,900	µg/Kg-dry	10	12/20/13 21:14
Diethyl phthalate	U		120	3,900	µg/Kg-dry	10	12/20/13 21:14
Dimethyl phthalate	U		130	3,900	µg/Kg-dry	10	12/20/13 21:14
Di-n-butyl phthalate	82	J	57	3,900	µg/Kg-dry	10	12/20/13 21:14
Di-n-octyl phthalate	U		130	1,900	µg/Kg-dry	10	12/20/13 21:14
Fluoranthene	370		27	350	µg/Kg-dry	10	12/20/13 21:14
Fluorene	U		26	350	µg/Kg-dry	10	12/20/13 21:14
Hexachlorobenzene	U		110	1,900	µg/Kg-dry	10	12/20/13 21:14
Hexachlorobutadiene	U		130	590	µg/Kg-dry	10	12/20/13 21:14
Hexachlorocyclopentadiene	U		120	3,900	µg/Kg-dry	10	12/20/13 21:14
Hexachloroethane	U		180	1,900	µg/Kg-dry	10	12/20/13 21:14
Indeno(1,2,3-cd)pyrene	U		26	350	µg/Kg-dry	10	12/20/13 21:14
Isophorone	U		130	1,900	µg/Kg-dry	10	12/20/13 21:14
Naphthalene	950		29	350	µg/Kg-dry	10	12/20/13 21:14
Nitrobenzene	U		150	1,900	µg/Kg-dry	10	12/20/13 21:14
N-Nitrosodi-n-propylamine	U		150	1,900	µg/Kg-dry	10	12/20/13 21:14
N-Nitrosodiphenylamine	U		700	1,900	µg/Kg-dry	10	12/20/13 21:14
Pentachlorophenol	U		75	230	µg/Kg-dry	10	12/20/13 21:14
Phenanthrene	380		16	350	µg/Kg-dry	10	12/20/13 21:14
Phenol	870	J	130	1,900	µg/Kg-dry	10	12/20/13 21:14
Pyrene	360		26	350	µg/Kg-dry	10	12/20/13 21:14
Surr: 2,4,6-Tribromophenol	82.2			34-140	%REC	10	12/20/13 21:14
Surr: 2-Fluorobiphenyl	54.8			12-100	%REC	10	12/20/13 21:14
Surr: 2-Fluorophenol	40.2			33-117	%REC	10	12/20/13 21:14
Surr: 4-Terphenyl-d14	75.8			25-137	%REC	10	12/20/13 21:14
Surr: Nitrobenzene-d5	44.0			37-107	%REC	10	12/20/13 21:14
Surr: Phenol-d6	58.4			40-106	%REC	10	12/20/13 21:14
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/9/13	Analyst: BG	
BatchID: 54220							
1,1,1-Trichloroethane	U		19	50	µg/Kg-dry	1	12/21/13 07:02
1,1,2,2-Tetrachloroethane	U		22	50	µg/Kg-dry	1	12/21/13 07:02
1,1,2-Trichloroethane	U		18	50	µg/Kg-dry	1	12/21/13 07:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121213-AJL-015
Collection Date: 12/12/13 10:30 AM

Work Order: 1312747
Lab ID: 1312747-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2-Trichlorotrifluoroethane	U		18	50	µg/Kg-dry	1	12/21/13 07:02
1,1-Dichloroethane	U		18	50	µg/Kg-dry	1	12/21/13 07:02
1,1-Dichloroethene	U		21	50	µg/Kg-dry	1	12/21/13 07:02
1,2,4-Trichlorobenzene	U		26	50	µg/Kg-dry	1	12/21/13 07:02
1,2-Dibromo-3-chloropropane	U		24	50	µg/Kg-dry	1	12/21/13 07:02
1,2-Dibromoethane	U		20	50	µg/Kg-dry	1	12/21/13 07:02
1,2-Dichlorobenzene	U		20	50	µg/Kg-dry	1	12/21/13 07:02
1,2-Dichloroethane	U		24	50	µg/Kg-dry	1	12/21/13 07:02
1,2-Dichloropropane	U		17	50	µg/Kg-dry	1	12/21/13 07:02
1,3-Dichlorobenzene	U		20	50	µg/Kg-dry	1	12/21/13 07:02
1,4-Dichlorobenzene	U		19	50	µg/Kg-dry	1	12/21/13 07:02
2-Butanone	660		120	660	µg/Kg-dry	1	12/21/13 07:02
2-Hexanone	U		12	50	µg/Kg-dry	1	12/21/13 07:02
4-Methyl-2-pentanone	U		17	50	µg/Kg-dry	1	12/21/13 07:02
Acetone	270		110	270	µg/Kg-dry	1	12/21/13 07:02
Benzene	U		20	50	µg/Kg-dry	1	12/21/13 07:02
Bromodichloromethane	U		11	50	µg/Kg-dry	1	12/21/13 07:02
Bromoform	U		9.8	50	µg/Kg-dry	1	12/21/13 07:02
Bromomethane	U		19	120	µg/Kg-dry	1	12/21/13 07:02
Carbon disulfide	37	J	25	50	µg/Kg-dry	1	12/21/13 07:02
Carbon tetrachloride	U		14	50	µg/Kg-dry	1	12/21/13 07:02
Chlorobenzene	U		20	50	µg/Kg-dry	1	12/21/13 07:02
Chloroethane	U		110	170	µg/Kg-dry	1	12/21/13 07:02
Chloroform	U		21	50	µg/Kg-dry	1	12/21/13 07:02
Chloromethane	U		28	170	µg/Kg-dry	1	12/21/13 07:02
cis-1,2-Dichloroethene	1,100		20	50	µg/Kg-dry	1	12/21/13 07:02
cis-1,3-Dichloropropene	U		17	50	µg/Kg-dry	1	12/21/13 07:02
Cyclohexane	U		22	50	µg/Kg-dry	1	12/21/13 07:02
Dibromochloromethane	U		9.2	50	µg/Kg-dry	1	12/21/13 07:02
Dichlorodifluoromethane	U		22	50	µg/Kg-dry	1	12/21/13 07:02
Ethylbenzene	180		18	50	µg/Kg-dry	1	12/21/13 07:02
Isopropylbenzene	200		21	50	µg/Kg-dry	1	12/21/13 07:02
Methyl acetate	160	J	67	330	µg/Kg-dry	1	12/21/13 07:02
Methyl tert-butyl ether	U		21	50	µg/Kg-dry	1	12/21/13 07:02
Methylcyclohexane	U		23	50	µg/Kg-dry	1	12/21/13 07:02
Methylene chloride	U		20	50	µg/Kg-dry	1	12/21/13 07:02
Styrene	U		19	50	µg/Kg-dry	1	12/21/13 07:02
Tetrachloroethene	2,200		22	50	µg/Kg-dry	1	12/21/13 07:02
Toluene	96		19	50	µg/Kg-dry	1	12/21/13 07:02
trans-1,2-Dichloroethene	120		15	50	µg/Kg-dry	1	12/21/13 07:02

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121213-AJL-015
Collection Date: 12/12/13 10:30 AM

Work Order: 1312747
Lab ID: 1312747-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
trans-1,3-Dichloropropene	U		17	50	µg/Kg-dry	1	12/21/13 07:02
Trichloroethene	870		23	50	µg/Kg-dry	1	12/21/13 07:02
Trichlorofluoromethane	U		14	50	µg/Kg-dry	1	12/21/13 07:02
Vinyl chloride	U		22	50	µg/Kg-dry	1	12/21/13 07:02
Xylenes, Total	640		59	150	µg/Kg-dry	1	12/21/13 07:02
Surr: 1,2-Dichloroethane-d4	104			70-130	%REC	1	12/21/13 07:02
Surr: 4-Bromofluorobenzene	95.7			70-130	%REC	1	12/21/13 07:02
Surr: Dibromofluoromethane	97.9			70-130	%REC	1	12/21/13 07:02
Surr: Toluene-d8	98.4			70-130	%REC	1	12/21/13 07:02
MOISTURE			A2540 G				Analyst: MEB
BatchID: <u>R132738</u>							
Moisture	17		0.025	0.050	% of sample	1	12/18/13 16:40

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-016
Collection Date: 12/12/13 11:23 AM

Work Order: 1312747
Lab ID: 1312747-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54267							
Mercury	0.00015	J	0.00010	0.00020	mg/L	1	12/19/13 11:23
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury		U	0.00010	0.00020	mg/L	1	12/30/13 16:27
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Aluminum	7.3		0.0078	0.50	mg/L	10	12/22/13 15:58
Antimony	0.0031	J	0.00036	0.020	mg/L	10	12/22/13 15:58
Arsenic	0.0068	J	0.0058	0.050	mg/L	10	12/22/13 15:58
Barium	2.7		0.00063	1.0	mg/L	10	12/22/13 15:58
Beryllium	U		0.00082	0.010	mg/L	10	12/22/13 15:58
Cadmium	0.0024	J	0.00045	0.010	mg/L	10	12/22/13 15:58
Chromium	0.022	J	0.0027	0.10	mg/L	10	12/22/13 15:58
Cobalt	0.0072	J	0.00041	0.20	mg/L	10	12/22/13 15:58
Copper	0.058		0.0053	0.040	mg/L	10	12/22/13 15:58
Iron	41		0.053	2.0	mg/L	10	12/22/13 15:58
Lead	0.94		0.00051	0.030	mg/L	10	12/22/13 15:58
Manganese	0.38	J	0.00054	0.50	mg/L	10	12/22/13 15:58
Nickel	0.022	J	0.0025	0.20	mg/L	10	12/22/13 15:58
Selenium	U		0.0064	0.050	mg/L	10	12/22/13 15:58
Silver	U		0.00042	0.0020	mg/L	10	12/22/13 15:58
Thallium	U		0.00062	0.020	mg/L	10	12/22/13 15:58
Vanadium	0.019	J	0.0016	0.040	mg/L	10	12/22/13 15:58
Zinc	0.95		0.0048	0.50	mg/L	10	12/22/13 15:58
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.018	J	0.0078	0.50	mg/L	10	01/02/14 19:08
Antimony	0.00043	J	0.00036	0.020	mg/L	10	01/02/14 19:08
Arsenic	U		0.0058	0.050	mg/L	10	01/02/14 19:08
Barium	2.1		0.00063	1.0	mg/L	10	01/02/14 19:08
Beryllium	U		0.00082	0.010	mg/L	10	01/02/14 19:08
Cadmium	U		0.00045	0.010	mg/L	10	01/02/14 19:08
Chromium	U		0.0027	0.10	mg/L	10	01/02/14 19:08
Cobalt	0.0036	J	0.00041	0.20	mg/L	10	01/02/14 19:08
Copper	U		0.0053	0.040	mg/L	10	01/02/14 19:08
Iron	29		0.053	2.0	mg/L	10	01/02/14 19:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-016
Collection Date: 12/12/13 11:23 AM

Work Order: 1312747
Lab ID: 1312747-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.0011	J	0.00051	0.030	mg/L	10	01/02/14 19:08
Manganese	0.26	J	0.00054	0.50	mg/L	10	01/02/14 19:08
Nickel	0.0082	J	0.0025	0.20	mg/L	10	01/02/14 19:08
Selenium	U		0.0064	0.050	mg/L	10	01/02/14 19:08
Silver	U		0.00042	0.0020	mg/L	10	01/02/14 19:08
Thallium	U		0.00062	0.020	mg/L	10	01/02/14 19:08
Vanadium	U		0.0016	0.040	mg/L	10	01/02/14 19:08
Zinc	U		0.0048	0.50	mg/L	10	01/02/14 19:08
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 12/16/13	Analyst: HL
<u>BatchID: 54173</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/17/13 11:54
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/17/13 11:54
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/17/13 11:54
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/17/13 11:54
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/17/13 11:54
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/17/13 11:54
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/17/13 11:54
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/17/13 11:54
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/17/13 11:54
2-Chlorophenol	3.1	J	0.32	10	µg/L	1	12/17/13 11:54
2-Methylnaphthalene	2.9	J	0.13	5.0	µg/L	1	12/17/13 11:54
2-Methylphenol	U		0.20	10	µg/L	1	12/17/13 11:54
2-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 11:54
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/17/13 11:54
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/17/13 11:54
3-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 11:54
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/17/13 11:54
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 11:54
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/17/13 11:54
4-Chloroaniline	U		0.32	10	µg/L	1	12/17/13 11:54
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 11:54
4-Methylphenol	U		0.20	10	µg/L	1	12/17/13 11:54
4-Nitroaniline	U		0.30	25	µg/L	1	12/17/13 11:54
4-Nitrophenol	U		0.51	25	µg/L	1	12/17/13 11:54
Acenaphthene	1.2	J	0.11	5.0	µg/L	1	12/17/13 11:54
Acenaphthylene	U		0.12	5.0	µg/L	1	12/17/13 11:54
Acetophenone	U		0.090	5.0	µg/L	1	12/17/13 11:54
Anthracene	U		0.72	5.0	µg/L	1	12/17/13 11:54
Atrazine	U		0.13	5.0	µg/L	1	12/17/13 11:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-016
Collection Date: 12/12/13 11:23 AM

Work Order: 1312747
Lab ID: 1312747-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	0.92	J	0.46	10	µg/L	1	12/17/13 11:54
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/17/13 11:54
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/17/13 11:54
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/17/13 11:54
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/17/13 11:54
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/17/13 11:54
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/17/13 11:54
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/17/13 11:54
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/17/13 11:54
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/17/13 11:54
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/17/13 11:54
Caprolactam	U		4.7	10	µg/L	1	12/17/13 11:54
Carbazole	U		0.16	10	µg/L	1	12/17/13 11:54
Chrysene	U		0.71	1.0	µg/L	1	12/17/13 11:54
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/17/13 11:54
Dibenzofuran	0.64	J	0.28	4.0	µg/L	1	12/17/13 11:54
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/17/13 11:54
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/17/13 11:54
Di-n-butyl phthalate	0.21	J	0.14	5.0	µg/L	1	12/17/13 11:54
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/17/13 11:54
Fluoranthene	U		0.77	1.0	µg/L	1	12/17/13 11:54
Fluorene	1.1	J	0.10	5.0	µg/L	1	12/17/13 11:54
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/17/13 11:54
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/17/13 11:54
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/17/13 11:54
Hexachloroethane	U		0.47	5.0	µg/L	1	12/17/13 11:54
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/17/13 11:54
Isophorone	U		0.30	5.0	µg/L	1	12/17/13 11:54
Naphthalene	2.2	J	0.12	5.0	µg/L	1	12/17/13 11:54
Nitrobenzene	U		0.33	3.0	µg/L	1	12/17/13 11:54
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/17/13 11:54
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/17/13 11:54
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/17/13 11:54
Phenanthrene	U		0.86	2.0	µg/L	1	12/17/13 11:54
Phenol	0.40	J	0.32	5.0	µg/L	1	12/17/13 11:54
Pyrene	U		0.65	5.0	µg/L	1	12/17/13 11:54
Surr: 2,4,6-Tribromophenol	84.6			32-115	%REC	1	12/17/13 11:54
Surr: 2-Fluorobiphenyl	73.3			32-100	%REC	1	12/17/13 11:54
Surr: 2-Fluorophenol	44.8			22-59	%REC	1	12/17/13 11:54
Surr: 4-Terphenyl-d14	70.3			23-112	%REC	1	12/17/13 11:54

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-016
Collection Date: 12/12/13 11:23 AM

Work Order: 1312747
Lab ID: 1312747-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	69.5			31-93	%REC	1	12/17/13 11:54
Surr: Phenol-d6	28.1			13-36	%REC	1	12/17/13 11:54
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132913							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 07:28
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 07:28
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 07:28
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 07:28
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 07:28
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 07:28
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 07:28
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 07:28
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 07:28
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 07:28
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 07:28
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 07:28
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 07:28
1,4-Dichlorobenzene	0.98	J	0.15	1.0	µg/L	1	12/21/13 07:28
2-Butanone	U		0.64	25	µg/L	1	12/21/13 07:28
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 07:28
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 07:28
Acetone	U		3.0	50	µg/L	1	12/21/13 07:28
Benzene	21		0.14	1.0	µg/L	1	12/21/13 07:28
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 07:28
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 07:28
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 07:28
Carbon disulfide	U		0.26	5.0	µg/L	1	12/21/13 07:28
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 07:28
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 07:28
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 07:28
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 07:28
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 07:28
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 07:28
Cyclohexane	5.5	J	0.20	10	µg/L	1	12/21/13 07:28
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 07:28
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 07:28
Ethylbenzene	0.29	J	0.12	1.0	µg/L	1	12/21/13 07:28
Isopropylbenzene	2.0	J	0.11	5.0	µg/L	1	12/21/13 07:28
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 07:28

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-016
Collection Date: 12/12/13 11:23 AM

Work Order: 1312747
Lab ID: 1312747-20
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 07:28
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 07:28
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 07:28
Styrene	U		0.12	1.0	µg/L	1	12/21/13 07:28
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 07:28
Toluene	0.33	J	0.13	1.0	µg/L	1	12/21/13 07:28
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 07:28
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 07:28
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 07:28
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 07:28
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 07:28
Xylenes, Total	1.0	J	0.30	3.0	µg/L	1	12/21/13 07:28
Surr: 1,2-Dichloroethane-d4	102			70-120	%REC	1	12/21/13 07:28
Surr: 4-Bromofluorobenzene	98.5			75-120	%REC	1	12/21/13 07:28
Surr: Dibromofluoromethane	96.1			85-115	%REC	1	12/21/13 07:28
Surr: Toluene-d8	98.0			85-120	%REC	1	12/21/13 07:28
<u>BatchID: R132945</u>							
Chlorobenzene	330		0.60	5.0	µg/L	5	12/21/13 17:25
Surr: 1,2-Dichloroethane-d4	104			70-120	%REC	5	12/21/13 17:25
Surr: 4-Bromofluorobenzene	96.8			75-120	%REC	5	12/21/13 17:25
Surr: Dibromofluoromethane	104			85-115	%REC	5	12/21/13 17:25
Surr: Toluene-d8	96.2			85-120	%REC	5	12/21/13 17:25
<u>BatchID: 54275</u>							
CYANIDE, AMENABLE			SW9012A			Prep: SW9012A / 12/18/13	Analyst: JB
Cyanide, Amenable	0.0039	J	0.0010	0.0050	mg/L	1	12/18/13 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121213-AJL-016
Collection Date: 12/12/13 12:45 PM

Work Order: 1312747
Lab ID: 1312747-21
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270		Prep: SW3541 / 12/19/13	Analyst: HL	
<u>BatchID: 54309</u>							
1,1'-Biphenyl	92	J	57	3,800	µg/Kg-dry	10	12/20/13 21:45
2,4,5-Trichlorophenol	U		95	1,800	µg/Kg-dry	10	12/20/13 21:45
2,4,6-Trichlorophenol	U		64	1,800	µg/Kg-dry	10	12/20/13 21:45
2,4-Dichlorophenol	U		110	1,800	µg/Kg-dry	10	12/20/13 21:45
2,4-Dimethylphenol	U		610	3,800	µg/Kg-dry	10	12/20/13 21:45
2,4-Dinitrophenol	U		340	7,600	µg/Kg-dry	10	12/20/13 21:45
2,4-Dinitrotoluene	U		120	1,800	µg/Kg-dry	10	12/20/13 21:45
2,6-Dinitrotoluene	U		200	1,800	µg/Kg-dry	10	12/20/13 21:45
2-Chloronaphthalene	U		18	920	µg/Kg-dry	10	12/20/13 21:45
2-Chlorophenol	U		120	1,800	µg/Kg-dry	10	12/20/13 21:45
2-Methylnaphthalene	110	J	32	920	µg/Kg-dry	10	12/20/13 21:45
2-Methylphenol	160	J	160	1,800	µg/Kg-dry	10	12/20/13 21:45
2-Nitroaniline	U		150	7,600	µg/Kg-dry	10	12/20/13 21:45
2-Nitrophenol	U		130	1,800	µg/Kg-dry	10	12/20/13 21:45
3,3'-Dichlorobenzidine	U		4,700	7,600	µg/Kg-dry	10	12/20/13 21:45
3-Nitroaniline	U		130	7,600	µg/Kg-dry	10	12/20/13 21:45
4,6-Dinitro-2-methylphenol	U		320	3,800	µg/Kg-dry	10	12/20/13 21:45
4-Bromophenyl phenyl ether	U		100	1,800	µg/Kg-dry	10	12/20/13 21:45
4-Chloro-3-methylphenol	U		88	1,800	µg/Kg-dry	10	12/20/13 21:45
4-Chloroaniline	U		110	3,800	µg/Kg-dry	10	12/20/13 21:45
4-Chlorophenyl phenyl ether	U		110	1,800	µg/Kg-dry	10	12/20/13 21:45
4-Methylphenol	2,800		180	1,800	µg/Kg-dry	10	12/20/13 21:45
4-Nitroaniline	U		110	7,600	µg/Kg-dry	10	12/20/13 21:45
4-Nitrophenol	U		76	7,600	µg/Kg-dry	10	12/20/13 21:45
Acenaphthene	110	J	11	340	µg/Kg-dry	10	12/20/13 21:45
Acenaphthylene	50	J	14	340	µg/Kg-dry	10	12/20/13 21:45
Acetophenone	140	J	57	3,800	µg/Kg-dry	10	12/20/13 21:45
Anthracene	350		15	340	µg/Kg-dry	10	12/20/13 21:45
Atrazine	U		120	570	µg/Kg-dry	10	12/20/13 21:45
Benzaldehyde	240	J	150	3,800	µg/Kg-dry	10	12/20/13 21:45
Benzo(a)anthracene	220	J	15	340	µg/Kg-dry	10	12/20/13 21:45
Benzo(a)pyrene	390		25	340	µg/Kg-dry	10	12/20/13 21:45
Benzo(b)fluoranthene	540		22	340	µg/Kg-dry	10	12/20/13 21:45
Benzo(g,h,i)perylene	220	J	30	340	µg/Kg-dry	10	12/20/13 21:45
Benzo(k)fluoranthene	210	J	16	340	µg/Kg-dry	10	12/20/13 21:45
Bis(2-chloroethoxy)methane	U		120	1,800	µg/Kg-dry	10	12/20/13 21:45
Bis(2-chloroethyl)ether	U		120	1,800	µg/Kg-dry	10	12/20/13 21:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121213-AJL-016
Collection Date: 12/12/13 12:45 PM

Work Order: 1312747
Lab ID: 1312747-21
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroisopropyl)ether	U		160	1,800	µg/Kg-dry	10	12/20/13 21:45
Bis(2-ethylhexyl)phthalate	3,100	J	130	3,800	µg/Kg-dry	10	12/20/13 21:45
Butyl benzyl phthalate	U		140	1,800	µg/Kg-dry	10	12/20/13 21:45
Caprolactam	U		170	3,800	µg/Kg-dry	10	12/20/13 21:45
Carbazole	140	J	110	1,800	µg/Kg-dry	10	12/20/13 21:45
Chrysene	550		18	340	µg/Kg-dry	10	12/20/13 21:45
Dibenzo(a,h)anthracene	61	J	28	340	µg/Kg-dry	10	12/20/13 21:45
Dibenzofuran	130	J	120	1,800	µg/Kg-dry	10	12/20/13 21:45
Diethyl phthalate	U		120	3,800	µg/Kg-dry	10	12/20/13 21:45
Dimethyl phthalate	U		130	3,800	µg/Kg-dry	10	12/20/13 21:45
Di-n-butyl phthalate	260	J	55	3,800	µg/Kg-dry	10	12/20/13 21:45
Di-n-octyl phthalate	U		120	1,800	µg/Kg-dry	10	12/20/13 21:45
Fluoranthene	1,400		27	340	µg/Kg-dry	10	12/20/13 21:45
Fluorene	150	J	26	340	µg/Kg-dry	10	12/20/13 21:45
Hexachlorobenzene	U		110	1,800	µg/Kg-dry	10	12/20/13 21:45
Hexachlorobutadiene	U		130	570	µg/Kg-dry	10	12/20/13 21:45
Hexachlorocyclopentadiene	U		120	3,800	µg/Kg-dry	10	12/20/13 21:45
Hexachloroethane	U		180	1,800	µg/Kg-dry	10	12/20/13 21:45
Indeno(1,2,3-cd)pyrene	180	J	25	340	µg/Kg-dry	10	12/20/13 21:45
Isophorone	U		130	1,800	µg/Kg-dry	10	12/20/13 21:45
Naphthalene	280	J	28	340	µg/Kg-dry	10	12/20/13 21:45
Nitrobenzene	U		150	1,800	µg/Kg-dry	10	12/20/13 21:45
N-Nitrosodi-n-propylamine	U		150	1,800	µg/Kg-dry	10	12/20/13 21:45
N-Nitrosodiphenylamine	U		680	1,800	µg/Kg-dry	10	12/20/13 21:45
Pentachlorophenol	U		74	230	µg/Kg-dry	10	12/20/13 21:45
Phenanthrene	1,500		15	340	µg/Kg-dry	10	12/20/13 21:45
Phenol	490	J	130	1,800	µg/Kg-dry	10	12/20/13 21:45
Pyrene	1,000		26	340	µg/Kg-dry	10	12/20/13 21:45
Surr: 2,4,6-Tribromophenol	91.6			34-140	%REC	10	12/20/13 21:45
Surr: 2-Fluorobiphenyl	66.0			12-100	%REC	10	12/20/13 21:45
Surr: 2-Fluorophenol	64.8			33-117	%REC	10	12/20/13 21:45
Surr: 4-Terphenyl-d14	92.4			25-137	%REC	10	12/20/13 21:45
Surr: Nitrobenzene-d5	61.4			37-107	%REC	10	12/20/13 21:45
Surr: Phenol-d6	62.6			40-106	%REC	10	12/20/13 21:45
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/9/13	Analyst: BG	
BatchID: 54220							
1,1,1-Trichloroethane	U		14	36	µg/Kg-dry	1	12/21/13 06:37
1,1,2,2-Tetrachloroethane	U		16	36	µg/Kg-dry	1	12/21/13 06:37
1,1,2-Trichloroethane	U		13	36	µg/Kg-dry	1	12/21/13 06:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121213-AJL-016
Collection Date: 12/12/13 12:45 PM

Work Order: 1312747
Lab ID: 1312747-21
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2-Trichlorotrifluoroethane	U		13	36	µg/Kg-dry	1	12/21/13 06:37
1,1-Dichloroethane	U		13	36	µg/Kg-dry	1	12/21/13 06:37
1,1-Dichloroethene	U		15	36	µg/Kg-dry	1	12/21/13 06:37
1,2,4-Trichlorobenzene	U		18	36	µg/Kg-dry	1	12/21/13 06:37
1,2-Dibromo-3-chloropropane	U		17	36	µg/Kg-dry	1	12/21/13 06:37
1,2-Dibromoethane	U		14	36	µg/Kg-dry	1	12/21/13 06:37
1,2-Dichlorobenzene	U		14	36	µg/Kg-dry	1	12/21/13 06:37
1,2-Dichloroethane	U		17	36	µg/Kg-dry	1	12/21/13 06:37
1,2-Dichloropropane	U		12	36	µg/Kg-dry	1	12/21/13 06:37
1,3-Dichlorobenzene	U		14	36	µg/Kg-dry	1	12/21/13 06:37
1,4-Dichlorobenzene	U		14	36	µg/Kg-dry	1	12/21/13 06:37
2-Butanone	260	J	88	260	µg/Kg-dry	1	12/21/13 06:37
2-Hexanone	U		8.7	36	µg/Kg-dry	1	12/21/13 06:37
4-Methyl-2-pentanone	U		12	36	µg/Kg-dry	1	12/21/13 06:37
Acetone	170	J	75	180	µg/Kg-dry	1	12/21/13 06:37
Benzene	89		14	36	µg/Kg-dry	1	12/21/13 06:37
Bromodichloromethane	U		8.0	36	µg/Kg-dry	1	12/21/13 06:37
Bromoform	U		7.0	36	µg/Kg-dry	1	12/21/13 06:37
Bromomethane	U		14	89	µg/Kg-dry	1	12/21/13 06:37
Carbon disulfide	U		18	36	µg/Kg-dry	1	12/21/13 06:37
Carbon tetrachloride	U		10	36	µg/Kg-dry	1	12/21/13 06:37
Chlorobenzene	U		14	36	µg/Kg-dry	1	12/21/13 06:37
Chloroethane	U		75	120	µg/Kg-dry	1	12/21/13 06:37
Chloroform	U		15	36	µg/Kg-dry	1	12/21/13 06:37
Chloromethane	U		20	120	µg/Kg-dry	1	12/21/13 06:37
cis-1,2-Dichloroethene	U		14	36	µg/Kg-dry	1	12/21/13 06:37
cis-1,3-Dichloropropene	U		12	36	µg/Kg-dry	1	12/21/13 06:37
Cyclohexane	U		16	36	µg/Kg-dry	1	12/21/13 06:37
Dibromochloromethane	U		6.6	36	µg/Kg-dry	1	12/21/13 06:37
Dichlorodifluoromethane	U		16	36	µg/Kg-dry	1	12/21/13 06:37
Ethylbenzene	81		13	36	µg/Kg-dry	1	12/21/13 06:37
Isopropylbenzene	47		15	36	µg/Kg-dry	1	12/21/13 06:37
Methyl acetate	90	J	48	240	µg/Kg-dry	1	12/21/13 06:37
Methyl tert-butyl ether	U		15	36	µg/Kg-dry	1	12/21/13 06:37
Methylcyclohexane	U		16	36	µg/Kg-dry	1	12/21/13 06:37
Methylene chloride	U		14	36	µg/Kg-dry	1	12/21/13 06:37
Styrene	U		13	36	µg/Kg-dry	1	12/21/13 06:37
Tetrachloroethene	U		16	36	µg/Kg-dry	1	12/21/13 06:37
Toluene	140		13	36	µg/Kg-dry	1	12/21/13 06:37
trans-1,2-Dichloroethene	U		11	36	µg/Kg-dry	1	12/21/13 06:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121213-AJL-016
Collection Date: 12/12/13 12:45 PM

Work Order: 1312747
Lab ID: 1312747-21
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
trans-1,3-Dichloropropene	U		12	36	µg/Kg-dry	1	12/21/13 06:37
Trichloroethene	U		17	36	µg/Kg-dry	1	12/21/13 06:37
Trichlorofluoromethane	U		9.8	36	µg/Kg-dry	1	12/21/13 06:37
Vinyl chloride	U		16	36	µg/Kg-dry	1	12/21/13 06:37
Xylenes, Total	94	J	42	110	µg/Kg-dry	1	12/21/13 06:37
Surr: 1,2-Dichloroethane-d4	104			70-130	%REC	1	12/21/13 06:37
Surr: 4-Bromofluorobenzene	100			70-130	%REC	1	12/21/13 06:37
Surr: Dibromofluoromethane	100			70-130	%REC	1	12/21/13 06:37
Surr: Toluene-d8	99.1			70-130	%REC	1	12/21/13 06:37
MOISTURE			A2540 G				Analyst: MEB
BatchID: <u>R132746</u>							
Moisture	16		0.025	0.050	% of sample	1	12/18/13 18:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-017
Collection Date: 12/12/13 01:30 PM

Work Order: 1312747
Lab ID: 1312747-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 12/18/13	Analyst: LR
<u>BatchID:</u> 54267							
Mercury	0.0022		0.00010	0.00020	mg/L	1	12/19/13 11:25
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 12/30/13	Analyst: LR
<u>BatchID:</u> 54583							
Mercury	U		0.00010	0.00020	mg/L	1	12/30/13 16:29
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 12/21/13	Analyst: JDD
<u>BatchID:</u> 54396							
Aluminum	45		0.0078	0.50	mg/L	10	12/22/13 17:29
Antimony	0.095		0.00036	0.020	mg/L	10	12/22/13 17:29
Arsenic	0.066		0.0058	0.050	mg/L	10	12/22/13 17:29
Barium	3.4		0.00063	1.0	mg/L	10	12/22/13 17:29
Beryllium	0.0020	J	0.00082	0.010	mg/L	10	12/22/13 17:29
Cadmium	0.042		0.00045	0.010	mg/L	10	12/22/13 17:29
Chromium	0.32		0.0027	0.10	mg/L	10	12/22/13 17:29
Cobalt	0.051	J	0.00041	0.20	mg/L	10	12/22/13 17:29
Copper	1.1		0.0053	0.040	mg/L	10	12/22/13 17:29
Iron	170		0.053	2.0	mg/L	10	12/22/13 17:29
Lead	3.2		0.00051	0.030	mg/L	10	12/23/13 18:08
Manganese	2.2		0.00054	0.50	mg/L	10	12/22/13 17:29
Nickel	0.32		0.0025	0.20	mg/L	10	12/22/13 17:29
Selenium	U		0.0064	0.050	mg/L	10	12/22/13 17:29
Silver	0.016		0.00042	0.0020	mg/L	10	12/22/13 17:29
Thallium	U		0.00062	0.020	mg/L	10	12/23/13 18:08
Vanadium	0.090		0.0016	0.040	mg/L	10	12/22/13 17:29
Zinc	9.9		0.0048	0.50	mg/L	10	12/22/13 17:29
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 12/30/13	Analyst: JDD
<u>BatchID:</u> 54568							
Aluminum	0.030	J	0.0078	0.50	mg/L	10	01/02/14 19:14
Antimony	0.0016	J	0.00036	0.020	mg/L	10	01/02/14 19:14
Arsenic	U		0.0058	0.050	mg/L	10	01/02/14 19:14
Barium	1.5		0.00063	1.0	mg/L	10	01/02/14 19:14
Beryllium	U		0.00082	0.010	mg/L	10	01/02/14 19:14
Cadmium	U		0.00045	0.010	mg/L	10	01/02/14 19:14
Chromium	0.0035	J	0.0027	0.10	mg/L	10	01/02/14 19:14
Cobalt	0.0068	J	0.00041	0.20	mg/L	10	01/02/14 19:14
Copper	U		0.0053	0.040	mg/L	10	01/02/14 19:14
Iron	23		0.053	2.0	mg/L	10	01/02/14 19:14

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-017
Collection Date: 12/12/13 01:30 PM

Work Order: 1312747
Lab ID: 1312747-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.00051	0.030	mg/L	10	01/02/14 19:14
Manganese	0.42	J	0.00054	0.50	mg/L	10	01/02/14 19:14
Nickel	0.016	J	0.0025	0.20	mg/L	10	01/02/14 19:14
Selenium	U		0.0064	0.050	mg/L	10	01/02/14 19:14
Silver	U		0.00042	0.0020	mg/L	10	01/02/14 19:14
Thallium	U		0.00062	0.020	mg/L	10	01/02/14 19:14
Vanadium	0.0023	J	0.0016	0.040	mg/L	10	01/02/14 19:14
Zinc	0.061	J	0.0048	0.50	mg/L	10	01/02/14 19:14
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 12/16/13		Analyst: HL	
BatchID: 54173							
1,1'-Biphenyl	U		0.095	10	µg/L	1	12/17/13 12:25
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/17/13 12:25
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/17/13 12:25
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/17/13 12:25
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/17/13 12:25
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/17/13 12:25
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/17/13 12:25
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/17/13 12:25
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/17/13 12:25
2-Chlorophenol	U		0.32	10	µg/L	1	12/17/13 12:25
2-Methylnaphthalene	0.29	J	0.13	5.0	µg/L	1	12/17/13 12:25
2-Methylphenol	U		0.20	10	µg/L	1	12/17/13 12:25
2-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 12:25
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/17/13 12:25
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/17/13 12:25
3-Nitroaniline	U		0.34	25	µg/L	1	12/17/13 12:25
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/17/13 12:25
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 12:25
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/17/13 12:25
4-Chloroaniline	U		0.32	10	µg/L	1	12/17/13 12:25
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/17/13 12:25
4-Methylphenol	0.40	J	0.20	10	µg/L	1	12/17/13 12:25
4-Nitroaniline	U		0.30	25	µg/L	1	12/17/13 12:25
4-Nitrophenol	U		0.51	25	µg/L	1	12/17/13 12:25
Acenaphthene	0.39	J	0.11	5.0	µg/L	1	12/17/13 12:25
Acenaphthylene	U		0.12	5.0	µg/L	1	12/17/13 12:25
Acetophenone	U		0.090	5.0	µg/L	1	12/17/13 12:25
Anthracene	U		0.72	5.0	µg/L	1	12/17/13 12:25
Atrazine	U		0.13	5.0	µg/L	1	12/17/13 12:25

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-017
Collection Date: 12/12/13 01:30 PM

Work Order: 1312747
Lab ID: 1312747-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	0.73	J	0.46	10	µg/L	1	12/17/13 12:25
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/17/13 12:25
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/17/13 12:25
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/17/13 12:25
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/17/13 12:25
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/17/13 12:25
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/17/13 12:25
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/17/13 12:25
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/17/13 12:25
Bis(2-ethylhexyl)phthalate	0.59	J	0.15	5.0	µg/L	1	12/17/13 12:25
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/17/13 12:25
Caprolactam	U		4.7	10	µg/L	1	12/17/13 12:25
Carbazole	U		0.16	10	µg/L	1	12/17/13 12:25
Chrysene	U		0.71	1.0	µg/L	1	12/17/13 12:25
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/17/13 12:25
Dibenzofuran	U		0.28	4.0	µg/L	1	12/17/13 12:25
Diethyl phthalate	0.37	J	0.24	5.0	µg/L	1	12/17/13 12:25
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/17/13 12:25
Di-n-butyl phthalate	0.26	J	0.14	5.0	µg/L	1	12/17/13 12:25
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/17/13 12:25
Fluoranthene	U		0.77	1.0	µg/L	1	12/17/13 12:25
Fluorene	U		0.10	5.0	µg/L	1	12/17/13 12:25
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/17/13 12:25
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/17/13 12:25
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/17/13 12:25
Hexachloroethane	U		0.47	5.0	µg/L	1	12/17/13 12:25
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/17/13 12:25
Isophorone	U		0.30	5.0	µg/L	1	12/17/13 12:25
Naphthalene	0.20	J	0.12	5.0	µg/L	1	12/17/13 12:25
Nitrobenzene	U		0.33	3.0	µg/L	1	12/17/13 12:25
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/17/13 12:25
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/17/13 12:25
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/17/13 12:25
Phenanthrene	U		0.86	2.0	µg/L	1	12/17/13 12:25
Phenol	U		0.32	5.0	µg/L	1	12/17/13 12:25
Pyrene	U		0.65	5.0	µg/L	1	12/17/13 12:25
Surr: 2,4,6-Tribromophenol	84.8			32-115	%REC	1	12/17/13 12:25
Surr: 2-Fluorobiphenyl	70.2			32-100	%REC	1	12/17/13 12:25
Surr: 2-Fluorophenol	46.6			22-59	%REC	1	12/17/13 12:25
Surr: 4-Terphenyl-d14	63.3			23-112	%REC	1	12/17/13 12:25

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-017
Collection Date: 12/12/13 01:30 PM

Work Order: 1312747
Lab ID: 1312747-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	69.3			31-93	%REC	1	12/17/13 12:25
Surr: Phenol-d6	29.7			13-36	%REC	1	12/17/13 12:25
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132917							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 14:12
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/21/13 14:12
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/21/13 14:12
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/21/13 14:12
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/21/13 14:12
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 14:12
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/21/13 14:12
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/21/13 14:12
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/21/13 14:12
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/21/13 14:12
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/21/13 14:12
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/21/13 14:12
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 14:12
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/21/13 14:12
2-Butanone	U		0.64	25	µg/L	1	12/21/13 14:12
2-Hexanone	U		0.19	50	µg/L	1	12/21/13 14:12
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/21/13 14:12
Acetone	3.9	J	3.0	50	µg/L	1	12/21/13 14:12
Benzene	0.71	J	0.14	1.0	µg/L	1	12/21/13 14:12
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/21/13 14:12
Bromoform	U		0.18	1.0	µg/L	1	12/21/13 14:12
Bromomethane	U		0.38	5.0	µg/L	1	12/21/13 14:12
Carbon disulfide	0.44	J	0.26	5.0	µg/L	1	12/21/13 14:12
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/21/13 14:12
Chlorobenzene	1.2		0.12	1.0	µg/L	1	12/21/13 14:12
Chloroethane	U		0.25	5.0	µg/L	1	12/21/13 14:12
Chloroform	U		0.15	1.0	µg/L	1	12/21/13 14:12
Chloromethane	U		0.29	5.0	µg/L	1	12/21/13 14:12
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/21/13 14:12
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/21/13 14:12
Cyclohexane	U		0.20	1.0	µg/L	1	12/21/13 14:12
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/21/13 14:12
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/21/13 14:12
Ethylbenzene	U		0.12	1.0	µg/L	1	12/21/13 14:12
Isopropylbenzene	0.62	J	0.11	5.0	µg/L	1	12/21/13 14:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121213-AJL-017
Collection Date: 12/12/13 01:30 PM

Work Order: 1312747
Lab ID: 1312747-22
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/21/13 14:12
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/21/13 14:12
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/21/13 14:12
Methylene chloride	U		0.75	5.0	µg/L	1	12/21/13 14:12
Styrene	U		0.12	1.0	µg/L	1	12/21/13 14:12
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/21/13 14:12
Toluene	0.29	J	0.13	1.0	µg/L	1	12/21/13 14:12
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/21/13 14:12
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/21/13 14:12
Trichloroethene	U		0.16	1.0	µg/L	1	12/21/13 14:12
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/21/13 14:12
Vinyl chloride	U		0.15	1.0	µg/L	1	12/21/13 14:12
Xylenes, Total	1.3	J	0.30	3.0	µg/L	1	12/21/13 14:12
Surr: 1,2-Dichloroethane-d4	105			70-120	%REC	1	12/21/13 14:12
Surr: 4-Bromofluorobenzene	99.8			75-120	%REC	1	12/21/13 14:12
Surr: Dibromofluoromethane	101			85-115	%REC	1	12/21/13 14:12
Surr: Toluene-d8	99.8			85-120	%REC	1	12/21/13 14:12
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/18/13		Analyst: JB
BatchID: 54275							
Cyanide, Amenable	0.060		0.0010	0.0050	mg/L	1	12/18/13 16:31

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54266** Instrument ID **HG1** Method: **SW7470**

MBLK		Sample ID: MBLK-54266-54266				Units: mg/L		Analysis Date: 12/18/13 05:41 PM		
Client ID:		Run ID: HG1_131218A				SeqNo: 2585579		Prep Date: 12/18/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS		Sample ID: LCS-54266-54266				Units: mg/L		Analysis Date: 12/18/13 05:43 PM		
Client ID:		Run ID: HG1_131218A				SeqNo: 2585580		Prep Date: 12/18/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002106 0.00020 0.002 0 105 80-120 0

MS		Sample ID: 1312718-02CMS				Units: mg/L		Analysis Date: 12/18/13 06:01 PM		
Client ID:		Run ID: HG1_131218A				SeqNo: 2585588		Prep Date: 12/18/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002247 0.00020 0.002 -0.000003 112 75-125 0

MSD		Sample ID: 1312718-02CMSD				Units: mg/L		Analysis Date: 12/18/13 06:04 PM		
Client ID:		Run ID: HG1_131218A				SeqNo: 2585589		Prep Date: 12/18/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.00217 0.00020 0.002 -0.000003 109 75-125 0.002247 3.49 20

The following samples were analyzed in this batch:

1312747-02D	1312747-05D	1312747-07D
1312747-09D	1312747-12D	1312747-13D
1312747-15D	1312747-16D	1312747-17D

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54267** Instrument ID **HG1** Method: **SW7470**

MBLK	Sample ID: MBLK-54267-54267					Units: mg/L		Analysis Date: 12/19/13 11:18 AM		
Client ID:	Run ID: HG1_131219A				SeqNo: 2586737		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS	Sample ID: LCS-54267-54267					Units: mg/L		Analysis Date: 12/19/13 11:21 AM		
Client ID:	Run ID: HG1_131219A				SeqNo: 2586738		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001986 0.00020 0.002 0 99.3 80-120 0

MS	Sample ID: 1312798-04BMS					Units: mg/L		Analysis Date: 12/19/13 11:51 AM		
Client ID:	Run ID: HG1_131219A				SeqNo: 2586751		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002073 0.00020 0.002 0 104 75-125 0

MSD	Sample ID: 1312798-04BMSD					Units: mg/L		Analysis Date: 12/19/13 11:53 AM		
Client ID:	Run ID: HG1_131219A				SeqNo: 2586752		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002106 0.00020 0.002 0 105 75-125 0.002073 1.58 20

The following samples were analyzed in this batch:

1312747-20D 1312747-22D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

QC Page: 2 of 56

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54583** Instrument ID **HG1** Method: **SW7470**

MBLK		Sample ID: MBLK-54583-54583				Units: mg/L		Analysis Date: 12/30/13 03:48 PM			
Client ID:		Run ID: HG1_131230A				SeqNo: 2599251		Prep Date: 12/30/13		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS		Sample ID: LCS-54583-54583				Units: mg/L		Analysis Date: 12/30/13 03:50 PM			
Client ID:		Run ID: HG1_131230A				SeqNo: 2599252		Prep Date: 12/30/13		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001892 0.00020 0.002 0 94.6 80-120 0

MS		Sample ID: 1312747-02EMS				Units: mg/L		Analysis Date: 12/30/13 03:55 PM			
Client ID: W-R2330009-120913-AJL-006		Run ID: HG1_131230A				SeqNo: 2599254		Prep Date: 12/30/13		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002059 0.00020 0.002 -0.000005 103 75-125 0

MSD		Sample ID: 1312747-02EMSD				Units: mg/L		Analysis Date: 12/30/13 03:57 PM			
Client ID: W-R2330009-120913-AJL-006		Run ID: HG1_131230A				SeqNo: 2599255		Prep Date: 12/30/13		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002003 0.00020 0.002 -0.000005 100 75-125 0.002059 2.76 20

The following samples were analyzed in this batch:

1312747-02E	1312747-05E	1312747-07E
1312747-09E	1312747-12E	1312747-13E
1312747-15E	1312747-16E	1312747-17E
1312747-18E	1312747-20E	1312747-22E

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

QC Page: 3 of 56

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54609** Instrument ID **HG1** Method: **SW7470**

MBLK	Sample ID: MBLK-54609-54609					Units: mg/L		Analysis Date: 12/31/13 05:57 PM		
Client ID:	Run ID: HG1_131231A				SeqNo: 2600784		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS	Sample ID: LCS-54609-54609					Units: mg/L		Analysis Date: 12/31/13 06:00 PM		
Client ID:	Run ID: HG1_131231A				SeqNo: 2600785		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002053 0.00020 0.002 0 103 80-120 0

MS	Sample ID: 13121064-02AMS					Units: mg/L		Analysis Date: 12/31/13 06:05 PM		
Client ID:	Run ID: HG1_131231A				SeqNo: 2600787		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.02126 0.0020 0.02 -0.00023 107 75-125 0

MSD	Sample ID: 13121064-02AMSD					Units: mg/L		Analysis Date: 12/31/13 06:07 PM		
Client ID:	Run ID: HG1_131231A				SeqNo: 2600788		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.02143 0.0020 0.02 -0.00023 108 75-125 0.02126 0.796 20

The following samples were analyzed in this batch:

1312747-18D

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54396** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-54396-54396				Units: mg/L		Analysis Date: 12/22/13 11:56 AM		
Client ID:		Run ID: ICPMS2_131221A				SeqNo: 2591394		Prep Date: 12/21/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	U	0.010								
Antimony	0.00004087	0.0050								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	0.0007941	0.0050								J
Iron	U	0.080								
Lead	U	0.0050								
Manganese	U	0.0050								
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Vanadium	U	0.0050								
Zinc	0.001408	0.010								J

LCS		Sample ID: LCS-54396-54396				Units: mg/L		Analysis Date: 12/22/13 12:02 PM		
Client ID:		Run ID: ICPMS2_131221A				SeqNo: 2591397		Prep Date: 12/21/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09632	0.010	0.1	0	96.3	80-120	0			
Antimony	0.09784	0.0050	0.1	0	97.8	80-120	0			
Arsenic	0.09807	0.0050	0.1	0	98.1	80-120	0			
Barium	0.09657	0.0050	0.1	0	96.6	80-120	0			
Beryllium	0.09281	0.0020	0.1	0	92.8	80-120	0			
Cadmium	0.09636	0.0020	0.1	0	96.4	80-120	0			
Chromium	0.09265	0.0050	0.1	0	92.6	80-120	0			
Cobalt	0.09903	0.0050	0.1	0	99	80-120	0			
Copper	0.09688	0.0050	0.1	0	96.9	80-120	0			
Iron	9.72	0.080	10	0	97.2	80-120	0			
Lead	0.0947	0.0050	0.1	0	94.7	80-120	0			
Manganese	0.09646	0.0050	0.1	0	96.5	80-120	0			
Nickel	0.09551	0.0050	0.1	0	95.5	80-120	0			
Selenium	0.09816	0.0050	0.1	0	98.2	80-120	0			
Silver	0.09737	0.0050	0.1	0	97.4	80-120	0			
Vanadium	0.0995	0.0050	0.1	0	99.5	80-120	0			
Zinc	0.1015	0.010	0.1	0	102	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54396** Instrument ID **ICPMS2** Method: **SW6020A**

MS				Sample ID: 13121030-01AMS		Units: mg/L		Analysis Date: 12/23/13 03:18 PM		
Client ID:			Run ID: ICPMS2_131223A		SeqNo: 2592784		Prep Date: 12/21/13		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.9875	0.50	1	0.08405	90.3	75-125	0			
Antimony	1.027	0.25	1	0.00529	102	75-125	0			
Arsenic	1.022	0.25	1	0.01258	101	75-125	0			
Barium	1.464	0.25	1	0.4359	103	75-125	0			
Cadmium	1.01	0.10	1	0.03206	97.7	75-125	0			
Chromium	0.971	0.25	1	0.0882	88.3	75-125	0			
Cobalt	0.848	0.25	1	0.006165	84.2	75-125	0			
Copper	0.927	0.25	1	0.01804	90.9	75-125	0			
Iron	97.1	4.0	100	2.956	94.1	75-125	0			
Lead	1.315	0.25	1	0.3974	91.8	75-125	0			
Manganese	1.04	0.25	1	0.131	90.9	75-125	0			
Nickel	0.953	0.25	1	0.0531	90	75-125	0			
Selenium	1.106	0.25	1	0.1007	101	75-125	0			
Silver	0.943	0.25	1	-0.0003596	94.3	75-125	0			
Thallium	0.8085	0.25	1	-0.004952	81.3	75-125	0			
Vanadium	0.956	0.25	1	0.008115	94.8	75-125	0			
Zinc	3.292	0.50	1	2.109	118	75-125	0			

MSD				Sample ID: 13121030-01AMSD		Units: mg/L		Analysis Date: 12/23/13 03:24 PM		
Client ID:			Run ID: ICPMS2_131223A			SeqNo: 2592785		Prep Date: 12/21/13		DF: 5
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.004	0.50	1	0.08405	91.9	75-125	0.9875	1.61	20	
Antimony	1.032	0.25	1	0.00529	103	75-125	1.027	0.534	20	
Arsenic	1.02	0.25	1	0.01258	101	75-125	1.022	0.196	20	
Barium	1.452	0.25	1	0.4359	102	75-125	1.464	0.892	20	
Cadmium	1.008	0.10	1	0.03206	97.6	75-125	1.01	0.149	20	
Chromium	0.981	0.25	1	0.0882	89.3	75-125	0.971	1.02	20	
Cobalt	0.8535	0.25	1	0.006165	84.7	75-125	0.848	0.646	20	
Copper	0.955	0.25	1	0.01804	93.7	75-125	0.927	2.98	20	
Iron	97.35	4.0	100	2.956	94.4	75-125	97.1	0.257	20	
Lead	1.297	0.25	1	0.3974	90	75-125	1.315	1.38	20	
Manganese	1.035	0.25	1	0.131	90.4	75-125	1.04	0.482	20	
Nickel	0.957	0.25	1	0.0531	90.4	75-125	0.953	0.419	20	
Selenium	1.114	0.25	1	0.1007	101	75-125	1.106	0.631	20	
Silver	0.9505	0.25	1	-0.0003596	95.1	75-125	0.943	0.792	20	
Thallium	0.8155	0.25	1	-0.004952	82	75-125	0.8085	0.862	20	
Vanadium	0.966	0.25	1	0.008115	95.8	75-125	0.956	1.04	20	
Zinc	3.17	0.50	1	2.109	106	75-125	3.292	3.78	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54396** Instrument ID **ICPMS2** Method: **SW6020A**

The following samples were analyzed in this batch:

1312747-02D	1312747-05D	1312747-07D
1312747-09D	1312747-12D	1312747-13D
1312747-15D	1312747-16D	1312747-17D
1312747-18D	1312747-20D	1312747-22D

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-54568-54568				Units: mg/L		Analysis Date: 12/31/13 03:44 PM		
Client ID:		Run ID: ICPMS2_131231A				SeqNo: 2600886		Prep Date: 12/30/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0001902	0.0050								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	U	0.080								
Lead	U	0.0050								
Manganese	U	0.0050								
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	0.0005963	0.0050								J
Vanadium	U	0.0050								
Zinc	0.001053	0.010								J

MBLK					Sample ID: MBLK-54568-54568				Units: mg/L			Analysis Date: 01/02/14 11:53 AM		
Client ID:			Run ID: ICPMS2_140102A				SeqNo: 2601578		Prep Date: 12/30/13		DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Aluminum		0.001565	0.010								J			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

LCS		Sample ID: LCS-54568-54568				Units: mg/L		Analysis Date: 12/31/13 03:49 PM		
Client ID:		Run ID: ICPMS2_131231A				SeqNo: 2600887		Prep Date: 12/30/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09986	0.0050	0.1	0	99.9	80-120	0			
Arsenic	0.09956	0.0050	0.1	0	99.6	80-120	0			
Barium	0.09722	0.0050	0.1	0	97.2	80-120	0			
Beryllium	0.09647	0.0020	0.1	0	96.5	80-120	0			
Cadmium	0.09782	0.0020	0.1	0	97.8	80-120	0			
Chromium	0.09284	0.0050	0.1	0	92.8	80-120	0			
Cobalt	0.09966	0.0050	0.1	0	99.7	80-120	0			
Copper	0.09745	0.0050	0.1	0	97.4	80-120	0			
Iron	9.854	0.080	10	0	98.5	80-120	0			
Lead	0.09529	0.0050	0.1	0	95.3	80-120	0			
Manganese	0.09748	0.0050	0.1	0	97.5	80-120	0			
Nickel	0.09594	0.0050	0.1	0	95.9	80-120	0			
Selenium	0.09888	0.0050	0.1	0	98.9	80-120	0			
Silver	0.09147	0.0050	0.1	0	91.5	80-120	0			
Thallium	0.08428	0.0050	0.1	0	84.3	80-120	0			
Vanadium	0.09984	0.0050	0.1	0	99.8	80-120	0			
Zinc	0.09937	0.010	0.1	0	99.4	80-120	0			

LCS		Sample ID: LCS-54568-54568				Units: mg/L		Analysis Date: 01/02/14 11:59 AM		
Client ID:		Run ID: ICPMS2_140102A				SeqNo: 2601579		Prep Date: 12/30/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0959	0.010	0.1	0	95.9	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

MS				Sample ID: 1312747-16EMS			Units: mg/L		Analysis Date: 12/31/13 05:23 PM	
Client ID: W-R2330009-121113-AJL-013				Run ID: ICPMS2_131231A			SeqNo: 2600904		Prep Date: 12/30/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09793	0.010	0.1	-0.00114	99.1	75-125	0			
Antimony	0.09652	0.0050	0.1	0.00003278	96.5	75-125	0			
Arsenic	0.09719	0.0050	0.1	-0.0001527	97.3	75-125	0			
Barium	0.0975	0.0050	0.1	0.0001056	97.4	75-125	0			
Beryllium	0.09214	0.0020	0.1	-0.00004222	92.2	75-125	0			
Cadmium	0.09555	0.0020	0.1	-0.00003049	95.6	75-125	0			
Chromium	0.09049	0.0050	0.1	-0.00007388	90.6	75-125	0			
Cobalt	0.09907	0.0050	0.1	0.0001389	98.9	75-125	0			
Copper	0.09801	0.0050	0.1	0.0003429	97.7	75-125	0			
Iron	9.821	0.080	10	0.0104	98.1	75-125	0			
Lead	0.094	0.0050	0.1	0.000002567	94	75-125	0			
Manganese	0.09737	0.0050	0.1	0.0003125	97.1	75-125	0			
Nickel	0.09549	0.0050	0.1	-0.0003924	95.9	75-125	0			
Selenium	0.0961	0.0050	0.1	0.0002494	95.9	75-125	0			
Silver	0.08812	0.0050	0.1	0.000003683	88.1	75-125	0			
Thallium	0.08338	0.0050	0.1	-0.0003435	83.7	75-125	0			
Vanadium	0.1008	0.0050	0.1	0.0001523	101	75-125	0			
Zinc	0.09708	0.010	0.1	0.001695	95.4	75-125	0			

MSD				Sample ID: 1312747-16EMSD			Units: mg/L		Analysis Date: 12/31/13 05:29 PM	
Client ID: W-R2330009-121113-AJL-013				Run ID: ICPMS2_131231A			SeqNo: 2600905		Prep Date: 12/30/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09889	0.010	0.1	-0.00114	100	75-125	0.09793	0.976	20	
Antimony	0.09583	0.0050	0.1	0.00003278	95.8	75-125	0.09652	0.717	20	
Arsenic	0.09607	0.0050	0.1	-0.0001527	96.2	75-125	0.09719	1.16	20	
Barium	0.09693	0.0050	0.1	0.0001056	96.8	75-125	0.0975	0.586	20	
Beryllium	0.09401	0.0020	0.1	-0.00004222	94.1	75-125	0.09214	2.01	20	
Cadmium	0.09521	0.0020	0.1	-0.00003049	95.2	75-125	0.09555	0.356	20	
Chromium	0.08962	0.0050	0.1	-0.00007388	89.7	75-125	0.09049	0.966	20	
Cobalt	0.1011	0.0050	0.1	0.0001389	101	75-125	0.09907	2.03	20	
Copper	0.09878	0.0050	0.1	0.0003429	98.4	75-125	0.09801	0.783	20	
Iron	9.854	0.080	10	0.0104	98.4	75-125	9.821	0.335	20	
Lead	0.09472	0.0050	0.1	0.000002567	94.7	75-125	0.094	0.763	20	
Manganese	0.09754	0.0050	0.1	0.0003125	97.2	75-125	0.09737	0.174	20	
Nickel	0.09685	0.0050	0.1	-0.0003924	97.2	75-125	0.09549	1.41	20	
Selenium	0.09523	0.0050	0.1	0.0002494	95	75-125	0.0961	0.909	20	
Silver	0.08764	0.0050	0.1	0.000003683	87.6	75-125	0.08812	0.546	20	
Thallium	0.0854	0.0050	0.1	-0.0003435	85.7	75-125	0.08338	2.39	20	
Vanadium	0.1018	0.0050	0.1	0.0001523	102	75-125	0.1008	0.987	20	
Zinc	0.09731	0.010	0.1	0.001695	95.6	75-125	0.09708	0.237	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

The following samples were analyzed in this batch:

1312747-02E	1312747-05E	1312747-07E
1312747-09E	1312747-12E	1312747-13E
1312747-15E	1312747-16E	1312747-17E
1312747-18E	1312747-20E	1312747-22E

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54173** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKW1-54173-54173				Units: µg/L		Analysis Date: 12/16/13 03:00 PM		
Client ID:		Run ID: SVMS4_131216A				SeqNo: 2582451		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	5.0								
2,4,5-Trichlorophenol	U	5.0								
2,4,6-Trichlorophenol	U	5.0								
2,4-Dichlorophenol	U	10								
2,4-Dimethylphenol	U	5.0								
2,4-Dinitrophenol	U	5.0								
2,4-Dinitrotoluene	U	5.0								
2,6-Dinitrotoluene	U	5.0								
2-Chloronaphthalene	U	5.0								
2-Chlorophenol	U	5.0								
2-Methylnaphthalene	U	5.0								
2-Methylphenol	U	5.0								
2-Nitroaniline	U	20								
2-Nitrophenol	U	5.0								
3,3'-Dichlorobenzidine	U	5.0								
3-Nitroaniline	U	20								
4,6-Dinitro-2-methylphenol	U	20								
4-Bromophenyl phenyl ether	U	5.0								
4-Chloro-3-methylphenol	U	5.0								
4-Chloroaniline	U	20								
4-Chlorophenyl phenyl ether	U	5.0								
4-Methylphenol	U	5.0								
4-Nitroaniline	U	20								
4-Nitrophenol	U	20								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Acetophenone	U	1.0								
Anthracene	U	5.0								
Atrazine	U	1.0								
Benzaldehyde	U	1.0								
Benzo(a)anthracene	U	5.0								
Benzo(a)pyrene	U	5.0								
Benzo(b)fluoranthene	U	5.0								
Benzo(g,h,i)perylene	U	5.0								
Benzo(k)fluoranthene	U	5.0								
Bis(2-chloroethoxy)methane	U	5.0								
Bis(2-chloroethyl)ether	U	5.0								
Bis(2-chloroisopropyl)ether	U	5.0								
Bis(2-ethylhexyl)phthalate	U	5.0								
Butyl benzyl phthalate	U	5.0								
Caprolactam	U	10								
Carbazole	U	10								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54173	Instrument ID SVMS4	Method: SW8270						
Chrysene	U	5.0						
Dibenzo(a,h)anthracene	U	5.0						
Dibenzofuran	U	5.0						
Diethyl phthalate	U	20						
Dimethyl phthalate	U	20						
Di-n-butyl phthalate	U	5.0						
Di-n-octyl phthalate	U	5.0						
Fluoranthene	U	5.0						
Fluorene	U	5.0						
Hexachlorobenzene	U	5.0						
Hexachlorobutadiene	U	5.0						
Hexachlorocyclopentadiene	U	20						
Hexachloroethane	U	5.0						
Indeno(1,2,3-cd)pyrene	U	5.0						
Isophorone	U	5.0						
Naphthalene	U	5.0						
Nitrobenzene	U	5.0						
N-Nitrosodi-n-propylamine	U	5.0						
N-Nitrosodiphenylamine	U	5.0						
Pentachlorophenol	U	20						
Phenanthrene	U	5.0						
Phenol	U	5.0						
Pyrene	U	5.0						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>29.16</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>58.3</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>36.21</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>72.4</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>20.71</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>41.4</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>44.53</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>89.1</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>35.43</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>70.9</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>11.72</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>23.4</i>	<i>13-36</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54173** Instrument ID **SVMS4** Method: **SW8270**

LCS		Sample ID: SLCSW1-54173-54173				Units: µg/L		Analysis Date: 12/16/13 02:29 PM		
Client ID:		Run ID: SVMS4_131216A				SeqNo: 2582448		Prep Date: 12/16/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	13.33	5.0	20	0	66.6	50-110	0			
2,4,6-Trichlorophenol	12.31	5.0	20	0	61.6	50-115	0			
2,4-Dichlorophenol	13.07	10	20	0	65.4	50-105	0			
2,4-Dimethylphenol	12.19	5.0	20	0	61	30-110	0			
2,4-Dinitrophenol	10.44	5.0	20	0	52.2	15-140	0			
2,4-Dinitrotoluene	15.36	5.0	20	0	76.8	50-120	0			
2,6-Dinitrotoluene	15.63	5.0	20	0	78.2	50-115	0			
2-Chloronaphthalene	14.19	5.0	20	0	71	50-105	0			
2-Chlorophenol	13.14	5.0	20	0	65.7	35-105	0			
2-Methylnaphthalene	13.88	5.0	20	0	69.4	45-105	0			
2-Methylphenol	13.37	5.0	20	0	66.8	40-110	0			
2-Nitroaniline	14.83	20	20	0	74.2	50-115	0			J
2-Nitrophenol	13.52	5.0	20	0	67.6	40-115	0			
3-Nitroaniline	12.45	20	20	0	62.2	20-125	0			J
4,6-Dinitro-2-methylphenol	12.28	20	20	0	61.4	40-130	0			J
4-Bromophenyl phenyl ether	15.34	5.0	20	0	76.7	50-115	0			
4-Chloro-3-methylphenol	13.27	5.0	20	0	66.4	45-110	0			
4-Chloroaniline	19.03	20	20	0	95.2	15-110	0			J
4-Chlorophenyl phenyl ether	13.72	5.0	20	0	68.6	50-110	0			
4-Methylphenol	9.38	5.0	20	0	46.9	30-110	0			
4-Nitroaniline	15.44	20	20	0	77.2	35-150	0			J
4-Nitrophenol	4.57	20	20	0	22.8	1-58	0			J
Acenaphthene	13.86	5.0	20	0	69.3	45-110	0			
Acenaphthylene	14.62	5.0	20	0	73.1	50-105	0			
Anthracene	15.29	5.0	20	0	76.4	55-110	0			
Benzo(a)pyrene	16.22	5.0	20	0	81.1	55-110	0			
Benzo(b)fluoranthene	15.41	5.0	20	0	77	45-120	0			
Benzo(g,h,i)perylene	16.65	5.0	20	0	83.2	40-125	0			
Benzo(k)fluoranthene	16.54	5.0	20	0	82.7	45-125	0			
Bis(2-chloroethoxy)methane	13.98	5.0	20	0	69.9	45-105	0			
Bis(2-chloroethyl)ether	14.01	5.0	20	0	70	35-110	0			
Bis(2-chloroisopropyl)ether	12.94	5.0	20	0	64.7	25-130	0			
Bis(2-ethylhexyl)phthalate	17.61	5.0	20	0	88	40-125	0			
Carbazole	22.7	10	20	0	114	50-150	0			
Chrysene	15.39	5.0	20	0	77	55-110	0			
Dibenzofuran	14.38	5.0	20	0	71.9	55-105	0			
Fluoranthene	16.75	5.0	20	0	83.8	55-115	0			
Fluorene	14.53	5.0	20	0	72.6	50-110	0			
Hexachlorobenzene	14.55	5.0	20	0	72.8	50-110	0			
Hexachlorobutadiene	13.54	5.0	20	0	67.7	25-105	0			
Hexachlorocyclopentadiene	7.22	20	20	0	36.1	25-105	0			J
Hexachloroethane	13.52	5.0	20	0	67.6	30-95	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54173		Instrument ID SVMS4		Method: SW8270				
Indeno(1,2,3-cd)pyrene	16.76	5.0	20	0	83.8	45-125	0	
Isophorone	14.37	5.0	20	0	71.8	50-110	0	
Naphthalene	13.47	5.0	20	0	67.4	40-100	0	
Nitrobenzene	14.54	5.0	20	0	72.7	45-110	0	
N-Nitrosodi-n-propylamine	14.52	5.0	20	0	72.6	35-130	0	
N-Nitrosodiphenylamine	16.7	5.0	20	0	83.5	50-110	0	
Pentachlorophenol	10.64	20	20	0	53.2	40-115	0	J
Phenanthrene	16.9	5.0	20	0	84.5	50-115	0	
Phenol	5.57	5.0	20	0	27.8	12-43	0	
Pyrene	15.75	5.0	20	0	78.8	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>31.84</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>63.7</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>34.63</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>69.3</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>19.33</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>38.7</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>40.8</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>81.6</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>33.77</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>67.5</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>11.67</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>23.3</i>	<i>13-36</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54173** Instrument ID **SVMS4** Method: **SW8270**

MS				Sample ID: 1312641-01A MS			Units: µg/L		Analysis Date: 12/16/13 03:32 PM	
Client ID:				Run ID: SVMS4_131216A			SeqNo: 2582454		Prep Date: 12/16/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	279	100	400	0	69.8	50-110	0			
2,4,6-Trichlorophenol	243.4	100	400	0	60.8	50-115	0			
2,4-Dichlorophenol	267.4	200	400	0	66.8	50-105	0			
2,4-Dimethylphenol	259.4	100	400	0	64.8	30-110	0			
2,4-Dinitrophenol	219.6	100	400	0	54.9	15-140	0			
2,4-Dinitrotoluene	312.6	100	400	0	78.2	50-120	0			
2,6-Dinitrotoluene	318.4	100	400	0	79.6	50-115	0			
2-Chloronaphthalene	291.8	100	400	0	73	50-105	0			
2-Chlorophenol	274	100	400	0	68.5	35-105	0			
2-Methylnaphthalene	286.4	100	400	0	71.6	45-105	0			
2-Methylphenol	279.4	100	400	0	69.8	40-110	0			
2-Nitroaniline	301	400	400	0	75.2	50-115	0			J
2-Nitrophenol	277.2	100	400	0	69.3	40-115	0			
3-Nitroaniline	262	400	400	0	65.5	20-125	0			J
4,6-Dinitro-2-methylphenol	239	400	400	0	59.8	40-130	0			J
4-Bromophenyl phenyl ether	309.6	100	400	0	77.4	50-115	0			
4-Chloro-3-methylphenol	272.8	100	400	0	68.2	45-110	0			
4-Chloroaniline	314	400	400	0	78.5	15-110	0			J
4-Chlorophenyl phenyl ether	281.6	100	400	0	70.4	50-110	0			
4-Methylphenol	191.4	100	400	0	47.8	30-110	0			
4-Nitroaniline	314	400	400	0	78.5	35-150	0			J
4-Nitrophenol	111.8	400	400	0	28	1-58	0			J
Acenaphthene	285.6	100	400	0	71.4	45-110	0			
Acenaphthylene	301	100	400	0	75.2	50-105	0			
Anthracene	310	100	400	3.4	76.6	55-110	0			
Benzo(a)pyrene	326.6	100	400	0	81.6	55-110	0			
Benzo(b)fluoranthene	311.2	100	400	0	77.8	45-120	0			
Benzo(g,h,i)perylene	337	100	400	0	84.2	40-125	0			
Benzo(k)fluoranthene	339	100	400	0	84.8	45-125	0			
Bis(2-chloroethoxy)methane	287.4	100	400	0	71.8	45-105	0			
Bis(2-chloroethyl)ether	291	100	400	0	72.8	35-110	0			
Bis(2-chloroisopropyl)ether	266.8	100	400	0	66.7	25-130	0			
Bis(2-ethylhexyl)phthalate	363.4	100	400	0	90.8	40-125	0			
Carbazole	446.2	200	400	0	112	50-150	0			
Chrysene	313.6	100	400	0	78.4	55-110	0			
Dibenzofuran	294	100	400	0	73.5	55-105	0			
Fluoranthene	337.6	100	400	0	84.4	55-115	0			
Fluorene	300	100	400	0	75	50-110	0			
Hexachlorobenzene	294.8	100	400	0	73.7	50-110	0			
Hexachlorobutadiene	276.6	100	400	0	69.2	25-105	0			
Hexachlorocyclopentadiene	158.6	400	400	0	39.6	25-105	0			J
Hexachloroethane	275.2	100	400	0	68.8	30-95	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54173		Instrument ID SVMS4		Method: SW8270			
Indeno(1,2,3-cd)pyrene	340.6	100	400	0	85.2	45-125	0
Isophorone	294.4	100	400	0	73.6	50-110	0
Naphthalene	284.8	100	400	7.2	69.4	40-100	0
Nitrobenzene	298.4	100	400	0	74.6	45-110	0
N-Nitrosodi-n-propylamine	299.2	100	400	0	74.8	35-130	0
N-Nitrosodiphenylamine	338.8	100	400	0	84.7	50-110	0
Pentachlorophenol	228.8	400	400	0	57.2	40-115	0
Phenanthrene	347	100	400	0	86.8	50-115	0
Phenol	105.4	100	400	0	26.4	12-43	0
Pyrene	321.8	100	400	0	80.4	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>651</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>65.1</i>	<i>38-115</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>704</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>70.4</i>	<i>32-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>390.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>39.1</i>	<i>22-59</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>825.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>82.6</i>	<i>23-112</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>685.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>68.6</i>	<i>31-93</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>222</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>22.2</i>	<i>13-36</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54173** Instrument ID **SVMS4** Method: **SW8270**

MSD				Sample ID: 1312641-01A MSD			Units: µg/L		Analysis Date: 12/16/13 04:03 PM		
Client ID:		Run ID: SVMS4_131216A			SeqNo: 2582457		Prep Date: 12/16/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
2,4,5-Trichlorophenol	288.6	100	400	0	72.2	50-110	279	3.38	30		
2,4,6-Trichlorophenol	251	100	400	0	62.8	50-115	243.4	3.07	30		
2,4-Dichlorophenol	276.4	200	400	0	69.1	50-105	267.4	3.31	30		
2,4-Dimethylphenol	272	100	400	0	68	30-110	259.4	4.74	30		
2,4-Dinitrophenol	234	100	400	0	58.5	15-140	219.6	6.35	30		
2,4-Dinitrotoluene	319.4	100	400	0	79.8	50-120	312.6	2.15	30		
2,6-Dinitrotoluene	329.2	100	400	0	82.3	50-115	318.4	3.34	30		
2-Chloronaphthalene	300.2	100	400	0	75	50-105	291.8	2.84	30		
2-Chlorophenol	284.6	100	400	0	71.2	35-105	274	3.8	30		
2-Methylnaphthalene	294.2	100	400	0	73.6	45-105	286.4	2.69	30		
2-Methylphenol	293.8	100	400	0	73.4	40-110	279.4	5.02	30		
2-Nitroaniline	313	400	400	0	78.2	50-115	301	0	30	J	
2-Nitrophenol	285.8	100	400	0	71.4	40-115	277.2	3.06	30		
3-Nitroaniline	256.6	400	400	0	64.2	20-125	262	0	30	J	
4,6-Dinitro-2-methylphenol	257.2	400	400	0	64.3	40-130	239	0	30	J	
4-Bromophenyl phenyl ether	317.2	100	400	0	79.3	50-115	309.6	2.43	30		
4-Chloro-3-methylphenol	284.8	100	400	0	71.2	45-110	272.8	4.3	30		
4-Chloroaniline	344.2	400	400	0	86	15-110	314	0	30	J	
4-Chlorophenyl phenyl ether	292.4	100	400	0	73.1	50-110	281.6	3.76	30		
4-Methylphenol	202.4	100	400	0	50.6	30-110	191.4	5.59	30		
4-Nitroaniline	315.2	400	400	0	78.8	35-150	314	0	30	J	
4-Nitrophenol	113.8	400	400	0	28.4	1-58	111.8	0	0	J	
Acenaphthene	293.4	100	400	0	73.4	45-110	285.6	2.69	30		
Acenaphthylene	310	100	400	0	77.5	50-105	301	2.95	30		
Anthracene	316.6	100	400	3.4	78.3	55-110	310	2.11	30		
Benzo(a)pyrene	337.8	100	400	0	84.4	55-110	326.6	3.37	30		
Benzo(b)fluoranthene	323.6	100	400	0	80.9	45-120	311.2	3.91	30		
Benzo(g,h,i)perylene	347.4	100	400	0	86.8	40-125	337	3.04	30		
Benzo(k)fluoranthene	345	100	400	0	86.2	45-125	339	1.75	30		
Bis(2-chloroethoxy)methane	304.6	100	400	0	76.2	45-105	287.4	5.81	30		
Bis(2-chloroethyl)ether	303.8	100	400	0	76	35-110	291	4.3	30		
Bis(2-chloroisopropyl)ether	276	100	400	0	69	25-130	266.8	3.39	30		
Bis(2-ethylhexyl)phthalate	372.8	100	400	0	93.2	40-125	363.4	2.55	30		
Carbazole	464.6	200	400	0	116	50-150	446.2	4.04	30		
Chrysene	320.2	100	400	0	80	55-110	313.6	2.08	30		
Dibenzofuran	302.4	100	400	0	75.6	55-105	294	2.82	30		
Fluoranthene	346.8	100	400	0	86.7	55-115	337.6	2.69	30		
Fluorene	310	100	400	0	77.5	50-110	300	3.28	30		
Hexachlorobenzene	304.8	100	400	0	76.2	50-110	294.8	3.34	30		
Hexachlorobutadiene	287.2	100	400	0	71.8	25-105	276.6	3.76	30		
Hexachlorocyclopentadiene	164.6	400	400	0	41.2	25-105	158.6	0	30	J	
Hexachloroethane	289.6	100	400	0	72.4	30-95	275.2	5.1	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54173		Instrument ID SVMS4		Method: SW8270						
Indeno(1,2,3-cd)pyrene	350.8	100	400	0	87.7	45-125	340.6	2.95	30	
Isophorone	317.8	100	400	0	79.4	50-110	294.4	7.64	30	
Naphthalene	290.8	100	400	7.2	70.9	40-100	284.8	2.08	30	
Nitrobenzene	313.6	100	400	0	78.4	45-110	298.4	4.97	30	
N-Nitrosodi-n-propylamine	311.2	100	400	0	77.8	35-130	299.2	3.93	30	
N-Nitrosodiphenylamine	349.6	100	400	0	87.4	50-110	338.8	3.14	30	
Pentachlorophenol	247	400	400	0	61.8	40-115	228.8	0	30	J
Phenanthrene	355.4	100	400	0	88.8	50-115	347	2.39	30	
Phenol	115.2	100	400	0	28.8	12-43	105.4	8.88	30	
Pyrene	327.8	100	400	0	82	50-130	321.8	1.85	30	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>657.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>65.8</i>	<i>38-115</i>	<i>651</i>	<i>1.04</i>	<i>40</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>717.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>71.8</i>	<i>32-100</i>	<i>704</i>	<i>1.94</i>	<i>40</i>	
<i>Surr: 2-Fluorophenol</i>	<i>420.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>42.1</i>	<i>22-59</i>	<i>390.8</i>	<i>7.35</i>	<i>40</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>828.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>82.8</i>	<i>23-112</i>	<i>825.8</i>	<i>0.29</i>	<i>40</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>731</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>73.1</i>	<i>31-93</i>	<i>685.6</i>	<i>6.41</i>	<i>40</i>	
<i>Surr: Phenol-d6</i>	<i>241.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>24.2</i>	<i>13-36</i>	<i>222</i>	<i>8.54</i>	<i>40</i>	

The following samples were analyzed in this batch:

1312747-02B	1312747-05B	1312747-07B
1312747-09B	1312747-12B	1312747-13B
1312747-15B	1312747-16B	1312747-17B
1312747-18B	1312747-20B	1312747-22B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54309** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKS1-54309-54309				Units: µg/Kg		Analysis Date: 12/20/13 12:20 PM		
Client ID:		Run ID: SVMS4_131220A		SeqNo: 2589103		Prep Date: 12/19/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	330								
2,4,5-Trichlorophenol	U	160								
2,4,6-Trichlorophenol	U	160								
2,4-Dichlorophenol	U	160								
2,4-Dimethylphenol	U	330								
2,4-Dinitrophenol	U	660								
2,4-Dinitrotoluene	U	160								
2,6-Dinitrotoluene	U	160								
2-Chloronaphthalene	U	6.7								
2-Chlorophenol	U	160								
2-Methylnaphthalene	U	6.7								
2-Methylphenol	U	160								
2-Nitroaniline	U	660								
2-Nitrophenol	U	160								
3,3'-Dichlorobenzidine	U	660								
3-Nitroaniline	U	660								
4,6-Dinitro-2-methylphenol	U	330								
4-Bromophenyl phenyl ether	U	160								
4-Chloro-3-methylphenol	U	160								
4-Chloroaniline	U	660								
4-Chlorophenyl phenyl ether	U	160								
4-Methylphenol	U	160								
4-Nitroaniline	U	660								
4-Nitrophenol	U	660								
Acenaphthene	U	6.7								
Acenaphthylene	U	6.7								
Acetophenone	U	330								
Anthracene	U	6.7								
Atrazine	U	330								
Benzaldehyde	U	330								
Benzo(a)anthracene	U	6.7								
Benzo(a)pyrene	U	6.7								
Benzo(b)fluoranthene	U	6.7								
Benzo(g,h,i)perylene	U	6.7								
Benzo(k)fluoranthene	U	6.7								
Bis(2-chloroethoxy)methane	U	160								
Bis(2-chloroethyl)ether	U	160								
Bis(2-chloroisopropyl)ether	U	160								
Bis(2-ethylhexyl)phthalate	U	330								
Butyl benzyl phthalate	U	160								
Caprolactam	U	330								
Carbazole	U	160								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

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Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54309	Instrument ID SVMS4	Method: SW8270						
Chrysene	U	6.7						
Dibenzo(a,h)anthracene	U	6.7						
Dibenzofuran	U	160						
Diethyl phthalate	U	330						
Dimethyl phthalate	U	330						
Di-n-butyl phthalate	U	330						
Di-n-octyl phthalate	U	160						
Fluoranthene	U	6.7						
Fluorene	U	6.7						
Hexachlorobenzene	U	160						
Hexachlorobutadiene	U	160						
Hexachlorocyclopentadiene	U	330						
Hexachloroethane	U	160						
Indeno(1,2,3-cd)pyrene	U	6.7						
Isophorone	U	160						
Naphthalene	U	6.7						
Nitrobenzene	U	160						
N-Nitrosodi-n-propylamine	U	160						
N-Nitrosodiphenylamine	U	160						
Pentachlorophenol	U	330						
Phenanthrene	U	6.7						
Phenol	U	160						
Pyrene	U	6.7						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1161</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>69.7</i>	<i>34-140</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>1365</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>81.9</i>	<i>12-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>1471</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>88.3</i>	<i>33-117</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>1654</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>99.2</i>	<i>25-137</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>1336</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>80.2</i>	<i>37-107</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>1340</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>80.4</i>	<i>40-106</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54309** Instrument ID **SVMS4** Method: **SW8270**

LCS		Sample ID: SLCSS1-54309-54309				Units: µg/Kg		Analysis Date: 12/20/13 11:49 AM		
Client ID:		Run ID: SVMS4_131220A				SeqNo: 2589102		Prep Date: 12/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	543.3	160	666.7	0	81.5	50-110	0			
2,4,6-Trichlorophenol	552.3	160	666.7	0	82.8	45-110	0			
2,4-Dichlorophenol	567.7	160	666.7	0	85.1	45-110	0			
2,4-Dimethylphenol	538.7	330	666.7	0	80.8	30-105	0			
2,4-Dinitrophenol	275.7	660	666.7	0	41.3	15-130	0			J
2,4-Dinitrotoluene	609.7	160	666.7	0	91.4	50-115	0			
2,6-Dinitrotoluene	617.3	160	666.7	0	92.6	50-110	0			
2-Chloronaphthalene	592	6.7	666.7	0	88.8	45-105	0			
2-Chlorophenol	650.3	160	666.7	0	97.5	45-105	0			
2-Methylnaphthalene	475	6.7	666.7	0	71.2	45-105	0			
2-Methylphenol	591.3	160	666.7	0	88.7	40-105	0			
2-Nitroaniline	608.3	660	666.7	0	91.2	45-120	0			J
2-Nitrophenol	600.7	160	666.7	0	90.1	40-110	0			
3-Nitroaniline	363.3	660	666.7	0	54.5	25-150	0			J
4-Bromophenyl phenyl ether	575.7	160	666.7	0	86.3	45-115	0			
4-Chloro-3-methylphenol	616.7	160	666.7	0	92.5	45-115	0			
4-Chloroaniline	679.3	660	666.7	0	102	15-110	0			
4-Chlorophenyl phenyl ether	580	160	666.7	0	87	45-110	0			
4-Methylphenol	546.7	160	666.7	0	82	40-105	0			
4-Nitroaniline	435	660	666.7	0	65.2	35-150	0			J
4-Nitrophenol	416.7	660	666.7	0	62.5	15-140	0			J
Acenaphthene	566	6.7	666.7	0	84.9	45-110	0			
Acenaphthylene	577.7	6.7	666.7	0	86.6	45-105	0			
Anthracene	612	6.7	666.7	0	91.8	55-105	0			
Benzo(a)anthracene	688.7	6.7	666.7	0	103	50-110	0			
Benzo(a)pyrene	654.3	6.7	666.7	0	98.1	50-110	0			
Benzo(b)fluoranthene	643.3	6.7	666.7	0	96.5	45-115	0			
Benzo(g,h,i)perylene	587.7	6.7	666.7	0	88.1	40-125	0			
Benzo(k)fluoranthene	660.3	6.7	666.7	0	99	45-115	0			
Bis(2-chloroethoxy)methane	581.3	160	666.7	0	87.2	45-110	0			
Bis(2-chloroethyl)ether	544	160	666.7	0	81.6	40-105	0			
Bis(2-chloroisopropyl)ether	557.3	160	666.7	0	83.6	20-115	0			
Bis(2-ethylhexyl)phthalate	660	330	666.7	0	99	45-125	0			
Butyl benzyl phthalate	637	160	666.7	0	95.5	50-125	0			
Carbazole	619	160	666.7	0	92.8	50-150	0			
Chrysene	629.7	6.7	666.7	0	94.4	55-110	0			
Dibenzo(a,h)anthracene	685	6.7	666.7	0	103	40-125	0			
Dibenzofuran	591	160	666.7	0	88.6	50-105	0			
Diethyl phthalate	601.3	330	666.7	0	90.2	50-115	0			
Dimethyl phthalate	576.7	330	666.7	0	86.5	50-110	0			
Di-n-butyl phthalate	622	330	666.7	0	93.3	55-110	0			
Di-n-octyl phthalate	644	160	666.7	0	96.6	40-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54309		Instrument ID SVMS4		Method: SW8270			
Fluoranthene	640.3	6.7	666.7	0	96	55-115	0
Fluorene	612.3	6.7	666.7	0	91.8	50-110	0
Hexachlorobenzene	571	160	666.7	0	85.6	45-120	0
Hexachlorobutadiene	577.7	160	666.7	0	86.6	40-115	0
Hexachlorocyclopentadiene	382	330	666.7	0	57.3	40-115	0
Hexachloroethane	567.7	160	666.7	0	85.1	35-110	0
Indeno(1,2,3-cd)pyrene	656.3	6.7	666.7	0	98.4	40-120	0
Isophorone	565.3	160	666.7	0	84.8	45-110	0
Naphthalene	567	6.7	666.7	0	85	40-105	0
Nitrobenzene	627.7	160	666.7	0	94.1	40-115	0
N-Nitrosodi-n-propylamine	612.3	160	666.7	0	91.8	40-115	0
N-Nitrosodiphenylamine	682.3	160	666.7	0	102	50-115	0
Pentachlorophenol	455.3	330	666.7	0	68.3	25-120	0
Phenanthrene	589.7	6.7	666.7	0	88.4	50-110	0
Phenol	623	160	666.7	0	93.4	40-100	0
Pyrene	614.3	6.7	666.7	0	92.1	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1425</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>85.5</i>	<i>34-140</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>1391</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>83.4</i>	<i>12-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>1496</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>89.8</i>	<i>33-117</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>1674</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>100</i>	<i>25-137</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>1401</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>84</i>	<i>37-107</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>1393</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>83.6</i>	<i>40-106</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54309** Instrument ID **SVMS4** Method: **SW8270**

MS				Sample ID: 1312949-06C MS			Units: µg/Kg		Analysis Date: 12/20/13 04:30 PM	
Client ID:				Run ID: SVMS4_131220A			SeqNo: 2592375		Prep Date: 12/19/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1603	440	1830	0	87.6	50-110	0			
2,4,6-Trichlorophenol	1545	440	1830	0	84.4	45-110	0			
2,4-Dichlorophenol	1425	440	1830	0	77.8	45-110	0			
2,4-Dimethylphenol	1560	910	1830	0	85.2	30-105	0			
2,4-Dinitrophenol	953.4	1,800	1830	0	52.1	15-130	0			J
2,4-Dinitrotoluene	1571	440	1830	0	85.8	50-115	0			
2,6-Dinitrotoluene	1554	440	1830	0	84.9	50-110	0			
2-Chloronaphthalene	1448	18	1830	0	79.1	45-105	0			
2-Chlorophenol	1619	440	1830	0	88.4	45-105	0			
2-Methylnaphthalene	1157	18	1830	0	63.2	45-105	0			
2-Methylphenol	1487	440	1830	0	81.2	40-105	0			
2-Nitroaniline	1554	1,800	1830	0	84.9	45-120	0			J
2-Nitrophenol	1467	440	1830	0	80.1	40-110	0			
3-Nitroaniline	2017	1,800	1830	0	110	25-110	0			S
4-Bromophenyl phenyl ether	1591	440	1830	0	86.9	45-115	0			
4-Chloro-3-methylphenol	1591	440	1830	0	86.9	45-115	0			
4-Chloroaniline	1306	1,800	1830	0	71.3	15-110	0			J
4-Chlorophenyl phenyl ether	1529	440	1830	0	83.5	45-110	0			
4-Methylphenol	1373	440	1830	0	75	40-105	0			
4-Nitroaniline	2419	1,800	1830	0	132	35-150	0			
4-Nitrophenol	1007	1,800	1830	0	55	15-140	0			J
Acenaphthene	1431	18	1830	0	78.2	45-110	0			
Acenaphthylene	1454	18	1830	0	79.4	45-105	0			
Anthracene	1647	18	1830	0	90	55-105	0			
Benzo(a)anthracene	1877	18	1830	0	103	50-110	0			
Benzo(a)pyrene	1682	18	1830	0	91.9	50-110	0			
Benzo(b)fluoranthene	1572	18	1830	0	85.9	45-115	0			
Benzo(g,h,i)perylene	1848	18	1830	0	101	40-125	0			
Benzo(k)fluoranthene	1781	18	1830	0	97.3	45-115	0			
Bis(2-chloroethoxy)methane	1427	440	1830	0	78	45-110	0			
Bis(2-chloroethyl)ether	1374	440	1830	0	75.1	40-105	0			
Bis(2-chloroisopropyl)ether	1325	440	1830	0	72.4	20-115	0			
Bis(2-ethylhexyl)phthalate	1893	910	1830	0	103	45-125	0			
Butyl benzyl phthalate	1735	440	1830	0	94.8	50-125	0			
Carbazole	1680	440	1830	0	91.8	50-150	0			
Chrysene	1732	18	1830	0	94.6	55-110	0			
Dibenzo(a,h)anthracene	1840	18	1830	0	101	40-125	0			
Dibenzofuran	1512	440	1830	0	82.6	50-105	0			
Diethyl phthalate	1588	910	1830	0	86.7	50-115	0			
Dimethyl phthalate	1492	910	1830	0	81.5	50-110	0			
Di-n-butyl phthalate	1680	910	1830	0	91.8	55-110	0			
Di-n-octyl phthalate	1682	440	1830	0	91.9	40-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54309		Instrument ID SVMS4		Method: SW8270			
Fluoranthene	1740	18	1830	0	95.1	55-115	0
Fluorene	1609	18	1830	0	87.9	50-110	0
Hexachlorobenzene	1652	440	1830	0	90.3	45-120	0
Hexachlorobutadiene	1370	440	1830	0	74.8	40-115	0
Hexachlorocyclopentadiene	574.6	910	1830	0	31.4	40-115	0 JS
Hexachloroethane	1330	440	1830	0	72.7	35-110	0
Indeno(1,2,3-cd)pyrene	1878	18	1830	0	103	40-120	0
Isophorone	1369	440	1830	0	74.8	45-110	0
Naphthalene	1378	18	1830	0	75.3	40-105	0
Nitrobenzene	1526	440	1830	0	83.4	40-115	0
N-Nitrosodi-n-propylamine	1487	440	1830	0	81.2	40-115	0
N-Nitrosodiphenylamine	1853	440	1830	0	101	50-115	0
Pentachlorophenol	2009	910	1830	0	110	25-120	0
Phenanthrene	1592	18	1830	0	87	50-110	0
Phenol	1558	440	1830	0	85.1	40-100	0
Pyrene	1661	18	1830	0	90.7	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>4121</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>90.1</i>	<i>34-140</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>3455</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>75.5</i>	<i>12-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>3654</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>79.9</i>	<i>33-117</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>4573</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>100</i>	<i>25-137</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>3337</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>72.9</i>	<i>37-107</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>3461</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>75.6</i>	<i>40-106</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54309** Instrument ID **SVMS4** Method: **SW8270**

MSD				Sample ID: 1312949-06C MSD				Units: µg/Kg		Analysis Date: 12/20/13 05:02 PM	
Client ID:		Run ID: SVMS4_131220A			SeqNo: 2592376		Prep Date: 12/19/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
2,4,5-Trichlorophenol	1522	440	1840	0	82.7	50-110	1603	5.2	30		
2,4,6-Trichlorophenol	1513	440	1840	0	82.2	45-110	1545	2.09	30		
2,4-Dichlorophenol	1422	440	1840	0	77.3	45-110	1425	0.158	30		
2,4-Dimethylphenol	1582	910	1840	0	86	30-105	1560	1.43	30		
2,4-Dinitrophenol	761.8	1,800	1840	0	41.4	15-130	953.4	0	30	J	
2,4-Dinitrotoluene	1555	440	1840	0	84.5	50-115	1571	1.03	30		
2,6-Dinitrotoluene	1528	440	1840	0	83	50-110	1554	1.65	30		
2-Chloronaphthalene	1462	18	1840	0	79.4	45-105	1448	0.992	30		
2-Chlorophenol	1665	440	1840	0	90.5	45-105	1619	2.84	30		
2-Methylnaphthalene	1160	18	1840	0	63	45-105	1157	0.313	30		
2-Methylphenol	1551	440	1840	0	84.3	40-105	1487	4.23	30		
2-Nitroaniline	1605	1,800	1840	0	87.2	45-120	1554	0	30	J	
2-Nitrophenol	1493	440	1840	0	81.1	40-110	1467	1.79	30		
3-Nitroaniline	2306	1,800	1840	0	125	25-110	2017	13.4	30	S	
4-Bromophenyl phenyl ether	1575	440	1840	0	85.6	45-115	1591	1.01	30		
4-Chloro-3-methylphenol	1609	440	1840	0	87.4	45-115	1591	1.12	30		
4-Chloroaniline	1674	1,800	1840	0	90.9	15-110	1306	0	30	J	
4-Chlorophenyl phenyl ether	1530	440	1840	0	83.1	45-110	1529	0.0706	30		
4-Methylphenol	1438	440	1840	0	78.1	40-105	1373	4.6	30		
4-Nitroaniline	2694	1,800	1840	0	146	35-150	2419	10.7	30		
4-Nitrophenol	1024	1,800	1840	0	55.6	15-140	1007	0	30	J	
Acenaphthene	1435	18	1840	0	78	45-110	1431	0.294	30		
Acenaphthylene	1456	18	1840	0	79.1	45-105	1454	0.172	30		
Anthracene	1621	18	1840	0	88.1	55-105	1647	1.58	30		
Benzo(a)anthracene	1829	18	1840	0	99.4	50-110	1877	2.57	30		
Benzo(a)pyrene	1633	18	1840	0	88.7	50-110	1682	2.94	30		
Benzo(b)fluoranthene	1557	18	1840	0	84.6	45-115	1572	0.974	30		
Benzo(g,h,i)perylene	1752	18	1840	0	95.2	40-125	1848	5.36	30		
Benzo(k)fluoranthene	1732	18	1840	0	94.1	45-115	1781	2.74	30		
Bis(2-chloroethoxy)methane	1452	440	1840	0	78.9	45-110	1427	1.7	30		
Bis(2-chloroethyl)ether	1353	440	1840	0	73.5	40-105	1374	1.53	30		
Bis(2-chloroisopropyl)ether	1395	440	1840	0	75.8	20-115	1325	5.14	30		
Bis(2-ethylhexyl)phthalate	1804	910	1840	0	98	45-125	1893	4.81	30		
Butyl benzyl phthalate	1697	440	1840	0	92.2	50-125	1735	2.18	30		
Carbazole	1676	440	1840	0	91.1	50-150	1680	0.215	30		
Chrysene	1687	18	1840	0	91.7	55-110	1732	2.62	30		
Dibenzo(a,h)anthracene	1767	18	1840	0	96	40-125	1840	4.03	30		
Dibenzofuran	1505	440	1840	0	81.8	50-105	1512	0.423	30		
Diethyl phthalate	1574	910	1840	0	85.5	50-115	1588	0.842	30		
Dimethyl phthalate	1476	910	1840	0	80.2	50-110	1492	1.12	30		
Di-n-butyl phthalate	1651	910	1840	0	89.7	55-110	1680	1.76	30		
Di-n-octyl phthalate	1647	440	1840	0	89.5	40-130	1682	2.1	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54309		Instrument ID SVMS4		Method: SW8270					
Fluoranthene	1709	18	1840	0	92.8	55-115	1740	1.84	30
Fluorene	1609	18	1840	0	87.4	50-110	1609	0.0373	30
Hexachlorobenzene	1639	440	1840	0	89	45-120	1652	0.843	30
Hexachlorobutadiene	1356	440	1840	0	73.7	40-115	1370	0.998	30
Hexachlorocyclopentadiene	350.5	910	1840	0	19	40-115	574.6	0	30 JS
Hexachloroethane	1309	440	1840	0	71.1	35-110	1330	1.6	30
Indeno(1,2,3-cd)pyrene	1788	18	1840	0	97.1	40-120	1878	4.91	30
Isophorone	1410	440	1840	0	76.6	45-110	1369	2.93	30
Naphthalene	1394	18	1840	0	75.7	40-105	1378	1.15	30
Nitrobenzene	1555	440	1840	0	84.5	40-115	1526	1.86	30
N-Nitrosodi-n-propylamine	1554	440	1840	0	84.4	40-115	1487	4.41	30
N-Nitrosodiphenylamine	1881	440	1840	0	102	50-115	1853	1.48	30
Pentachlorophenol	1739	910	1840	0	94.5	25-120	2009	14.4	30
Phenanthrene	1568	18	1840	0	85.2	50-110	1592	1.54	30
Phenol	1598	440	1840	0	86.8	40-100	1558	2.53	30
Pyrene	1622	18	1840	0	88.1	45-125	1661	2.36	30
<i>Surr: 2,4,6-Tribromophenol</i>	<i>4036</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>87.7</i>	<i>34-140</i>	<i>4121</i>	<i>2.08</i>	<i>40</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>3497</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>76</i>	<i>12-100</i>	<i>3455</i>	<i>1.21</i>	<i>40</i>
<i>Surr: 2-Fluorophenol</i>	<i>3769</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>81.9</i>	<i>33-117</i>	<i>3654</i>	<i>3.12</i>	<i>40</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>4459</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>96.9</i>	<i>25-137</i>	<i>4573</i>	<i>2.52</i>	<i>40</i>
<i>Surr: Nitrobenzene-d5</i>	<i>3449</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>75</i>	<i>37-107</i>	<i>3337</i>	<i>3.31</i>	<i>40</i>
<i>Surr: Phenol-d6</i>	<i>3570</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>77.6</i>	<i>40-106</i>	<i>3461</i>	<i>3.11</i>	<i>40</i>

The following samples were analyzed in this batch: | 1312747-19A | 1312747-21A |

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54220** Instrument ID **VMS8** Method: **SW8260B**

MBLK		Sample ID: MBLK-54220-54220				Units: µg/Kg		Analysis Date: 12/17/13 02:11 PM		
Client ID:		Run ID: VMS8_131217A				SeqNo: 2584249		Prep Date: 12/09/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	30								
1,1,2,2-Tetrachloroethane	U	30								
1,1,2-Trichloroethane	U	30								
1,1,2-Trichlorotrifluoroethane	U	30								
1,1-Dichloroethane	U	30								
1,1-Dichloroethene	U	30								
1,2,4-Trichlorobenzene	U	30								
1,2-Dibromo-3-chloropropane	U	30								
1,2-Dibromoethane	U	30								
1,2-Dichlorobenzene	U	30								
1,2-Dichloroethane	U	30								
1,2-Dichloropropane	U	30								
1,3-Dichlorobenzene	U	30								
1,4-Dichlorobenzene	U	30								
2-Butanone	U	200								
2-Hexanone	U	30								
4-Methyl-2-pentanone	U	30								
Acetone	U	100								
Benzene	U	30								
Bromodichloromethane	U	30								
Bromoform	U	30								
Bromomethane	U	75								
Carbon disulfide	U	30								
Carbon tetrachloride	U	30								
Chlorobenzene	U	30								
Chloroethane	U	100								
Chloroform	U	30								
Chloromethane	U	100								
cis-1,2-Dichloroethene	U	30								
cis-1,3-Dichloropropene	U	30								
Cyclohexane	U	30								
Dibromochloromethane	U	30								
Dichlorodifluoromethane	U	30								
Ethylbenzene	U	30								
Isopropylbenzene	U	30								
Methyl acetate	U	200								
Methyl tert-butyl ether	U	30								
Methylcyclohexane	U	30								
Methylene chloride	U	30								
Styrene	U	30								
Tetrachloroethene	U	30								
Toluene	U	30								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54220	Instrument ID VMS8	Method: SW8260B
trans-1,2-Dichloroethene	U	30
trans-1,3-Dichloropropene	U	30
Trichloroethene	U	30
Trichlorofluoromethane	U	30
Vinyl chloride	U	30
Xylenes, Total	U	90
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>961.5</i>	<i>0 1000 0 96.2 70-130 0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>983</i>	<i>0 1000 0 98.3 70-130 0</i>
<i>Surr: Dibromofluoromethane</i>	<i>971.5</i>	<i>0 1000 0 97.2 70-130 0</i>
<i>Surr: Toluene-d8</i>	<i>983</i>	<i>0 1000 0 98.3 70-130 0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54220** Instrument ID **VMS8** Method: **SW8260B**

LCS Sample ID: LCS-54220-54220				Units: µg/Kg			Analysis Date: 12/17/13 12:33 PM			
Client ID:		Run ID: VMS8_131217A		SeqNo: 2584248		Prep Date: 12/09/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	988	30	1000	0	98.8	70-135	0			
1,1,2,2-Tetrachloroethane	1020	30	1000	0	102	55-130	0			
1,1,2-Trichloroethane	980	30	1000	0	98	60-125	0			
1,1-Dichloroethane	956.5	30	1000	0	95.6	75-125	0			
1,1-Dichloroethene	1020	30	1000	0	102	65-135	0			
1,2,4-Trichlorobenzene	982	30	1000	0	98.2	65-130	0			
1,2-Dibromo-3-chloropropane	939	30	1000	0	93.9	40-135	0			
1,2-Dibromoethane	1084	30	1000	0	108	70-125	0			
1,2-Dichlorobenzene	973	30	1000	0	97.3	75-120	0			
1,2-Dichloroethane	978.5	30	1000	0	97.8	70-135	0			
1,2-Dichloropropane	987	30	1000	0	98.7	70-120	0			
1,3-Dichlorobenzene	974	30	1000	0	97.4	70-125	0			
1,4-Dichlorobenzene	978.5	30	1000	0	97.8	70-125	0			
2-Butanone	980.5	200	1000	0	98	30-160	0			
2-Hexanone	1003	30	1000	0	100	45-145	0			
4-Methyl-2-pentanone	1412	30	1000	0	141	45-145	0			
Acetone	871.5	100	1000	0	87.2	20-160	0			
Benzene	957	30	1000	0	95.7	75-125	0			
Bromodichloromethane	968	30	1000	0	96.8	70-130	0			
Bromoform	986.5	30	1000	0	98.6	55-135	0			
Bromomethane	935	75	1000	0	93.5	30-160	0			
Carbon disulfide	943.5	30	1000	0	94.4	45-160	0			
Carbon tetrachloride	1023	30	1000	0	102	65-135	0			
Chlorobenzene	986	30	1000	0	98.6	75-125	0			
Chloroethane	905	100	1000	0	90.5	40-155	0			
Chloroform	938	30	1000	0	93.8	70-125	0			
Chloromethane	831	100	1000	0	83.1	50-130	0			
cis-1,2-Dichloroethene	974.5	30	1000	0	97.4	65-125	0			
cis-1,3-Dichloropropene	1033	30	1000	0	103	70-125	0			
Dibromochloromethane	959.5	30	1000	0	96	65-135	0			
Dichlorodifluoromethane	829	30	1000	0	82.9	35-135	0			
Ethylbenzene	980	30	1000	0	98	75-125	0			
Isopropylbenzene	991	30	1000	0	99.1	75-130	0			
Methyl tert-butyl ether	1064	30	1000	0	106	75-125	0			
Methylene chloride	959.5	30	1000	0	96	55-145	0			
Styrene	1007	30	1000	0	101	75-125	0			
Tetrachloroethene	1120	30	1000	0	112	64-140	0			
Toluene	974	30	1000	0	97.4	70-125	0			
trans-1,2-Dichloroethene	1018	30	1000	0	102	65-135	0			
trans-1,3-Dichloropropene	1040	30	1000	0	104	65-125	0			
Trichloroethene	1018	30	1000	0	102	75-125	0			
Trichlorofluoromethane	940	30	1000	0	94	25-185	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54220	Instrument ID VMS8		Method: SW8260B				
Vinyl chloride	910	30	1000	0	91	60-125	0
Xylenes, Total	2956	90	3000	0	98.5	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>973.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97.4</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>1009</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>999.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>100</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>995</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.5</i>	<i>70-130</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54220** Instrument ID **VMS8** Method: **SW8260B**

MS				Sample ID: 1312745-11B MS			Units: µg/Kg		Analysis Date: 12/20/13 09:06 PM	
Client ID:				Run ID: VMS8_131220A			SeqNo: 2590182		Prep Date: 12/09/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	980	30	1000	0	98	70-135	0			
1,1,2,2-Tetrachloroethane	871	30	1000	0	87.1	55-130	0			
1,1,2-Trichloroethane	923.5	30	1000	0	92.4	60-125	0			
1,1-Dichloroethane	919.5	30	1000	0	92	75-125	0			
1,1-Dichloroethene	977.5	30	1000	0	97.8	65-135	0			
1,2,4-Trichlorobenzene	814	30	1000	0	81.4	65-130	0			
1,2-Dibromo-3-chloropropane	810.5	30	1000	0	81	40-135	0			
1,2-Dibromoethane	1035	30	1000	0	104	70-125	0			
1,2-Dichlorobenzene	897.5	30	1000	0	89.8	75-120	0			
1,2-Dichloroethane	961.5	30	1000	0	96.2	70-135	0			
1,2-Dichloropropane	954	30	1000	0	95.4	70-120	0			
1,3-Dichlorobenzene	910	30	1000	0	91	70-125	0			
1,4-Dichlorobenzene	896.5	30	1000	0	89.6	70-125	0			
2-Butanone	817	200	1000	0	81.7	30-160	0			
2-Hexanone	830	30	1000	0	83	45-145	0			
4-Methyl-2-pentanone	1156	30	1000	0	116	45-145	0			
Acetone	819	100	1000	0	81.9	20-160	0			
Benzene	919.5	30	1000	0	92	75-125	0			
Bromodichloromethane	929	30	1000	0	92.9	70-130	0			
Bromoform	881.5	30	1000	0	88.2	55-135	0			
Bromomethane	781.5	75	1000	0	78.2	30-160	0			
Carbon disulfide	871	30	1000	0	87.1	45-160	0			
Carbon tetrachloride	993.5	30	1000	0	99.4	65-135	0			
Chlorobenzene	940	30	1000	0	94	75-125	0			
Chloroethane	687.5	100	1000	0	68.8	40-155	0			
Chloroform	920.5	30	1000	0	92	70-125	0			
Chloromethane	761	100	1000	0	76.1	50-130	0			
cis-1,2-Dichloroethene	925	30	1000	0	92.5	65-125	0			
cis-1,3-Dichloropropene	978.5	30	1000	0	97.8	70-125	0			
Dibromochloromethane	879.5	30	1000	0	88	65-135	0			
Dichlorodifluoromethane	770	30	1000	0	77	35-135	0			
Ethylbenzene	933	30	1000	0	93.3	75-125	0			
Isopropylbenzene	930	30	1000	0	93	75-130	0			
Methyl tert-butyl ether	1058	30	1000	0	106	75-125	0			
Methylene chloride	916.5	30	1000	0	91.6	55-145	0			
Styrene	921	30	1000	0	92.1	75-125	0			
Tetrachloroethene	1187	30	1000	0	119	64-140	0			
Toluene	919	30	1000	0	91.9	70-125	0			
trans-1,2-Dichloroethene	976	30	1000	0	97.6	65-135	0			
trans-1,3-Dichloropropene	967.5	30	1000	0	96.8	65-125	0			
Trichloroethene	999	30	1000	0	99.9	75-125	0			
Trichlorofluoromethane	1119	30	1000	0	112	25-185	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54220		Instrument ID VMS8		Method: SW8260B			
Vinyl chloride	824.5	30	1000	0	82.4	60-125	0
Xylenes, Total	2764	90	3000	0	92.2	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>936</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>93.6</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>952</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.2</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>997.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.8</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>968</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>96.8</i>	<i>70-130</i>	<i>0</i>

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54220** Instrument ID **VMS8** Method: **SW8260B**

MSD				Sample ID: 1312745-11B MSD			Units: µg/Kg		Analysis Date: 12/20/13 09:30 PM	
Client ID:				Run ID: VMS8_131220A			SeqNo: 2590183		Prep Date: 12/09/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	949	30	1000	0	94.9	70-135	980	3.21	30	
1,1,2,2-Tetrachloroethane	882.5	30	1000	0	88.2	55-130	871	1.31	30	
1,1,2-Trichloroethane	906	30	1000	0	90.6	60-125	923.5	1.91	30	
1,1-Dichloroethane	885.5	30	1000	0	88.6	75-125	919.5	3.77	30	
1,1-Dichloroethene	946.5	30	1000	0	94.6	65-135	977.5	3.22	30	
1,2,4-Trichlorobenzene	866	30	1000	0	86.6	65-130	814	6.19	30	
1,2-Dibromo-3-chloropropane	802.5	30	1000	0	80.2	40-135	810.5	0.992	30	
1,2-Dibromoethane	1022	30	1000	0	102	70-125	1035	1.22	30	
1,2-Dichlorobenzene	899	30	1000	0	89.9	75-120	897.5	0.167	30	
1,2-Dichloroethane	949	30	1000	0	94.9	70-135	961.5	1.31	30	
1,2-Dichloropropane	935.5	30	1000	0	93.6	70-120	954	1.96	30	
1,3-Dichlorobenzene	904	30	1000	0	90.4	70-125	910	0.662	30	
1,4-Dichlorobenzene	917.5	30	1000	0	91.8	70-125	896.5	2.32	30	
2-Butanone	841	200	1000	0	84.1	30-160	817	2.9	30	
2-Hexanone	819	30	1000	0	81.9	45-145	830	1.33	30	
4-Methyl-2-pentanone	1182	30	1000	0	118	45-145	1156	2.27	30	
Acetone	878.5	100	1000	0	87.8	20-160	819	7.01	30	
Benzene	908.5	30	1000	0	90.8	75-125	919.5	1.2	30	
Bromodichloromethane	927	30	1000	0	92.7	70-130	929	0.216	30	
Bromoform	866.5	30	1000	0	86.6	55-135	881.5	1.72	30	
Bromomethane	777	75	1000	0	77.7	30-160	781.5	0.577	30	
Carbon disulfide	913.5	30	1000	0	91.4	45-160	871	4.76	30	
Carbon tetrachloride	969	30	1000	0	96.9	65-135	993.5	2.5	30	
Chlorobenzene	936.5	30	1000	0	93.6	75-125	940	0.373	30	
Chloroethane	694.5	100	1000	0	69.4	40-155	687.5	1.01	30	
Chloroform	899	30	1000	0	89.9	70-125	920.5	2.36	30	
Chloromethane	767.5	100	1000	0	76.8	50-130	761	0.851	30	
cis-1,2-Dichloroethene	911.5	30	1000	0	91.2	65-125	925	1.47	30	
cis-1,3-Dichloropropene	978.5	30	1000	0	97.8	70-125	978.5	0	30	
Dibromochloromethane	877	30	1000	0	87.7	65-135	879.5	0.285	30	
Dichlorodifluoromethane	753.5	30	1000	0	75.4	35-135	770	2.17	30	
Ethylbenzene	917.5	30	1000	0	91.8	75-125	933	1.68	30	
Isopropylbenzene	919.5	30	1000	0	92	75-130	930	1.14	30	
Methyl tert-butyl ether	1042	30	1000	0	104	75-125	1058	1.57	30	
Methylene chloride	889.5	30	1000	0	89	55-145	916.5	2.99	30	
Styrene	919	30	1000	0	91.9	75-125	921	0.217	30	
Tetrachloroethene	1158	30	1000	0	116	64-140	1187	2.47	30	
Toluene	906	30	1000	0	90.6	70-125	919	1.42	30	
trans-1,2-Dichloroethene	936	30	1000	0	93.6	65-135	976	4.18	30	
trans-1,3-Dichloropropene	965.5	30	1000	0	96.6	65-125	967.5	0.207	30	
Trichloroethene	994.5	30	1000	0	99.4	75-125	999	0.451	30	
Trichlorofluoromethane	1114	30	1000	0	111	25-185	1119	0.493	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54220		Instrument ID VMS8		Method: SW8260B					
Vinyl chloride	796.5	30	1000	0	79.6	60-125	824.5	3.45	30
Xylenes, Total	2710	90	3000	0	90.4	75-125	2764	1.97	30
<i>Surr: 1,2-Dichloroethane-d4</i>	951	0	1000	0	95.1	70-130	936	1.59	30
<i>Surr: 4-Bromofluorobenzene</i>	954.5	0	1000	0	95.4	70-130	952	0.262	30
<i>Surr: Dibromofluoromethane</i>	985.5	0	1000	0	98.6	70-130	997.5	1.21	30
<i>Surr: Toluene-d8</i>	966.5	0	1000	0	96.6	70-130	968	0.155	30
The following samples were analyzed in this batch:			1312747-04A	1312747-19B	1312747-21B				

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132913** Instrument ID **VMS5** Method: **SW8260**

MBLK		Sample ID: VBK2-131220-R132913				Units: µg/L		Analysis Date: 12/20/13 11:26 PM		
Client ID:		Run ID: VMS5_131220B				SeqNo: 2590095		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1,2-Trichlorotrifluoroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2-Dibromo-3-chloropropane	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	2.0								
1,3-Dichlorobenzene	U	2.0								
1,4-Dichlorobenzene	U	2.0								
2-Butanone	U	5.0								
2-Hexanone	U	5.0								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	20								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.5								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	5.0								
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	2.0								
Methyl tert-butyl ether	U	5.0								
Methylcyclohexane	U	5.0								
Methylene chloride	U	5.0								
Styrene	U	1.0								
Tetrachloroethene	U	2.0								
Toluene	U	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132913	Instrument ID VMS5	Method: SW8260						
trans-1,2-Dichloroethene	U	1.0						
trans-1,3-Dichloropropene	U	1.0						
Trichloroethene	U	1.0						
Trichlorofluoromethane	U	1.0						
Vinyl chloride	U	1.0						
Xylenes, Total	U	3.0						
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.09</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.95</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.8</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>19.78</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.9</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.85</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.2</i>	<i>85-120</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132913** Instrument ID **VMS5** Method: **SW8260**

LCS		Sample ID: VLCSW2-131220-R132913				Units: µg/L		Analysis Date: 12/20/13 10:36 PM		
Client ID:		Run ID: VMS5_131220B				SeqNo: 2590093		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.6	1.0	20	0	113	65-130	0			
1,1,2,2-Tetrachloroethane	21.86	1.0	20	0	109	65-130	0			
1,1,2-Trichloroethane	21.45	1.0	20	0	107	75-125	0			
1,1-Dichloroethane	21.79	1.0	20	0	109	70-135	0			
1,1-Dichloroethene	23.6	1.0	20	0	118	70-130	0			
1,2,4-Trichlorobenzene	21.46	1.0	20	0	107	65-135	0			
1,2-Dibromo-3-chloropropane	18.4	1.0	20	0	92	50-130	0			
1,2-Dibromoethane	23.38	1.0	20	0	117	80-120	0			
1,2-Dichlorobenzene	20.5	1.0	20	0	102	70-120	0			
1,2-Dichloroethane	21.41	1.0	20	0	107	70-130	0			
1,2-Dichloropropane	21.35	2.0	20	0	107	75-125	0			
1,3-Dichlorobenzene	20.92	2.0	20	0	105	75-125	0			
1,4-Dichlorobenzene	20.47	2.0	20	0	102	75-125	0			
2-Butanone	21.79	5.0	20	0	109	30-150	0			
2-Hexanone	22.86	5.0	20	0	114	55-130	0			
4-Methyl-2-pentanone	31.16	5.0	20	0	156	60-135	0			S
Acetone	22	20	20	0	110	40-140	0			
Benzene	21.51	1.0	20	0	108	80-120	0			
Bromodichloromethane	21.18	1.0	20	0	106	75-120	0			
Bromoform	18.53	1.0	20	0	92.6	70-130	0			
Bromomethane	19.4	1.0	20	0	97	30-145	0			
Carbon disulfide	22.06	2.5	20	0	110	35-165	0			
Carbon tetrachloride	20.97	1.0	20	0	105	65-140	0			
Chlorobenzene	21.09	1.0	20	0	105	80-120	0			
Chloroethane	19.8	1.0	20	0	99	60-135	0			
Chloroform	21.05	1.0	20	0	105	65-135	0			
Chloromethane	18.87	1.0	20	0	94.4	70-125	0			
cis-1,2-Dichloroethene	21.71	1.0	20	0	109	70-125	0			
cis-1,3-Dichloropropene	22.7	1.0	20	0	114	70-130	0			
Dibromochloromethane	19.47	1.0	20	0	97.4	60-135	0			
Dichlorodifluoromethane	14.26	1.0	20	0	71.3	30-155	0			
Ethylbenzene	21.66	1.0	20	0	108	75-125	0			
Isopropylbenzene	21.33	1.0	20	0	107	75-125	0			
Methyl tert-butyl ether	21.85	5.0	20	0	109	65-125	0			
Methylene chloride	21.47	5.0	20	0	107	55-140	0			
Styrene	22.34	1.0	20	0	112	65-135	0			
Tetrachloroethene	20.99	2.0	20	0	105	45-150	0			
Toluene	21.54	1.0	20	0	108	75-120	0			
trans-1,2-Dichloroethene	23.15	1.0	20	0	116	60-140	0			
trans-1,3-Dichloropropene	22.49	1.0	20	0	112	55-140	0			
Trichloroethene	21.96	1.0	20	0	110	70-125	0			
Trichlorofluoromethane	19.66	1.0	20	0	98.3	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132913		Instrument ID VMS5		Method: SW8260			
Vinyl chloride	18.48	1.0	20	0	92.4	50-145	0
Xylenes, Total	65.03	3.0	60	0	108	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.05</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.99</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.57</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.8</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.98</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.9</i>	<i>85-120</i>	<i>0</i>

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132913** Instrument ID **VMS5** Method: **SW8260**

MS				Sample ID: 1312747-12A MS			Units: µg/L		Analysis Date: 12/21/13 08:18 AM	
Client ID: W-R2330009-121113-AJL-010				Run ID: VMS5_131220B			SeqNo: 2590122		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	19.99	1.0	20	0	100	65-130	0			
1,1,2,2-Tetrachloroethane	18.01	1.0	20	0	90	65-130	0			
1,1,2-Trichloroethane	18.15	1.0	20	0	90.8	75-125	0			
1,1-Dichloroethane	20.69	1.0	20	0	103	70-135	0			
1,1-Dichloroethene	22.12	1.0	20	0	111	70-130	0			
1,2,4-Trichlorobenzene	7.6	1.0	20	0	38	65-135	0			S
1,2-Dibromo-3-chloropropane	12.99	1.0	20	0	65	50-130	0			
1,2-Dibromoethane	19.16	1.0	20	0	95.8	80-120	0			
1,2-Dichlorobenzene	11.97	1.0	20	0	59.8	70-120	0			S
1,2-Dichloroethane	19.3	1.0	20	0	96.5	70-130	0			
1,2-Dichloropropane	18.65	2.0	20	0	93.2	75-125	0			
1,3-Dichlorobenzene	11.31	2.0	20	0	56.6	75-125	0			S
1,4-Dichlorobenzene	10.99	2.0	20	0	55	75-125	0			S
2-Butanone	19.95	5.0	20	0	99.8	30-150	0			
2-Hexanone	19.85	5.0	20	0	99.2	55-130	0			
4-Methyl-2-pentanone	26.59	5.0	20	0	133	60-135	0			
Acetone	25.45	20	20	6.11	96.7	40-140	0			
Benzene	19.41	1.0	20	0	97	80-120	0			
Bromodichloromethane	18.01	1.0	20	0	90	75-120	0			
Bromoform	14.38	1.0	20	0	71.9	70-130	0			
Bromomethane	10.4	1.0	20	0	52	30-145	0			
Carbon disulfide	21.36	2.5	20	0.53	104	35-165	0			
Carbon tetrachloride	18.55	1.0	20	0	92.8	65-140	0			
Chlorobenzene	15.79	1.0	20	0	79	80-120	0			S
Chloroethane	22.52	1.0	20	2.93	98	60-135	0			
Chloroform	19.47	1.0	20	0	97.4	65-135	0			
Chloromethane	17.43	1.0	20	0	87.2	70-125	0			
cis-1,2-Dichloroethene	20.01	1.0	20	0	100	70-125	0			
cis-1,3-Dichloropropene	18.21	1.0	20	0	91	70-130	0			
Dibromochloromethane	15.63	1.0	20	0	78.2	60-135	0			
Dichlorodifluoromethane	13.73	1.0	20	0	68.6	30-155	0			
Ethylbenzene	15.47	1.0	20	0	77.4	75-125	0			
Isopropylbenzene	14.9	1.0	20	0	74.5	75-125	0			S
Methyl tert-butyl ether	20.54	5.0	20	0	103	65-125	0			
Methylene chloride	20.36	5.0	20	0	102	55-140	0			
Styrene	14.25	1.0	20	0	71.2	65-135	0			
Tetrachloroethene	14.98	2.0	20	0	74.9	45-150	0			
Toluene	17.52	1.0	20	0	87.6	75-120	0			
trans-1,2-Dichloroethene	21.81	1.0	20	0	109	60-140	0			
trans-1,3-Dichloropropene	17.46	1.0	20	0	87.3	55-140	0			
Trichloroethene	17.64	1.0	20	0	88.2	70-125	0			
Trichlorofluoromethane	18.41	1.0	20	0	92	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132913	Instrument ID VMS5		Method: SW8260				
Vinyl chloride	17.9	1.0	20	0	89.5	50-145	0
Xylenes, Total	47.03	3.0	60	0	78.4	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.02</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.16</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.84</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.2</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>20.13</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>85-120</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132913** Instrument ID **VMS5** Method: **SW8260**

MSD				Sample ID: 1312747-12A MSD			Units: µg/L		Analysis Date: 12/21/13 08:43 AM	
Client ID: W-R2330009-121113-AJL-010				Run ID: VMS5_131220B			SeqNo: 2590124		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	18.88	1.0	20	0	94.4	65-130	19.99	5.71	30	
1,1,2,2-Tetrachloroethane	16.98	1.0	20	0	84.9	65-130	18.01	5.89	30	
1,1,2-Trichloroethane	17.36	1.0	20	0	86.8	75-125	18.15	4.45	30	
1,1-Dichloroethane	19.5	1.0	20	0	97.5	70-135	20.69	5.92	30	
1,1-Dichloroethene	20.39	1.0	20	0	102	70-130	22.12	8.14	30	
1,2,4-Trichlorobenzene	8.1	1.0	20	0	40.5	65-135	7.6	6.37	30	S
1,2-Dibromo-3-chloropropane	12.48	1.0	20	0	62.4	50-130	12.99	4	30	
1,2-Dibromoethane	18.66	1.0	20	0	93.3	80-120	19.16	2.64	30	
1,2-Dichlorobenzene	12.23	1.0	20	0	61.2	70-120	11.97	2.15	30	S
1,2-Dichloroethane	18.94	1.0	20	0	94.7	70-130	19.3	1.88	30	
1,2-Dichloropropane	18.4	2.0	20	0	92	75-125	18.65	1.35	30	
1,3-Dichlorobenzene	11.38	2.0	20	0	56.9	75-125	11.31	0.617	30	S
1,4-Dichlorobenzene	11.1	2.0	20	0	55.5	75-125	10.99	0.996	30	S
2-Butanone	17.9	5.0	20	0	89.5	30-150	19.95	10.8	30	
2-Hexanone	18.44	5.0	20	0	92.2	55-130	19.85	7.36	30	
4-Methyl-2-pentanone	24.98	5.0	20	0	125	60-135	26.59	6.24	30	
Acetone	22.53	20	20	6.11	82.1	40-140	25.45	12.2	30	
Benzene	18.5	1.0	20	0	92.5	80-120	19.41	4.8	30	
Bromodichloromethane	17.71	1.0	20	0	88.6	75-120	18.01	1.68	30	
Bromoform	13.78	1.0	20	0	68.9	70-130	14.38	4.26	30	S
Bromomethane	12.84	1.0	20	0	64.2	30-145	10.4	21	30	
Carbon disulfide	19.51	2.5	20	0.53	94.9	35-165	21.36	9.05	30	
Carbon tetrachloride	18.44	1.0	20	0	92.2	65-140	18.55	0.595	30	
Chlorobenzene	14.87	1.0	20	0	74.4	80-120	15.79	6	30	S
Chloroethane	20.97	1.0	20	2.93	90.2	60-135	22.52	7.13	30	
Chloroform	18.38	1.0	20	0	91.9	65-135	19.47	5.76	30	
Chloromethane	16.11	1.0	20	0	80.6	70-125	17.43	7.87	30	
cis-1,2-Dichloroethene	18.91	1.0	20	0	94.6	70-125	20.01	5.65	30	
cis-1,3-Dichloropropene	18.11	1.0	20	0	90.6	70-130	18.21	0.551	30	
Dibromochloromethane	15.09	1.0	20	0	75.4	60-135	15.63	3.52	30	
Dichlorodifluoromethane	12.28	1.0	20	0	61.4	30-155	13.73	11.1	30	
Ethylbenzene	14.95	1.0	20	0	74.8	75-125	15.47	3.42	30	S
Isopropylbenzene	14.88	1.0	20	0	74.4	75-125	14.9	0.134	30	S
Methyl tert-butyl ether	19.4	5.0	20	0	97	65-125	20.54	5.71	30	
Methylene chloride	19.17	5.0	20	0	95.8	55-140	20.36	6.02	30	
Styrene	13.67	1.0	20	0	68.4	65-135	14.25	4.15	30	
Tetrachloroethene	14.4	2.0	20	0	72	45-150	14.98	3.95	30	
Toluene	16.67	1.0	20	0	83.4	75-120	17.52	4.97	30	
trans-1,2-Dichloroethene	19.96	1.0	20	0	99.8	60-140	21.81	8.86	30	
trans-1,3-Dichloropropene	17.09	1.0	20	0	85.4	55-140	17.46	2.14	30	
Trichloroethene	16.85	1.0	20	0	84.2	70-125	17.64	4.58	30	
Trichlorofluoromethane	17.17	1.0	20	0	85.8	60-145	18.41	6.97	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132913	Instrument ID VMS5			Method: SW8260					
Vinyl chloride	16.31	1.0	20	0	81.6	50-145	17.9	9.3	30
Xylenes, Total	45.22	3.0	60	0	75.4	75-130	47.03	3.92	30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.41</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>102</i>	<i>70-120</i>	<i>20.02</i>	<i>1.93</i>	<i>30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.24</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>75-120</i>	<i>20.16</i>	<i>0.396</i>	<i>30</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.88</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.4</i>	<i>85-115</i>	<i>19.84</i>	<i>0.201</i>	<i>30</i>
<i>Surr: Toluene-d8</i>	<i>20.04</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>85-120</i>	<i>20.13</i>	<i>0.448</i>	<i>30</i>

The following samples were analyzed in this batch:	1312747-02A	1312747-05A	1312747-07A
	1312747-09A	1312747-12A	1312747-13A
	1312747-15A	1312747-16A	1312747-17A
	1312747-18A	1312747-20A	1312747-22A

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132917A** Instrument ID **VMS5** Method: **SW8260**

MBLK		Sample ID: VBKWW1-131221-R132917A				Units: µg/L		Analysis Date: 12/21/13 12:56 PM		
Client ID:		Run ID: VMS5_131221A				SeqNo: 2591801		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1,2-Trichlorotrifluoroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2-Dibromo-3-chloropropane	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	2.0								
1,3-Dichlorobenzene	U	2.0								
1,4-Dichlorobenzene	U	2.0								
2-Butanone	U	5.0								
2-Hexanone	U	5.0								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	20								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.5								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	5.0								
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	2.0								
Methyl tert-butyl ether	U	5.0								
Methylcyclohexane	U	5.0								
Methylene chloride	U	5.0								
Styrene	U	1.0								
Tetrachloroethene	U	2.0								
Toluene	U	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132917A	Instrument ID VMS5	Method: SW8260						
trans-1,2-Dichloroethene	U	1.0						
trans-1,3-Dichloropropene	U	1.0						
Trichloroethene	U	1.0						
Trichlorofluoromethane	U	1.0						
Vinyl chloride	U	1.0						
Xylenes, Total	U	3.0						
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.82</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>104</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.6</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>19.71</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.6</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.87</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.4</i>	<i>85-120</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132917A** Instrument ID **VMS5** Method: **SW8260**

LCS		Sample ID: VLCSW1-131221-R132917A				Units: µg/L		Analysis Date: 12/21/13 11:14 AM		
Client ID:		Run ID: VMS5_131221A				SeqNo: 2591799		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.13	1.0	20	0	101	65-130	0			
1,1,2,2-Tetrachloroethane	20.92	1.0	20	0	105	65-130	0			
1,1,2-Trichloroethane	18.89	1.0	20	0	94.4	75-125	0			
1,1-Dichloroethane	19.86	1.0	20	0	99.3	70-135	0			
1,1-Dichloroethene	20.12	1.0	20	0	101	70-130	0			
1,2,4-Trichlorobenzene	18.85	1.0	20	0	94.2	65-135	0			
1,2-Dibromo-3-chloropropane	19.27	1.0	20	0	96.4	50-130	0			
1,2-Dibromoethane	21.23	1.0	20	0	106	80-120	0			
1,2-Dichlorobenzene	17.17	1.0	20	0	85.8	70-120	0			
1,2-Dichloroethane	19.57	1.0	20	0	97.8	70-130	0			
1,2-Dichloropropane	19.3	2.0	20	0	96.5	75-125	0			
1,3-Dichlorobenzene	17.35	2.0	20	0	86.8	75-125	0			
1,4-Dichlorobenzene	16.63	2.0	20	0	83.2	75-125	0			
2-Butanone	24.82	5.0	20	0	124	30-150	0			
2-Hexanone	25.28	5.0	20	0	126	55-130	0			
4-Methyl-2-pentanone	32.74	5.0	20	0	164	60-135	0			S
Acetone	23.06	20	20	0	115	40-140	0			
Benzene	19.5	1.0	20	0	97.5	80-120	0			
Bromodichloromethane	18.93	1.0	20	0	94.6	75-120	0			
Bromoform	17.14	1.0	20	0	85.7	70-130	0			
Bromomethane	12.93	1.0	20	0	64.6	30-145	0			
Carbon disulfide	19.56	2.5	20	0	97.8	35-165	0			
Carbon tetrachloride	19.13	1.0	20	0	95.6	65-140	0			
Chlorobenzene	18.48	1.0	20	0	92.4	80-120	0			
Chloroethane	16.92	1.0	20	0	84.6	60-135	0			
Chloroform	19.16	1.0	20	0	95.8	65-135	0			
Chloromethane	15.59	1.0	20	0	78	70-125	0			
cis-1,2-Dichloroethene	20.17	1.0	20	0	101	70-125	0			
cis-1,3-Dichloropropene	20.74	1.0	20	0	104	70-130	0			
Dibromochloromethane	16.89	1.0	20	0	84.4	60-135	0			
Dichlorodifluoromethane	10.34	1.0	20	0	51.7	30-155	0			
Ethylbenzene	18.74	1.0	20	0	93.7	75-125	0			
Isopropylbenzene	18.19	1.0	20	0	91	75-125	0			
Methyl tert-butyl ether	19.89	5.0	20	0	99.4	65-125	0			
Methylene chloride	19.3	5.0	20	0	96.5	55-140	0			
Styrene	19.28	1.0	20	0	96.4	65-135	0			
Tetrachloroethene	18.11	2.0	20	0	90.6	45-150	0			
Toluene	19.16	1.0	20	0	95.8	75-120	0			
trans-1,2-Dichloroethene	20.38	1.0	20	0	102	60-140	0			
trans-1,3-Dichloropropene	20.49	1.0	20	0	102	55-140	0			
Trichloroethene	19.41	1.0	20	0	97	70-125	0			
Trichlorofluoromethane	15.96	1.0	20	0	79.8	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132917A	Instrument ID VMS5		Method: SW8260				
Vinyl chloride	15.2	1.0	20	0	76	50-145	0
Xylenes, Total	56.33	3.0	60	0	93.9	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.59</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>103</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.94</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.7</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>20.05</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.79</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99</i>	<i>85-120</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132917A** Instrument ID **VMS5** Method: **SW8260**

MS				Sample ID: 1312855-03A MS			Units: µg/L		Analysis Date: 12/21/13 09:24 PM	
Client ID:				Run ID: VMS5_131221A			SeqNo: 2591809		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	23.49	1.0	20	0	117	65-130	0			
1,1,2,2-Tetrachloroethane	20.41	1.0	20	0	102	65-130	0			
1,1,2-Trichloroethane	20.41	1.0	20	0	102	75-125	0			
1,1-Dichloroethane	22.73	1.0	20	0	114	70-135	0			
1,1-Dichloroethene	24.75	1.0	20	0	124	70-130	0			
1,2,4-Trichlorobenzene	19.27	1.0	20	0	96.4	65-135	0			
1,2-Dibromo-3-chloropropane	14.81	1.0	20	0	74	50-130	0			
1,2-Dibromoethane	21.77	1.0	20	0	109	80-120	0			
1,2-Dichlorobenzene	19.84	1.0	20	0	99.2	70-120	0			
1,2-Dichloroethane	21.42	1.0	20	0	107	70-130	0			
1,2-Dichloropropane	22.05	2.0	20	0	110	75-125	0			
1,3-Dichlorobenzene	20.25	2.0	20	0	101	75-125	0			
1,4-Dichlorobenzene	19.71	2.0	20	0	98.6	75-125	0			
2-Butanone	21.51	5.0	20	0	108	30-150	0			
2-Hexanone	22.19	5.0	20	0	111	55-130	0			
4-Methyl-2-pentanone	29.04	5.0	20	0	145	60-135	0			S
Acetone	23.65	20	20	2.73	105	40-140	0			
Benzene	22.12	1.0	20	0	111	80-120	0			
Bromodichloromethane	20.7	1.0	20	0	104	75-120	0			
Bromoform	16.76	1.0	20	0	83.8	70-130	0			
Bromomethane	13.17	1.0	20	0	65.8	30-145	0			
Carbon disulfide	22.32	2.5	20	0	112	35-165	0			
Carbon tetrachloride	22.58	1.0	20	0	113	65-140	0			
Chlorobenzene	20.73	1.0	20	0	104	80-120	0			
Chloroethane	19.97	1.0	20	0	99.8	60-135	0			
Chloroform	21.32	1.0	20	0	107	65-135	0			
Chloromethane	18.2	1.0	20	0	91	70-125	0			
cis-1,2-Dichloroethene	23.83	1.0	20	1.47	112	70-125	0			
cis-1,3-Dichloropropene	22.72	1.0	20	0	114	70-130	0			
Dibromochloromethane	17.97	1.0	20	0	89.8	60-135	0			
Dichlorodifluoromethane	13.16	1.0	20	0	65.8	30-155	0			
Ethylbenzene	21.91	1.0	20	0	110	75-125	0			
Isopropylbenzene	21.81	1.0	20	0	109	75-125	0			
Methyl tert-butyl ether	21.75	5.0	20	0	109	65-125	0			
Methylene chloride	22.04	5.0	20	0	110	55-140	0			
Styrene	21.83	1.0	20	0	109	65-135	0			
Tetrachloroethene	29.56	2.0	20	8.25	107	45-150	0			
Toluene	21.75	1.0	20	0	109	75-120	0			
trans-1,2-Dichloroethene	23.91	1.0	20	0	120	60-140	0			
trans-1,3-Dichloropropene	21.93	1.0	20	0	110	55-140	0			
Trichloroethene	24.15	1.0	20	1.32	114	70-125	0			
Trichlorofluoromethane	20.09	1.0	20	0	100	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132917A		Instrument ID VMS5		Method: SW8260			
Vinyl chloride	18.34	1.0	20	0	91.7	50-145	0
Xylenes, Total	65.57	3.0	60	0	109	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.76</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>104</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.24</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.79</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.93</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.6</i>	<i>85-120</i>	<i>0</i>

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132917A** Instrument ID **VMS5** Method: **SW8260**

MSD				Sample ID: 1312855-03A MSD			Units: µg/L		Analysis Date: 12/21/13 09:49 PM	
Client ID:				Run ID: VMS5_131221A			SeqNo: 2591810		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.2	1.0	20	0	111	65-130	23.49	5.65	30	
1,1,2,2-Tetrachloroethane	20.47	1.0	20	0	102	65-130	20.41	0.294	30	
1,1,2-Trichloroethane	19.84	1.0	20	0	99.2	75-125	20.41	2.83	30	
1,1-Dichloroethane	21.39	1.0	20	0	107	70-135	22.73	6.07	30	
1,1-Dichloroethene	22.32	1.0	20	0	112	70-130	24.75	10.3	30	
1,2,4-Trichlorobenzene	21.43	1.0	20	0	107	65-135	19.27	10.6	30	
1,2-Dibromo-3-chloropropane	15.22	1.0	20	0	76.1	50-130	14.81	2.73	30	
1,2-Dibromoethane	21.66	1.0	20	0	108	80-120	21.77	0.507	30	
1,2-Dichlorobenzene	20.39	1.0	20	0	102	70-120	19.84	2.73	30	
1,2-Dichloroethane	20.76	1.0	20	0	104	70-130	21.42	3.13	30	
1,2-Dichloropropane	20.55	2.0	20	0	103	75-125	22.05	7.04	30	
1,3-Dichlorobenzene	20.92	2.0	20	0	105	75-125	20.25	3.25	30	
1,4-Dichlorobenzene	20.43	2.0	20	0	102	75-125	19.71	3.59	30	
2-Butanone	21.13	5.0	20	0	106	30-150	21.51	1.78	30	
2-Hexanone	22.09	5.0	20	0	110	55-130	22.19	0.452	30	
4-Methyl-2-pentanone	28.86	5.0	20	0	144	60-135	29.04	0.622	30	S
Acetone	22.88	20	20	2.73	101	40-140	23.65	3.31	30	
Benzene	21.13	1.0	20	0	106	80-120	22.12	4.58	30	
Bromodichloromethane	20.13	1.0	20	0	101	75-120	20.7	2.79	30	
Bromoform	16.22	1.0	20	0	81.1	70-130	16.76	3.27	30	
Bromomethane	13.24	1.0	20	0	66.2	30-145	13.17	0.53	30	
Carbon disulfide	20.69	2.5	20	0	103	35-165	22.32	7.58	30	
Carbon tetrachloride	21.76	1.0	20	0	109	65-140	22.58	3.7	30	
Chlorobenzene	20.22	1.0	20	0	101	80-120	20.73	2.49	30	
Chloroethane	18.47	1.0	20	0	92.4	60-135	19.97	7.8	30	
Chloroform	20.33	1.0	20	0	102	65-135	21.32	4.75	30	
Chloromethane	17.02	1.0	20	0	85.1	70-125	18.2	6.7	30	
cis-1,2-Dichloroethene	22.7	1.0	20	1.47	106	70-125	23.83	4.86	30	
cis-1,3-Dichloropropene	21.75	1.0	20	0	109	70-130	22.72	4.36	30	
Dibromochloromethane	17.4	1.0	20	0	87	60-135	17.97	3.22	30	
Dichlorodifluoromethane	11.96	1.0	20	0	59.8	30-155	13.16	9.55	30	
Ethylbenzene	21.37	1.0	20	0	107	75-125	21.91	2.5	30	
Isopropylbenzene	22.15	1.0	20	0	111	75-125	21.81	1.55	30	
Methyl tert-butyl ether	20.66	5.0	20	0	103	65-125	21.75	5.14	30	
Methylene chloride	20.5	5.0	20	0	102	55-140	22.04	7.24	30	
Styrene	20.87	1.0	20	0	104	65-135	21.83	4.5	30	
Tetrachloroethene	28.54	2.0	20	8.25	101	45-150	29.56	3.51	30	
Toluene	20.61	1.0	20	0	103	75-120	21.75	5.38	30	
trans-1,2-Dichloroethene	22.71	1.0	20	0	114	60-140	23.91	5.15	30	
trans-1,3-Dichloropropene	20.86	1.0	20	0	104	55-140	21.93	5	30	
Trichloroethene	22.36	1.0	20	1.32	105	70-125	24.15	7.7	30	
Trichlorofluoromethane	18.66	1.0	20	0	93.3	60-145	20.09	7.38	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132917A		Instrument ID VMS5		Method: SW8260					
Vinyl chloride	17.35	1.0	20	0	86.8	50-145	18.34	5.55	30
Xylenes, Total	63.49	3.0	60	0	106	75-130	65.57	3.22	30
<i>Surr: 1,2-Dichloroethane-d4</i>	20.66	0	20	0	103	70-120	20.76	0.483	30
<i>Surr: 4-Bromofluorobenzene</i>	20.46	0	20	0	102	75-120	20.24	1.08	30
<i>Surr: Dibromofluoromethane</i>	19.93	0	20	0	99.6	85-115	19.79	0.705	30
<i>Surr: Toluene-d8</i>	19.95	0	20	0	99.8	85-120	19.93	0.1	30

The following samples were analyzed in this batch: | 1312747-22A |

Client: The Mannik & Smith Group, Inc.
 Work Order: 1312747
 Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132945A** Instrument ID **VMS9** Method: **SW8260**

MBLK Sample ID: VBLKW1-131221-R132945A				Units: µg/L		Analysis Date: 12/21/13 03:48 PM				
Client ID:		Run ID: VMS9_131221A		SeqNo: 2591823		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chlorobenzene	U	1.0								
Surr: 1,2-Dichloroethane-d4	21.21	0	20	0	106	70-120	0			
Surr: 4-Bromofluorobenzene	19.09	0	20	0	95.4	75-120	0			
Surr: Dibromofluoromethane	21.54	0	20	0	108	85-115	0			
Surr: Toluene-d8	19.11	0	20	0	95.6	85-120	0			

LCS Sample ID: VLCSW2-131221-R132945A				Units: µg/L		Analysis Date: 12/21/13 03:00 PM				
Client ID:		Run ID: VMS9_131221A		SeqNo: 2591821		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chlorobenzene	21.33	1.0	20	0	107	80-120	0			
Surr: 1,2-Dichloroethane-d4	20.23	0	20	0	101	70-120	0			
Surr: 4-Bromofluorobenzene	20.85	0	20	0	104	75-120	0			
Surr: Dibromofluoromethane	21.35	0	20	0	107	85-115	0			
Surr: Toluene-d8	19.59	0	20	0	98	85-120	0			

MS Sample ID: 1312835-15A MS				Units: µg/L		Analysis Date: 12/22/13 12:18 PM				
Client ID:		Run ID: VMS9_131221A		SeqNo: 2591855		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chlorobenzene	20.43	1.0	20	0	102	80-120	0			
Surr: 1,2-Dichloroethane-d4	20.2	0	20	0	101	70-120	0			
Surr: 4-Bromofluorobenzene	21.08	0	20	0	105	75-120	0			
Surr: Dibromofluoromethane	21.19	0	20	0	106	85-115	0			
Surr: Toluene-d8	19.27	0	20	0	96.4	85-120	0			

MSD Sample ID: 1312835-15A MSD				Units: µg/L		Analysis Date: 12/22/13 12:42 PM				
Client ID:		Run ID: VMS9_131221A		SeqNo: 2591857		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chlorobenzene	20.13	1.0	20	0	101	80-120	20.43	1.48	30	
Surr: 1,2-Dichloroethane-d4	20.55	0	20	0	103	70-120	20.2	1.72	30	
Surr: 4-Bromofluorobenzene	20.83	0	20	0	104	75-120	21.08	1.19	30	
Surr: Dibromofluoromethane	21.28	0	20	0	106	85-115	21.19	0.424	30	
Surr: Toluene-d8	19.68	0	20	0	98.4	85-120	19.27	2.11	30	

The following samples were analyzed in this batch:

1312747-17A 1312747-20A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

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Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54203** Instrument ID **LACHAT** Method: **SW9012A**

MBLK		Sample ID: MBLK-54203-54203				Units: mg/L		Analysis Date: 12/17/13 11:54 AM		
Client ID:		Run ID: LACHAT_131217A		SeqNo: 2582598		Prep Date: 12/16/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	U	0.0050								

LCS		Sample ID: LCS-54203-54203				Units: mg/L		Analysis Date: 12/17/13 11:54 AM		
Client ID:		Run ID: LACHAT_131217A		SeqNo: 2582599		Prep Date: 12/16/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.2686	0.0050	0.25	0	107	83-120	0			

The following samples were analyzed in this batch:

1312747-02C	1312747-05C	1312747-07C
1312747-09C	1312747-12C	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54275** Instrument ID **LACHAT** Method: **A4500-CN G**

MBLK	Sample ID: MBLK-54275-54275					Units: mg/L		Analysis Date: 12/18/13 04:31 PM		
Client ID:	Run ID: LACHAT_131218A				SeqNo: 2585527		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable U 0.0050

MBLK	Sample ID: MBLK-54275-54275					Units: mg/L		Analysis Date: 12/18/13 04:31 PM		
Client ID:	Run ID: LACHAT_131218A				SeqNo: 2585532		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable U 0.0050

LCS	Sample ID: LCS-54275-54275					Units: mg/L		Analysis Date: 12/18/13 04:31 PM		
Client ID:	Run ID: LACHAT_131218A				SeqNo: 2585528		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2543 0.0050 0.25 0 102 83-120 0

LCS	Sample ID: LCS-54275-54275					Units: mg/L		Analysis Date: 12/18/13 04:31 PM		
Client ID:	Run ID: LACHAT_131218A				SeqNo: 2585533		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2543 0.0050 0.25 0 102 83-120 0

The following samples were analyzed in this batch:

1312747-13C	1312747-15C	1312747-16C
1312747-17C	1312747-18C	1312747-20C
1312747-22C		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132738** Instrument ID **MOIST** Method: **A2540 G**

MBLK	Sample ID: WBLKS-R132738					Units: % of sample		Analysis Date: 12/18/13 04:40 PM		
Client ID:	Run ID: MOIST_131218B				SeqNo: 2587287		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture U 0.050

LCS	Sample ID: LCS-R132738					Units: % of sample		Analysis Date: 12/18/13 04:40 PM		
Client ID:	Run ID: MOIST_131218B				SeqNo: 2587283		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP	Sample ID: 1312857-01A DUP					Units: % of sample		Analysis Date: 12/18/13 04:40 PM		
Client ID:	Run ID: MOIST_131218B				SeqNo: 2587261		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 27.95 0.050 0 0 0 0-0 27.82 0.466 20

DUP	Sample ID: 1312896-17A DUP					Units: % of sample		Analysis Date: 12/18/13 04:40 PM		
Client ID:	Run ID: MOIST_131218B				SeqNo: 2587273		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 2.2 0.050 0 0 0 0-0 2.19 0.456 20

The following samples were analyzed in this batch:

1312747-19A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

QC Page: 55 of 56

Client: The Mannik & Smith Group, Inc.
Work Order: 1312747
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132746** Instrument ID **MOIST** Method: **A2540 G**

MBLK				Sample ID: WBLKS-R132746				Units: % of sample			Analysis Date: 12/18/13 06:50 PM			
Client ID:				Run ID: MOIST_131218C				SeqNo: 2586572			Prep Date:		DF: 1	
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture U 0.050

LCS				Sample ID: LCS-R132746				Units: % of sample			Analysis Date: 12/18/13 06:50 PM												
Client ID:				Run ID: MOIST_131218C				SeqNo: 2586568		Prep Date:		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP				Sample ID: 1312775-08A DUP				Units: % of sample			Analysis Date: 12/18/13 06:50 PM												
Client ID:				Run ID: MOIST_131218C				SeqNo: 2586554		Prep Date:		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Moisture 6.11 0.050 0 0 0 0-0 6.36 4.01 20

DUP				Sample ID: 1312946-07B DUP				Units: % of sample			Analysis Date: 12/18/13 06:50 PM												
Client ID:				Run ID: MOIST_131218C				SeqNo: 2586566		Prep Date:		DF: 1											
Analyte				Result		PQL		SPK Val		SPK Ref Value		%REC		Control Limit		RPD Ref Value		%RPD		RPD Limit		Qual	

Moisture 14.03 0.050 0 0 0 0-0 13.88 1.07 20

The following samples were analyzed in this batch:

1312747-21A



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Page 1 of

COC ID: 94669

Environmental

Customer Information				Project Information				ALS Project Manager: <u>TSB</u> ALS Work Order #: <u>1312747</u>											
Parameter/Method Request for Analysis																			
Purchase Order		Project Name	Van Buren Landfill	A	VOCs														
Work Order		Project Number	<u>R2330009</u>	B	SVOCs														
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs														
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total														
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable														
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	F	Metals (Including Hg) - total														
Phone	(734) 397-3100	Phone		G	Moisture														
Fax	(734) 397-3131	Fax		H	Metals (Including Hg) - dissolved														
e-Mail Address		e-Mail Address		I															
				J															

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-R2330009-120913-AJL-008	12/9/13	1043	S	MeOH	4	X	X									X
2	W-R2330009-120913-AJL-006	12/9/13	1335	W	1/2/4/-	8	X	X			X	X					
3	S-R2330009-120913-AJL-009	12/9/13	1415	S	MeOH	4	X	X									X
4	Temp Blank	12/9/13					X										
5	Trip Blank	12/9/13					X										
6	W-R2330009-121013-AJL-007	12/10/13	0915	W	1/2/4/-	8	X	X			X	X					
7	S-R2330009-121013-AJL-010	12/10/13	0955	S	MeOH	4	X	X									X
8	W-R2330009-121013-AJL-008	12/10/13	1128	W	1/2/4/-	8	X	X			X	X					
9	S-R2330009-121013-AJL-011	12/10/13	1315	S	MeOH	4	X	X									X
10	W-R2330009-121013-AJL-009	12/10/13	1530	W	1/2/4/-	8	X	X			X	X					

Sampler(s) Please Print & Sign				Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
						☐ Std 10 WK Days ☐ 5 WK Days ☐ Other _____ ☐ 2 WK Days ☐ 24 Hour					
Relinquished by		Date:	Time:	Received by		Notes:					
<u>[Signature]</u>		12/13/13	1000	<u>[Signature]</u>							
Relinquished by		Date:	Time:	Received by (Laboratory):		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)			
<u>[Signature]</u>		12/13/13	1400	<u>[Signature]</u>			3.2°C	☒ Level II Std QC ☐ TRRP Checklist ☐ Level III Std QC/Raw Data ☐ TRRP Level I/A ☐ Level IV SWB46/CLP ☐ Other _____			
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):							
<u>KE</u>		12/14/13	0900	<u>[Signature]</u>							
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035											

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
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 3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

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+1 281 530 5656

Spring City, PA
+1 610 948 4903

Middletown, PA
+1 717 944 5541

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

Page 2 of 2

COC ID: 94673

Environmental

Customer Information			Project Information					ALS Project Manager: <u>TS</u> ALS Work Order #: <u>1312747</u>													
Parameter/Method Request for Analysis																					
Purchase Order		Project Name	Van Buren Landfill					A	VOCs												
Work Order		Project Number	R2330009					B	SVOCs												
Company Name	The Mannik & Smith Group, Inc.		Bill To Company	RACER Trust					C	PCBs											
Send Report To		Invoice Attn	Accounts Payable					D	Cyanide - total												
Address	2365 Haggerty Road South Suite 100		Address	2930 Ecorse Rd					E	Cyanide - amenable											
City/State/Zip	Canton, MI 48188		City/State/Zip	Ypsilanti, MI 48198					F	Metals (Including Hg) - total											
Phone	(734) 397-3100		Phone						G	Moisture											
Fax	(734) 397-3131		Fax						H	Metals (Including Hg) - dissolved											
e-Mail Address			e-Mail Address						I												
									J												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
✓ 105	R2330009. 121113. ASL. 012	12/11/13	0845	S	MeOH	3	X	X									X
✓ 105	R2330009. 121113. ASL. 013		0850	S	MeOH	3	X	X									X
✓ 105	R2330009. 121113. ASL. 010		1015	W	1/2/4/-	8	X	X			X	X					
✓ 105	R2330009. 121113. ASL. 011		1051	W	1/2/4/-	8	X	X			X	X					
✓ 105	R2330009. 121113. ASL. 014		1128	S	MeOH	3	X	X									X
✓ 105	R2330009. 121113. ASL. 012		1305	W	1/2/4/-	8	X	X			X	X					
✓ 105	R2330009. 121113. ASL. 013		1613	W	1/2/4/-	8	X	X			X	X					
✓ 105	R2330009. 121213. ASL. 014	12/12/13	0850	W	1/2/4/-	8	X	X			X	X					
✓ 105	R2330009. 121213. ASL. 015		0945	W	1/2/4/-	8	X	X			X	X					
✓ 105	R2330009. 121213. ASL. 015		1030	S	MeOH	3	X	X									

Sampler(s) Please Print & Sign			Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
					☐ Std 10 WK Days ☐ 5 WK Days ☐ Other _____ ☐ 2 WK Days ☐ 24 Hour					
Relinquished by:	Date:	Time:	Received by:	Notes:						
<u>Andy Lahaie</u>	12/13/13	1000	<u>[Signature]</u>							
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)				
<u>[Signature]</u>	12/13/13	1900	<u>[Signature]</u>		3.2°C	☒ Level II Std QC ☐ TRRP CheckList ☐ Level III Std QC/Raw Data ☐ TRRP Level I/II ☐ Level IV SWB46/CLP ☐ Other				
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):							
<u>Kes</u>	12/14/13	0900	<u>[Signature]</u>							
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035										

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Environmental

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Holland, MI
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Chain of Custody Form

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COC ID: **94672**

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

ALS Project Manager: TSB

ALS Work Order #: 1312747

Customer Information		Project Information		Parameter/Method Request for Analysis																
Purchase Order		Project Name	Van Buren Landfill	A	VOCs															
Work Order		Project Number	R2330009	B	SVOCs															
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs															
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total															
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable															
				F	Metals (Including Hg) - total															
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	Moisture															
Phone	(734) 397-3100	Phone		H	Metals (Including Hg) - dissolved															
Fax	(734) 397-3131	Fax		I																
e-Mail Address		e-Mail Address		J																

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W. R2330009. 121213. AZ. 016	12/12/13	1123	W	1/24/-	8	X	X			X	X					
2	S. R2330009. 121213. AZ. 016	12/12/13	1245	S	MeOH	3	X	X									
3	W. R2330009. 121213. AZ. 017	12/12/13	1330	W	1/24/-	8	X	X			X	X					
4	Trip Blank																
5	Trip Blank																
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:		
				☐ Std 10 WK Days ☐ 5 WK Days ☐ Other _____ ☐ 2 WK Days ☐ 24 Hour						
Relinquished by:	Date:	Time:	Received by:	Notes:						
	12/13/13	1000								
Relinquished by:	Date:	Time:	Received by (Laboratory):							
	12/13/13	1900			Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			3.20C	☒ Level II Std QC ☐ TRRP Checklist ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SW846/CLP ☐ Other _____			
	12/14/13	0900								

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂S₂O₃ 6-NaHSO₄ 7-Other 8-4°C 9-5035

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COC ID: 94669

York, PA
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Note:

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Page 2 of 2

COC ID: 94673

York, PA
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Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **14-Dec-13 08:00**

Work Order: **1312747**

Received by: **KRW**

Checklist completed by Keith Wurenga
eSignature

14-Dec-13
Date

Reviewed by: Tom Bramish
eSignature

14-Dec-13
Date

Matrices: **Water & Soil**

Carrier name: **City Transfer**

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☒
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☐	No ☒	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Sample(s) received on ice?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>3.2 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/14/2013 9:50:30 AM</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:			

Login Notes: **Broken trip blank vials.**

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:

Revision: 1

Work Order: 1312894

Project Name:
RACER - Van Buren Landfill (R2330009)

The Mannik & Smith Group, Inc.

Frank Biehl
2365 Haggerty Road South
Suite 100
Canton, MI 48188
(734) 397-3100

12-Feb-2014



Certificate No: MN 532786



12-Feb-2014

Frank Biehl
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **RACER - Van Buren Landfill (R2330009)**

Work Order: **1312894**

Dear Frank,

Revision: **1**

ALS Environmental received 4 samples on 18-Dec-2013 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 70.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Beamish".

Electronically approved by: Tom Beamish

Tom Beamish
Senior Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1312894**Work Order Sample Summary**

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1312894-01	S-R2330009-121313-AJL-017	Soil		12/13/13 08:55	12/18/13 08:00	☐
1312894-02	W-R2330009-121313-AJL-018	Water		12/13/13 09:48	12/18/13 08:00	☐
1312894-03	S-R2330009-121313-AJL-018	Soil		12/13/13 10:25	12/18/13 08:00	☐
1312894-04	W-R2330009-121313-AJL-019	Water		12/13/13 11:17	12/18/13 08:00	☐

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
WorkOrder: 1312894

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
% of sample	Percent of Sample
µg/Kg-dry	Micrograms per Kilogram Dry Weight
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1312894

Case Narrative**Analytical Comments:**

Batch 54309, Method SVO_8270_S, Sample 1312894-01B: One or more SVOC surrogate recoveries are unavailable due to sample matrix interference. Target analytes were not affected by the interference. No qualification is necessary.

Batch 54309, Method SVO_8270_S, Sample 1312894-03B: One or more SVOC surrogate recoveries are unavailable due to sample matrix interference. Target analytes were not affected by the interference. No qualification is necessary.

QC Comments:

Batch 54243, Method SVO_8270_W, Sample SLCSW1-54243: The LCS recovery was above the upper control limit. The sample results may be biased high for 4-Chloroaniline.

Batch R132946, Method VOC_8260_W, Sample VLCSW3-131221: The LCS recovery was outside of the upper control limit but within the Sporadic Marginal Exceedence limit. No qualification is necessary for 1,2-Dibromoethane.

Batch R132946, Method VOC_8260_W, Sample VLCSW3-131221: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 4-Methyl-2-pentanone.

Batch R132961, Method VOC_8260_W, Sample VLCSW1-131223: The LCS recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 2-Hexanone and 4-Methyl -2-pentanone.

Batch R132961, Method VOC_8260_W, Sample VLCSW1-131223: The LCS recovery was outside of the upper control limit but within the Sporadic Marginal Exceedence limit. No qualification is necessary for 1,2- Dibromoethane.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121313-AJL-017
Collection Date: 12/13/13 08:55 AM

Work Order: 1312894
Lab ID: 1312894-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270		Prep: SW3541 / 12/19/13	Analyst: HL	
<u>BatchID: 54309</u>							
1,1'-Biphenyl	U		58	3,800	µg/Kg-dry	10	12/20/13 22:16
2,4,5-Trichlorophenol	U		96	1,900	µg/Kg-dry	10	12/20/13 22:16
2,4,6-Trichlorophenol	U		65	1,900	µg/Kg-dry	10	12/20/13 22:16
2,4-Dichlorophenol	U		110	1,900	µg/Kg-dry	10	12/20/13 22:16
2,4-Dimethylphenol	U		620	3,800	µg/Kg-dry	10	12/20/13 22:16
2,4-Dinitrophenol	U		350	7,700	µg/Kg-dry	10	12/20/13 22:16
2,4-Dinitrotoluene	U		120	1,900	µg/Kg-dry	10	12/20/13 22:16
2,6-Dinitrotoluene	U		200	1,900	µg/Kg-dry	10	12/20/13 22:16
2-Chloronaphthalene	U		18	930	µg/Kg-dry	10	12/20/13 22:16
2-Chlorophenol	U		120	1,900	µg/Kg-dry	10	12/20/13 22:16
2-Methylnaphthalene	U		32	930	µg/Kg-dry	10	12/20/13 22:16
2-Methylphenol	U		160	1,900	µg/Kg-dry	10	12/20/13 22:16
2-Nitroaniline	U		150	7,700	µg/Kg-dry	10	12/20/13 22:16
2-Nitrophenol	U		130	1,900	µg/Kg-dry	10	12/20/13 22:16
3-Nitroaniline	U		130	7,700	µg/Kg-dry	10	12/20/13 22:16
4,6-Dinitro-2-methylphenol	U		320	3,800	µg/Kg-dry	10	12/20/13 22:16
4-Bromophenyl phenyl ether	U		100	1,900	µg/Kg-dry	10	12/20/13 22:16
4-Chloro-3-methylphenol	U		89	1,900	µg/Kg-dry	10	12/20/13 22:16
4-Chloroaniline	U		120	3,800	µg/Kg-dry	10	12/20/13 22:16
4-Chlorophenyl phenyl ether	U		110	1,900	µg/Kg-dry	10	12/20/13 22:16
4-Methylphenol	U		180	1,900	µg/Kg-dry	10	12/20/13 22:16
4-Nitroaniline	U		110	7,700	µg/Kg-dry	10	12/20/13 22:16
4-Nitrophenol	U		77	7,700	µg/Kg-dry	10	12/20/13 22:16
Acenaphthene	U		12	350	µg/Kg-dry	10	12/20/13 22:16
Acenaphthylene	U		14	350	µg/Kg-dry	10	12/20/13 22:16
Acetophenone	73	J	58	3,800	µg/Kg-dry	10	12/20/13 22:16
Anthracene	U		15	350	µg/Kg-dry	10	12/20/13 22:16
Atrazine	U		120	580	µg/Kg-dry	10	12/20/13 22:16
Benzaldehyde	320	J	150	3,800	µg/Kg-dry	10	12/20/13 22:16
Benzo(a)pyrene	66	J	25	350	µg/Kg-dry	10	12/20/13 22:16
Benzo(b)fluoranthene	77	J	23	350	µg/Kg-dry	10	12/20/13 22:16
Benzo(g,h,i)perylene	43	J	30	350	µg/Kg-dry	10	12/20/13 22:16
Benzo(k)fluoranthene	43	J	16	350	µg/Kg-dry	10	12/20/13 22:16
Bis(2-chloroethoxy)methane	U		120	1,900	µg/Kg-dry	10	12/20/13 22:16
Bis(2-chloroethyl)ether	U		120	1,900	µg/Kg-dry	10	12/20/13 22:16
Bis(2-chloroisopropyl)ether	U		160	1,900	µg/Kg-dry	10	12/20/13 22:16
Caprolactam	U		170	3,800	µg/Kg-dry	10	12/20/13 22:16

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121313-AJL-017
Collection Date: 12/13/13 08:55 AM

Work Order: 1312894
Lab ID: 1312894-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Carbazole	U		110	1,900	µg/Kg-dry	10	12/20/13 22:16
Dibenzo(a,h)anthracene	U		29	350	µg/Kg-dry	10	12/20/13 22:16
Dibenzofuran	U		120	1,900	µg/Kg-dry	10	12/20/13 22:16
Diethyl phthalate	U		120	3,800	µg/Kg-dry	10	12/20/13 22:16
Dimethyl phthalate	U		130	3,800	µg/Kg-dry	10	12/20/13 22:16
Di-n-butyl phthalate	220	J	56	3,800	µg/Kg-dry	10	12/20/13 22:16
Di-n-octyl phthalate	U		130	1,900	µg/Kg-dry	10	12/20/13 22:16
Fluoranthene	130	J	27	350	µg/Kg-dry	10	12/20/13 22:16
Fluorene	U		26	350	µg/Kg-dry	10	12/20/13 22:16
Hexachlorobenzene	U		110	1,900	µg/Kg-dry	10	12/20/13 22:16
Hexachlorobutadiene	U		130	580	µg/Kg-dry	10	12/20/13 22:16
Hexachlorocyclopentadiene	U		120	3,800	µg/Kg-dry	10	12/20/13 22:16
Hexachloroethane	U		180	1,900	µg/Kg-dry	10	12/20/13 22:16
Indeno(1,2,3-cd)pyrene	U		26	350	µg/Kg-dry	10	12/20/13 22:16
Isophorone	U		130	1,900	µg/Kg-dry	10	12/20/13 22:16
Naphthalene	U		28	350	µg/Kg-dry	10	12/20/13 22:16
Nitrobenzene	U		150	1,900	µg/Kg-dry	10	12/20/13 22:16
N-Nitrosodi-n-propylamine	U		150	1,900	µg/Kg-dry	10	12/20/13 22:16
N-Nitrosodiphenylamine	U		690	1,900	µg/Kg-dry	10	12/20/13 22:16
Pentachlorophenol	U		75	230	µg/Kg-dry	10	12/20/13 22:16
Phenanthrene	130	J	15	350	µg/Kg-dry	10	12/20/13 22:16
Phenol	U		130	1,900	µg/Kg-dry	10	12/20/13 22:16
Surr: 2,4,6-Tribromophenol	89.8			34-140	%REC	10	12/20/13 22:16
Surr: 2-Fluorobiphenyl	70.4			12-100	%REC	10	12/20/13 22:16
Surr: 2-Fluorophenol	72.6			33-117	%REC	10	12/20/13 22:16
Surr: 4-Terphenyl-d14	222	S		25-137	%REC	10	12/20/13 22:16
Surr: Nitrobenzene-d5	66.4			37-107	%REC	10	12/20/13 22:16
Surr: Phenol-d6	63.2			40-106	%REC	10	12/20/13 22:16
BatchID: 54309							
3,3'-Dichlorobenzidine	U		9,600	15,000	µg/Kg-dry	20	12/23/13 14:34
Benzo(a)anthracene	U		30	700	µg/Kg-dry	20	12/23/13 14:34
Bis(2-ethylhexyl)phthalate	U		250	7,700	µg/Kg-dry	20	12/23/13 14:34
Butyl benzyl phthalate	U		290	3,700	µg/Kg-dry	20	12/23/13 14:34
Chrysene	U		37	700	µg/Kg-dry	20	12/23/13 14:34
Pyrene	200	J	52	700	µg/Kg-dry	20	12/23/13 14:34
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/12/13		Analyst: RS
BatchID: 54254							
1,1,1-Trichloroethane	U		17	45	µg/Kg-dry	1	12/22/13 11:12
1,1,2,2-Tetrachloroethane	U		20	45	µg/Kg-dry	1	12/22/13 11:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121313-AJL-017
Collection Date: 12/13/13 08:55 AM

Work Order: 1312894
Lab ID: 1312894-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2-Trichloroethane	U		16	45	µg/Kg-dry	1	12/22/13 11:12
1,1,2-Trichlorotrifluoroethane	U		17	45	µg/Kg-dry	1	12/22/13 11:12
1,1-Dichloroethane	U		17	45	µg/Kg-dry	1	12/22/13 11:12
1,1-Dichloroethene	U		19	45	µg/Kg-dry	1	12/22/13 11:12
1,2,4-Trichlorobenzene	U		24	45	µg/Kg-dry	1	12/22/13 11:12
1,2-Dibromo-3-chloropropane	U		22	45	µg/Kg-dry	1	12/22/13 11:12
1,2-Dibromoethane	U		18	45	µg/Kg-dry	1	12/22/13 11:12
1,2-Dichlorobenzene	U		18	45	µg/Kg-dry	1	12/22/13 11:12
1,2-Dichloroethane	U		22	45	µg/Kg-dry	1	12/22/13 11:12
1,2-Dichloropropane	U		15	45	µg/Kg-dry	1	12/22/13 11:12
1,3-Dichlorobenzene	U		18	45	µg/Kg-dry	1	12/22/13 11:12
1,4-Dichlorobenzene	U		17	45	µg/Kg-dry	1	12/22/13 11:12
2-Butanone	U		110	300	µg/Kg-dry	1	12/22/13 11:12
2-Hexanone	U		11	45	µg/Kg-dry	1	12/22/13 11:12
4-Methyl-2-pentanone	U		15	45	µg/Kg-dry	1	12/22/13 11:12
Acetone	U		96	150	µg/Kg-dry	1	12/22/13 11:12
Benzene	U		18	45	µg/Kg-dry	1	12/22/13 11:12
Bromodichloromethane	U		10	45	µg/Kg-dry	1	12/22/13 11:12
Bromoform	U		9.0	45	µg/Kg-dry	1	12/22/13 11:12
Bromomethane	U		17	110	µg/Kg-dry	1	12/22/13 11:12
Carbon disulfide	U		23	45	µg/Kg-dry	1	12/22/13 11:12
Carbon tetrachloride	U		13	45	µg/Kg-dry	1	12/22/13 11:12
Chlorobenzene	U		19	45	µg/Kg-dry	1	12/22/13 11:12
Chloroethane	U		97	150	µg/Kg-dry	1	12/22/13 11:12
Chloroform	U		19	45	µg/Kg-dry	1	12/22/13 11:12
Chloromethane	140	J	25	150	µg/Kg-dry	1	12/22/13 11:12
cis-1,2-Dichloroethene	U		18	45	µg/Kg-dry	1	12/22/13 11:12
cis-1,3-Dichloropropene	U		16	45	µg/Kg-dry	1	12/22/13 11:12
Cyclohexane	U		20	45	µg/Kg-dry	1	12/22/13 11:12
Dibromochloromethane	U		8.4	45	µg/Kg-dry	1	12/22/13 11:12
Dichlorodifluoromethane	U		21	45	µg/Kg-dry	1	12/22/13 11:12
Ethylbenzene	61		17	45	µg/Kg-dry	1	12/22/13 11:12
Isopropylbenzene	U		20	45	µg/Kg-dry	1	12/22/13 11:12
Methyl acetate	230	J	61	300	µg/Kg-dry	1	12/22/13 11:12
Methyl tert-butyl ether	U		19	45	µg/Kg-dry	1	12/22/13 11:12
Methylcyclohexane	U		21	45	µg/Kg-dry	1	12/22/13 11:12
Methylene chloride	U		18	45	µg/Kg-dry	1	12/22/13 11:12
Styrene	U		17	45	µg/Kg-dry	1	12/22/13 11:12
Tetrachloroethene	230		20	45	µg/Kg-dry	1	12/22/13 11:12
Toluene	69		17	45	µg/Kg-dry	1	12/22/13 11:12

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121313-AJL-017
Collection Date: 12/13/13 08:55 AM

Work Order: 1312894
Lab ID: 1312894-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
trans-1,2-Dichloroethene	U		14	45	µg/Kg-dry	1	12/22/13 11:12
trans-1,3-Dichloropropene	U		15	45	µg/Kg-dry	1	12/22/13 11:12
Trichloroethene	U		21	45	µg/Kg-dry	1	12/22/13 11:12
Trichlorofluoromethane	U		13	45	µg/Kg-dry	1	12/22/13 11:12
Vinyl chloride	U		21	45	µg/Kg-dry	1	12/22/13 11:12
Xylenes, Total	250		54	140	µg/Kg-dry	1	12/22/13 11:12
Surr: 1,2-Dichloroethane-d4	105			70-130	%REC	1	12/22/13 11:12
Surr: 4-Bromofluorobenzene	97.3			70-130	%REC	1	12/22/13 11:12
Surr: Dibromofluoromethane	110			70-130	%REC	1	12/22/13 11:12
Surr: Toluene-d8	90.6			70-130	%REC	1	12/22/13 11:12
MOISTURE			A2540 G				Analyst: MEB
BatchID: <u>R132867</u>							
Moisture	14		0.025	0.050	% of sample	1	12/19/13 17:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-018
Collection Date: 12/13/13 09:48 AM

Work Order: 1312894
Lab ID: 1312894-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470		Prep: SW7470 / 12/21/13		Analyst: LR
<u>BatchID: 54394</u>							
Mercury	0.00011	J	0.00010	0.00020	mg/L	1	12/23/13 13:08
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 12/31/13		Analyst: LR
<u>BatchID: 54609</u>							
Mercury		U	0.00010	0.00020	mg/L	1	12/31/13 19:05
METALS BY ICP-MS			SW6020A		Prep: SW3005A / 12/30/13		Analyst: JDD
<u>BatchID: 54568</u>							
Aluminum	2.0		0.00078	0.050	mg/L	1	01/02/14 19:31
Antimony	0.00034	J	0.000036	0.0020	mg/L	1	01/02/14 19:31
Arsenic	0.0057		0.00058	0.0050	mg/L	1	01/02/14 19:31
Barium	0.084	J	0.000063	0.10	mg/L	1	01/02/14 19:31
Beryllium	0.00010	J	0.000082	0.0010	mg/L	1	01/02/14 19:31
Cadmium		U	0.000045	0.0010	mg/L	1	01/02/14 19:31
Chromium	0.014		0.00027	0.010	mg/L	1	01/02/14 19:31
Cobalt	0.0025	J	0.000041	0.020	mg/L	1	01/02/14 19:31
Copper	0.014		0.00053	0.0040	mg/L	1	01/02/14 19:31
Iron	8.4		0.0053	0.20	mg/L	1	01/02/14 19:31
Lead	0.011		0.000051	0.0030	mg/L	1	01/02/14 19:31
Manganese	0.13		0.000054	0.050	mg/L	1	01/02/14 19:31
Nickel	0.0097	J	0.00025	0.020	mg/L	1	01/02/14 19:31
Selenium		U	0.00064	0.0050	mg/L	1	01/02/14 19:31
Silver		U	0.000042	0.00020	mg/L	1	01/02/14 19:31
Thallium		U	0.000062	0.0020	mg/L	1	01/02/14 19:31
Vanadium	0.0066		0.00016	0.0040	mg/L	1	01/02/14 19:31
Zinc	0.044	J	0.00048	0.050	mg/L	1	01/02/14 19:31
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/30/13		Analyst: JDD
<u>BatchID: 54568</u>							
Aluminum	0.060	J	0.0078	0.50	mg/L	10	01/02/14 19:36
Antimony	0.00046	J	0.00036	0.020	mg/L	10	01/02/14 19:36
Arsenic	0.023	J	0.0058	0.050	mg/L	10	01/02/14 19:36
Barium	0.52	J	0.00063	1.0	mg/L	10	01/02/14 19:36
Beryllium		U	0.00082	0.010	mg/L	10	01/02/14 19:36
Cadmium		U	0.00045	0.010	mg/L	10	01/02/14 19:36
Chromium	0.0043	J	0.0027	0.10	mg/L	10	01/02/14 19:36
Cobalt	0.0059	J	0.00041	0.20	mg/L	10	01/02/14 19:36
Copper		U	0.0053	0.040	mg/L	10	01/02/14 19:36
Iron	21		0.053	2.0	mg/L	10	01/02/14 19:36

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-018
Collection Date: 12/13/13 09:48 AM

Work Order: 1312894
Lab ID: 1312894-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.00051	0.030	mg/L	10	01/02/14 19:36
Manganese	0.17	J	0.00054	0.50	mg/L	10	01/02/14 19:36
Nickel	0.019	J	0.0025	0.20	mg/L	10	01/02/14 19:36
Selenium	U		0.0064	0.050	mg/L	10	01/02/14 19:36
Silver	U		0.00042	0.0020	mg/L	10	01/02/14 19:36
Thallium	U		0.00062	0.020	mg/L	10	01/02/14 19:36
Vanadium	U		0.0016	0.040	mg/L	10	01/02/14 19:36
Zinc	0.027	J	0.0048	0.50	mg/L	10	01/02/14 19:36

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 12/18/13

Analyst: HL

BatchID: 54243

1,1'-Biphenyl	U		0.095	10	µg/L	1	12/20/13 02:50
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/20/13 02:50
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/20/13 02:50
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/20/13 02:50
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/20/13 02:50
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/20/13 02:50
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/20/13 02:50
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/20/13 02:50
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/20/13 02:50
2-Chlorophenol	U		0.32	10	µg/L	1	12/20/13 02:50
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/20/13 02:50
2-Methylphenol	U		0.20	10	µg/L	1	12/20/13 02:50
2-Nitroaniline	U		0.34	25	µg/L	1	12/20/13 02:50
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/20/13 02:50
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/20/13 02:50
3-Nitroaniline	U		0.34	25	µg/L	1	12/20/13 02:50
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/20/13 02:50
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/20/13 02:50
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/20/13 02:50
4-Chloroaniline	U		0.32	10	µg/L	1	12/20/13 02:50
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/20/13 02:50
4-Methylphenol	U		0.20	10	µg/L	1	12/20/13 02:50
4-Nitroaniline	U		0.30	25	µg/L	1	12/20/13 02:50
4-Nitrophenol	U		0.51	25	µg/L	1	12/20/13 02:50
Acenaphthene	U		0.11	5.0	µg/L	1	12/20/13 02:50
Acenaphthylene	U		0.12	5.0	µg/L	1	12/20/13 02:50
Acetophenone	U		0.090	5.0	µg/L	1	12/20/13 02:50
Anthracene	U		0.72	5.0	µg/L	1	12/20/13 02:50
Atrazine	U		0.13	5.0	µg/L	1	12/20/13 02:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-018
Collection Date: 12/13/13 09:48 AM

Work Order: 1312894
Lab ID: 1312894-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	0.65	J	0.46	10	µg/L	1	12/20/13 02:50
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/20/13 02:50
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/20/13 02:50
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/20/13 02:50
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/20/13 02:50
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/20/13 02:50
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/20/13 02:50
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/20/13 02:50
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/20/13 02:50
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/20/13 02:50
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/20/13 02:50
Caprolactam	U		4.7	10	µg/L	1	12/20/13 02:50
Carbazole	U		0.16	10	µg/L	1	12/20/13 02:50
Chrysene	U		0.71	1.0	µg/L	1	12/20/13 02:50
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/20/13 02:50
Dibenzofuran	U		0.28	4.0	µg/L	1	12/20/13 02:50
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/20/13 02:50
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/20/13 02:50
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	12/20/13 02:50
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/20/13 02:50
Fluoranthene	U		0.77	1.0	µg/L	1	12/20/13 02:50
Fluorene	U		0.10	5.0	µg/L	1	12/20/13 02:50
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/20/13 02:50
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/20/13 02:50
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/20/13 02:50
Hexachloroethane	U		0.47	5.0	µg/L	1	12/20/13 02:50
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/20/13 02:50
Isophorone	U		0.30	5.0	µg/L	1	12/20/13 02:50
Naphthalene	U		0.12	5.0	µg/L	1	12/20/13 02:50
Nitrobenzene	U		0.33	3.0	µg/L	1	12/20/13 02:50
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/20/13 02:50
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/20/13 02:50
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/20/13 02:50
Phenanthrene	U		0.86	2.0	µg/L	1	12/20/13 02:50
Phenol	U		0.32	5.0	µg/L	1	12/20/13 02:50
Pyrene	U		0.65	5.0	µg/L	1	12/20/13 02:50
Surr: 2,4,6-Tribromophenol	88.5			32-115	%REC	1	12/20/13 02:50
Surr: 2-Fluorobiphenyl	74.8			32-100	%REC	1	12/20/13 02:50
Surr: 2-Fluorophenol	46.8			22-59	%REC	1	12/20/13 02:50
Surr: 4-Terphenyl-d14	81.4			23-112	%REC	1	12/20/13 02:50

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-018
Collection Date: 12/13/13 09:48 AM

Work Order: 1312894
Lab ID: 1312894-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	75.5			31-93	%REC	1	12/20/13 02:50
Surr: Phenol-d6	27.0			13-36	%REC	1	12/20/13 02:50
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R132946							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/22/13 04:20
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/22/13 04:20
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/22/13 04:20
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/22/13 04:20
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/22/13 04:20
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/22/13 04:20
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/22/13 04:20
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/22/13 04:20
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/22/13 04:20
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/22/13 04:20
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/22/13 04:20
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/22/13 04:20
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/22/13 04:20
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/22/13 04:20
2-Butanone	U		0.64	25	µg/L	1	12/22/13 04:20
2-Hexanone	U		0.19	50	µg/L	1	12/22/13 04:20
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/22/13 04:20
Acetone	U		3.0	50	µg/L	1	12/22/13 04:20
Benzene	U		0.14	1.0	µg/L	1	12/22/13 04:20
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/22/13 04:20
Bromoform	U		0.18	1.0	µg/L	1	12/22/13 04:20
Bromomethane	U		0.38	5.0	µg/L	1	12/22/13 04:20
Carbon disulfide	U		0.26	5.0	µg/L	1	12/22/13 04:20
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/22/13 04:20
Chlorobenzene	U		0.12	1.0	µg/L	1	12/22/13 04:20
Chloroethane	U		0.25	5.0	µg/L	1	12/22/13 04:20
Chloroform	U		0.15	1.0	µg/L	1	12/22/13 04:20
Chloromethane	U		0.29	5.0	µg/L	1	12/22/13 04:20
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/22/13 04:20
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/22/13 04:20
Cyclohexane	U		0.20	1.0	µg/L	1	12/22/13 04:20
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/22/13 04:20
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/22/13 04:20
Ethylbenzene	U		0.12	1.0	µg/L	1	12/22/13 04:20
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/22/13 04:20

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-018
Collection Date: 12/13/13 09:48 AM

Work Order: 1312894
Lab ID: 1312894-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/22/13 04:20
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/22/13 04:20
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/22/13 04:20
Methylene chloride	U		0.75	5.0	µg/L	1	12/22/13 04:20
Styrene	U		0.12	1.0	µg/L	1	12/22/13 04:20
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/22/13 04:20
Toluene	0.44	J	0.13	1.0	µg/L	1	12/22/13 04:20
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/22/13 04:20
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/22/13 04:20
Trichloroethene	U		0.16	1.0	µg/L	1	12/22/13 04:20
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/22/13 04:20
Vinyl chloride	U		0.15	1.0	µg/L	1	12/22/13 04:20
Xylenes, Total	U		0.30	3.0	µg/L	1	12/22/13 04:20
Surr: 1,2-Dichloroethane-d4	104			70-120	%REC	1	12/22/13 04:20
Surr: 4-Bromofluorobenzene	92.0			75-120	%REC	1	12/22/13 04:20
Surr: Dibromofluoromethane	93.2			85-115	%REC	1	12/22/13 04:20
Surr: Toluene-d8	97.8			85-120	%REC	1	12/22/13 04:20
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/26/13		Analyst: JB
BatchID: 54481							
Cyanide, Amenable	0.0021	J	0.0010	0.0050	mg/L	1	12/26/13 14:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121313-AJL-018
Collection Date: 12/13/13 10:25 AM

Work Order: 1312894
Lab ID: 1312894-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270		Prep: SW3541 / 12/19/13	Analyst: HL	
<u>BatchID: 54309</u>							
1,1'-Biphenyl	160	J	58	3,900	µg/Kg-dry	10	12/20/13 22:48
2,4,5-Trichlorophenol	U		98	1,900	µg/Kg-dry	10	12/20/13 22:48
2,4,6-Trichlorophenol	U		66	1,900	µg/Kg-dry	10	12/20/13 22:48
2,4-Dichlorophenol	U		110	1,900	µg/Kg-dry	10	12/20/13 22:48
2,4-Dimethylphenol	U		630	3,900	µg/Kg-dry	10	12/20/13 22:48
2,4-Dinitrophenol	U		350	7,800	µg/Kg-dry	10	12/20/13 22:48
2,4-Dinitrotoluene	U		130	1,900	µg/Kg-dry	10	12/20/13 22:48
2,6-Dinitrotoluene	U		200	1,900	µg/Kg-dry	10	12/20/13 22:48
2-Chloronaphthalene	U		18	940	µg/Kg-dry	10	12/20/13 22:48
2-Chlorophenol	U		120	1,900	µg/Kg-dry	10	12/20/13 22:48
2-Methylnaphthalene	290	J	33	940	µg/Kg-dry	10	12/20/13 22:48
2-Methylphenol	U		160	1,900	µg/Kg-dry	10	12/20/13 22:48
2-Nitroaniline	U		150	7,800	µg/Kg-dry	10	12/20/13 22:48
2-Nitrophenol	U		130	1,900	µg/Kg-dry	10	12/20/13 22:48
3,3'-Dichlorobenzidine	U		4,900	7,800	µg/Kg-dry	10	12/20/13 22:48
3-Nitroaniline	U		130	7,800	µg/Kg-dry	10	12/20/13 22:48
4,6-Dinitro-2-methylphenol	U		320	3,900	µg/Kg-dry	10	12/20/13 22:48
4-Bromophenyl phenyl ether	U		110	1,900	µg/Kg-dry	10	12/20/13 22:48
4-Chloro-3-methylphenol	U		91	1,900	µg/Kg-dry	10	12/20/13 22:48
4-Chloroaniline	U		120	3,900	µg/Kg-dry	10	12/20/13 22:48
4-Chlorophenyl phenyl ether	U		110	1,900	µg/Kg-dry	10	12/20/13 22:48
4-Methylphenol	590	J	190	1,900	µg/Kg-dry	10	12/20/13 22:48
4-Nitroaniline	U		110	7,800	µg/Kg-dry	10	12/20/13 22:48
4-Nitrophenol	U		78	7,800	µg/Kg-dry	10	12/20/13 22:48
Acenaphthene	280	J	12	350	µg/Kg-dry	10	12/20/13 22:48
Acenaphthylene	200	J	14	350	µg/Kg-dry	10	12/20/13 22:48
Acetophenone	U		59	3,900	µg/Kg-dry	10	12/20/13 22:48
Anthracene	810		15	350	µg/Kg-dry	10	12/20/13 22:48
Atrazine	U		120	590	µg/Kg-dry	10	12/20/13 22:48
Benzaldehyde	U		150	3,900	µg/Kg-dry	10	12/20/13 22:48
Benzo(a)anthracene	2,100		15	350	µg/Kg-dry	10	12/20/13 22:48
Benzo(a)pyrene	1,800		26	350	µg/Kg-dry	10	12/20/13 22:48
Benzo(b)fluoranthene	2,300		23	350	µg/Kg-dry	10	12/20/13 22:48
Benzo(g,h,i)perylene	840		31	350	µg/Kg-dry	10	12/20/13 22:48
Benzo(k)fluoranthene	1,200		17	350	µg/Kg-dry	10	12/20/13 22:48
Bis(2-chloroethoxy)methane	U		120	1,900	µg/Kg-dry	10	12/20/13 22:48
Bis(2-chloroethyl)ether	U		120	1,900	µg/Kg-dry	10	12/20/13 22:48

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121313-AJL-018
Collection Date: 12/13/13 10:25 AM

Work Order: 1312894
Lab ID: 1312894-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bis(2-chloroisopropyl)ether	U		160	1,900	µg/Kg-dry	10	12/20/13 22:48
Bis(2-ethylhexyl)phthalate	890	J	130	3,900	µg/Kg-dry	10	12/20/13 22:48
Butyl benzyl phthalate	U		150	1,900	µg/Kg-dry	10	12/20/13 22:48
Caprolactam	U		170	3,900	µg/Kg-dry	10	12/20/13 22:48
Carbazole	460	J	120	1,900	µg/Kg-dry	10	12/20/13 22:48
Chrysene	2,300		19	350	µg/Kg-dry	10	12/20/13 22:48
Dibenzo(a,h)anthracene	240	J	29	350	µg/Kg-dry	10	12/20/13 22:48
Dibenzofuran	490	J	120	1,900	µg/Kg-dry	10	12/20/13 22:48
Diethyl phthalate	U		120	3,900	µg/Kg-dry	10	12/20/13 22:48
Dimethyl phthalate	U		130	3,900	µg/Kg-dry	10	12/20/13 22:48
Di-n-butyl phthalate	63	J	57	3,900	µg/Kg-dry	10	12/20/13 22:48
Di-n-octyl phthalate	U		130	1,900	µg/Kg-dry	10	12/20/13 22:48
Fluoranthene	5,000		27	350	µg/Kg-dry	10	12/20/13 22:48
Fluorene	630		26	350	µg/Kg-dry	10	12/20/13 22:48
Hexachlorobenzene	U		110	1,900	µg/Kg-dry	10	12/20/13 22:48
Hexachlorobutadiene	U		130	590	µg/Kg-dry	10	12/20/13 22:48
Hexachlorocyclopentadiene	U		120	3,900	µg/Kg-dry	10	12/20/13 22:48
Hexachloroethane	U		180	1,900	µg/Kg-dry	10	12/20/13 22:48
Indeno(1,2,3-cd)pyrene	840		26	350	µg/Kg-dry	10	12/20/13 22:48
Isophorone	U		130	1,900	µg/Kg-dry	10	12/20/13 22:48
Naphthalene	870		29	350	µg/Kg-dry	10	12/20/13 22:48
Nitrobenzene	U		150	1,900	µg/Kg-dry	10	12/20/13 22:48
N-Nitrosodi-n-propylamine	U		150	1,900	µg/Kg-dry	10	12/20/13 22:48
N-Nitrosodiphenylamine	U		700	1,900	µg/Kg-dry	10	12/20/13 22:48
Pentachlorophenol	U		76	240	µg/Kg-dry	10	12/20/13 22:48
Phenanthrene	3,800		16	350	µg/Kg-dry	10	12/20/13 22:48
Phenol	U		130	1,900	µg/Kg-dry	10	12/20/13 22:48
Pyrene	4,100		27	350	µg/Kg-dry	10	12/20/13 22:48
Surr: 2,4,6-Tribromophenol	65.6			34-140	%REC	10	12/20/13 22:48
Surr: 2-Fluorobiphenyl	40.2			12-100	%REC	10	12/20/13 22:48
Surr: 2-Fluorophenol	42.2			33-117	%REC	10	12/20/13 22:48
Surr: 4-Terphenyl-d14	60.2			25-137	%REC	10	12/20/13 22:48
Surr: Nitrobenzene-d5	36.8	S		37-107	%REC	10	12/20/13 22:48
Surr: Phenol-d6	39.2	S		40-106	%REC	10	12/20/13 22:48
VOLATILE ORGANIC COMPOUNDS			SW8260B		Prep: SW5035 / 12/12/13		Analyst: RS
BatchID: 54254							
1,1,1-Trichloroethane	U		14	36	µg/Kg-dry	1	12/22/13 11:37
1,1,2,2-Tetrachloroethane	U		16	36	µg/Kg-dry	1	12/22/13 11:37
1,1,2-Trichloroethane	U		13	36	µg/Kg-dry	1	12/22/13 11:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121313-AJL-018
Collection Date: 12/13/13 10:25 AM

Work Order: 1312894
Lab ID: 1312894-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,1,2-Trichlorotrifluoroethane	U		13	36	µg/Kg-dry	1	12/22/13 11:37
1,1-Dichloroethane	U		13	36	µg/Kg-dry	1	12/22/13 11:37
1,1-Dichloroethene	U		15	36	µg/Kg-dry	1	12/22/13 11:37
1,2,4-Trichlorobenzene	U		19	36	µg/Kg-dry	1	12/22/13 11:37
1,2-Dibromo-3-chloropropane	U		18	36	µg/Kg-dry	1	12/22/13 11:37
1,2-Dibromoethane	U		14	36	µg/Kg-dry	1	12/22/13 11:37
1,2-Dichlorobenzene	U		15	36	µg/Kg-dry	1	12/22/13 11:37
1,2-Dichloroethane	U		17	36	µg/Kg-dry	1	12/22/13 11:37
1,2-Dichloropropane	U		12	36	µg/Kg-dry	1	12/22/13 11:37
1,3-Dichlorobenzene	U		15	36	µg/Kg-dry	1	12/22/13 11:37
1,4-Dichlorobenzene	U		14	36	µg/Kg-dry	1	12/22/13 11:37
2-Butanone	1,500	J	90	1,600	µg/Kg-dry	1	12/22/13 11:37
2-Hexanone	U		8.9	36	µg/Kg-dry	1	12/22/13 11:37
4-Methyl-2-pentanone	U		12	36	µg/Kg-dry	1	12/22/13 11:37
Acetone	810	J	77	850	µg/Kg-dry	1	12/22/13 11:37
Benzene	120		15	36	µg/Kg-dry	1	12/22/13 11:37
Bromodichloromethane	U		8.1	36	µg/Kg-dry	1	12/22/13 11:37
Bromoform	U		7.1	36	µg/Kg-dry	1	12/22/13 11:37
Bromomethane	U		14	91	µg/Kg-dry	1	12/22/13 11:37
Carbon disulfide	U		18	36	µg/Kg-dry	1	12/22/13 11:37
Carbon tetrachloride	U		10	36	µg/Kg-dry	1	12/22/13 11:37
Chlorobenzene	U		15	36	µg/Kg-dry	1	12/22/13 11:37
Chloroethane	U		77	120	µg/Kg-dry	1	12/22/13 11:37
Chloroform	U		15	36	µg/Kg-dry	1	12/22/13 11:37
Chloromethane	92	J	20	120	µg/Kg-dry	1	12/22/13 11:37
cis-1,2-Dichloroethene	560		15	36	µg/Kg-dry	1	12/22/13 11:37
cis-1,3-Dichloropropene	U		12	36	µg/Kg-dry	1	12/22/13 11:37
Cyclohexane	U		16	36	µg/Kg-dry	1	12/22/13 11:37
Dibromochloromethane	U		6.7	36	µg/Kg-dry	1	12/22/13 11:37
Dichlorodifluoromethane	U		16	36	µg/Kg-dry	1	12/22/13 11:37
Ethylbenzene	950		13	36	µg/Kg-dry	1	12/22/13 11:37
Isopropylbenzene	130		16	36	µg/Kg-dry	1	12/22/13 11:37
Methyl acetate	200	J	49	240	µg/Kg-dry	1	12/22/13 11:37
Methyl tert-butyl ether	U		15	36	µg/Kg-dry	1	12/22/13 11:37
Methylcyclohexane	U		17	36	µg/Kg-dry	1	12/22/13 11:37
Methylene chloride	U		14	36	µg/Kg-dry	1	12/22/13 11:37
Styrene	U		14	36	µg/Kg-dry	1	12/22/13 11:37
Tetrachloroethene	U		16	36	µg/Kg-dry	1	12/22/13 11:37
Toluene	1,500		14	36	µg/Kg-dry	1	12/22/13 11:37
trans-1,2-Dichloroethene	U		11	36	µg/Kg-dry	1	12/22/13 11:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-121313-AJL-018
Collection Date: 12/13/13 10:25 AM

Work Order: 1312894
Lab ID: 1312894-03
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
trans-1,3-Dichloropropene	U		12	36	µg/Kg-dry	1	12/22/13 11:37
Trichloroethene	1,300		17	36	µg/Kg-dry	1	12/22/13 11:37
Trichlorofluoromethane	U		10	36	µg/Kg-dry	1	12/22/13 11:37
Vinyl chloride	U		16	36	µg/Kg-dry	1	12/22/13 11:37
Xylenes, Total	3,300		43	110	µg/Kg-dry	1	12/22/13 11:37
Surr: 1,2-Dichloroethane-d4	105			70-130	%REC	1	12/22/13 11:37
Surr: 4-Bromofluorobenzene	99.5			70-130	%REC	1	12/22/13 11:37
Surr: Dibromofluoromethane	107			70-130	%REC	1	12/22/13 11:37
Surr: Toluene-d8	91.2			70-130	%REC	1	12/22/13 11:37
MOISTURE			A2540 G				Analyst: MEB
BatchID: <u>R132867</u>							
Moisture	16		0.025	0.050	% of sample	1	12/19/13 17:00

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-019
Collection Date: 12/13/13 11:17 AM

Work Order: 1312894
Lab ID: 1312894-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470		Prep: SW7470 / 12/21/13		Analyst: LR
<u>BatchID: 54394</u>							
Mercury	0.00043		0.00010	0.00020	mg/L	1	12/23/13 13:11
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 12/31/13		Analyst: LR
<u>BatchID: 54609</u>							
Mercury		U	0.00010	0.00020	mg/L	1	12/31/13 19:07
METALS BY ICP-MS			SW6020A		Prep: SW3005A / 12/30/13		Analyst: JDD
<u>BatchID: 54568</u>							
Aluminum	11		0.00078	0.050	mg/L	1	01/02/14 19:42
Antimony	0.00097	J	0.000036	0.0020	mg/L	1	01/02/14 19:42
Arsenic	0.012		0.00058	0.0050	mg/L	1	01/02/14 19:42
Barium	0.15		0.000063	0.10	mg/L	1	01/02/14 19:42
Beryllium	0.00049	J	0.000082	0.0010	mg/L	1	01/02/14 19:42
Cadmium	0.00026	J	0.000045	0.0010	mg/L	1	01/02/14 19:42
Chromium	0.059		0.00027	0.010	mg/L	1	01/02/14 19:42
Cobalt	0.011	J	0.000041	0.020	mg/L	1	01/02/14 19:42
Copper	0.050		0.00053	0.0040	mg/L	1	01/02/14 19:42
Iron	31		0.0053	0.20	mg/L	1	01/02/14 19:42
Lead	0.077		0.000051	0.0030	mg/L	1	01/02/14 19:42
Manganese	0.61		0.000054	0.050	mg/L	1	01/02/14 19:42
Nickel	0.040		0.00025	0.020	mg/L	1	01/02/14 19:42
Selenium	0.0026	J	0.00064	0.0050	mg/L	1	01/02/14 19:42
Silver	0.00018	J	0.000042	0.00020	mg/L	1	01/02/14 19:42
Thallium	0.00037	J	0.000062	0.0020	mg/L	1	01/02/14 19:42
Vanadium	0.030		0.00016	0.0040	mg/L	1	01/02/14 19:42
Zinc	0.14		0.00048	0.050	mg/L	1	01/02/14 19:42
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/30/13		Analyst: JDD
<u>BatchID: 54568</u>							
Aluminum	0.075	J	0.0078	0.50	mg/L	10	01/02/14 19:47
Antimony	0.00089	J	0.00036	0.020	mg/L	10	01/02/14 19:47
Arsenic	0.0093	J	0.0058	0.050	mg/L	10	01/02/14 19:47
Barium	0.70	J	0.00063	1.0	mg/L	10	01/02/14 19:47
Beryllium		U	0.00082	0.010	mg/L	10	01/02/14 19:47
Cadmium		U	0.00045	0.010	mg/L	10	01/02/14 19:47
Chromium		U	0.0027	0.10	mg/L	10	01/02/14 19:47
Cobalt	0.0046	J	0.00041	0.20	mg/L	10	01/02/14 19:47
Copper		U	0.0053	0.040	mg/L	10	01/02/14 19:47
Iron	38		0.053	2.0	mg/L	10	01/02/14 19:47

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-019
Collection Date: 12/13/13 11:17 AM

Work Order: 1312894
Lab ID: 1312894-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.00051	0.030	mg/L	10	01/02/14 19:47
Manganese	1.5		0.00054	0.50	mg/L	10	01/02/14 19:47
Nickel	0.026	J	0.0025	0.20	mg/L	10	01/02/14 19:47
Selenium	U		0.0064	0.050	mg/L	10	01/02/14 19:47
Silver	U		0.00042	0.0020	mg/L	10	01/02/14 19:47
Thallium	U		0.00062	0.020	mg/L	10	01/02/14 19:47
Vanadium	0.0017	J	0.0016	0.040	mg/L	10	01/02/14 19:47
Zinc	0.034	J	0.0048	0.50	mg/L	10	01/02/14 19:47

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 12/18/13

Analyst: HL

BatchID: 54243

1,1'-Biphenyl	U		0.095	10	µg/L	1	12/20/13 12:45
2,4,5-Trichlorophenol	U		0.25	5.0	µg/L	1	12/20/13 12:45
2,4,6-Trichlorophenol	U		0.27	4.0	µg/L	1	12/20/13 12:45
2,4-Dichlorophenol	U		0.22	10	µg/L	1	12/20/13 12:45
2,4-Dimethylphenol	U		1.8	5.0	µg/L	1	12/20/13 12:45
2,4-Dinitrophenol	U		0.67	25	µg/L	1	12/20/13 12:45
2,4-Dinitrotoluene	U		0.27	5.0	µg/L	1	12/20/13 12:45
2,6-Dinitrotoluene	U		0.23	5.0	µg/L	1	12/20/13 12:45
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	12/20/13 12:45
2-Chlorophenol	U		0.32	10	µg/L	1	12/20/13 12:45
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	12/20/13 12:45
2-Methylphenol	U		0.20	10	µg/L	1	12/20/13 12:45
2-Nitroaniline	U		0.34	25	µg/L	1	12/20/13 12:45
2-Nitrophenol	U		0.28	5.0	µg/L	1	12/20/13 12:45
3,3'-Dichlorobenzidine	U		3.9	1.0	µg/L	1	12/20/13 12:45
3-Nitroaniline	U		0.34	25	µg/L	1	12/20/13 12:45
4,6-Dinitro-2-methylphenol	U		1.2	20	µg/L	1	12/20/13 12:45
4-Bromophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/20/13 12:45
4-Chloro-3-methylphenol	U		0.31	5.0	µg/L	1	12/20/13 12:45
4-Chloroaniline	U		0.32	10	µg/L	1	12/20/13 12:45
4-Chlorophenyl phenyl ether	U		0.23	5.0	µg/L	1	12/20/13 12:45
4-Methylphenol	U		0.20	10	µg/L	1	12/20/13 12:45
4-Nitroaniline	U		0.30	25	µg/L	1	12/20/13 12:45
4-Nitrophenol	U		0.51	25	µg/L	1	12/20/13 12:45
Acenaphthene	U		0.11	5.0	µg/L	1	12/20/13 12:45
Acenaphthylene	U		0.12	5.0	µg/L	1	12/20/13 12:45
Acetophenone	U		0.090	5.0	µg/L	1	12/20/13 12:45
Anthracene	U		0.72	5.0	µg/L	1	12/20/13 12:45
Atrazine	U		0.13	5.0	µg/L	1	12/20/13 12:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-019
Collection Date: 12/13/13 11:17 AM

Work Order: 1312894
Lab ID: 1312894-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	0.69	J	0.46	10	µg/L	1	12/20/13 12:45
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	12/20/13 12:45
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	12/20/13 12:45
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	12/20/13 12:45
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	12/20/13 12:45
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	12/20/13 12:45
Bis(2-chloroethoxy)methane	U		0.33	5.0	µg/L	1	12/20/13 12:45
Bis(2-chloroethyl)ether	U		0.34	1.0	µg/L	1	12/20/13 12:45
Bis(2-chloroisopropyl)ether	U		0.32	5.0	µg/L	1	12/20/13 12:45
Bis(2-ethylhexyl)phthalate	U		0.15	5.0	µg/L	1	12/20/13 12:45
Butyl benzyl phthalate	U		0.10	5.0	µg/L	1	12/20/13 12:45
Caprolactam	U		4.7	10	µg/L	1	12/20/13 12:45
Carbazole	U		0.16	10	µg/L	1	12/20/13 12:45
Chrysene	U		0.71	1.0	µg/L	1	12/20/13 12:45
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	12/20/13 12:45
Dibenzofuran	U		0.28	4.0	µg/L	1	12/20/13 12:45
Diethyl phthalate	U		0.24	5.0	µg/L	1	12/20/13 12:45
Dimethyl phthalate	U		0.27	5.0	µg/L	1	12/20/13 12:45
Di-n-butyl phthalate	U		0.14	5.0	µg/L	1	12/20/13 12:45
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	12/20/13 12:45
Fluoranthene	U		0.77	1.0	µg/L	1	12/20/13 12:45
Fluorene	U		0.10	5.0	µg/L	1	12/20/13 12:45
Hexachlorobenzene	U		0.22	0.50	µg/L	1	12/20/13 12:45
Hexachlorobutadiene	U		0.24	0.50	µg/L	1	12/20/13 12:45
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	12/20/13 12:45
Hexachloroethane	U		0.47	5.0	µg/L	1	12/20/13 12:45
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	12/20/13 12:45
Isophorone	U		0.30	5.0	µg/L	1	12/20/13 12:45
Naphthalene	U		0.12	5.0	µg/L	1	12/20/13 12:45
Nitrobenzene	U		0.33	3.0	µg/L	1	12/20/13 12:45
N-Nitrosodi-n-propylamine	U		0.32	5.0	µg/L	1	12/20/13 12:45
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	12/20/13 12:45
Pentachlorophenol	U		0.22	1.0	µg/L	1	12/20/13 12:45
Phenanthrene	U		0.86	2.0	µg/L	1	12/20/13 12:45
Phenol	U		0.32	5.0	µg/L	1	12/20/13 12:45
Pyrene	U		0.65	5.0	µg/L	1	12/20/13 12:45
Surr: 2,4,6-Tribromophenol	82.2			32-115	%REC	1	12/20/13 12:45
Surr: 2-Fluorobiphenyl	73.5			32-100	%REC	1	12/20/13 12:45
Surr: 2-Fluorophenol	44.6			22-59	%REC	1	12/20/13 12:45
Surr: 4-Terphenyl-d14	70.6			23-112	%REC	1	12/20/13 12:45

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-019
Collection Date: 12/13/13 11:17 AM

Work Order: 1312894
Lab ID: 1312894-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	75.7			31-93	%REC	1	12/20/13 12:45
Surr: Phenol-d6	25.7			13-36	%REC	1	12/20/13 12:45
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R132961							
1,1,1-Trichloroethane	U		0.11	1.0	µg/L	1	12/23/13 19:29
1,1,2,2-Tetrachloroethane	U		0.21	1.0	µg/L	1	12/23/13 19:29
1,1,2-Trichloroethane	U		0.11	1.0	µg/L	1	12/23/13 19:29
1,1,2-Trichlorotrifluoroethane	U		0.40	1.0	µg/L	1	12/23/13 19:29
1,1-Dichloroethane	U		0.14	1.0	µg/L	1	12/23/13 19:29
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	12/23/13 19:29
1,2,4-Trichlorobenzene	U		0.096	5.0	µg/L	1	12/23/13 19:29
1,2-Dibromo-3-chloropropane	U		0.35	1.0	µg/L	1	12/23/13 19:29
1,2-Dibromoethane	U		0.14	1.0	µg/L	1	12/23/13 19:29
1,2-Dichlorobenzene	U		0.17	1.0	µg/L	1	12/23/13 19:29
1,2-Dichloroethane	U		0.11	1.0	µg/L	1	12/23/13 19:29
1,2-Dichloropropane	U		0.12	1.0	µg/L	1	12/23/13 19:29
1,3-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/23/13 19:29
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	12/23/13 19:29
2-Butanone	U		0.64	25	µg/L	1	12/23/13 19:29
2-Hexanone	U		0.19	50	µg/L	1	12/23/13 19:29
4-Methyl-2-pentanone	U		0.20	50	µg/L	1	12/23/13 19:29
Acetone	U		3.0	50	µg/L	1	12/23/13 19:29
Benzene	U		0.14	1.0	µg/L	1	12/23/13 19:29
Bromodichloromethane	U		0.22	1.0	µg/L	1	12/23/13 19:29
Bromoform	U		0.18	1.0	µg/L	1	12/23/13 19:29
Bromomethane	U		0.38	5.0	µg/L	1	12/23/13 19:29
Carbon disulfide	U		0.26	5.0	µg/L	1	12/23/13 19:29
Carbon tetrachloride	U		0.16	1.0	µg/L	1	12/23/13 19:29
Chlorobenzene	U		0.12	1.0	µg/L	1	12/23/13 19:29
Chloroethane	U		0.25	5.0	µg/L	1	12/23/13 19:29
Chloroform	U		0.15	1.0	µg/L	1	12/23/13 19:29
Chloromethane	U		0.29	5.0	µg/L	1	12/23/13 19:29
cis-1,2-Dichloroethene	U		0.10	1.0	µg/L	1	12/23/13 19:29
cis-1,3-Dichloropropene	U		0.097	1.0	µg/L	1	12/23/13 19:29
Cyclohexane	U		0.20	1.0	µg/L	1	12/23/13 19:29
Dibromochloromethane	U		0.12	5.0	µg/L	1	12/23/13 19:29
Dichlorodifluoromethane	U		0.18	5.0	µg/L	1	12/23/13 19:29
Ethylbenzene	U		0.12	1.0	µg/L	1	12/23/13 19:29
Isopropylbenzene	U		0.11	5.0	µg/L	1	12/23/13 19:29

Note: See Qualifiers page for a list of qualifiers and their definitions.

Revision: 1

ALS Group USA, Corp

Date: 12-Feb-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-121313-AJL-019
Collection Date: 12/13/13 11:17 AM

Work Order: 1312894
Lab ID: 1312894-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.76	10	µg/L	1	12/23/13 19:29
Methyl tert-butyl ether	U		0.28	5.0	µg/L	1	12/23/13 19:29
Methylcyclohexane	U		0.19	1.0	µg/L	1	12/23/13 19:29
Methylene chloride	U		0.75	5.0	µg/L	1	12/23/13 19:29
Styrene	U		0.12	1.0	µg/L	1	12/23/13 19:29
Tetrachloroethene	U		0.098	1.0	µg/L	1	12/23/13 19:29
Toluene	0.38	J	0.13	1.0	µg/L	1	12/23/13 19:29
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	12/23/13 19:29
trans-1,3-Dichloropropene	U		0.093	1.0	µg/L	1	12/23/13 19:29
Trichloroethene	U		0.16	1.0	µg/L	1	12/23/13 19:29
Trichlorofluoromethane	U		0.22	1.0	µg/L	1	12/23/13 19:29
Vinyl chloride	U		0.15	1.0	µg/L	1	12/23/13 19:29
Xylenes, Total	U		0.30	3.0	µg/L	1	12/23/13 19:29
Surr: 1,2-Dichloroethane-d4	103			70-120	%REC	1	12/23/13 19:29
Surr: 4-Bromofluorobenzene	100			75-120	%REC	1	12/23/13 19:29
Surr: Dibromofluoromethane	98.7			85-115	%REC	1	12/23/13 19:29
Surr: Toluene-d8	100			85-120	%REC	1	12/23/13 19:29
CYANIDE, AMENABLE			SW9012A		Prep: SW9012A / 12/26/13		Analyst: JB
BatchID: 54481							
Cyanide, Amenable	0.0045	J	0.0010	0.0050	mg/L	1	12/26/13 14:08

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54394** Instrument ID **HG1** Method: **SW7470**

MBLK		Sample ID: MBLK-54394-54394				Units: mg/L		Analysis Date: 12/23/13 12:32 PM		
Client ID:		Run ID: HG1_131223A				SeqNo: 2592325		Prep Date: 12/21/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS		Sample ID: LCS-54394-54394				Units: mg/L		Analysis Date: 12/23/13 12:34 PM		
Client ID:		Run ID: HG1_131223A				SeqNo: 2592326		Prep Date: 12/21/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001958 0.00020 0.002 0 97.9 80-120 0

MS		Sample ID: 13121095-01DMS				Units: mg/L		Analysis Date: 12/23/13 12:41 PM		
Client ID:		Run ID: HG1_131223A				SeqNo: 2592330		Prep Date: 12/21/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002145 0.00020 0.002 0.00002 106 75-125 0

MSD		Sample ID: 13121095-01DMSD				Units: mg/L		Analysis Date: 12/23/13 12:43 PM		
Client ID:		Run ID: HG1_131223A				SeqNo: 2592332		Prep Date: 12/21/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002139 0.00020 0.002 0.00002 106 75-125 0.002145 0.28 20

The following samples were analyzed in this batch:

1312894-02D 1312894-04D

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54609** Instrument ID **HG1** Method: **SW7470**

MBLK	Sample ID: MBLK-54609-54609					Units: mg/L		Analysis Date: 12/31/13 05:57 PM		
Client ID:	Run ID: HG1_131231A				SeqNo: 2600784		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS	Sample ID: LCS-54609-54609					Units: mg/L		Analysis Date: 12/31/13 06:00 PM		
Client ID:	Run ID: HG1_131231A				SeqNo: 2600785		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002053 0.00020 0.002 0 103 80-120 0

MS	Sample ID: 13121064-02AMS					Units: mg/L		Analysis Date: 12/31/13 06:05 PM		
Client ID:	Run ID: HG1_131231A				SeqNo: 2600787		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.02126 0.0020 0.02 -0.00023 107 75-125 0

MSD	Sample ID: 13121064-02AMSD					Units: mg/L		Analysis Date: 12/31/13 06:07 PM		
Client ID:	Run ID: HG1_131231A				SeqNo: 2600788		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.02143 0.0020 0.02 -0.00023 108 75-125 0.02126 0.796 20

The following samples were analyzed in this batch:

1312894-02E 1312894-04E

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-54568-54568				Units: mg/L		Analysis Date: 12/31/13 03:44 PM		
Client ID:		Run ID: ICPMS2_131231A		SeqNo: 2600886		Prep Date: 12/30/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0001902	0.0050								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	U	0.080								
Lead	U	0.0050								
Manganese	U	0.0050								
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	0.0005963	0.0050								J
Vanadium	U	0.0050								
Zinc	0.001053	0.010								J

MBLK					Sample ID: MBLK-54568-54568				Units: mg/L			Analysis Date: 01/02/14 11:53 AM		
Client ID:			Run ID: ICPMS2_140102A				SeqNo: 2601578		Prep Date: 12/30/13		DF: 1			
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			
Aluminum		0.001565	0.010								J			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

LCS		Sample ID: LCS-54568-54568				Units: mg/L		Analysis Date: 12/31/13 03:49 PM		
Client ID:		Run ID: ICPMS2_131231A				SeqNo: 2600887		Prep Date: 12/30/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09986	0.0050	0.1	0	99.9	80-120	0			
Arsenic	0.09956	0.0050	0.1	0	99.6	80-120	0			
Barium	0.09722	0.0050	0.1	0	97.2	80-120	0			
Beryllium	0.09647	0.0020	0.1	0	96.5	80-120	0			
Cadmium	0.09782	0.0020	0.1	0	97.8	80-120	0			
Chromium	0.09284	0.0050	0.1	0	92.8	80-120	0			
Cobalt	0.09966	0.0050	0.1	0	99.7	80-120	0			
Copper	0.09745	0.0050	0.1	0	97.4	80-120	0			
Iron	9.854	0.080	10	0	98.5	80-120	0			
Lead	0.09529	0.0050	0.1	0	95.3	80-120	0			
Manganese	0.09748	0.0050	0.1	0	97.5	80-120	0			
Nickel	0.09594	0.0050	0.1	0	95.9	80-120	0			
Selenium	0.09888	0.0050	0.1	0	98.9	80-120	0			
Silver	0.09147	0.0050	0.1	0	91.5	80-120	0			
Thallium	0.08428	0.0050	0.1	0	84.3	80-120	0			
Vanadium	0.09984	0.0050	0.1	0	99.8	80-120	0			
Zinc	0.09937	0.010	0.1	0	99.4	80-120	0			

LCS		Sample ID: LCS-54568-54568				Units: mg/L		Analysis Date: 01/02/14 11:59 AM		
Client ID:		Run ID: ICPMS2_140102A				SeqNo: 2601579		Prep Date: 12/30/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0959	0.010	0.1	0	95.9	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

MS				Sample ID: 1312747-16EMS			Units: mg/L		Analysis Date: 12/31/13 05:23 PM		
Client ID:		Run ID: ICPMS2_131231A			SeqNo: 2600904		Prep Date: 12/30/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.09793	0.010	0.1	-0.00114	99.1	75-125	0				
Antimony	0.09652	0.0050	0.1	0.00003278	96.5	75-125	0				
Arsenic	0.09719	0.0050	0.1	-0.0001527	97.3	75-125	0				
Barium	0.0975	0.0050	0.1	0.0001056	97.4	75-125	0				
Beryllium	0.09214	0.0020	0.1	-0.00004222	92.2	75-125	0				
Cadmium	0.09555	0.0020	0.1	-0.00003049	95.6	75-125	0				
Chromium	0.09049	0.0050	0.1	-0.00007388	90.6	75-125	0				
Cobalt	0.09907	0.0050	0.1	0.0001389	98.9	75-125	0				
Copper	0.09801	0.0050	0.1	0.0003429	97.7	75-125	0				
Iron	9.821	0.080	10	0.0104	98.1	75-125	0				
Lead	0.094	0.0050	0.1	0.000002567	94	75-125	0				
Manganese	0.09737	0.0050	0.1	0.0003125	97.1	75-125	0				
Nickel	0.09549	0.0050	0.1	-0.0003924	95.9	75-125	0				
Selenium	0.0961	0.0050	0.1	0.0002494	95.9	75-125	0				
Silver	0.08812	0.0050	0.1	0.000003683	88.1	75-125	0				
Thallium	0.08338	0.0050	0.1	-0.0003435	83.7	75-125	0				
Vanadium	0.1008	0.0050	0.1	0.0001523	101	75-125	0				
Zinc	0.09708	0.010	0.1	0.001695	95.4	75-125	0				

MSD				Sample ID: 1312747-16EMSD			Units: mg/L		Analysis Date: 12/31/13 05:29 PM		
Client ID:			Run ID: ICPMS2_131231A			SeqNo: 2600905		Prep Date: 12/30/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.09889	0.010	0.1	-0.00114	100	75-125	0.09793	0.976	20		
Antimony	0.09583	0.0050	0.1	0.00003278	95.8	75-125	0.09652	0.717	20		
Arsenic	0.09607	0.0050	0.1	-0.0001527	96.2	75-125	0.09719	1.16	20		
Barium	0.09693	0.0050	0.1	0.0001056	96.8	75-125	0.0975	0.586	20		
Beryllium	0.09401	0.0020	0.1	-0.00004222	94.1	75-125	0.09214	2.01	20		
Cadmium	0.09521	0.0020	0.1	-0.00003049	95.2	75-125	0.09555	0.356	20		
Chromium	0.08962	0.0050	0.1	-0.00007388	89.7	75-125	0.09049	0.966	20		
Cobalt	0.1011	0.0050	0.1	0.0001389	101	75-125	0.09907	2.03	20		
Copper	0.09878	0.0050	0.1	0.0003429	98.4	75-125	0.09801	0.783	20		
Iron	9.854	0.080	10	0.0104	98.4	75-125	9.821	0.335	20		
Lead	0.09472	0.0050	0.1	0.000002567	94.7	75-125	0.094	0.763	20		
Manganese	0.09754	0.0050	0.1	0.0003125	97.2	75-125	0.09737	0.174	20		
Nickel	0.09685	0.0050	0.1	-0.0003924	97.2	75-125	0.09549	1.41	20		
Selenium	0.09523	0.0050	0.1	0.0002494	95	75-125	0.0961	0.909	20		
Silver	0.08764	0.0050	0.1	0.000003683	87.6	75-125	0.08812	0.546	20		
Thallium	0.0854	0.0050	0.1	-0.0003435	85.7	75-125	0.08338	2.39	20		
Vanadium	0.1018	0.0050	0.1	0.0001523	102	75-125	0.1008	0.987	20		
Zinc	0.09731	0.010	0.1	0.001695	95.6	75-125	0.09708	0.237	20		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

The following samples were analyzed in this batch:

1312894-02D	1312894-02E	1312894-04D
1312894-04E		

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54243** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKW1-54243-54243				Units: µg/L		Analysis Date: 12/19/13 05:44 PM		
Client ID:		Run ID: SVMS4_131219A				SeqNo: 2588488		Prep Date: 12/18/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	5.0								
2,4,5-Trichlorophenol	U	5.0								
2,4,6-Trichlorophenol	U	5.0								
2,4-Dichlorophenol	U	10								
2,4-Dimethylphenol	U	5.0								
2,4-Dinitrophenol	U	5.0								
2,4-Dinitrotoluene	U	5.0								
2,6-Dinitrotoluene	U	5.0								
2-Chloronaphthalene	U	5.0								
2-Chlorophenol	U	5.0								
2-Methylnaphthalene	U	5.0								
2-Methylphenol	U	5.0								
2-Nitroaniline	U	20								
2-Nitrophenol	U	5.0								
3,3'-Dichlorobenzidine	U	5.0								
3-Nitroaniline	U	20								
4,6-Dinitro-2-methylphenol	U	20								
4-Bromophenyl phenyl ether	U	5.0								
4-Chloro-3-methylphenol	U	5.0								
4-Chloroaniline	U	20								
4-Chlorophenyl phenyl ether	U	5.0								
4-Methylphenol	U	5.0								
4-Nitroaniline	U	20								
4-Nitrophenol	U	20								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Acetophenone	U	1.0								
Anthracene	U	5.0								
Atrazine	U	1.0								
Benzaldehyde	U	1.0								
Benzo(a)anthracene	U	5.0								
Benzo(a)pyrene	U	5.0								
Benzo(b)fluoranthene	U	5.0								
Benzo(g,h,i)perylene	U	5.0								
Benzo(k)fluoranthene	U	5.0								
Bis(2-chloroethoxy)methane	U	5.0								
Bis(2-chloroethyl)ether	U	5.0								
Bis(2-chloroisopropyl)ether	U	5.0								
Bis(2-ethylhexyl)phthalate	U	5.0								
Butyl benzyl phthalate	U	5.0								
Caprolactam	U	10								
Carbazole	U	10								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54243	Instrument ID SVMS4	Method: SW8270						
Chrysene	U	5.0						
Dibenzo(a,h)anthracene	U	5.0						
Dibenzofuran	U	5.0						
Diethyl phthalate	U	20						
Dimethyl phthalate	U	20						
Di-n-butyl phthalate	U	5.0						
Di-n-octyl phthalate	U	5.0						
Fluoranthene	U	5.0						
Fluorene	U	5.0						
Hexachlorobenzene	U	5.0						
Hexachlorobutadiene	U	5.0						
Hexachlorocyclopentadiene	U	20						
Hexachloroethane	U	5.0						
Indeno(1,2,3-cd)pyrene	U	5.0						
Isophorone	U	5.0						
Naphthalene	U	5.0						
Nitrobenzene	U	5.0						
N-Nitrosodi-n-propylamine	U	5.0						
N-Nitrosodiphenylamine	U	5.0						
Pentachlorophenol	U	20						
Phenanthrene	U	5.0						
Phenol	U	5.0						
Pyrene	U	5.0						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>27.23</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>54.5</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>30.85</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>61.7</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>18.05</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>36.1</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>40.55</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>81.1</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>30.81</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>61.6</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>9.8</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>19.6</i>	<i>13-36</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54243** Instrument ID **SVMS4** Method: **SW8270**

LCS		Sample ID: SLCSW1-54243-54243				Units: µg/L		Analysis Date: 12/19/13 04:09 PM		
Client ID:		Run ID: SVMS4_131219A			SeqNo: 2588485		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	12.54	5.0	20	0	62.7	50-110	0			
2,4,6-Trichlorophenol	12.85	5.0	20	0	64.2	50-115	0			
2,4-Dichlorophenol	12.72	10	20	0	63.6	50-105	0			
2,4-Dimethylphenol	11.17	5.0	20	0	55.8	30-110	0			
2,4-Dinitrophenol	13.32	5.0	20	0	66.6	15-140	0			
2,4-Dinitrotoluene	15.53	5.0	20	0	77.6	50-120	0			
2,6-Dinitrotoluene	15.57	5.0	20	0	77.8	50-115	0			
2-Chloronaphthalene	14.19	5.0	20	0	71	50-105	0			
2-Chlorophenol	13.29	5.0	20	0	66.4	35-105	0			
2-Methylnaphthalene	13.92	5.0	20	0	69.6	45-105	0			
2-Methylphenol	10.39	5.0	20	0	52	40-110	0			
2-Nitroaniline	15.12	20	20	0	75.6	50-115	0			J
2-Nitrophenol	13.85	5.0	20	0	69.2	40-115	0			
3-Nitroaniline	12.72	20	20	0	63.6	20-125	0			J
4,6-Dinitro-2-methylphenol	15.33	20	20	0	76.6	40-130	0			J
4-Bromophenyl phenyl ether	14.91	5.0	20	0	74.6	50-115	0			
4-Chloro-3-methylphenol	13.71	5.0	20	0	68.6	45-110	0			
4-Chloroaniline	28.2	20	20	0	141	15-110	0			S
4-Chlorophenyl phenyl ether	14.35	5.0	20	0	71.8	50-110	0			
4-Methylphenol	8.67	5.0	20	0	43.4	30-110	0			
4-Nitroaniline	16.54	20	20	0	82.7	35-150	0			J
4-Nitrophenol	10.07	20	20	0	50.4	1-58	0			J
Acenaphthene	13.85	5.0	20	0	69.2	45-110	0			
Acenaphthylene	14.23	5.0	20	0	71.2	50-105	0			
Anthracene	15.27	5.0	20	0	76.4	55-110	0			
Benzo(a)anthracene	17.85	5.0	20	0	89.2	55-110	0			
Benzo(a)pyrene	16.7	5.0	20	0	83.5	55-110	0			
Benzo(b)fluoranthene	16.09	5.0	20	0	80.4	45-120	0			
Benzo(g,h,i)perylene	16.81	5.0	20	0	84	40-125	0			
Benzo(k)fluoranthene	17.52	5.0	20	0	87.6	45-125	0			
Bis(2-chloroethoxy)methane	14.06	5.0	20	0	70.3	45-105	0			
Bis(2-chloroethyl)ether	13.74	5.0	20	0	68.7	35-110	0			
Bis(2-chloroisopropyl)ether	12.7	5.0	20	0	63.5	25-130	0			
Bis(2-ethylhexyl)phthalate	16.82	5.0	20	0	84.1	40-125	0			
Butyl benzyl phthalate	16.41	5.0	20	0	82	45-115	0			
Carbazole	14.11	10	20	0	70.6	50-150	0			
Chrysene	16.31	5.0	20	0	81.6	55-110	0			
Dibenzo(a,h)anthracene	17.95	5.0	20	0	89.8	40-125	0			
Dibenzofuran	14.75	5.0	20	0	73.8	55-105	0			
Diethyl phthalate	15.15	20	20	0	75.8	40-120	0			J
Dimethyl phthalate	14.77	20	20	0	73.8	25-125	0			J
Di-n-butyl phthalate	15.96	5.0	20	0	79.8	55-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54243		Instrument ID SVMS4		Method: SW8270				
Di-n-octyl phthalate	16.77	5.0	20	0	83.8	35-135	0	
Fluoranthene	16.67	5.0	20	0	83.4	55-115	0	
Fluorene	15.19	5.0	20	0	76	50-110	0	
Hexachlorobenzene	14.94	5.0	20	0	74.7	50-110	0	
Hexachlorobutadiene	12.43	5.0	20	0	62.2	25-105	0	
Hexachlorocyclopentadiene	8.64	20	20	0	43.2	25-105	0	J
Hexachloroethane	12.91	5.0	20	0	64.6	30-95	0	
Indeno(1,2,3-cd)pyrene	17.21	5.0	20	0	86	45-125	0	
Isophorone	13.9	5.0	20	0	69.5	50-110	0	
Naphthalene	12.72	5.0	20	0	63.6	40-100	0	
Nitrobenzene	14.27	5.0	20	0	71.4	45-110	0	
N-Nitrosodi-n-propylamine	14.67	5.0	20	0	73.4	35-130	0	
N-Nitrosodiphenylamine	16.6	5.0	20	0	83	50-110	0	
Pentachlorophenol	12.82	20	20	0	64.1	40-115	0	J
Phenanthrene	14.92	5.0	20	0	74.6	50-115	0	
Phenol	5.31	5.0	20	0	26.6	12-43	0	
Pyrene	15.79	5.0	20	0	79	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	34.22	0	50	0	68.4	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	33.94	0	50	0	67.9	32-100	0	
<i>Surr: 2-Fluorophenol</i>	18.2	0	50	0	36.4	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	42.33	0	50	0	84.7	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	32.08	0	50	0	64.2	31-93	0	
<i>Surr: Phenol-d6</i>	11.33	0	50	0	22.7	13-36	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54243** Instrument ID **SVMS4** Method: **SW8270**

MS				Sample ID: 1312745-10B MS			Units: µg/L		Analysis Date: 12/19/13 08:02 PM	
Client ID:				Run ID: SVMS4_131219A			SeqNo: 2588491		Prep Date: 12/18/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	126.3	50	200	0	63.2	50-110	0			
2,4,6-Trichlorophenol	129.9	50	200	0	65	50-115	0			
2,4-Dichlorophenol	125.7	100	200	0	62.8	50-105	0			
2,4-Dimethylphenol	115.7	50	200	0	57.8	30-110	0			
2,4-Dinitrophenol	135.9	50	200	0	68	15-140	0			
2,4-Dinitrotoluene	155.4	50	200	0	77.7	50-120	0			
2,6-Dinitrotoluene	156.2	50	200	0	78.1	50-115	0			
2-Chloronaphthalene	141.6	50	200	0	70.8	50-105	0			
2-Chlorophenol	139	50	200	0	69.5	35-105	0			
2-Methylnaphthalene	139.1	50	200	0	69.6	45-105	0			
2-Methylphenol	111	50	200	0	55.5	40-110	0			
2-Nitroaniline	152.5	200	200	0	76.2	50-115	0			J
2-Nitrophenol	136.9	50	200	0	68.4	40-115	0			
3-Nitroaniline	139.6	200	200	0	69.8	20-125	0			J
4,6-Dinitro-2-methylphenol	149.6	200	200	0	74.8	40-130	0			J
4-Bromophenyl phenyl ether	148.8	50	200	0	74.4	50-115	0			
4-Chloro-3-methylphenol	138.8	50	200	0	69.4	45-110	0			
4-Chloroaniline	300.5	200	200	0	150	15-110	0			S
4-Chlorophenyl phenyl ether	142.7	50	200	0	71.4	50-110	0			
4-Methylphenol	92.7	50	200	0	46.4	30-110	0			
4-Nitroaniline	178.3	200	200	0	89.2	35-150	0			J
4-Nitrophenol	102.2	200	200	0	51.1	1-58	0			J
Acenaphthene	137.6	50	200	0	68.8	45-110	0			
Acenaphthylene	141.8	50	200	0	70.9	50-105	0			
Anthracene	151.5	50	200	0	75.8	55-110	0			
Benzo(a)anthracene	180.1	50	200	0	90	55-110	0			
Benzo(a)pyrene	158.9	50	200	0	79.4	55-110	0			
Benzo(b)fluoranthene	156.1	50	200	0	78	45-120	0			
Benzo(g,h,i)perylene	170.6	50	200	0	85.3	40-125	0			
Benzo(k)fluoranthene	160.8	50	200	0	80.4	45-125	0			
Bis(2-chloroethoxy)methane	142	50	200	0	71	45-105	0			
Bis(2-chloroethyl)ether	142.4	50	200	0	71.2	35-110	0			
Bis(2-chloroisopropyl)ether	141.1	50	200	0	70.6	25-130	0			
Bis(2-ethylhexyl)phthalate	169.5	50	200	0	84.8	40-125	0			
Butyl benzyl phthalate	161.9	50	200	0	81	45-115	0			
Carbazole	141.1	100	200	0	70.6	50-150	0			
Chrysene	162	50	200	0	81	55-110	0			
Dibenzo(a,h)anthracene	174.6	50	200	0	87.3	40-125	0			
Dibenzofuran	148.2	50	200	0	74.1	55-105	0			
Diethyl phthalate	152.5	200	200	0.29	76.1	40-120	0			J
Dimethyl phthalate	148.1	200	200	0	74	25-125	0			J
Di-n-butyl phthalate	157.3	50	200	0.11	78.6	55-115	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54243		Instrument ID SVMS4		Method: SW8270				
Di-n-octyl phthalate	164.7	50	200	0	82.4	35-135	0	
Fluoranthene	159.5	50	200	0	79.8	55-115	0	
Fluorene	152	50	200	0	76	50-110	0	
Hexachlorobenzene	146.1	50	200	0	73	50-110	0	
Hexachlorobutadiene	127	50	200	0	63.5	25-105	0	
Hexachlorocyclopentadiene	94.3	200	200	0	47.2	25-105	0	J
Hexachloroethane	132.4	50	200	0	66.2	30-95	0	
Indeno(1,2,3-cd)pyrene	173.2	50	200	0	86.6	45-125	0	
Isophorone	137.5	50	200	0	68.8	50-110	0	
Naphthalene	129.1	50	200	0	64.6	40-100	0	
Nitrobenzene	147.3	50	200	0	73.6	45-110	0	
N-Nitrosodi-n-propylamine	155.7	50	200	0	77.8	35-130	0	
N-Nitrosodiphenylamine	163.3	50	200	0	81.6	50-110	0	
Pentachlorophenol	141.4	200	200	0	70.7	40-115	0	J
Phenanthrene	148.4	50	200	0	74.2	50-115	0	
Phenol	54.2	50	200	0	27.1	12-43	0	
Pyrene	152	50	200	0	76	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>340.7</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>68.1</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>335</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>67</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>189.8</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>38</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>422.6</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>84.5</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>339.2</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>67.8</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>115.7</i>	<i>0</i>	<i>500</i>	<i>0</i>	<i>23.1</i>	<i>13-36</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54243** Instrument ID **SVMS4** Method: **SW8270**

MSD				Sample ID: 1312745-10B MSD				Units: µg/L		Analysis Date: 12/19/13 08:34 PM	
Client ID:			Run ID: SVMS4_131219A			SeqNo: 2588495		Prep Date: 12/18/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
2,4,5-Trichlorophenol	119.7	50	200	0	59.8	50-110	126.3	5.37	30		
2,4,6-Trichlorophenol	122.4	50	200	0	61.2	50-115	129.9	5.95	30		
2,4-Dichlorophenol	117	100	200	0	58.5	50-105	125.7	7.17	30		
2,4-Dimethylphenol	106	50	200	0	53	30-110	115.7	8.75	30		
2,4-Dinitrophenol	128.8	50	200	0	64.4	15-140	135.9	5.36	30		
2,4-Dinitrotoluene	150.3	50	200	0	75.2	50-120	155.4	3.34	30		
2,6-Dinitrotoluene	148.5	50	200	0	74.2	50-115	156.2	5.05	30		
2-Chloronaphthalene	131.5	50	200	0	65.8	50-105	141.6	7.4	30		
2-Chlorophenol	126.6	50	200	0	63.3	35-105	139	9.34	30		
2-Methylnaphthalene	130.4	50	200	0	65.2	45-105	139.1	6.46	30		
2-Methylphenol	101.1	50	200	0	50.6	40-110	111	9.34	30		
2-Nitroaniline	146.3	200	200	0	73.2	50-115	152.5	0	30	J	
2-Nitrophenol	128.1	50	200	0	64	40-115	136.9	6.64	30		
3-Nitroaniline	136.3	200	200	0	68.2	20-125	139.6	0	30	J	
4,6-Dinitro-2-methylphenol	143.4	200	200	0	71.7	40-130	149.6	0	30	J	
4-Bromophenyl phenyl ether	143.2	50	200	0	71.6	50-115	148.8	3.84	30		
4-Chloro-3-methylphenol	131.2	50	200	0	65.6	45-110	138.8	5.63	30		
4-Chloroaniline	314.7	200	200	0	157	15-110	300.5	4.62	30	S	
4-Chlorophenyl phenyl ether	134	50	200	0	67	50-110	142.7	6.29	30		
4-Methylphenol	83.7	50	200	0	41.8	30-110	92.7	10.2	30		
4-Nitroaniline	173.1	200	200	0	86.6	35-150	178.3	0	30	J	
4-Nitrophenol	104.5	200	200	0	52.2	1-58	102.2	0	0	J	
Acenaphthene	130.3	50	200	0	65.2	45-110	137.6	5.45	30		
Acenaphthylene	133.7	50	200	0	66.8	50-105	141.8	5.88	30		
Anthracene	147.1	50	200	0	73.6	55-110	151.5	2.95	30		
Benzo(a)anthracene	174.7	50	200	0	87.4	55-110	180.1	3.04	30		
Benzo(a)pyrene	153.8	50	200	0	76.9	55-110	158.9	3.26	30		
Benzo(b)fluoranthene	150.8	50	200	0	75.4	45-120	156.1	3.45	30		
Benzo(g,h,i)perylene	164.8	50	200	0	82.4	40-125	170.6	3.46	30		
Benzo(k)fluoranthene	156	50	200	0	78	45-125	160.8	3.03	30		
Bis(2-chloroethoxy)methane	133.7	50	200	0	66.8	45-105	142	6.02	30		
Bis(2-chloroethyl)ether	126.4	50	200	0	63.2	35-110	142.4	11.9	30		
Bis(2-chloroisopropyl)ether	122.5	50	200	0	61.2	25-130	141.1	14.1	30		
Bis(2-ethylhexyl)phthalate	166.8	50	200	0	83.4	40-125	169.5	1.61	30		
Butyl benzyl phthalate	158.7	50	200	0	79.4	45-115	161.9	2	30		
Carbazole	136.7	100	200	0	68.4	50-150	141.1	3.17	30		
Chrysene	156.8	50	200	0	78.4	55-110	162	3.26	30		
Dibenzo(a,h)anthracene	169.6	50	200	0	84.8	40-125	174.6	2.91	30		
Dibenzofuran	140.9	50	200	0	70.4	55-105	148.2	5.05	30		
Diethyl phthalate	147.6	200	200	0.29	73.7	40-120	152.5	0	30	J	
Dimethyl phthalate	141.6	200	200	0	70.8	25-125	148.1	0	30	J	
Di-n-butyl phthalate	153.2	50	200	0.11	76.5	55-115	157.3	2.64	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54243		Instrument ID SVMS4		Method: SW8270						
Di-n-octyl phthalate	161.5	50	200	0	80.8	35-135	164.7	1.96	30	
Fluoranthene	153.3	50	200	0	76.6	55-115	159.5	3.96	30	
Fluorene	146.6	50	200	0	73.3	50-110	152	3.62	30	
Hexachlorobenzene	140.3	50	200	0	70.2	50-110	146.1	4.05	30	
Hexachlorobutadiene	117	50	200	0	58.5	25-105	127	8.2	30	
Hexachlorocyclopentadiene	87.8	200	200	0	43.9	25-105	94.3	0	30	J
Hexachloroethane	118.7	50	200	0	59.4	30-95	132.4	10.9	30	
Indeno(1,2,3-cd)pyrene	169.4	50	200	0	84.7	45-125	173.2	2.22	30	
Isophorone	131.2	50	200	0	65.6	50-110	137.5	4.69	30	
Naphthalene	120.9	50	200	0	60.4	40-100	129.1	6.56	30	
Nitrobenzene	134.6	50	200	0	67.3	45-110	147.3	9.01	30	
N-Nitrosodi-n-propylamine	140.9	50	200	0	70.4	35-130	155.7	9.98	30	
N-Nitrosodiphenylamine	155.2	50	200	0	77.6	50-110	163.3	5.09	30	
Pentachlorophenol	141.2	200	200	0	70.6	40-115	141.4	0	30	J
Phenanthrene	144.8	50	200	0	72.4	50-115	148.4	2.46	30	
Phenol	46.7	50	200	0	23.4	12-43	54.2	0	30	J
Pyrene	147.9	50	200	0	74	50-130	152	2.73	30	
<i>Surr: 2,4,6-Tribromophenol</i>	320.7	0	500	0	64.1	38-115	340.7	6.05	40	
<i>Surr: 2-Fluorobiphenyl</i>	310.5	0	500	0	62.1	32-100	335	7.59	40	
<i>Surr: 2-Fluorophenol</i>	167.5	0	500	0	33.5	22-59	189.8	12.5	40	
<i>Surr: 4-Terphenyl-d14</i>	412.9	0	500	0	82.6	23-112	422.6	2.32	40	
<i>Surr: Nitrobenzene-d5</i>	303	0	500	0	60.6	31-93	339.2	11.3	40	
<i>Surr: Phenol-d6</i>	99.5	0	500	0	19.9	13-36	115.7	15.1	40	

The following samples were analyzed in this batch:

1312894-02B	1312894-04B
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Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54309** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKS1-54309-54309				Units: µg/Kg		Analysis Date: 12/20/13 12:20 PM		
Client ID:		Run ID: SVMS4_131220A				SeqNo: 2589103		Prep Date: 12/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1'-Biphenyl	U	330								
2,4,5-Trichlorophenol	U	160								
2,4,6-Trichlorophenol	U	160								
2,4-Dichlorophenol	U	160								
2,4-Dimethylphenol	U	330								
2,4-Dinitrophenol	U	660								
2,4-Dinitrotoluene	U	160								
2,6-Dinitrotoluene	U	160								
2-Chloronaphthalene	U	6.7								
2-Chlorophenol	U	160								
2-Methylnaphthalene	U	6.7								
2-Methylphenol	U	160								
2-Nitroaniline	U	660								
2-Nitrophenol	U	160								
3,3'-Dichlorobenzidine	U	660								
3-Nitroaniline	U	660								
4,6-Dinitro-2-methylphenol	U	330								
4-Bromophenyl phenyl ether	U	160								
4-Chloro-3-methylphenol	U	160								
4-Chloroaniline	U	660								
4-Chlorophenyl phenyl ether	U	160								
4-Methylphenol	U	160								
4-Nitroaniline	U	660								
4-Nitrophenol	U	660								
Acenaphthene	U	6.7								
Acenaphthylene	U	6.7								
Acetophenone	U	330								
Anthracene	U	6.7								
Atrazine	U	330								
Benzaldehyde	U	330								
Benzo(a)anthracene	U	6.7								
Benzo(a)pyrene	U	6.7								
Benzo(b)fluoranthene	U	6.7								
Benzo(g,h,i)perylene	U	6.7								
Benzo(k)fluoranthene	U	6.7								
Bis(2-chloroethoxy)methane	U	160								
Bis(2-chloroethyl)ether	U	160								
Bis(2-chloroisopropyl)ether	U	160								
Bis(2-ethylhexyl)phthalate	U	330								
Butyl benzyl phthalate	U	160								
Caprolactam	U	330								
Carbazole	U	160								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54309	Instrument ID SVMS4	Method: SW8270						
Chrysene	U	6.7						
Dibenzo(a,h)anthracene	U	6.7						
Dibenzofuran	U	160						
Diethyl phthalate	U	330						
Dimethyl phthalate	U	330						
Di-n-butyl phthalate	U	330						
Di-n-octyl phthalate	U	160						
Fluoranthene	U	6.7						
Fluorene	U	6.7						
Hexachlorobenzene	U	160						
Hexachlorobutadiene	U	160						
Hexachlorocyclopentadiene	U	330						
Hexachloroethane	U	160						
Indeno(1,2,3-cd)pyrene	U	6.7						
Isophorone	U	160						
Naphthalene	U	6.7						
Nitrobenzene	U	160						
N-Nitrosodi-n-propylamine	U	160						
N-Nitrosodiphenylamine	U	160						
Pentachlorophenol	U	330						
Phenanthrene	U	6.7						
Phenol	U	160						
Pyrene	U	6.7						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1161</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>69.7</i>	<i>34-140</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>1365</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>81.9</i>	<i>12-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>1471</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>88.3</i>	<i>33-117</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>1654</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>99.2</i>	<i>25-137</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>1336</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>80.2</i>	<i>37-107</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>1340</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>80.4</i>	<i>40-106</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54309** Instrument ID **SVMS4** Method: **SW8270**

LCS		Sample ID: SLCSS1-54309-54309				Units: µg/Kg		Analysis Date: 12/20/13 11:49 AM		
Client ID:		Run ID: SVMS4_131220A				SeqNo: 2589102		Prep Date: 12/19/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	543.3	160	666.7	0	81.5	50-110	0			
2,4,6-Trichlorophenol	552.3	160	666.7	0	82.8	45-110	0			
2,4-Dichlorophenol	567.7	160	666.7	0	85.1	45-110	0			
2,4-Dimethylphenol	538.7	330	666.7	0	80.8	30-105	0			
2,4-Dinitrophenol	275.7	660	666.7	0	41.3	15-130	0			J
2,4-Dinitrotoluene	609.7	160	666.7	0	91.4	50-115	0			
2,6-Dinitrotoluene	617.3	160	666.7	0	92.6	50-110	0			
2-Chloronaphthalene	592	6.7	666.7	0	88.8	45-105	0			
2-Chlorophenol	650.3	160	666.7	0	97.5	45-105	0			
2-Methylnaphthalene	475	6.7	666.7	0	71.2	45-105	0			
2-Methylphenol	591.3	160	666.7	0	88.7	40-105	0			
2-Nitroaniline	608.3	660	666.7	0	91.2	45-120	0			J
2-Nitrophenol	600.7	160	666.7	0	90.1	40-110	0			
3-Nitroaniline	363.3	660	666.7	0	54.5	25-150	0			J
4-Bromophenyl phenyl ether	575.7	160	666.7	0	86.3	45-115	0			
4-Chloro-3-methylphenol	616.7	160	666.7	0	92.5	45-115	0			
4-Chloroaniline	679.3	660	666.7	0	102	15-110	0			
4-Chlorophenyl phenyl ether	580	160	666.7	0	87	45-110	0			
4-Methylphenol	546.7	160	666.7	0	82	40-105	0			
4-Nitroaniline	435	660	666.7	0	65.2	35-150	0			J
4-Nitrophenol	416.7	660	666.7	0	62.5	15-140	0			J
Acenaphthene	566	6.7	666.7	0	84.9	45-110	0			
Acenaphthylene	577.7	6.7	666.7	0	86.6	45-105	0			
Anthracene	612	6.7	666.7	0	91.8	55-105	0			
Benzo(a)anthracene	688.7	6.7	666.7	0	103	50-110	0			
Benzo(a)pyrene	654.3	6.7	666.7	0	98.1	50-110	0			
Benzo(b)fluoranthene	643.3	6.7	666.7	0	96.5	45-115	0			
Benzo(g,h,i)perylene	587.7	6.7	666.7	0	88.1	40-125	0			
Benzo(k)fluoranthene	660.3	6.7	666.7	0	99	45-115	0			
Bis(2-chloroethoxy)methane	581.3	160	666.7	0	87.2	45-110	0			
Bis(2-chloroethyl)ether	544	160	666.7	0	81.6	40-105	0			
Bis(2-chloroisopropyl)ether	557.3	160	666.7	0	83.6	20-115	0			
Bis(2-ethylhexyl)phthalate	660	330	666.7	0	99	45-125	0			
Butyl benzyl phthalate	637	160	666.7	0	95.5	50-125	0			
Carbazole	619	160	666.7	0	92.8	50-150	0			
Chrysene	629.7	6.7	666.7	0	94.4	55-110	0			
Dibenzo(a,h)anthracene	685	6.7	666.7	0	103	40-125	0			
Dibenzofuran	591	160	666.7	0	88.6	50-105	0			
Diethyl phthalate	601.3	330	666.7	0	90.2	50-115	0			
Dimethyl phthalate	576.7	330	666.7	0	86.5	50-110	0			
Di-n-butyl phthalate	622	330	666.7	0	93.3	55-110	0			
Di-n-octyl phthalate	644	160	666.7	0	96.6	40-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54309		Instrument ID SVMS4		Method: SW8270			
Fluoranthene	640.3	6.7	666.7	0	96	55-115	0
Fluorene	612.3	6.7	666.7	0	91.8	50-110	0
Hexachlorobenzene	571	160	666.7	0	85.6	45-120	0
Hexachlorobutadiene	577.7	160	666.7	0	86.6	40-115	0
Hexachlorocyclopentadiene	382	330	666.7	0	57.3	40-115	0
Hexachloroethane	567.7	160	666.7	0	85.1	35-110	0
Indeno(1,2,3-cd)pyrene	656.3	6.7	666.7	0	98.4	40-120	0
Isophorone	565.3	160	666.7	0	84.8	45-110	0
Naphthalene	567	6.7	666.7	0	85	40-105	0
Nitrobenzene	627.7	160	666.7	0	94.1	40-115	0
N-Nitrosodi-n-propylamine	612.3	160	666.7	0	91.8	40-115	0
N-Nitrosodiphenylamine	682.3	160	666.7	0	102	50-115	0
Pentachlorophenol	455.3	330	666.7	0	68.3	25-120	0
Phenanthrene	589.7	6.7	666.7	0	88.4	50-110	0
Phenol	623	160	666.7	0	93.4	40-100	0
Pyrene	614.3	6.7	666.7	0	92.1	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1425</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>85.5</i>	<i>34-140</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>1391</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>83.4</i>	<i>12-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>1496</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>89.8</i>	<i>33-117</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>1674</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>100</i>	<i>25-137</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>1401</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>84</i>	<i>37-107</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>1393</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>83.6</i>	<i>40-106</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54309** Instrument ID **SVMS4** Method: **SW8270**

MS Sample ID: 1312949-06C MS				Units: µg/Kg			Analysis Date: 12/20/13 04:30 PM			
Client ID:		Run ID: SVMS4_131220A		SeqNo: 2592375		Prep Date: 12/19/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1603	440	1830	0	87.6	50-110	0			
2,4,6-Trichlorophenol	1545	440	1830	0	84.4	45-110	0			
2,4-Dichlorophenol	1425	440	1830	0	77.8	45-110	0			
2,4-Dimethylphenol	1560	910	1830	0	85.2	30-105	0			
2,4-Dinitrophenol	953.4	1,800	1830	0	52.1	15-130	0			J
2,4-Dinitrotoluene	1571	440	1830	0	85.8	50-115	0			
2,6-Dinitrotoluene	1554	440	1830	0	84.9	50-110	0			
2-Chloronaphthalene	1448	18	1830	0	79.1	45-105	0			
2-Chlorophenol	1619	440	1830	0	88.4	45-105	0			
2-Methylnaphthalene	1157	18	1830	0	63.2	45-105	0			
2-Methylphenol	1487	440	1830	0	81.2	40-105	0			
2-Nitroaniline	1554	1,800	1830	0	84.9	45-120	0			J
2-Nitrophenol	1467	440	1830	0	80.1	40-110	0			
3-Nitroaniline	2017	1,800	1830	0	110	25-110	0			S
4-Bromophenyl phenyl ether	1591	440	1830	0	86.9	45-115	0			
4-Chloro-3-methylphenol	1591	440	1830	0	86.9	45-115	0			
4-Chloroaniline	1306	1,800	1830	0	71.3	15-110	0			J
4-Chlorophenyl phenyl ether	1529	440	1830	0	83.5	45-110	0			
4-Methylphenol	1373	440	1830	0	75	40-105	0			
4-Nitroaniline	2419	1,800	1830	0	132	35-150	0			
4-Nitrophenol	1007	1,800	1830	0	55	15-140	0			J
Acenaphthene	1431	18	1830	0	78.2	45-110	0			
Acenaphthylene	1454	18	1830	0	79.4	45-105	0			
Anthracene	1647	18	1830	0	90	55-105	0			
Benzo(a)anthracene	1877	18	1830	0	103	50-110	0			
Benzo(a)pyrene	1682	18	1830	0	91.9	50-110	0			
Benzo(b)fluoranthene	1572	18	1830	0	85.9	45-115	0			
Benzo(g,h,i)perylene	1848	18	1830	0	101	40-125	0			
Benzo(k)fluoranthene	1781	18	1830	0	97.3	45-115	0			
Bis(2-chloroethoxy)methane	1427	440	1830	0	78	45-110	0			
Bis(2-chloroethyl)ether	1374	440	1830	0	75.1	40-105	0			
Bis(2-chloroisopropyl)ether	1325	440	1830	0	72.4	20-115	0			
Bis(2-ethylhexyl)phthalate	1893	910	1830	0	103	45-125	0			
Butyl benzyl phthalate	1735	440	1830	0	94.8	50-125	0			
Carbazole	1680	440	1830	0	91.8	50-150	0			
Chrysene	1732	18	1830	0	94.6	55-110	0			
Dibenzo(a,h)anthracene	1840	18	1830	0	101	40-125	0			
Dibenzofuran	1512	440	1830	0	82.6	50-105	0			
Diethyl phthalate	1588	910	1830	0	86.7	50-115	0			
Dimethyl phthalate	1492	910	1830	0	81.5	50-110	0			
Di-n-butyl phthalate	1680	910	1830	0	91.8	55-110	0			
Di-n-octyl phthalate	1682	440	1830	0	91.9	40-130	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54309		Instrument ID SVMS4		Method: SW8270				
Fluoranthene	1740	18	1830	0	95.1	55-115	0	
Fluorene	1609	18	1830	0	87.9	50-110	0	
Hexachlorobenzene	1652	440	1830	0	90.3	45-120	0	
Hexachlorobutadiene	1370	440	1830	0	74.8	40-115	0	
Hexachlorocyclopentadiene	574.6	910	1830	0	31.4	40-115	0	JS
Hexachloroethane	1330	440	1830	0	72.7	35-110	0	
Indeno(1,2,3-cd)pyrene	1878	18	1830	0	103	40-120	0	
Isophorone	1369	440	1830	0	74.8	45-110	0	
Naphthalene	1378	18	1830	0	75.3	40-105	0	
Nitrobenzene	1526	440	1830	0	83.4	40-115	0	
N-Nitrosodi-n-propylamine	1487	440	1830	0	81.2	40-115	0	
N-Nitrosodiphenylamine	1853	440	1830	0	101	50-115	0	
Pentachlorophenol	2009	910	1830	0	110	25-120	0	
Phenanthrene	1592	18	1830	0	87	50-110	0	
Phenol	1558	440	1830	0	85.1	40-100	0	
Pyrene	1661	18	1830	0	90.7	45-125	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>4121</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>90.1</i>	<i>34-140</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>3455</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>75.5</i>	<i>12-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>3654</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>79.9</i>	<i>33-117</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>4573</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>100</i>	<i>25-137</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>3337</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>72.9</i>	<i>37-107</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>3461</i>	<i>0</i>	<i>4575</i>	<i>0</i>	<i>75.6</i>	<i>40-106</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54309** Instrument ID **SVMS4** Method: **SW8270**

MSD				Sample ID: 1312949-06C MSD			Units: µg/Kg		Analysis Date: 12/20/13 05:02 PM	
Client ID:				Run ID: SVMS4_131220A			SeqNo: 2592376		Prep Date: 12/19/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1522	440	1840	0	82.7	50-110	1603	5.2	30	
2,4,6-Trichlorophenol	1513	440	1840	0	82.2	45-110	1545	2.09	30	
2,4-Dichlorophenol	1422	440	1840	0	77.3	45-110	1425	0.158	30	
2,4-Dimethylphenol	1582	910	1840	0	86	30-105	1560	1.43	30	
2,4-Dinitrophenol	761.8	1,800	1840	0	41.4	15-130	953.4	0	30	J
2,4-Dinitrotoluene	1555	440	1840	0	84.5	50-115	1571	1.03	30	
2,6-Dinitrotoluene	1528	440	1840	0	83	50-110	1554	1.65	30	
2-Chloronaphthalene	1462	18	1840	0	79.4	45-105	1448	0.992	30	
2-Chlorophenol	1665	440	1840	0	90.5	45-105	1619	2.84	30	
2-Methylnaphthalene	1160	18	1840	0	63	45-105	1157	0.313	30	
2-Methylphenol	1551	440	1840	0	84.3	40-105	1487	4.23	30	
2-Nitroaniline	1605	1,800	1840	0	87.2	45-120	1554	0	30	J
2-Nitrophenol	1493	440	1840	0	81.1	40-110	1467	1.79	30	
3-Nitroaniline	2306	1,800	1840	0	125	25-110	2017	13.4	30	S
4-Bromophenyl phenyl ether	1575	440	1840	0	85.6	45-115	1591	1.01	30	
4-Chloro-3-methylphenol	1609	440	1840	0	87.4	45-115	1591	1.12	30	
4-Chloroaniline	1674	1,800	1840	0	90.9	15-110	1306	0	30	J
4-Chlorophenyl phenyl ether	1530	440	1840	0	83.1	45-110	1529	0.0706	30	
4-Methylphenol	1438	440	1840	0	78.1	40-105	1373	4.6	30	
4-Nitroaniline	2694	1,800	1840	0	146	35-150	2419	10.7	30	
4-Nitrophenol	1024	1,800	1840	0	55.6	15-140	1007	0	30	J
Acenaphthene	1435	18	1840	0	78	45-110	1431	0.294	30	
Acenaphthylene	1456	18	1840	0	79.1	45-105	1454	0.172	30	
Anthracene	1621	18	1840	0	88.1	55-105	1647	1.58	30	
Benzo(a)anthracene	1829	18	1840	0	99.4	50-110	1877	2.57	30	
Benzo(a)pyrene	1633	18	1840	0	88.7	50-110	1682	2.94	30	
Benzo(b)fluoranthene	1557	18	1840	0	84.6	45-115	1572	0.974	30	
Benzo(g,h,i)perylene	1752	18	1840	0	95.2	40-125	1848	5.36	30	
Benzo(k)fluoranthene	1732	18	1840	0	94.1	45-115	1781	2.74	30	
Bis(2-chloroethoxy)methane	1452	440	1840	0	78.9	45-110	1427	1.7	30	
Bis(2-chloroethyl)ether	1353	440	1840	0	73.5	40-105	1374	1.53	30	
Bis(2-chloroisopropyl)ether	1395	440	1840	0	75.8	20-115	1325	5.14	30	
Bis(2-ethylhexyl)phthalate	1804	910	1840	0	98	45-125	1893	4.81	30	
Butyl benzyl phthalate	1697	440	1840	0	92.2	50-125	1735	2.18	30	
Carbazole	1676	440	1840	0	91.1	50-150	1680	0.215	30	
Chrysene	1687	18	1840	0	91.7	55-110	1732	2.62	30	
Dibenzo(a,h)anthracene	1767	18	1840	0	96	40-125	1840	4.03	30	
Dibenzofuran	1505	440	1840	0	81.8	50-105	1512	0.423	30	
Diethyl phthalate	1574	910	1840	0	85.5	50-115	1588	0.842	30	
Dimethyl phthalate	1476	910	1840	0	80.2	50-110	1492	1.12	30	
Di-n-butyl phthalate	1651	910	1840	0	89.7	55-110	1680	1.76	30	
Di-n-octyl phthalate	1647	440	1840	0	89.5	40-130	1682	2.1	30	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54309		Instrument ID SVMS4		Method: SW8270					
Fluoranthene	1709	18	1840	0	92.8	55-115	1740	1.84	30
Fluorene	1609	18	1840	0	87.4	50-110	1609	0.0373	30
Hexachlorobenzene	1639	440	1840	0	89	45-120	1652	0.843	30
Hexachlorobutadiene	1356	440	1840	0	73.7	40-115	1370	0.998	30
Hexachlorocyclopentadiene	350.5	910	1840	0	19	40-115	574.6	0	30 JS
Hexachloroethane	1309	440	1840	0	71.1	35-110	1330	1.6	30
Indeno(1,2,3-cd)pyrene	1788	18	1840	0	97.1	40-120	1878	4.91	30
Isophorone	1410	440	1840	0	76.6	45-110	1369	2.93	30
Naphthalene	1394	18	1840	0	75.7	40-105	1378	1.15	30
Nitrobenzene	1555	440	1840	0	84.5	40-115	1526	1.86	30
N-Nitrosodi-n-propylamine	1554	440	1840	0	84.4	40-115	1487	4.41	30
N-Nitrosodiphenylamine	1881	440	1840	0	102	50-115	1853	1.48	30
Pentachlorophenol	1739	910	1840	0	94.5	25-120	2009	14.4	30
Phenanthrene	1568	18	1840	0	85.2	50-110	1592	1.54	30
Phenol	1598	440	1840	0	86.8	40-100	1558	2.53	30
Pyrene	1622	18	1840	0	88.1	45-125	1661	2.36	30
<i>Surr: 2,4,6-Tribromophenol</i>	<i>4036</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>87.7</i>	<i>34-140</i>	<i>4121</i>	<i>2.08</i>	<i>40</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>3497</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>76</i>	<i>12-100</i>	<i>3455</i>	<i>1.21</i>	<i>40</i>
<i>Surr: 2-Fluorophenol</i>	<i>3769</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>81.9</i>	<i>33-117</i>	<i>3654</i>	<i>3.12</i>	<i>40</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>4459</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>96.9</i>	<i>25-137</i>	<i>4573</i>	<i>2.52</i>	<i>40</i>
<i>Surr: Nitrobenzene-d5</i>	<i>3449</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>75</i>	<i>37-107</i>	<i>3337</i>	<i>3.31</i>	<i>40</i>
<i>Surr: Phenol-d6</i>	<i>3570</i>	<i>0</i>	<i>4600</i>	<i>0</i>	<i>77.6</i>	<i>40-106</i>	<i>3461</i>	<i>3.11</i>	<i>40</i>

The following samples were analyzed in this batch: | 1312894-01B | 1312894-03B |

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54254** Instrument ID **VMS8** Method: **SW8260B**

MBLK				Sample ID: MBLK-54254-54254			Units: µg/Kg		Analysis Date: 12/18/13 04:13 PM		
Client ID:			Run ID: VMS8_131218A			SeqNo: 2586219		Prep Date: 12/12/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	U	30									
1,1,2,2-Tetrachloroethane	U	30									
1,1,2-Trichloroethane	U	30									
1,1,2-Trichlorotrifluoroethane	U	30									
1,1-Dichloroethane	U	30									
1,1-Dichloroethene	U	30									
1,2,4-Trichlorobenzene	U	30									
1,2-Dibromo-3-chloropropane	U	30									
1,2-Dibromoethane	U	30									
1,2-Dichlorobenzene	U	30									
1,2-Dichloroethane	U	30									
1,2-Dichloropropane	U	30									
1,3-Dichlorobenzene	U	30									
1,4-Dichlorobenzene	U	30									
2-Butanone	U	200									
2-Hexanone	U	30									
4-Methyl-2-pentanone	U	30									
Acetone	U	100									
Benzene	U	30									
Bromodichloromethane	U	30									
Bromoform	U	30									
Bromomethane	U	75									
Carbon disulfide	U	30									
Carbon tetrachloride	U	30									
Chlorobenzene	U	30									
Chloroethane	U	100									
Chloroform	U	30									
Chloromethane	U	100									
cis-1,2-Dichloroethene	U	30									
cis-1,3-Dichloropropene	U	30									
Cyclohexane	U	30									
Dibromochloromethane	U	30									
Dichlorodifluoromethane	U	30									
Ethylbenzene	U	30									
Isopropylbenzene	U	30									
Methyl acetate	U	200									
Methyl tert-butyl ether	U	30									
Methylcyclohexane	U	30									
Methylene chloride	U	30									
Styrene	U	30									
Tetrachloroethene	U	30									
Toluene	U	30									

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54254	Instrument ID VMS8	Method: SW8260B						
trans-1,2-Dichloroethene	U	30						
trans-1,3-Dichloropropene	U	30						
Trichloroethene	U	30						
Trichlorofluoromethane	U	30						
Vinyl chloride	U	30						
Xylenes, Total	U	90						
<i>Surr: 1,2-Dichloroethane-d4</i>	943.5	0	1000	0	94.4	70-130	0	
<i>Surr: 4-Bromofluorobenzene</i>	955	0	1000	0	95.5	70-130	0	
<i>Surr: Dibromofluoromethane</i>	948.5	0	1000	0	94.8	70-130	0	
<i>Surr: Toluene-d8</i>	988.5	0	1000	0	98.8	70-130	0	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54254** Instrument ID **VMS8** Method: **SW8260B**

LCS Sample ID: LCS-54254-54254				Units: µg/Kg			Analysis Date: 12/18/13 02:12 PM			
Client ID:		Run ID: VMS8_131218A		SeqNo: 2586217		Prep Date: 12/12/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	888.5	30	1000	0	88.8	70-135	0			
1,1,2,2-Tetrachloroethane	1005	30	1000	0	100	55-130	0			
1,1,2-Trichloroethane	963.5	30	1000	0	96.4	60-125	0			
1,1-Dichloroethane	872	30	1000	0	87.2	75-125	0			
1,1-Dichloroethene	872.5	30	1000	0	87.2	65-135	0			
1,2,4-Trichlorobenzene	947.5	30	1000	0	94.8	65-130	0			
1,2-Dibromo-3-chloropropane	914.5	30	1000	0	91.4	40-135	0			
1,2-Dibromoethane	1072	30	1000	0	107	70-125	0			
1,2-Dichlorobenzene	932	30	1000	0	93.2	75-120	0			
1,2-Dichloroethane	937	30	1000	0	93.7	70-135	0			
1,2-Dichloropropane	941	30	1000	0	94.1	70-120	0			
1,3-Dichlorobenzene	932.5	30	1000	0	93.2	70-125	0			
1,4-Dichlorobenzene	938.5	30	1000	0	93.8	70-125	0			
2-Butanone	978	200	1000	0	97.8	30-160	0			
2-Hexanone	941	30	1000	0	94.1	45-145	0			
4-Methyl-2-pentanone	1348	30	1000	0	135	45-145	0			
Acetone	886	100	1000	0	88.6	20-160	0			
Benzene	903.5	30	1000	0	90.4	75-125	0			
Bromodichloromethane	909	30	1000	0	90.9	70-130	0			
Bromoform	968	30	1000	0	96.8	55-135	0			
Bromomethane	913	75	1000	0	91.3	30-160	0			
Carbon disulfide	827	30	1000	0	82.7	45-160	0			
Carbon tetrachloride	903	30	1000	0	90.3	65-135	0			
Chlorobenzene	944	30	1000	0	94.4	75-125	0			
Chloroethane	809.5	100	1000	0	81	40-155	0			
Chloroform	891	30	1000	0	89.1	70-125	0			
Chloromethane	763.5	100	1000	0	76.4	50-130	0			
cis-1,2-Dichloroethene	903.5	30	1000	0	90.4	65-125	0			
cis-1,3-Dichloropropene	969.5	30	1000	0	97	70-125	0			
Dibromochloromethane	915	30	1000	0	91.5	65-135	0			
Dichlorodifluoromethane	624	30	1000	0	62.4	35-135	0			
Ethylbenzene	906.5	30	1000	0	90.6	75-125	0			
Isopropylbenzene	917.5	30	1000	0	91.8	75-130	0			
Methyl tert-butyl ether	1032	30	1000	0	103	75-125	0			
Methylene chloride	881.5	30	1000	0	88.2	55-145	0			
Styrene	946	30	1000	0	94.6	75-125	0			
Tetrachloroethene	1068	30	1000	0	107	64-140	0			
Toluene	890.5	30	1000	0	89	70-125	0			
trans-1,2-Dichloroethene	928.5	30	1000	0	92.8	65-135	0			
trans-1,3-Dichloropropene	966.5	30	1000	0	96.6	65-125	0			
Trichloroethene	957	30	1000	0	95.7	75-125	0			
Trichlorofluoromethane	763.5	30	1000	0	76.4	25-185	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 54254	Instrument ID VMS8		Method: SW8260B				
Vinyl chloride	785	30	1000	0	78.5	60-125	0
Xylenes, Total	2748	90	3000	0	91.6	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>946</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>94.6</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>987.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.8</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>993</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.3</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>988.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.8</i>	<i>70-130</i>	<i>0</i>

The following samples were analyzed in this batch: | 1312894-01A | 1312894-03A |

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132946** Instrument ID **VMS9** Method: **SW8260**

MBLK		Sample ID: VBK2-131221-R132946				Units: µg/L		Analysis Date: 12/22/13 03:32 AM		
Client ID:		Run ID: VMS9_131221B				SeqNo: 2591901		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1,2-Trichlorotrifluoroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2-Dibromo-3-chloropropane	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	2.0								
1,3-Dichlorobenzene	U	2.0								
1,4-Dichlorobenzene	U	2.0								
2-Butanone	U	5.0								
2-Hexanone	U	5.0								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	20								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.5								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	5.0								
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	2.0								
Methyl tert-butyl ether	U	5.0								
Methylcyclohexane	U	5.0								
Methylene chloride	U	5.0								
Styrene	U	1.0								
Tetrachloroethene	U	2.0								
Toluene	U	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132946	Instrument ID VMS9	Method: SW8260
trans-1,2-Dichloroethene	U	1.0
trans-1,3-Dichloropropene	U	1.0
Trichloroethene	U	1.0
Trichlorofluoromethane	U	1.0
Vinyl chloride	U	1.0
Xylenes, Total	U	3.0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.84</i>	<i>0 20 0 104 70-120 0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>18.1</i>	<i>0 20 0 90.5 75-120 0</i>
<i>Surr: Dibromofluoromethane</i>	<i>21.35</i>	<i>0 20 0 107 85-115 0</i>
<i>Surr: Toluene-d8</i>	<i>18.95</i>	<i>0 20 0 94.8 85-120 0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132946** Instrument ID **VMS9** Method: **SW8260**

LCS		Sample ID: VLCSW3-131221-R132946				Units: µg/L		Analysis Date: 12/22/13 02:43 AM		
Client ID:		Run ID: VMS9_131221B				SeqNo: 2591900		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	20.17	1.0	20	0	101	65-130	0			
1,1,2,2-Tetrachloroethane	24.73	1.0	20	0	124	65-130	0			
1,1,2-Trichloroethane	21.8	1.0	20	0	109	75-125	0			
1,1-Dichloroethane	21.4	1.0	20	0	107	70-135	0			
1,1-Dichloroethene	20.39	1.0	20	0	102	70-130	0			
1,2,4-Trichlorobenzene	21.65	1.0	20	0	108	65-135	0			
1,2-Dibromo-3-chloropropane	21.02	1.0	20	0	105	50-130	0			
1,2-Dibromoethane	24.48	1.0	20	0	122	80-120	0			S
1,2-Dichlorobenzene	22.09	1.0	20	0	110	70-120	0			
1,2-Dichloroethane	22.21	1.0	20	0	111	70-130	0			
1,2-Dichloropropane	22.17	2.0	20	0	111	75-125	0			
1,3-Dichlorobenzene	23.33	2.0	20	0	117	75-125	0			
1,4-Dichlorobenzene	22.98	2.0	20	0	115	75-125	0			
2-Butanone	23.81	5.0	20	0	119	30-150	0			
2-Hexanone	25.66	5.0	20	0	128	55-130	0			
4-Methyl-2-pentanone	30.99	5.0	20	0	155	60-135	0			S
Acetone	25.73	20	20	0	129	40-140	0			
Benzene	22.66	1.0	20	0	113	80-120	0			
Bromodichloromethane	23.25	1.0	20	0	116	75-120	0			
Bromoform	21.65	1.0	20	0	108	70-130	0			
Bromomethane	18.7	1.0	20	0	93.5	30-145	0			
Carbon disulfide	23.05	2.5	20	0	115	35-165	0			
Carbon tetrachloride	18.86	1.0	20	0	94.3	65-140	0			
Chlorobenzene	22.11	1.0	20	0	111	80-120	0			
Chloroethane	16.16	1.0	20	0	80.8	60-135	0			
Chloroform	22.6	1.0	20	0	113	65-135	0			
Chloromethane	17.93	1.0	20	0	89.6	70-125	0			
cis-1,2-Dichloroethene	20.94	1.0	20	0	105	70-125	0			
cis-1,3-Dichloropropene	19.52	1.0	20	0	97.6	70-130	0			
Dibromochloromethane	18.38	1.0	20	0	91.9	60-135	0			
Dichlorodifluoromethane	11.34	1.0	20	0	56.7	30-155	0			
Ethylbenzene	22.15	1.0	20	0	111	75-125	0			
Isopropylbenzene	21.01	1.0	20	0	105	75-125	0			
Methyl tert-butyl ether	22.38	5.0	20	0	112	65-125	0			
Methylene chloride	20.64	5.0	20	0	103	55-140	0			
Styrene	21.73	1.0	20	0	109	65-135	0			
Tetrachloroethene	18.68	2.0	20	0	93.4	45-150	0			
Toluene	21.86	1.0	20	0	109	75-120	0			
trans-1,2-Dichloroethene	22.73	1.0	20	0	114	60-140	0			
trans-1,3-Dichloropropene	20.35	1.0	20	0	102	55-140	0			
Trichloroethene	22.68	1.0	20	0	113	70-125	0			
Trichlorofluoromethane	18.41	1.0	20	0	92	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132946	Instrument ID VMS9			Method: SW8260			
Vinyl chloride	16.96	1.0	20	0	84.8	50-145	0
Xylenes, Total	63.63	3.0	60	0	106	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.58</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.9</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.95</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>105</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>21.16</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>106</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.63</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.2</i>	<i>85-120</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132946** Instrument ID **VMS9** Method: **SW8260**

MS				Sample ID: 1312945-08A MS			Units: µg/L		Analysis Date: 12/22/13 12:25 PM	
Client ID:				Run ID: VMS9_131221B			SeqNo: 2591919		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	19.17	1.0	20	0	95.8	65-130	0			
1,1,2,2-Tetrachloroethane	22.82	1.0	20	0	114	65-130	0			
1,1,2-Trichloroethane	20.44	1.0	20	0	102	75-125	0			
1,1-Dichloroethane	21.02	1.0	20	0	105	70-135	0			
1,1-Dichloroethene	22.33	1.0	20	0	112	70-130	0			
1,2,4-Trichlorobenzene	17.14	1.0	20	0	85.7	65-135	0			
1,2-Dibromo-3-chloropropane	18.31	1.0	20	0	91.6	50-130	0			
1,2-Dibromoethane	22.54	1.0	20	0	113	80-120	0			
1,2-Dichlorobenzene	19.99	1.0	20	0	100	70-120	0			
1,2-Dichloroethane	21.13	1.0	20	0	106	70-130	0			
1,2-Dichloropropane	21.11	2.0	20	0	106	75-125	0			
1,3-Dichlorobenzene	20.91	2.0	20	0	105	75-125	0			
1,4-Dichlorobenzene	20.72	2.0	20	0	104	75-125	0			
2-Butanone	19.23	5.0	20	0	96.2	30-150	0			
2-Hexanone	20.3	5.0	20	0	102	55-130	0			
4-Methyl-2-pentanone	25.97	5.0	20	0	130	60-135	0			
Acetone	23.54	20	20	0	118	40-140	0			
Benzene	22.09	1.0	20	0	110	80-120	0			
Bromodichloromethane	21.82	1.0	20	0	109	75-120	0			
Bromoform	19.06	1.0	20	0	95.3	70-130	0			
Bromomethane	16.88	1.0	20	0	84.4	30-145	0			
Carbon disulfide	22.43	2.5	20	0	112	35-165	0			
Carbon tetrachloride	17.71	1.0	20	0	88.6	65-140	0			
Chlorobenzene	20.74	1.0	20	0	104	80-120	0			
Chloroethane	17.39	1.0	20	0	87	60-135	0			
Chloroform	21.87	1.0	20	0	109	65-135	0			
Chloromethane	15.77	1.0	20	0	78.8	70-125	0			
cis-1,2-Dichloroethene	19.79	1.0	20	0	99	70-125	0			
cis-1,3-Dichloropropene	17.01	1.0	20	0	85	70-130	0			
Dibromochloromethane	16.62	1.0	20	0	83.1	60-135	0			
Dichlorodifluoromethane	12.29	1.0	20	0	61.4	30-155	0			
Ethylbenzene	21.2	1.0	20	0	106	75-125	0			
Isopropylbenzene	19.72	1.0	20	0	98.6	75-125	0			
Methyl tert-butyl ether	20.01	5.0	20	0	100	65-125	0			
Methylene chloride	19.09	5.0	20	0	95.4	55-140	0			
Styrene	16.92	1.0	20	0	84.6	65-135	0			
Tetrachloroethene	18.88	2.0	20	0	94.4	45-150	0			
Toluene	20.9	1.0	20	0	104	75-120	0			
trans-1,2-Dichloroethene	22.78	1.0	20	0	114	60-140	0			
trans-1,3-Dichloropropene	17.12	1.0	20	0	85.6	55-140	0			
Trichloroethene	22.83	1.0	20	0	114	70-125	0			
Trichlorofluoromethane	19.82	1.0	20	0	99.1	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132946	Instrument ID VMS9		Method: SW8260				
Vinyl chloride	17.57	1.0	20	0	87.8	50-145	0
Xylenes, Total	60.39	3.0	60	0	101	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.74</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>104</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.42</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>102</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>21.71</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>109</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.07</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>95.4</i>	<i>85-120</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132946** Instrument ID **VMS9** Method: **SW8260**

MSD				Sample ID: 1312945-08A MSD			Units: µg/L		Analysis Date: 12/22/13 12:49 PM		
Client ID:		Run ID: VMS9_131221B			SeqNo: 2591920		Prep Date:		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	18.99	1.0	20	0	95	65-130	19.17	0.943	30		
1,1,2,2-Tetrachloroethane	22.5	1.0	20	0	112	65-130	22.82	1.41	30		
1,1,2-Trichloroethane	20.28	1.0	20	0	101	75-125	20.44	0.786	30		
1,1-Dichloroethane	20.85	1.0	20	0	104	70-135	21.02	0.812	30		
1,1-Dichloroethene	21.49	1.0	20	0	107	70-130	22.33	3.83	30		
1,2,4-Trichlorobenzene	17.88	1.0	20	0	89.4	65-135	17.14	4.23	30		
1,2-Dibromo-3-chloropropane	18.9	1.0	20	0	94.5	50-130	18.31	3.17	30		
1,2-Dibromoethane	22.71	1.0	20	0	114	80-120	22.54	0.751	30		
1,2-Dichlorobenzene	20.2	1.0	20	0	101	70-120	19.99	1.05	30		
1,2-Dichloroethane	20.45	1.0	20	0	102	70-130	21.13	3.27	30		
1,2-Dichloropropane	20.51	2.0	20	0	103	75-125	21.11	2.88	30		
1,3-Dichlorobenzene	21.12	2.0	20	0	106	75-125	20.91	0.999	30		
1,4-Dichlorobenzene	21.06	2.0	20	0	105	75-125	20.72	1.63	30		
2-Butanone	19.81	5.0	20	0	99	30-150	19.23	2.97	30		
2-Hexanone	21.51	5.0	20	0	108	55-130	20.3	5.79	30		
4-Methyl-2-pentanone	26.43	5.0	20	0	132	60-135	25.97	1.76	30		
Acetone	23.35	20	20	0	117	40-140	23.54	0.81	30		
Benzene	21.74	1.0	20	0	109	80-120	22.09	1.6	30		
Bromodichloromethane	21.25	1.0	20	0	106	75-120	21.82	2.65	30		
Bromoform	19.29	1.0	20	0	96.4	70-130	19.06	1.2	30		
Bromomethane	16.17	1.0	20	0	80.8	30-145	16.88	4.3	30		
Carbon disulfide	22.33	2.5	20	0	112	35-165	22.43	0.447	30		
Carbon tetrachloride	17.6	1.0	20	0	88	65-140	17.71	0.623	30		
Chlorobenzene	20.66	1.0	20	0	103	80-120	20.74	0.386	30		
Chloroethane	16.8	1.0	20	0	84	60-135	17.39	3.45	30		
Chloroform	20.76	1.0	20	0	104	65-135	21.87	5.21	30		
Chloromethane	15.44	1.0	20	0	77.2	70-125	15.77	2.11	30		
cis-1,2-Dichloroethene	19.84	1.0	20	0	99.2	70-125	19.79	0.252	30		
cis-1,3-Dichloropropene	16.82	1.0	20	0	84.1	70-130	17.01	1.12	30		
Dibromochloromethane	16.86	1.0	20	0	84.3	60-135	16.62	1.43	30		
Dichlorodifluoromethane	12.06	1.0	20	0	60.3	30-155	12.29	1.89	30		
Ethylbenzene	20.9	1.0	20	0	104	75-125	21.2	1.43	30		
Isopropylbenzene	19.79	1.0	20	0	99	75-125	19.72	0.354	30		
Methyl tert-butyl ether	19.8	5.0	20	0	99	65-125	20.01	1.06	30		
Methylene chloride	19.29	5.0	20	0	96.4	55-140	19.09	1.04	30		
Styrene	17.12	1.0	20	0	85.6	65-135	16.92	1.18	30		
Tetrachloroethene	18.42	2.0	20	0	92.1	45-150	18.88	2.47	30		
Toluene	20.41	1.0	20	0	102	75-120	20.9	2.37	30		
trans-1,2-Dichloroethene	22.17	1.0	20	0	111	60-140	22.78	2.71	30		
trans-1,3-Dichloropropene	17.54	1.0	20	0	87.7	55-140	17.12	2.42	30		
Trichloroethene	22.35	1.0	20	0	112	70-125	22.83	2.12	30		
Trichlorofluoromethane	19.12	1.0	20	0	95.6	60-145	19.82	3.6	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132946	Instrument ID VMS9			Method: SW8260					
Vinyl chloride	17.22	1.0	20	0	86.1	50-145	17.57	2.01	30
Xylenes, Total	59.7	3.0	60	0	99.5	75-130	60.39	1.15	30
<i>Surr: 1,2-Dichloroethane-d4</i>	20.5	0	20	0	102	70-120	20.74	1.16	30
<i>Surr: 4-Bromofluorobenzene</i>	20.97	0	20	0	105	75-120	20.42	2.66	30
<i>Surr: Dibromofluoromethane</i>	21.16	0	20	0	106	85-115	21.71	2.57	30
<i>Surr: Toluene-d8</i>	19.27	0	20	0	96.4	85-120	19.07	1.04	30

The following samples were analyzed in this batch: | 1312894-02A | 1312894-04A |

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132961** Instrument ID **VMS5** Method: **SW8260**

MBLK		Sample ID: VLKW1-131223-R132961				Units: µg/L		Analysis Date: 12/23/13 12:20 PM		
Client ID:		Run ID: VMS5_131223A				SeqNo: 2592544		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	U	1.0								
1,1,2,2-Tetrachloroethane	U	1.0								
1,1,2-Trichloroethane	U	1.0								
1,1,2-Trichlorotrifluoroethane	U	1.0								
1,1-Dichloroethane	U	1.0								
1,1-Dichloroethene	U	1.0								
1,2,4-Trichlorobenzene	U	1.0								
1,2-Dibromo-3-chloropropane	U	1.0								
1,2-Dibromoethane	U	1.0								
1,2-Dichlorobenzene	U	1.0								
1,2-Dichloroethane	U	1.0								
1,2-Dichloropropane	U	2.0								
1,3-Dichlorobenzene	U	2.0								
1,4-Dichlorobenzene	U	2.0								
2-Butanone	U	5.0								
2-Hexanone	U	5.0								
4-Methyl-2-pentanone	U	5.0								
Acetone	U	20								
Benzene	U	1.0								
Bromodichloromethane	U	1.0								
Bromoform	U	1.0								
Bromomethane	U	1.0								
Carbon disulfide	U	2.5								
Carbon tetrachloride	U	1.0								
Chlorobenzene	U	1.0								
Chloroethane	U	1.0								
Chloroform	U	1.0								
Chloromethane	U	1.0								
cis-1,2-Dichloroethene	U	1.0								
cis-1,3-Dichloropropene	U	1.0								
Cyclohexane	U	5.0								
Dibromochloromethane	U	1.0								
Dichlorodifluoromethane	U	1.0								
Ethylbenzene	U	1.0								
Isopropylbenzene	U	1.0								
Methyl acetate	U	2.0								
Methyl tert-butyl ether	U	5.0								
Methylcyclohexane	U	5.0								
Methylene chloride	U	5.0								
Styrene	U	1.0								
Tetrachloroethene	U	2.0								
Toluene	U	1.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132961	Instrument ID VMS5	Method: SW8260						
trans-1,2-Dichloroethene	U	1.0						
trans-1,3-Dichloropropene	U	1.0						
Trichloroethene	U	1.0						
Trichlorofluoromethane	U	1.0						
Vinyl chloride	U	1.0						
Xylenes, Total	U	3.0						
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.83</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>104</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.98</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.9</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>20.06</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.61</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98</i>	<i>85-120</i>	<i>0</i>	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132961** Instrument ID **VMS5** Method: **SW8260**

LCS		Sample ID: VLCSW1-131223-R132961				Units: µg/L		Analysis Date: 12/23/13 11:04 AM		
Client ID:		Run ID: VMS5_131223A				SeqNo: 2592543		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.52	1.0	20	0	113	65-130	0			
1,1,2,2-Tetrachloroethane	24.72	1.0	20	0	124	65-130	0			
1,1,2-Trichloroethane	21.8	1.0	20	0	109	75-125	0			
1,1-Dichloroethane	23.25	1.0	20	0	116	70-135	0			
1,1-Dichloroethene	22.4	1.0	20	0	112	70-130	0			
1,2,4-Trichlorobenzene	24.23	1.0	20	0	121	65-135	0			
1,2-Dibromo-3-chloropropane	21.63	1.0	20	0	108	50-130	0			
1,2-Dibromoethane	24.43	1.0	20	0	122	80-120	0			S
1,2-Dichlorobenzene	21.25	1.0	20	0	106	70-120	0			
1,2-Dichloroethane	22.41	1.0	20	0	112	70-130	0			
1,2-Dichloropropane	22.01	2.0	20	0	110	75-125	0			
1,3-Dichlorobenzene	21.41	2.0	20	0	107	75-125	0			
1,4-Dichlorobenzene	21.2	2.0	20	0	106	75-125	0			
2-Butanone	26.51	5.0	20	0	133	30-150	0			
2-Hexanone	28.8	5.0	20	0	144	55-130	0			S
4-Methyl-2-pentanone	37.41	5.0	20	0	187	60-135	0			S
Acetone	23.52	20	20	0	118	40-140	0			
Benzene	22.23	1.0	20	0	111	80-120	0			
Bromodichloromethane	21.94	1.0	20	0	110	75-120	0			
Bromoform	19.41	1.0	20	0	97	70-130	0			
Bromomethane	18.5	1.0	20	0	92.5	30-145	0			
Carbon disulfide	22.16	2.5	20	0	111	35-165	0			
Carbon tetrachloride	21.08	1.0	20	0	105	65-140	0			
Chlorobenzene	21.55	1.0	20	0	108	80-120	0			
Chloroethane	18.95	1.0	20	0	94.8	60-135	0			
Chloroform	22.36	1.0	20	0	112	65-135	0			
Chloromethane	17.55	1.0	20	0	87.8	70-125	0			
cis-1,2-Dichloroethene	23.5	1.0	20	0	118	70-125	0			
cis-1,3-Dichloropropene	24.29	1.0	20	0	121	70-130	0			
Dibromochloromethane	19.96	1.0	20	0	99.8	60-135	0			
Dichlorodifluoromethane	10.99	1.0	20	0	55	30-155	0			
Ethylbenzene	21.92	1.0	20	0	110	75-125	0			
Isopropylbenzene	21.31	1.0	20	0	107	75-125	0			
Methyl tert-butyl ether	23.27	5.0	20	0	116	65-125	0			
Methylene chloride	23.05	5.0	20	0	115	55-140	0			
Styrene	22.81	1.0	20	0	114	65-135	0			
Tetrachloroethene	20.61	2.0	20	0	103	45-150	0			
Toluene	22.21	1.0	20	0	111	75-120	0			
trans-1,2-Dichloroethene	23.41	1.0	20	0	117	60-140	0			
trans-1,3-Dichloropropene	23.92	1.0	20	0	120	55-140	0			
Trichloroethene	21.92	1.0	20	0	110	70-125	0			
Trichlorofluoromethane	17.75	1.0	20	0	88.8	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132961	Instrument ID VMS5		Method: SW8260				
Vinyl chloride	16.81	1.0	20	0	84	50-145	0
Xylenes, Total	66.09	3.0	60	0	110	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.34</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>102</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.97</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.8</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.56</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.8</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.84</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.2</i>	<i>85-120</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1
QC Page: 38 of 44

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132961** Instrument ID **VMS5** Method: **SW8260**

MS				Sample ID: 1312963-01A MS			Units: µg/L		Analysis Date: 12/23/13 09:35 PM	
Client ID:				Run ID: VMS5_131223A			SeqNo: 2593864		Prep Date:	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	22.33	1.0	20	0	112	65-130	0			
1,1,2,2-Tetrachloroethane	20.55	1.0	20	0	103	65-130	0			
1,1,2-Trichloroethane	19.91	1.0	20	0	99.6	75-125	0			
1,1-Dichloroethane	21.57	1.0	20	0	108	70-135	0			
1,1-Dichloroethene	24.4	1.0	20	0	122	70-130	0			
1,2,4-Trichlorobenzene	17.81	1.0	20	0	89	65-135	0			
1,2-Dibromo-3-chloropropane	16.64	1.0	20	0	83.2	50-130	0			
1,2-Dibromoethane	21.62	1.0	20	0	108	80-120	0			
1,2-Dichlorobenzene	19.33	1.0	20	0	96.6	70-120	0			
1,2-Dichloroethane	21.15	1.0	20	0	106	70-130	0			
1,2-Dichloropropane	20.55	2.0	20	0	103	75-125	0			
1,3-Dichlorobenzene	19.66	2.0	20	0	98.3	75-125	0			
1,4-Dichlorobenzene	19	2.0	20	0	95	75-125	0			
2-Butanone	18.77	5.0	20	0	93.8	30-150	0			
2-Hexanone	21.91	5.0	20	0	110	55-130	0			
4-Methyl-2-pentanone	28.7	5.0	20	0	144	60-135	0			S
Acetone	26.19	20	20	0	131	40-140	0			
Benzene	21.37	1.0	20	0	107	80-120	0			
Bromodichloromethane	19.95	1.0	20	0	99.8	75-120	0			
Bromoform	17.26	1.0	20	0	86.3	70-130	0			
Bromomethane	14.77	1.0	20	0	73.8	30-145	0			
Carbon disulfide	23.24	2.5	20	0	116	35-165	0			
Carbon tetrachloride	22.19	1.0	20	0	111	65-140	0			
Chlorobenzene	20	1.0	20	0	100	80-120	0			
Chloroethane	20.39	1.0	20	0	102	60-135	0			
Chloroform	20.79	1.0	20	0	104	65-135	0			
Chloromethane	18.87	1.0	20	0	94.4	70-125	0			
cis-1,2-Dichloroethene	21.74	1.0	20	0	109	70-125	0			
cis-1,3-Dichloropropene	21.93	1.0	20	0	110	70-130	0			
Dibromochloromethane	17.81	1.0	20	0	89	60-135	0			
Dichlorodifluoromethane	15.13	1.0	20	0	75.6	30-155	0			
Ethylbenzene	21.17	1.0	20	0	106	75-125	0			
Isopropylbenzene	21.02	1.0	20	0	105	75-125	0			
Methyl tert-butyl ether	20.93	5.0	20	0	105	65-125	0			
Methylene chloride	21.05	5.0	20	0	105	55-140	0			
Styrene	21.03	1.0	20	0	105	65-135	0			
Tetrachloroethene	20.49	2.0	20	0	102	45-150	0			
Toluene	20.76	1.0	20	0	104	75-120	0			
trans-1,2-Dichloroethene	22.97	1.0	20	0	115	60-140	0			
trans-1,3-Dichloropropene	21.26	1.0	20	0	106	55-140	0			
Trichloroethene	21.18	1.0	20	0	106	70-125	0			
Trichlorofluoromethane	19.9	1.0	20	0	99.5	60-145	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132961	Instrument ID VMS5		Method: SW8260				
Vinyl chloride	18.78	1.0	20	0	93.9	50-145	0
Xylenes, Total	63.48	3.0	60	0.43	105	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>21</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>105</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.24</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>20.08</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.95</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.8</i>	<i>85-120</i>	<i>0</i>

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132961** Instrument ID **VMS5** Method: **SW8260**

MSD				Sample ID: 1312963-01A MSD				Units: µg/L		Analysis Date: 12/23/13 10:00 PM	
Client ID:			Run ID: VMS5_131223A			SeqNo: 2593865		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
1,1,1-Trichloroethane	22.81	1.0	20	0	114	65-130	22.33	2.13	30		
1,1,2,2-Tetrachloroethane	20.7	1.0	20	0	104	65-130	20.55	0.727	30		
1,1,2-Trichloroethane	20.54	1.0	20	0	103	75-125	19.91	3.11	30		
1,1-Dichloroethane	22.47	1.0	20	0	112	70-135	21.57	4.09	30		
1,1-Dichloroethene	24.36	1.0	20	0	122	70-130	24.4	0.164	30		
1,2,4-Trichlorobenzene	22.03	1.0	20	0	110	65-135	17.81	21.2	30		
1,2-Dibromo-3-chloropropane	15.75	1.0	20	0	78.8	50-130	16.64	5.5	30		
1,2-Dibromoethane	22.29	1.0	20	0	111	80-120	21.62	3.05	30		
1,2-Dichlorobenzene	21.17	1.0	20	0	106	70-120	19.33	9.09	30		
1,2-Dichloroethane	21.44	1.0	20	0	107	70-130	21.15	1.36	30		
1,2-Dichloropropane	20.78	2.0	20	0	104	75-125	20.55	1.11	30		
1,3-Dichlorobenzene	21.56	2.0	20	0	108	75-125	19.66	9.22	30		
1,4-Dichlorobenzene	20.76	2.0	20	0	104	75-125	19	8.85	30		
2-Butanone	18.07	5.0	20	0	90.4	30-150	18.77	3.8	30		
2-Hexanone	21.14	5.0	20	0	106	55-130	21.91	3.58	30		
4-Methyl-2-pentanone	27.58	5.0	20	0	138	60-135	28.7	3.98	30	S	
Acetone	25.53	20	20	0	128	40-140	26.19	2.55	30		
Benzene	21.44	1.0	20	0	107	80-120	21.37	0.327	30		
Bromodichloromethane	20.44	1.0	20	0	102	75-120	19.95	2.43	30		
Bromoform	17.47	1.0	20	0	87.4	70-130	17.26	1.21	30		
Bromomethane	17.29	1.0	20	0	86.4	30-145	14.77	15.7	30		
Carbon disulfide	23.61	2.5	20	0	118	35-165	23.24	1.58	30		
Carbon tetrachloride	23.13	1.0	20	0	116	65-140	22.19	4.15	30		
Chlorobenzene	20.6	1.0	20	0	103	80-120	20	2.96	30		
Chloroethane	20.9	1.0	20	0	104	60-135	20.39	2.47	30		
Chloroform	21.17	1.0	20	0	106	65-135	20.79	1.81	30		
Chloromethane	19.23	1.0	20	0	96.2	70-125	18.87	1.89	30		
cis-1,2-Dichloroethene	22.48	1.0	20	0	112	70-125	21.74	3.35	30		
cis-1,3-Dichloropropene	22.47	1.0	20	0	112	70-130	21.93	2.43	30		
Dibromochloromethane	18.58	1.0	20	0	92.9	60-135	17.81	4.23	30		
Dichlorodifluoromethane	16.15	1.0	20	0	80.8	30-155	15.13	6.52	30		
Ethylbenzene	21.92	1.0	20	0	110	75-125	21.17	3.48	30		
Isopropylbenzene	23.1	1.0	20	0	116	75-125	21.02	9.43	30		
Methyl tert-butyl ether	22.08	5.0	20	0	110	65-125	20.93	5.35	30		
Methylene chloride	21.85	5.0	20	0	109	55-140	21.05	3.73	30		
Styrene	21.72	1.0	20	0	109	65-135	21.03	3.23	30		
Tetrachloroethene	21.21	2.0	20	0	106	45-150	20.49	3.45	30		
Toluene	21.21	1.0	20	0	106	75-120	20.76	2.14	30		
trans-1,2-Dichloroethene	23.69	1.0	20	0	118	60-140	22.97	3.09	30		
trans-1,3-Dichloropropene	21.95	1.0	20	0	110	55-140	21.26	3.19	30		
Trichloroethene	21.29	1.0	20	0	106	70-125	21.18	0.518	30		
Trichlorofluoromethane	20.68	1.0	20	0	103	60-145	19.9	3.84	30		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R132961	Instrument ID VMS5			Method: SW8260					
Vinyl chloride	19.63	1.0	20	0	98.2	50-145	18.78	4.43	30
Xylenes, Total	66.11	3.0	60	0.43	109	75-130	63.48	4.06	30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.25</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>70-120</i>	<i>21</i>	<i>3.64</i>	<i>30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.26</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>75-120</i>	<i>20.24</i>	<i>0.0988</i>	<i>30</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.96</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.8</i>	<i>85-115</i>	<i>20.08</i>	<i>0.599</i>	<i>30</i>
<i>Surr: Toluene-d8</i>	<i>19.71</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.6</i>	<i>85-120</i>	<i>19.95</i>	<i>1.21</i>	<i>30</i>

The following samples were analyzed in this batch: | 1312894-04A |

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54481** Instrument ID **LACHAT** Method: **A4500-CN G**

MBLK	Sample ID: MBLK-54481-54481					Units: mg/L		Analysis Date: 12/26/13 02:08 PM		
Client ID:	Run ID: LACHAT_131226G				SeqNo: 2595340		Prep Date: 12/26/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable U 0.0050

MBLK	Sample ID: MBLK-54481-54481					Units: mg/L		Analysis Date: 12/26/13 02:08 PM		
Client ID:	Run ID: LACHAT_131226G				SeqNo: 2595364		Prep Date: 12/26/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable U 0.0050

LCS	Sample ID: LCS-54481-54481					Units: mg/L		Analysis Date: 12/26/13 02:08 PM		
Client ID:	Run ID: LACHAT_131226G				SeqNo: 2595341		Prep Date: 12/26/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2549 0.0050 0.25 0 102 83-120 0

LCS	Sample ID: LCS-54481-54481					Units: mg/L		Analysis Date: 12/26/13 02:08 PM		
Client ID:	Run ID: LACHAT_131226G				SeqNo: 2595365		Prep Date: 12/26/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2549 0.0050 0.25 0 102 83-120 0

The following samples were analyzed in this batch:

1312894-02C 1312894-04C

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1312894
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R132867** Instrument ID **MOIST** Method: **A2540 G**

MBLK				Sample ID: WBLKS-R132867				Units: % of sample			Analysis Date: 12/19/13 05:00 PM			
Client ID:				Run ID: MOIST_131219B				SeqNo: 2588942		Prep Date:		DF: 1		
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 0.05 0.050

LCS				Sample ID: LCS-R132867				Units: % of sample			Analysis Date: 12/19/13 05:00 PM			
Client ID:				Run ID: MOIST_131219B				SeqNo: 2588938		Prep Date:		DF: 1		
Analyte				Result		POL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 100 0.050 100 0 100 99.5-100.5 0

DUP				Sample ID: 1312801-03A DUP				Units: % of sample		Analysis Date: 12/19/13 05:00 PM			
Client ID:				Run ID: MOIST_131219B				SeqNo: 2588916		Prep Date:		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

Moisture 4.76 0.050 0 0 0 0-0 4.89 2.69 20

DUP				Sample ID: 1312859-16B DUP				Units: % of sample			Analysis Date: 12/19/13 05:00 PM			
Client ID:				Run ID: MOIST_131219B				SeqNo: 2588931		Prep Date:		DF: 1		
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 24.18 0.050 0 0 0 0-0 27.04 11.2 20

The following samples were analyzed in this batch:

1312894-01B 1312894-03B



Environmental

Cincinnati, OH
+1 513 733 5336

Everett, WA
+1 425 356 2600

Fort Collins, CO
+1 970 490 1511

Holland, MI
+1 616 399 6070

Chain of Custody Form

Page 1 of 1

COC ID: **94670**

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

ALS Project Manager: TBS

ALS Work Order #: 1312894

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order		Project Name	Van Buren Landfill	A	VOCs
Work Order		Project Number	<u>R2330009</u>	B	SVOCs
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable
				F	Metals (Including Hg) - total
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	Moisture
Phone	(734) 397-3100	Phone		H	Metals (Including Hg) - dissolved
Fax	(734) 397-3131	Fax		I	
e-Mail Address		e-Mail Address		J	

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S. R2330009. 121313. ASL. 017	12/13/13	0855	S	MeOH	3	X	X									
2	W. R2330009. 121313. 12. 018		0948	W	1/2/4/-	8	X	X			X	X					
3	S. R2330009. 121313. 12. 018		1025	S	MeOH	3	X	X									
4	W. R2330009. 121313. ASL. 019		1117	W	1/2/4/-	8	X	X			X	X					
5	Trip Blank						X	X									
6	Temp Blank																
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
				☐ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour					
Relinquished by:	Date:	Time:	Received by:	Notes:					
	12/17/13	1100							
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)			
	12/17/13	1900			3.2°C	☒ Level II Std QC ☐ TRRP Checklist ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SW846/CLP ☐ Other			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):						
	12/18/13	0930							
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035									

- Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

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COC ID: 94670

York, PA
+1 717 505 5280

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
3. The Chain of Custody is a legal document. All information must be completed accurately.

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Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **18-Dec-13 08:00**

Work Order: **1312894**

Received by: **DS**

Checklist completed by <u><i>Diane Shaw</i></u>	18-Dec-13	Reviewed by: <u><i>Tom Bramish</i></u>	18-Dec-13
eSignature	Date	eSignature	Date

Matrices: Soil, Water

Carrier name: City Transfer

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Sample(s) received on ice?	Yes ☒	No ☐	
Temperature(s)/Thermometer(s):	<u>3.2 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>12/18/2013 9:32:44 AM</u>		
Water - VOA vials have zero headspace?	Yes ☒	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

Work Order: 13121218

Project Name:
RACER - Van Buren Landfill (R2330009)

The Mannik & Smith Group, Inc.

Frank Biehl
2365 Haggerty Road South
Suite 100
Canton, MI 48188
(734) 397-3100

04-Jan-2014



Certificate No: MN 532786



04-Jan-2014

Frank Biehl
The Mannik & Smith Group, Inc.
2365 Haggerty Road South
Suite 100
Canton, MI 48188

Re: **RACER - Van Buren Landfill (R2330009)**

Work Order: **13121218**

Dear Frank,

ALS Environmental received 5 samples on 26-Dec-2013 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Sample results are compliant with NELAP standard requirements and QC results achieved laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 26.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Beamish".

Electronically approved by: Tom Beamish

Tom Beamish
Senior Project Manager



Certificate No: MN 532786

Report of Laboratory Analysis

ADDRESS 3352 128th Avenue Holland, Michigan 49424-9263 | PHONE (616) 399-6070 | FAX (616) 399-6185

ALS GROUP USA, CORP Part of the ALS Laboratory Group A Campbell Brothers Limited Company

Environmental 

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 13121218

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
13121218-01	W-R2330009-120513-RD-001	Water		12/05/13 10:15	12/26/13 11:00	☐
13121218-02	W-R2330009-120513-RD-002	Water		12/05/13 11:20	12/26/13 11:00	☐
13121218-03	W-R2330009-120513-RD-003	Water		12/05/13 15:00	12/26/13 11:00	☐
13121218-04	W-R2330009-120613-RD-004	Water		12/06/13 12:45	12/26/13 11:00	☐
13121218-05	W-R2330009-120613-RD-005	Water		12/06/13 14:50	12/26/13 11:00	☐

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
WorkOrder: 13121218

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte is present at an estimated concentration between the MDL and Report Limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LOD	Limit of Detection (see MDL)
LOQ	Limit of Quantitation (see PQL)
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
TDL	Target Detection Limit
A	APHA Standard Methods
D	ASTM
E	EPA
SW	SW-846 Update III

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter

ALS Group USA, Corp

Date: 04-Jan-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-001
Collection Date: 12/05/13 10:15 AM

Work Order: 13121218
Lab ID: 13121218-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 12/31/13	Analyst: LR	
<u>BatchID: 54609</u>							
Mercury	U		0.00010	0.00020	mg/L	1	12/31/13 18:48
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/30/13	Analyst: JDD	
<u>BatchID: 54568</u>							
Antimony	0.00097	J	0.000036	0.0020	mg/L	1	12/31/13 15:55
Arsenic	0.0023	J	0.00058	0.0050	mg/L	1	12/31/13 15:55
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 15:55
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 15:55
Chromium	0.0017	J	0.00027	0.010	mg/L	1	12/31/13 15:55
Cobalt	0.0055	J	0.000041	0.020	mg/L	1	12/31/13 15:55
Copper	0.0023	J	0.00053	0.0040	mg/L	1	12/31/13 15:55
Iron	13		0.0053	0.20	mg/L	1	12/31/13 15:55
Lead	0.00049	J	0.000051	0.0030	mg/L	1	12/31/13 15:55
Manganese	0.53		0.000054	0.050	mg/L	1	12/31/13 15:55
Nickel	0.010	J	0.00025	0.020	mg/L	1	12/31/13 15:55
Selenium	U		0.00064	0.0050	mg/L	1	12/31/13 15:55
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 15:55
Thallium	0.0011	J	0.000062	0.0020	mg/L	1	12/31/13 15:55
Vanadium	0.0013	J	0.00016	0.0040	mg/L	1	12/31/13 15:55
Zinc	0.026	J	0.00048	0.050	mg/L	1	12/31/13 15:55
<u>BatchID: 54568</u>							
Aluminum	0.024	J	0.0078	0.50	mg/L	10	01/02/14 12:32
Barium	2.0		0.00063	1.0	mg/L	10	01/02/14 12:32

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 04-Jan-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-002
Collection Date: 12/05/13 11:20 AM

Work Order: 13121218
Lab ID: 13121218-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 12/31/13	Analyst: LR	
<u>BatchID: 54609</u>							
Mercury	U		0.00010	0.00020	mg/L	1	12/31/13 19:00
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/30/13	Analyst: JDD	
<u>BatchID: 54568</u>							
Antimony	0.00099	J	0.000036	0.0020	mg/L	1	12/31/13 16:00
Arsenic	0.0020	J	0.00058	0.0050	mg/L	1	12/31/13 16:00
Barium	0.96		0.000063	0.10	mg/L	1	12/31/13 16:00
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 16:00
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 16:00
Chromium	0.0011	J	0.00027	0.010	mg/L	1	12/31/13 16:00
Cobalt	0.0039	J	0.000041	0.020	mg/L	1	12/31/13 16:00
Copper	0.0028	J	0.00053	0.0040	mg/L	1	12/31/13 16:00
Iron	12		0.0053	0.20	mg/L	1	12/31/13 16:00
Lead	0.00021	J	0.000051	0.0030	mg/L	1	12/31/13 16:00
Manganese	0.56		0.000054	0.050	mg/L	1	12/31/13 16:00
Nickel	0.016	J	0.00025	0.020	mg/L	1	12/31/13 16:00
Selenium	U		0.00064	0.0050	mg/L	1	12/31/13 16:00
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 16:00
Thallium	0.000081	J	0.000062	0.0020	mg/L	1	12/31/13 16:00
Vanadium	0.00077	J	0.00016	0.0040	mg/L	1	12/31/13 16:00
Zinc	0.024	J	0.00048	0.050	mg/L	1	12/31/13 16:00
<u>BatchID: 54568</u>							
Aluminum	0.010	J	0.0078	0.50	mg/L	10	01/02/14 12:37

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 04-Jan-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120513-RD-003
Collection Date: 12/05/13 03:00 PM

Work Order: 13121218
Lab ID: 13121218-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 12/31/13	Analyst: LR	
<u>BatchID: 54609</u>							
Mercury	U		0.00010	0.00020	mg/L	1	12/31/13 19:10
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/30/13	Analyst: JDD	
<u>BatchID: 54568</u>							
Antimony	0.00039	J	0.000036	0.0020	mg/L	1	12/31/13 16:06
Arsenic	0.023		0.00058	0.0050	mg/L	1	12/31/13 16:06
Barium	0.69		0.000063	0.10	mg/L	1	12/31/13 16:06
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 16:06
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 16:06
Chromium	0.0023	J	0.00027	0.010	mg/L	1	12/31/13 16:06
Cobalt	0.0030	J	0.000041	0.020	mg/L	1	12/31/13 16:06
Copper	0.0015	J	0.00053	0.0040	mg/L	1	12/31/13 16:06
Iron	12		0.0053	0.20	mg/L	1	12/31/13 16:06
Lead	0.000084	J	0.000051	0.0030	mg/L	1	12/31/13 16:06
Manganese	0.070		0.000054	0.050	mg/L	1	12/31/13 16:06
Nickel	0.0091	J	0.00025	0.020	mg/L	1	12/31/13 16:06
Selenium	0.00076	J	0.00064	0.0050	mg/L	1	12/31/13 16:06
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 16:06
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 16:06
Vanadium	0.0017	J	0.00016	0.0040	mg/L	1	12/31/13 16:06
Zinc	0.0056	J	0.00048	0.050	mg/L	1	12/31/13 16:06
<u>BatchID: 54568</u>							
Aluminum	0.017	J	0.0078	0.50	mg/L	10	01/02/14 12:43

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 04-Jan-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-004
Collection Date: 12/06/13 12:45 PM

Work Order: 13121218
Lab ID: 13121218-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 1/2/14	Analyst: LR	
BatchID: <u>54634</u>							
Mercury	U		0.00010	0.00020	mg/L	1	01/02/14 16:05
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/30/13	Analyst: JDD	
BatchID: <u>54568</u>							
Antimony	0.00060	J	0.000036	0.0020	mg/L	1	12/31/13 16:11
Arsenic	0.0067		0.00058	0.0050	mg/L	1	12/31/13 16:11
Barium	0.41		0.000063	0.10	mg/L	1	12/31/13 16:11
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 16:11
Cadmium	U		0.000045	0.0010	mg/L	1	12/31/13 16:11
Chromium	U		0.00027	0.010	mg/L	1	12/31/13 16:11
Cobalt	0.0025	J	0.000041	0.020	mg/L	1	12/31/13 16:11
Copper	0.0025	J	0.00053	0.0040	mg/L	1	12/31/13 16:11
Iron	4.7		0.0053	0.20	mg/L	1	12/31/13 16:11
Manganese	0.36		0.000054	0.050	mg/L	1	12/31/13 16:11
Nickel	0.014	J	0.00025	0.020	mg/L	1	12/31/13 16:11
Selenium	0.00073	J	0.00064	0.0050	mg/L	1	12/31/13 16:11
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 16:11
Thallium	U		0.000062	0.0020	mg/L	1	12/31/13 16:11
Vanadium	0.00038	J	0.00016	0.0040	mg/L	1	12/31/13 16:11
Zinc	0.0048	J	0.00048	0.050	mg/L	1	12/31/13 16:11
BatchID: <u>54568</u>							
Aluminum	0.052	J	0.0078	0.50	mg/L	10	01/02/14 12:59
Lead	U		0.00051	0.030	mg/L	10	01/02/14 12:59

Note: See Qualifiers page for a list of qualifiers and their definitions.

ALS Group USA, Corp

Date: 04-Jan-14

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-120613-RD-005
Collection Date: 12/06/13 02:50 PM

Work Order: 13121218
Lab ID: 13121218-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA (DISSOLVED)			SW7470		Prep: SW7470 / 1/2/14	Analyst: LR	
<u>BatchID: 54634</u>							
Mercury	U		0.00010	0.00020	mg/L	1	01/02/14 16:13
METALS BY ICP-MS (DISSOLVED)			SW6020A		Prep: SW3005A / 12/31/13	Analyst: ML	
<u>BatchID: 54607</u>							
Aluminum	0.93		0.00078	0.050	mg/L	1	12/31/13 22:52
Antimony	0.0043		0.000036	0.0020	mg/L	1	12/31/13 22:52
Arsenic	0.011		0.00058	0.0050	mg/L	1	12/31/13 22:52
Barium	0.084	J	0.000063	0.10	mg/L	1	12/31/13 22:52
Beryllium	U		0.000082	0.0010	mg/L	1	12/31/13 22:52
Cadmium	0.00010	J	0.000045	0.0010	mg/L	1	12/31/13 22:52
Chromium	0.0014	J	0.00027	0.010	mg/L	1	12/31/13 22:52
Cobalt	0.0040	J	0.000041	0.020	mg/L	1	12/31/13 22:52
Copper	0.0015	J	0.00053	0.0040	mg/L	1	12/31/13 22:52
Iron	1.1		0.0053	0.20	mg/L	1	12/31/13 22:52
Lead	0.00063	J	0.000051	0.0030	mg/L	1	12/31/13 22:52
Manganese	0.53		0.000054	0.050	mg/L	1	12/31/13 22:52
Nickel	0.0050	J	0.00025	0.020	mg/L	1	12/31/13 22:52
Selenium	U		0.00064	0.0050	mg/L	1	12/31/13 22:52
Silver	U		0.000042	0.00020	mg/L	1	12/31/13 22:52
Thallium	0.00026	J	0.000062	0.0020	mg/L	1	12/31/13 22:52
Vanadium	0.0032	J	0.00016	0.0040	mg/L	1	12/31/13 22:52
Zinc	0.0045	J	0.00048	0.050	mg/L	1	12/31/13 22:52

Note: See Qualifiers page for a list of qualifiers and their definitions.

Client: The Mannik & Smith Group, Inc.

QC BATCH REPORT

Work Order: 13121218

Project: RACER - Van Buren Landfill (R2330009)

Batch ID: 54609

Instrument ID HG1

Method: SW7470

MBLK				Sample ID: MBLK-54609-54609				Units: mg/L			Analysis Date: 12/31/13 05:57 PM			
Client ID:				Run ID: HG1_131231A				SeqNo: 2600784			Prep Date: 12/31/13		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

Mercury U 0.00020

LCS		Sample ID: LCS-54609-54609				Units: mg/L		Analysis Date: 12/31/13 06:00 PM		
Client ID:		Run ID: HG1_131231A		SeqNo: 2600785		Prep Date: 12/31/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002053 0.00020 0.002 0 103 80-120 0

MS				Sample ID: 13121064-02AMS				Units: mg/L			Analysis Date: 12/31/13 06:05 PM		
Client ID:				Run ID: HG1_131231A				SeqNo: 2600787		Prep Date: 12/31/13		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

Mercury 0.02126 0.0020 0.02 -0.00023 107 75-125 0

MSD				Sample ID: 13121064-02AMSD				Units: mg/L			Analysis Date: 12/31/13 06:07 PM		
Client ID:				Run ID: HG1_131231A				SeqNo: 2600788		Prep Date: 12/31/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual			

Mercury 0.02143 0.0020 0.02 -0.00023 108 75-125 0.02126 0.796 20

The following samples were analyzed in this batch:

13121218-01A	13121218-02A	13121218-03A
--------------	--------------	--------------

Client: The Mannik & Smith Group, Inc.
Work Order: 13121218
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54634** Instrument ID **HG1** Method: **SW7470**

MBLK				Sample ID: MBLK-54634-54634				Units: mg/L			Analysis Date: 01/02/14 04:00 PM			
Client ID:				Run ID: HG1_140102A				SeqNo: 2602183		Prep Date: 01/02/14		DF: 1		
Analyte				Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury U 0.00020

LCS		Sample ID: LCS-54634-54634				Units: mg/L		Analysis Date: 01/02/14 04:02 PM		
Client ID:		Run ID: HG1_140102A		SeqNo: 2602184		Prep Date: 01/02/14		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001992 0.00020 0.002 0 99.6 80-120 0

MS				Sample ID: 13121218-04AMS				Units: mg/L			Analysis Date: 01/02/14 04:07 PM		
Client ID: W-R2330009-120613-RD-004				Run ID: HG1_140102A				SeqNo: 2602186		Prep Date: 01/02/14		DF: 1	
Analyte		Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual		

Mercury 0.001963 0.00020 0.002 -0.000008 98.6 75-125 0

MSD					Sample ID: 13121218-04AMSD					Units: mg/L			Analysis Date: 01/02/14 04:11 PM			
Client ID: W-R2330009-120613-RD-004					Run ID: HG1_140102A					SeqNo: 2602187			Prep Date: 01/02/14		DF: 1	
Analyte					Result		PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	

Mercury 0.002035 0.00020 0.002 -0.000008 102 75-125 0.001963 3.6 20

The following samples were analyzed in this batch:

13121218-04A	13121218-05A
--------------	--------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 13121218
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-54568-54568				Units: mg/L		Analysis Date: 12/31/13 03:44 PM		
Client ID:		Run ID: ICPMS2_131231A				SeqNo: 2600886		Prep Date: 12/30/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0001902	0.0050								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	U	0.080								
Lead	U	0.0050								
Manganese	U	0.0050								
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	0.0005963	0.0050								J
Vanadium	U	0.0050								
Zinc	0.001053	0.010								J

MBLK		Sample ID: MBLK-54568-54568				Units: mg/L		Analysis Date: 01/02/14 11:53 AM		
Client ID:		Run ID: ICPMS2_140102A				SeqNo: 2601578		Prep Date: 12/30/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.001565	0.010								J

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 13121218
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

LCS				Sample ID: LCS-54568-54568			Units: mg/L		Analysis Date: 12/31/13 03:49 PM	
Client ID:				Run ID: ICPMS2_131231A			SeqNo: 2600887		Prep Date: 12/30/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09986	0.0050	0.1	0	99.9	80-120	0			
Arsenic	0.09956	0.0050	0.1	0	99.6	80-120	0			
Barium	0.09722	0.0050	0.1	0	97.2	80-120	0			
Beryllium	0.09647	0.0020	0.1	0	96.5	80-120	0			
Cadmium	0.09782	0.0020	0.1	0	97.8	80-120	0			
Chromium	0.09284	0.0050	0.1	0	92.8	80-120	0			
Cobalt	0.09966	0.0050	0.1	0	99.7	80-120	0			
Copper	0.09745	0.0050	0.1	0	97.4	80-120	0			
Iron	9.854	0.080	10	0	98.5	80-120	0			
Lead	0.09529	0.0050	0.1	0	95.3	80-120	0			
Manganese	0.09748	0.0050	0.1	0	97.5	80-120	0			
Nickel	0.09594	0.0050	0.1	0	95.9	80-120	0			
Selenium	0.09888	0.0050	0.1	0	98.9	80-120	0			
Silver	0.09147	0.0050	0.1	0	91.5	80-120	0			
Thallium	0.08428	0.0050	0.1	0	84.3	80-120	0			
Vanadium	0.09984	0.0050	0.1	0	99.8	80-120	0			
Zinc	0.09937	0.010	0.1	0	99.4	80-120	0			

LCS				Sample ID: LCS-54568-54568			Units: mg/L		Analysis Date: 01/02/14 11:59 AM	
Client ID:				Run ID: ICPMS2_140102A			SeqNo: 2601579		Prep Date: 12/30/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0959	0.010	0.1	0	95.9	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 13121218
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

MS				Sample ID: 1312747-16EMS			Units: mg/L		Analysis Date: 12/31/13 05:23 PM		
Client ID:			Run ID: ICPMS2_131231A			SeqNo: 2600904		Prep Date: 12/30/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.09793	0.010	0.1	-0.00114	99.1	75-125	0				
Antimony	0.09652	0.0050	0.1	0.00003278	96.5	75-125	0				
Arsenic	0.09719	0.0050	0.1	-0.0001527	97.3	75-125	0				
Barium	0.0975	0.0050	0.1	0.0001056	97.4	75-125	0				
Beryllium	0.09214	0.0020	0.1	-0.00004222	92.2	75-125	0				
Cadmium	0.09555	0.0020	0.1	-0.00003049	95.6	75-125	0				
Chromium	0.09049	0.0050	0.1	-0.00007388	90.6	75-125	0				
Cobalt	0.09907	0.0050	0.1	0.0001389	98.9	75-125	0				
Copper	0.09801	0.0050	0.1	0.0003429	97.7	75-125	0				
Iron	9.821	0.080	10	0.0104	98.1	75-125	0				
Lead	0.094	0.0050	0.1	0.000002567	94	75-125	0				
Manganese	0.09737	0.0050	0.1	0.0003125	97.1	75-125	0				
Nickel	0.09549	0.0050	0.1	-0.0003924	95.9	75-125	0				
Selenium	0.0961	0.0050	0.1	0.0002494	95.9	75-125	0				
Silver	0.08812	0.0050	0.1	0.000003683	88.1	75-125	0				
Thallium	0.08338	0.0050	0.1	-0.0003435	83.7	75-125	0				
Vanadium	0.1008	0.0050	0.1	0.0001523	101	75-125	0				
Zinc	0.09708	0.010	0.1	0.001695	95.4	75-125	0				

MSD				Sample ID: 1312747-16EMSD			Units: mg/L		Analysis Date: 12/31/13 05:29 PM		
Client ID:			Run ID: ICPMS2_131231A			SeqNo: 2600905		Prep Date: 12/30/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.09889	0.010	0.1	-0.00114	100	75-125	0.09793	0.976	20		
Antimony	0.09583	0.0050	0.1	0.00003278	95.8	75-125	0.09652	0.717	20		
Arsenic	0.09607	0.0050	0.1	-0.0001527	96.2	75-125	0.09719	1.16	20		
Barium	0.09693	0.0050	0.1	0.0001056	96.8	75-125	0.0975	0.586	20		
Beryllium	0.09401	0.0020	0.1	-0.00004222	94.1	75-125	0.09214	2.01	20		
Cadmium	0.09521	0.0020	0.1	-0.00003049	95.2	75-125	0.09555	0.356	20		
Chromium	0.08962	0.0050	0.1	-0.00007388	89.7	75-125	0.09049	0.966	20		
Cobalt	0.1011	0.0050	0.1	0.0001389	101	75-125	0.09907	2.03	20		
Copper	0.09878	0.0050	0.1	0.0003429	98.4	75-125	0.09801	0.783	20		
Iron	9.854	0.080	10	0.0104	98.4	75-125	9.821	0.335	20		
Lead	0.09472	0.0050	0.1	0.000002567	94.7	75-125	0.094	0.763	20		
Manganese	0.09754	0.0050	0.1	0.0003125	97.2	75-125	0.09737	0.174	20		
Nickel	0.09685	0.0050	0.1	-0.0003924	97.2	75-125	0.09549	1.41	20		
Selenium	0.09523	0.0050	0.1	0.0002494	95	75-125	0.0961	0.909	20		
Silver	0.08764	0.0050	0.1	0.000003683	87.6	75-125	0.08812	0.546	20		
Thallium	0.0854	0.0050	0.1	-0.0003435	85.7	75-125	0.08338	2.39	20		
Vanadium	0.1018	0.0050	0.1	0.0001523	102	75-125	0.1008	0.987	20		
Zinc	0.09731	0.010	0.1	0.001695	95.6	75-125	0.09708	0.237	20		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 13121218
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54568** Instrument ID **ICPMS2** Method: **SW6020A**

The following samples were analyzed in this batch:

13121218-01A	13121218-02A	13121218-03A
13121218-04A		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 13121218
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54607** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-54607-54607				Units: mg/L		Analysis Date: 12/31/13 10:40 PM		
Client ID:		Run ID: ICPMS1_131231A				SeqNo: 2601137		Prep Date: 12/31/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.002592	0.010								J
Antimony	0.0002941	0.0050								J
Arsenic	U	0.0050								
Barium	U	0.0050								
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	U	0.080								
Lead	U	0.0050								
Manganese	0.0001296	0.0050								J
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0050								
Vanadium	U	0.0050								
Zinc	0.0009002	0.010								J

LCS		Sample ID: LCS-54607-54607				Units: mg/L		Analysis Date: 12/31/13 10:46 PM		
Client ID:		Run ID: ICPMS1_131231A				SeqNo: 2601138		Prep Date: 12/31/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09194	0.010	0.1	0	91.9	80-120	0			
Antimony	0.1048	0.0050	0.1	0	105	80-120	0			
Arsenic	0.09248	0.0050	0.1	0	92.5	80-120	0			
Barium	0.09444	0.0050	0.1	0	94.4	80-120	0			
Beryllium	0.09653	0.0020	0.1	0	96.5	80-120	0			
Cadmium	0.09816	0.0020	0.1	0	98.2	80-120	0			
Chromium	0.09276	0.0050	0.1	0	92.8	80-120	0			
Cobalt	0.09173	0.0050	0.1	0	91.7	80-120	0			
Copper	0.09265	0.0050	0.1	0	92.6	80-120	0			
Iron	9.511	0.080	10	0	95.1	80-120	0			
Lead	0.09755	0.0050	0.1	0	97.6	80-120	0			
Manganese	0.09244	0.0050	0.1	0	92.4	80-120	0			
Nickel	0.09121	0.0050	0.1	0	91.2	80-120	0			
Selenium	0.09141	0.0050	0.1	0	91.4	80-120	0			
Silver	0.09499	0.0050	0.1	0	95	80-120	0			
Thallium	0.09231	0.0050	0.1	0	92.3	80-120	0			
Vanadium	0.09435	0.0050	0.1	0	94.4	80-120	0			
Zinc	0.09876	0.010	0.1	0	98.8	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 13121218
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54607** Instrument ID **ICPMS1** Method: **SW6020A**

MS				Sample ID: 13121218-05AMS			Units: mg/L		Analysis Date: 12/31/13 11:03 PM	
Client ID: W-R2330009-120613-RD-005				Run ID: ICPMS1_131231A			SeqNo: 2601141		Prep Date: 12/31/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.034	0.010	0.1	0.9304	104	75-125	0			O
Antimony	0.1004	0.0050	0.1	0.004318	96.1	75-125	0			
Arsenic	0.1016	0.0050	0.1	0.01128	90.3	75-125	0			
Barium	0.1737	0.0050	0.1	0.08412	89.6	75-125	0			
Beryllium	0.0849	0.0020	0.1	-0.00003323	84.9	75-125	0			
Cadmium	0.0905	0.0020	0.1	0.00009966	90.4	75-125	0			
Chromium	0.09309	0.0050	0.1	0.001402	91.7	75-125	0			
Cobalt	0.09063	0.0050	0.1	0.004019	86.6	75-125	0			
Copper	0.08625	0.0050	0.1	0.001535	84.7	75-125	0			
Iron	10.25	0.080	10	1.137	91.1	75-125	0			
Lead	0.09549	0.0050	0.1	0.0006324	94.9	75-125	0			
Manganese	0.6141	0.0050	0.1	0.5309	83.2	75-125	0			O
Nickel	0.08953	0.0050	0.1	0.004954	84.6	75-125	0			
Selenium	0.08574	0.0050	0.1	0.0005199	85.2	75-125	0			
Silver	0.08085	0.0050	0.1	0.00003732	80.8	75-125	0			
Thallium	0.09085	0.0050	0.1	0.0002613	90.6	75-125	0			
Vanadium	0.101	0.0050	0.1	0.00318	97.8	75-125	0			
Zinc	0.09174	0.010	0.1	0.004514	87.2	75-125	0			

MSD				Sample ID: 13121218-05AMSD			Units: mg/L		Analysis Date: 12/31/13 11:09 PM	
Client ID: W-R2330009-120613-RD-005				Run ID: ICPMS1_131231A			SeqNo: 2601142		Prep Date: 12/31/13	
									DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.049	0.010	0.1	0.9304	119	75-125	1.034	1.44	20	O
Antimony	0.102	0.0050	0.1	0.004318	97.7	75-125	0.1004	1.58	20	
Arsenic	0.103	0.0050	0.1	0.01128	91.7	75-125	0.1016	1.37	20	
Barium	0.1802	0.0050	0.1	0.08412	96.1	75-125	0.1737	3.67	20	
Beryllium	0.08631	0.0020	0.1	-0.00003323	86.3	75-125	0.0849	1.65	20	
Cadmium	0.09358	0.0020	0.1	0.00009966	93.5	75-125	0.0905	3.35	20	
Chromium	0.09429	0.0050	0.1	0.001402	92.9	75-125	0.09309	1.28	20	
Cobalt	0.09248	0.0050	0.1	0.004019	88.5	75-125	0.09063	2.02	20	
Copper	0.08769	0.0050	0.1	0.001535	86.2	75-125	0.08625	1.66	20	
Iron	10.36	0.080	10	1.137	92.2	75-125	10.25	1.07	20	
Lead	0.09771	0.0050	0.1	0.0006324	97.1	75-125	0.09549	2.3	20	
Manganese	0.6189	0.0050	0.1	0.5309	88	75-125	0.6141	0.779	20	O
Nickel	0.09132	0.0050	0.1	0.004954	86.4	75-125	0.08953	1.98	20	
Selenium	0.08536	0.0050	0.1	0.0005199	84.8	75-125	0.08574	0.444	20	
Silver	0.08228	0.0050	0.1	0.00003732	82.2	75-125	0.08085	1.75	20	
Thallium	0.0931	0.0050	0.1	0.0002613	92.8	75-125	0.09085	2.45	20	
Vanadium	0.1013	0.0050	0.1	0.00318	98.1	75-125	0.101	0.297	20	
Zinc	0.09261	0.010	0.1	0.004514	88.1	75-125	0.09174	0.944	20	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: The Mannik & Smith Group, Inc.
Work Order: 13121218
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **54607** Instrument ID **ICPMS1** Method: **SW6020A**

The following samples were analyzed in this batch:

13121218- 05A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Bill Carey

From: Tom Beamish
Sent: Monday, December 23, 2013 6:00 PM
To: Bill Carey
Subject: FW: RACER - Van Buren Landfill (R2330009)
Attachments: 201312231755.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

From: Michael Friedhoff
Sent: Monday, December 23, 2013 5:57:40 PM (UTC-05:00) Eastern Time (US & Canada)
To: Tom Beamish
Cc: "Frank Biehl" <FBiehl@manniksmithgroup.com> " <Frank Biehl
Subject: Re: RACER - Van Buren Landfill (R2330009)

Tom,

We are analyzing for total metals and dissolved metals for ground water samples for this phase of the project.

Please add dissolved metals for the analysis on the attached COCs:

94668;
94667;
94670;
94673; and
94672.

Thanks,

Mike

Michael Friedhoff, CPG
Project Geologist
The Mannik & Smith Group, Inc.
(734) 904-6679 (Cell)
(734) 397-3100 (Office)
www.manniksmithgroup.com



>>> Tom Beamish <Tom.Beamish@alsglobal.com> 12/20/2013 3:53 PM >>>
Frank / Mike -

Results of the analyses for the samples we received on 12/10 are attached. Hardcopies will not follow unless specifically requested.



Environmental

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Chain of Custody Form

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COC ID: 94667

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+1 610 948 4903

Salt Lake City, UT
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South Charleston, WV
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13121218

Customer Information		Project Information		Parameter/Method Request for Analysis														
Purchase Order		Project Name	Van Buren Landfill	A	VOCs													
Work Order		Project Number	R2330009	B	SVOCs													
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs													
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total													
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecourse Rd	E	Cyanide - amenable													
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	F	Metals (Including Hg) - total													
Phone	(734) 397-3100	Phone		G	Moisture													
Fax	(734) 397-3131	Fax		H	Metals (Including Hg) - dissolved													
e-Mail Address		e-Mail Address		I														
				J														

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-R2330009-120313-RD-001	12/03/13	10:40	S	7	2	-	-	X	X			X	X			
2	S-R2330009-120313-RD-002	12/03/13	14:30	S	7	2	-	-	X	X			X	X			
3	S-R2330009-120413-RD-003	12/04/13	10:00	S	7	2	-	-	X	X			X	X			
4	W-R2330009-120513-RD-001	12/05/13	10:15	W	124	3212	X	X			X	X		X	MTF		
5	S-R2330009-120413-RD-004	12/04/13	12:44	S	7	2	-	-	X	X			X	X			
6	W-R2330009-120513-RD-002	12/05/13	11:20	W	124	3212	X	X			X	X		X	MTF		
7	S-R2330009-120513-RD-005	12/05/13	13:15	S	7	2	-	-	X	X			X	X			
8	W-R2330009-120513-RD-003	12/05/13	15:00	W	124	3212	X	X			X	X		X	MTF		
9	S-R2330009-120613-RD-006	12/06/13	12:15	S	7	2	-	-	X	X			X	X			
10	W-R2330009-120613-RD-004	12/06/13	12:45	W	124	3212	X	X			X	X		X	MTF		

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
DANIEL DANIEL				☒ Std 10 Wk Days ☐ 4 Wk Days ☐ Other _____					
Relinquished by:	Date: 12/06/13	Time: 1600	Received by:	MSG Refrigerator		Notes:			
Relinquished by:	Date: 12/06/13	Time: 1:10	Received by (Laboratory):	Cooler ID:	Cooler Temp:	QC Package: (Check One Box Below)			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):			☒ Level II Std QC ☐ TRRP Check List ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SW/BAE/CLP ☐ Other			
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₅ 6-NaHSO ₃ 7-Other 8-4°C 9-5035									

- Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.

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Chain of Custody Form

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COC ID: 94668

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South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

13121218

Environmental

Customer Information		Project Information		Parameter/Method Request for Analysis													
Purchase Order		Project Name	Van Buren Landfill	A	VOCs												
Work Order		Project Number	R2330009	B	SVOCs												
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs												
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total												
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable												
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	F	Metals (Including Hg) - total												
Phone	(734) 397-3100	Phone		G	Moisture												
Fax	(734) 397-3131	Fax		H	Metals (Including Hg) - dissolved												
e-Mail Address		e-Mail Address		I													
				J													

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-R2330009-120613 RD-007	2/6/13	14:00	S	-	2	X	X			X	X					
2	W-R2330009-120613 RD-005	2/6/13	14:50	W	1,2,4,-	3,2,1,2	X	X			X	X		X			Hold 2/11/14
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
KAPAL KAPAL				☒ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour					
Relinquished by:	Date:	Time:	Received by:	Notes:					
Mannik	2/6/13	1600	MISG Refrigerator						
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)			
	2/11/13	1500				☒ Level II Std QC ☐ TRRP Check List ☐ Level III Std QC Raw Data ☐ TRRP Level IV ☐ Level IV SWB46/CLP ☐ Other			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):						
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₈ 6-NaHSO ₄ 7-Other 8-4°C 9-5035									

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Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

12/21/13
247

Customer Information		Project Information		Parameter/Method Request for Analysis																
Purchase Order		Project Name	Van Buren Landfill	A	VOCs															
Work Order		Project Number	R2330009	B	SVOCs															
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs															
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total															
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable															
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	F	Metals (Including Hg) - total															
Phone	(734) 397-3100	Phone		G	Moisture															
Fax	(734) 397-3131	Fax		H	Metals (Including Hg) - dissolved															
e-Mail Address		e-Mail Address		I																
				J																
No.	Sample Description	Date	Time	Matrix	Pres	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold			
1	S-R2330009-120113-ATL-008	12/1/13	1143	S	MeOH	4	X	X									X			
2	L-R2330009-120113-ATL-006	12/1/13	1325	L	MeOH	8	X	X			X	X		X	MF					
3	S-R2330009-120113-ATL-009	12/1/13	1415	S	MeOH	4	X	X									X			
4	T-R2330009-120113-ATL-007	12/1/13					X													
5	T-R2330009-120113-ATL-007	12/1/13					X													
6	L-R2330009-121013-ATL-007	12/10/13	0915	L	MeOH	8	X	X			X	X		X	MF					
7	S-R2330009-121013-ATL-010	12/10/13	0915	S	MeOH	4	X	X									X			
8	L-R2330009-121013-ATL-008	12/10/13	1128	L	MeOH	8	X	X			X	X		X	MF					
9	S-R2330009-121013-ATL-011	12/10/13	1315	S	MeOH	4	X	X									X			
10	L-R2330009-121013-ATL-009	12/10/13	1530	L	MeOH	8	X	X			X	X		X	MF					
Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time (Check Box)				Results Due Date:												
				☐ Std 40 WK Days ☐ 5 WK Days ☒ Other ☐ 2 WK Days ☐ 24 Hour																
Relinquished by:	Date:	Time:	Received by:	Notes:																
	12/1/13	1000																		
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp	QC Package: (Check One Box Below)														
						☒ Level II Std QC ☐ TRRP CheckList ☐ Level III Std QC/Raw Data ☐ TRRP Level III ☐ Level IV BW845/CLP ☐ Other														
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):																	
Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO3 7-Other 8-4°C 9-5035																				

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COC ID: **94673**

Houston, TX
+1 281 530 5656

Middletown, PA
+1 717 944 5541

Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

13121218

Customer Information		Project Information		Parameter/Method Request for Analysis																
Purchase Order		Project Name	Van Buren Landfill	A	VOCs															
Work Order		Project Number	R2330009	B	SVOCs															
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs															
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total															
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable															
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	F	Metals (including Hg) - total															
Phone	(734) 397-3100	Phone		G	Moisture															
Fax	(734) 397-3131	Fax		H	Metals (including Hg) - dissolved															
e-Mail Address		e-Mail Address		I																
				J																

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S. R2330029. 121113. ASL. 012	12/11/13	0845	S	MeOH	3	X	X									X
2	S. R2330009. 121113. ASL. 013		0850	S	MeOH	3	X	X									X
10	W. R2330009. 121113. ASL. 010		1015	W	1/2/4/-	8	X	X			X	X		X	MTF		
11	W. R2330009. 121113. ASL. 011		1051 ¹⁰⁵	W	1/2/4/-	8	X	X			X	X		X	MTF		
12	S. R2330009. 121113. ASL. 014		1128	S	MeOH	3	X	X									X
13	W. R2330009. 121113. ASL. 012		1305	W	1/2/4/-	8	X	X			X	X		X			
14	W. R2330009. 121213. ASL. 013	12/12/13	0813	W	1/2/4/-	8	X	X			X	X		X	MTF		
15	W. R2330009. 121213. ASL. 014	12/12/13	0856	W	1/2/4/-	8	X	X			X	X		X			
16	W. R2330009. 121213. ASL. 015		0945	W	1/2/4/-	8	X	X			X	X		X			
17	S. R2330009. 121213. ASL. 015		1030	S	MeOH	3	X	X									

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
				☐ Std 10 WK Days ☐ 5 WK Days ☐ Other 2 WK Days ☐ 24 Hour					
Relinquished by:	Date:	Time:	Received by:	Notes:					
	12/13/13	1600							
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp	QC Package: (Check One Box Below)			
						☒ Level II Std QC ☐ TRRP Check List ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SW846/GLP ☐ Other			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):						
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₄ 7-Other 8-4°C 9-5035									

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COC ID: **94672**

Houston, TX
+1 281 530 5656

Middletown, PA
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Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

13121218

13121218

Customer Information		Project Information		Parameter/Method Request for Analysis														
Purchase Order		Project Name	Van Buren Landfill	A	VOCs													
Work Order		Project Number	R2330009	B	SVOCs													
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs													
Send Report To		Invoice Attn	Accounts Payable	D	Cyanide - total													
Address	2365 Haggerty Road South Suite 100	Address	2930 Ecorse Rd	E	Cyanide - amenable													
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	F	Metals (including Hg) - total													
Phone	(734) 397-3100	Phone		G	Moisture													
Fax	(734) 397-3131	Fax		H	Metals (including Hg) - dissolved													
e-Mail Address		e-Mail Address		I														
				J														

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
16	W. R2330009. 121213. A2. 016	12/12/13	1123	W	1/24/-	8	X	X			X	X			X		
17	S. R2330009. 121213. A2. 016	12/12/13	1245	S	MeOH	3	X	X									
18	W. R2330009. 121213. A2. 017	12/12/13	1330	W	1/24/-	8	X	X			X	X			X		
	Tip Blank																
	Top Blank																

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
				☐ 8-10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour					
Relinquished by:	Date:	Time:	Received by:	Notes:					
	12/13/13	1123							
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp	QC Package: (Check One Box Below)			
						☒ Level II Std QC ☐ TRRP Check List ☐ Level III Std QC/Res Data ☐ TRRP Level IV ☐ Level IV SWB46/CLP ☐ Other			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):						
Preservative Key: 1-HCl 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ S ₂ O ₃ 6-NaHSO ₃ 7-Other 8-4°C 9-5035									

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COC ID: 94670

Houston, TX
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Middletown, PA
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Spring City, PA
+1 610 948 4903

Salt Lake City, UT
+1 801 266 7700

South Charleston, WV
+1 304 356 3168

York, PA
+1 717 505 5280

13121218

1312894

Customer Information			Project Information			Parameter/Method Request for Analysis												
Purchase Order			Project Name	Van Buren Landfill		A	VOCs											
Work Order			Project Number	R2330009		B	SVOCs											
Company Name	The Mannik & Smith Group, Inc.		Bill To Company	RACER Trust		C	PCBs											
Send Report To			Invoice Amt	Accounts Payable		D	Cyanide - total											
Address	2365 Haggerty Road South Suite 100		Address	2830 Ecorse Rd		E	Cyanide - amenable											
City/State/Zip	Canton, MI 48188		City/State/Zip	Ypsilanti, MI 48198		F	Metals (including Hg) - total											
Phone	(734) 397-3100		Phone			G	Moisture											
Fax	(734) 397-3131		Fax			H	Metals (including Hg) - dissolved											
e-Mail Address			e-Mail Address			I												
						J												

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	S-R2330009-121313-ASL-017	12/13/13	0855	S	MeOH	3	X	X									
2	W-R2330009-121313-AL-018		0948	W	1/2/41-	8	X	X			X	X			X	mtf	
3	S-R2330009-121313-AL-018		1025	S	MeOH	3	X	X									
4	W-R2330009-121313-AL-019		1117	W	1/2/41-	8	X	X			X	X			X	mtf	
5	Trip Blank						X										
6	Temp Blank																
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date	
				☐ Std 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour			
Relinquished by:	Date:	Time:	Received by:	Notes:			
	12/13/13	11:00					
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
						☒ Level II Std QC ☐ TRRP CheckList ☐ Level III Std QC/Raw Data ☐ TRRP Level IV ☐ Level IV SW846/CLP ☐ Other	
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):				
Preservative Key: 1-HCl, 2-HNO ₃ , 3-H ₂ SO ₄ , 4-NaOH, 5-Na ₂ S ₂ O ₃ , 6-NaHSO ₃ , 7-Other, 8-4°C, 9-5035							

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Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **26-Dec-13 11:00**

Work Order: **13121218**

Received by: **MA**

Checklist completed by <u>Tom Bramish</u>	04-Jan-14	Reviewed by: <u>Tom Bramish</u>	04-Jan-14
eSignature	Date	eSignature	Date

Matrices: water

Carrier name: City Transfer

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☒
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Sample(s) received on ice?	Yes ☐	No ☒	
Temperature(s)/Thermometer(s):	<u>4 C</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☒
Water - pH acceptable upon receipt?	Yes ☒	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☒	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction: