



MEMO

To: Mr. Chris Black, U.S. EPA
From: Mr. Francis Biehl, PE and Mr. Michael J. Friedhoff, CPG
CC: Mr. Grant Trigger, RACER Trust; Mr. David Favero, RACER Trust
Date: October 7, 2013
Revised November 20, 2013

Project #: R2330009
Re: RACER Van Buren Landfill Site – Phase IB Site Investigation

The Mannik & Smith Group, Inc. (MSG) has been performing site investigation activities at the Van Buren Landfill Property located northeast of the Ecorse Road / Michigan Avenue intersection in Van Buren Township, Wayne County, Michigan (Site) on behalf of Revitalizing Auto Communities Environmental Response (RACER) Trust. These activities are being performed to ensure compliance with the Executed Performance-based Voluntary Agreement dated September 30, 2011 between the United States Environmental Protection Agency (USEPA) and RACER Trust. *Figure 1, Site Location Map*, depicts the location of the Site relative to nearby roads and major topographic features.

The initial phase of this investigation was documented in the report “Phase IA Site Investigation”, dated February 19, 2013. Recommendations for this additional investigation, Phase 1B, were reviewed and approved by the USEPA. This Site investigation was performed in general accordance with the United States Environmental Protection Agency (USEPA) approved Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP), dated June 2012.

SCOPE OF WORK

The scope of work for the Phase 1B Site investigation consisted of the following field activities: the advancement of soil borings around the Site perimeter in order to collect soil samples; the installation of monitoring wells; ground water sample collection from monitoring wells; and the collection of surface water samples. The contaminants of concern associated with the Site are from wastes. The soil boring and associated monitoring wells were placed at locations along the perimeter of the Site (including within the Michigan Department of Transportation Right-of-Way (MDOT ROW)) beyond the expected limits of waste.

Ten (10) soil borings (SB-1A, SB-5B, SB-5C, SB-7D, SB-7E, SB-8, SB-9, SB-10, SB-11 and SB-12) were advanced to a depth of at least 15-feet below ground surface (bgs) to collect soil samples; eight (8) monitoring wells (MW-1, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11 and MW-12) were installed at eight of the ten soil boring locations (ground water was not encountered at SB-5B and SB-7D and thus the reason for SB-5C and SB-7E); ground water samples were collected from all eleven (11) monitoring wells (MW-1, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11 and MW-12); and surface water samples were collected from the slope along the western perimeter of the Site (SW-1 and SW-3) and the intermittent surface water body on the southern portion of the Site (SW-2). Soil boring and monitoring well installation activities occurred from March 25 through April 3, 2013 and ground water sampling activities occurred from April 30 through May 3, 2013. A second, quarterly round of ground water sampling and analysis occurred in August of 2013 with sampling performed between August 6 and August 8, 2013. Total metals were collected in addition to dissolved metals during the August 2013 ground water sampling event for comparison purposes to confirm metals content in dissolved phase versus the amount present in the particulates in the samples. Soil boring, monitoring well and surface water sample locations are illustrated on *Figure 2, Site Schematic*.

PHYSICAL SETTING

MSG reviewed available regional soils information and geological resource information to determine the physical setting of the Site and surrounding area. This information was reviewed to assess the topographic and subsurface characteristics of the Site and surrounding area, and how those characteristics may ultimately influence potential environmental conditions at and surrounding the Site.

The United States Geological Survey (USGS) Ypsilanti East, Michigan 7.5 Minute Quadrangle map, dated 1967, photo revised 1983, and the and Denton, Michigan 7.5 Minute Quadrangle map, dated 1969, photo revised 1973 and 1980, were reviewed for topographical information in the vicinity of the Site (Figure 1). *Figure 1* depicts a majority of the surface topography in the vicinity of the Site gradually sloping to the south-southeast with the ground surface elevation ranging between approximately 715 feet above mean sea level (msl) to approximately 710 feet above msl. A section of divided highway (Michigan Avenue / US-12) lies adjacent west of the Site in a roadway cut at an elevation of approximately 700 to 705 feet above msl and the western edge of the property grades steeply down to the Michigan Avenue / US-12 roadway.

Based on the map of the Quaternary Geology of Southern Michigan, compiled in 1982 by W.R. Farrand and published by the Michigan Geological Survey in Lansing, Michigan, the Site is located in an area that consists of lacustrine sand and gravel. Typically, these deposits contain pale brown to pale reddish brown fine to medium grained sand, occurring chiefly as former beach and near-offshore littoral deposits of the glacial Great Lakes.

According to the map titled Bedrock Geology of Southern Michigan, compiled in 1987 by Randall L. Milstein and published by the Michigan Department of Natural Resources, the bedrock beneath the Site consists of the late Devonian-aged Antrim Shale formation. A review of historical water supply well logs within approximately one mile of the Site indicates that the regional geology consists of approximately 70 to 80 feet of lacustrine clay deposits underlain by approximately 8 to 13 feet of sand and gravel deposits which in turn are underlain by bedrock (noted as being approximately 90 to 97 feet bgs).

GEOLOGY

Soil borings conducted for this phase of the project were located outside of the former landfill perimeter, based on the extent of earth disturbance illustrated on the April 26, 1970 aerial photograph of the Site, noted on *Figure 3, Generalized Geologic Cross-Section Profile Locations*. Soil boring and monitoring well construction logs are contained in *Attachment 1, Soil Boring and Monitoring Well Logs*, and their locations illustrated on *Figure 3*. Several generalized geologic cross-sections were constructed based on the geologic information contained in Site boring logs, the locations of these cross-sections are illustrated on *Figure 3*. Generally, the soil profiles consisted of silty fine to coarse grained sand, ranging in thickness from 0.2 feet to 19.2 feet, overlying at least five feet of silty clay. The top of the silty clay unit is shallowest in the eastern portion of the Site at 8 feet bgs (elevation of 703 feet above mean sea level (AMSL)), and deepest in the northwest portion of the Site at 27.1 feet bgs (697 feet AMSL). Waste was not encountered in soil borings around the perimeter of the former landfill, including SB-1A, SB-3, SB-4, SB-5C, SB-6A, SB-7D, SB-7E, SB-8, SB-9, SB-10, SB-11 or SB-12. The limit of waste is estimated based on information contained in Site boring logs and illustrated in *Figure 4, Generalized Geologic Cross-sections A-A' and B-B'*, and *Figure 5, Generalized Geologic Cross-sections C-C' and D-D'*.

Using Water Well and Pump Records from the Michigan Department of Environmental Quality State Groundwater Database (Welogic), *Attachment 2, Water Well and Pump Records*, basic regional geologic information was correlated to geologic information at the Site. *Figure 6, Regional Geologic Cross-Section E-E' Location Map*, illustrates the location of these borings with regard to the Site and the geologic information is illustrated in *Figure 7, Regional Geologic Cross-Section E-E'*. Generally, the regional geology consists of a layer of sandy clay and/or silty sand at the surface overlying a partially confined sand layer, approximately 5 to 18 feet in thickness. The sand layer is underlain by a silty clay layer ranging in thickness from 50 to 82 feet. A confined saturated coarse gravel layer is located below the silty clay at a depth of 72 to 86 feet bgs. Water Well and Pump Records indicate this gravel layer may be used as a source of drinking water.

SOIL SAMPLE RESULTS

Soil sample analytical results are summarized in *Table 1, Summary of Soil Sample Analytical Results*. Soil sample laboratory analytical results that exceed Michigan Part 201 Drinking Water (DW) Protection and / or Ground Water Surface Water Interface (GSI) Protection Criteria are presented in and illustrated in *Figure 8, Summary of Soil Sample Exceedances*. Soil sample laboratory analytical results are included in *Attachment 3, Soil Sample Laboratory Analytical Data Reports*.

A summary of the Site monitoring well construction and monitoring data is included in *Table 2, Monitoring Well Construction and Monitoring Data*. Additional information including Site soil boring and monitoring well construction logs are provided in *Attachment 1*. Ground water elevation contours and ground water flow are illustrated on *Figure 9, Ground Water Elevation Contour Map (April 29, 2013 Data)*, and *Figure 10, Ground Water Elevation Contour Map (August 7, 2013 Data)* for the monitoring wells around the Site perimeter for both the April 29, 2013 and August 7, 2013 ground water monitoring events. Based on the April 29, 2013 data (Figure 9), ground water appears to flow from a local ground water high in the central portion of the Site towards both the northwest and to the east. Ground water flow, based on the August 7, 2013 data (Figure 10), appears to flow in a similar manner; from a ground water high in the central portion of the Site, towards the both the northwest and to the east / southeast.

The surface water level at the location in the southeast portion of the site where surface water appears to collect and pond on a seasonal, intermittent basis and where surface water / seep sample SW-2 was collected appears to be similar to the elevation of groundwater at MW-6 (see Figures 9 and 10). The elevation where seep samples SW-1 and SW-3 were collected was approximately 703.5 to 704.5 based on Michigan Avenue having a surface elevation of approximately 702.5 and the samples being collected from the sideslope of the road at an elevation approximately 1 to 2 feet higher than the road surface. There does not appear to be a correlation between the seep elevations and the groundwater elevation along the western perimeter of the RACER site and adjoining property to the north.

GROUND WATER SAMPLE RESULTS

Ground water sample analytical results are summarized in *Table 3, Summary of Ground Water Sample Laboratory Analytical Data* and illustrated on *Figure 11, Ground Water Sample Results Map*. Detailed ground water sample analytical results can be found in *Attachment 4, Ground Water Sample Laboratory Analytical Data Reports*.

In summary, the ground water analytical results from the two rounds of sampling that occurred from all Site monitoring wells in late May 2013 and in August 2013 were very similar. In addition, the results for the total/unfiltered and dissolved/filtered metals analyses were very similar as well (excluding the results for Aluminum). The results indicate that ground water samples collected to date from wells along the northern and western perimeter of the Site (monitoring wells MW-1, MW-5, MW-7 and MW-9) have exceedances for both iron and arsenic above Michigan Part 201 health-based Drinking Water (DW) and/or GSI criteria. The ground water sample from monitoring well MW-10 (also on the northern Site perimeter) contained exceedances for iron above Michigan Part 201 health-based DW criteria and, the only volatile organic compound (VOC), benzene, exceedance above Michigan Part 201 DW criteria. On the southern portion of the Site, ground water samples from monitoring wells (MW-4, MW-6, MW-8 and MW-12) only have exceedances for iron above Michigan Part 201 health-based DW criteria. The ground water samples from monitoring wells MW-3 and MW-11 contained no exceedances above Michigan Part 201 health-based criteria during the May or August 2013 ground water sampling events.

In addition to the ground water exceedances, there were also iron and manganese Drinking Water Aesthetic Criteria-based exceedances at surface water/seep sample SW-3 (there was a Drinking Water Aesthetic Criteria-based exceedance of manganese at surface water/seep sample SW-2). The similarity in iron concentrations at SW-3 to those at MW-5 (located at the northwest corner of the Site) suggest that there may be off-site impacts to the groundwater north of the Site. There does not appear to be any correlation between iron and manganese concentrations in the SW-1 and SW-2 samples relative to the iron and manganese concentrations in the closest monitoring wells.

SUMMARY AND RECOMMENDATIONS

The results from the Phase 1A and 1B investigations were used to complete and submit to USEPA the RCRA Corrective Action Environmental Indicator (EI) CA725 document by June 30, 2013 in compliance with the Executed Performance-based Voluntary Agreement. Based on our review of the results from the investigation activities, it was our professional opinion that all available relevant and significant information on known and reasonably suspected releases to soil, ground water, surface water/sediments and air, subject to RCRA Corrective Action, had been considered in the EI determination and that there is a RCRIS status code for the *Current Human Exposures Under Control* EI event code of "YES". Thus, "Current Human Exposures" are expected to be "Under Control" at the facility under current and reasonably expected conditions. The final decision with respect to the EI 725 determination lies with USEPA.

The Executed Performance-based Voluntary Agreement requires that the next EI document, i.e. the CA750 *Migration of Contaminated Ground Water Under Control*, be submitted by March 31, 2014. We believe that the “any discharge of ground water to surface water is either insignificant or shown to be currently acceptable according to an appropriate interim assessment” criteria have been addressed. However, as previously stated, ground water samples collected to date from monitoring wells along the northern, western and southern perimeter of the Site have identified health-based exceedances above Michigan Part 201 Drinking Water (DW) Protection and/or GSI criteria. Thus, we have not fully addressed “the migration of all ground water known or reasonably suspected to be contaminated with hazardous wastes or hazardous constituents above acceptable levels is stabilized to remain within any designated at the time of the demonstration” criteria.

Thus, MSG is proposing to perform additional investigation activities this Fall (i.e. in 2013) to confirm the extent of the ground water exceedances, to confirm the existence and assess the competency and hydraulic conductivity of the clay underlying the impacted sand layer, and to ensure that sufficient information exists to adequately address the completion of the CA750 document. Our proposed additional effort includes the installation of 16 soil borings and temporary monitoring wells (expected to be 10-20 ft. bgs based on the geology encountered during the Phase 1B investigation and also on available regional geologic information sources) to assist in further delineating ground water impacts. The 16 soil boring (SB-13 to SB-26) and associated monitoring well locations are depicted in *Figure 12, Proposed Investigation*. Temporary wells are being proposed in lieu of permanent wells in order to provide initial data for evaluating the extent of ground water exceedances and to help identify appropriate locations for permanent monitoring wells, if it is determined permanent monitoring wells are necessary.

Temporary wells will be constructed of 1-inch diameter PVC with 10-slot screens. Temporary wells will be sampled in general accordance with *USEPA Low-flow (Minimal Drawdown) Ground-Water Sampling Procedures* and with the SAP/QAPP, prepared by CRA, dated June 2012. This effort also includes coordinating with adjacent property owners to obtain access agreements, as well as MDOT and Wayne County to obtain ROW permits.

Sampling and analytical testing parameters will be in general accordance with the SAP/QAPP, except for the elimination of analysis for semi-volatile organic compounds, pesticides and herbicides, and cyanide, as they have not been encountered at the Site. All temporary well ground water samples will be analyzed for metals and, due to the VOC detection in MW-10, temporary well locations adjacent to MW-10 (proposed soil borings SB-16, SB-17, SB-18, SB-21 and SB-22) will be sampled for VOCs and metals. Unfiltered samples will be also analyzed for metals depending on the turbidity measurement during the sample collection.

In addition to the scope noted above, geotechnical sampling and analysis of the lacustrine clay layer will be conducted to demonstrate the integrity and impermeable nature of the layer. Continuous soil samples of the lacustrine clay layer will be collected to a depth of 20 feet below the top of the layer from at least three of the temporary well locations. All soil samples will be visually inspected for evidence of vertical fractures within the clay. An undisturbed Shelby tube sample will also be collected at a pre-determined depth within these borings (e.g. all three collected at a depth of 10 feet below the top of the lacustrine clay layer). The undisturbed soil samples will be classified in accordance with ASTM D422, *Standard Test Method for Particle-Size Analysis of Soils*, and their hydraulic conductivity determined in accordance with ASTM D5084, *Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter*.

TABLES



Table 1
Summary of Soil Sample Analytical Results
Van Buren Landfill Site
Michigan Avenue and Ecorse Road
Van Buren Township, Wayne County, Michigan

Table 1
Summary of Soil Sample
Analytical Results

SOIL: Part 201 Generic Non-Residential Cleanup Criteria Revised March 25, 2011 Units: ug/Kg				Volatile Organic Compounds (VOCs)										Semi-volatile Organic Compounds (SVOCs)									
				Acetone	Benzene	Chlorobenzene	Cyclohexane	Ethylbenzene	Isopropylbenzene	Methylene Chloride	Methylcyclohexane	Methyl Acetate	Toluene	Total Xylenes	Acenaphthene	Acenaphthylene	Anthracene	Benzaldehyde	Benzo(a)anthracene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Benzo(a)pyrene
Statewide Default Background Levels (X)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Drinking Water Protection Criteria (XXI)				45,000	100	2,000	NA	1,500	2.6E+05	100	NA	NA	16,000	5,600	8.8E+05	17,000	41,000	NA	NLL	NLL	NLL	NLL	NLL
Groundwater/Surface Water Interface Protection Criteria (XII)				34,000	4,000 (X)	500	NA	360	3,200	30,000 (X)	NA	NA	5,400	820	8,700	ID	ID	NA	NLL	NLL	NLL	NLL	NLL
Groundwater Contact Protection Criteria (XIII)				1.1E+8 (C)	220,000	2.6E+5 (C)	NA	1.4E+05 (C)	3.9E+05	2.3E+06 (C)	NA	NA	2.5E+05 (C)	1.5E+05 (C)	9.7E+05	4.4E+05	41,000	NA	NLL	NLL	NLL	NLL	NLL
Soil Vapor Intrusion Concentration(t) (Drift)				1.96E+05	50	220	642	99.8	250	NA	NA	NA	6,350	183	2.72E+05	NA	ID	NA	NLV	NLV	NLV	NLV	NLV
Soil Volatilization to Indoor Air Inhalation (XXII)				1.1E+8 (C)	8,400	2.2E+5 (C)	NA	1.4E+05 (C)	3.9E+05	2.4E+05	NA	NA	2.5E+05 (C)	1.5E+05 (C)	3.5E+08	3.0E+06	1.0E+09 (D)	NA	NLV	ID	NLV	NLV	NLV
Infinite Source Volatile Soil Inhalation Criteria (XXIII)				1.6E+08	45,000	9.E+05	NA	2.4E+06	2.0E+06	7.0E+05	NA	NA	3.3E+06	5.4E+07	9.7E+07	2.7E+06	1.6E+09	NA	NLV	ID	NLV	NLV	NLV
Finite Source Volatile Soil Inhalation Criteria (5 m) (XXIV)				1.6E+08	99,000	1.E+06	NA	3.1E+06	2.0E+06	1.7E+06	NA	NA	3.6E+07	6.5E+07	9.7E+07	2.7E+06	1.6E+09	NA	NLV	ID	NLV	NLV	NLV
Finite Source Volatile Soil Inhalation Criteria (2 m) (XXV)				2.0E+08	230,000	2.E+06	NA	6.5E+06	3.0E+06	4.0E+06	NA	NA	3.6E+07	1.3E+08	9.7E+07	2.7E+06	1.6E+09	NA	NLV	ID	NLV	NLV	NLV
Particulate Soil Inhalation Criteria (XXVI)				1.7E+11	4.7E+08	2.E+09	NA	1.3E+10	2.6E+09	8.3E+09	NA	NA	1.2E+10	1.3E+11	6.2E+09	1.0E+09	2.9E+10	NA	ID	ID	3.5E+08	ID	1.9E+06
Non-Residential Direct Contact Criteria (XXVII)				7.30E+07	4.0E+5 (C)	2.6E+5 (C)	NA	1.4E+05 (C)	3.9E+5 (C)	2.3E+06 (C)	NA	NA	2.5E+05 (C)	1.5E+05 (C)	1.3E+08	5.2E+06	7.3E+08	NA	80,000	80,000	7.0E+06	8.0E+05	8,000
Soil Saturation Concentration Screening Levels (Csat) (XXX)				1.1E+8 (C)	400,000	2.6E+5 (C)	NA	1.4E+05	3.9E+05	2.3E+06	NA	NA	2.5E+05	1.5E+05	NA	NA	NA	NA	NA	NA	NA	NA	NA
BORING ID	DEPTH	SAMPLE ID	SAMPLE DATE																				
SB-1	0'-2'	S-R2330004-071212-MF-006	7/12/2012	<170	<51	<51	41 J	67	<51	<51	130	<340	78	270	<320	<320	<320	<3500	210 J	350	<320	280 J	210 J
SB-1	8'-9'	S-R2330004-071212-MF-007	7/12/2012	<170	<52	<52	25 J	<52	<52	<52	<350	<52	65 J	<32	<32	<32	<32	<360	18 J	<32	<32	<32	<32
SB-1A	0'-2'	S-R2330009-032513-MJF-001	3/25/2013	<110	<33	<33	<33	<33	<33	<33	<33	<220	<33	<99	<32	<32	<32	<350	26 J	43	<32	<32	21 J
SB-1A	10'-11'	S-R2330009-032513-MJF-002	3/25/2013	<110	<33	<33	<33	<33	<33	<33	<33	<220	<33	<99	<32	<32	<32	<350	<32	31 J	<32	<32	<32
SB-2	0'-2'	S-R2330004-071212-MF-010	7/12/2012	<140	<41	<41	<41	<41	<41	<41	<41	<270	<41	<120	<30	<30	<30	16 J	35	49	<30	34	32
SB-2	0'-2'	S-R2330004-071212-MF-011 (DUP)	7/12/2012	<110	<34	<34	<34	<34	<34	<34	<34	<230	<34	<100	<310	<310	<310	480 J	<310	<310	<310	<310	<310
SB-2	10'-12'	S-R2330004-071212-MF-012	7/12/2012	<180	<55	<55	<55	<55	<55	<55	<55	<360	<55	<160	<32	<32	<32	<350	<32	<32	<32	<32	<32
SB-3	0'-2'	S-R2330004-071112-MF-005	7/11/2012	<120	<37	<37	<37	<37	<37	<37	<37	<250	<37	<110	<32	<32	<32	<350	<32	<32	<32	<32	<32
SB-4	0'-2'	S-R2330004-071212-MF-008	7/12/2012	<120	<37	<37	<37	<37	<37	<37	<37	<250	<37	<110	<31	<31	<31	<340	17 J	31 J	<31	23 J	22 J
SB-4	10'-11'	S-R2330004-071212-MF-009	7/12/2012	<160	<47	<47	<47	<47	<47	<47	<47	<310	<47	<140	<33	<33	<33	<360	<33	<33	<33	<33	<33
SB-5	0'-2'	S-R2330004-071112-MF-001	7/11/2012	<120	<37	<37	<37	<37	<37	<37	280	<250	34 J	220	<310	<310	<310	<3400	230 J	700	<310	280 J	500
SB-5	25'-27'	S-R2330004-071112-MF-002	7/11/2012	<120	41	<37	<37	<37	<37	<37	<37	<250	22 J	47 J	32 J	<36	50	<400	130	190	80	110	140
SB-5C	0'-2'	S-R2330009-040213-MJF-005	4/2/2013	<110	<34	<34	<34	<34	<34	<34	<34	<230	<34	<100	<33	<33	<33	<370	30 J	42	<33	27 J	25 J
SB-5C	17'-18'	S-R2330009-040213-MJF-006	4/2/2013	<120	<35	<35	<35	<35	<35	52	<35	<230	<35	<100	<380	<380	54	<380	170	230	65	120	160
SB-6	1.5'-2.5'	S-R2330004-071212-MF-013	7/12/2012	<190	<56	<56	<56	420	50 J	<56	<56	<370	410	1,500	NS	NS	NS	NS	NS	NS	NS	NS	NS
SB-6	1.5'-3'	S-R2330004-071212-MF-013	7/12/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	<330	<330	360	<3600	1,200	1,700	470	980	1,300
SB-6	1.5'-3'	S-R2330004-071212-MF-017 (DUP)	7/12/2012	170 J	<56	<56	<56	190	<56	<56	<56	<370	350	620	<330	<330	500	<3600	2,000	2,500	570	1,400	1,800
SB-6	6'-7'	S-R2330004-071212-MF-014	7/12/2012	<130	<39	<39	<39	<39	<39	<39	<39	<260	<39	<120	<33	<33	<33	<370	<33	<33	<33	<33	<33
SB-6A	0'-2'	S-R2330004-071612-MF-015	7/16/2012	<260	<79	<79	<79	65 J	<79	<79	<79	<530	410	360	<310	<310	<310	<3500	<310	<310	<310	<310	<310
SB-6A	2.5'-4.5'	S-R2330004-071612-MF-016	7/16/2012	<150	<44	<44	<44	<44	<44	<44	<44	<290	<44	<130	80	<36	160	<390	250	270	60	180	210
SB-7	0'-2'	S-R2330004-071112-MF-003	7/11/2012	<130	<40	<40	<40	18 J	<40	<40	<40	<270	23 J	140	<320	<320	180 J	<3500	620	940	290 J	520	750
SB-7	10'-11'	S-R2330004-071112-MF-004	7/11/2012	230 B	59	69	<48	200	41 J	<48	<48	<320	350	610	610	<350	640	<3800	1,100	1,500	410	760	1,100
SB-7E	0'-2'	S-R2330009-040213-MJF-009	4/2/2013	<110	<34	<34	<34	<34	<34	<34	<34	<230	<34	<100	<33	<33	<33	<370	<33	<33	<33	<33	<33
SB-7E	5'-6'	S-R2330009-040213-MJF-010	4/2/2013	<120	<35	<35	<35	<35	<35	<35	<35	<230	<35	<100	<34	<34	<34	<380	36	38	<34	26 J	26 J
SB-8	0'-2'	S-R2330009-032813-MJF-011	3/28/2013	<130	<39	<39	<39	<39	<39	<39	<39	590	<39	<120	<34	<34	<34	<380	40	67	<34	29 J	40
SB-9	0'-2'	S-R2330009-032613-MJF-012	3/26/2013	<110	<33	<33	<33	<33	<33	<33	<33	<220	<33	<100	<33	24 J	41	<360	250	440	120	190	280
SB-9	10'-11'	S-R2330009-032613-MJF-013	3/26/2013	<120	<35	<35	<35	<35	<35	<35	<35	130 J	<35	<110	<35	<35	<35	<380	35 J	70	<35	83	29 J
SB-10	0'-2'	S-R2330009-032513-MJF-014	3/25/2013	<150	<45	<45	<45	<45	<45	<45	<45	150 J	<45	<130	<32	<32	<32	<360	<32	24 J	<32	<32	<32
SB-10	13'-14'	S-R2330009-032513-MJF-015	3/25/2013	<110	<33	<33	<33	<33	<33	<33	<33	480	<33	<99	<33	<33	<33	<360	<33	<33	<33	<33	<33
SB-11	0'-2'	S-R2330009-032613-MJF-016	3/26/2013	<120	<36	<36	<36	<36	<36	<36	140	<240	<36	100 J	<33	<33	<33	<360	<33	<33	<33	<33	<33
SB-11	6.5'-7.5'	S-R2330009-032613-MJF-017	3/26/2013	<110	<34	<34	<34	<34	<34	<34	<34	<230	<34	<100	<33	<33	<33	<370	<33	<33	<33	<33	<33
SB-12	0'-2'	S-R2330009-032513-MJF-018	3/25/2013	<130	78	<38	<38	73	<38	<38	<38	140 J	320	360	<360	<360	280 J	<3,900	1,100	1,200	560	620	800
SB-12	8'-9'	S-R2330009-032513-MJF-019	3/25/2013	<110	<33	<33	<33	<33	<33	<33	<33	<220	<33	<100	<33	<33	<33	<370	<33	<33	<33	<33	<33

Notes:
Bold indicates concentration above method detection limits.
Roman numerals indicate DEQ criterion number
Exceeds MDEQ Generic Drinking Water Protection Cleanup Criteria (XXI)
Exceeds MDEQ Groundwater Surface Water Interface Protection Cleanup Criteria (XII)
Exceeds MDEQ Generic Drinking Water Criteria and Groundwater Surface Water Interface Protection Cleanup Criteria
ND = Not Detected Above Method Detection Limits
NS = Not Sampled or Not Analyzed
J = Analyte detected below quantitation limit.
B = Analyte detected in the associated Method Blank above the Reporting Limit.

Table 1
Summary of Soil Sample Analytical Results
Van Buren Landfill Site
Michigan Avenue and Ecorse Road
Van Buren Township, Wayne County, Michigan

Table 1
Summary of Soil Sample
Analytical Results

SOIL: Part 201 Generic Non-Residential Cleanup Criteria Revised March 25, 2011 Units: ug/Kg				Semivolatile Organic Compounds (SVOCs)																							
				Bis(2-ethylhexyl)phthalate	Butyl Benzyl Phthalate	Caprolactam	Carbazole	Chrysene	2,4-Dinitrotoluene	Dibenz(a,h)anthracene	Dibenzofuran	Diethyl Phthalate	Di-n-butyl Phthalate	Di-n-octyl Phthalate	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Isophorone	2-Methylnaphthalene	4-Methylphenol	Naphthalene	Phenanthrene	Phenol	Pyrene			
Statewide Default Background Levels (X)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Drinking Water Protection Criteria (XXI)				NLL	3.1E+05 (C)	3.4E+05	39,000	NLL	640	NLL	ID	3.2E+05	7.6E+05 (C)	1.4E+08 (C)	7.3E+05	8.9E+05	NLL	62,000	1.7E+05	NA	1.0E+05	1.6E+05	2.6E+05	4.8E+05			
Groundwater/Surface Water Interface Protection Criteria (XII)				NLL	1.2E+05 (X)	NA	1,100	NLL	NA	NLL	1,700	2,200	11,000	ID	5,500	5,300	NLL	26,000 (X)	4,200	NA	730	2,100	9,000	ID			
Groundwater Contact Protection Criteria (XIII)				NLV	3.1E+05 (C)	1.0E+09 (D)	8.2E+05	NLL	1.7E+05	NLL	ID	7.4E+05 (C)	7.6E+05 (C)	1.4E+08 (C)	7.3E+05	8.9E+05	NLL	2.4E+06 (C)	5.5E+06	NA	2.1E+06	1.1E+06	1.2E+07 (C)	4.8E+05			
Soil Vapor Intrusion Concentration(I) (Draft)				NLV	NLV	NLV	NLV	NA	NLV	NLV	330	NLV	NLV	NLV	NA	4.47E+05	NLV	NLV	4,710	NA	330	3,240	NLV	4.08E+07			
Soil Volatilization to Indoor Air Inhalation (XXII)				NLV	NLV	NLV	NLV	ID	NLV	NLV	3,600,000	NLV	NLV	NLV	1.0E+09 (D)	1.0E+9 (D)	NLV	NLV	4.9E+06	NA	4.7E+05	5.1E+06	NLV	1.0E+09 (D)			
Infinite Source Volatile Soil Inhalation Criteria (XXIII)				NLV	NLV	NLV	NLV	ID	NLV	NLV	160,000	NLV	NLV	NLV	8.9E+08	1.5E+08	NLV	NLV	1.8E+06	NA	3.5E+05	1.9E+05	NLV	7.8E+08			
Finite Source Source Volatile Soil Inhalation Criteria (5 m) (XXIV)				NLV	NLV	NLV	NLV	ID	NLV	NLV	160,000	NLV	NLV	NLV	8.8E+08	1.5E+08	NLV	NLV	1.8E+06	NA	3.5E+05	1.9E+05	NLV	7.8E+08			
Finite Source Source Volatile Soil Inhalation Criteria (2 m) (XXV)				NLV	NLV	NLV	NLV	ID	NLV	NLV	160,000	NLV	NLV	NLV	8.8E+08	1.5E+08	NLV	NLV	1.8E+06	NA	3.5E+05	1.9E+05	NLV	7.8E+08			
Particulate Soil Inhalation Criteria (XXVI)				8.9E+08	2.1E+10	2.9E+08	7.8E+07	ID	2.0E+06	ID	2,900,000	1.5E+09	1.5E+09	1.4E+10	4.1E+09	4.1E+09	ID	8.2E+09	2.9E+08	NA	8.8E+07	2.9E+06	1.8E+10	2.9E+07			
Non-Residential Direct Contact Criteria (XXVII)				1.0E+07 (C)	3.1E+05 (C)	3.1E+08 (DD)	2.4E+06	8.0E+06	2.2E+05	8,000	ID	7.4E+05 (C)	7.6E+05 (C)	2.0E+06	1.3E+08	8.7E+07	80,000	2.4E+06 (C)	2.6E+07	NA	5.2E+07	5.2E+06	1.2E+07 (C, DD)	8.4E+07			
Soil Saturation Concentration Screening Levels (Csat) (XXX)				1.0E+06	3.1E+05	NA	NA	NA	NA	NA	NA	7.4E+05	7.6E+05	1.4E+08	NA	NA	NA	2.4E+06	NA	NA	NA	NA	1.2E+07	NA			
BORING ID	DEPTH	SAMPLE ID	SAMPLE DATE	740 J	<1700	<3500	<1700	270 J	<1700	<320	<1700	<3500	200 J	<1700	410	<320	<320	<1700	<840	<1700	<320	<320	<1700	420			
SB-1	0'-2'	S-R2330004-071212-MF-006	7/12/2012	47 J	<170	<360	<170	22 J	<170	<32	<170	32 J	32 J	<170	28 J	<32	<32	54 J	<86	<170	22 J	<32	<170	24 J			
SB-1A	0'-2'	S-R2330009-032513-MJF-001	3/25/2013	78 J	<170	87 J	<170	44	<170	<32	20 J	<350	29 J	33 J	51	<32	<32	<170	60 J	<170	43	77	<170	48			
SB-1A	10'-11'	S-R2330009-032513-MJF-002	3/25/2013	20 J	<170	<350	<170	23 J	<170	<32	<170	<350	38 J	34 J	22 J	<32	<32	<170	<85	<170	<32	<32	<170	20 J			
SB-2	0'-2'	S-R2330004-071212-MF-010	7/12/2012	400	<160	35 J	<160	46	<160	<30	<160	<330	<330	<160	67	<30	<30	20 J	<80	<160	<30	44	<160	52			
SB-2	0'-2'	S-R2330004-071212-MF-011 (DUP)	7/12/2012	390 J	<1600	<3400	<1600	<310	<1600	<310	<1600	<3400	<3400	<1600	<310	<310	<310	<1600	<820	<1600	<310	<310	<1600	<310			
SB-2	10'-12'	S-R2330004-071212-MF-012	7/12/2012	94 J	<170	<350	<170	19 J	<170	<32	<170	<350	<350	<170	19 J	<32	<32	<170	<85	<170	<32	<32	<170	19 J			
SB-3	0'-2'	S-R2330004-071112-MF-005	7/11/2012	48 J	<170	<350	<170	<32	<170	<32	<170	<350	<350	<170	<32	<32	<32	<170	<86	<170	<32	<32	<170	<32			
SB-4	0'-2'	S-R2330004-071212-MF-008	7/12/2012	<340	<160	<340	<160	29 J	<160	<31	<160	<340	<340	<160	54	<31	<31	<160	<82	<160	<31	<31	<160	38			
SB-4	10'-11'	S-R2330004-071212-MF-009	7/12/2012	<360	<180	<360	<180	<33	<180	<33	<180	<360	<360	<180	21 J	<33	<33	<180	<88	<180	<33	<33	<180	<33			
SB-5	0'-2'	S-R2330004-071112-MF-001	7/11/2012	420 J	540 J	<3400	<1700	390	<1700	<310	<1700	<3400	<3400	<1700	230 J	<310	<310	<1700	<830	<1700	<310	<310	<1700	170 J			
SB-5	25'-27'	S-R2330004-071112-MF-002	7/11/2012	130 J	70 J	<400	32 J	140	<190	21 J	48 J	<400	<400	<190	210	73	64	<190	40 J	32 J	81	190	<190	180			
SB-5C	0'-2'	S-R2330009-040213-MJF-005	4/2/2013	<370	<180	<370	<180	42	<180	<33	<180	<370	<370	<180	43	<33	<33	<180	<89	<180	<33	<33	<180	41			
SB-5C	17'-18'	S-R2330009-040213-MJF-006	4/2/2013	190	<180	<380	<180	210	<1,800	<34	<1,800	<3,800	<380	<180	400	<340	56	<180	48 J	53 J	62	230	<180	330			
SB-6	1.5'-2.5'	S-R2330004-071212-MF-013	7/12/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
SB-6	1.5'-3'	S-R2330004-071212-MF-013	7/12/2012	1,900 J	<1800	<3600	<1800	1,400	<1800	<330	<1800	<3600	<3600	<1800	2,700	<330	440	<1800	<880	<1800	<330	1,700	<1800	1,900			
SB-6	1.5'-3'	S-R2330004-071212-MF-017 (DUP)	7/12/2012	520 J	290 J	<3600	<1800	2,100	<1800	<330	<1800	<3600	<3600	<1800	3,900	<330	540	<1800	<880	<1800	<330	2,100	<1800	2,900			
SB-6	6'-7'	S-R2330004-071212-MF-014	7/12/2012	<370	<180	<370	<180	<33	<180	<33	<180	<370	<370	<180	18 J	<33	<33	<180	<89	<180	<33	<33	<180	<33			
SB-6A	0'-2'	S-R2330004-071612-MF-015	7/16/2012	270 J	350 J	<3500	<1700	<310	<1700	<310	<1700	<3500	<3500	<1700	180 J	<310	<310	<1700	<840	<1700	<310	<310	<1700	<310			
SB-6A	2.5'-4.5'	S-R2330004-071612-MF-016	7/16/2012	<390	<190	<390	<190	250	<190	21 J	64 J	<390	<390	<190	650	97	60	<190	<95	<190	49	550	<190	490			
SB-7	0'-2'	S-R2330004-071112-MF-003	7/11/2012	7,400	590 J	<3500	<1700	610	<1700	<320	<1700	<3500	<3500	440 J	1,100	<320	220 J	<1700	<840	<1700	<320	700	<1700	880			
SB-7	10'-11'	S-R2330004-071112-MF-004	7/11/2012	2,300 J	750 J	<3800	<1900	1,100	440 J	<350	390 J	<3800	<3800	<1900	3,000	570	310 J	<1900	410 J	540 J	1,000	2,700	290 J	2,100			
SB-7E	0'-2'	S-R2330009-040213-MJF-009	4/2/2013	27 J	<180	<370	<180	<33	<180	<33	<180	<370	<370	<370	<33	<33	<33	<180	<89	<180	<33	<33	<180	<33			
SB-7E	5'-6'	S-R2330009-040213-MJF-010	4/2/2013	<380	<180	<380	<180	37	<180	<34	<180	<380	<380	<380	82	<34	<34	<180	<92	<180	<34	47	<180	64			
SB-8	0'-2'	S-R2330009-032813-MJF-011	3/28/2013	<380	29 J	<380	<180	51	<180	<34	<180	<380	<380	<380	86	<34	<34	<180	<91	<180	<34	43	<180	73			
SB-9	0'-2'	S-R2330009-032613-MJF-012	3/26/2013	<360	<170	<360	<170	280	<170	32	<170	33 J	<360	<170	530	<33	110	<170	<87	<170	<33	170	<170	450			
SB-9	10'-11'	S-R2330009-032613-MJF-013	3/26/2013	<380	<190	<380	<190	49	<190	<35	<190	<380	<380	<190	59	<35	<35	<190	<93	<190	<35	39	<190	57			
SB-10	0'-2'	S-R2330009-032513-MJF-014	3/25/2013	<360	<170	72 J	<170	<32	<170	<32	<170	<360	<360	<170	<32	<32	<32	<170	<86	<170	<32	<32	<170	<32			
SB-10	13'-14'	S-R2330009-032513-MJF-015	3/25/2013	<360	<170	<360	<170	<33	<170	<33	<170	<360	<360	34 J	<33	<33	<33	<170	<87	<170	<33	<33	<170	<33			
SB-11	0'-2'	S-R2330009-032613-MJF-016	3/26/2013	<360	<180	<360	<180	<33	<180	<33	<180	<360	<360	<180	<33	<33	<33	<180	<88	<180	<33	<33	44 J	<33			
SB-11	6.5'-7.5'	S-R2330009-032613-MJF-017	3/26/2013	<370	<180	85 J	<180	<33	<180	<33	<180	<370	&lt														

Notes:

Bold indicates concentration above method detection limits.

Roman numerals indicate DEQ criterion number

Table 1
Summary of Soil Sample Analytical Results
Van Buren Landfill Site
Michigan Avenue and Ecorse Road
Van Buren Township, Wayne County, Michigan

Table 1
Summary of Soil Sample
Analytical Results

SOIL: Part 201 Generic Non-Residential Cleanup Criteria Revised March 25, 2011 Units: ug/Kg				Metals																				PCBs		
				Aluminum (B)	Antimony	Arsenic (B)	Barium (B)	Beryllium	Cadmium (B)	Chromium	Cobalt	Copper (B)	Iron (B)	Lead (B)	Manganese (B)	Mercury (B,Z)	Nickel (B)	Selenium (B)	Silver (B)	Thallium (B)	Vanadium	Zinc (B)	Aroclor 1248	Aroclor 1254	Total PCBs	
Statewide Default Background Levels (X)				6.9E+06	NA	5,800	75,000	NA	1,200	18,000	68,000	32,000	1.2E+07	21,000	4.4E+05	130	20,000	410	1,000	NA	NA	47,000	NA	NA	NA	
Drinking Water Protection Criteria (XXI)				1.0E+03	4,300	4,600	1.3E+06	51,000	6,000	30,000	2,000	5.8E+06	6,000	7.0E+05	1,000	1,700	1.0E+05	4,000	13,000	2,300	9.9E+05	5.0E+06	NA	NA	NLL	
Groundwater/Surface Water Interface Protection Criteria (XII)				NA	94,000 (X)	4,600	(G)	(G)	(G,X)	3,300	2,000	(G)	NA	(G,X)	(G,X)	50 (M); 1.2	(G)	400	100 (M); 27	4,200 (X)	1.9E+05	(G)	NA	NA	NLL	
Groundwater Contact Protection Criteria (XIII)				1.0E+09 (D)	4.9E+07	NLV	1.0E+09 (D)	1.0E+09 (D)	2.3E+08	1.4E+08	4.8E+07	1.0E+09 (D)	1.0E+09 (D)	ID	1.8E+08	47,000	1.0E+09 (D)	7.8E+07	2.0E+08	1.5E+07	1.0E+09 (D)	1.0E+09 (D)	NA	NA	NLL	
Soil Vapor Intrusion Concentration(I) (Draft)				NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NA	NLV	NLV	NLV	NLV	NLV	NLV	NA	NA	330	
Soil Volatilization to Indoor Air Inhalation (XXII)				NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	89,000	NLV	NLV	NLV	NLV	NLV	NLV	NA	NA	3.0E+06	
Infinite Source Volatile Soil Inhalation Criteria (XXIII)				NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	62,000	NLV	NLV	NLV	NLV	NLV	NLV	NA	NA	2.4E+05	
Finite Source Source Volatile Soil Inhalation Criteria (5 m) (XXIV)				NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	62,000	NLV	NLV	NLV	NLV	NLV	NLV	NA	NA	7.9E+06	
Finite Source Source Volatile Soil Inhalation Criteria (2 m) (XXV)				NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	62,000	NLV	NLV	NLV	NLV	NLV	NLV	NA	NA	7.9E+06	
Particulate Soil Inhalation Criteria (XXVI)				ID	5.9E+06	9.1E+05	1.5E+08	5.9E+05	2.2E+06	2.4E+05	5.9E+06	5.9E+07	ID	4.4E+07	1.5E+06	8.8E+06	1.6E+07	5.9E+07	2.9E+06	5.9E+06	ID	ID	NA	NA	5.2E+06	
Non-Residential Direct Contact Criteria (XXVII)				3.7E+08 (DD)	6.7E+05	37,000	1.3E+08	1.6E+06	2.1E+06	9.2E+06	9.0E+06	7.3E+07	5.8E+08	9.0E+05 (DD)	9.0E+07	5.8E+05	1.5E+08	9.6E+06	9.0E+06	1.3E+05	5.5E+06 (DD)	6.3E+08	NA	NA	(T)	
Soil Saturation Concentration Screening Levels (Csat) (XXX)				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
BORING ID	DEPTH	SAMPLE ID	SAMPLE DATE	9,500,000	5,800	6,100	140,000	500 J	1,500	24,000	8,200	130,000	20,000,000	190,000	220,000	72	19,000	580	500 J	160 J	18,000	280,000	340	840	1,180	
SB-1	0'-2'	S-R2330004-071212-MF-006	7/12/2012	3,600,000	430	2,800	44,000	140 J	390	7,100	3,000	15,000	12,000,000	52,000	270,000	11 J	8,200	440	78 J	83 J	9,500	38,000	<42	75	75	
SB-1A	0'-2'	S-R2330009-032513-MJF-001	3/25/2013	3,800,000	130 J	3,200	25,000	280 J	150 J	6,400	2,500	6,300	6,900,000	7,800	270,000	22	7,000	290 J	1.1 J	9.1 J	9,600	19,000	<43	<43	ND	
SB-1A	10'-11'	S-R2330009-032513-MJF-002	3/25/2013	3,600,000	100 J	3,300	18,000	220 J	130 J	8,500	2,700	7,500	8,400,000	5,200	200,000	31	7,900	<230	18 J	110 J	11,000	21,000	<43	<43	ND	
SB-2	0'-2'	S-R2330004-071212-MF-010	7/12/2012	4,500,000	1,600	2,800	45,000	120 J	860	8,500	2,700	31,000	15,000,000	64,000	360,000	620	9,800	320	390 J	86 J	9,100	98,000	<40	140	140	
SB-2	0'-2'	S-R2330004-071212-MF-011 (DUP)	7/12/2012	4,100,000	1,800	2,700	70,000	120 J	840	9,000	2,600	27,000	14,000,000	69,000	360,000	710	10,000	270 J	490 J	77 J	9,300	100,000	<39	160	160	
SB-2	10'-12'	S-R2330004-071212-MF-012	7/12/2012	3,900,000	550	3,000	22,000	120 J	250	5,800	2,400	13,000	9,800,000	16,000	380,000	160	7,300	380	130 J	94 J	8,600	40,000	<42	<42	ND	
SB-3	0'-2'	S-R2330004-071112-MF-005	7/11/2012	2,700,000	150 J	2,100	8,000	97 J	88 J	5,200	1,900	5,200	5,400,000	4,000	170,000	6.4 J	5,600	320	18 J	56 J	8,900	22,000	<42	<42	ND	
SB-4	0'-2'	S-R2330004-071212-MF-008	7/12/2012	6,300,000	150 J	2,600	20,000	140 J	160	6,300	1,800	3,300	7,100,000	10,000	77,000	27	4,600	250 J	16 J	89 J	13,000	24,000	<41	150	150	
SB-4	10'-11'	S-R2330004-071212-MF-009	7/12/2012	6,900,000	140 J	3,000	41,000	240	120 J	18,000	2,300	5,500	9,800,000	7,300	140,000	27	6,900	390	26 J	63 J	18,000	19,000	<42	<42	ND	
SB-5	0'-2'	S-R2330004-071112-MF-001	7/11/2012	6,900,000	2,900	5,600	92,000	350 J	1,600	17,000	5,500	120,000	20,000,000	99,000	470,000	210	18,000	830	800 J	210 J	17,000	510,000	250	110	360	
SB-5	25'-27'	S-R2330004-071112-MF-002	7/11/2012	5,400,000	5,300	8,200	430,000	160 J	5,600	22,000	5,300	150,000	53,000,000	2,600,000	570,000	30	26,000	270 J	410 J	94 J	15,000	730,000	<49	<49	ND	
SB-5C	0'-2'	S-R2330009-040213-MJF-005	4/2/2013	5,000,000	190 J	11,000	27,000	320 J	230 J	8,800	3,600	11,000	15,000,000	16,000	380,000	27	11,000	320 J	21 J	130 J	16,000	34,000	<44	<44	ND	
SB-5C	17'-18'	S-R2330009-040213-MJF-006	4/2/2013	5,700,000	1,100	5,900	93,000	210 J	2,000	13,000	5,000	42,000	24,000,000	85,000	310,000	45	19,000	<250	310 J	150 J	12,000	210,000	<43	<43	ND	
SB-6	1.5'-2.5'	S-R2330004-071212-MF-013	7/12/2012	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
SB-6	1.5'-3'	S-R2330004-071212-MF-013	7/12/2012	9,100,000	5,900	7,300	290,000	200	5,000	38,000	5,600	240,000	50,000,000	540,000	500,000	240	90,000	570	1,300	100 J	15,000	990,000	620	750	1,370	
SB-6	1.5'-3'	S-R2330004-071212-MF-017 (DUP)	7/12/2012	9,000,000	4,300	6,600	360,000	180	5,100	58,000	5,600	180,000	42,000,000	410,000	330,000	220	83,000	410	1,100 J	71 J	18,000	970,000	640	790	1,430	
SB-6	6'-7'	S-R2330004-071212-MF-014	7/12/2012	3,700,000	170 J	1,900	15,000	130 J	110 J	7,900	2,300	6,100	6,100,000	5,000	140,000	15 J	6,800	430	12 J	67 J	10,000	16,000	<45	<45	ND	
SB-6A	0'-2'	S-R2330004-071612-MF-015	7/16/2012	7,600,000	1,500	4,300	89,000	160 J	2,100	22,000	3,500	110,000	17,000,000	130,000	240,000	100	62,000	240 J	300 J	75 J	12,000	320,000	280	410	690	
SB-6A	2.5'-4.5'	S-R2330004-071612-MF-016	7/16/2012	3,800,000	170 J	2,500	15,000	140 J	200	8,600	2,800	8,800	7,300,000	5,700	130,000	18 J	7,900	340 J	14 J	84 J	12,000	41,000	<47	<47	ND	
SB-7	0'-2'	S-R2330004-071112-MF-003	7/11/2012	12,000,000	18,000	12,000	540,000	220	9,300	53,000	7,800	1,500,000	74,000,000	770,000	600,000	450	60,000	690	4,200 J	65 J	18,000	2,400,000	240	270	510	
SB-7	10'-11'	S-R2330004-071112-MF-004	7/11/2012	5,900,000	8,800	9,800	200,000	150 J	7,100	40,000	7,000	160,000	51,000,000	960,000	820,000	190	31,000	340 J	950	56 J	12,000	800,000	390	280	ND	
SB-7E	0'-2'	S-R2330009-040213-MJF-009	4/2/2013	5,100,000	160	5,300	34,000	260 J	370 J	9,000	4,400	10,000	11,000,000	9,500	260,000	18	12,000	<1,500	38 J	170 J	18,000	32,000	<43	<43	ND	
SB-7E	5'-6'	S-R2330009-040213-MJF-010	4/2/2013	4,900,000	22 J	4,900	45,000	250 J	230 J	10,000	4,900	14,000	12,000,000	12,000	310,000	17 J	14,000	510 J	46 J	180 J	15,000	44,000	<44	<44	ND	
SB-8	0'-2'	S-R2330009-032813-MJF-011	3/28/2013	5,600,000	190 J	4,900	37,000	230 J	290 J	12,000	3,300	8,400	12,000,000	21,000	250,000	37	8,900	<1,700	29 J	68 J	14,000	43,000	<44	<44	ND	
SB-9	0'-2'	S-R2330009-032613-MJF-012	3/26/2013	3,800,000	150 J	4,100	21,000	210 J	180 J	8,200	2,600	9,800	9,200,000	21,000	200,000	25	7,300	<1,700	12 J	90 J	11,000	34,000	<43	<43	ND	
SB-9	10'-11'	S-R2330009-032613-MJF-013	3/26/2013	5,000,000	230 J	4,300	34,000	230 J	260 J	8,900	4,200	14,000	12,000,000	23,000	250,000	23	12,000	<1,700	40 J	16 J	15,000	42,000	<46	<46	ND	
SB-10	0'-2'	S-R2330009-032513-MJF-014	3/25/2013	5,000,000	240 J	4,200	19,000	210 J	510 J	9,400	2,900	11,000	11,000,000	20,000	310,000	25	9,900	<1,400	110 J	120						

Table 2
Monitoring Well Construction and Monitoring Data

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

Well ID	Northing (US State Plane - NAD83 ¹)	Easting (US State Plane - NAD83)	Top of Casing Elevation (feet above MSL ²)	Ground Surface Elevation (feet above MSL)	Screen Length (feet)	Stickup (feet)	Total Depth of Well from TOC ³ (feet)	Top of Screen Elevation (feet above MSL)	Date	Depth to Water (feet TOC)	Groundwater Elevation (feet above MSL)
MW-1	275,331.04	13,347,841.62	723.83	721.2	10	2.67	21.22	712.61	4/29/2013	10.88	712.95
									8/7/2013	11.63	712.20
MW-3	274,792.30	13,348,574.41	714.28	711.0	10	3.28	11.52	712.76	4/29/2013	4.25	710.03
									8/7/2013	6.15	708.13
MW-4	274,332.44	13,348,192.73	723.72	724.3	10	-0.53	21.60	712.12	4/29/2013	10.54	713.18
									8/7/2013	14.00	709.72
MW-5	275,074.96	13,346,833.88	719.62	719.8	10	-0.18	30.02	699.60	4/29/2013	9.81	709.81
									8/7/2013	11.08	708.54
MW-6	273,963.47	13,347,317.78	718.47	715.1	10	3.35	16.38	712.09	4/29/2013	5.22	713.25
									8/7/2013	7.30	711.17
MW-7	274,354.61	13,346,295.14	716.85	717.2	5	-0.34	8.81	713.04	4/29/2013	4.21	712.64
									8/7/2013	5.69	711.16
MW-8	274,067.17	13,346,770.57	713.36	714.0	5	-0.60	7.51	710.85	4/29/2013	(FLOWING)	>713.36
									8/7/2013	1.73	711.63
MW-9	274,824.06	13,346,622.78	721.17	721.4	5	-0.19	14.74	711.43	4/29/2013	8.60	712.57
									8/7/2013	9.15	712.02
MW-10	275,236.53	13,347,440.42	727.87	724.7	5	3.19	23.45	709.42	4/29/2013	14.86	713.01
									8/7/2013	15.60	712.27
MW-11	275,501.53	13,348,552.50	718.32	715.2	10	3.11	18.10	710.22	4/29/2013	7.70	710.62
									8/7/2013	9.02	709.30
MW-12	274,233.16	13,347,712.66	721.97	719.3	10	2.66	17.60	714.37	4/29/2013	8.43	713.54
									8/7/2013	10.60	711.37

Notes:

1. NAD83 = North American Datum 1983.
2. MSL = Mean Sea Level.
3. TOC = Feet from Top of Casing.

TABLE 3
SUMMARY OF GROUND WATER SAMPLE LABORATORY ANALYTICAL DATA

Van Buren Landfill Site
Van Buren Township, Wayne County, Michigan

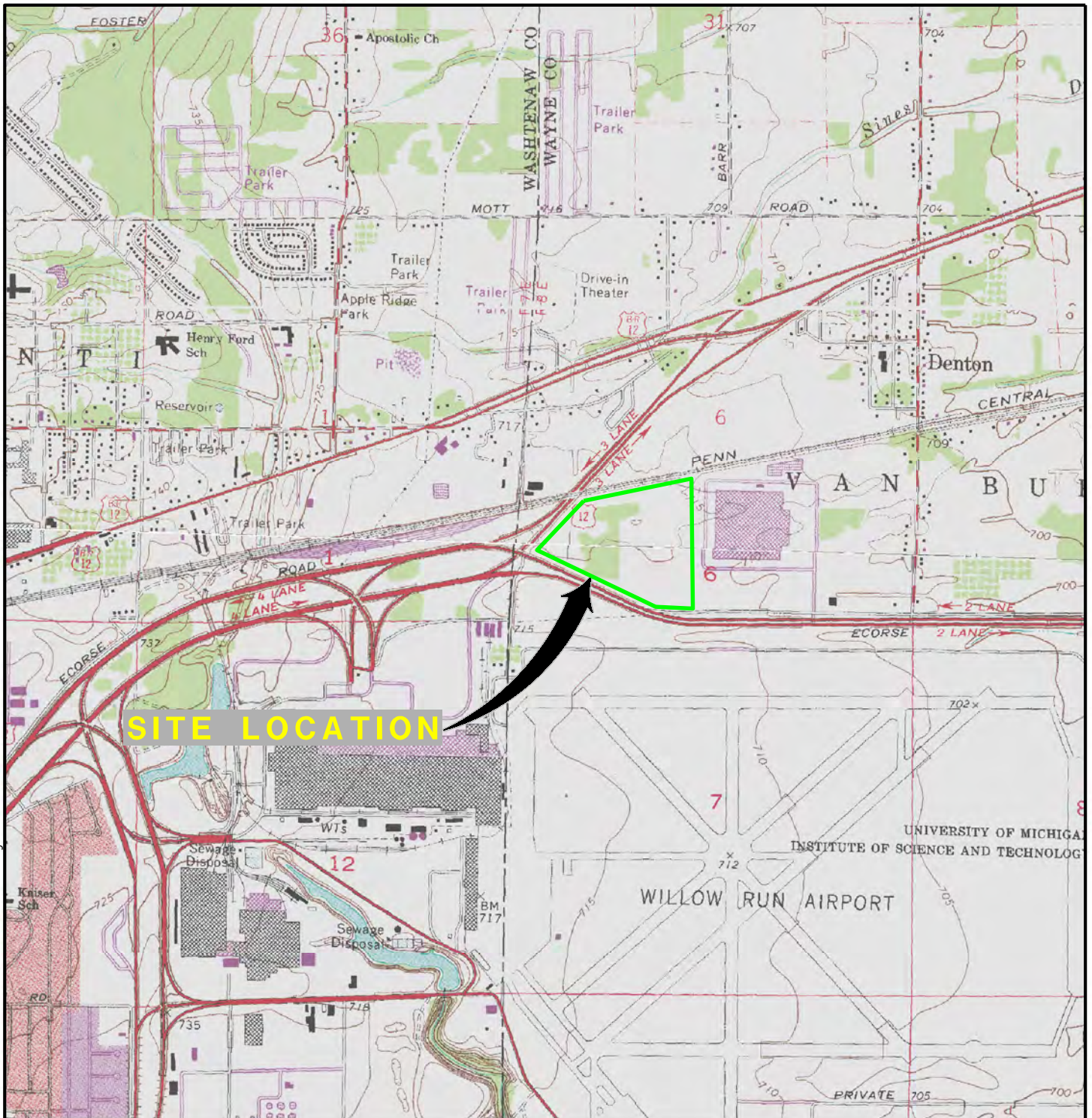
Table 3
Summary of Ground Water Sample
Laboratory Analytical Data

Page 1 of 1

GROUND WATER: Part 201 Generic Non-Residential Cleanup Criteria Revised September 28, 2012 Units: µg/L	VOCs							SVOCs										Metals																	
	2-Butanone (MEK)	Acetone	Benzene	Chlorobenzene	Chloroethane	Chloroform	1,1-Dibiphenyl	2,4-Dimethylphenol	p-Chloroaniline	1,3,5-Trichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	1,1-Dichloroethane	1,1,1-Trichloroethane	1,2-Dichloroethane	Fluorene	Aluminum	Antimony	Arsenic	Barium	Cadmium	Chromium	Cobalt	Copper (B)	Iron (B)	Lead (B)	Manganese (B)	Nickel	Selenium (B)	Thallium	Vanadium	Zinc			
Drinking Water Criteria (II)	38,000	2,100	5.0 (A)	100 (A)	1,700	80 (A,W)	ID	1,000	NA	6.0 (A)	350	16,000	2,10E+05	2,500	2,000 (S)	50 (V)	6.0 (A)	10 (A)	2,000 (A)	5.0 (A)	100 (A)	100	1,000 (E)	300 (E)	5,600	4.0 (L)	50 (E)	2,500	100 (A)	50 (A)	2.0 (A)	62	5,000 (E)		
Ground Water Surface Water Interface Criteria (GSI) (III)	2,200	1,700	200 (X)	25	1,100 (X)	350	ID	380	NA	25	10 (M)	110	NA	9.7	12	NA	130 (X)	10	(G)	(G,X)	11	100	(G)	NA	(G,X)	(G,X)	(G)	5.0	3.7 (X)	12	(G)				
GSI Final Acute Value (FAV)	40,000	30,000	1,900	450	20,000	11,000	ID	2,700	ID	285	72	NA	ID	285	NA	220	NA	2,300	680	(G)	(G)	(G)	740	(G)	NA	(G)	(G)	(G)	120	94.0	220	(G)			
Groundwater Volatilization to Indoor Air Inhalation Criteria (V)	2.4E+8 (S)	1.0E+09 (D,S)	35,000	4.7E+5 (S)	5.7E+06 (S)	1.8E+05	ID	NLV	NA	NLV	NLV	NLV	NLV	NLV	2,000 (S)	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV		
Groundwater Contact Criteria (VI)	2.4E+8 (S)	3.1E+07	11,000	86,000	4.4E+05	1.5E+05	ID	5.2E+05	NA	320 (AA)	7400	1.1E+06 (S)	4.2E+06 (S)	11,000 (S)	2,000 (S)	6.40E+07	68,000	4,300	1.4E+07	1.90E+05	4.60E+05	2.40E+06	7.4E+06	5.8E+07	ID	9.1E+06	7.4E+07	9.7E+05	13,000	9.7E+05	1.1E+08				
Draft Non-Residential Groundwater Screening Levels (GWISL _{CL-0})	9.6E+06	1.1E+07	100	1.3E+03	7.9E+04	520	ID	NLV	NA	NLV	NLV	NA	NA	NA	1.5E+05	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV		
Draft Ground Water Concentration for Vapor Intrusion (GWISL _{CL-0})	1.8E+07	3.4E+07	92	4,600	1.8E+05	480	ID	NLV	NA	NA	NLV	NA	NA	NA	3.0E+05	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV		
Draft Ground Water Sump Concentration for Vapor Intrusion (GWISL _{SUMP})	18,000	34,000	5.0 (d)	100 (d)	180	80 (d)	ID	NLV	NA	NA	NLV	NA	NA	NA	300	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV	NLV		
Water Solubility (VII)	2.40E+08	1.0E+09	1.75E+06	4.72E+05	5.74E+06	7.92E+06	ID	7.87E+06	NA	340	7480	1.08E+06	4.19E+06	1.12E+04	1,980	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		
Flammability & Explosivity Screening Level (VIII)	ID	1.5E+07	68,000	1.6E+05	1.1E+05	ID	ID	ID	NA	ID	NA	ID	NA	NA	NA	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	
Acute Inhalation Screening Level (IX)	2.4E+8 (S)	1.0E+09 (D)	67,000	ID	ID	ID	ID	ID	NA	340 (S)	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	ID	
MONITORING WELL ID	SAMPLE ID	SAMPLE DATE																																	
MW-1	W-R2330009-043013-MJF-002	4/30/2013	<25	<50	0.66 J	<1.0	7.3	<1.0	<10	<5.0	<10	<5.0	<10	10 J	<5.0	<5.0	<5.0	<5.0	<5.0	6.1 J	0.43 J	15	1,500	<1.0	11 J	2.8 J	13 J	17,000	<3.0	130	5.3 J	<5.0	<2.0	14 J	9.1 J
MW-1 ^A	W-R2330009-080713-ZTR-007	8/7/2013																		67	0.21 J	23	1,700	0.17 J	15 J	3.4 J	3.3 J	25,000	0.25 J	120	8.0 J	<5.0	<2.0	20 J	6.0 J
MW-1	W-R2330009-080713-ZTR-007	8/7/2013	<25	<50	0.78 J	<1.0	6.9	<1.0	<10	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.3 J	0.27 J	23	1,900	0.10 J	13 J	3.7 J	1.2 J	25,000	0.076 J	120	7.4 J	<5.0	<2.0	17 J	5.6 J
MW-3	W-R2330004-090512-MJF-01	9/5/2012	<25	<50	0.66 J	<1.0	<5.0	<1.0	<10	<5.0	4.2 J	<5.0	0.85 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	6.0 J	0.29 J	14	900	<1.0	11 J	4.2 J	0.39 J	9,300	0.12 J	86	15 J	<5.0	<2.0	0.60 J	3.7 J
MW-3	W-R2330009-050213-MJF-009	5/2/2013	<25	<50	<1.0	<1.0	<5.0	<1.0	<10	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	10 J	0.51 J	15 J	220	0.047 J	0.86 J	1.5 J	3.2 J	2,000	0.11 J	67	4.9 J	0.98 J	0.49 J	0.53 J	2.3 J	
MW-3 ^A	W-R2330009-080713-ZTR-004	8/7/2013																		120	0.28 J	3.9 J	300	0.11 J	0.84 J	0.95 J	5.4	4,000	0.24 J	44 J	5.6 J	3.6 J	<2.0	0.75 J	4.4 J
MW-3	W-R2330009-080713-ZTR-004	8/7/2013	<25	<50	<1.0	<1.0	<5.0	<1.0	<10	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	5.2 J	0.40 J	3.8 J	320	0.063 J	4.5 J	1.9 J	3.5 J	4,000	<30	46 J	7.2 J	3.6 J	<2.0	0.60 J	2.4 J	
MW-4	W-R2330004-090512-MJF-02	9/5/2012	<25	12 J	0.39 J	<1.0	<5.0	<1.0	<10	<5.0	<11	<5.0	<0.84	<5.0	<5.0	<5.0	<5.0	<5.0	7.6 J	0.097 J	14 J	470	<1.0	11 J	1.2 J	<4.0	14,000	<3.0	56	24 J	0.46 J	<2.0	0.75 J	1.9 J	
MW-4 (DUP)	W-R2330004-090512-MJF-03	9/5/2012	<25	8.5 J	0.43 J	<1.0	<5.0	<1.0	<10	<5.0	<11	<5.0	<0.84	<5.0	<5.0	<5.0	<5.0	<5.0	11 J	0.14 J	12 J	480	<1.0	0.85 J	1.3 J	0.26 J	15,000	0.034 J	55	24 J	<5.0	<2.0	0.73 J	2.4 J	
MW-4	W-R2330009-050213-MJF-010	5/2/2013	<25	<50	<1.0	<1.0	<5.0	<1.0	<10	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	13 J	0.21 J	<5.0	410	<1.0	0.84 J	2.7 J	<4.0	11,000	<3.0	490	2.8 J	<5.0	<2.0	0.85 J	1.1 J	
MW-4 ^A	W-R2330009-080713-ZTR-005	8/7/2013																		4.5 J	0.22 J	<5.0	480	0.29 J	0.80 J	2.4 J	2.7 J	16,000	<3.0	77	4.0 J	<5.0	<2.0	1.0 J	2.4 J
MW-4	W-R2330009-080713-ZTR-005	8/7/2013	<25	<50	<1.0	<1.0	<5.0	<1.0	<10	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	170	0.12 J	<5.0	490	0.29 J	14 J	1.5 J	2.6 J	16,000	0.30 J	80	4.0 J	1.0 J	<2.0	1.4 J	3.5 J
MW-5	W-R2330009-050113-MJF-004	5/1/2013	<25	6.9 J	<1.0	<1.0	<5.0	<1.0	<10	<5.0	<10	1.3 J	1.2 J	0.99 J	<5.0	<5.0	<5.0	<5.0	<5.0	15 J	0.17 J	31	1,300	<1.0	15 J	2.3 J	<4.0	5,300	0.3 J	56	3.5 J	0.69 J	<2.0	1.3 J	1.1 J
MW-5 (DUP)	W-R2330009-050113-MJF-005	5/1/2013	<25	<50	<1.0	<1.0	<5.0	<1.0	<10	<5.0	<10	1.3 J	1.2 J	0.93 J	<5.0	<5.0	<5.0	<5.0	<5.0	12 J	0.27 J	31	1,300	<1.0	19 J	2.3 J	<4.0	5,400	0.061 J	58	3.9 J	0.67 J	0.069 J	1.2 J	1.1 J
MW-5 ^A	W-R2330009-080813-ZTR-009	8/8/2013																		330	2.2 J	34	1,500	0.84 J	2.1 J	2.3 J	3.5 J	5,300	2.1 J	56	4.9 J	0.75 J	<2.0	2.2 J	10 J
MW-5	W-R2330009-080813-ZTR-009	8/8/2013	<25	<50	<1.0	<1.0	<5.0	<1.0	<10	<5.0	<10	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	6.7 J	0.27 J	31	1,400	0.16 J	16 J	3.1 J	2.1 J	4,300	0.069 J	50	4.3 J	<5.0	<2.0	1.4 J	3.1 J	
MW-6	W-R2330004-090512-MJF-04	9/5/2012	<25	11 J	4.9	<1.0	<5.0	<1.0	<10	<5.0	<11	<5.0	<10	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	17 J	0.16 J	9.4	580	<1.0	10 J	2.4 J	0.31 J	26,000	0.057 J	500	3.8 J	0.051 J	<2.0	1.2 J	1.5 J
MW-6	W-R2330009-050213-MJF-012	5/2/2013	<25	<50	2.8	<1.0	<5.0	<1.0	<10	<5.0	<10	<5.0	<10	<5.0	<5.0	&																			

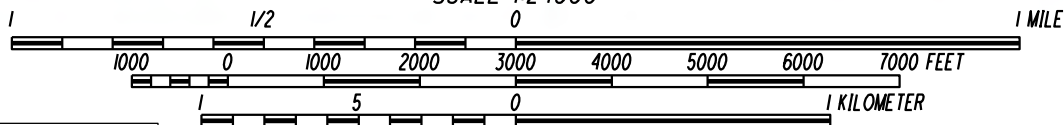
FIGURES



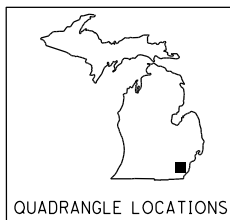


SITE LOCATION

SCALE 1:24000



CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATIONS

NOTE: MAP ADAPTED FROM USGS TOPOGRAPHIC QUADRANGLES, (MICHIGAN 7.5 MINUTE SERIES) DENTON, MICHIGAN (PHOTOGRAPHS TAKEN 1952 AND REVISED FROM PHOTOGRAPHS TAKEN 1966 AND FIELD CHECKED 1969, REVISED AGAIN IN 1982) AND YPSILANTI EAST, MICHIGAN (PHOTOGRAPHS TAKEN 1952, AND REVISIONS TAKEN FROM PHOTOGRAPHS TAKEN 1966, AND FIELD CHECKED 1967, REVISED AGAIN IN 1982)

Mannik & Smith
The Group, Inc.

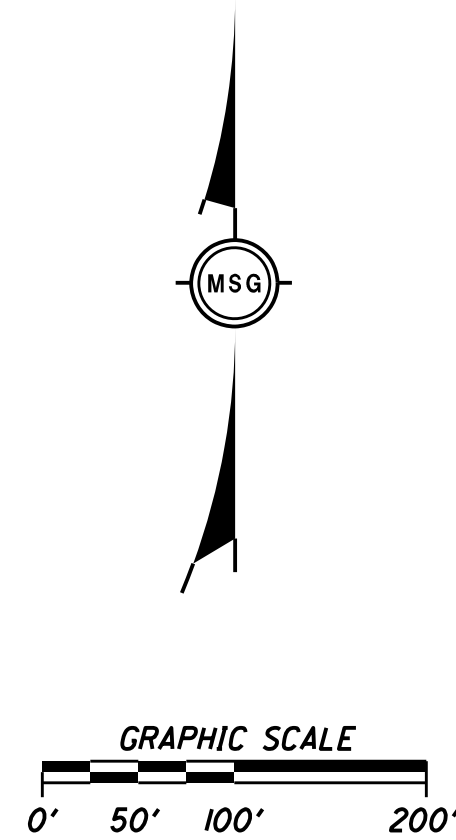
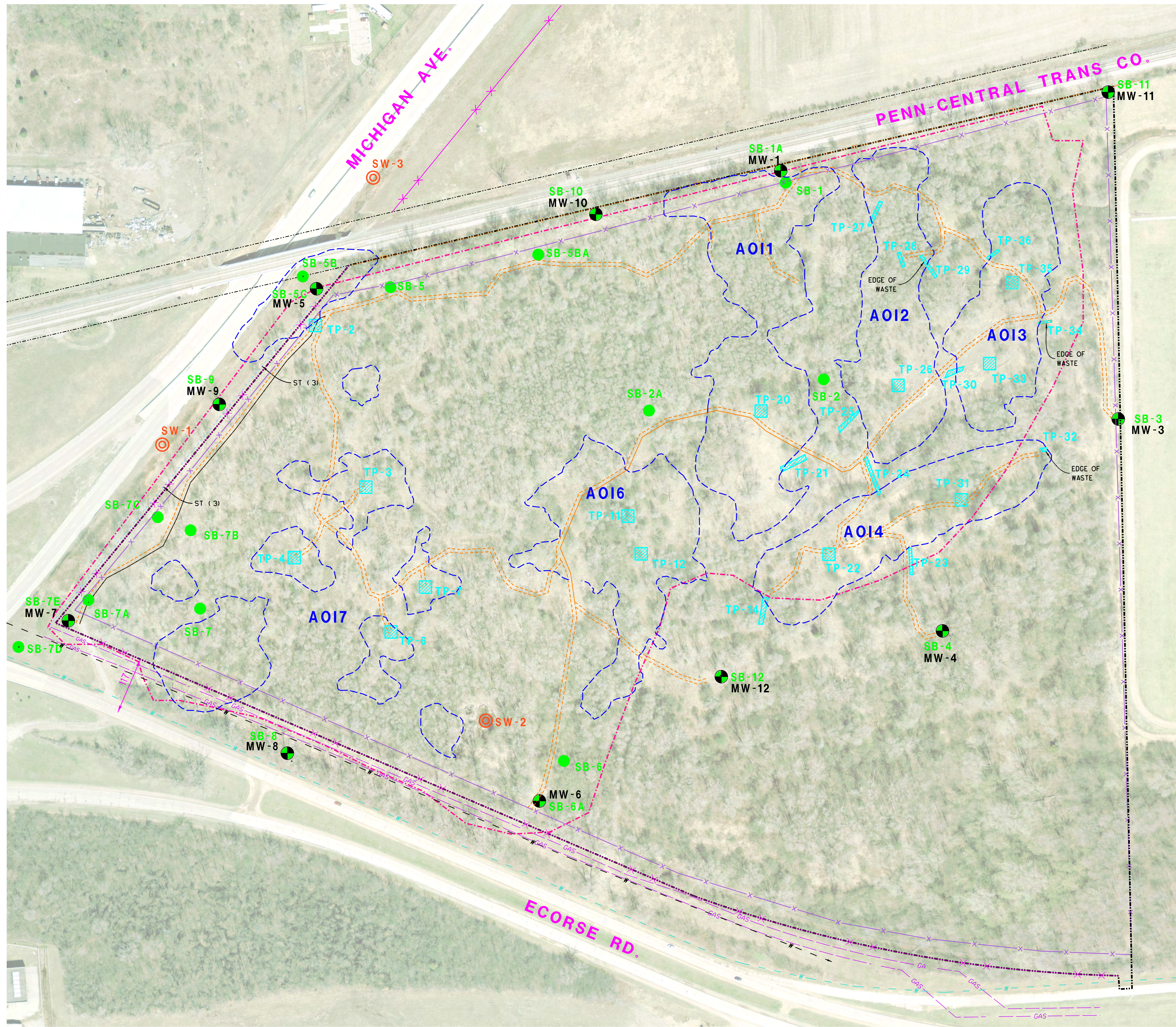
2365 Haggerty Road South Canton, Michigan 48188
Telephone: (734) 397-3100

**FIGURE 1
SITE LOCATION MAP**

VAN BUREN LANDFILL SITE
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

DATE	DRAWN BY	DESIGNED BY	PROJECT NO.
11/12	HMW	MJF	R2330004

W:\Projects\Projects P-T\R2330009\CAD\PHASE 1B SITE INVESTIGATION\R2330009_PH_1B_FIG2.dgn 6/25/2013



LEGEND

- EXTENT OF AREA OF INTEREST (A01)
- PROPERTY LINE
- R/W LINE
- FENCE
- TRAIL CLEARED AND GRUBBED BY MSG
- EXTENT OF EARTH DISTURBANCE BASED ON APRIL 26, 1970 AERIAL PHOTO
- GAS EXISTING GAS MAIN
- FO EXISTING FIBER OPTIC CABLE
- FW EXISTING FIRE WATER
- WM EXISTING WATER MAIN
- ST EXISTING STORM
- ST (3) THREE EXISTING PARALLEL STORM SEWERS
- SURFACE WATER SAMPLE LOCATION
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- TEST PIT LOCATION

- GENERAL NOTES:
- AERIAL PHOTO FROM SEMCOG DATED 2010.
 - MONITORING WELL AND SURFACE WATER LOCATIONS SURVEYED APRIL 2013 BY MSG TO AN ACCURACY OF 0.01'.
 - SOIL BORING, MONITORING WELL, TEST PIT AND CLEARED AND GRUBBED TRAIL LOCATIONS SURVEYED JULY 2012 AND MAY 2013 BY MSG USING SUBDECIMETER ACCURACY GLOBAL POSITIONING SYSTEM (GPS) UNIT.
 - UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/OAPP AND MISS DIG UTILITY MARKINGS.
 - EASEMENT DIMENSIONS OBTAINED FROM MDOT RIGHT-OF-WAY MAP NO. 82-R-1, PAGE 242, DATED SEPT 2006.

FIGURE 2

SITE SCHEMATIC

VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN

NO. DATE BY
1 1/31/13 HMM
2 2/12/13 RAR

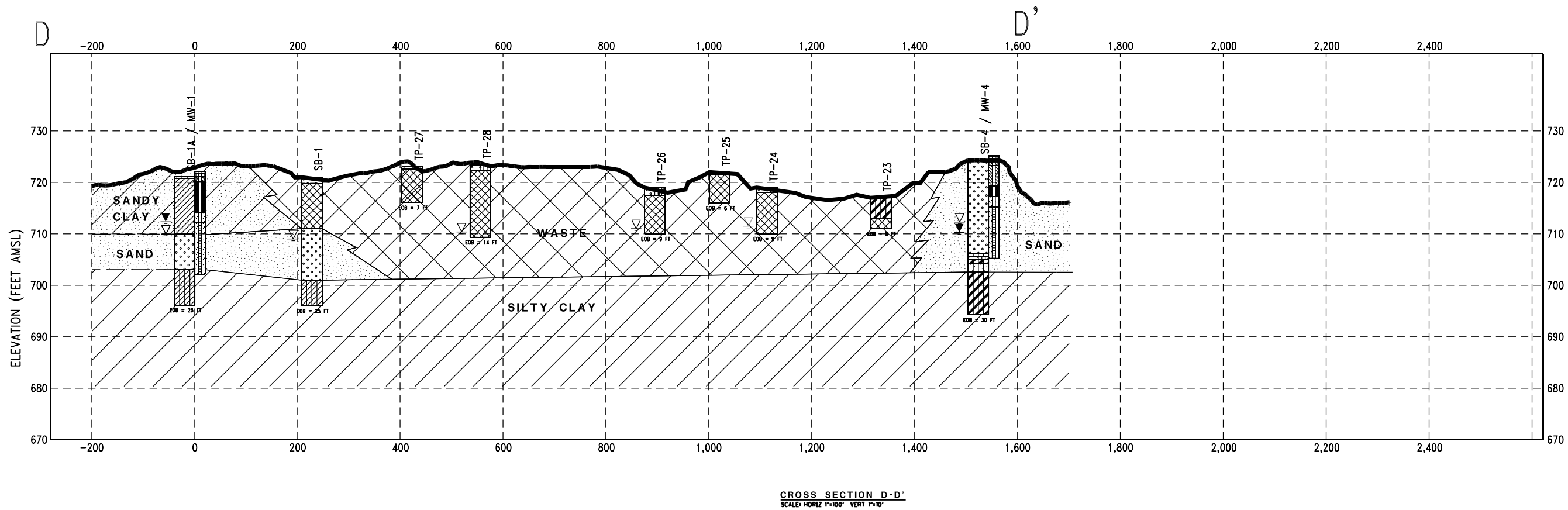
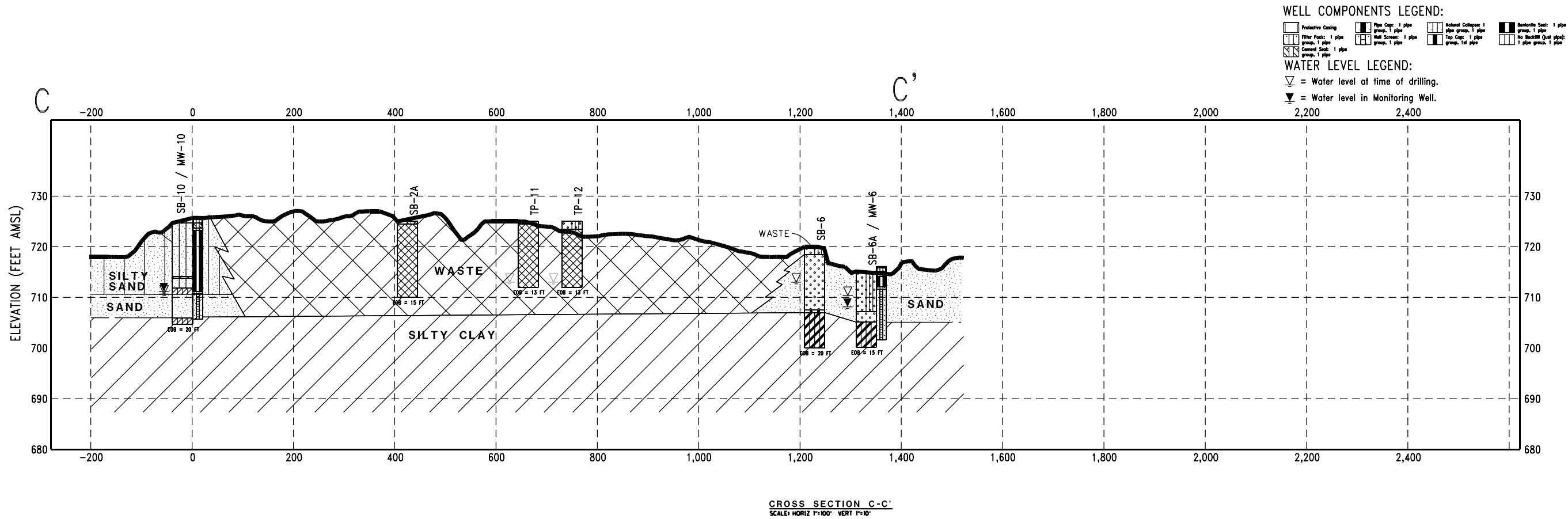
DESCRIPTION
REVISED PER 1/29/13 MTG. W/ EPA
REVISED PER 2/17/13 EPA COMMENTS

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RACER

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- NOTES:
1. THIS PROFILE IS GENERALIZED. SOIL CONTACTS BETWEEN BORINGS ARE INFERRED. FOR ACTUAL CONDITIONS, REFER TO ORIGINAL SOIL BORING LOGS.
 2. SURFACE ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.
 3. SURFACE ELEVATIONS FOR SOIL BORING LOGS HAVE BEEN ESTIMATED BASED ON USGS TOPOGRAPHIC DATA.
 4. EOB = END OF BORING.

DISTANCE ALONG PROFILE (FEET)

FIGURE 5
GENERALIZED GEOLOGIC
CROSS-SECTIONS
C-C' AND D-D'

VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN



NO.	DATE	BY	DESCRIPTION

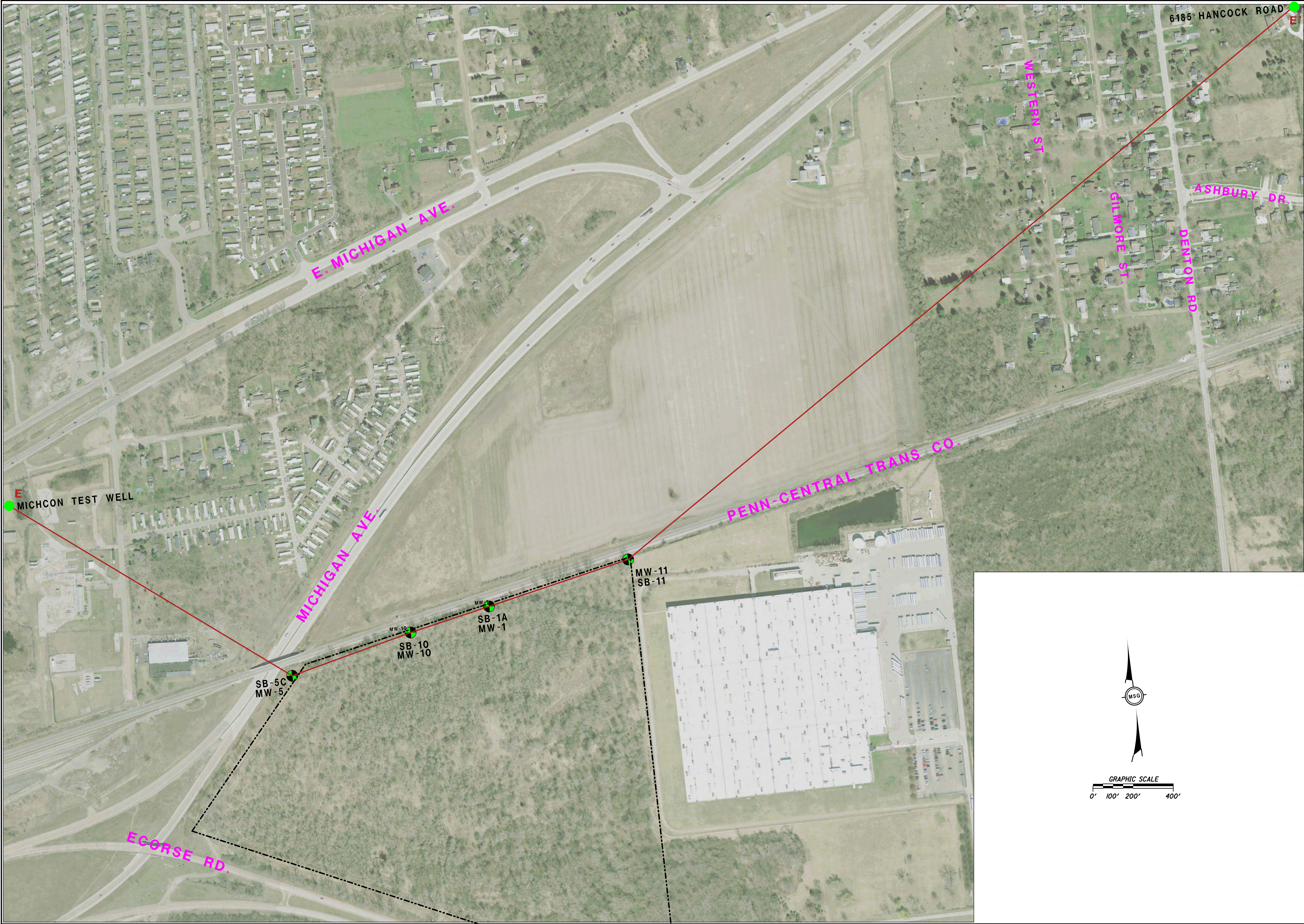


FIGURE 6
GENERALIZED REGIONAL
CROSS-SECTION E-E
LOCATION MAP

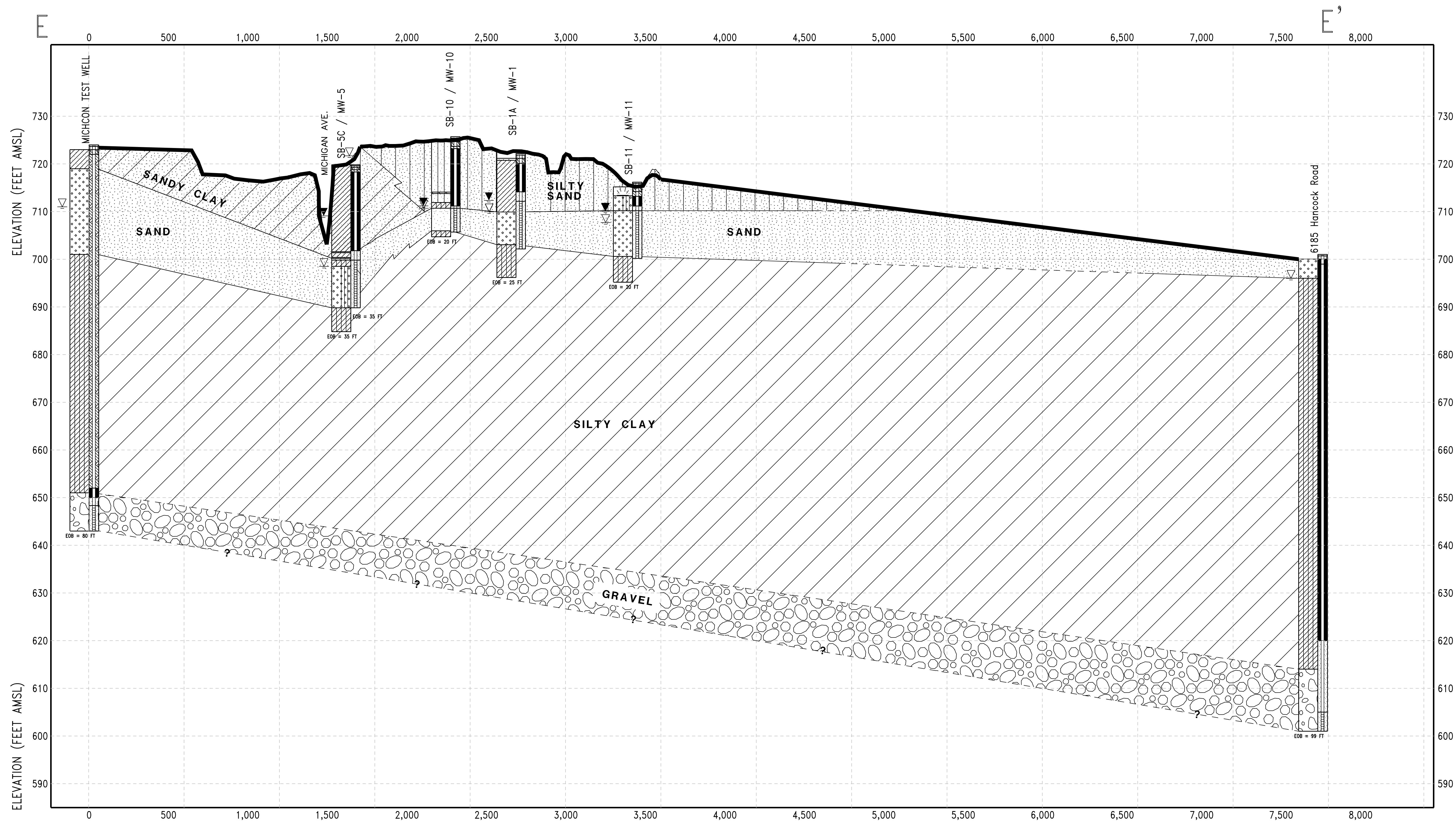
VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN

Revealing Air Communities
Environmental Response Trust

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NO.	DATE	BY	DESCRIPTION
1			
2			

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WELL COMPONENTS LEGEND:

Protective Casing	Pipe Cap: 1 pipe group, 1 pipe	Natural Collapse: 1 pipe group, 1 pipe	Benlouis Sed: 1 pipe group, 1 pipe
Filter Pack: 1 pipe group, 1 pipe	Well Screen: 1 pipe group, 1 pipe	Top Cap: 1 pipe group, 1 pipe	No Backfill (just pipe): 1 pipe group, 1 pipe
Cement Seal: 1 pipe group, 1 pipe			

WATER LEVEL LEGEND:

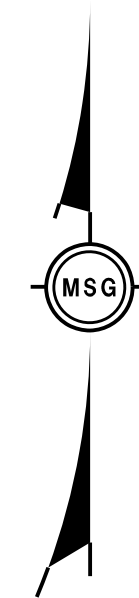
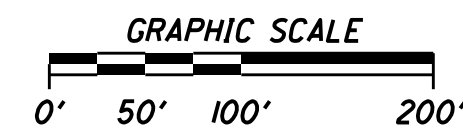
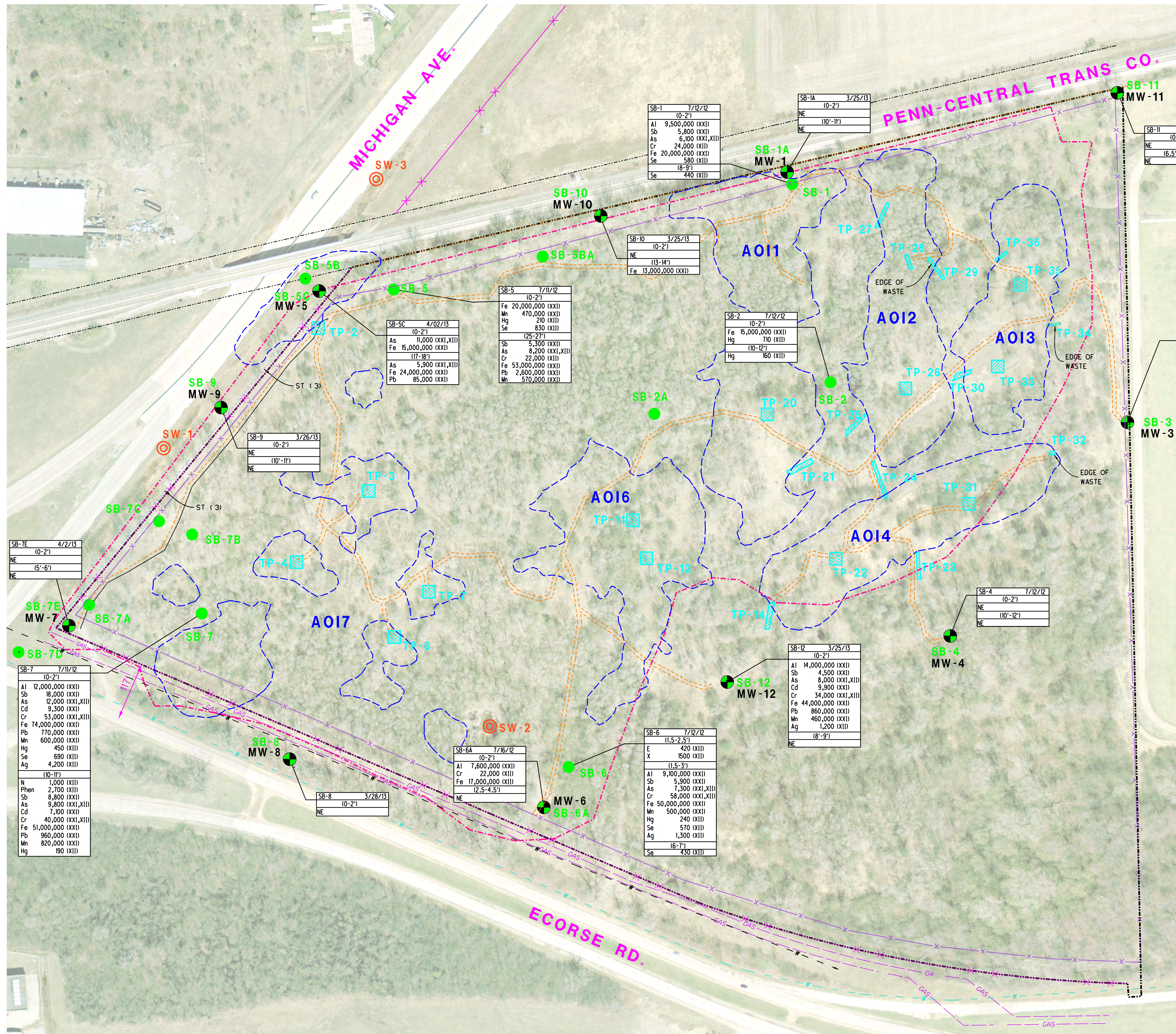
▽ = Water level at time of drilling.

▼ = Water level in Monitoring Well.

NOTES: 1. THIS PROFILE IS GENERALIZED. SOIL CONTACTS BETWEEN BORINGS ARE INFERRED. FOR ACTUAL CONDITIONS, REFER TO ORIGINAL SOIL BORING LOGS.
2. SURFACE ELEVATIONS ARE REFERENCED TO MEAN SEA LEVEL.
3. SURFACE ELEVATIONS FOR SOIL BORING LOGS HAVE BEEN ESTIMATED BASED ON USGS TOPOGRAPHIC DATA.
4. EOB = END OF BORING.

DISTANCE ALONG PROFILE (FEET)

FIGURE 7 GENERALIZED GEOLOGIC CROSS-SECTION E-E'	VAN BUREN LANDFILL SITE (11070) MICHIGAN AVE. & ECORSE RD. VAN BUREN TWP., WAYNE CO. MICHIGAN	 Participating As a Consortium Environmental Response Trust	 TECHNICAL DRAFT GRANTING PERMIT	NO.	DATE	BY	DESCRIPTION



LEGEND

- EXTENT OF AREA OF INTEREST (AO1)
- PROPERTY LINE
- R/W LINE
- FENCE
- TRAIL CLEARED AND GRUBBED BY MSG ON APRIL 26, 1970 AERIAL PHOTO
- EXISTING GAS MAIN
- EXISTING FIBER OPTIC CABLE
- EXISTING FIRE WATER
- EXISTING WATER MAIN
- EXISTING STORM
- ST (3) THREE EXISTING STORM SEWERS SIDE BY SIDE
- SURFACE SAMPLE WATER LOCATION
- SOIL BORING LOCATION
- MONITORING WELL LOCATION
- TEST PIT LOCATION

CHEMICAL ABBREVIATIONS

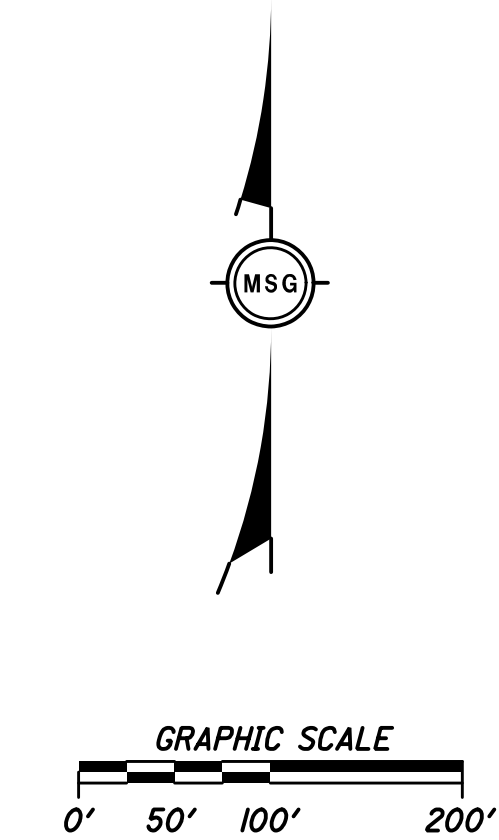
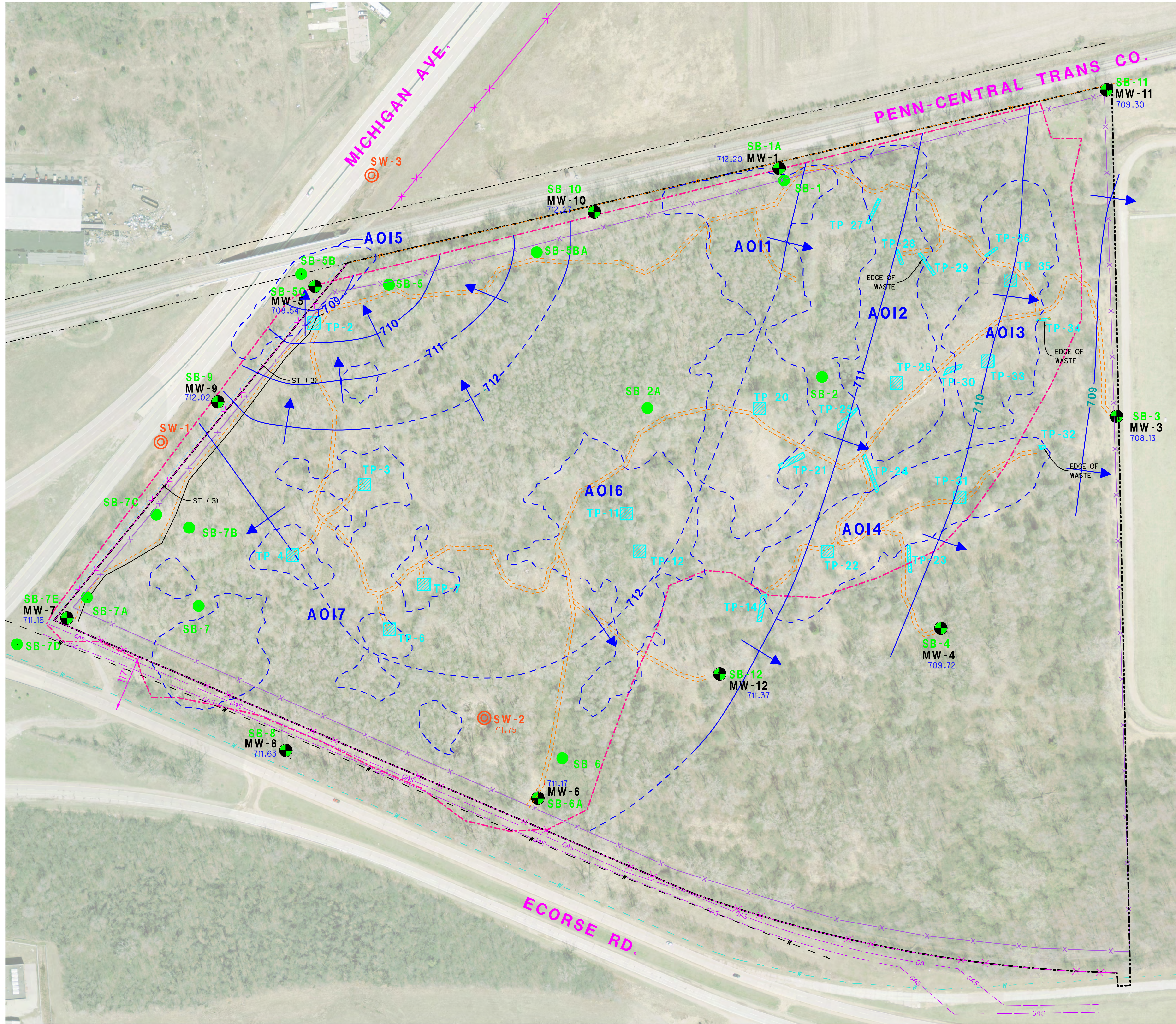
N = Naphthalene
Phen = Phenanthrene
E = Ethylbenzene
X = Total Xylenes
Al = Aluminum
Sb = Antimony
As = Arsenic
Cd = Cadmium
Cr = Chromium
Fe = Iron
Pb = Lead
Mn = Manganese
Hg = Mercury
Se = Selenium
Ag = Silver
NE = Not Exceeding

Exceedence of Part 201 Non Residential Cleanup Criteria
(Revised March 25, 2011)
Units: ug/Kg

SOIL CRITERIA
(XXI) Exceeds MDEQ Generic Drinking Water Protection Cleanup Criteria
(XII) Exceeds MDEQ Ground Water/Surface Water interface protection cleanup criteria

GENERAL NOTES:

- AERIAL PHOTO FROM SEMCOG DATED 2010.
- MONITORING WELL AND SURFACE WATER LOCATIONS SURVEYED APRIL 2013 BY MSG TO AN ACCURACY OF 0.01'.
- SOIL BORING, MONITORING WELL, TEST PIT AND CLEARED AND GRUBBED TRAIL LOCATIONS SURVEYED JULY 2012 AND MAY 2013 BY MSG USING SUBDECIMETER ACCURACY GLOBAL POSITIONING SYSTEM (GPS) UNIT.
- UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/OAPP AND MISS DIG UTILITY MARKINGS.
- EASEMENT DIMENSIONS OBTAINED FROM MDOT RIGHT-OF-WAY MAP NO. 82-R-1, PAGE 242, DATED SEPT 2006.

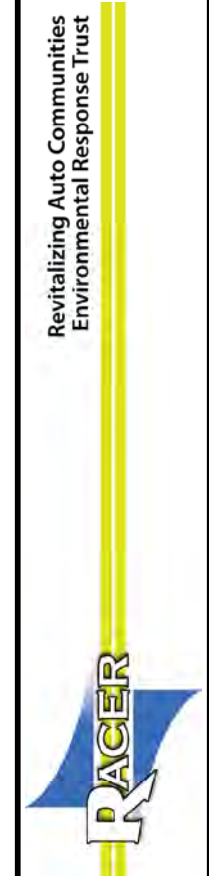


LEGEND	
	GROUND WATER ELEVATION CONTOUR FEET ABOVE MEAN SEA LEVEL (MSL)
	GROUND WATER FLOW DIRECTION
	SURFACE WATER SAMPLE LOCATION
	SOIL BORING LOCATION
	MONITORING WELL LOCATION
	GROUND WATER ELEVATION (FEET ABOVE MSL)
	TEST PIT LOCATION
	EXTENT OF AREA OF INTEREST (A01)
	PROPERTY LINE
	R/W LINE
	FENCE
	TRAIL CLEARED AND GRUBBED BY MSG
	EXTENT OF EARTH DISTURBANCE BASED ON APRIL 26, 1970 AERIAL PHOTO
	EXISTING GAS MAIN
	EXISTING FIBER OPTIC CABLE
	EXISTING FIRE WATER
	EXISTING WATER MAIN
	EXISTING STORM SEWER (ST)

- GENERAL NOTES:
1. AERIAL PHOTO FROM SEMCOG DATED 2010.
 2. MONITORING WELL AND SURFACE WATER LOCATIONS SURVEYED APRIL 2013 BY MSG TO AN ACCURACY OF 0.01'.
 3. SOIL BORING, MONITORING WELL, TEST PIT AND CLEARED AND GRUBBED TRAIL LOCATIONS SURVEYED JULY 2012 AND MAY 2013 BY MSG USING SUBDECIMETER ACCURACY GLOBAL POSITIONING SYSTEM (GPS) UNIT.
 4. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/QAPP AND MISS DIG UTILITY MARKINGS.
 5. EASEMENT DIMENSIONS OBTAINED FROM MDOT RIGHT-OF-WAY MAP NO. 82-R-1, PAGE 242, DATED SEPT 2006.

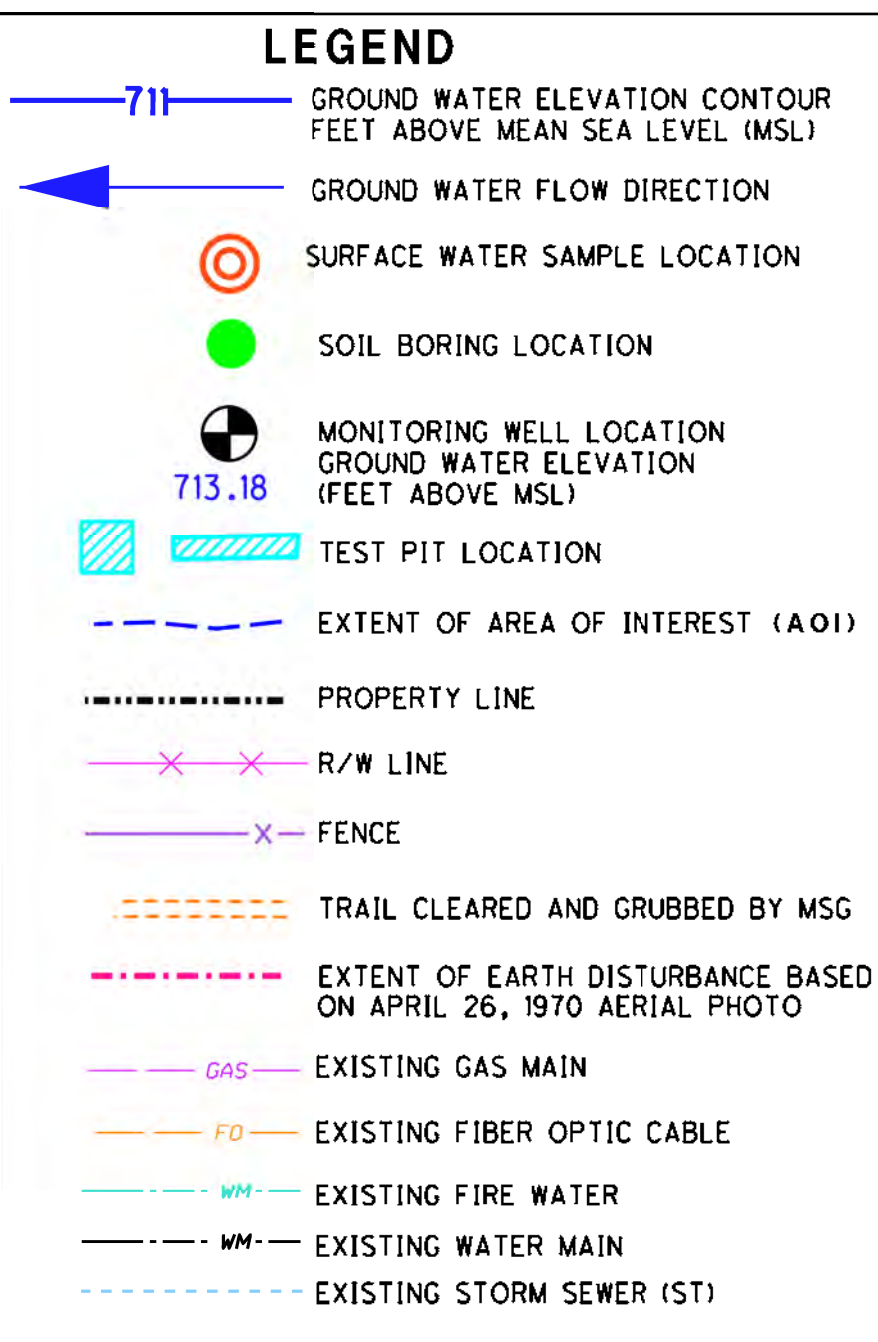
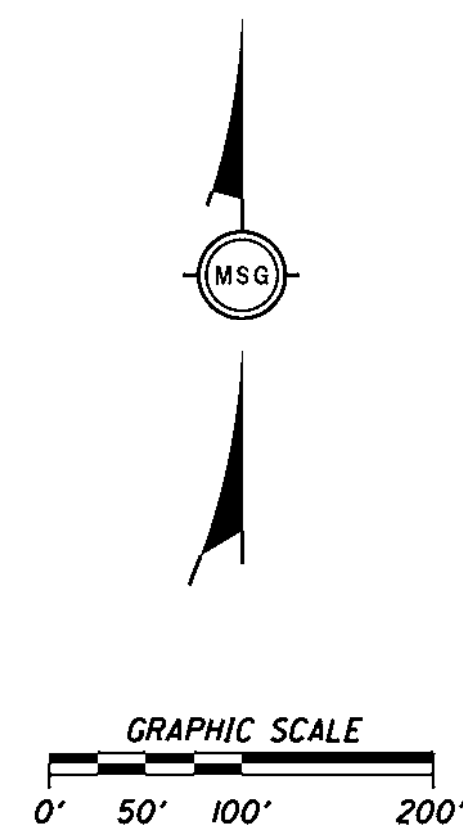
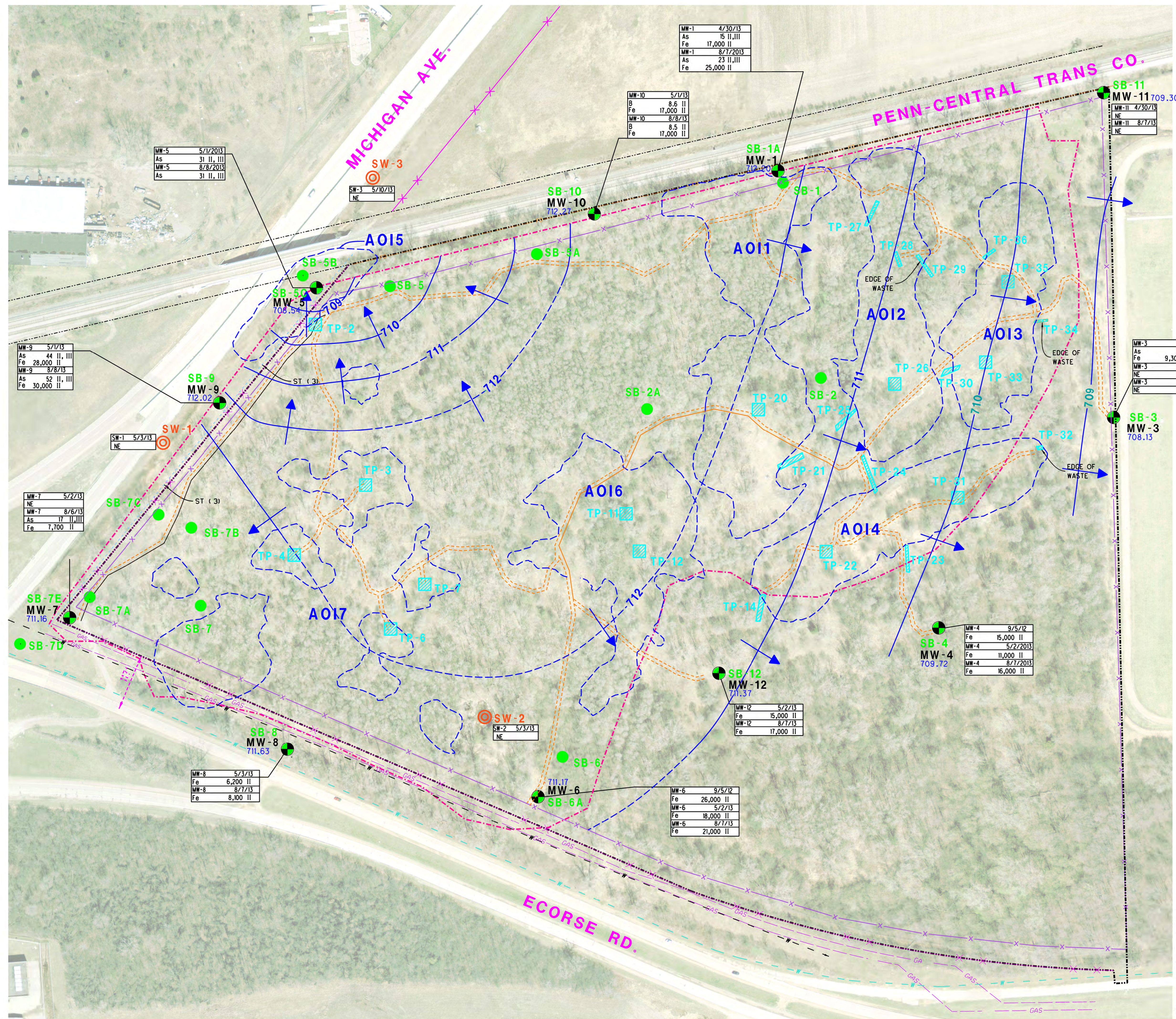
FIGURE 10
GROUND WATER ELEVATION
CONTOUR MAP
(AUGUST 7, 2013 DATA)

VAN BUREN LANDFILL SITE (11070)
MICHIGAN AVE. & ECORSE RD.
VAN BUREN TWP., WAYNE CO. MICHIGAN



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CHEMICAL ABBREVIATIONS - UNITS ARE MICROGRAMS PER LITER (ug/L)

Benz = Benzene
As = Dissolved Arsenic
Fe = Dissolved Iron
Mn = Dissolved Manganese
NE = NOT EXCEEDING

EXCEEDANCE OF APPLICABLE NONRESIDENTIAL PART 201 GENERIC CLEANUP CRITERIA AND SCREENING LEVELS (REVISED MARCH 25, 2010)

II EXCEEDS MDEQ NON-RESIDENTIAL HEALTH BASED DRINKING WATER CRITERIA

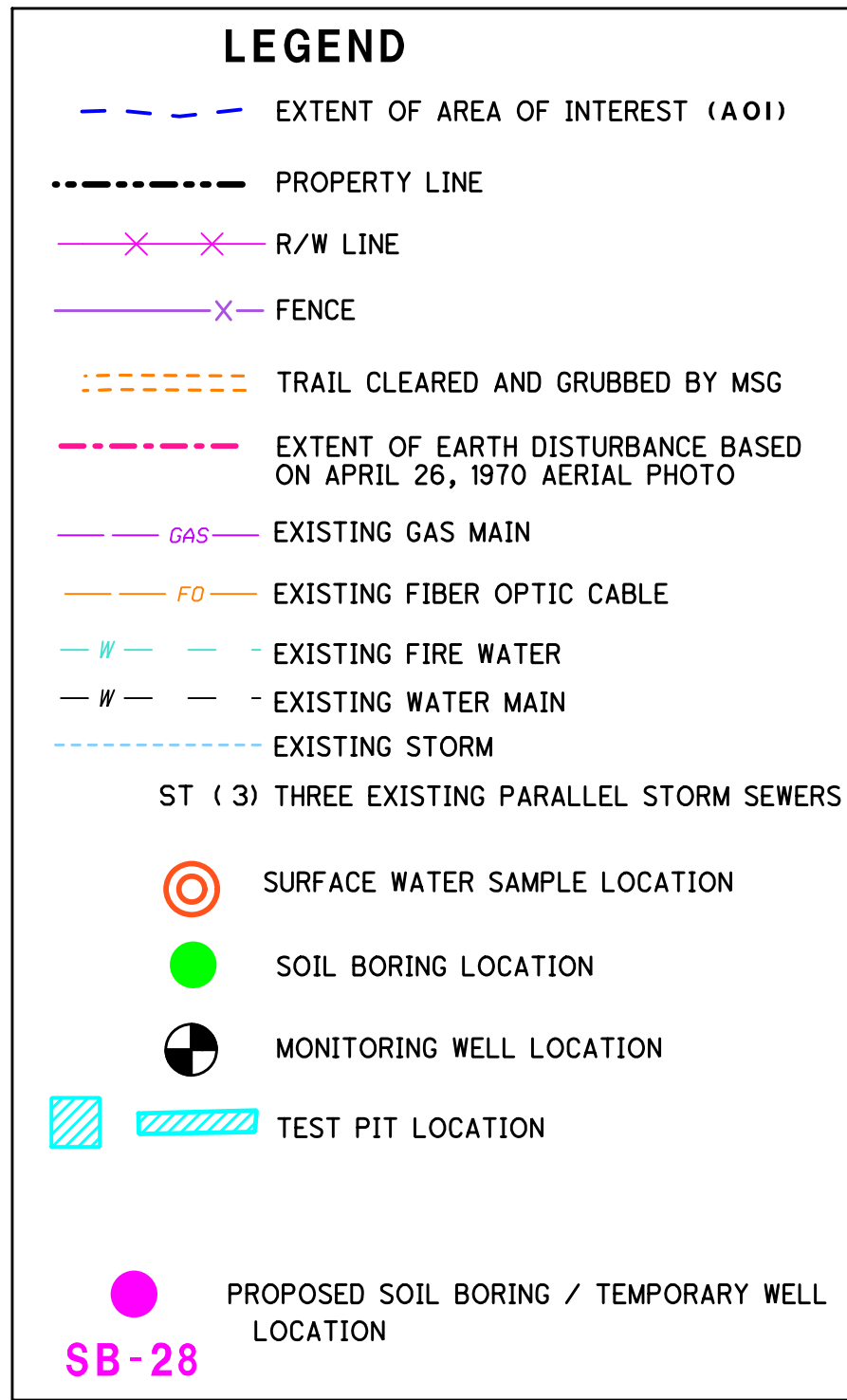
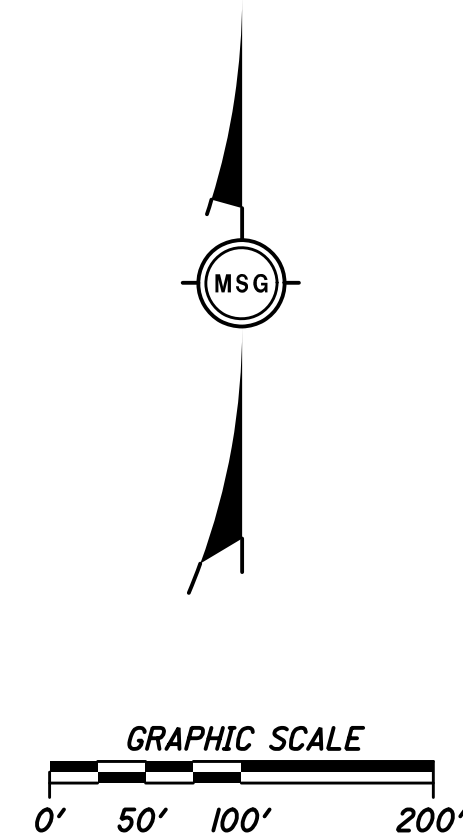
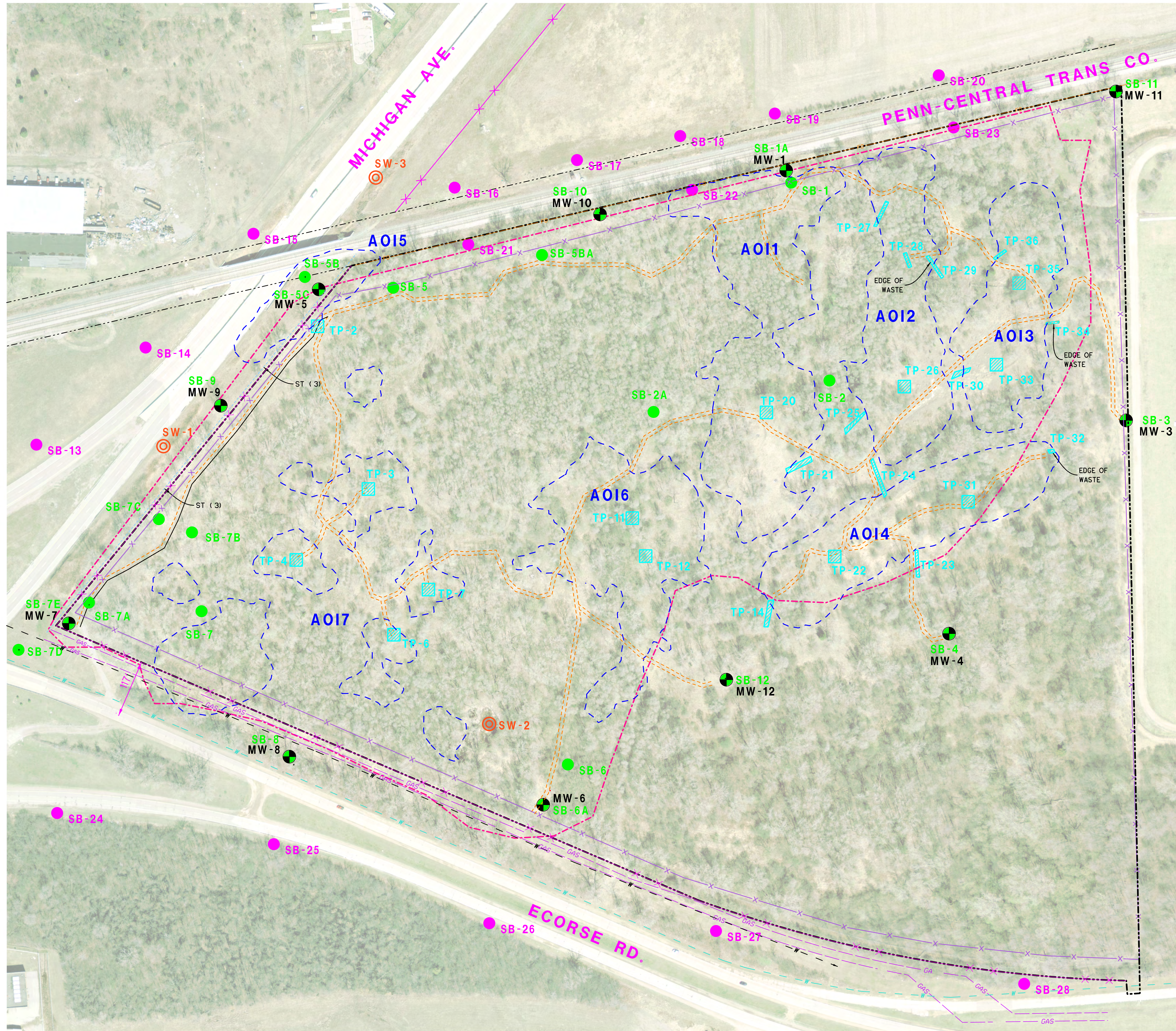
III EXCEEDS MDEQ GROUNDWATER SURFACE WATER INTERFACE CRITERIA

GENERAL NOTES:

1. AERIAL PHOTO FROM SEMCOG DATED 2010.
2. MONITORING WELL AND SURFACE WATER LOCATIONS SURVEYED APRIL 2013 BY MSG TO AN ACCURACY OF 0.01'.
3. SOIL BORING, MONITORING WELL, TEST PIT AND CLEARED AND GRUBBED TRAIL LOCATIONS SURVEYED JULY 2012 AND MAY 2013 BY MSG USING SUBDECIMETER ACCURACY GLOBAL POSITIONING SYSTEM (GPS) UNIT.
4. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/OAPP AND MISS DIG UTILITY MARKINGS.
5. EASEMENT DIMENSIONS OBTAINED FROM MDOT RIGHT-OF-WAY MAP NO. 82-R-1, PAGE 242, DATED SEPT 2006.

10/2/2013

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- GENERAL NOTES:
1. AERIAL PHOTO FROM SEMCOG DATED 2010.
 2. MONITORING WELL AND SURFACE WATER LOCATIONS SURVEYED APRIL 2013 BY MSG TO AN ACURACY OF 0.01'.
 3. SOIL BORING, MONITORING WELL, TEST PIT AND CLEARED AND GRUBBED TRAIL LOCATIONS SURVEYED JULY 2012 AND MAY 2013 BY MSG USING SUBDECIMETER ACCURACY GLOBAL POSITIONING SYSTEM (GPS) UNIT.
 4. UTILITY LOCATIONS BASED ON INFORMATION FROM SAP/QAPP AND MISS DIG UTILITY MARKINGS.
 5. EASEMENT DIMENSIONS OBTAINED FROM MDOT RIGHT-OF-WAY MAP NO. 82-R-1, PAGE 242, DATED SEPT 2006.

ATTACHMENT 1

SOIL BORING AND MONITORING WELL LOGS





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BORING ID: SB-1

PAGE 1 OF 2

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER Trust

PROJECT NAME Van Buren Landfill

PROJECT NUMBER R2330009

PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 7/12/12

COMPLETED 7/12/12

BORING DIAMETER: 2"

DRILLING CONTRACTOR MSG

SURVEY COORDINATES: 275307 N; 13347850 E (US ST PLN 83)

DRILLING METHOD MacroCore

GROUND SURFACE ELEV.: 721 feet NAVD88

LOGGED BY MJF

CHECKED BY FJB

GROUND WATER ENCOUNTERED DURING DRILLING: 12 FEET BGS

NOTES Soil boring backfilled with medium bentonite chips.

WATER LEVEL AFTER DRILLING: N/A

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
				Loose, tan, fine to coarse grained SAND; trace fine grained angular Gravel (fill); moist.	719.8		
	MC 1	2.5		Loose, dark orange/black FILL (including plastic, brick & glass fragments); little to some fine to coarse grained Sand; trace fine grained angular Gravel; dry to moist.	0.0		SB-1 (0'-2') Soil Sample Collected @ 0815 (Sample ID: S-R2330004-071212-MF-006)
5							
	MC 2	2.7			0.0		
10							
	MC 3	4.3		Loose, gray, fine to medium grained SAND; trace coarse grained rounded Sand; dry.	711.0		SB-1 (8'-9') Soil Sample Collected @ 0915 (Sample ID: S-R2330004-071212-MF-007)
				-Becomes wet at 12.0 feet bgs	0.0		
				-1.5 inch Sandy CLAY seam (at 13.2 feet)			
15				Grading to medium to coarse grained rounded SAND.			
	MC-DS 4	5.0		Loose gray fine to medium grained SAND; wet (at 17.3').	1.8		
20					701.0		

(Continued Next Page)



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BORING ID: SB-1

PAGE 2 OF 2

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER Trust **PROJECT NAME** Van Buren Landfill

PROJECT NUMBER R2330009 **PROJECT LOCATION** Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 7/12/12 **COMPLETED** 7/12/12 **BORING DIAMETER:** 2"

DRILLING CONTRACTOR MSG **SURVEY COORDINATES:** 275307 N; 13347850 E (US ST PLN 83)

DRILLING METHOD MacroCore **GROUND SURFACE ELEV.:** 721 feet NAVD88

LOGGED BY MJF **CHECKED BY** FJB **GROUND WATER ENCOUNTERED DURING DRILLING:** 12 FEET BGS

NOTES Soil boring backfilled with medium bentonite chips. **WATER LEVEL AFTER DRILLING:** N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
20							
	MC-DS 5	4.3		Soft, dark gray Silty CLAY; trace Silt partings; moist.	0.5		
25				Bottom of borehole at 25.0 feet.	696.0		



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BORING / WELL ID: SB-1A / MW-1

PAGE 1 OF 2

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER Trust**PROJECT NAME** Van Buren Landfill**PROJECT NUMBER** R2330009**PROJECT LOCATION** Michigan and Ecorse, Van Buren Township, MI**DATE STARTED** 3/25/13**COMPLETED** 3/25/13**BORING DIAMETER:** 2" / 8"**DRILLING CONTRACTOR** MSG**SURVEY COORDINATES:** 275331 N; 13347842 E (US ST PLN 83)**DRILLING METHOD** MacroCore / 4.25" Hollow Stem Auger**TOP OF CASING ELEV.:** 723.83 feet NAVD88**LOGGED BY** MJF**CHECKED BY** FJB**GROUND WATER ENCOUNTERED DURING DRILLING:** 11.2 FEET BGS**NOTES****WATER LEVEL AFTER DRILLING:** 8.8 FEET BGS

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Aboveground Pro-Casing Surface Elev. = 721.15 feet
0.4				Soft black TOPSOIL; trace-little roots; moist.	720.8			
2.7	MC 1	2.7		Medium stiff tan-brown fine to medium grained Sandy CLAY; some silt; trace to little subsounded gravel.	0.0		- SB-1A (0'-2') Soil Sample Collected @ 1145 (Sample ID: S-R2330009-032513-MF-001)	Concrete
5								Bentonite Seal (Medium Bentonite Chips)
10.0	MC 2	3.1		Medium stiff brown fine to medium grained Sandy CLAY; little silt; trace to little subrounded gravel; moist.	0.0			2-Inch Diameter PVC Riser
11.2					711.2			
12.6	MC-DS 1	5.0		Medium stiff tan fine to medium grained Sandy CLAY; some silt; moist.	710.0		SB-1A (10'-11') Soil Sample Collected @ 1215 (Sample ID: S-R2330009-032513-MF-003)	
18.1								Sand Filter Pack (K&E Well Gravel - WP1)
12.6				Loose tan fine to course grained SAND; trace course grained angular gravel; wet.	708.6	0.0		
18.1								2-Inch Diameter PVC Well Screen (10-Slot)
18.1	MC-DS 2	5.0		Loose gray fine to medium grained SAND; trace coarse grained sand; trace fine grained sand lenses (grading finer upward).	703.1	0.0		
20				Soft dark gray Silty CLAY; moist.				

(Continued Next Page)



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BORING / WELL ID: SB-1A / MW-1

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

PAGE 2 OF 2

CLIENT RACER Trust **PROJECT NAME** Van Buren Landfill

PROJECT NUMBER R2330009 **PROJECT LOCATION** Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 3/25/13 **COMPLETED** 3/25/13 **BORING DIAMETER:** 2" / 8"

DRILLING CONTRACTOR MSG **SURVEY COORDINATES:** 275331 N; 13347842 E (US ST PLN 83)

DRILLING METHOD MacroCore / 4.25" Hollow Stem Auger **TOP OF CASING ELEV.:** 723.83 feet NAVD88

LOGGED BY MJF **CHECKED BY** FJB **GROUND WATER ENCOUNTERED DURING DRILLING:** 11.2 FEET BGS

NOTES ▼ WATER LEVEL AFTER DRILLING: 8.8 FEET BGS

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
20								
25	MC-DS 3	5.0		Soft dark gray Silty CLAY; moist. (continued)	0.0			
25.0				Bottom of borehole at 25.0 feet.	696.2			



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BORING ID: SB-2

PAGE 1 OF 2

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER Trust

PROJECT NAME Van Buren Landfill

PROJECT NUMBER R2330009

PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 7/12/12

COMPLETED 7/12/12

BORING DIAMETER: 2"

DRILLING CONTRACTOR MSG

SURVEY COORDINATES: 274864 N; 13347919 E (US ST PLN 83)

DRILLING METHOD MacroCore

GROUND SURFACE ELEV.: 723 feet NAVD88

LOGGED BY MJF

CHECKED BY FJB

GROUND WATER ENCOUNTERED DURING DRILLING: 12 FEET BGS

NOTES Soil boring backfilled with medium bentonite chips.

WATER LEVEL AFTER DRILLING: N/A

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
5	MC 1	5.0		Loose, tan, Silty fine to coarse grained rounded SAND; little to some fill (including glass, plastic, & metal fragments); dry.	0		SB-2 (0'-2') Soil Sample Collected @ 1415 (Sample ID: S-R2330004-071212-MF-010) SB-2 (0'-2') Soil Sample Collected @ 1415 (Sample ID: S-R2330004-071212-MF-011) -for Matrix Spike
6.5	MC 2	5.0		Loose, tan, fine to coarse grained rounded SAND; trace fine grained rounded Gravel; moist.	6.2		
10	MC 3	5.0		-wet at 12.0 feet bgs	10.9		SB-2 (10'-12') Soil Sample Collected @ 1430 (Sample ID: S-R2330004-071212-MF-012)
15	MC-DS 1	4.0		Compact, gray, Silty fine grained SAND; trace medium to coarse grained rounded Sand; wet.	11.9		
18.0							
20							

(Continued Next Page)



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BORING ID: SB-2

PAGE 2 OF 2

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER Trust **PROJECT NAME** Van Buren Landfill

PROJECT NUMBER R2330009 **PROJECT LOCATION** Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 7/12/12 **COMPLETED** 7/12/12 **BORING DIAMETER:** 2"

DRILLING CONTRACTOR MSG **SURVEY COORDINATES:** 274864 N; 13347919 E (US ST PLN 83)

DRILLING METHOD MacroCore **GROUND SURFACE ELEV.:** 723 feet NAVD88

LOGGED BY MJF **CHECKED BY** FJB **GROUND WATER ENCOUNTERED DURING DRILLING:** 12 FEET BGS

NOTES Soil boring backfilled with medium bentonite chips. **WATER LEVEL AFTER DRILLING:** N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
20							
				Compact, gray, Silty fine grained SAND; trace medium to coarse grained rounded Sand; wet. (continued)			
	MC-DS 2	5.0		22.0 Soft, dark gray Silty CLAY; trace Silt partings; moist.	701.0 11.9		
25							
	MC-DS 3	5.0			2.9		
30				30.0 Bottom of borehole at 30.0 feet.	693.0		



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TRAVERSE CITY

BORING ID: SB-2A

PAGE 1 OF 1

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT	RACER Trust	PROJECT NAME	Van Buren Landfill
PROJECT NUMBER	R2330009	PROJECT LOCATION	Michigan and Ecorse, Van Buren Township, MI
DATE STARTED	7/18/12	COMPLETED	7/18/12
BORING DIAMETER:	2"		
DRILLING CONTRACTOR	MSG	SURVEY COORDINATES:	274811 N; 13347567 E (US ST PLN 83)
DRILLING METHOD	MacroCore	GROUND SURFACE ELEV.:	725 feet NAVD88
LOGGED BY	MJF	CHECKED BY	FJB
		GROUND WATER ENCOUNTERED DURING DRILLING:	N/A
NOTES	Soil boring backfilled with medium bentonite chips.		
		WATER LEVEL AFTER DRILLING:	N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
			0.5	Loose, tan, Silty fine to coarse SAND; trace to little angular Gravel; dry Loose, black FILL (including plastic, debris); little to some fine to coarse Sand; wet	724.5		
5							
10							
15			15.0	Bottom of borehole at 15.0 feet.	710.0		



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BORING / WELL ID: SB-3 / MW-3

PAGE 1 OF 1

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER Trust**PROJECT NAME** Van Buren Landfill**PROJECT NUMBER** R2330009**PROJECT LOCATION** Michigan and Ecorse, Van Buren Township, MI**DATE STARTED** 7/11/12**COMPLETED** 7/11/12**BORING DIAMETER:** 2" / 8"**DRILLING CONTRACTOR** MSG**SURVEY COORDINATES:** 274792 N; 13348574 E (US ST PLN 83)**DRILLING METHOD** MacroCore / 4.25" Hollow Stem Auger**TOP OF CASING ELEV.:** 714.28 feet NAVD88**LOGGED BY** MJF**CHECKED BY** FJB**GROUND WATER ENCOUNTERED DURING DRILLING:** 1.5 FEET BGS**NOTES****WATER LEVEL AFTER DRILLING:** 2.5 FEET BGS

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Aboveground Pro-Casing Surface Elev. = 711 feet
	MC 1	5.0		Loose, gray, fine to coarse SAND; trace fine round Gravel; dry Becomes wet at 1.5 feet bgs	4.2		SB-3 (0'-2') Soil Sample Collected @ 1545 (Sample ID: S-R2330004- 071112-MF-005)	Bentonite Seal (Medium Bentonite Chips) 2-Inch Diameter PVC Riser
5	MC 2	5.0		Soft, dark gray, Silty CLAY; moist	7.7			Sand Filter Pack (K&E Well Gravel - WP1)
10	MC 3	5.0		Soft, dark gray, Silty CLAY; trace round Gravel; moist	4.2			2-Inch Diameter PVC Well Screen (10-Slot)
15				Bottom of borehole at 15.0 feet.	696.0			



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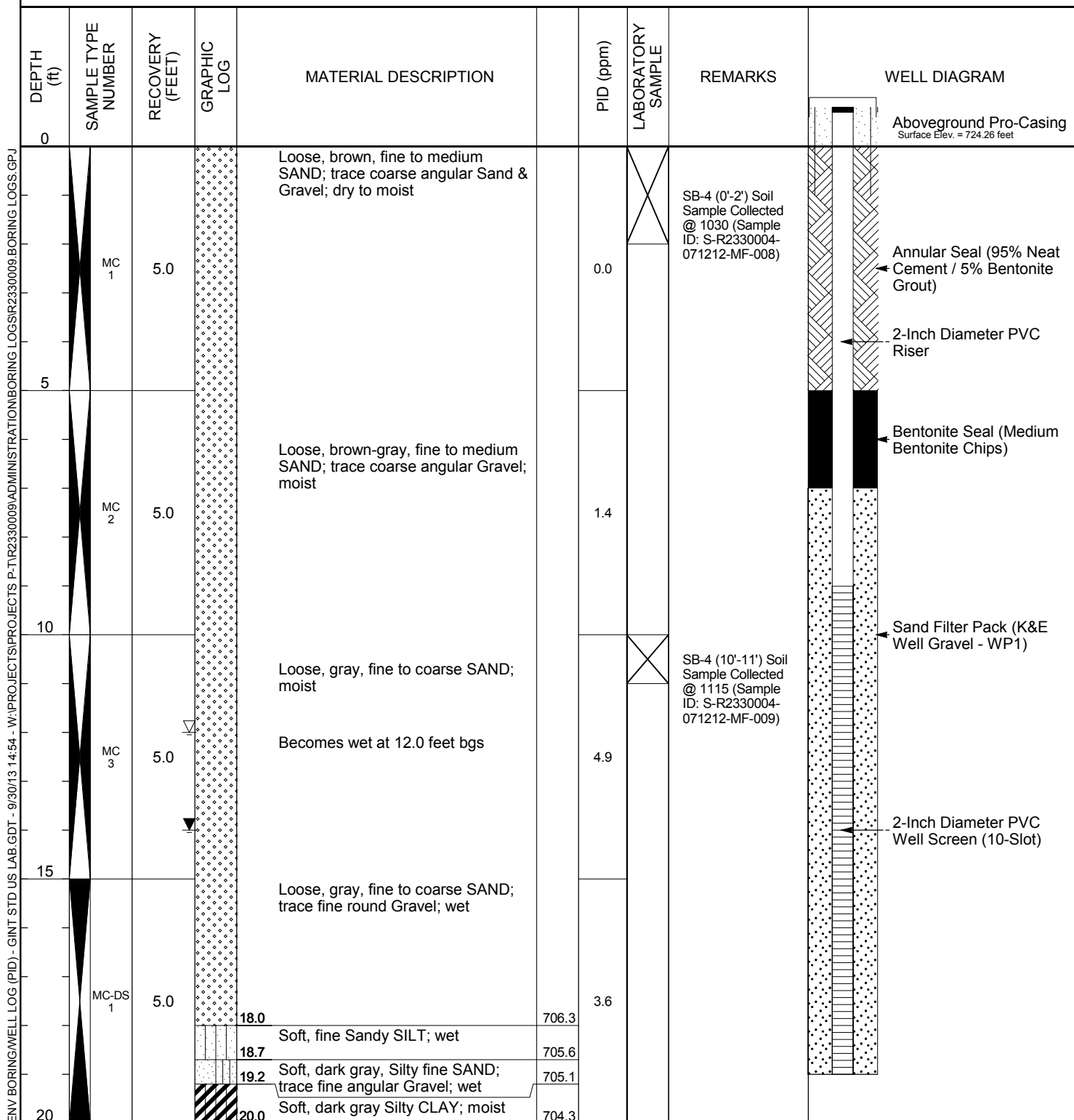
BORING / WELL ID: SB-4 / MW-4

PAGE 1 OF 2

The Mannik & Smith Group, Inc.
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ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 7/12/12COMPLETED 7/12/12BORING DIAMETER: 2" / 8"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274332 N; 13348193 E (US ST PLN 83)DRILLING METHOD MacroCore / 4.25" Hollow Stem AugerTOP OF CASING ELEV.: 723.72 feet NAVD88LOGGED BY MJFCHECKED BY FJBGROUND WATER ENCOUNTERED DURING DRILLING: 12 FEET BGS

NOTES

WATER LEVEL AFTER DRILLING: 14 FEET BGS

(Continued Next Page)



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BORING / WELL ID: SB-4 / MW-4

PAGE 2 OF 2

The Mannik & Smith Group, Inc.
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ph: (734)-397-3100 fax: (734)-397-3131

CLIENT	RACER Trust	PROJECT NAME	Van Buren Landfill
PROJECT NUMBER	R2330009	PROJECT LOCATION	Michigan and Ecorse, Van Buren Township, MI
DATE STARTED	7/12/12	COMPLETED	7/12/12
BORING DIAMETER:	2" / 8"	SURVEY COORDINATES:	274332 N; 13348193 E (US ST PLN 83)
DRILLING CONTRACTOR	MSG	TOP OF CASING ELEV.:	723.72 feet NAVD88
DRILLING METHOD	MacroCore / 4.25" Hollow Stem Auger	GROUND WATER ENCOUNTERED DURING DRILLING:	12 FEET BGS
LOGGED BY	MJF	CHECKED BY	FJB
NOTES	WATER LEVEL AFTER DRILLING: 14 FEET BGS		

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
20				Soft, dark gray fine Sandy SILT; wet				
	MC-DS 2	5.0		21.7 Soft, dark gray Silty CLAY; wet	702.6	3.5		
25								
	MC-DS 3	5.0				0.9		
30				30.0 Bottom of borehole at 30.0 feet.	694.3			



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BORING ID: SB-5

PAGE 1 OF 2

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT <u>RACER Trust</u>	PROJECT NAME <u>Van Buren Landfill</u>
PROJECT NUMBER <u>R2330009</u>	PROJECT LOCATION <u>Michigan and Ecorse, Van Buren Township, MI</u>
DATE STARTED <u>7/11/12</u> COMPLETED <u>7/11/12</u>	BORING DIAMETER: <u>2"</u>
DRILLING CONTRACTOR <u>MSG</u>	SURVEY COORDINATES: <u>275080 N; 13346998 E (US ST PLN 83)</u>
DRILLING METHOD <u>MacroCore</u>	GROUND SURFACE ELEV.: <u>724 feet NAVD88</u>
LOGGED BY <u>MJF</u> CHECKED BY <u>FJB</u>	GROUND WATER ENCOUNTERED DURING DRILLING: <u>2.3 FEET BGS</u>
NOTES <u>Soil boring backfilled with medium bentonite chips.</u>	WATER LEVEL AFTER DRILLING: <u>N/A</u>

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
	MC 1	2.8		Loose, tan, Silty fine to coarse SAND; trace to little angular Gravel; dry	721.7		SB-5 (0'-2') Soil Sample Collected @ 1115 (Sample ID: S-R2330004-071112-MF-001)
					2.5		
5	MC 2	1.9		Loose, black FILL (including plastic, metal shavings, debris); little to some fine to coarse Sand; wet			
					40.2		
10	MC 3	2.9		Wood fragments & bricks present			
					40.7		
15	MC 4	0.7		Glass present			
					40.2		
20							

(Continued Next Page)



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2365 Haggerty Road South, Canton, Michigan 48188
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CLIENT RACER Trust

PROJECT NAME Van Buren Landfill

PROJECT NUMBER R2330009

PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 7/11/12

COMPLETED 7/11/12

BORING DIAMETER: 2"

DRILLING CONTRACTOR MSG

SURVEY COORDINATES: 275080 N; 13346998 E (US ST PLN 83)

DRILLING METHOD MacroCore

GROUND SURFACE ELEV.: 724 feet NAVD88

LOGGED BY MJF

CHECKED BY FJB

GROUND WATER ENCOUNTERED DURING DRILLING: 2.3 FEET BGS

NOTES Soil boring backfilled with medium bentonite chips.

WATER LEVEL AFTER DRILLING: N/A

ENV BORING LOG (PID) - GINT STD US LAB GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
20							
	MC 5	0.0		Loose, black FILL (including plastic, metal shavings, debris); little to some fine to coarse Sand; wet (<i>continued</i>)	NA		
25							
	MC 6	4.5		Trace coarse angular gravel present	47.2		
					696.9		
							SB-5 (25'-27') Soil Sample Collected @ 1145 (Sample ID: S-R2330004-071112-MF-002)
	MC 7	5.0		Soft, dark gray, Silty CLAY; trace to little fine to coarse round Sand; moist	5.1		
30							
					3.3		
35							
				Bottom of borehole at 35.0 feet.	689.0		



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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 7/18/12COMPLETED 7/18/12BORING DIAMETER: 2"DRILLING CONTRACTOR MSGSURVEY COORDINATES: N/ADRILLING METHOD MacroCoreGROUND SURFACE ELEV.: N/ALOGGED BY MJFCHECKED BY FJB▽ GROUND WATER ENCOUNTERED DURING DRILLING: 10 FEET BGSNOTES Soil boring backfilled with medium bentonite chips.▼ WATER LEVEL AFTER DRILLING: N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
0.6				Loose, tan, Silty fine SAND; some roots; trace medium to coarse round Sand; dry			
	MC 1	2.9		Loose, tan/brown/black FILL (including glass, brick, wood, & paper fragments); little fine to coarse angular Sand; dry to moist	0.0		
5							
	MC 2	2.4		Becomes moist at 8.0 feet bgs	0.0		
10							
	MC 3	1.6		Becomes wet at 11.0 feet bgs	0.0		
15				Bottom of borehole at 15.0 feet.			



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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 3/26/13COMPLETED 3/26/13BORING DIAMETER: 2"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 275080 N; 13346803 E (US ST PLN 83)DRILLING METHOD MacroCoreGROUND SURFACE ELEV.: 709.35 feet NAVD88LOGGED BY MJFCHECKED BY FJB▽ GROUND WATER ENCOUNTERED DURING DRILLING: N/ANOTES Soil boring backfilled with medium bentonite chips.▼ WATER LEVEL AFTER DRILLING: N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
	MC 1	5.0		Soft black TOPSOIL; trace fine to coarse grained sand; moist. Soft brown fine to coarse grained Sandy CLAY; some silt; trace fine grained gravel; moist.	708.1 0.0		SB-5B (0'-2') Soil Sample Collected @ 1115 (Sample ID: S-R2330009- 032613-MF-005)
5	MC 2	5.0		Soft to medium stiff dark gray Silty CLAY; moist.	703.9		SB-5B (4'-5') Soil Sample Collected @ 1145 (Sample ID: S-R2330009- 032613-MF-007)
10	MC 3	5.0		Soft light gray SILT layer; moist. Medium stiff dark gray Silty CLAY; moist.	0.0		
15				Bottom of borehole at 15.0 feet.	694.4		



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BORING / WELL ID: SB-5C / MW-5

PAGE 1 OF 2

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2365 Haggerty Road South, Canton, Michigan 48188
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CLIENT RACER Trust

PROJECT NAME Van Buren Landfill

PROJECT NUMBER R2330009

PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 4/2/13

COMPLETED 4/2/13

BORING DIAMETER: 2" / 8"

DRILLING CONTRACTOR MSG

SURVEY COORDINATES: 275075 N; 13346834 E (US ST PLN 83)

DRILLING METHOD MacroCore / 4.25" Hollow Stem Auger

TOP OF CASING ELEV.: 719.62 feet NAVD88

LOGGED BY MJF

CHECKED BY FJB

GROUND WATER ENCOUNTERED DURING DRILLING: 21.3 FEET BGS

NOTES

WATER LEVEL AFTER DRILLING: 10.7 FEET BGS

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Surface Elev. = 719.8 feet
	MC 1	5.0		Soft brown fine grained Sandy CLAY; some silt, trace angular gravel; moist (FILL)	0.0		SB-5C (0'-2') Soil Sample Collected @ 0930 (Sample ID: S-R2330009-040213-MF-009)	Flush-mount Protective Casing Concrete
5	MC 2	4.7		Soft brown fine grained Sandy CLAY; some silt; moist (FILL)	0.0			
				Glass Fragment at 8.2 feet				
10	MC 3	5.0		Soft brown fine grained Sandy CLAY; some silt; moist (FILL)	0.0			Bentonite Seal (Medium Bentonite Chips)
15	MC 4	2.3		Soft brown fine grained Sandy CLAY; some silt; moist (FILL)	0.0			
				18.2 Loose Silty fine grained SAND; wet.	701.6		SB-5C (17'-18') Soil Sample Collected @ 1000 (Sample ID: S-R2330009-040213-MF-001)	
				18.4 Soft brown fine grained Sandy CLAY; some silt; moist (FILL)	701.4			
				19.4	700.4			
				19.6 Loose Silty fine to medium grained	700.2			
20				20.0	699.8			2-Inch Diameter PVC Riser

(Continued Next Page)



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BORING / WELL ID: SB-5C / MW-5

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2365 Haggerty Road South, Canton, Michigan 48188
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PAGE 2 OF 2

CLIENT RACER Trust

PROJECT NAME Van Buren Landfill

PROJECT NUMBER R2330009

PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 4/2/13

COMPLETED 4/2/13

BORING DIAMETER: 2" / 8"

DRILLING CONTRACTOR MSG

SURVEY COORDINATES: 275075 N; 13346834 E (US ST PLN 83)

DRILLING METHOD MacroCore / 4.25" Hollow Stem Auger

TOP OF CASING ELEV.: 719.62 feet NAVD88

LOGGED BY MJF

CHECKED BY FJB

GROUND WATER ENCOUNTERED DURING DRILLING: 21.3 FEET BGS

NOTES

WATER LEVEL AFTER DRILLING: 10.7 FEET BGS

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
20								
	MC-DS 1	2.8		SAND; wet. Soft brown fine grained Sandy CLAY; some silt; moist (FILL) Loose Silty fine to medium grained SAND; wet. Loose gray Silty fine grained SAND; wet	698.5			
25	MC-DS 2	4.6		Compact gray fine grained SAND; little to some medium to coarse grained sand; wet. trace plastic fragments at 27.5'	0.0			
30				trace glass fragments at 29.4' - 30.0'	689.8			
	MC-DS 3	1.2		Medium stiff to stiff dark gray Silty CLAY; moist.	0.0			
35				Bottom of borehole at 35.0 feet.	684.8			



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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 7/12/12COMPLETED 7/12/12BORING DIAMETER: 2"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274050 N; 13347371 E (US ST PLN 83)DRILLING METHOD MacroCoreGROUND SURFACE ELEV.: 720 feet NAVD88LOGGED BY MJFCHECKED BY FJBGROUND WATER ENCOUNTERED DURING DRILLING: 7 FEET BGSNOTES Soil boring backfilled with medium bentonite chips.WATER LEVEL AFTER DRILLING: N/A

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
1.5	MC 1	4.2		Loose, gray, Silty fine to coarse SAND; trace fine round Gravel; dry	718.5		
5.0	MC 2	4.0		Loose, brown/orange/black fine to medium SAND; little to some fill (including glass & brick fragments and paper); moist	715.0		SB-6 (1.5'-2.5') Soil Sample Collected @ 1600 (Sample ID: S-R2330004-071212-MF-013); Duplicate Soil Sample Collected @ 1600 (Sample ID: S-R2330004-071212-MF-017)
10.0	MC 3	3.2		Loose, fine to coarse round SAND; trace fine round Gravel; moist	707.5		
13.0				Becomes wet at 7.0 feet bgs	707.0		SB-6 (6'-7') Soil Sample Collected @ 1615 (Sample ID: S-R2330004-071212-MF-014)
15.0	MC-DS 1	5.0		Soft, dark gray Clayey SILT; wet			
20.0				Soft to medium stiff dark gray Silty CLAY			

Bottom of borehole at 20.0 feet.



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BORING / WELL ID: SB-6A / MW-6

PAGE 1 OF 1

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CLIENT RACER Trust

PROJECT NAME Van Buren Landfill

PROJECT NUMBER R2330009

PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MI

DATE STARTED 7/16/12

COMPLETED 7/16/12

BORING DIAMETER: 2" / 8"

DRILLING CONTRACTOR MSG

SURVEY COORDINATES: 273963 N; 13347318 E (US ST PLN 83)

DRILLING METHOD MacroCore

TOP OF CASING ELEV.: 718.47 feet NAVD88

LOGGED BY MJF

CHECKED BY FJB

GROUND WATER ENCOUNTERED DURING DRILLING: 4.7 FEET BGS

NOTES

WATER LEVEL AFTER DRILLING: 7 FEET BGS

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Stickup Pro-Casing Surface Elev. = 715.12 feet
0.9 1.2	MC 1	5.0		Loose, brown, Silty fine to medium SAND; little to some roots; trace coarse round Sand, trace fine Gravel; dry Loose, brown, Silty fine to medium SAND; some fill (including plastic, paper, & glass fragments); dry Loose, dark gray, Silty fine to medium SAND; trace coarse subrounded Sand, trace fine subrounded Gravel; moist to wet Becomes wet at 4.7 feet bgs	714.2 713.9 0.0		- SB-6A (0'-2') Soil Sample Collected @ 0915 (Sample ID: S-R2330004-071612-MF-015)	Annular Seal (95% Neat Cement / 5% Bentonite Grout) Bentonite Seal (Medium Bentonite Chips)
5	MC 2	5.0			707.2 0.0		SB-6A (2.5'-4.5') Soil Sample Collected @ 0925 (Sample ID: S-R2330004-071612-MF-016)	2-Inch Diameter PVC Riser
10	MC 3	5.0		Loose, dark gray, medium to coarse subrounded SAND; little to some fine subrounded Gravel; trace fine Sand; wet Soft to medium stiff, dark gray, Silty CLAY; trace to little coarse subrounded Sand; moist	705.1 0.0			Sand Filter Pack (K&E Well Gravel - WP1)
15				Bottom of borehole at 15.0 feet.	700.1			2-Inch Diameter PVC Well Screen (10-Slot)



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BORING ID: SB-7

PAGE 1 OF 2

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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 7/11/12COMPLETED 7/11/12BORING DIAMETER: 2"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274381 N; 13346581 E (US ST PLN 83)DRILLING METHOD MacroCoreGROUND SURFACE ELEV.: 716 feet NAVD88LOGGED BY MJFCHECKED BY FJBGROUND WATER ENCOUNTERED DURING DRILLING: 15 FEET BGSNOTES Soil boring backfilled with medium bentonite chips.WATER LEVEL AFTER DRILLING: N/A

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
	MC 1	2.6		Loose, gray, fine to coarse SAND; trace fill (glass, wood & brick fragments); dry	713.7		SB-7 (0'-2') Soil Sample Collected @ 1315 (Sample ID: S-R2330004-071112-MF-003)
5	MC 2	3.2		Loose, black FILL (including glass, plastic, bricks, & wood fragments); little to some fine to coarse Sand; moist	242.3		
10	MC 3	1.1		Loose, black FILL (including bricks & glass fragments); moist	122.2		
15	MC 4	5.0		Becomes wet at 15.0 feet bgs	13.3		SB-7 (10'-11') Soil Sample Collected @ 1345 (Sample ID: S-R2330004-071112-MF-004)
20				Soft, dark gray, Silty CLAY; trace Silt partings; moist	55.0		
					698.6		
					83		

(Continued Next Page)



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BORING ID: SB-7

PAGE 2 OF 2

The Mannik & Smith Group, Inc.
2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT	RACER Trust	PROJECT NAME	Van Buren Landfill
PROJECT NUMBER	R2330009	PROJECT LOCATION	Michigan and Ecorse, Van Buren Township, MI
DATE STARTED	7/11/12	COMPLETED	7/11/12
BORING DIAMETER:	2"		
DRILLING CONTRACTOR	MSG	SURVEY COORDINATES:	274381 N; 13346581 E (US ST PLN 83)
DRILLING METHOD	MacroCore	GROUND SURFACE ELEV.:	716 feet NAVD88
LOGGED BY	MJF	CHECKED BY	FJB
		GROUND WATER ENCOUNTERED DURING DRILLING:	15 FEET BGS
NOTES	Soil boring backfilled with medium bentonite chips.		
		WATER LEVEL AFTER DRILLING:	N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
20							
25	MC 5	5.0		Soft, dark gray, Silty CLAY; trace Silt partings; moist (continued)	4.2		
25.0				Bottom of borehole at 25.0 feet.	691.0		



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ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 7/18/12COMPLETED 7/18/12BORING DIAMETER: 2"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274391 N; 13346325 E (US ST PLN 83)DRILLING METHOD MacroCoreGROUND SURFACE ELEV.: 716 feet NAVD88LOGGED BY MJFCHECKED BY FJB▽ GROUND WATER ENCOUNTERED DURING DRILLING: N/ANOTES Soil boring backfilled with medium bentonite chips.▼ WATER LEVEL AFTER DRILLING: N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
2.0	MC 1	5.0		Loose, gray, fine to coarse SAND; trace fill (glass, wood & brick fragments); dry	714.0		
5							
7.0	MC 2	4.7		Loose, black FILL (including glass, plastic, bricks, & wood fragments); little to some fine to coarse Sand; moist	0.0		
10							
13.0	MC 3	5.0			0.0		
15							
15.0				Bottom of borehole at 15.0 feet.	701.0		



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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 7/18/12COMPLETED 7/18/12BORING DIAMETER: 2"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274572 N; 13346567 E (US ST PLN 83)DRILLING METHOD MacroCoreGROUND SURFACE ELEV.: 714 feet NAVD88LOGGED BY MJFCHECKED BY FJB▽ GROUND WATER ENCOUNTERED DURING DRILLING: N/ANOTES Soil boring backfilled with medium bentonite chips.▼ WATER LEVEL AFTER DRILLING: N/A

ENV BORING LOG (PID) - GINT STD US LAB GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
1.8	MC 1	4.5		Loose, gray, fine to coarse SAND; trace fill (glass, wood & brick fragments); dry	712.2		
5	MC 2	5.0		Loose, black FILL (including glass, plastic, bricks, & wood fragments); little to some fine to coarse Sand; moist	0.0		
10	MC 3	5.0			0.0		
15				Bottom of borehole at 15.0 feet.	699.0		



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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 7/18/12COMPLETED 7/18/12BORING DIAMETER: 2"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274605 N; 13346505 E (US ST PLN 83)DRILLING METHOD MacroCoreGROUND SURFACE ELEV.: 720 feet NAVD88LOGGED BY MJFCHECKED BY FJB▽ GROUND WATER ENCOUNTERED DURING DRILLING: N/ANOTES Soil boring backfilled with medium bentonite chips.▼ WATER LEVEL AFTER DRILLING: N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
2.3	MC 1	5.0		Loose, gray, fine to coarse SAND; trace fill (glass, wood & brick fragments); dry	717.7		
5	MC 2	4.2		Loose, black FILL (including glass, plastic, bricks, & wood fragments); little to some fine to coarse Sand; moist	0.0		
10	MC 3	4.5			0.0		
15				Bottom of borehole at 15.0 feet.	705.0		



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ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 3/28/13COMPLETED 3/28/13BORING DIAMETER: 2"DRILLING CONTRACTOR MSGSURVEY COORDINATES: N/ADRILLING METHOD MacroCoreGROUND SURFACE ELEV.: 720 feet NAVD88LOGGED BY MJFCHECKED BY FJBGROUND WATER ENCOUNTERED DURING DRILLING: N/ANOTES Soil boring backfilled with medium bentonite chipsWATER LEVEL AFTER DRILLING: N/A

ENV BORING LOG (PID) - GINT STD US LAB.GDT - 9/30/13 15:19 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS
0							
				Soft black TOPSOIL; little to some fine to coarse grained sand; moist.	719.1		
	MC 1	4.1		Soft to medium stiff dark brown SILT & CLAY; little fine to coarse grained sand; moist (FILL).	0.0		SB-7D (0'-2') Soil Sample Collected @ 1250 (Sample ID: S-R2330009- 032813-MF-003)
5				Asphalt fragments 6.4' to 6.7'	0.0		
	MC 2	5.0					
				Soft dark brown Silty CLAY; moist.	711.5		
10							SB-7D (9'-10') Soil Sample Collected @ 1320 (Sample ID: S-R2330009- 032813-MF-005)
				Loose light brown fine grained SAND; moist.	709.7		
	MC 3	5.0		Soft dark brown Silty CLAY; moist	708.7		
15					0.0		
				Bottom of borehole at 15.0 feet.	705.0		



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BORING / WELL ID: SB-7E / MW-7

PAGE 1 OF 1

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2365 Haggerty Road South, Canton, Michigan 48188
ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 4/3/13COMPLETED 4/3/13BORING DIAMETER: 2" / 8"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274355 N; 13346295 E (US ST PLN 83)DRILLING METHOD MacroCore / 4.25" Hollow Stem AugerTOP OF CASING ELEV.: 716.85 feet NAVD88LOGGED BY MJFCHECKED BY FJBGROUND WATER ENCOUNTERED DURING DRILLING: 6.5 FEET BGS

NOTES

WATER LEVEL AFTER DRILLING: 5 FEET BGS

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Surface Elev. = 717.19 feet
4.6	MC 1	4.6		Stiff dark brown Silty CLAY; trace coarse grained sand; trace roots (0.0'-0.5'); moist.	0.0		- SB-7E (0'-2') Soil Sample Collected @ 0815 (Sample ID: S-R2330009-040213-MF-007)	Flush-mount Protective Casing Concrete Bentonite Seal (Medium Bentonite Chips) 2-Inch Diameter PVC Riser
5				Stiff dark brown Silty CLAY; moist.				
6.5					710.7			
6.7					710.5			
3.1	MC 2	3.1		Loose light brown fine to medium grained SAND; wet. Medium stiff dark gray Silty CLAY; moist.	0.0		SB-7E (5'-6') Soil Sample Collected @ 0850 (Sample ID: S-R2330004-040213-MF-009)	Sand Filter Pack (K&E Well Gravel - WP1) 2-Inch Diameter PVC Well Screen (10-Slot)
10				Medium stiff dark gray Silty CLAY; moist.				
11.3					705.9			
4.7	MC 3	4.7		Hard dark gray Clayey SILT; little fine grained sand; moist.	0.0			
14.0					703.2			
15				Very hard dark gray Silty CLAY; moist				
15.0					702.2			
				Bottom of borehole at 15.0 feet.				



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BORING / WELL ID: SB-8 / MW-8

PAGE 1 OF 1

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ph: (734)-397-3100 fax: (734)-397-3131

CLIENT RACER Trust	PROJECT NAME Van Buren Landfill
PROJECT NUMBER R2330009	PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MI
DATE STARTED 3/28/13 COMPLETED 3/28/13	BORING DIAMETER: 2" / 8"
DRILLING CONTRACTOR MSG	SURVEY COORDINATES: 274067 N; 13346771 E (US ST PLN 83)
DRILLING METHOD MacroCore / 4.25" Hollow Stem Auger	TOP OF CASING ELEV.: 713.36 feet NAVD88
LOGGED BY MJF CHECKED BY FJB	GROUND WATER ENCOUNTERED DURING DRILLING: 1 FEET BGS
NOTES	WATER LEVEL AFTER DRILLING: 2 FEET BGS

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Surface Elev. = 713.96 feet
0.9	MC 1	3.9		Soft black TOPSOIL; little to some roots; trace fine to coarse grained sand; moist. Loose orange Silty fine to coarse grained SAND AND fine grained rounded GRAVEL; wet.	713.1		- SB-8 (0'-2') Soil Sample Collected @ 1420 (Sample ID: S-R2330009-032813-MF-001)	Flush-mount Protective Casing Concrete Bentonite Seal (Medium Bentonite Chips)
2.6				Compact fine grained SAND; trace medium to coarse grained sand; wet.	711.4	0.0		2-Inch Diameter PVC Riser
5	MC 2	5.0				0.0		Sand Filter Pack (K&E Well Gravel - WP1)
8.1				(grading to)	705.9			2-Inch Diameter PVC Well Screen (10-Slot)
8.3				Loose dark gray medium to coarse grained SAND and fine grained GRAVEL; trace fine grained sand; wet.	705.7			
10.0				Soft light gray fine grained Sandy SILT; wet (high dilatancy). Soft dark gray Silty CLAY; moist.	704.0			
12.6	MC-DS 1	4.0			701.4	0.0		
12.9				Soft light gray SILT; dry to moist. Soft dark gray Silty CLAY; moist.	701.1			
14.0				Bottom of borehole at 14.0 feet.	700.0			



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PAGE 1 OF 1

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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 3/26/13COMPLETED 3/26/13BORING DIAMETER: 2" / 8"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274824 N; 13346623 E (US ST PLN 83)DRILLING METHOD MacroCore / 4.25" Hollow Stem AugerTOP OF CASING ELEV.: 721.17 feet NAVD88LOGGED BY MJFCHECKED BY FJBGROUND WATER ENCOUNTERED DURING DRILLING: 11.3 FEET BGS

NOTES

WATER LEVEL AFTER DRILLING: 10 FEET BGS

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Surface Elev. = 721.36 feet
0.9				Soft black TOPSOIL; trace medium to coarse grained sand; moist.	720.5			
1.6	MC 1	1.6		Soft dark brown fine to coarse grained Sandy CLAY; some silt; trace medium grained angular gravel; moist (FILL).	0.0		SB-9 (0'-2') Soil Sample Collected @ 1340 (Sample ID: S-R2330009-032613-MF-003)	Flush-mount Protective Casing Concrete
6.4				Medium stiff dark brown Silty CLAY; trace roots; moist (FILL).	715.0			
7.1				Compact Silty Clayey fine to medium grained SAND; trace roots; trace coarse grained subrounded sand; moist.	714.3			
7.9	MC 2	3.9		Medium stiff dark brown Silty CLAY; little roots; little mud cracks (filled with silt); moist.	713.5	0.0		Bentonite Seal (Medium Bentonite Chips)
11.3				Loose light gray fine grained SAND; little silt; wet.	710.1		SB-9 (10'-11') Soil Sample Collected @ 1350 (Sample ID: S-R2330009-032613-MF-005)	2-Inch Diameter PVC Riser
15.0	MC 3	3.8		(grading into)	706.4	0.0		Sand Filter Pack (K&E Well Gravel - WP1)
15.4				Compact light gray SILT; wet (high dilatancy).	706.0			
15.4				Soft dark gray Silty CLAY; trace silt partings (16.4' to 16.6'); moist.				2-Inch Diameter PVC Well Screen (10-Slot)
20.0	MC-DS 1	5.0			701.4	0.0		
20								

Bottom of borehole at 20.0 feet.



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BORING / WELL ID: SB-10 / MW-10

PAGE 1 OF 1

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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 3/25/13COMPLETED 3/25/13BORING DIAMETER: 2" / 8"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 275237 N; 13347440 E (US ST PLN 83)DRILLING METHOD MacroCore / 4.25" Hollow Stem AugerTOP OF CASING ELEV.: 727.87 feet NAVD88LOGGED BY MJFCHECKED BY FJBGROUND WATER ENCOUNTERED DURING DRILLING: 14 FEET BGS

NOTES

WATER LEVEL AFTER DRILLING: 13.5 FEET BGS

ENV BORING/WELL LOG (PID) - GINT STD US LAB.GDT - 9/30/13 14:54 - W:\PROJECTS\PROJECTS P-T\R2330009\ADMINISTRATION\BORING LOGS\R2330009 BORING LOGS.GPJ

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Aboveground Pro-Casing Surface Elev. = 724.69 feet
	MC 1	2.7		Soft dark brown Silty fine to medium grained SAND; trace fine grained angular gravel; dry.	0.0		SB-10 (0'-2') Soil Sample Collected @ 1015 (Sample ID: S-R2330009-032513-MF-007)	Concrete
5	MC 2	3.9		Soft dark brown Silty fine to medium grained SAND; trace fine grained angular gravel; dry.	0.0			2-Inch Diameter PVC Riser
				tan 8.2' to 9.3'				
10				trace roots and wood fragments; loamy; moist 9.3' to 10.8'				Bentonite Seal (Medium Bentonite Chips)
				10.6 Wood fragments.	714.1			
				10.9	713.8			
	MC 3	5.0		Soft dark brown Silty fine to medium grained SAND; trace fine grained angular gravel; dry.	0.0			
				12.8	711.9			
				Hard light brown Silty CLAY; trace to little roots; some fine to medium grained sand; moist.	710.7		SB-10 (13'-14') Soil Sample Collected @ 1045 (Sample ID: S-R2330009-032513-MF-009)	Sand Filter Pack (K&E Well Gravel - WP1)
15				Loose medium grained SAND (grading to fine grained SAND with depth); wet.				2-Inch Diameter PVC Well Screen (10-Slot)
	MC 4	5.0			0.0			
				18.7	706.0			
20				Soft to medium stiff dark gray laminated Silty CLAY; moist.	704.7			
				20.0				

Bottom of borehole at 20.0 feet.



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PAGE 1 OF 1

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CLIENT RACER TrustPROJECT NAME Van Buren LandfillPROJECT NUMBER R2330009PROJECT LOCATION Michigan and Ecorse, Van Buren Township, MIDATE STARTED 3/25/13COMPLETED 3/25/13BORING DIAMETER: 2" / 8"DRILLING CONTRACTOR MSGSURVEY COORDINATES: 274233 N; 13347713 E (US ST PLN 83)DRILLING METHOD MacroCore / 4.25" Hollow Stem AugerTOP OF CASING ELEV.: 721.97 feet NAVD88LOGGED BY MJFCHECKED BY FJBGROUND WATER ENCOUNTERED DURING DRILLING: 10 FEET BGS

NOTES

WATER LEVEL AFTER DRILLING: 6 FEET BGS

DEPTH (ft)	SAMPLE TYPE NUMBER	RECOVERY (FEET)	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	LABORATORY SAMPLE	REMARKS	WELL DIAGRAM
0								Aboveground Pro-Casing Surface Elev. = 719.31 feet
	MC 1	2.7		Soft black TOPSOIL; little to some roots; moist.	718.1		SB-12 (0'-2') Soil Sample Collected @ 1450 (Sample ID: S-R2330009-032513-MF-005)	Concrete
				Soft black/tan fine to medium grained Sandy CLAY; some silt; moist. trace glass fragments at 2.0'-2.3'	0.0			Bentonite Seal (Medium Bentonite Chips)
5	MC 2	4.2			0.0			2-Inch Diameter PVC Riser
10					709.3		SB-12 (8'-9') Soil Sample Collected @ 1500 (Sample ID: S-R2330009-032513-MF-007)	Sand Filter Pack (K&E Well Gravel - WP1)
	MC-DS 1	5.0		Loose gray medium to coarse grained subrounded SAND; wet.				2-Inch Diameter PVC Well Screen (10-Slot)
				(grading to)	707.0			
				Loose gray coarse grained rounded SAND AND fine grained subrounded GRAVEL; some fine to medim grained sand; wet.	705.6			
				(grading to)				
				Loose gray fine to medium grained SAND; wet.	704.3			
15	MC-DS 2	5.0		Soft gray Silty CLAY; moist.				
20					699.3			

Bottom of borehole at 20.0 feet.

ATTACHMENT 2

WATER WELL AND PUMP RECORDS



MAY 26 1976

WATER WELL RECORD

ACT 294

PA 1965

MICHIGAN DEPARTMENT
OF
PUBLIC HEALTH

1 LOCATION OF WELL

County

Township Name

Fraction

Section Number

Town Number

Range Number

Washtenaw

Lansing

1/4 NW 1/4 Sec 1

1

3 N 2

7 E W.

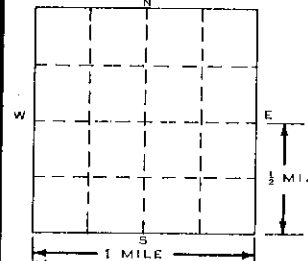
Distance And Direction from Road Intersections

Rawsonville Road and Michigan
Approx 2950 Michigan Ave

Street Address & City of Well Location

Locate with "X" in section below

Sketch Map:



US 12
800' = 800'
Rawsonville Rd
Perry Central RR

3 OWNER OF WELL:

Michigan Consolidated Gas Co.

Address One Woodward Ave.

Detroit 48226 Att: Mr. D. Beaver

4 WELL DEPTH: (completed) Date of Completion

80 ft. 10-7-75

5 ☒ Cable tool ☐ Rotary ☐ Driven ☐ Dug☐ Hollow rod ☐ Jetted ☐ Bored ☐6 USE: ☐ Domestic ☐ Public Supply ☐ Industry☐ Irrigation ☐ Air Conditioning ☐ Commercial☐ Test Well ☐7 CASING: Threaded ☒ Welded ☐

Diam. 8" Height: Above Surface 19.45 ft.

6 in. to 75-4 ft. Depth Weight 19.45 lbs./ft.

in. to ft. Depth Drive Shoe? Yes ☒ No ☐

8 SCREEN:

Johnson SS 6 inch

Type: Slot 5 Ft. Length

Set between 74-8" ft. and 80 ft.

Fittings: 5" X 18" nipple

9 STATIC WATER LEVEL

12 ft. below land surface

10 PUMPING LEVEL below land surface

18 ft. after 1 1/2 hrs. pumping 60 g.p.m.

ft. after hrs. pumping g.p.m.

11 WATER QUALITY in Parts Per Million:

Iron (Fe) 1.1 Chlorides (Cl) 68

Hardness 272 Other

12 WELL HEAD COMPLETION:

☐ In Approved Pit☒ Pitless Adapter ☐ 12" Above Grade13 Well Grouted? ☐ Yes ☒ No☐ Neat Cement ☐ Bentonite ☐

Depth: From ft. to ft.

14 Nearest Source of possible contamination

feet Direction unknown Type

Well disinfected upon completion ☒ Yes ☐ No

15 PUMP:

☐ Not installed

Manufacturer's Name Red Jacket

Model Number 500T4-5LB HP 5 Volts 230

Length of Drop Pipe 63 ft. capacity 85 G.P.M.

Type: ☒ Submersible☐ Jet☐ Reciprocating

USE A 2ND SHEET IF NEEDED

16 Remarks, elevation, source of data, etc.

Test Well

ADDED INFO BY DRILLER, ITEM NO.

CORRECTED BY

ADDITION BY

ELEVATION

DEPTH TO ROCK

17 WATER WELL CONTRACTOR'S CERTIFICATION:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

O.O. Corseaut Inc.

REGISTERED BUSINESS NAME

0025

REGISTRATION NO.

Address 15101 W. 11 Mile Road, Oak Park 48237

Signed

AUTHORIZED REPRESENTATIVE

Date Nov. 6, 1975

D67d

100M (Rev. 12-68)

GEOLOGICAL SURVEY COPY



Water Well And Pump Record



Completion is required under authority of Part 127 Act 368 PA 1978.

Failure to comply is a misdemeanor.

Import ID: 82737805001

Tax No: 82018010048301	Permit No:	County: Wayne	Township: Van Buren			
Well ID: 82000001335 Elevation: 701 ft. Latitude: 42.2595436951 Longitude: -83.5216597149 Method of Collection: Interpolation-Map		Town/Range: 03S 08E	Section: 5	Well Status:	WSSN:	Source ID/Well No:
		Distance and Direction from Road Intersection: LOUIE COCHRAN				
		Well Owner: ENGINEERED HOUSING CONCEPTS IN				
		Well Address: 6185 HANCOCK RD. BELLEVILLE, MI 48111		Owner Address: 23511 CLARK RD BELLEVILLE, MI 48111		

Drilling Method: Rotary Well Depth: 99.00 ft. Well Type: New Casing Type: PVC plastic Casing Joint: Unknown Casing Fitting: None Diameter: 5.00 in. to 95.00 ft. depth Borehole: 8.00 in. to 80.00 ft. depth				Pump Installed: No Pressure Tank Installed: No Pressure Relief Valve Installed: No																																
Well Use: Household Date Completed: 10/22/1991 Height: 0.00 ft. below grade				<table border="1"><thead><tr><th>Formation Description</th><th>Thickness</th><th>Depth to Bottom</th></tr></thead><tbody><tr><td>Yellow Sand</td><td>4.00</td><td>4.00</td></tr><tr><td>Gray Clay</td><td>82.00</td><td>86.00</td></tr><tr><td>Gravel Coarse</td><td>13.00</td><td>99.00</td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></tbody></table>			Formation Description	Thickness	Depth to Bottom	Yellow Sand	4.00	4.00	Gray Clay	82.00	86.00	Gravel Coarse	13.00	99.00																		
Formation Description	Thickness	Depth to Bottom																																		
Yellow Sand	4.00	4.00																																		
Gray Clay	82.00	86.00																																		
Gravel Coarse	13.00	99.00																																		
Static Water Level: 4.00 ft. Below Grade Well Yield Test: Yield Test Method: Unknown Pumping level 4.00 ft. after 2.00 hrs. at 24 GPM																																				
Screen Installed: Yes Filter Packed: No Screen Diameter: 4.00 in. Blank: 0.00 ft. Above Screen Material Type: <table><tr><td>Slot</td><td>Length</td><td>Set Between</td></tr><tr><td>35.00</td><td>4.00 ft.</td><td>95.00 ft. and 99.00 ft.</td></tr></table> Fittings: Neoprene packer				Slot	Length	Set Between	35.00	4.00 ft.	95.00 ft. and 99.00 ft.																											
Slot	Length	Set Between																																		
35.00	4.00 ft.	95.00 ft. and 99.00 ft.																																		
Well Grouted: Yes Grouting Method: Unknown <table><tr><td>Grouting Material</td><td>Bags</td><td>Additives</td><td>Depth</td></tr><tr><td>Bentonite slurry</td><td>0.00</td><td>None</td><td>0.00 ft. to 80.00 ft.</td></tr></table>				Grouting Material	Bags	Additives	Depth	Bentonite slurry	0.00	None	0.00 ft. to 80.00 ft.																									
Grouting Material	Bags	Additives	Depth																																	
Bentonite slurry	0.00	None	0.00 ft. to 80.00 ft.																																	
Wellhead Completion: Other, 12 inches above grade																																				
Nearest Source of Possible Contamination: <table><tr><td>Type</td><td>Distance</td><td>Direction</td></tr><tr><td>Septic tank</td><td>100 ft.</td><td>South</td></tr></table>				Type	Distance	Direction	Septic tank	100 ft.	South																											
Type	Distance	Direction																																		
Septic tank	100 ft.	South																																		
Drilling Machine Operator Name: KURT WING AND KENNY PEARCE Employment: Unknown																																				
Contractor Type: Unknown Reg No: 81-0524 Business Name: Business Address:																																				
Water Well Contractor's Certification This well was drilled under my supervision and this report is true to the best of my knowledge and belief. Signature of Registered Contractor Date																																				
General Remarks:																																				
Other Remarks: Wellhead Completion: 12 inch Above Grade																																				

ATTACHMENT 3

SOIL SAMPLE
LABORATORY ANALYTICAL DATA REPORTS



Work Order: 1304246

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

21-May-2013



Certificate No: MN 532786



21-May-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: **1304246**

Revision: **1**

Dear Frank,

ALS Environmental received 19 samples on 05-Apr-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 163.

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 Group An ALS Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1304246

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>
1304246-01	S-R2330009-032513-MJF-001	Soil		03/25/13 11:45	04/05/13 08:00	☐
1304246-02	S-R2330009-032513-MJF-002	Soil		03/25/13 12:15	04/05/13 08:00	☐
1304246-03	S-R2330009-032613-MJF-003	Soil		03/26/13 11:15	04/05/13 08:00	☒
1304246-04	S-R2330009-032613-MJF-004	Soil		03/26/13 11:45	04/05/13 08:00	☒
1304246-05	S-R2330009-040213-MJF-005	Soil		04/02/13 09:30	04/05/13 08:00	☐
1304246-06	S-R2330009-040213-MJF-006	Soil		04/02/13 10:00	04/05/13 08:00	☐
1304246-07	S-R2330009-032813-MJF-007	Soil		03/28/13 12:50	04/05/13 08:00	☒
1304246-08	S-R2330009-032813-MJF-008	Soil		03/28/13 13:20	04/05/13 08:00	☒
1304246-09	S-R2330009-040213-MJF-009	Soil		04/02/13 08:45	04/05/13 08:00	☐
1304246-10	S-R2330009-040213-MJF-010	Soil		04/02/13 08:50	04/05/13 08:00	☐
1304246-11	S-R2330009-032813-MJF-011	Soil		03/28/13 14:20	04/05/13 08:00	☐
1304246-12	S-R2330009-032613-MJF-012	Soil		03/26/13 13:40	04/05/13 08:00	☐
1304246-13	S-R2330009-032613-MJF-013	Soil		03/26/13 13:50	04/05/13 08:00	☐
1304246-14	S-R2330009-032513-MJF-014	Soil		03/25/13 10:15	04/05/13 08:00	☐
1304246-15	S-R2330009-032513-MJF-015	Soil		03/25/13 10:45	04/05/13 08:00	☐
1304246-16	S-R2330009-032613-MJF-016	Soil		03/26/13 09:00	04/05/13 08:00	☐
1304246-17	S-R2330009-032613-MJF-017	Soil		03/26/13 09:10	04/05/13 08:00	☐
1304246-18	S-R2330009-032513-MJF-018	Soil		03/25/13 14:50	04/05/13 08:00	☐
1304246-19	S-R2330009-032513-MJF-019	Soil		03/25/13 15:00	04/05/13 08:00	☐

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
WorkOrder: 1304246

**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 detected below quantitation 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
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
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
mg/Kg-dry	Milligrams per Kilogram Dry Weight

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1304246

Case Narrative**Analytical Comments:**

Batch R118497, Method MOISTURE: The hold time for Moisture analysis expired for several samples prior to receipt at the laboratory. The corresponding results are "H"-flagged and should be considered estimated.

The positive results for Methyl acetate, Methylcyclohexane, and Methylene chloride should be considered as sample artifacts and not inherent in the samples themselves, unless historical data from the site indicates otherwise. There were no observances of these analytes in the associated method blanks, therefore lab contamination is not suspected. The exact source of the artifacts are not able to be determined, but potential causes could be any of the following: sample collection equipment and procedures, sample storage and transport, and/or background laboratory levels due to routine analytical procedures or factors affecting the air handling system within the laboratory. These analytes are commonly found at low levels in environmental samples and positive results should be considered as estimated.

QC Comments:

Batch 47624, Method ICP_6020_S, Sample 1304246-01BMS: The MS and/or MSD recoveries were above the upper control limit. The corresponding results in the parent sample may be biased high for Barium, Vanadium, and Zinc.

Batch 47460, Method VOC_8260_S, Sample LCS-47460: 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 47576, Method VOC_8260_S, Sample LCS-47576: The LCS recoveries were above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 4-Methyl-2-pentanone and 1,2-Dibromoethane.

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-001
Collection Date: 03/25/13 11:45 AM

Work Order: 1304246
Lab ID: 1304246-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID:</u> 47500							
Aroclor 1016	U		38	43	µg/Kg-dry	1	04/09/13 14:11
Aroclor 1221	U		38	43	µg/Kg-dry	1	04/09/13 14:11
Aroclor 1232	U		38	43	µg/Kg-dry	1	04/09/13 14:11
Aroclor 1242	U		38	43	µg/Kg-dry	1	04/09/13 14:11
Aroclor 1248	U		38	43	µg/Kg-dry	1	04/09/13 14:11
Aroclor 1254	U		12	43	µg/Kg-dry	1	04/09/13 14:11
Aroclor 1260	U		12	43	µg/Kg-dry	1	04/09/13 14:11
Surr: Decachlorobiphenyl	86.1			40-140	%REC	1	04/09/13 14:11
Surr: Tetrachloro-m-xylene	79.1			45-124	%REC	1	04/09/13 14:11
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID:</u> 47602							
Mercury	0.022		0.00077	0.015	mg/Kg-dry	1	04/11/13 11:56
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID:</u> 47624							
Antimony	0.13	J	0.0016	0.40	mg/Kg-dry	1	04/13/13 03:33
Arsenic	3.2		0.055	0.16	mg/Kg-dry	1	04/12/13 21:49
Barium	25		0.011	0.40	mg/Kg-dry	1	04/12/13 21:49
Cadmium	0.15	J	0.0016	0.16	mg/Kg-dry	1	04/12/13 21:49
Chromium	6.4		0.066	0.40	mg/Kg-dry	1	04/13/13 03:33
Cobalt	2.5		0.0016	0.40	mg/Kg-dry	1	04/13/13 03:33
Copper	6.3		0.079	0.40	mg/Kg-dry	1	04/13/13 03:33
Iron	6,900		1.3	6.5	mg/Kg-dry	1	04/13/13 03:33
Lead	7.8		0.0016	0.40	mg/Kg-dry	1	04/12/13 21:49
Nickel	7.0		0.040	0.40	mg/Kg-dry	1	04/13/13 03:33
Selenium	0.29	J	0.052	0.32	mg/Kg-dry	1	04/13/13 03:33
Silver	0.011	J	0.0016	0.16	mg/Kg-dry	1	04/13/13 03:33
Thallium	0.091	J	0.0097	0.40	mg/Kg-dry	1	04/12/13 21:49
Vanadium	9.6		0.024	0.40	mg/Kg-dry	1	04/13/13 03:33
Zinc	19		0.034	0.81	mg/Kg-dry	1	04/13/13 03:33
<u>BatchID:</u> 47624							
Aluminum	3,800		0.51	4.0	mg/Kg-dry	5	04/15/13 20:19
Beryllium	0.28	J	0.016	0.81	mg/Kg-dry	5	04/14/13 02:46
Manganese	270		0.18	2.0	mg/Kg-dry	5	04/14/13 02:46
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/7/13	Analyst: HL
<u>BatchID:</u> 47480							
1,1'-Biphenyl	U		5.3	350	µg/Kg-dry	1	04/08/13 10:09

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-001
Collection Date: 03/25/13 11:45 AM

Work Order: 1304246
Lab ID: 1304246-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,5-Trichlorophenol	U		8.6	170	µg/Kg-dry	1	04/08/13 10:09
2,4,6-Trichlorophenol	U		8.6	170	µg/Kg-dry	1	04/08/13 10:09
2,4-Dichlorophenol	U		10	170	µg/Kg-dry	1	04/08/13 10:09
2,4-Dimethylphenol	U		44	350	µg/Kg-dry	1	04/08/13 10:09
2,4-Dinitrophenol	U		46	710	µg/Kg-dry	1	04/08/13 10:09
2,4-Dinitrotoluene	U		9.6	170	µg/Kg-dry	1	04/08/13 10:09
2,6-Dinitrotoluene	U		10	170	µg/Kg-dry	1	04/08/13 10:09
2-Chloronaphthalene	U		9.8	86	µg/Kg-dry	1	04/08/13 10:09
2-Chlorophenol	U		9.6	170	µg/Kg-dry	1	04/08/13 10:09
2-Methylnaphthalene	60	J	11	86	µg/Kg-dry	1	04/08/13 10:09
2-Methylphenol	U		10	170	µg/Kg-dry	1	04/08/13 10:09
2-Nitroaniline	U		8.2	710	µg/Kg-dry	1	04/08/13 10:09
2-Nitrophenol	U		9.4	170	µg/Kg-dry	1	04/08/13 10:09
3,3'-Dichlorobenzidine	U		10	710	µg/Kg-dry	1	04/08/13 10:09
3-Nitroaniline	U		87	710	µg/Kg-dry	1	04/08/13 10:09
4,6-Dinitro-2-methylphenol	U		52	350	µg/Kg-dry	1	04/08/13 10:09
4-Bromophenyl phenyl ether	U		9.3	170	µg/Kg-dry	1	04/08/13 10:09
4-Chloro-3-methylphenol	U		9.7	170	µg/Kg-dry	1	04/08/13 10:09
4-Chloroaniline	U		14	350	µg/Kg-dry	1	04/08/13 10:09
4-Chlorophenyl phenyl ether	U		9.8	170	µg/Kg-dry	1	04/08/13 10:09
4-Methylphenol	U		11	170	µg/Kg-dry	1	04/08/13 10:09
4-Nitroaniline	U		16	710	µg/Kg-dry	1	04/08/13 10:09
4-Nitrophenol	U		43	710	µg/Kg-dry	1	04/08/13 10:09
Acenaphthene	U		9.8	32	µg/Kg-dry	1	04/08/13 10:09
Acenaphthylene	U		10	32	µg/Kg-dry	1	04/08/13 10:09
Acetophenone	U		5.4	350	µg/Kg-dry	1	04/08/13 10:09
Anthracene	U		11	32	µg/Kg-dry	1	04/08/13 10:09
Atrazine	U		11	54	µg/Kg-dry	1	04/08/13 10:09
Benzaldehyde	U		14	350	µg/Kg-dry	1	04/08/13 10:09
Benzo(a)anthracene	26	J	13	32	µg/Kg-dry	1	04/08/13 10:09
Benzo(a)pyrene	21	J	17	32	µg/Kg-dry	1	04/08/13 10:09
Benzo(b)fluoranthene	43		17	32	µg/Kg-dry	1	04/08/13 10:09
Benzo(g,h,i)perylene	U		25	32	µg/Kg-dry	1	04/08/13 10:09
Benzo(k)fluoranthene	U		15	32	µg/Kg-dry	1	04/08/13 10:09
Bis(2-chloroethoxy)methane	U		8.8	170	µg/Kg-dry	1	04/08/13 10:09
Bis(2-chloroethyl)ether	U		9.0	170	µg/Kg-dry	1	04/08/13 10:09
Bis(2-chloroisopropyl)ether	U		8.4	170	µg/Kg-dry	1	04/08/13 10:09
Bis(2-ethylhexyl)phthalate	78	J	11	350	µg/Kg-dry	1	04/08/13 10:09
Butyl benzyl phthalate	U		15	170	µg/Kg-dry	1	04/08/13 10:09
Caprolactam	87	J	16	350	µg/Kg-dry	1	04/08/13 10:09

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-001
Collection Date: 03/25/13 11:45 AM

Work Order: 1304246
Lab ID: 1304246-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Carbazole	U		12	170	µg/Kg-dry	1	04/08/13 10:09
Chrysene	44		12	32	µg/Kg-dry	1	04/08/13 10:09
Dibenzo(a,h)anthracene	U		18	32	µg/Kg-dry	1	04/08/13 10:09
Dibenzofuran	20	J	9.8	170	µg/Kg-dry	1	04/08/13 10:09
Diethyl phthalate	U		8.9	350	µg/Kg-dry	1	04/08/13 10:09
Dimethyl phthalate	U		9.0	350	µg/Kg-dry	1	04/08/13 10:09
Di-n-butyl phthalate	29	J	11	350	µg/Kg-dry	1	04/08/13 10:09
Di-n-octyl phthalate	33	J	13	170	µg/Kg-dry	1	04/08/13 10:09
Fluoranthene	51		13	32	µg/Kg-dry	1	04/08/13 10:09
Fluorene	U		9.4	32	µg/Kg-dry	1	04/08/13 10:09
Hexachlorobenzene	U		9.8	170	µg/Kg-dry	1	04/08/13 10:09
Hexachlorobutadiene	U		9.1	54	µg/Kg-dry	1	04/08/13 10:09
Hexachlorocyclopentadiene	U		37	350	µg/Kg-dry	1	04/08/13 10:09
Hexachloroethane	U		9.4	170	µg/Kg-dry	1	04/08/13 10:09
Indeno(1,2,3-cd)pyrene	U		20	32	µg/Kg-dry	1	04/08/13 10:09
Isophorone	U		9.3	170	µg/Kg-dry	1	04/08/13 10:09
Naphthalene	43		9.2	32	µg/Kg-dry	1	04/08/13 10:09
Nitrobenzene	U		9.3	170	µg/Kg-dry	1	04/08/13 10:09
N-Nitrosodi-n-propylamine	U		9.4	170	µg/Kg-dry	1	04/08/13 10:09
N-Nitrosodiphenylamine	U		64	170	µg/Kg-dry	1	04/08/13 10:09
Pentachlorophenol	U		16	21	µg/Kg-dry	1	04/08/13 10:09
Phenanthrene	77		32	32	µg/Kg-dry	1	04/08/13 10:09
Phenol	U		9.1	170	µg/Kg-dry	1	04/08/13 10:09
Pyrene	48		13	32	µg/Kg-dry	1	04/08/13 10:09
Surr: 2,4,6-Tribromophenol	73.7			34-140	%REC	1	04/08/13 10:09
Surr: 2-Fluorobiphenyl	71.7			12-100	%REC	1	04/08/13 10:09
Surr: 2-Fluorophenol	84.6			33-117	%REC	1	04/08/13 10:09
Surr: 4-Terphenyl-d14	112			25-137	%REC	1	04/08/13 10:09
Surr: Nitrobenzene-d5	71.0			37-107	%REC	1	04/08/13 10:09
Surr: Phenol-d6	83.6			40-106	%REC	1	04/08/13 10:09
VOLATILE ORGANIC COMPOUNDS		SW8260			Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane	U		13	33	µg/Kg-dry	1	04/06/13 06:00
1,1,2,2-Tetrachloroethane	U		15	33	µg/Kg-dry	1	04/06/13 06:00
1,1,2-Trichloroethane	U		12	33	µg/Kg-dry	1	04/06/13 06:00
1,1,2-Trichlorotrifluoroethane	U		12	33	µg/Kg-dry	1	04/06/13 06:00
1,1-Dichloroethane	U		12	33	µg/Kg-dry	1	04/06/13 06:00
1,1-Dichloroethene	U		14	33	µg/Kg-dry	1	04/06/13 06:00
1,2,4-Trichlorobenzene	U		17	33	µg/Kg-dry	1	04/06/13 06:00

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-001
Collection Date: 03/25/13 11:45 AM

Work Order: 1304246
Lab ID: 1304246-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromo-3-chloropropane	U		16	33	µg/Kg-dry	1	04/06/13 06:00
1,2-Dibromoethane	U		13	33	µg/Kg-dry	1	04/06/13 06:00
1,2-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 06:00
1,2-Dichloroethane	U		16	33	µg/Kg-dry	1	04/06/13 06:00
1,2-Dichloropropane	U		11	33	µg/Kg-dry	1	04/06/13 06:00
1,3-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 06:00
1,4-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 06:00
2-Butanone	U		82	220	µg/Kg-dry	1	04/06/13 06:00
2-Hexanone	U		8.1	33	µg/Kg-dry	1	04/06/13 06:00
4-Methyl-2-pentanone	U		11	33	µg/Kg-dry	1	04/06/13 06:00
Acetone	U		70	110	µg/Kg-dry	1	04/06/13 06:00
Benzene	U		13	33	µg/Kg-dry	1	04/06/13 06:00
Bromodichloromethane	U		7.4	33	µg/Kg-dry	1	04/06/13 06:00
Bromoform	U		6.5	33	µg/Kg-dry	1	04/06/13 06:00
Bromomethane	U		13	83	µg/Kg-dry	1	04/06/13 06:00
Carbon disulfide	U		16	33	µg/Kg-dry	1	04/06/13 06:00
Carbon tetrachloride	U		9.4	33	µg/Kg-dry	1	04/06/13 06:00
Chlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 06:00
Chloroethane	U		70	110	µg/Kg-dry	1	04/06/13 06:00
Chloroform	U		14	33	µg/Kg-dry	1	04/06/13 06:00
Chloromethane	U		18	110	µg/Kg-dry	1	04/06/13 06:00
cis-1,2-Dichloroethene	U		13	33	µg/Kg-dry	1	04/06/13 06:00
cis-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/06/13 06:00
Cyclohexane	U		15	33	µg/Kg-dry	1	04/06/13 06:00
Dibromochloromethane	U		6.1	33	µg/Kg-dry	1	04/06/13 06:00
Dichlorodifluoromethane	U		15	33	µg/Kg-dry	1	04/06/13 06:00
Ethylbenzene	U		12	33	µg/Kg-dry	1	04/06/13 06:00
Isopropylbenzene	U		14	33	µg/Kg-dry	1	04/06/13 06:00
Methyl acetate	U		44	220	µg/Kg-dry	1	04/06/13 06:00
Methyl tert-butyl ether	U		14	33	µg/Kg-dry	1	04/06/13 06:00
Methylcyclohexane	U		15	33	µg/Kg-dry	1	04/06/13 06:00
Methylene chloride	U		13	33	µg/Kg-dry	1	04/06/13 06:00
Styrene	U		12	33	µg/Kg-dry	1	04/06/13 06:00
Tetrachloroethene	U		15	33	µg/Kg-dry	1	04/06/13 06:00
Toluene	U		12	33	µg/Kg-dry	1	04/06/13 06:00
trans-1,2-Dichloroethene	U		10	33	µg/Kg-dry	1	04/06/13 06:00
trans-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/06/13 06:00
Trichloroethene	U		15	33	µg/Kg-dry	1	04/06/13 06:00
Trichlorofluoromethane	U		9.1	33	µg/Kg-dry	1	04/06/13 06:00
Vinyl chloride	U		15	33	µg/Kg-dry	1	04/06/13 06:00

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-001
Collection Date: 03/25/13 11:45 AM

Work Order: 1304246
Lab ID: 1304246-01
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Xylenes, Total	U		39	99	µg/Kg-dry	1	04/06/13 06:00
Surr: 1,2-Dichloroethane-d4	94.8			70-130	%REC	1	04/06/13 06:00
Surr: 4-Bromofluorobenzene	95.6			70-130	%REC	1	04/06/13 06:00
Surr: Dibromofluoromethane	94.8			70-130	%REC	1	04/06/13 06:00
Surr: Toluene-d8	94.4			70-130	%REC	1	04/06/13 06:00
CYANIDE, TOTAL			SW9012A		Prep: SW9014 / 4/8/13		Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.096	J	0.029	0.55	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	9.4	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-002
Collection Date: 03/25/13 12:15 PM

Work Order: 1304246
Lab ID: 1304246-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		38	43	µg/Kg-dry	1	04/09/13 14:31
Aroclor 1221	U		38	43	µg/Kg-dry	1	04/09/13 14:31
Aroclor 1232	U		38	43	µg/Kg-dry	1	04/09/13 14:31
Aroclor 1242	U		38	43	µg/Kg-dry	1	04/09/13 14:31
Aroclor 1248	U		38	43	µg/Kg-dry	1	04/09/13 14:31
Aroclor 1254	U		12	43	µg/Kg-dry	1	04/09/13 14:31
Aroclor 1260	U		12	43	µg/Kg-dry	1	04/09/13 14:31
Surr: Decachlorobiphenyl	90.1			40-140	%REC	1	04/09/13 14:31
Surr: Tetrachloro-m-xylene	81.1			45-124	%REC	1	04/09/13 14:31
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.031		0.00089	0.018	mg/Kg-dry	1	04/11/13 11:58
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	3,600		0.45	3.5	mg/Kg-dry	5	04/15/13 20:55
Antimony	0.10	J	0.0071	1.8	mg/Kg-dry	5	04/14/13 03:04
Arsenic	3.3		0.24	0.71	mg/Kg-dry	5	04/14/13 03:04
Barium	18		0.049	1.8	mg/Kg-dry	5	04/14/13 03:04
Beryllium	0.22	J	0.014	0.71	mg/Kg-dry	5	04/14/13 03:04
Cadmium	0.13	J	0.0071	0.71	mg/Kg-dry	5	04/14/13 03:04
Chromium	8.5		0.29	1.8	mg/Kg-dry	5	04/14/13 03:04
Cobalt	2.7		0.0071	1.8	mg/Kg-dry	5	04/14/13 03:04
Copper	7.5		0.35	1.8	mg/Kg-dry	5	04/14/13 03:04
Iron	8,400		5.9	28	mg/Kg-dry	5	04/15/13 20:55
Lead	5.2		0.0071	1.8	mg/Kg-dry	5	04/14/13 03:04
Manganese	200		0.16	1.8	mg/Kg-dry	5	04/14/13 03:04
Nickel	7.9		0.18	1.8	mg/Kg-dry	5	04/14/13 03:04
Selenium	U		0.23	1.4	mg/Kg-dry	5	04/14/13 03:04
Silver	0.018	J	0.0071	0.71	mg/Kg-dry	5	04/14/13 03:04
Thallium	0.11	J	0.042	1.8	mg/Kg-dry	5	04/14/13 03:04
Vanadium	11		0.11	1.8	mg/Kg-dry	5	04/14/13 03:04
Zinc	21		0.15	3.5	mg/Kg-dry	5	04/14/13 03:04
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/7/13	Analyst: HL
<u>BatchID: 47480</u>							
1,1'-Biphenyl	U		5.3	350	µg/Kg-dry	1	04/08/13 12:15
2,4,5-Trichlorophenol	U		8.5	170	µg/Kg-dry	1	04/08/13 12:15

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-002
Collection Date: 03/25/13 12:15 PM

Work Order: 1304246
Lab ID: 1304246-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.5	170	µg/Kg-dry	1	04/08/13 12:15
2,4-Dichlorophenol	U		10	170	µg/Kg-dry	1	04/08/13 12:15
2,4-Dimethylphenol	U		43	350	µg/Kg-dry	1	04/08/13 12:15
2,4-Dinitrophenol	U		45	700	µg/Kg-dry	1	04/08/13 12:15
2,4-Dinitrotoluene	U		9.5	170	µg/Kg-dry	1	04/08/13 12:15
2,6-Dinitrotoluene	U		10	170	µg/Kg-dry	1	04/08/13 12:15
2-Chloronaphthalene	U		9.7	85	µg/Kg-dry	1	04/08/13 12:15
2-Chlorophenol	U		9.5	170	µg/Kg-dry	1	04/08/13 12:15
2-Methylnaphthalene	U		10	85	µg/Kg-dry	1	04/08/13 12:15
2-Methylphenol	U		10	170	µg/Kg-dry	1	04/08/13 12:15
2-Nitroaniline	U		8.1	700	µg/Kg-dry	1	04/08/13 12:15
2-Nitrophenol	U		9.3	170	µg/Kg-dry	1	04/08/13 12:15
3,3'-Dichlorobenzidine	U		9.9	700	µg/Kg-dry	1	04/08/13 12:15
3-Nitroaniline	U		87	700	µg/Kg-dry	1	04/08/13 12:15
4,6-Dinitro-2-methylphenol	U		51	350	µg/Kg-dry	1	04/08/13 12:15
4-Bromophenyl phenyl ether	U		9.3	170	µg/Kg-dry	1	04/08/13 12:15
4-Chloro-3-methylphenol	U		9.6	170	µg/Kg-dry	1	04/08/13 12:15
4-Chloroaniline	U		14	350	µg/Kg-dry	1	04/08/13 12:15
4-Chlorophenyl phenyl ether	U		9.7	170	µg/Kg-dry	1	04/08/13 12:15
4-Methylphenol	U		10	170	µg/Kg-dry	1	04/08/13 12:15
4-Nitroaniline	U		16	700	µg/Kg-dry	1	04/08/13 12:15
4-Nitrophenol	U		43	700	µg/Kg-dry	1	04/08/13 12:15
Acenaphthene	U		9.7	32	µg/Kg-dry	1	04/08/13 12:15
Acenaphthylene	U		10	32	µg/Kg-dry	1	04/08/13 12:15
Acetophenone	U		5.3	350	µg/Kg-dry	1	04/08/13 12:15
Anthracene	U		11	32	µg/Kg-dry	1	04/08/13 12:15
Atrazine	U		11	53	µg/Kg-dry	1	04/08/13 12:15
Benzaldehyde	U		14	350	µg/Kg-dry	1	04/08/13 12:15
Benzo(a)anthracene	U		13	32	µg/Kg-dry	1	04/08/13 12:15
Benzo(a)pyrene	U		16	32	µg/Kg-dry	1	04/08/13 12:15
Benzo(b)fluoranthene	31	J	17	32	µg/Kg-dry	1	04/08/13 12:15
Benzo(g,h,i)perylene	U		25	32	µg/Kg-dry	1	04/08/13 12:15
Benzo(k)fluoranthene	U		14	32	µg/Kg-dry	1	04/08/13 12:15
Bis(2-chloroethoxy)methane	U		8.7	170	µg/Kg-dry	1	04/08/13 12:15
Bis(2-chloroethyl)ether	U		8.9	170	µg/Kg-dry	1	04/08/13 12:15
Bis(2-chloroisopropyl)ether	U		8.3	170	µg/Kg-dry	1	04/08/13 12:15
Bis(2-ethylhexyl)phthalate	20	J	11	350	µg/Kg-dry	1	04/08/13 12:15
Butyl benzyl phthalate	U		15	170	µg/Kg-dry	1	04/08/13 12:15
Caprolactam	U		15	350	µg/Kg-dry	1	04/08/13 12:15
Carbazole	U		12	170	µg/Kg-dry	1	04/08/13 12:15

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-002
Collection Date: 03/25/13 12:15 PM

Work Order: 1304246
Lab ID: 1304246-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	23	J	12	32	µg/Kg-dry	1	04/08/13 12:15
Dibenzo(a,h)anthracene	U		18	32	µg/Kg-dry	1	04/08/13 12:15
Dibenzofuran	U		9.7	170	µg/Kg-dry	1	04/08/13 12:15
Diethyl phthalate	U		8.8	350	µg/Kg-dry	1	04/08/13 12:15
Dimethyl phthalate	U		8.9	350	µg/Kg-dry	1	04/08/13 12:15
Di-n-butyl phthalate	38	J	11	350	µg/Kg-dry	1	04/08/13 12:15
Di-n-octyl phthalate	34	J	13	170	µg/Kg-dry	1	04/08/13 12:15
Fluoranthene	22	J	13	32	µg/Kg-dry	1	04/08/13 12:15
Fluorene	U		9.3	32	µg/Kg-dry	1	04/08/13 12:15
Hexachlorobenzene	U		9.7	170	µg/Kg-dry	1	04/08/13 12:15
Hexachlorobutadiene	U		9.0	53	µg/Kg-dry	1	04/08/13 12:15
Hexachlorocyclopentadiene	U		37	350	µg/Kg-dry	1	04/08/13 12:15
Hexachloroethane	U		9.3	170	µg/Kg-dry	1	04/08/13 12:15
Indeno(1,2,3-cd)pyrene	U		20	32	µg/Kg-dry	1	04/08/13 12:15
Isophorone	U		9.2	170	µg/Kg-dry	1	04/08/13 12:15
Naphthalene	U		9.1	32	µg/Kg-dry	1	04/08/13 12:15
Nitrobenzene	U		9.2	170	µg/Kg-dry	1	04/08/13 12:15
N-Nitrosodi-n-propylamine	U		9.3	170	µg/Kg-dry	1	04/08/13 12:15
N-Nitrosodiphenylamine	U		63	170	µg/Kg-dry	1	04/08/13 12:15
Pentachlorophenol	U		16	21	µg/Kg-dry	1	04/08/13 12:15
Phenanthrene	U		32	32	µg/Kg-dry	1	04/08/13 12:15
Phenol	U		9.0	170	µg/Kg-dry	1	04/08/13 12:15
Pyrene	20	J	13	32	µg/Kg-dry	1	04/08/13 12:15
Surr: 2,4,6-Tribromophenol	75.0			34-140	%REC	1	04/08/13 12:15
Surr: 2-Fluorobiphenyl	71.7			12-100	%REC	1	04/08/13 12:15
Surr: 2-Fluorophenol	87.0			33-117	%REC	1	04/08/13 12:15
Surr: 4-Terphenyl-d14	107			25-137	%REC	1	04/08/13 12:15
Surr: Nitrobenzene-d5	72.0			37-107	%REC	1	04/08/13 12:15
Surr: Phenol-d6	84.5			40-106	%REC	1	04/08/13 12:15
VOLATILE ORGANIC COMPOUNDS			SW8260	Prep: SW5035 / 4/5/13		Analyst: AK	
<u>BatchID: 47460</u>							
1,1,1-Trichloroethane	U		13	33	µg/Kg-dry	1	04/05/13 20:28
1,1,2,2-Tetrachloroethane	U		15	33	µg/Kg-dry	1	04/05/13 20:28
1,1,2-Trichloroethane	U		12	33	µg/Kg-dry	1	04/05/13 20:28
1,1,2-Trichlorotrifluoroethane	U		12	33	µg/Kg-dry	1	04/05/13 20:28
1,1-Dichloroethane	U		12	33	µg/Kg-dry	1	04/05/13 20:28
1,1-Dichloroethene	U		14	33	µg/Kg-dry	1	04/05/13 20:28
1,2,4-Trichlorobenzene	U		17	33	µg/Kg-dry	1	04/05/13 20:28
1,2-Dibromo-3-chloropropane	U		16	33	µg/Kg-dry	1	04/05/13 20:28

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-002
Collection Date: 03/25/13 12:15 PM

Work Order: 1304246
Lab ID: 1304246-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		13	33	µg/Kg-dry	1	04/05/13 20:28
1,2-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/05/13 20:28
1,2-Dichloroethane	U		16	33	µg/Kg-dry	1	04/05/13 20:28
1,2-Dichloropropane	U		11	33	µg/Kg-dry	1	04/05/13 20:28
1,3-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/05/13 20:28
1,4-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/05/13 20:28
2-Butanone	U		82	220	µg/Kg-dry	1	04/05/13 20:28
2-Hexanone	U		8.1	33	µg/Kg-dry	1	04/05/13 20:28
4-Methyl-2-pentanone	U		11	33	µg/Kg-dry	1	04/05/13 20:28
Acetone	U		70	110	µg/Kg-dry	1	04/05/13 20:28
Benzene	U		13	33	µg/Kg-dry	1	04/05/13 20:28
Bromodichloromethane	U		7.4	33	µg/Kg-dry	1	04/05/13 20:28
Bromoform	U		6.5	33	µg/Kg-dry	1	04/05/13 20:28
Bromomethane	U		13	83	µg/Kg-dry	1	04/05/13 20:28
Carbon disulfide	U		16	33	µg/Kg-dry	1	04/05/13 20:28
Carbon tetrachloride	U		9.4	33	µg/Kg-dry	1	04/05/13 20:28
Chlorobenzene	U		13	33	µg/Kg-dry	1	04/05/13 20:28
Chloroethane	U		70	110	µg/Kg-dry	1	04/05/13 20:28
Chloroform	U		14	33	µg/Kg-dry	1	04/05/13 20:28
Chloromethane	U		18	110	µg/Kg-dry	1	04/05/13 20:28
cis-1,2-Dichloroethene	U		13	33	µg/Kg-dry	1	04/05/13 20:28
cis-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/05/13 20:28
Cyclohexane	U		15	33	µg/Kg-dry	1	04/05/13 20:28
Dibromochloromethane	U		6.1	33	µg/Kg-dry	1	04/05/13 20:28
Dichlorodifluoromethane	U		15	33	µg/Kg-dry	1	04/05/13 20:28
Ethylbenzene	U		12	33	µg/Kg-dry	1	04/05/13 20:28
Isopropylbenzene	U		14	33	µg/Kg-dry	1	04/05/13 20:28
Methyl acetate	U		44	220	µg/Kg-dry	1	04/05/13 20:28
Methyl tert-butyl ether	U		14	33	µg/Kg-dry	1	04/05/13 20:28
Methylcyclohexane	U		15	33	µg/Kg-dry	1	04/05/13 20:28
Methylene chloride	U		13	33	µg/Kg-dry	1	04/05/13 20:28
Styrene	U		12	33	µg/Kg-dry	1	04/05/13 20:28
Tetrachloroethene	U		15	33	µg/Kg-dry	1	04/05/13 20:28
Toluene	U		12	33	µg/Kg-dry	1	04/05/13 20:28
trans-1,2-Dichloroethene	U		10	33	µg/Kg-dry	1	04/05/13 20:28
trans-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/05/13 20:28
Trichloroethene	U		15	33	µg/Kg-dry	1	04/05/13 20:28
Trichlorofluoromethane	U		9.1	33	µg/Kg-dry	1	04/05/13 20:28
Vinyl chloride	U		15	33	µg/Kg-dry	1	04/05/13 20:28
Xylenes, Total	U		39	99	µg/Kg-dry	1	04/05/13 20:28

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-002
Collection Date: 03/25/13 12:15 PM

Work Order: 1304246
Lab ID: 1304246-02
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	95.9			70-130	%REC	1	04/05/13 20:28
Surr: 4-Bromofluorobenzene	97.0			70-130	%REC	1	04/05/13 20:28
Surr: Dibromofluoromethane	92.1			70-130	%REC	1	04/05/13 20:28
Surr: Toluene-d8	96.0			70-130	%REC	1	04/05/13 20:28
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.085	J	0.028	0.54	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	9.2	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 10 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-005
Collection Date: 04/02/13 09:30 AM

Work Order: 1304246
Lab ID: 1304246-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/10/13	Analyst: JD
<u>BatchID: 47577</u>							
Aroclor 1016	U		40	44	µg/Kg-dry	1	04/11/13 08:21
Aroclor 1221	U		40	44	µg/Kg-dry	1	04/11/13 08:21
Aroclor 1232	U		40	44	µg/Kg-dry	1	04/11/13 08:21
Aroclor 1242	U		40	44	µg/Kg-dry	1	04/11/13 08:21
Aroclor 1248	U		40	44	µg/Kg-dry	1	04/11/13 08:21
Aroclor 1254	U		12	44	µg/Kg-dry	1	04/11/13 08:21
Aroclor 1260	U		12	44	µg/Kg-dry	1	04/11/13 08:21
Surr: Decachlorobiphenyl	88.1			40-140	%REC	1	04/11/13 08:21
Surr: Tetrachloro-m-xylene	81.1			45-124	%REC	1	04/11/13 08:21
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.027		0.00078	0.016	mg/Kg-dry	1	04/11/13 12:06
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	5,000		0.47	3.7	mg/Kg-dry	5	04/15/13 21:02
Antimony	0.19	J	0.0074	1.9	mg/Kg-dry	5	04/14/13 03:29
Arsenic	11		0.25	0.74	mg/Kg-dry	5	04/14/13 03:29
Barium	27		0.052	1.9	mg/Kg-dry	5	04/14/13 03:29
Beryllium	0.32	J	0.015	0.74	mg/Kg-dry	5	04/14/13 03:29
Cadmium	0.23	J	0.0074	0.74	mg/Kg-dry	5	04/14/13 03:29
Chromium	8.8		0.30	1.9	mg/Kg-dry	5	04/14/13 03:29
Cobalt	3.6		0.0074	1.9	mg/Kg-dry	5	04/14/13 03:29
Copper	11		0.36	1.9	mg/Kg-dry	5	04/14/13 03:29
Iron	15,000		6.2	30	mg/Kg-dry	5	04/15/13 21:02
Lead	16		0.0074	1.9	mg/Kg-dry	5	04/14/13 03:29
Manganese	380		0.16	1.9	mg/Kg-dry	5	04/14/13 03:29
Nickel	11		0.19	1.9	mg/Kg-dry	5	04/14/13 03:29
Selenium	0.32	J	0.24	1.5	mg/Kg-dry	5	04/14/13 03:29
Silver	0.021	J	0.0074	0.74	mg/Kg-dry	5	04/14/13 03:29
Thallium	0.13	J	0.044	1.9	mg/Kg-dry	5	04/14/13 03:29
Vanadium	16		0.11	1.9	mg/Kg-dry	5	04/14/13 03:29
Zinc	34		0.16	3.7	mg/Kg-dry	5	04/14/13 03:29
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/9/13	Analyst: RM
<u>BatchID: 47525</u>							
1,1'-Biphenyl	U		5.5	370	µg/Kg-dry	1	04/11/13 12:16
2,4,5-Trichlorophenol	U		8.8	180	µg/Kg-dry	1	04/11/13 12:16

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-005
Collection Date: 04/02/13 09:30 AM

Work Order: 1304246
Lab ID: 1304246-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.8	180	µg/Kg-dry	1	04/11/13 12:16
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	04/11/13 12:16
2,4-Dimethylphenol	U		45	370	µg/Kg-dry	1	04/11/13 12:16
2,4-Dinitrophenol	U		47	730	µg/Kg-dry	1	04/11/13 12:16
2,4-Dinitrotoluene	U		9.9	180	µg/Kg-dry	1	04/11/13 12:16
2,6-Dinitrotoluene	U		10	180	µg/Kg-dry	1	04/11/13 12:16
2-Chloronaphthalene	U		10	89	µg/Kg-dry	1	04/11/13 12:16
2-Chlorophenol	U		9.9	180	µg/Kg-dry	1	04/11/13 12:16
2-Methylnaphthalene	U		11	89	µg/Kg-dry	1	04/11/13 12:16
2-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 12:16
2-Nitroaniline	U		8.4	730	µg/Kg-dry	1	04/11/13 12:16
2-Nitrophenol	U		9.6	180	µg/Kg-dry	1	04/11/13 12:16
3,3'-Dichlorobenzidine	U		10	730	µg/Kg-dry	1	04/11/13 12:16
3-Nitroaniline	U		90	730	µg/Kg-dry	1	04/11/13 12:16
4,6-Dinitro-2-methylphenol	U		53	370	µg/Kg-dry	1	04/11/13 12:16
4-Bromophenyl phenyl ether	U		9.6	180	µg/Kg-dry	1	04/11/13 12:16
4-Chloro-3-methylphenol	U		10	180	µg/Kg-dry	1	04/11/13 12:16
4-Chloroaniline	U		14	370	µg/Kg-dry	1	04/11/13 12:16
4-Chlorophenyl phenyl ether	U		10	180	µg/Kg-dry	1	04/11/13 12:16
4-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 12:16
4-Nitroaniline	U		16	730	µg/Kg-dry	1	04/11/13 12:16
4-Nitrophenol	U		45	730	µg/Kg-dry	1	04/11/13 12:16
Acenaphthene	U		10	33	µg/Kg-dry	1	04/11/13 12:16
Acenaphthylene	U		10	33	µg/Kg-dry	1	04/11/13 12:16
Acetophenone	U		5.5	370	µg/Kg-dry	1	04/11/13 12:16
Anthracene	U		11	33	µg/Kg-dry	1	04/11/13 12:16
Atrazine	U		11	55	µg/Kg-dry	1	04/11/13 12:16
Benzaldehyde	U		14	370	µg/Kg-dry	1	04/11/13 12:16
Benzo(a)anthracene	30	J	13	33	µg/Kg-dry	1	04/11/13 12:16
Benzo(a)pyrene	25	J	17	33	µg/Kg-dry	1	04/11/13 12:16
Benzo(b)fluoranthene	42		18	33	µg/Kg-dry	1	04/11/13 12:16
Benzo(g,h,i)perylene	U		26	33	µg/Kg-dry	1	04/11/13 12:16
Benzo(k)fluoranthene	27	J	15	33	µg/Kg-dry	1	04/11/13 12:16
Bis(2-chloroethoxy)methane	U		9.1	180	µg/Kg-dry	1	04/11/13 12:16
Bis(2-chloroethyl)ether	U		9.2	180	µg/Kg-dry	1	04/11/13 12:16
Bis(2-chloroisopropyl)ether	U		8.6	180	µg/Kg-dry	1	04/11/13 12:16
Bis(2-ethylhexyl)phthalate	U		11	370	µg/Kg-dry	1	04/11/13 12:16
Butyl benzyl phthalate	U		15	180	µg/Kg-dry	1	04/11/13 12:16
Caprolactam	U		16	370	µg/Kg-dry	1	04/11/13 12:16
Carbazole	U		13	180	µg/Kg-dry	1	04/11/13 12:16

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-005
Collection Date: 04/02/13 09:30 AM

Work Order: 1304246
Lab ID: 1304246-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	42		13	33	µg/Kg-dry	1	04/11/13 12:16
Dibenzo(a,h)anthracene	U		19	33	µg/Kg-dry	1	04/11/13 12:16
Dibenzofuran	U		10	180	µg/Kg-dry	1	04/11/13 12:16
Diethyl phthalate	U		9.2	370	µg/Kg-dry	1	04/11/13 12:16
Dimethyl phthalate	U		9.2	370	µg/Kg-dry	1	04/11/13 12:16
Di-n-butyl phthalate	U		11	370	µg/Kg-dry	1	04/11/13 12:16
Di-n-octyl phthalate	U		14	180	µg/Kg-dry	1	04/11/13 12:16
Fluoranthene	43		13	33	µg/Kg-dry	1	04/11/13 12:16
Fluorene	U		9.7	33	µg/Kg-dry	1	04/11/13 12:16
Hexachlorobenzene	U		10	180	µg/Kg-dry	1	04/11/13 12:16
Hexachlorobutadiene	U		9.3	55	µg/Kg-dry	1	04/11/13 12:16
Hexachlorocyclopentadiene	U		39	370	µg/Kg-dry	1	04/11/13 12:16
Hexachloroethane	U		9.7	180	µg/Kg-dry	1	04/11/13 12:16
Indeno(1,2,3-cd)pyrene	U		21	33	µg/Kg-dry	1	04/11/13 12:16
Isophorone	U		9.6	180	µg/Kg-dry	1	04/11/13 12:16
Naphthalene	U		9.4	33	µg/Kg-dry	1	04/11/13 12:16
Nitrobenzene	U		9.6	180	µg/Kg-dry	1	04/11/13 12:16
N-Nitrosodi-n-propylamine	U		9.7	180	µg/Kg-dry	1	04/11/13 12:16
N-Nitrosodiphenylamine	U		66	180	µg/Kg-dry	1	04/11/13 12:16
Pentachlorophenol	U		16	22	µg/Kg-dry	1	04/11/13 12:16
Phenanthrene	U		33	33	µg/Kg-dry	1	04/11/13 12:16
Phenol	U		9.4	180	µg/Kg-dry	1	04/11/13 12:16
Pyrene	41		14	33	µg/Kg-dry	1	04/11/13 12:16
Surr: 2,4,6-Tribromophenol	89.8			34-140	%REC	1	04/11/13 12:16
Surr: 2-Fluorobiphenyl	72.7			12-100	%REC	1	04/11/13 12:16
Surr: 2-Fluorophenol	83.7			33-117	%REC	1	04/11/13 12:16
Surr: 4-Terphenyl-d14	109			25-137	%REC	1	04/11/13 12:16
Surr: Nitrobenzene-d5	78.5			37-107	%REC	1	04/11/13 12:16
Surr: Phenol-d6	83.7			40-106	%REC	1	04/11/13 12:16
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane	U		13	34	µg/Kg-dry	1	04/05/13 20:52
1,1,2,2-Tetrachloroethane	U		15	34	µg/Kg-dry	1	04/05/13 20:52
1,1,2-Trichloroethane	U		12	34	µg/Kg-dry	1	04/05/13 20:52
1,1,2-Trichlorotrifluoroethane	U		13	34	µg/Kg-dry	1	04/05/13 20:52
1,1-Dichloroethane	U		13	34	µg/Kg-dry	1	04/05/13 20:52
1,1-Dichloroethene	U		14	34	µg/Kg-dry	1	04/05/13 20:52
1,2,4-Trichlorobenzene	U		18	34	µg/Kg-dry	1	04/05/13 20:52
1,2-Dibromo-3-chloropropane	U		17	34	µg/Kg-dry	1	04/05/13 20:52

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-005
Collection Date: 04/02/13 09:30 AM

Work Order: 1304246
Lab ID: 1304246-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		13	34	µg/Kg-dry	1	04/05/13 20:52
1,2-Dichlorobenzene	U		14	34	µg/Kg-dry	1	04/05/13 20:52
1,2-Dichloroethane	U		16	34	µg/Kg-dry	1	04/05/13 20:52
1,2-Dichloropropane	U		11	34	µg/Kg-dry	1	04/05/13 20:52
1,3-Dichlorobenzene	U		14	34	µg/Kg-dry	1	04/05/13 20:52
1,4-Dichlorobenzene	U		13	34	µg/Kg-dry	1	04/05/13 20:52
2-Butanone	U		85	230	µg/Kg-dry	1	04/05/13 20:52
2-Hexanone	U		8.4	34	µg/Kg-dry	1	04/05/13 20:52
4-Methyl-2-pentanone	U		12	34	µg/Kg-dry	1	04/05/13 20:52
Acetone	U		72	110	µg/Kg-dry	1	04/05/13 20:52
Benzene	U		14	34	µg/Kg-dry	1	04/05/13 20:52
Bromodichloromethane	U		7.7	34	µg/Kg-dry	1	04/05/13 20:52
Bromoform	U		6.7	34	µg/Kg-dry	1	04/05/13 20:52
Bromomethane	U		13	85	µg/Kg-dry	1	04/05/13 20:52
Carbon disulfide	U		17	34	µg/Kg-dry	1	04/05/13 20:52
Carbon tetrachloride	U		9.7	34	µg/Kg-dry	1	04/05/13 20:52
Chlorobenzene	U		14	34	µg/Kg-dry	1	04/05/13 20:52
Chloroethane	U		73	110	µg/Kg-dry	1	04/05/13 20:52
Chloroform	U		14	34	µg/Kg-dry	1	04/05/13 20:52
Chloromethane	U		19	110	µg/Kg-dry	1	04/05/13 20:52
cis-1,2-Dichloroethene	U		14	34	µg/Kg-dry	1	04/05/13 20:52
cis-1,3-Dichloropropene	U		12	34	µg/Kg-dry	1	04/05/13 20:52
Cyclohexane	U		15	34	µg/Kg-dry	1	04/05/13 20:52
Dibromochloromethane	U		6.3	34	µg/Kg-dry	1	04/05/13 20:52
Dichlorodifluoromethane	U		15	34	µg/Kg-dry	1	04/05/13 20:52
Ethylbenzene	U		13	34	µg/Kg-dry	1	04/05/13 20:52
Isopropylbenzene	U		15	34	µg/Kg-dry	1	04/05/13 20:52
Methyl acetate	U		46	230	µg/Kg-dry	1	04/05/13 20:52
Methyl tert-butyl ether	U		14	34	µg/Kg-dry	1	04/05/13 20:52
Methylcyclohexane	U		16	34	µg/Kg-dry	1	04/05/13 20:52
Methylene chloride	U		13	34	µg/Kg-dry	1	04/05/13 20:52
Styrene	U		13	34	µg/Kg-dry	1	04/05/13 20:52
Tetrachloroethene	U		15	34	µg/Kg-dry	1	04/05/13 20:52
Toluene	U		13	34	µg/Kg-dry	1	04/05/13 20:52
trans-1,2-Dichloroethene	U		11	34	µg/Kg-dry	1	04/05/13 20:52
trans-1,3-Dichloropropene	U		11	34	µg/Kg-dry	1	04/05/13 20:52
Trichloroethene	U		16	34	µg/Kg-dry	1	04/05/13 20:52
Trichlorofluoromethane	U		9.4	34	µg/Kg-dry	1	04/05/13 20:52
Vinyl chloride	U		15	34	µg/Kg-dry	1	04/05/13 20:52
Xylenes, Total	U		40	100	µg/Kg-dry	1	04/05/13 20:52

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-005
Collection Date: 04/02/13 09:30 AM

Work Order: 1304246
Lab ID: 1304246-05
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	98.4			70-130	%REC	1	04/05/13 20:52
Surr: 4-Bromofluorobenzene	100			70-130	%REC	1	04/05/13 20:52
Surr: Dibromofluoromethane	96.2			70-130	%REC	1	04/05/13 20:52
Surr: Toluene-d8	98.7			70-130	%REC	1	04/05/13 20:52
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.070	J	0.030	0.57	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	12		0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 15 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-006
Collection Date: 04/02/13 10:00 AM

Work Order: 1304246
Lab ID: 1304246-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/10/13	Analyst: JD
<u>BatchID: 47577</u>							
Aroclor 1016	U		39	43	µg/Kg-dry	1	04/11/13 08:41
Aroclor 1221	U		39	43	µg/Kg-dry	1	04/11/13 08:41
Aroclor 1232	U		39	43	µg/Kg-dry	1	04/11/13 08:41
Aroclor 1242	U		39	43	µg/Kg-dry	1	04/11/13 08:41
Aroclor 1248	U		39	43	µg/Kg-dry	1	04/11/13 08:41
Aroclor 1254	U		12	43	µg/Kg-dry	1	04/11/13 08:41
Aroclor 1260	U		12	43	µg/Kg-dry	1	04/11/13 08:41
Surr: Decachlorobiphenyl	86.1			40-140	%REC	1	04/11/13 08:41
Surr: Tetrachloro-m-xylene	75.1			45-124	%REC	1	04/11/13 08:41
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.045		0.00077	0.015	mg/Kg-dry	1	04/11/13 12:08
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	5,700		0.49	3.9	mg/Kg-dry	5	04/15/13 21:08
Antimony	1.1	J	0.0078	1.9	mg/Kg-dry	5	04/14/13 03:36
Arsenic	5.9		0.26	0.78	mg/Kg-dry	5	04/14/13 03:36
Barium	93		0.054	1.9	mg/Kg-dry	5	04/14/13 03:36
Beryllium	0.21	J	0.016	0.78	mg/Kg-dry	5	04/14/13 03:36
Cadmium	2.0		0.0078	0.78	mg/Kg-dry	5	04/14/13 03:36
Chromium	13		0.32	1.9	mg/Kg-dry	5	04/14/13 03:36
Cobalt	5.0		0.0078	1.9	mg/Kg-dry	5	04/14/13 03:36
Copper	42		0.38	1.9	mg/Kg-dry	5	04/14/13 03:36
Iron	24,000		6.5	31	mg/Kg-dry	5	04/15/13 21:08
Lead	85		0.0078	1.9	mg/Kg-dry	5	04/14/13 03:36
Manganese	310		0.17	1.9	mg/Kg-dry	5	04/14/13 03:36
Nickel	19		0.19	1.9	mg/Kg-dry	5	04/14/13 03:36
Selenium	U		0.25	1.6	mg/Kg-dry	5	04/14/13 03:36
Silver	0.31	J	0.0078	0.78	mg/Kg-dry	5	04/14/13 03:36
Thallium	0.15	J	0.047	1.9	mg/Kg-dry	5	04/14/13 03:36
Vanadium	12		0.12	1.9	mg/Kg-dry	5	04/14/13 03:36
Zinc	210		0.16	3.9	mg/Kg-dry	5	04/14/13 03:36
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/9/13	Analyst: RM
<u>BatchID: 47525</u>							
1,1'-Biphenyl	U		5.7	380	µg/Kg-dry	1	04/11/13 12:42
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	04/11/13 12:42

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-006
Collection Date: 04/02/13 10:00 AM

Work Order: 1304246
Lab ID: 1304246-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4-Dimethylphenol	U		47	380	µg/Kg-dry	1	04/11/13 12:42
2-Chlorophenol	U		10	180	µg/Kg-dry	1	04/11/13 12:42
2-Methylnaphthalene	48	J	11	91	µg/Kg-dry	1	04/11/13 12:42
2-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 12:42
2-Nitrophenol	U		9.9	180	µg/Kg-dry	1	04/11/13 12:42
3,3'-Dichlorobenzidine	U		11	750	µg/Kg-dry	1	04/11/13 12:42
4,6-Dinitro-2-methylphenol	U		55	380	µg/Kg-dry	1	04/11/13 12:42
4-Bromophenyl phenyl ether	U		9.9	180	µg/Kg-dry	1	04/11/13 12:42
4-Chloro-3-methylphenol	U		10	180	µg/Kg-dry	1	04/11/13 12:42
4-Chloroaniline	U		15	380	µg/Kg-dry	1	04/11/13 12:42
4-Methylphenol	53	J	11	180	µg/Kg-dry	1	04/11/13 12:42
Acetophenone	U		5.7	380	µg/Kg-dry	1	04/11/13 12:42
Anthracene	54		12	34	µg/Kg-dry	1	04/11/13 12:42
Benzaldehyde	U		14	380	µg/Kg-dry	1	04/11/13 12:42
Benzo(a)anthracene	170		14	34	µg/Kg-dry	1	04/11/13 12:42
Benzo(a)pyrene	160		18	34	µg/Kg-dry	1	04/11/13 12:42
Benzo(b)fluoranthene	230		18	34	µg/Kg-dry	1	04/11/13 12:42
Benzo(g,h,i)perylene	65		27	34	µg/Kg-dry	1	04/11/13 12:42
Benzo(k)fluoranthene	120		16	34	µg/Kg-dry	1	04/11/13 12:42
Bis(2-chloroethoxy)methane	U		9.4	180	µg/Kg-dry	1	04/11/13 12:42
Bis(2-chloroethyl)ether	U		9.5	180	µg/Kg-dry	1	04/11/13 12:42
Bis(2-chloroisopropyl)ether	U		8.9	180	µg/Kg-dry	1	04/11/13 12:42
Bis(2-ethylhexyl)phthalate	190	J	11	380	µg/Kg-dry	1	04/11/13 12:42
Butyl benzyl phthalate	U		16	180	µg/Kg-dry	1	04/11/13 12:42
Caprolactam	U		17	380	µg/Kg-dry	1	04/11/13 12:42
Carbazole	U		13	180	µg/Kg-dry	1	04/11/13 12:42
Chrysene	210		13	34	µg/Kg-dry	1	04/11/13 12:42
Dibenzo(a,h)anthracene	U		19	34	µg/Kg-dry	1	04/11/13 12:42
Di-n-butyl phthalate	U		11	380	µg/Kg-dry	1	04/11/13 12:42
Di-n-octyl phthalate	U		14	180	µg/Kg-dry	1	04/11/13 12:42
Fluoranthene	400		14	34	µg/Kg-dry	1	04/11/13 12:42
Hexachlorobenzene	U		10	180	µg/Kg-dry	1	04/11/13 12:42
Hexachlorobutadiene	U		9.6	57	µg/Kg-dry	1	04/11/13 12:42
Hexachloroethane	U		10	180	µg/Kg-dry	1	04/11/13 12:42
Indeno(1,2,3-cd)pyrene	56		22	34	µg/Kg-dry	1	04/11/13 12:42
Isophorone	U		9.9	180	µg/Kg-dry	1	04/11/13 12:42
Naphthalene	62		9.7	34	µg/Kg-dry	1	04/11/13 12:42
Nitrobenzene	U		9.9	180	µg/Kg-dry	1	04/11/13 12:42
N-Nitrosodi-n-propylamine	U		10	180	µg/Kg-dry	1	04/11/13 12:42
N-Nitrosodiphenylamine	U		68	180	µg/Kg-dry	1	04/11/13 12:42

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-006
Collection Date: 04/02/13 10:00 AM

Work Order: 1304246
Lab ID: 1304246-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Pentachlorophenol	U		17	23	µg/Kg-dry	1	04/11/13 12:42
Phenanthrene	230		34	34	µg/Kg-dry	1	04/11/13 12:42
Phenol	U		9.7	180	µg/Kg-dry	1	04/11/13 12:42
Pyrene	330		14	34	µg/Kg-dry	1	04/11/13 12:42
Surr: 2,4,6-Tribromophenol	90.9			34-140	%REC	1	04/11/13 12:42
Surr: 2-Fluorophenol	87.6			33-117	%REC	1	04/11/13 12:42
Surr: 4-Terphenyl-d14	105			25-137	%REC	1	04/11/13 12:42
Surr: Nitrobenzene-d5	80.8			37-107	%REC	1	04/11/13 12:42
Surr: Phenol-d6	85.7			40-106	%REC	1	04/11/13 12:42
BatchID: 47525							
2,4,5-Trichlorophenol	U		91	1,800	µg/Kg-dry	10	04/11/13 21:55
2,4,6-Trichlorophenol	U		91	1,800	µg/Kg-dry	10	04/11/13 21:55
2,4-Dinitrophenol	U		480	7,500	µg/Kg-dry	10	04/11/13 21:55
2,4-Dinitrotoluene	U		100	1,800	µg/Kg-dry	10	04/11/13 21:55
2,6-Dinitrotoluene	U		110	1,800	µg/Kg-dry	10	04/11/13 21:55
2-Chloronaphthalene	U		100	910	µg/Kg-dry	10	04/11/13 21:55
2-Nitroaniline	U		87	7,500	µg/Kg-dry	10	04/11/13 21:55
3-Nitroaniline	U		930	7,500	µg/Kg-dry	10	04/11/13 21:55
4-Chlorophenyl phenyl ether	U		100	1,800	µg/Kg-dry	10	04/11/13 21:55
4-Nitroaniline	U		170	7,500	µg/Kg-dry	10	04/11/13 21:55
4-Nitrophenol	U		460	7,500	µg/Kg-dry	10	04/11/13 21:55
Acenaphthene	U		100	340	µg/Kg-dry	10	04/11/13 21:55
Acenaphthylene	U		110	340	µg/Kg-dry	10	04/11/13 21:55
Atrazine	U		120	570	µg/Kg-dry	10	04/11/13 21:55
Dibenzofuran	U		100	1,800	µg/Kg-dry	10	04/11/13 21:55
Diethyl phthalate	U		95	3,800	µg/Kg-dry	10	04/11/13 21:55
Dimethyl phthalate	U		95	3,800	µg/Kg-dry	10	04/11/13 21:55
Fluorene	U		100	340	µg/Kg-dry	10	04/11/13 21:55
Hexachlorocyclopentadiene	U		400	3,800	µg/Kg-dry	10	04/11/13 21:55
Surr: 2-Fluorobiphenyl	77.6			12-100	%REC	10	04/11/13 21:55
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/10/13		Analyst: BG
BatchID: 47576							
1,1,1-Trichloroethane	U		13	35	µg/Kg-dry	1	04/11/13 05:33
1,1,2,2-Tetrachloroethane	U		15	35	µg/Kg-dry	1	04/11/13 05:33
1,1,2-Trichloroethane	U		12	35	µg/Kg-dry	1	04/11/13 05:33
1,1,2-Trichlorotrifluoroethane	U		13	35	µg/Kg-dry	1	04/11/13 05:33
1,1-Dichloroethane	U		13	35	µg/Kg-dry	1	04/11/13 05:33
1,1-Dichloroethene	U		15	35	µg/Kg-dry	1	04/11/13 05:33
1,2,4-Trichlorobenzene	U		18	35	µg/Kg-dry	1	04/11/13 05:33

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-006
Collection Date: 04/02/13 10:00 AM

Work Order: 1304246
Lab ID: 1304246-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromo-3-chloropropane	U		17	35	µg/Kg-dry	1	04/11/13 05:33
1,2-Dibromoethane	U		14	35	µg/Kg-dry	1	04/11/13 05:33
1,2-Dichlorobenzene	U		14	35	µg/Kg-dry	1	04/11/13 05:33
1,2-Dichloroethane	U		16	35	µg/Kg-dry	1	04/11/13 05:33
1,2-Dichloropropane	U		11	35	µg/Kg-dry	1	04/11/13 05:33
1,3-Dichlorobenzene	U		14	35	µg/Kg-dry	1	04/11/13 05:33
1,4-Dichlorobenzene	U		13	35	µg/Kg-dry	1	04/11/13 05:33
2-Butanone	U		86	230	µg/Kg-dry	1	04/11/13 05:33
2-Hexanone	U		8.5	35	µg/Kg-dry	1	04/11/13 05:33
4-Methyl-2-pentanone	U		12	35	µg/Kg-dry	1	04/11/13 05:33
Acetone	U		73	120	µg/Kg-dry	1	04/11/13 05:33
Benzene	U		14	35	µg/Kg-dry	1	04/11/13 05:33
Bromodichloromethane	U		7.8	35	µg/Kg-dry	1	04/11/13 05:33
Bromoform	U		6.8	35	µg/Kg-dry	1	04/11/13 05:33
Bromomethane	U		13	86	µg/Kg-dry	1	04/11/13 05:33
Carbon disulfide	U		17	35	µg/Kg-dry	1	04/11/13 05:33
Carbon tetrachloride	U		9.8	35	µg/Kg-dry	1	04/11/13 05:33
Chlorobenzene	U		14	35	µg/Kg-dry	1	04/11/13 05:33
Chloroethane	U		73	120	µg/Kg-dry	1	04/11/13 05:33
Chloroform	U		14	35	µg/Kg-dry	1	04/11/13 05:33
Chloromethane	U		19	120	µg/Kg-dry	1	04/11/13 05:33
cis-1,2-Dichloroethene	U		14	35	µg/Kg-dry	1	04/11/13 05:33
cis-1,3-Dichloropropene	U		12	35	µg/Kg-dry	1	04/11/13 05:33
Cyclohexane	U		16	35	µg/Kg-dry	1	04/11/13 05:33
Dibromochloromethane	U		6.4	35	µg/Kg-dry	1	04/11/13 05:33
Dichlorodifluoromethane	U		16	35	µg/Kg-dry	1	04/11/13 05:33
Ethylbenzene	U		13	35	µg/Kg-dry	1	04/11/13 05:33
Isopropylbenzene	U		15	35	µg/Kg-dry	1	04/11/13 05:33
Methyl acetate	U		46	230	µg/Kg-dry	1	04/11/13 05:33
Methyl tert-butyl ether	U		15	35	µg/Kg-dry	1	04/11/13 05:33
Methylcyclohexane	U		16	35	µg/Kg-dry	1	04/11/13 05:33
Methylene chloride	52		14	35	µg/Kg-dry	1	04/11/13 05:33
Styrene	U		13	35	µg/Kg-dry	1	04/11/13 05:33
Tetrachloroethene	U		15	35	µg/Kg-dry	1	04/11/13 05:33
Toluene	U		13	35	µg/Kg-dry	1	04/11/13 05:33
trans-1,2-Dichloroethene	U		11	35	µg/Kg-dry	1	04/11/13 05:33
trans-1,3-Dichloropropene	U		12	35	µg/Kg-dry	1	04/11/13 05:33
Trichloroethene	U		16	35	µg/Kg-dry	1	04/11/13 05:33
Trichlorofluoromethane	U		9.5	35	µg/Kg-dry	1	04/11/13 05:33
Vinyl chloride	U		16	35	µg/Kg-dry	1	04/11/13 05:33

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-006
Collection Date: 04/02/13 10:00 AM

Work Order: 1304246
Lab ID: 1304246-06
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Xylenes, Total	U		41	100	µg/Kg-dry	1	04/11/13 05:33
Surr: 1,2-Dichloroethane-d4	99.2			70-130	%REC	1	04/11/13 05:33
Surr: 4-Bromofluorobenzene	99.2			70-130	%REC	1	04/11/13 05:33
Surr: Dibromofluoromethane	94.8			70-130	%REC	1	04/11/13 05:33
Surr: Toluene-d8	99.8			70-130	%REC	1	04/11/13 05:33
CYANIDE, TOTAL			SW9012A		Prep: SW9014 / 4/8/13		Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.14	J	0.029	0.57	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	13		0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-009
Collection Date: 04/02/13 08:45 AM

Work Order: 1304246
Lab ID: 1304246-09
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/10/13	Analyst: JD
<u>BatchID: 47577</u>							
Aroclor 1016	U		39	43	µg/Kg-dry	1	04/11/13 09:01
Aroclor 1221	U		39	43	µg/Kg-dry	1	04/11/13 09:01
Aroclor 1232	U		39	43	µg/Kg-dry	1	04/11/13 09:01
Aroclor 1242	U		39	43	µg/Kg-dry	1	04/11/13 09:01
Aroclor 1248	U		39	43	µg/Kg-dry	1	04/11/13 09:01
Aroclor 1254	U		12	43	µg/Kg-dry	1	04/11/13 09:01
Aroclor 1260	U		12	43	µg/Kg-dry	1	04/11/13 09:01
Surr: Decachlorobiphenyl	88.1			40-140	%REC	1	04/11/13 09:01
Surr: Tetrachloro-m-xylene	80.1			45-124	%REC	1	04/11/13 09:01
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.018		0.00082	0.016	mg/Kg-dry	1	04/11/13 12:11
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	5,100		0.48	3.8	mg/Kg-dry	5	04/16/13 12:10
Antimony	0.16	J	0.0077	1.9	mg/Kg-dry	5	04/16/13 12:10
Arsenic	5.3		0.26	0.77	mg/Kg-dry	5	04/16/13 12:10
Barium	34		0.054	1.9	mg/Kg-dry	5	04/16/13 12:10
Beryllium	0.26	J	0.015	0.77	mg/Kg-dry	5	04/16/13 12:10
Cadmium	0.37	J	0.0077	0.77	mg/Kg-dry	5	04/16/13 12:10
Chromium	9.0		0.32	1.9	mg/Kg-dry	5	04/16/13 12:10
Cobalt	4.4		0.0077	1.9	mg/Kg-dry	5	04/16/13 12:10
Copper	10		0.38	1.9	mg/Kg-dry	5	04/16/13 12:10
Iron	11,000		6.4	31	mg/Kg-dry	5	04/16/13 12:10
Lead	9.5		0.0077	1.9	mg/Kg-dry	5	04/16/13 12:10
Manganese	260		0.17	1.9	mg/Kg-dry	5	04/16/13 12:10
Nickel	12		0.19	1.9	mg/Kg-dry	5	04/16/13 12:10
Selenium	U		0.25	1.5	mg/Kg-dry	5	04/16/13 12:10
Silver	0.038	J	0.0077	0.77	mg/Kg-dry	5	04/16/13 12:10
Thallium	0.17	J	0.046	1.9	mg/Kg-dry	5	04/16/13 12:10
Vanadium	18		0.12	1.9	mg/Kg-dry	5	04/16/13 12:10
Zinc	32		0.16	3.8	mg/Kg-dry	5	04/16/13 12:10
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/9/13	Analyst: RM
<u>BatchID: 47525</u>							
1,1'-Biphenyl	U		5.5	370	µg/Kg-dry	1	04/11/13 01:07
2,4,5-Trichlorophenol	U		8.9	180	µg/Kg-dry	1	04/11/13 01:07

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-009
Collection Date: 04/02/13 08:45 AM

Work Order: 1304246
Lab ID: 1304246-09
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.9	180	µg/Kg-dry	1	04/11/13 01:07
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	04/11/13 01:07
2,4-Dimethylphenol	U		45	370	µg/Kg-dry	1	04/11/13 01:07
2,4-Dinitrophenol	U		47	740	µg/Kg-dry	1	04/11/13 01:07
2,4-Dinitrotoluene	U		9.9	180	µg/Kg-dry	1	04/11/13 01:07
2,6-Dinitrotoluene	U		10	180	µg/Kg-dry	1	04/11/13 01:07
2-Chloronaphthalene	U		10	89	µg/Kg-dry	1	04/11/13 01:07
2-Chlorophenol	U		10	180	µg/Kg-dry	1	04/11/13 01:07
2-Methylnaphthalene	U		11	89	µg/Kg-dry	1	04/11/13 01:07
2-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 01:07
2-Nitroaniline	U		8.5	740	µg/Kg-dry	1	04/11/13 01:07
2-Nitrophenol	U		9.7	180	µg/Kg-dry	1	04/11/13 01:07
3,3'-Dichlorobenzidine	U		10	740	µg/Kg-dry	1	04/11/13 01:07
3-Nitroaniline	U		90	740	µg/Kg-dry	1	04/11/13 01:07
4,6-Dinitro-2-methylphenol	U		54	370	µg/Kg-dry	1	04/11/13 01:07
4-Bromophenyl phenyl ether	U		9.7	180	µg/Kg-dry	1	04/11/13 01:07
4-Chloro-3-methylphenol	U		10	180	µg/Kg-dry	1	04/11/13 01:07
4-Chloroaniline	U		14	370	µg/Kg-dry	1	04/11/13 01:07
4-Chlorophenyl phenyl ether	U		10	180	µg/Kg-dry	1	04/11/13 01:07
4-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 01:07
4-Nitroaniline	U		16	740	µg/Kg-dry	1	04/11/13 01:07
4-Nitrophenol	U		45	740	µg/Kg-dry	1	04/11/13 01:07
Acenaphthene	U		10	33	µg/Kg-dry	1	04/11/13 01:07
Acenaphthylene	U		11	33	µg/Kg-dry	1	04/11/13 01:07
Acetophenone	U		5.5	370	µg/Kg-dry	1	04/11/13 01:07
Anthracene	U		11	33	µg/Kg-dry	1	04/11/13 01:07
Atrazine	U		11	56	µg/Kg-dry	1	04/11/13 01:07
Benzaldehyde	U		14	370	µg/Kg-dry	1	04/11/13 01:07
Benzo(a)anthracene	U		14	33	µg/Kg-dry	1	04/11/13 01:07
Benzo(a)pyrene	U		17	33	µg/Kg-dry	1	04/11/13 01:07
Benzo(b)fluoranthene	U		18	33	µg/Kg-dry	1	04/11/13 01:07
Benzo(g,h,i)perylene	U		26	33	µg/Kg-dry	1	04/11/13 01:07
Benzo(k)fluoranthene	U		15	33	µg/Kg-dry	1	04/11/13 01:07
Bis(2-chloroethoxy)methane	U		9.1	180	µg/Kg-dry	1	04/11/13 01:07
Bis(2-chloroethyl)ether	U		9.3	180	µg/Kg-dry	1	04/11/13 01:07
Bis(2-chloroisopropyl)ether	U		8.7	180	µg/Kg-dry	1	04/11/13 01:07
Bis(2-ethylhexyl)phthalate	27	J	11	370	µg/Kg-dry	1	04/11/13 01:07
Butyl benzyl phthalate	U		15	180	µg/Kg-dry	1	04/11/13 01:07
Caprolactam	U		16	370	µg/Kg-dry	1	04/11/13 01:07
Carbazole	U		13	180	µg/Kg-dry	1	04/11/13 01:07

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-009
Collection Date: 04/02/13 08:45 AM

Work Order: 1304246
Lab ID: 1304246-09
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene		U	13	33	µg/Kg-dry	1	04/11/13 01:07
Dibenzo(a,h)anthracene		U	19	33	µg/Kg-dry	1	04/11/13 01:07
Dibenzofuran		U	10	180	µg/Kg-dry	1	04/11/13 01:07
Diethyl phthalate		U	9.2	370	µg/Kg-dry	1	04/11/13 01:07
Dimethyl phthalate		U	9.3	370	µg/Kg-dry	1	04/11/13 01:07
Di-n-butyl phthalate		U	11	370	µg/Kg-dry	1	04/11/13 01:07
Di-n-octyl phthalate		U	14	180	µg/Kg-dry	1	04/11/13 01:07
Fluoranthene		U	13	33	µg/Kg-dry	1	04/11/13 01:07
Fluorene		U	9.7	33	µg/Kg-dry	1	04/11/13 01:07
Hexachlorobenzene		U	10	180	µg/Kg-dry	1	04/11/13 01:07
Hexachlorobutadiene		U	9.4	56	µg/Kg-dry	1	04/11/13 01:07
Hexachlorocyclopentadiene		U	39	370	µg/Kg-dry	1	04/11/13 01:07
Hexachloroethane		U	9.7	180	µg/Kg-dry	1	04/11/13 01:07
Indeno(1,2,3-cd)pyrene		U	21	33	µg/Kg-dry	1	04/11/13 01:07
Isophorone		U	9.7	180	µg/Kg-dry	1	04/11/13 01:07
Naphthalene		U	9.5	33	µg/Kg-dry	1	04/11/13 01:07
Nitrobenzene		U	9.6	180	µg/Kg-dry	1	04/11/13 01:07
N-Nitrosodi-n-propylamine		U	9.7	180	µg/Kg-dry	1	04/11/13 01:07
N-Nitrosodiphenylamine		U	66	180	µg/Kg-dry	1	04/11/13 01:07
Pentachlorophenol		U	16	22	µg/Kg-dry	1	04/11/13 01:07
Phenanthrene		U	33	33	µg/Kg-dry	1	04/11/13 01:07
Phenol		U	9.4	180	µg/Kg-dry	1	04/11/13 01:07
Pyrene		U	14	33	µg/Kg-dry	1	04/11/13 01:07
Surr: 2,4,6-Tribromophenol	77.8			34-140	%REC	1	04/11/13 01:07
Surr: 2-Fluorobiphenyl	71.4			12-100	%REC	1	04/11/13 01:07
Surr: 2-Fluorophenol	84.5			33-117	%REC	1	04/11/13 01:07
Surr: 4-Terphenyl-d14	101			25-137	%REC	1	04/11/13 01:07
Surr: Nitrobenzene-d5	79.4			37-107	%REC	1	04/11/13 01:07
Surr: Phenol-d6	82.1			40-106	%REC	1	04/11/13 01:07
VOLATILE ORGANIC COMPOUNDS		SW8260			Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane		U	13	34	µg/Kg-dry	1	04/05/13 21:16
1,1,2,2-Tetrachloroethane		U	15	34	µg/Kg-dry	1	04/05/13 21:16
1,1,2-Trichloroethane		U	12	34	µg/Kg-dry	1	04/05/13 21:16
1,1,2-Trichlorotrifluoroethane		U	13	34	µg/Kg-dry	1	04/05/13 21:16
1,1-Dichloroethane		U	12	34	µg/Kg-dry	1	04/05/13 21:16
1,1-Dichloroethene		U	14	34	µg/Kg-dry	1	04/05/13 21:16
1,2,4-Trichlorobenzene		U	18	34	µg/Kg-dry	1	04/05/13 21:16
1,2-Dibromo-3-chloropropane		U	17	34	µg/Kg-dry	1	04/05/13 21:16

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-009
Collection Date: 04/02/13 08:45 AM

Work Order: 1304246
Lab ID: 1304246-09
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		13	34	µg/Kg-dry	1	04/05/13 21:16
1,2-Dichlorobenzene	U		14	34	µg/Kg-dry	1	04/05/13 21:16
1,2-Dichloroethane	U		16	34	µg/Kg-dry	1	04/05/13 21:16
1,2-Dichloropropane	U		11	34	µg/Kg-dry	1	04/05/13 21:16
1,3-Dichlorobenzene	U		14	34	µg/Kg-dry	1	04/05/13 21:16
1,4-Dichlorobenzene	U		13	34	µg/Kg-dry	1	04/05/13 21:16
2-Butanone	U		84	230	µg/Kg-dry	1	04/05/13 21:16
2-Hexanone	U		8.4	34	µg/Kg-dry	1	04/05/13 21:16
4-Methyl-2-pentanone	U		12	34	µg/Kg-dry	1	04/05/13 21:16
Acetone	U		72	110	µg/Kg-dry	1	04/05/13 21:16
Benzene	U		14	34	µg/Kg-dry	1	04/05/13 21:16
Bromodichloromethane	U		7.6	34	µg/Kg-dry	1	04/05/13 21:16
Bromoform	U		6.7	34	µg/Kg-dry	1	04/05/13 21:16
Bromomethane	U		13	85	µg/Kg-dry	1	04/05/13 21:16
Carbon disulfide	U		17	34	µg/Kg-dry	1	04/05/13 21:16
Carbon tetrachloride	U		9.7	34	µg/Kg-dry	1	04/05/13 21:16
Chlorobenzene	U		14	34	µg/Kg-dry	1	04/05/13 21:16
Chloroethane	U		72	110	µg/Kg-dry	1	04/05/13 21:16
Chloroform	U		14	34	µg/Kg-dry	1	04/05/13 21:16
Chloromethane	U		19	110	µg/Kg-dry	1	04/05/13 21:16
cis-1,2-Dichloroethene	U		14	34	µg/Kg-dry	1	04/05/13 21:16
cis-1,3-Dichloropropene	U		12	34	µg/Kg-dry	1	04/05/13 21:16
Cyclohexane	U		15	34	µg/Kg-dry	1	04/05/13 21:16
Dibromochloromethane	U		6.3	34	µg/Kg-dry	1	04/05/13 21:16
Dichlorodifluoromethane	U		15	34	µg/Kg-dry	1	04/05/13 21:16
Ethylbenzene	U		13	34	µg/Kg-dry	1	04/05/13 21:16
Isopropylbenzene	U		15	34	µg/Kg-dry	1	04/05/13 21:16
Methyl acetate	U		46	230	µg/Kg-dry	1	04/05/13 21:16
Methyl tert-butyl ether	U		14	34	µg/Kg-dry	1	04/05/13 21:16
Methylcyclohexane	U		16	34	µg/Kg-dry	1	04/05/13 21:16
Methylene chloride	U		13	34	µg/Kg-dry	1	04/05/13 21:16
Styrene	U		13	34	µg/Kg-dry	1	04/05/13 21:16
Tetrachloroethene	U		15	34	µg/Kg-dry	1	04/05/13 21:16
Toluene	U		13	34	µg/Kg-dry	1	04/05/13 21:16
trans-1,2-Dichloroethene	U		10	34	µg/Kg-dry	1	04/05/13 21:16
trans-1,3-Dichloropropene	U		11	34	µg/Kg-dry	1	04/05/13 21:16
Trichloroethene	U		16	34	µg/Kg-dry	1	04/05/13 21:16
Trichlorofluoromethane	U		9.4	34	µg/Kg-dry	1	04/05/13 21:16
Vinyl chloride	U		15	34	µg/Kg-dry	1	04/05/13 21:16
Xylenes, Total	U		40	100	µg/Kg-dry	1	04/05/13 21:16

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-009
Collection Date: 04/02/13 08:45 AM

Work Order: 1304246
Lab ID: 1304246-09
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	97.4			70-130	%REC	1	04/05/13 21:16
Surr: 4-Bromofluorobenzene	97.3			70-130	%REC	1	04/05/13 21:16
Surr: Dibromofluoromethane	95.2			70-130	%REC	1	04/05/13 21:16
Surr: Toluene-d8	97.2			70-130	%REC	1	04/05/13 21:16
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.065	J	0.029	0.56	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	12		0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 25 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-010
Collection Date: 04/02/13 08:50 AM

Work Order: 1304246
Lab ID: 1304246-10
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/10/13	Analyst: JD
<u>BatchID: 47577</u>							
Aroclor 1016	U		39	44	µg/Kg-dry	1	04/11/13 09:21
Aroclor 1221	U		39	44	µg/Kg-dry	1	04/11/13 09:21
Aroclor 1232	U		39	44	µg/Kg-dry	1	04/11/13 09:21
Aroclor 1242	U		39	44	µg/Kg-dry	1	04/11/13 09:21
Aroclor 1248	U		39	44	µg/Kg-dry	1	04/11/13 09:21
Aroclor 1254	U		12	44	µg/Kg-dry	1	04/11/13 09:21
Aroclor 1260	U		12	44	µg/Kg-dry	1	04/11/13 09:21
Surr: Decachlorobiphenyl	87.1			40-140	%REC	1	04/11/13 09:21
Surr: Tetrachloro-m-xylene	80.1			45-124	%REC	1	04/11/13 09:21
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.017	J	0.0010	0.020	mg/Kg-dry	1	04/11/13 12:13
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	4,900		0.50	3.9	mg/Kg-dry	5	04/15/13 21:14
Antimony	0.22	J	0.0079	2.0	mg/Kg-dry	5	04/14/13 03:42
Arsenic	4.9		0.27	0.79	mg/Kg-dry	5	04/14/13 03:42
Barium	45		0.055	2.0	mg/Kg-dry	5	04/14/13 03:42
Beryllium	0.25	J	0.016	0.79	mg/Kg-dry	5	04/14/13 03:42
Cadmium	0.23	J	0.0079	0.79	mg/Kg-dry	5	04/14/13 03:42
Chromium	10		0.32	2.0	mg/Kg-dry	5	04/14/13 03:42
Cobalt	4.9		0.0079	2.0	mg/Kg-dry	5	04/14/13 03:42
Copper	14		0.39	2.0	mg/Kg-dry	5	04/14/13 03:42
Iron	12,000		6.6	32	mg/Kg-dry	5	04/15/13 21:14
Lead	12		0.0079	2.0	mg/Kg-dry	5	04/14/13 03:42
Manganese	310		0.17	2.0	mg/Kg-dry	5	04/14/13 03:42
Nickel	14		0.20	2.0	mg/Kg-dry	5	04/14/13 03:42
Selenium	0.51	J	0.25	1.6	mg/Kg-dry	5	04/14/13 03:42
Silver	0.046	J	0.0079	0.79	mg/Kg-dry	5	04/14/13 03:42
Thallium	0.18	J	0.047	2.0	mg/Kg-dry	5	04/14/13 03:42
Vanadium	15		0.12	2.0	mg/Kg-dry	5	04/14/13 03:42
Zinc	44		0.17	3.9	mg/Kg-dry	5	04/14/13 03:42
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/9/13	Analyst: RM
<u>BatchID: 47525</u>							
1,1'-Biphenyl	U		5.7	380	µg/Kg-dry	1	04/11/13 01:32
2,4,5-Trichlorophenol	U		9.1	180	µg/Kg-dry	1	04/11/13 01:32

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-010
Collection Date: 04/02/13 08:50 AM

Work Order: 1304246
Lab ID: 1304246-10
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		9.1	180	µg/Kg-dry	1	04/11/13 01:32
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	04/11/13 01:32
2,4-Dimethylphenol	U		47	380	µg/Kg-dry	1	04/11/13 01:32
2,4-Dinitrophenol	U		49	760	µg/Kg-dry	1	04/11/13 01:32
2,4-Dinitrotoluene	U		10	180	µg/Kg-dry	1	04/11/13 01:32
2,6-Dinitrotoluene	U		11	180	µg/Kg-dry	1	04/11/13 01:32
2-Chloronaphthalene	U		10	92	µg/Kg-dry	1	04/11/13 01:32
2-Chlorophenol	U		10	180	µg/Kg-dry	1	04/11/13 01:32
2-Methylnaphthalene	U		11	92	µg/Kg-dry	1	04/11/13 01:32
2-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 01:32
2-Nitroaniline	U		8.7	760	µg/Kg-dry	1	04/11/13 01:32
2-Nitrophenol	U		10	180	µg/Kg-dry	1	04/11/13 01:32
3,3'-Dichlorobenzidine	U		11	760	µg/Kg-dry	1	04/11/13 01:32
3-Nitroaniline	U		93	760	µg/Kg-dry	1	04/11/13 01:32
4,6-Dinitro-2-methylphenol	U		55	380	µg/Kg-dry	1	04/11/13 01:32
4-Bromophenyl phenyl ether	U		9.9	180	µg/Kg-dry	1	04/11/13 01:32
4-Chloro-3-methylphenol	U		10	180	µg/Kg-dry	1	04/11/13 01:32
4-Chloroaniline	U		15	380	µg/Kg-dry	1	04/11/13 01:32
4-Chlorophenyl phenyl ether	U		10	180	µg/Kg-dry	1	04/11/13 01:32
4-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 01:32
4-Nitroaniline	U		17	760	µg/Kg-dry	1	04/11/13 01:32
4-Nitrophenol	U		46	760	µg/Kg-dry	1	04/11/13 01:32
Acenaphthene	U		10	34	µg/Kg-dry	1	04/11/13 01:32
Acenaphthylene	U		11	34	µg/Kg-dry	1	04/11/13 01:32
Acetophenone	U		5.7	380	µg/Kg-dry	1	04/11/13 01:32
Anthracene	U		12	34	µg/Kg-dry	1	04/11/13 01:32
Atrazine	U		12	57	µg/Kg-dry	1	04/11/13 01:32
Benzaldehyde	U		15	380	µg/Kg-dry	1	04/11/13 01:32
Benzo(a)anthracene	36		14	34	µg/Kg-dry	1	04/11/13 01:32
Benzo(a)pyrene	26	J	18	34	µg/Kg-dry	1	04/11/13 01:32
Benzo(b)fluoranthene	38		18	34	µg/Kg-dry	1	04/11/13 01:32
Benzo(g,h,i)perylene	U		27	34	µg/Kg-dry	1	04/11/13 01:32
Benzo(k)fluoranthene	26	J	16	34	µg/Kg-dry	1	04/11/13 01:32
Bis(2-chloroethoxy)methane	U		9.4	180	µg/Kg-dry	1	04/11/13 01:32
Bis(2-chloroethyl)ether	U		9.5	180	µg/Kg-dry	1	04/11/13 01:32
Bis(2-chloroisopropyl)ether	U		8.9	180	µg/Kg-dry	1	04/11/13 01:32
Bis(2-ethylhexyl)phthalate	U		11	380	µg/Kg-dry	1	04/11/13 01:32
Butyl benzyl phthalate	U		16	180	µg/Kg-dry	1	04/11/13 01:32
Caprolactam	U		17	380	µg/Kg-dry	1	04/11/13 01:32
Carbazole	U		13	180	µg/Kg-dry	1	04/11/13 01:32

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-010
Collection Date: 04/02/13 08:50 AM

Work Order: 1304246
Lab ID: 1304246-10
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	37		13	34	µg/Kg-dry	1	04/11/13 01:32
Dibenzo(a,h)anthracene	U		20	34	µg/Kg-dry	1	04/11/13 01:32
Dibenzofuran	U		10	180	µg/Kg-dry	1	04/11/13 01:32
Diethyl phthalate	U		9.5	380	µg/Kg-dry	1	04/11/13 01:32
Dimethyl phthalate	U		9.5	380	µg/Kg-dry	1	04/11/13 01:32
Di-n-butyl phthalate	U		12	380	µg/Kg-dry	1	04/11/13 01:32
Di-n-octyl phthalate	U		14	180	µg/Kg-dry	1	04/11/13 01:32
Fluoranthene	82		14	34	µg/Kg-dry	1	04/11/13 01:32
Fluorene	U		10	34	µg/Kg-dry	1	04/11/13 01:32
Hexachlorobenzene	U		10	180	µg/Kg-dry	1	04/11/13 01:32
Hexachlorobutadiene	U		9.7	57	µg/Kg-dry	1	04/11/13 01:32
Hexachlorocyclopentadiene	U		40	380	µg/Kg-dry	1	04/11/13 01:32
Hexachloroethane	U		10	180	µg/Kg-dry	1	04/11/13 01:32
Indeno(1,2,3-cd)pyrene	U		22	34	µg/Kg-dry	1	04/11/13 01:32
Isophorone	U		9.9	180	µg/Kg-dry	1	04/11/13 01:32
Naphthalene	U		9.8	34	µg/Kg-dry	1	04/11/13 01:32
Nitrobenzene	U		9.9	180	µg/Kg-dry	1	04/11/13 01:32
N-Nitrosodi-n-propylamine	U		10	180	µg/Kg-dry	1	04/11/13 01:32
N-Nitrosodiphenylamine	U		68	180	µg/Kg-dry	1	04/11/13 01:32
Pentachlorophenol	U		17	23	µg/Kg-dry	1	04/11/13 01:32
Phenanthrene	47		34	34	µg/Kg-dry	1	04/11/13 01:32
Phenol	U		9.7	180	µg/Kg-dry	1	04/11/13 01:32
Pyrene	64		14	34	µg/Kg-dry	1	04/11/13 01:32
Surr: 2,4,6-Tribromophenol	75.1			34-140	%REC	1	04/11/13 01:32
Surr: 2-Fluorobiphenyl	67.8			12-100	%REC	1	04/11/13 01:32
Surr: 2-Fluorophenol	81.9			33-117	%REC	1	04/11/13 01:32
Surr: 4-Terphenyl-d14	99.2			25-137	%REC	1	04/11/13 01:32
Surr: Nitrobenzene-d5	76.5			37-107	%REC	1	04/11/13 01:32
Surr: Phenol-d6	79.1			40-106	%REC	1	04/11/13 01:32
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane	U		13	35	µg/Kg-dry	1	04/05/13 21:39
1,1,2,2-Tetrachloroethane	U		15	35	µg/Kg-dry	1	04/05/13 21:39
1,1,2-Trichloroethane	U		12	35	µg/Kg-dry	1	04/05/13 21:39
1,1,2-Trichlorotrifluoroethane	U		13	35	µg/Kg-dry	1	04/05/13 21:39
1,1-Dichloroethane	U		13	35	µg/Kg-dry	1	04/05/13 21:39
1,1-Dichloroethene	U		15	35	µg/Kg-dry	1	04/05/13 21:39
1,2,4-Trichlorobenzene	U		18	35	µg/Kg-dry	1	04/05/13 21:39
1,2-Dibromo-3-chloropropane	U		17	35	µg/Kg-dry	1	04/05/13 21:39

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-010
Collection Date: 04/02/13 08:50 AM

Work Order: 1304246
Lab ID: 1304246-10
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		14	35	µg/Kg-dry	1	04/05/13 21:39
1,2-Dichlorobenzene	U		14	35	µg/Kg-dry	1	04/05/13 21:39
1,2-Dichloroethane	U		17	35	µg/Kg-dry	1	04/05/13 21:39
1,2-Dichloropropane	U		12	35	µg/Kg-dry	1	04/05/13 21:39
1,3-Dichlorobenzene	U		14	35	µg/Kg-dry	1	04/05/13 21:39
1,4-Dichlorobenzene	U		13	35	µg/Kg-dry	1	04/05/13 21:39
2-Butanone	U		86	230	µg/Kg-dry	1	04/05/13 21:39
2-Hexanone	U		8.5	35	µg/Kg-dry	1	04/05/13 21:39
4-Methyl-2-pentanone	U		12	35	µg/Kg-dry	1	04/05/13 21:39
Acetone	U		74	120	µg/Kg-dry	1	04/05/13 21:39
Benzene	U		14	35	µg/Kg-dry	1	04/05/13 21:39
Bromodichloromethane	U		7.8	35	µg/Kg-dry	1	04/05/13 21:39
Bromoform	U		6.9	35	µg/Kg-dry	1	04/05/13 21:39
Bromomethane	U		13	87	µg/Kg-dry	1	04/05/13 21:39
Carbon disulfide	U		17	35	µg/Kg-dry	1	04/05/13 21:39
Carbon tetrachloride	U		9.9	35	µg/Kg-dry	1	04/05/13 21:39
Chlorobenzene	U		14	35	µg/Kg-dry	1	04/05/13 21:39
Chloroethane	U		74	120	µg/Kg-dry	1	04/05/13 21:39
Chloroform	U		14	35	µg/Kg-dry	1	04/05/13 21:39
Chloromethane	U		19	120	µg/Kg-dry	1	04/05/13 21:39
cis-1,2-Dichloroethene	U		14	35	µg/Kg-dry	1	04/05/13 21:39
cis-1,3-Dichloropropene	U		12	35	µg/Kg-dry	1	04/05/13 21:39
Cyclohexane	U		16	35	µg/Kg-dry	1	04/05/13 21:39
Dibromochloromethane	U		6.4	35	µg/Kg-dry	1	04/05/13 21:39
Dichlorodifluoromethane	U		16	35	µg/Kg-dry	1	04/05/13 21:39
Ethylbenzene	U		13	35	µg/Kg-dry	1	04/05/13 21:39
Isopropylbenzene	U		15	35	µg/Kg-dry	1	04/05/13 21:39
Methyl acetate	U		47	230	µg/Kg-dry	1	04/05/13 21:39
Methyl tert-butyl ether	U		15	35	µg/Kg-dry	1	04/05/13 21:39
Methylcyclohexane	U		16	35	µg/Kg-dry	1	04/05/13 21:39
Methylene chloride	U		14	35	µg/Kg-dry	1	04/05/13 21:39
Styrene	U		13	35	µg/Kg-dry	1	04/05/13 21:39
Tetrachloroethene	U		16	35	µg/Kg-dry	1	04/05/13 21:39
Toluene	U		13	35	µg/Kg-dry	1	04/05/13 21:39
trans-1,2-Dichloroethene	U		11	35	µg/Kg-dry	1	04/05/13 21:39
trans-1,3-Dichloropropene	U		12	35	µg/Kg-dry	1	04/05/13 21:39
Trichloroethene	U		16	35	µg/Kg-dry	1	04/05/13 21:39
Trichlorofluoromethane	U		9.6	35	µg/Kg-dry	1	04/05/13 21:39
Vinyl chloride	U		16	35	µg/Kg-dry	1	04/05/13 21:39
Xylenes, Total	U		41	100	µg/Kg-dry	1	04/05/13 21:39

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-040213-MJF-010
Collection Date: 04/02/13 08:50 AM

Work Order: 1304246
Lab ID: 1304246-10
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	93.6			70-130	%REC	1	04/05/13 21:39
Surr: 4-Bromofluorobenzene	98.8			70-130	%REC	1	04/05/13 21:39
Surr: Dibromofluoromethane	93.0			70-130	%REC	1	04/05/13 21:39
Surr: Toluene-d8	95.8			70-130	%REC	1	04/05/13 21:39
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.054	J	0.030	0.58	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	14		0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 30 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032813-MJF-011
Collection Date: 03/28/13 02:20 PM

Work Order: 1304246
Lab ID: 1304246-11
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		39	44	µg/Kg-dry	1	04/09/13 14:51
Aroclor 1221	U		39	44	µg/Kg-dry	1	04/09/13 14:51
Aroclor 1232	U		39	44	µg/Kg-dry	1	04/09/13 14:51
Aroclor 1242	U		39	44	µg/Kg-dry	1	04/09/13 14:51
Aroclor 1248	U		39	44	µg/Kg-dry	1	04/09/13 14:51
Aroclor 1254	U		12	44	µg/Kg-dry	1	04/09/13 14:51
Aroclor 1260	U		12	44	µg/Kg-dry	1	04/09/13 14:51
Surr: Decachlorobiphenyl	94.1			40-140	%REC	1	04/09/13 14:51
Surr: Tetrachloro-m-xylene	83.1			45-124	%REC	1	04/09/13 14:51
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.037		0.00081	0.016	mg/Kg-dry	1	04/11/13 12:15
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	5,600		0.53	4.2	mg/Kg-dry	5	04/15/13 21:20
Antimony	0.19	J	0.0085	2.1	mg/Kg-dry	5	04/14/13 03:48
Arsenic	4.9		0.29	0.85	mg/Kg-dry	5	04/14/13 03:48
Barium	37		0.059	2.1	mg/Kg-dry	5	04/14/13 03:48
Beryllium	0.23	J	0.017	0.85	mg/Kg-dry	5	04/14/13 03:48
Cadmium	0.29	J	0.0085	0.85	mg/Kg-dry	5	04/14/13 03:48
Chromium	12		0.35	2.1	mg/Kg-dry	5	04/14/13 03:48
Cobalt	3.3		0.0085	2.1	mg/Kg-dry	5	04/14/13 03:48
Copper	8.4		0.41	2.1	mg/Kg-dry	5	04/14/13 03:48
Iron	12,000		7.0	34	mg/Kg-dry	5	04/15/13 21:20
Lead	21		0.0085	2.1	mg/Kg-dry	5	04/14/13 03:48
Manganese	250		0.19	2.1	mg/Kg-dry	5	04/14/13 03:48
Nickel	8.9		0.21	2.1	mg/Kg-dry	5	04/14/13 03:48
Selenium	U		0.27	1.7	mg/Kg-dry	5	04/14/13 03:48
Silver	0.029	J	0.0085	0.85	mg/Kg-dry	5	04/14/13 03:48
Thallium	0.068	J	0.051	2.1	mg/Kg-dry	5	04/14/13 03:48
Vanadium	14		0.13	2.1	mg/Kg-dry	5	04/14/13 03:48
Zinc	43		0.18	4.2	mg/Kg-dry	5	04/14/13 03:48
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/8/13	Analyst: RM
<u>BatchID: 47499</u>							
1,1'-Biphenyl	U		5.7	380	µg/Kg-dry	1	04/11/13 02:22
2,4,5-Trichlorophenol	U		9.1	180	µg/Kg-dry	1	04/11/13 02:22

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032813-MJF-011
Collection Date: 03/28/13 02:20 PM

Work Order: 1304246
Lab ID: 1304246-11
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		9.1	180	µg/Kg-dry	1	04/11/13 02:22
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	04/11/13 02:22
2,4-Dimethylphenol	U		46	380	µg/Kg-dry	1	04/11/13 02:22
2,4-Dinitrophenol	U		48	750	µg/Kg-dry	1	04/11/13 02:22
2,4-Dinitrotoluene	U		10	180	µg/Kg-dry	1	04/11/13 02:22
2,6-Dinitrotoluene	U		11	180	µg/Kg-dry	1	04/11/13 02:22
2-Chloronaphthalene	U		10	91	µg/Kg-dry	1	04/11/13 02:22
2-Chlorophenol	U		10	180	µg/Kg-dry	1	04/11/13 02:22
2-Methylnaphthalene	U		11	91	µg/Kg-dry	1	04/11/13 02:22
2-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 02:22
2-Nitroaniline	U		8.7	750	µg/Kg-dry	1	04/11/13 02:22
2-Nitrophenol	U		9.9	180	µg/Kg-dry	1	04/11/13 02:22
3,3'-Dichlorobenzidine	U		11	750	µg/Kg-dry	1	04/11/13 02:22
3-Nitroaniline	U		93	750	µg/Kg-dry	1	04/11/13 02:22
4,6-Dinitro-2-methylphenol	U		55	380	µg/Kg-dry	1	04/11/13 02:22
4-Bromophenyl phenyl ether	U		9.9	180	µg/Kg-dry	1	04/11/13 02:22
4-Chloro-3-methylphenol	U		10	180	µg/Kg-dry	1	04/11/13 02:22
4-Chloroaniline	U		15	380	µg/Kg-dry	1	04/11/13 02:22
4-Chlorophenyl phenyl ether	U		10	180	µg/Kg-dry	1	04/11/13 02:22
4-Methylphenol	U		11	180	µg/Kg-dry	1	04/11/13 02:22
4-Nitroaniline	U		17	750	µg/Kg-dry	1	04/11/13 02:22
4-Nitrophenol	U		46	750	µg/Kg-dry	1	04/11/13 02:22
Acenaphthene	U		10	34	µg/Kg-dry	1	04/11/13 02:22
Acenaphthylene	U		11	34	µg/Kg-dry	1	04/11/13 02:22
Acetophenone	U		5.7	380	µg/Kg-dry	1	04/11/13 02:22
Anthracene	U		12	34	µg/Kg-dry	1	04/11/13 02:22
Atrazine	U		12	57	µg/Kg-dry	1	04/11/13 02:22
Benzaldehyde	U		14	380	µg/Kg-dry	1	04/11/13 02:22
Benzo(a)anthracene	40		14	34	µg/Kg-dry	1	04/11/13 02:22
Benzo(a)pyrene	40		18	34	µg/Kg-dry	1	04/11/13 02:22
Benzo(b)fluoranthene	67		18	34	µg/Kg-dry	1	04/11/13 02:22
Benzo(g,h,i)perylene	U		27	34	µg/Kg-dry	1	04/11/13 02:22
Benzo(k)fluoranthene	29	J	16	34	µg/Kg-dry	1	04/11/13 02:22
Bis(2-chloroethoxy)methane	U		9.4	180	µg/Kg-dry	1	04/11/13 02:22
Bis(2-chloroethyl)ether	U		9.5	180	µg/Kg-dry	1	04/11/13 02:22
Bis(2-chloroisopropyl)ether	U		8.9	180	µg/Kg-dry	1	04/11/13 02:22
Bis(2-ethylhexyl)phthalate	U		11	380	µg/Kg-dry	1	04/11/13 02:22
Butyl benzyl phthalate	29	J	16	180	µg/Kg-dry	1	04/11/13 02:22
Caprolactam	U		17	380	µg/Kg-dry	1	04/11/13 02:22
Carbazole	U		13	180	µg/Kg-dry	1	04/11/13 02:22

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032813-MJF-011
Collection Date: 03/28/13 02:20 PM

Work Order: 1304246
Lab ID: 1304246-11
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	51		13	34	µg/Kg-dry	1	04/11/13 02:22
Dibenzo(a,h)anthracene	U		19	34	µg/Kg-dry	1	04/11/13 02:22
Dibenzofuran	U		10	180	µg/Kg-dry	1	04/11/13 02:22
Diethyl phthalate	U		9.5	380	µg/Kg-dry	1	04/11/13 02:22
Dimethyl phthalate	U		9.5	380	µg/Kg-dry	1	04/11/13 02:22
Di-n-butyl phthalate	U		11	380	µg/Kg-dry	1	04/11/13 02:22
Di-n-octyl phthalate	U		14	180	µg/Kg-dry	1	04/11/13 02:22
Fluoranthene	86		14	34	µg/Kg-dry	1	04/11/13 02:22
Fluorene	U		10	34	µg/Kg-dry	1	04/11/13 02:22
Hexachlorobenzene	U		10	180	µg/Kg-dry	1	04/11/13 02:22
Hexachlorobutadiene	U		9.6	57	µg/Kg-dry	1	04/11/13 02:22
Hexachlorocyclopentadiene	U		40	380	µg/Kg-dry	1	04/11/13 02:22
Hexachloroethane	U		10	180	µg/Kg-dry	1	04/11/13 02:22
Indeno(1,2,3-cd)pyrene	U		22	34	µg/Kg-dry	1	04/11/13 02:22
Isophorone	U		9.9	180	µg/Kg-dry	1	04/11/13 02:22
Naphthalene	U		9.7	34	µg/Kg-dry	1	04/11/13 02:22
Nitrobenzene	U		9.9	180	µg/Kg-dry	1	04/11/13 02:22
N-Nitrosodi-n-propylamine	U		10	180	µg/Kg-dry	1	04/11/13 02:22
N-Nitrosodiphenylamine	U		68	180	µg/Kg-dry	1	04/11/13 02:22
Pentachlorophenol	U		17	23	µg/Kg-dry	1	04/11/13 02:22
Phenanthrene	43		34	34	µg/Kg-dry	1	04/11/13 02:22
Phenol	U		9.7	180	µg/Kg-dry	1	04/11/13 02:22
Pyrene	73		14	34	µg/Kg-dry	1	04/11/13 02:22
Surr: 2,4,6-Tribromophenol	88.2			34-140	%REC	1	04/11/13 02:22
Surr: 2-Fluorobiphenyl	79.8			12-100	%REC	1	04/11/13 02:22
Surr: 2-Fluorophenol	92.5			33-117	%REC	1	04/11/13 02:22
Surr: 4-Terphenyl-d14	111			25-137	%REC	1	04/11/13 02:22
Surr: Nitrobenzene-d5	86.5			37-107	%REC	1	04/11/13 02:22
Surr: Phenol-d6	91.0			40-106	%REC	1	04/11/13 02:22
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/5/13		Analyst: BG
BatchID: 47460							
1,1,1-Trichloroethane	U		15	39	µg/Kg-dry	1	04/11/13 05:56
1,1,2,2-Tetrachloroethane	U		17	39	µg/Kg-dry	1	04/11/13 05:56
1,1,2-Trichloroethane	U		14	39	µg/Kg-dry	1	04/11/13 05:56
1,1,2-Trichlorotrifluoroethane	U		15	39	µg/Kg-dry	1	04/11/13 05:56
1,1-Dichloroethane	U		14	39	µg/Kg-dry	1	04/11/13 05:56
1,1-Dichloroethene	U		17	39	µg/Kg-dry	1	04/11/13 05:56
1,2,4-Trichlorobenzene	U		20	39	µg/Kg-dry	1	04/11/13 05:56
1,2-Dibromo-3-chloropropane	U		19	39	µg/Kg-dry	1	04/11/13 05:56

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032813-MJF-011
Collection Date: 03/28/13 02:20 PM

Work Order: 1304246
Lab ID: 1304246-11
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		15	39	µg/Kg-dry	1	04/11/13 05:56
1,2-Dichlorobenzene	U		16	39	µg/Kg-dry	1	04/11/13 05:56
1,2-Dichloroethane	U		19	39	µg/Kg-dry	1	04/11/13 05:56
1,2-Dichloropropane	U		13	39	µg/Kg-dry	1	04/11/13 05:56
1,3-Dichlorobenzene	U		16	39	µg/Kg-dry	1	04/11/13 05:56
1,4-Dichlorobenzene	U		15	39	µg/Kg-dry	1	04/11/13 05:56
2-Butanone	U		97	260	µg/Kg-dry	1	04/11/13 05:56
2-Hexanone	U		9.6	39	µg/Kg-dry	1	04/11/13 05:56
4-Methyl-2-pentanone	U		13	39	µg/Kg-dry	1	04/11/13 05:56
Acetone	U		83	130	µg/Kg-dry	1	04/11/13 05:56
Benzene	U		16	39	µg/Kg-dry	1	04/11/13 05:56
Bromodichloromethane	U		8.8	39	µg/Kg-dry	1	04/11/13 05:56
Bromoform	U		7.7	39	µg/Kg-dry	1	04/11/13 05:56
Bromomethane	U		15	98	µg/Kg-dry	1	04/11/13 05:56
Carbon disulfide	U		19	39	µg/Kg-dry	1	04/11/13 05:56
Carbon tetrachloride	U		11	39	µg/Kg-dry	1	04/11/13 05:56
Chlorobenzene	U		16	39	µg/Kg-dry	1	04/11/13 05:56
Chloroethane	U		83	130	µg/Kg-dry	1	04/11/13 05:56
Chloroform	U		16	39	µg/Kg-dry	1	04/11/13 05:56
Chloromethane	U		22	130	µg/Kg-dry	1	04/11/13 05:56
cis-1,2-Dichloroethene	U		16	39	µg/Kg-dry	1	04/11/13 05:56
cis-1,3-Dichloropropene	U		13	39	µg/Kg-dry	1	04/11/13 05:56
Cyclohexane	U		18	39	µg/Kg-dry	1	04/11/13 05:56
Dibromochloromethane	U		7.3	39	µg/Kg-dry	1	04/11/13 05:56
Dichlorodifluoromethane	U		18	39	µg/Kg-dry	1	04/11/13 05:56
Ethylbenzene	U		15	39	µg/Kg-dry	1	04/11/13 05:56
Isopropylbenzene	U		17	39	µg/Kg-dry	1	04/11/13 05:56
Methyl acetate	590		53	260	µg/Kg-dry	1	04/11/13 05:56
Methyl tert-butyl ether	U		17	39	µg/Kg-dry	1	04/11/13 05:56
Methylcyclohexane	U		18	39	µg/Kg-dry	1	04/11/13 05:56
Methylene chloride	U		15	39	µg/Kg-dry	1	04/11/13 05:56
Styrene	U		15	39	µg/Kg-dry	1	04/11/13 05:56
Tetrachloroethene	U		17	39	µg/Kg-dry	1	04/11/13 05:56
Toluene	U		15	39	µg/Kg-dry	1	04/11/13 05:56
trans-1,2-Dichloroethene	U		12	39	µg/Kg-dry	1	04/11/13 05:56
trans-1,3-Dichloropropene	U		13	39	µg/Kg-dry	1	04/11/13 05:56
Trichloroethene	U		18	39	µg/Kg-dry	1	04/11/13 05:56
Trichlorofluoromethane	U		11	39	µg/Kg-dry	1	04/11/13 05:56
Vinyl chloride	U		18	39	µg/Kg-dry	1	04/11/13 05:56
Xylenes, Total	U		46	120	µg/Kg-dry	1	04/11/13 05:56

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032813-MJF-011
Collection Date: 03/28/13 02:20 PM

Work Order: 1304246
Lab ID: 1304246-11
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	100			70-130	%REC	1	04/11/13 05:56
Surr: 4-Bromofluorobenzene	97.5			70-130	%REC	1	04/11/13 05:56
Surr: Dibromofluoromethane	94.0			70-130	%REC	1	04/11/13 05:56
Surr: Toluene-d8	99.5			70-130	%REC	1	04/11/13 05:56
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.075	J	0.030	0.58	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	14	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 35 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-012
Collection Date: 03/26/13 01:40 PM

Work Order: 1304246
Lab ID: 1304246-12
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		38	43	µg/Kg-dry	1	04/09/13 15:11
Aroclor 1221	U		38	43	µg/Kg-dry	1	04/09/13 15:11
Aroclor 1232	U		38	43	µg/Kg-dry	1	04/09/13 15:11
Aroclor 1242	U		38	43	µg/Kg-dry	1	04/09/13 15:11
Aroclor 1248	U		38	43	µg/Kg-dry	1	04/09/13 15:11
Aroclor 1254	U		12	43	µg/Kg-dry	1	04/09/13 15:11
Aroclor 1260	U		12	43	µg/Kg-dry	1	04/09/13 15:11
Surr: Decachlorobiphenyl	92.1			40-140	%REC	1	04/09/13 15:11
Surr: Tetrachloro-m-xylene	80.1			45-124	%REC	1	04/09/13 15:11
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.025		0.00085	0.017	mg/Kg-dry	1	04/11/13 12:17
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	3,800		0.53	4.2	mg/Kg-dry	5	04/15/13 21:26
Antimony	0.15	J	0.0085	2.1	mg/Kg-dry	5	04/14/13 03:54
Arsenic	4.1		0.29	0.85	mg/Kg-dry	5	04/14/13 03:54
Barium	21		0.059	2.1	mg/Kg-dry	5	04/14/13 03:54
Beryllium	0.21	J	0.017	0.85	mg/Kg-dry	5	04/14/13 03:54
Cadmium	0.18	J	0.0085	0.85	mg/Kg-dry	5	04/14/13 03:54
Chromium	8.2		0.35	2.1	mg/Kg-dry	5	04/14/13 03:54
Cobalt	2.6		0.0085	2.1	mg/Kg-dry	5	04/14/13 03:54
Copper	9.8		0.42	2.1	mg/Kg-dry	5	04/14/13 03:54
Iron	9,200		7.1	34	mg/Kg-dry	5	04/15/13 21:26
Lead	21		0.0085	2.1	mg/Kg-dry	5	04/14/13 03:54
Manganese	200		0.19	2.1	mg/Kg-dry	5	04/14/13 03:54
Nickel	7.3		0.21	2.1	mg/Kg-dry	5	04/14/13 03:54
Selenium	U		0.27	1.7	mg/Kg-dry	5	04/14/13 03:54
Silver	0.012	J	0.0085	0.85	mg/Kg-dry	5	04/14/13 03:54
Thallium	0.090	J	0.051	2.1	mg/Kg-dry	5	04/14/13 03:54
Vanadium	11		0.13	2.1	mg/Kg-dry	5	04/14/13 03:54
Zinc	34		0.18	4.2	mg/Kg-dry	5	04/14/13 03:54
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/8/13	Analyst: RM
<u>BatchID: 47499</u>							
1,1'-Biphenyl	U		5.4	360	µg/Kg-dry	1	04/11/13 02:48
2,4,5-Trichlorophenol	U		8.7	170	µg/Kg-dry	1	04/11/13 02:48

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-012
Collection Date: 03/26/13 01:40 PM

Work Order: 1304246
Lab ID: 1304246-12
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.7	170	µg/Kg-dry	1	04/11/13 02:48
2,4-Dichlorophenol	U		11	170	µg/Kg-dry	1	04/11/13 02:48
2,4-Dimethylphenol	U		44	360	µg/Kg-dry	1	04/11/13 02:48
2,4-Dinitrophenol	U		46	720	µg/Kg-dry	1	04/11/13 02:48
2,4-Dinitrotoluene	U		9.7	170	µg/Kg-dry	1	04/11/13 02:48
2,6-Dinitrotoluene	U		10	170	µg/Kg-dry	1	04/11/13 02:48
2-Chloronaphthalene	U		9.9	87	µg/Kg-dry	1	04/11/13 02:48
2-Chlorophenol	U		9.7	170	µg/Kg-dry	1	04/11/13 02:48
2-Methylnaphthalene	U		11	87	µg/Kg-dry	1	04/11/13 02:48
2-Methylphenol	U		10	170	µg/Kg-dry	1	04/11/13 02:48
2-Nitroaniline	U		8.3	720	µg/Kg-dry	1	04/11/13 02:48
2-Nitrophenol	U		9.5	170	µg/Kg-dry	1	04/11/13 02:48
3,3'-Dichlorobenzidine	U		10	720	µg/Kg-dry	1	04/11/13 02:48
3-Nitroaniline	U		88	720	µg/Kg-dry	1	04/11/13 02:48
4,6-Dinitro-2-methylphenol	U		52	360	µg/Kg-dry	1	04/11/13 02:48
4-Bromophenyl phenyl ether	U		9.4	170	µg/Kg-dry	1	04/11/13 02:48
4-Chloro-3-methylphenol	U		9.8	170	µg/Kg-dry	1	04/11/13 02:48
4-Chloroaniline	U		14	360	µg/Kg-dry	1	04/11/13 02:48
4-Chlorophenyl phenyl ether	U		9.9	170	µg/Kg-dry	1	04/11/13 02:48
4-Methylphenol	U		11	170	µg/Kg-dry	1	04/11/13 02:48
4-Nitroaniline	U		16	720	µg/Kg-dry	1	04/11/13 02:48
4-Nitrophenol	U		44	720	µg/Kg-dry	1	04/11/13 02:48
Acenaphthene	U		9.9	33	µg/Kg-dry	1	04/11/13 02:48
Acenaphthylene	24	J	10	33	µg/Kg-dry	1	04/11/13 02:48
Acetophenone	U		5.4	360	µg/Kg-dry	1	04/11/13 02:48
Anthracene	41		11	33	µg/Kg-dry	1	04/11/13 02:48
Atrazine	U		11	54	µg/Kg-dry	1	04/11/13 02:48
Benzaldehyde	U		14	360	µg/Kg-dry	1	04/11/13 02:48
Benzo(a)anthracene	250		13	33	µg/Kg-dry	1	04/11/13 02:48
Benzo(a)pyrene	280		17	33	µg/Kg-dry	1	04/11/13 02:48
Benzo(b)fluoranthene	440		18	33	µg/Kg-dry	1	04/11/13 02:48
Benzo(g,h,i)perylene	120		26	33	µg/Kg-dry	1	04/11/13 02:48
Benzo(k)fluoranthene	190		15	33	µg/Kg-dry	1	04/11/13 02:48
Bis(2-chloroethoxy)methane	U		8.9	170	µg/Kg-dry	1	04/11/13 02:48
Bis(2-chloroethyl)ether	U		9.1	170	µg/Kg-dry	1	04/11/13 02:48
Bis(2-chloroisopropyl)ether	U		8.5	170	µg/Kg-dry	1	04/11/13 02:48
Bis(2-ethylhexyl)phthalate	U		11	360	µg/Kg-dry	1	04/11/13 02:48
Butyl benzyl phthalate	U		15	170	µg/Kg-dry	1	04/11/13 02:48
Caprolactam	U		16	360	µg/Kg-dry	1	04/11/13 02:48
Carbazole	U		12	170	µg/Kg-dry	1	04/11/13 02:48

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-012
Collection Date: 03/26/13 01:40 PM

Work Order: 1304246
Lab ID: 1304246-12
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	280		12	33	µg/Kg-dry	1	04/11/13 02:48
Dibenzo(a,h)anthracene	32		19	33	µg/Kg-dry	1	04/11/13 02:48
Dibenzofuran	U		9.9	170	µg/Kg-dry	1	04/11/13 02:48
Diethyl phthalate	U		9.0	360	µg/Kg-dry	1	04/11/13 02:48
Dimethyl phthalate	33	J	9.1	360	µg/Kg-dry	1	04/11/13 02:48
Di-n-butyl phthalate	U		11	360	µg/Kg-dry	1	04/11/13 02:48
Di-n-octyl phthalate	U		13	170	µg/Kg-dry	1	04/11/13 02:48
Fluoranthene	530		13	33	µg/Kg-dry	1	04/11/13 02:48
Fluorene	U		9.5	33	µg/Kg-dry	1	04/11/13 02:48
Hexachlorobenzene	U		9.9	170	µg/Kg-dry	1	04/11/13 02:48
Hexachlorobutadiene	U		9.2	54	µg/Kg-dry	1	04/11/13 02:48
Hexachlorocyclopentadiene	U		38	360	µg/Kg-dry	1	04/11/13 02:48
Hexachloroethane	U		9.5	170	µg/Kg-dry	1	04/11/13 02:48
Indeno(1,2,3-cd)pyrene	110		21	33	µg/Kg-dry	1	04/11/13 02:48
Isophorone	U		9.4	170	µg/Kg-dry	1	04/11/13 02:48
Naphthalene	U		9.3	33	µg/Kg-dry	1	04/11/13 02:48
Nitrobenzene	U		9.4	170	µg/Kg-dry	1	04/11/13 02:48
N-Nitrosodi-n-propylamine	U		9.5	170	µg/Kg-dry	1	04/11/13 02:48
N-Nitrosodiphenylamine	U		65	170	µg/Kg-dry	1	04/11/13 02:48
Pentachlorophenol	U		16	22	µg/Kg-dry	1	04/11/13 02:48
Phenanthrene	170		33	33	µg/Kg-dry	1	04/11/13 02:48
Phenol	U		9.2	170	µg/Kg-dry	1	04/11/13 02:48
Pyrene	450		14	33	µg/Kg-dry	1	04/11/13 02:48
Surr: 2,4,6-Tribromophenol	84.6			34-140	%REC	1	04/11/13 02:48
Surr: 2-Fluorobiphenyl	71.4			12-100	%REC	1	04/11/13 02:48
Surr: 2-Fluorophenol	80.7			33-117	%REC	1	04/11/13 02:48
Surr: 4-Terphenyl-d14	105			25-137	%REC	1	04/11/13 02:48
Surr: Nitrobenzene-d5	75.0			37-107	%REC	1	04/11/13 02:48
Surr: Phenol-d6	81.1			40-106	%REC	1	04/11/13 02:48
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane	U		13	33	µg/Kg-dry	1	04/05/13 22:27
1,1,2,2-Tetrachloroethane	U		15	33	µg/Kg-dry	1	04/05/13 22:27
1,1,2-Trichloroethane	U		12	33	µg/Kg-dry	1	04/05/13 22:27
1,1,2-Trichlorotrifluoroethane	U		12	33	µg/Kg-dry	1	04/05/13 22:27
1,1-Dichloroethane	U		12	33	µg/Kg-dry	1	04/05/13 22:27
1,1-Dichloroethene	U		14	33	µg/Kg-dry	1	04/05/13 22:27
1,2,4-Trichlorobenzene	U		17	33	µg/Kg-dry	1	04/05/13 22:27
1,2-Dibromo-3-chloropropane	U		16	33	µg/Kg-dry	1	04/05/13 22:27

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-012
Collection Date: 03/26/13 01:40 PM

Work Order: 1304246
Lab ID: 1304246-12
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		13	33	µg/Kg-dry	1	04/05/13 22:27
1,2-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/05/13 22:27
1,2-Dichloroethane	U		16	33	µg/Kg-dry	1	04/05/13 22:27
1,2-Dichloropropane	U		11	33	µg/Kg-dry	1	04/05/13 22:27
1,3-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/05/13 22:27
1,4-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/05/13 22:27
2-Butanone	U		82	220	µg/Kg-dry	1	04/05/13 22:27
2-Hexanone	U		8.2	33	µg/Kg-dry	1	04/05/13 22:27
4-Methyl-2-pentanone	U		11	33	µg/Kg-dry	1	04/05/13 22:27
Acetone	U		70	110	µg/Kg-dry	1	04/05/13 22:27
Benzene	U		13	33	µg/Kg-dry	1	04/05/13 22:27
Bromodichloromethane	U		7.5	33	µg/Kg-dry	1	04/05/13 22:27
Bromoform	U		6.5	33	µg/Kg-dry	1	04/05/13 22:27
Bromomethane	U		13	83	µg/Kg-dry	1	04/05/13 22:27
Carbon disulfide	U		16	33	µg/Kg-dry	1	04/05/13 22:27
Carbon tetrachloride	U		9.4	33	µg/Kg-dry	1	04/05/13 22:27
Chlorobenzene	U		14	33	µg/Kg-dry	1	04/05/13 22:27
Chloroethane	U		71	110	µg/Kg-dry	1	04/05/13 22:27
Chloroform	U		14	33	µg/Kg-dry	1	04/05/13 22:27
Chloromethane	U		18	110	µg/Kg-dry	1	04/05/13 22:27
cis-1,2-Dichloroethene	U		13	33	µg/Kg-dry	1	04/05/13 22:27
cis-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/05/13 22:27
Cyclohexane	U		15	33	µg/Kg-dry	1	04/05/13 22:27
Dibromochloromethane	U		6.1	33	µg/Kg-dry	1	04/05/13 22:27
Dichlorodifluoromethane	U		15	33	µg/Kg-dry	1	04/05/13 22:27
Ethylbenzene	U		12	33	µg/Kg-dry	1	04/05/13 22:27
Isopropylbenzene	U		14	33	µg/Kg-dry	1	04/05/13 22:27
Methyl acetate	U		45	220	µg/Kg-dry	1	04/05/13 22:27
Methyl tert-butyl ether	U		14	33	µg/Kg-dry	1	04/05/13 22:27
Methylcyclohexane	U		15	33	µg/Kg-dry	1	04/05/13 22:27
Methylene chloride	U		13	33	µg/Kg-dry	1	04/05/13 22:27
Styrene	U		12	33	µg/Kg-dry	1	04/05/13 22:27
Tetrachloroethene	U		15	33	µg/Kg-dry	1	04/05/13 22:27
Toluene	U		12	33	µg/Kg-dry	1	04/05/13 22:27
trans-1,2-Dichloroethene	U		10	33	µg/Kg-dry	1	04/05/13 22:27
trans-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/05/13 22:27
Trichloroethene	U		16	33	µg/Kg-dry	1	04/05/13 22:27
Trichlorofluoromethane	U		9.1	33	µg/Kg-dry	1	04/05/13 22:27
Vinyl chloride	U		15	33	µg/Kg-dry	1	04/05/13 22:27
Xylenes, Total	U		39	100	µg/Kg-dry	1	04/05/13 22:27

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-012
Collection Date: 03/26/13 01:40 PM

Work Order: 1304246
Lab ID: 1304246-12
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	97.4			70-130	%REC	1	04/05/13 22:27
Surr: 4-Bromofluorobenzene	95.4			70-130	%REC	1	04/05/13 22:27
Surr: Dibromofluoromethane	92.6			70-130	%REC	1	04/05/13 22:27
Surr: Toluene-d8	96.4			70-130	%REC	1	04/05/13 22:27
CYANIDE, TOTAL			SW9012A		Prep: SW9014 / 4/8/13		Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.11	J	0.028	0.55	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	9.7	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 40 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-013
Collection Date: 03/26/13 01:50 PM

Work Order: 1304246
Lab ID: 1304246-13
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		41	46	µg/Kg-dry	1	04/09/13 15:30
Aroclor 1221	U		41	46	µg/Kg-dry	1	04/09/13 15:30
Aroclor 1232	U		41	46	µg/Kg-dry	1	04/09/13 15:30
Aroclor 1242	U		41	46	µg/Kg-dry	1	04/09/13 15:30
Aroclor 1248	U		41	46	µg/Kg-dry	1	04/09/13 15:30
Aroclor 1254	U		13	46	µg/Kg-dry	1	04/09/13 15:30
Aroclor 1260	U		13	46	µg/Kg-dry	1	04/09/13 15:30
Surr: Decachlorobiphenyl	88.1			40-140	%REC	1	04/09/13 15:30
Surr: Tetrachloro-m-xylene	78.1			45-124	%REC	1	04/09/13 15:30
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.023		0.00082	0.016	mg/Kg-dry	1	04/11/13 12:19
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	5,000		0.55	4.4	mg/Kg-dry	5	04/15/13 21:32
Antimony	0.23	J	0.0087	2.2	mg/Kg-dry	5	04/14/13 04:00
Arsenic	4.3		0.30	0.87	mg/Kg-dry	5	04/14/13 04:00
Barium	34		0.061	2.2	mg/Kg-dry	5	04/14/13 04:00
Beryllium	0.23	J	0.017	0.87	mg/Kg-dry	5	04/14/13 04:00
Cadmium	0.26	J	0.0087	0.87	mg/Kg-dry	5	04/14/13 04:00
Chromium	8.9		0.36	2.2	mg/Kg-dry	5	04/14/13 04:00
Cobalt	4.2		0.0087	2.2	mg/Kg-dry	5	04/14/13 04:00
Copper	14		0.43	2.2	mg/Kg-dry	5	04/14/13 04:00
Iron	12,000		7.2	35	mg/Kg-dry	5	04/15/13 21:32
Lead	23		0.0087	2.2	mg/Kg-dry	5	04/14/13 04:00
Manganese	250		0.19	2.2	mg/Kg-dry	5	04/14/13 04:00
Nickel	12		0.22	2.2	mg/Kg-dry	5	04/14/13 04:00
Selenium	U		0.28	1.7	mg/Kg-dry	5	04/14/13 04:00
Silver	0.040	J	0.0087	0.87	mg/Kg-dry	5	04/14/13 04:00
Thallium	0.16	J	0.052	2.2	mg/Kg-dry	5	04/14/13 04:00
Vanadium	15		0.13	2.2	mg/Kg-dry	5	04/14/13 04:00
Zinc	42		0.18	4.4	mg/Kg-dry	5	04/14/13 04:00
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/8/13	Analyst: RM
<u>BatchID: 47499</u>							
1,1'-Biphenyl	U		5.7	380	µg/Kg-dry	1	04/11/13 03:13
2,4,5-Trichlorophenol	U		9.2	190	µg/Kg-dry	1	04/11/13 03:13

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-013
Collection Date: 03/26/13 01:50 PM

Work Order: 1304246
Lab ID: 1304246-13
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		9.2	190	µg/Kg-dry	1	04/11/13 03:13
2,4-Dichlorophenol	U		11	190	µg/Kg-dry	1	04/11/13 03:13
2,4-Dimethylphenol	U		47	380	µg/Kg-dry	1	04/11/13 03:13
2,4-Dinitrophenol	U		49	760	µg/Kg-dry	1	04/11/13 03:13
2,4-Dinitrotoluene	U		10	190	µg/Kg-dry	1	04/11/13 03:13
2,6-Dinitrotoluene	U		11	190	µg/Kg-dry	1	04/11/13 03:13
2-Chloronaphthalene	U		11	93	µg/Kg-dry	1	04/11/13 03:13
2-Chlorophenol	U		10	190	µg/Kg-dry	1	04/11/13 03:13
2-Methylnaphthalene	U		11	93	µg/Kg-dry	1	04/11/13 03:13
2-Methylphenol	U		11	190	µg/Kg-dry	1	04/11/13 03:13
2-Nitroaniline	U		8.8	760	µg/Kg-dry	1	04/11/13 03:13
2-Nitrophenol	U		10	190	µg/Kg-dry	1	04/11/13 03:13
3,3'-Dichlorobenzidine	U		11	760	µg/Kg-dry	1	04/11/13 03:13
3-Nitroaniline	U		94	760	µg/Kg-dry	1	04/11/13 03:13
4,6-Dinitro-2-methylphenol	U		56	380	µg/Kg-dry	1	04/11/13 03:13
4-Bromophenyl phenyl ether	U		10	190	µg/Kg-dry	1	04/11/13 03:13
4-Chloro-3-methylphenol	U		10	190	µg/Kg-dry	1	04/11/13 03:13
4-Chloroaniline	U		15	380	µg/Kg-dry	1	04/11/13 03:13
4-Chlorophenyl phenyl ether	U		11	190	µg/Kg-dry	1	04/11/13 03:13
4-Methylphenol	U		11	190	µg/Kg-dry	1	04/11/13 03:13
4-Nitroaniline	U		17	760	µg/Kg-dry	1	04/11/13 03:13
4-Nitrophenol	U		47	760	µg/Kg-dry	1	04/11/13 03:13
Acenaphthene	U		11	35	µg/Kg-dry	1	04/11/13 03:13
Acenaphthylene	U		11	35	µg/Kg-dry	1	04/11/13 03:13
Acetophenone	U		5.8	380	µg/Kg-dry	1	04/11/13 03:13
Anthracene	U		12	35	µg/Kg-dry	1	04/11/13 03:13
Atrazine	U		12	58	µg/Kg-dry	1	04/11/13 03:13
Benzaldehyde	U		15	380	µg/Kg-dry	1	04/11/13 03:13
Benzo(a)anthracene	35	J	14	35	µg/Kg-dry	1	04/11/13 03:13
Benzo(a)pyrene	29	J	18	35	µg/Kg-dry	1	04/11/13 03:13
Benzo(b)fluoranthene	70		19	35	µg/Kg-dry	1	04/11/13 03:13
Benzo(g,h,i)perylene	U		27	35	µg/Kg-dry	1	04/11/13 03:13
Benzo(k)fluoranthene	83		16	35	µg/Kg-dry	1	04/11/13 03:13
Bis(2-chloroethoxy)methane	U		9.5	190	µg/Kg-dry	1	04/11/13 03:13
Bis(2-chloroethyl)ether	U		9.7	190	µg/Kg-dry	1	04/11/13 03:13
Bis(2-chloroisopropyl)ether	U		9.0	190	µg/Kg-dry	1	04/11/13 03:13
Bis(2-ethylhexyl)phthalate	U		11	380	µg/Kg-dry	1	04/11/13 03:13
Butyl benzyl phthalate	U		16	190	µg/Kg-dry	1	04/11/13 03:13
Caprolactam	U		17	380	µg/Kg-dry	1	04/11/13 03:13
Carbazole	U		13	190	µg/Kg-dry	1	04/11/13 03:13

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-013
Collection Date: 03/26/13 01:50 PM

Work Order: 1304246
Lab ID: 1304246-13
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	49		13	35	µg/Kg-dry	1	04/11/13 03:13
Dibenzo(a,h)anthracene	U		20	35	µg/Kg-dry	1	04/11/13 03:13
Dibenzofuran	U		11	190	µg/Kg-dry	1	04/11/13 03:13
Diethyl phthalate	U		9.6	380	µg/Kg-dry	1	04/11/13 03:13
Dimethyl phthalate	U		9.7	380	µg/Kg-dry	1	04/11/13 03:13
Di-n-butyl phthalate	U		12	380	µg/Kg-dry	1	04/11/13 03:13
Di-n-octyl phthalate	U		14	190	µg/Kg-dry	1	04/11/13 03:13
Fluoranthene	59		14	35	µg/Kg-dry	1	04/11/13 03:13
Fluorene	U		10	35	µg/Kg-dry	1	04/11/13 03:13
Hexachlorobenzene	U		11	190	µg/Kg-dry	1	04/11/13 03:13
Hexachlorobutadiene	U		9.8	58	µg/Kg-dry	1	04/11/13 03:13
Hexachlorocyclopentadiene	U		40	380	µg/Kg-dry	1	04/11/13 03:13
Hexachloroethane	U		10	190	µg/Kg-dry	1	04/11/13 03:13
Indeno(1,2,3-cd)pyrene	U		22	35	µg/Kg-dry	1	04/11/13 03:13
Isophorone	U		10	190	µg/Kg-dry	1	04/11/13 03:13
Naphthalene	U		9.9	35	µg/Kg-dry	1	04/11/13 03:13
Nitrobenzene	U		10	190	µg/Kg-dry	1	04/11/13 03:13
N-Nitrosodi-n-propylamine	U		10	190	µg/Kg-dry	1	04/11/13 03:13
N-Nitrosodiphenylamine	U		69	190	µg/Kg-dry	1	04/11/13 03:13
Pentachlorophenol	U		17	23	µg/Kg-dry	1	04/11/13 03:13
Phenanthrene	39		35	35	µg/Kg-dry	1	04/11/13 03:13
Phenol	U		9.8	190	µg/Kg-dry	1	04/11/13 03:13
Pyrene	57		14	35	µg/Kg-dry	1	04/11/13 03:13
Surr: 2,4,6-Tribromophenol	84.3			34-140	%REC	1	04/11/13 03:13
Surr: 2-Fluorobiphenyl	74.7			12-100	%REC	1	04/11/13 03:13
Surr: 2-Fluorophenol	88.3			33-117	%REC	1	04/11/13 03:13
Surr: 4-Terphenyl-d14	107			25-137	%REC	1	04/11/13 03:13
Surr: Nitrobenzene-d5	82.1			37-107	%REC	1	04/11/13 03:13
Surr: Phenol-d6	85.5			40-106	%REC	1	04/11/13 03:13
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/5/13		Analyst: AK
<u>BatchID: 47460</u>							
1,1,1-Trichloroethane	U		13	35	µg/Kg-dry	1	04/05/13 20:04
1,1,2,2-Tetrachloroethane	U		15	35	µg/Kg-dry	1	04/05/13 20:04
1,1,2-Trichloroethane	U		12	35	µg/Kg-dry	1	04/05/13 20:04
1,1,2-Trichlorotrifluoroethane	U		13	35	µg/Kg-dry	1	04/05/13 20:04
1,1-Dichloroethane	U		13	35	µg/Kg-dry	1	04/05/13 20:04
1,1-Dichloroethene	U		15	35	µg/Kg-dry	1	04/05/13 20:04
1,2,4-Trichlorobenzene	U		18	35	µg/Kg-dry	1	04/05/13 20:04
1,2-Dibromo-3-chloropropane	U		17	35	µg/Kg-dry	1	04/05/13 20:04

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-013
Collection Date: 03/26/13 01:50 PM

Work Order: 1304246
Lab ID: 1304246-13
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		14	35	µg/Kg-dry	1	04/05/13 20:04
1,2-Dichlorobenzene	U		14	35	µg/Kg-dry	1	04/05/13 20:04
1,2-Dichloroethane	U		17	35	µg/Kg-dry	1	04/05/13 20:04
1,2-Dichloropropane	U		12	35	µg/Kg-dry	1	04/05/13 20:04
1,3-Dichlorobenzene	U		14	35	µg/Kg-dry	1	04/05/13 20:04
1,4-Dichlorobenzene	U		13	35	µg/Kg-dry	1	04/05/13 20:04
2-Butanone	U		87	230	µg/Kg-dry	1	04/05/13 20:04
2-Hexanone	U		8.6	35	µg/Kg-dry	1	04/05/13 20:04
4-Methyl-2-pentanone	U		12	35	µg/Kg-dry	1	04/05/13 20:04
Acetone	U		75	120	µg/Kg-dry	1	04/05/13 20:04
Benzene	U		14	35	µg/Kg-dry	1	04/05/13 20:04
Bromodichloromethane	U		7.9	35	µg/Kg-dry	1	04/05/13 20:04
Bromoform	U		6.9	35	µg/Kg-dry	1	04/05/13 20:04
Bromomethane	U		13	88	µg/Kg-dry	1	04/05/13 20:04
Carbon disulfide	U		17	35	µg/Kg-dry	1	04/05/13 20:04
Carbon tetrachloride	U		10	35	µg/Kg-dry	1	04/05/13 20:04
Chlorobenzene	U		14	35	µg/Kg-dry	1	04/05/13 20:04
Chloroethane	U		75	120	µg/Kg-dry	1	04/05/13 20:04
Chloroform	U		15	35	µg/Kg-dry	1	04/05/13 20:04
Chloromethane	U		20	120	µg/Kg-dry	1	04/05/13 20:04
cis-1,2-Dichloroethene	U		14	35	µg/Kg-dry	1	04/05/13 20:04
cis-1,3-Dichloropropene	U		12	35	µg/Kg-dry	1	04/05/13 20:04
Cyclohexane	U		16	35	µg/Kg-dry	1	04/05/13 20:04
Dibromochloromethane	U		6.5	35	µg/Kg-dry	1	04/05/13 20:04
Dichlorodifluoromethane	U		16	35	µg/Kg-dry	1	04/05/13 20:04
Ethylbenzene	U		13	35	µg/Kg-dry	1	04/05/13 20:04
Isopropylbenzene	U		15	35	µg/Kg-dry	1	04/05/13 20:04
Methyl acetate	130	J	47	230	µg/Kg-dry	1	04/05/13 20:04
Methyl tert-butyl ether	U		15	35	µg/Kg-dry	1	04/05/13 20:04
Methylcyclohexane	U		16	35	µg/Kg-dry	1	04/05/13 20:04
Methylene chloride	U		14	35	µg/Kg-dry	1	04/05/13 20:04
Styrene	U		13	35	µg/Kg-dry	1	04/05/13 20:04
Tetrachloroethene	U		16	35	µg/Kg-dry	1	04/05/13 20:04
Toluene	U		13	35	µg/Kg-dry	1	04/05/13 20:04
trans-1,2-Dichloroethene	U		11	35	µg/Kg-dry	1	04/05/13 20:04
trans-1,3-Dichloropropene	U		12	35	µg/Kg-dry	1	04/05/13 20:04
Trichloroethene	U		16	35	µg/Kg-dry	1	04/05/13 20:04
Trichlorofluoromethane	U		9.7	35	µg/Kg-dry	1	04/05/13 20:04
Vinyl chloride	U		16	35	µg/Kg-dry	1	04/05/13 20:04
Xylenes, Total	U		42	110	µg/Kg-dry	1	04/05/13 20:04

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-013
Collection Date: 03/26/13 01:50 PM

Work Order: 1304246
Lab ID: 1304246-13
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	95.2			70-130	%REC	1	04/05/13 20:04
Surr: 4-Bromofluorobenzene	96.0			70-130	%REC	1	04/05/13 20:04
Surr: Dibromofluoromethane	96.1			70-130	%REC	1	04/05/13 20:04
Surr: Toluene-d8	98.6			70-130	%REC	1	04/05/13 20:04
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.057	J	0.031	0.59	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	15	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 45 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-014
Collection Date: 03/25/13 10:15 AM

Work Order: 1304246
Lab ID: 1304246-14
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		37	41	µg/Kg-dry	1	04/09/13 15:50
Aroclor 1221	U		37	41	µg/Kg-dry	1	04/09/13 15:50
Aroclor 1232	U		37	41	µg/Kg-dry	1	04/09/13 15:50
Aroclor 1242	U		37	41	µg/Kg-dry	1	04/09/13 15:50
Aroclor 1248	U		37	41	µg/Kg-dry	1	04/09/13 15:50
Aroclor 1254	U		11	41	µg/Kg-dry	1	04/09/13 15:50
Aroclor 1260	U		11	41	µg/Kg-dry	1	04/09/13 15:50
Surr: Decachlorobiphenyl	93.1			40-140	%REC	1	04/09/13 15:50
Surr: Tetrachloro-m-xylene	80.1			45-124	%REC	1	04/09/13 15:50
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.025		0.00080	0.016	mg/Kg-dry	1	04/11/13 12:21
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	5,000		0.44	3.5	mg/Kg-dry	5	04/15/13 21:38
Antimony	0.24	J	0.0070	1.7	mg/Kg-dry	5	04/14/13 04:06
Arsenic	4.2		0.24	0.70	mg/Kg-dry	5	04/14/13 04:06
Barium	19		0.049	1.7	mg/Kg-dry	5	04/14/13 04:06
Beryllium	0.21	J	0.014	0.70	mg/Kg-dry	5	04/14/13 04:06
Cadmium	0.51	J	0.0070	0.70	mg/Kg-dry	5	04/14/13 04:06
Chromium	9.4		0.29	1.7	mg/Kg-dry	5	04/14/13 04:06
Cobalt	2.9		0.0070	1.7	mg/Kg-dry	5	04/14/13 04:06
Copper	11		0.34	1.7	mg/Kg-dry	5	04/14/13 04:06
Iron	11,000		5.8	28	mg/Kg-dry	5	04/15/13 21:38
Lead	20		0.0070	1.7	mg/Kg-dry	5	04/14/13 04:06
Manganese	310		0.15	1.7	mg/Kg-dry	5	04/14/13 04:06
Nickel	9.9		0.17	1.7	mg/Kg-dry	5	04/14/13 04:06
Selenium	U		0.22	1.4	mg/Kg-dry	5	04/14/13 04:06
Silver	0.11	J	0.0070	0.70	mg/Kg-dry	5	04/14/13 04:06
Thallium	0.12	J	0.042	1.7	mg/Kg-dry	5	04/14/13 04:06
Vanadium	12		0.10	1.7	mg/Kg-dry	5	04/14/13 04:06
Zinc	59		0.15	3.5	mg/Kg-dry	5	04/14/13 04:06
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/7/13	Analyst: HL
<u>BatchID: 47480</u>							
1,1'-Biphenyl	U		5.4	360	µg/Kg-dry	1	04/08/13 12:46
2,4,5-Trichlorophenol	U		8.6	170	µg/Kg-dry	1	04/08/13 12:46

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-014
Collection Date: 03/25/13 10:15 AM

Work Order: 1304246
Lab ID: 1304246-14
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.6	170	µg/Kg-dry	1	04/08/13 12:46
2,4-Dichlorophenol	U		10	170	µg/Kg-dry	1	04/08/13 12:46
2,4-Dimethylphenol	U		44	360	µg/Kg-dry	1	04/08/13 12:46
2,4-Dinitrophenol	U		46	710	µg/Kg-dry	1	04/08/13 12:46
2,4-Dinitrotoluene	U		9.6	170	µg/Kg-dry	1	04/08/13 12:46
2,6-Dinitrotoluene	U		10	170	µg/Kg-dry	1	04/08/13 12:46
2-Chloronaphthalene	U		9.9	86	µg/Kg-dry	1	04/08/13 12:46
2-Chlorophenol	U		9.7	170	µg/Kg-dry	1	04/08/13 12:46
2-Methylnaphthalene	U		11	86	µg/Kg-dry	1	04/08/13 12:46
2-Methylphenol	U		10	170	µg/Kg-dry	1	04/08/13 12:46
2-Nitroaniline	U		8.2	710	µg/Kg-dry	1	04/08/13 12:46
2-Nitrophenol	U		9.4	170	µg/Kg-dry	1	04/08/13 12:46
3,3'-Dichlorobenzidine	U		10	710	µg/Kg-dry	1	04/08/13 12:46
3-Nitroaniline	U		88	710	µg/Kg-dry	1	04/08/13 12:46
4,6-Dinitro-2-methylphenol	U		52	360	µg/Kg-dry	1	04/08/13 12:46
4-Bromophenyl phenyl ether	U		9.4	170	µg/Kg-dry	1	04/08/13 12:46
4-Chloro-3-methylphenol	U		9.7	170	µg/Kg-dry	1	04/08/13 12:46
4-Chloroaniline	U		14	360	µg/Kg-dry	1	04/08/13 12:46
4-Chlorophenyl phenyl ether	U		9.9	170	µg/Kg-dry	1	04/08/13 12:46
4-Methylphenol	U		11	170	µg/Kg-dry	1	04/08/13 12:46
4-Nitroaniline	U		16	710	µg/Kg-dry	1	04/08/13 12:46
4-Nitrophenol	U		44	710	µg/Kg-dry	1	04/08/13 12:46
Acenaphthene	U		9.8	32	µg/Kg-dry	1	04/08/13 12:46
Acenaphthylene	U		10	32	µg/Kg-dry	1	04/08/13 12:46
Acetophenone	U		5.4	360	µg/Kg-dry	1	04/08/13 12:46
Anthracene	U		11	32	µg/Kg-dry	1	04/08/13 12:46
Atrazine	U		11	54	µg/Kg-dry	1	04/08/13 12:46
Benzaldehyde	U		14	360	µg/Kg-dry	1	04/08/13 12:46
Benzo(a)anthracene	U		13	32	µg/Kg-dry	1	04/08/13 12:46
Benzo(a)pyrene	U		17	32	µg/Kg-dry	1	04/08/13 12:46
Benzo(b)fluoranthene	24	J	17	32	µg/Kg-dry	1	04/08/13 12:46
Benzo(g,h,i)perylene	U		25	32	µg/Kg-dry	1	04/08/13 12:46
Benzo(k)fluoranthene	U		15	32	µg/Kg-dry	1	04/08/13 12:46
Bis(2-chloroethoxy)methane	U		8.9	170	µg/Kg-dry	1	04/08/13 12:46
Bis(2-chloroethyl)ether	U		9.0	170	µg/Kg-dry	1	04/08/13 12:46
Bis(2-chloroisopropyl)ether	U		8.4	170	µg/Kg-dry	1	04/08/13 12:46
Bis(2-ethylhexyl)phthalate	U		11	360	µg/Kg-dry	1	04/08/13 12:46
Butyl benzyl phthalate	U		15	170	µg/Kg-dry	1	04/08/13 12:46
Caprolactam	72	J	16	360	µg/Kg-dry	1	04/08/13 12:46
Carbazole	U		12	170	µg/Kg-dry	1	04/08/13 12:46

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-014
Collection Date: 03/25/13 10:15 AM

Work Order: 1304246
Lab ID: 1304246-14
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	U		12	32	µg/Kg-dry	1	04/08/13 12:46
Dibenzo(a,h)anthracene	U		18	32	µg/Kg-dry	1	04/08/13 12:46
Dibenzofuran	U		9.9	170	µg/Kg-dry	1	04/08/13 12:46
Diethyl phthalate	U		9.0	360	µg/Kg-dry	1	04/08/13 12:46
Dimethyl phthalate	U		9.0	360	µg/Kg-dry	1	04/08/13 12:46
Di-n-butyl phthalate	U		11	360	µg/Kg-dry	1	04/08/13 12:46
Di-n-octyl phthalate	U		13	170	µg/Kg-dry	1	04/08/13 12:46
Fluoranthene	U		13	32	µg/Kg-dry	1	04/08/13 12:46
Fluorene	U		9.4	32	µg/Kg-dry	1	04/08/13 12:46
Hexachlorobenzene	U		9.8	170	µg/Kg-dry	1	04/08/13 12:46
Hexachlorobutadiene	U		9.1	54	µg/Kg-dry	1	04/08/13 12:46
Hexachlorocyclopentadiene	U		38	360	µg/Kg-dry	1	04/08/13 12:46
Hexachloroethane	U		9.4	170	µg/Kg-dry	1	04/08/13 12:46
Indeno(1,2,3-cd)pyrene	U		20	32	µg/Kg-dry	1	04/08/13 12:46
Isophorone	U		9.4	170	µg/Kg-dry	1	04/08/13 12:46
Naphthalene	U		9.2	32	µg/Kg-dry	1	04/08/13 12:46
Nitrobenzene	U		9.3	170	µg/Kg-dry	1	04/08/13 12:46
N-Nitrosodi-n-propylamine	U		9.4	170	µg/Kg-dry	1	04/08/13 12:46
N-Nitrosodiphenylamine	U		64	170	µg/Kg-dry	1	04/08/13 12:46
Pentachlorophenol	U		16	22	µg/Kg-dry	1	04/08/13 12:46
Phenanthrene	U		32	32	µg/Kg-dry	1	04/08/13 12:46
Phenol	U		9.1	170	µg/Kg-dry	1	04/08/13 12:46
Pyrene	U		13	32	µg/Kg-dry	1	04/08/13 12:46
Surr: 2,4,6-Tribromophenol	74.9			34-140	%REC	1	04/08/13 12:46
Surr: 2-Fluorobiphenyl	73.0			12-100	%REC	1	04/08/13 12:46
Surr: 2-Fluorophenol	87.2			33-117	%REC	1	04/08/13 12:46
Surr: 4-Terphenyl-d14	106			25-137	%REC	1	04/08/13 12:46
Surr: Nitrobenzene-d5	71.9			37-107	%REC	1	04/08/13 12:46
Surr: Phenol-d6	85.5			40-106	%REC	1	04/08/13 12:46
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane	U		17	45	µg/Kg-dry	1	04/06/13 06:24
1,1,2,2-Tetrachloroethane	U		20	45	µg/Kg-dry	1	04/06/13 06:24
1,1,2-Trichloroethane	U		16	45	µg/Kg-dry	1	04/06/13 06:24
1,1,2-Trichlorotrifluoroethane	U		17	45	µg/Kg-dry	1	04/06/13 06:24
1,1-Dichloroethane	U		16	45	µg/Kg-dry	1	04/06/13 06:24
1,1-Dichloroethene	U		19	45	µg/Kg-dry	1	04/06/13 06:24
1,2,4-Trichlorobenzene	U		23	45	µg/Kg-dry	1	04/06/13 06:24
1,2-Dibromo-3-chloropropane	U		22	45	µg/Kg-dry	1	04/06/13 06:24

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-014
Collection Date: 03/25/13 10:15 AM

Work Order: 1304246
Lab ID: 1304246-14
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		18	45	µg/Kg-dry	1	04/06/13 06:24
1,2-Dichlorobenzene	U		18	45	µg/Kg-dry	1	04/06/13 06:24
1,2-Dichloroethane	U		21	45	µg/Kg-dry	1	04/06/13 06:24
1,2-Dichloropropane	U		15	45	µg/Kg-dry	1	04/06/13 06:24
1,3-Dichlorobenzene	U		18	45	µg/Kg-dry	1	04/06/13 06:24
1,4-Dichlorobenzene	U		17	45	µg/Kg-dry	1	04/06/13 06:24
2-Butanone	U		110	300	µg/Kg-dry	1	04/06/13 06:24
2-Hexanone	U		11	45	µg/Kg-dry	1	04/06/13 06:24
4-Methyl-2-pentanone	U		15	45	µg/Kg-dry	1	04/06/13 06:24
Acetone	U		95	150	µg/Kg-dry	1	04/06/13 06:24
Benzene	U		18	45	µg/Kg-dry	1	04/06/13 06:24
Bromodichloromethane	U		10	45	µg/Kg-dry	1	04/06/13 06:24
Bromoform	U		8.9	45	µg/Kg-dry	1	04/06/13 06:24
Bromomethane	U		17	110	µg/Kg-dry	1	04/06/13 06:24
Carbon disulfide	U		22	45	µg/Kg-dry	1	04/06/13 06:24
Carbon tetrachloride	U		13	45	µg/Kg-dry	1	04/06/13 06:24
Chlorobenzene	U		18	45	µg/Kg-dry	1	04/06/13 06:24
Chloroethane	U		96	150	µg/Kg-dry	1	04/06/13 06:24
Chloroform	U		19	45	µg/Kg-dry	1	04/06/13 06:24
Chloromethane	U		25	150	µg/Kg-dry	1	04/06/13 06:24
cis-1,2-Dichloroethene	U		18	45	µg/Kg-dry	1	04/06/13 06:24
cis-1,3-Dichloropropene	U		15	45	µg/Kg-dry	1	04/06/13 06:24
Cyclohexane	U		20	45	µg/Kg-dry	1	04/06/13 06:24
Dibromochloromethane	U		8.3	45	µg/Kg-dry	1	04/06/13 06:24
Dichlorodifluoromethane	U		20	45	µg/Kg-dry	1	04/06/13 06:24
Ethylbenzene	U		17	45	µg/Kg-dry	1	04/06/13 06:24
Isopropylbenzene	U		19	45	µg/Kg-dry	1	04/06/13 06:24
Methyl acetate	150	J	60	300	µg/Kg-dry	1	04/06/13 06:24
Methyl tert-butyl ether	U		19	45	µg/Kg-dry	1	04/06/13 06:24
Methylcyclohexane	U		21	45	µg/Kg-dry	1	04/06/13 06:24
Methylene chloride	U		18	45	µg/Kg-dry	1	04/06/13 06:24
Styrene	U		17	45	µg/Kg-dry	1	04/06/13 06:24
Tetrachloroethene	U		20	45	µg/Kg-dry	1	04/06/13 06:24
Toluene	U		17	45	µg/Kg-dry	1	04/06/13 06:24
trans-1,2-Dichloroethene	U		14	45	µg/Kg-dry	1	04/06/13 06:24
trans-1,3-Dichloropropene	U		15	45	µg/Kg-dry	1	04/06/13 06:24
Trichloroethene	U		21	45	µg/Kg-dry	1	04/06/13 06:24
Trichlorofluoromethane	U		12	45	µg/Kg-dry	1	04/06/13 06:24
Vinyl chloride	U		20	45	µg/Kg-dry	1	04/06/13 06:24
Xylenes, Total	U		53	130	µg/Kg-dry	1	04/06/13 06:24

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

Revision: 1

ALS Group USA, Corp**Date:** 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-014
Collection Date: 03/25/13 10:15 AM

Work Order: 1304246
Lab ID: 1304246-14
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	96.2			70-130	%REC	1	04/06/13 06:24
<i>Surr: 4-Bromofluorobenzene</i>	95.1			70-130	%REC	1	04/06/13 06:24
<i>Surr: Dibromofluoromethane</i>	94.1			70-130	%REC	1	04/06/13 06:24
<i>Surr: Toluene-d8</i>	94.4			70-130	%REC	1	04/06/13 06:24
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
<u>BatchID:</u> 47526							
Cyanide, Total	0.072	J	0.028	0.54	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
<u>BatchID:</u> R118497							
Moisture	8.3	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-015
Collection Date: 03/25/13 10:45 AM

Work Order: 1304246
Lab ID: 1304246-15
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		39	43	µg/Kg-dry	1	04/09/13 16:09
Aroclor 1221	U		39	43	µg/Kg-dry	1	04/09/13 16:09
Aroclor 1232	U		39	43	µg/Kg-dry	1	04/09/13 16:09
Aroclor 1242	U		39	43	µg/Kg-dry	1	04/09/13 16:09
Aroclor 1248	U		39	43	µg/Kg-dry	1	04/09/13 16:09
Aroclor 1254	U		12	43	µg/Kg-dry	1	04/09/13 16:09
Aroclor 1260	U		12	43	µg/Kg-dry	1	04/09/13 16:09
Surr: Decachlorobiphenyl	96.1			40-140	%REC	1	04/09/13 16:09
Surr: Tetrachloro-m-xylene	83.1			45-124	%REC	1	04/09/13 16:09
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.030		0.00084	0.017	mg/Kg-dry	1	04/11/13 12:33
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	5,700		0.46	3.6	mg/Kg-dry	5	04/15/13 21:44
Antimony	0.072	J	0.0073	1.8	mg/Kg-dry	5	04/14/13 04:13
Arsenic	5.6		0.25	0.73	mg/Kg-dry	5	04/14/13 04:13
Barium	21		0.051	1.8	mg/Kg-dry	5	04/14/13 04:13
Beryllium	0.32	J	0.015	0.73	mg/Kg-dry	5	04/14/13 04:13
Cadmium	0.12	J	0.0073	0.73	mg/Kg-dry	5	04/14/13 04:13
Chromium	11		0.30	1.8	mg/Kg-dry	5	04/14/13 04:13
Cobalt	3.9		0.0073	1.8	mg/Kg-dry	5	04/14/13 04:13
Copper	14		0.36	1.8	mg/Kg-dry	5	04/14/13 04:13
Iron	13,000		6.1	29	mg/Kg-dry	5	04/15/13 21:44
Lead	6.4		0.0073	1.8	mg/Kg-dry	5	04/14/13 04:13
Manganese	180		0.16	1.8	mg/Kg-dry	5	04/14/13 04:13
Nickel	14		0.18	1.8	mg/Kg-dry	5	04/14/13 04:13
Selenium	U		0.23	1.5	mg/Kg-dry	5	04/14/13 04:13
Silver	0.010	J	0.0073	0.73	mg/Kg-dry	5	04/14/13 04:13
Thallium	0.085	J	0.044	1.8	mg/Kg-dry	5	04/14/13 04:13
Vanadium	17		0.11	1.8	mg/Kg-dry	5	04/14/13 04:13
Zinc	33		0.15	3.6	mg/Kg-dry	5	04/14/13 04:13
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/7/13	Analyst: HL
<u>BatchID: 47480</u>							
1,1'-Biphenyl	U		5.4	360	µg/Kg-dry	1	04/08/13 13:17
2,4,5-Trichlorophenol	U		8.6	170	µg/Kg-dry	1	04/08/13 13:17

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-015
Collection Date: 03/25/13 10:45 AM

Work Order: 1304246
Lab ID: 1304246-15
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.6	170	µg/Kg-dry	1	04/08/13 13:17
2,4-Dichlorophenol	U		11	170	µg/Kg-dry	1	04/08/13 13:17
2,4-Dimethylphenol	U		44	360	µg/Kg-dry	1	04/08/13 13:17
2,4-Dinitrophenol	U		46	720	µg/Kg-dry	1	04/08/13 13:17
2,4-Dinitrotoluene	U		9.7	170	µg/Kg-dry	1	04/08/13 13:17
2,6-Dinitrotoluene	U		10	170	µg/Kg-dry	1	04/08/13 13:17
2-Chloronaphthalene	U		9.9	87	µg/Kg-dry	1	04/08/13 13:17
2-Chlorophenol	U		9.7	170	µg/Kg-dry	1	04/08/13 13:17
2-Methylnaphthalene	U		11	87	µg/Kg-dry	1	04/08/13 13:17
2-Methylphenol	U		10	170	µg/Kg-dry	1	04/08/13 13:17
2-Nitroaniline	U		8.2	720	µg/Kg-dry	1	04/08/13 13:17
2-Nitrophenol	U		9.4	170	µg/Kg-dry	1	04/08/13 13:17
3,3'-Dichlorobenzidine	U		10	720	µg/Kg-dry	1	04/08/13 13:17
3-Nitroaniline	U		88	720	µg/Kg-dry	1	04/08/13 13:17
4,6-Dinitro-2-methylphenol	U		52	360	µg/Kg-dry	1	04/08/13 13:17
4-Bromophenyl phenyl ether	U		9.4	170	µg/Kg-dry	1	04/08/13 13:17
4-Chloro-3-methylphenol	U		9.8	170	µg/Kg-dry	1	04/08/13 13:17
4-Chloroaniline	U		14	360	µg/Kg-dry	1	04/08/13 13:17
4-Chlorophenyl phenyl ether	U		9.9	170	µg/Kg-dry	1	04/08/13 13:17
4-Methylphenol	U		11	170	µg/Kg-dry	1	04/08/13 13:17
4-Nitroaniline	U		16	720	µg/Kg-dry	1	04/08/13 13:17
4-Nitrophenol	U		44	720	µg/Kg-dry	1	04/08/13 13:17
Acenaphthene	U		9.9	33	µg/Kg-dry	1	04/08/13 13:17
Acenaphthylene	U		10	33	µg/Kg-dry	1	04/08/13 13:17
Acetophenone	U		5.4	360	µg/Kg-dry	1	04/08/13 13:17
Anthracene	U		11	33	µg/Kg-dry	1	04/08/13 13:17
Atrazine	U		11	54	µg/Kg-dry	1	04/08/13 13:17
Benzaldehyde	U		14	360	µg/Kg-dry	1	04/08/13 13:17
Benzo(a)anthracene	U		13	33	µg/Kg-dry	1	04/08/13 13:17
Benzo(a)pyrene	U		17	33	µg/Kg-dry	1	04/08/13 13:17
Benzo(b)fluoranthene	U		17	33	µg/Kg-dry	1	04/08/13 13:17
Benzo(g,h,i)perylene	U		26	33	µg/Kg-dry	1	04/08/13 13:17
Benzo(k)fluoranthene	U		15	33	µg/Kg-dry	1	04/08/13 13:17
Bis(2-chloroethoxy)methane	U		8.9	170	µg/Kg-dry	1	04/08/13 13:17
Bis(2-chloroethyl)ether	U		9.0	170	µg/Kg-dry	1	04/08/13 13:17
Bis(2-chloroisopropyl)ether	U		8.4	170	µg/Kg-dry	1	04/08/13 13:17
Bis(2-ethylhexyl)phthalate	U		11	360	µg/Kg-dry	1	04/08/13 13:17
Butyl benzyl phthalate	U		15	170	µg/Kg-dry	1	04/08/13 13:17
Caprolactam	U		16	360	µg/Kg-dry	1	04/08/13 13:17
Carbazole	U		12	170	µg/Kg-dry	1	04/08/13 13:17

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-015
Collection Date: 03/25/13 10:45 AM

Work Order: 1304246
Lab ID: 1304246-15
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	U		12	33	µg/Kg-dry	1	04/08/13 13:17
Dibenzo(a,h)anthracene	U		18	33	µg/Kg-dry	1	04/08/13 13:17
Dibenzofuran	U		9.9	170	µg/Kg-dry	1	04/08/13 13:17
Diethyl phthalate	U		9.0	360	µg/Kg-dry	1	04/08/13 13:17
Dimethyl phthalate	U		9.0	360	µg/Kg-dry	1	04/08/13 13:17
Di-n-butyl phthalate	U		11	360	µg/Kg-dry	1	04/08/13 13:17
Di-n-octyl phthalate	34	J	13	170	µg/Kg-dry	1	04/08/13 13:17
Fluoranthene	U		13	33	µg/Kg-dry	1	04/08/13 13:17
Fluorene	U		9.5	33	µg/Kg-dry	1	04/08/13 13:17
Hexachlorobenzene	U		9.9	170	µg/Kg-dry	1	04/08/13 13:17
Hexachlorobutadiene	U		9.1	54	µg/Kg-dry	1	04/08/13 13:17
Hexachlorocyclopentadiene	U		38	360	µg/Kg-dry	1	04/08/13 13:17
Hexachloroethane	U		9.5	170	µg/Kg-dry	1	04/08/13 13:17
Indeno(1,2,3-cd)pyrene	U		21	33	µg/Kg-dry	1	04/08/13 13:17
Isophorone	U		9.4	170	µg/Kg-dry	1	04/08/13 13:17
Naphthalene	U		9.2	33	µg/Kg-dry	1	04/08/13 13:17
Nitrobenzene	U		9.4	170	µg/Kg-dry	1	04/08/13 13:17
N-Nitrosodi-n-propylamine	U		9.5	170	µg/Kg-dry	1	04/08/13 13:17
N-Nitrosodiphenylamine	U		64	170	µg/Kg-dry	1	04/08/13 13:17
Pentachlorophenol	U		16	22	µg/Kg-dry	1	04/08/13 13:17
Phenanthrene	U		33	33	µg/Kg-dry	1	04/08/13 13:17
Phenol	U		9.2	170	µg/Kg-dry	1	04/08/13 13:17
Pyrene	U		14	33	µg/Kg-dry	1	04/08/13 13:17
Surr: 2,4,6-Tribromophenol	78.7			34-140	%REC	1	04/08/13 13:17
Surr: 2-Fluorobiphenyl	72.6			12-100	%REC	1	04/08/13 13:17
Surr: 2-Fluorophenol	88.7			33-117	%REC	1	04/08/13 13:17
Surr: 4-Terphenyl-d14	110			25-137	%REC	1	04/08/13 13:17
Surr: Nitrobenzene-d5	72.3			37-107	%REC	1	04/08/13 13:17
Surr: Phenol-d6	85.1			40-106	%REC	1	04/08/13 13:17
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane	U		13	33	µg/Kg-dry	1	04/06/13 06:48
1,1,2,2-Tetrachloroethane	U		15	33	µg/Kg-dry	1	04/06/13 06:48
1,1,2-Trichloroethane	U		12	33	µg/Kg-dry	1	04/06/13 06:48
1,1,2-Trichlorotrifluoroethane	U		12	33	µg/Kg-dry	1	04/06/13 06:48
1,1-Dichloroethane	U		12	33	µg/Kg-dry	1	04/06/13 06:48
1,1-Dichloroethene	U		14	33	µg/Kg-dry	1	04/06/13 06:48
1,2,4-Trichlorobenzene	U		17	33	µg/Kg-dry	1	04/06/13 06:48
1,2-Dibromo-3-chloropropane	U		16	33	µg/Kg-dry	1	04/06/13 06:48

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-015
Collection Date: 03/25/13 10:45 AM

Work Order: 1304246
Lab ID: 1304246-15
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		13	33	µg/Kg-dry	1	04/06/13 06:48
1,2-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 06:48
1,2-Dichloroethane	U		16	33	µg/Kg-dry	1	04/06/13 06:48
1,2-Dichloropropane	U		11	33	µg/Kg-dry	1	04/06/13 06:48
1,3-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 06:48
1,4-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 06:48
2-Butanone	U		82	220	µg/Kg-dry	1	04/06/13 06:48
2-Hexanone	U		8.1	33	µg/Kg-dry	1	04/06/13 06:48
4-Methyl-2-pentanone	U		11	33	µg/Kg-dry	1	04/06/13 06:48
Acetone	U		70	110	µg/Kg-dry	1	04/06/13 06:48
Benzene	U		13	33	µg/Kg-dry	1	04/06/13 06:48
Bromodichloromethane	U		7.4	33	µg/Kg-dry	1	04/06/13 06:48
Bromoform	U		6.5	33	µg/Kg-dry	1	04/06/13 06:48
Bromomethane	U		13	83	µg/Kg-dry	1	04/06/13 06:48
Carbon disulfide	U		16	33	µg/Kg-dry	1	04/06/13 06:48
Carbon tetrachloride	U		9.4	33	µg/Kg-dry	1	04/06/13 06:48
Chlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 06:48
Chloroethane	U		70	110	µg/Kg-dry	1	04/06/13 06:48
Chloroform	U		14	33	µg/Kg-dry	1	04/06/13 06:48
Chloromethane	U		18	110	µg/Kg-dry	1	04/06/13 06:48
cis-1,2-Dichloroethene	U		13	33	µg/Kg-dry	1	04/06/13 06:48
cis-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/06/13 06:48
Cyclohexane	U		15	33	µg/Kg-dry	1	04/06/13 06:48
Dibromochloromethane	U		6.1	33	µg/Kg-dry	1	04/06/13 06:48
Dichlorodifluoromethane	U		15	33	µg/Kg-dry	1	04/06/13 06:48
Ethylbenzene	U		12	33	µg/Kg-dry	1	04/06/13 06:48
Isopropylbenzene	U		14	33	µg/Kg-dry	1	04/06/13 06:48
Methyl acetate	480		44	220	µg/Kg-dry	1	04/06/13 06:48
Methyl tert-butyl ether	U		14	33	µg/Kg-dry	1	04/06/13 06:48
Methylcyclohexane	U		15	33	µg/Kg-dry	1	04/06/13 06:48
Methylene chloride	U		13	33	µg/Kg-dry	1	04/06/13 06:48
Styrene	U		12	33	µg/Kg-dry	1	04/06/13 06:48
Tetrachloroethene	U		15	33	µg/Kg-dry	1	04/06/13 06:48
Toluene	U		12	33	µg/Kg-dry	1	04/06/13 06:48
trans-1,2-Dichloroethene	U		10	33	µg/Kg-dry	1	04/06/13 06:48
trans-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/06/13 06:48
Trichloroethene	U		15	33	µg/Kg-dry	1	04/06/13 06:48
Trichlorofluoromethane	U		9.1	33	µg/Kg-dry	1	04/06/13 06:48
Vinyl chloride	U		15	33	µg/Kg-dry	1	04/06/13 06:48
Xylenes, Total	U		39	99	µg/Kg-dry	1	04/06/13 06:48

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-015
Collection Date: 03/25/13 10:45 AM

Work Order: 1304246
Lab ID: 1304246-15
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	95.6			70-130	%REC	1	04/06/13 06:48
Surr: 4-Bromofluorobenzene	97.6			70-130	%REC	1	04/06/13 06:48
Surr: Dibromofluoromethane	95.2			70-130	%REC	1	04/06/13 06:48
Surr: Toluene-d8	98.6			70-130	%REC	1	04/06/13 06:48
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.065	J	0.028	0.54	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	9.2	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 55 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-016
Collection Date: 03/26/13 09:00 AM

Work Order: 1304246
Lab ID: 1304246-16
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		38	42	µg/Kg-dry	1	04/09/13 16:49
Aroclor 1221	U		38	42	µg/Kg-dry	1	04/09/13 16:49
Aroclor 1232	U		38	42	µg/Kg-dry	1	04/09/13 16:49
Aroclor 1242	U		38	42	µg/Kg-dry	1	04/09/13 16:49
Aroclor 1248	U		38	42	µg/Kg-dry	1	04/09/13 16:49
Aroclor 1254	U		12	42	µg/Kg-dry	1	04/09/13 16:49
Aroclor 1260	U		12	42	µg/Kg-dry	1	04/09/13 16:49
Surr: Decachlorobiphenyl	100			40-140	%REC	1	04/09/13 16:49
Surr: Tetrachloro-m-xylene	85.1			45-124	%REC	1	04/09/13 16:49
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.025		0.00089	0.018	mg/Kg-dry	1	04/11/13 12:35
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	4,800		0.44	3.5	mg/Kg-dry	5	04/15/13 22:09
Antimony	0.028	J	0.0070	1.8	mg/Kg-dry	5	04/14/13 04:19
Arsenic	1.8		0.24	0.70	mg/Kg-dry	5	04/14/13 04:19
Barium	24		0.049	1.8	mg/Kg-dry	5	04/14/13 04:19
Beryllium	0.22	J	0.014	0.70	mg/Kg-dry	5	04/14/13 04:19
Cadmium	0.095	J	0.0070	0.70	mg/Kg-dry	5	04/14/13 04:19
Chromium	7.1		0.29	1.8	mg/Kg-dry	5	04/14/13 04:19
Cobalt	1.7	J	0.0070	1.8	mg/Kg-dry	5	04/14/13 04:19
Copper	2.9		0.34	1.8	mg/Kg-dry	5	04/14/13 04:19
Iron	8,200		5.9	28	mg/Kg-dry	5	04/15/13 22:09
Lead	5.0		0.0070	1.8	mg/Kg-dry	5	04/14/13 04:19
Manganese	86		0.15	1.8	mg/Kg-dry	5	04/14/13 04:19
Nickel	4.9		0.18	1.8	mg/Kg-dry	5	04/14/13 04:19
Selenium	U		0.23	1.4	mg/Kg-dry	5	04/14/13 04:19
Silver	0.0080	J	0.0070	0.70	mg/Kg-dry	5	04/14/13 04:19
Thallium	U		0.042	1.8	mg/Kg-dry	5	04/14/13 04:19
Vanadium	11		0.11	1.8	mg/Kg-dry	5	04/14/13 04:19
Zinc	18		0.15	3.5	mg/Kg-dry	5	04/14/13 04:19
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/8/13	Analyst: HL
<u>BatchID: 47499</u>							
1,1'-Biphenyl	U		5.5	360	µg/Kg-dry	1	04/09/13 15:07
2,4,5-Trichlorophenol	U		8.8	180	µg/Kg-dry	1	04/09/13 15:07

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-016
Collection Date: 03/26/13 09:00 AM

Work Order: 1304246
Lab ID: 1304246-16
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.8	180	µg/Kg-dry	1	04/09/13 15:07
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	04/09/13 15:07
2,4-Dimethylphenol	U		45	360	µg/Kg-dry	1	04/09/13 15:07
2,4-Dinitrophenol	U		47	730	µg/Kg-dry	1	04/09/13 15:07
2,4-Dinitrotoluene	U		9.8	180	µg/Kg-dry	1	04/09/13 15:07
2,6-Dinitrotoluene	U		10	180	µg/Kg-dry	1	04/09/13 15:07
2-Chloronaphthalene	U		10	88	µg/Kg-dry	1	04/09/13 15:07
2-Chlorophenol	U		9.9	180	µg/Kg-dry	1	04/09/13 15:07
2-Methylnaphthalene	U		11	88	µg/Kg-dry	1	04/09/13 15:07
2-Methylphenol	U		11	180	µg/Kg-dry	1	04/09/13 15:07
2-Nitroaniline	U		8.4	730	µg/Kg-dry	1	04/09/13 15:07
2-Nitrophenol	U		9.6	180	µg/Kg-dry	1	04/09/13 15:07
3,3'-Dichlorobenzidine	U		10	730	µg/Kg-dry	1	04/09/13 15:07
3-Nitroaniline	U		89	730	µg/Kg-dry	1	04/09/13 15:07
4,6-Dinitro-2-methylphenol	U		53	360	µg/Kg-dry	1	04/09/13 15:07
4-Bromophenyl phenyl ether	U		9.6	180	µg/Kg-dry	1	04/09/13 15:07
4-Chloro-3-methylphenol	U		10	180	µg/Kg-dry	1	04/09/13 15:07
4-Chloroaniline	U		14	360	µg/Kg-dry	1	04/09/13 15:07
4-Chlorophenyl phenyl ether	U		10	180	µg/Kg-dry	1	04/09/13 15:07
4-Methylphenol	U		11	180	µg/Kg-dry	1	04/09/13 15:07
4-Nitroaniline	U		16	730	µg/Kg-dry	1	04/09/13 15:07
4-Nitrophenol	U		45	730	µg/Kg-dry	1	04/09/13 15:07
Acenaphthene	U		10	33	µg/Kg-dry	1	04/09/13 15:07
Acenaphthylene	U		10	33	µg/Kg-dry	1	04/09/13 15:07
Acetophenone	U		5.5	360	µg/Kg-dry	1	04/09/13 15:07
Anthracene	U		11	33	µg/Kg-dry	1	04/09/13 15:07
Atrazine	U		11	55	µg/Kg-dry	1	04/09/13 15:07
Benzaldehyde	U		14	360	µg/Kg-dry	1	04/09/13 15:07
Benzo(a)anthracene	U		13	33	µg/Kg-dry	1	04/09/13 15:07
Benzo(a)pyrene	U		17	33	µg/Kg-dry	1	04/09/13 15:07
Benzo(b)fluoranthene	U		18	33	µg/Kg-dry	1	04/09/13 15:07
Benzo(g,h,i)perylene	U		26	33	µg/Kg-dry	1	04/09/13 15:07
Benzo(k)fluoranthene	U		15	33	µg/Kg-dry	1	04/09/13 15:07
Bis(2-chloroethoxy)methane	U		9.0	180	µg/Kg-dry	1	04/09/13 15:07
Bis(2-chloroethyl)ether	U		9.2	180	µg/Kg-dry	1	04/09/13 15:07
Bis(2-chloroisopropyl)ether	U		8.6	180	µg/Kg-dry	1	04/09/13 15:07
Bis(2-ethylhexyl)phthalate	U		11	360	µg/Kg-dry	1	04/09/13 15:07
Butyl benzyl phthalate	U		15	180	µg/Kg-dry	1	04/09/13 15:07
Caprolactam	U		16	360	µg/Kg-dry	1	04/09/13 15:07
Carbazole	U		13	180	µg/Kg-dry	1	04/09/13 15:07

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-016
Collection Date: 03/26/13 09:00 AM

Work Order: 1304246
Lab ID: 1304246-16
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene	U		12	33	µg/Kg-dry	1	04/09/13 15:07
Dibenzo(a,h)anthracene	U		19	33	µg/Kg-dry	1	04/09/13 15:07
Dibenzofuran	U		10	180	µg/Kg-dry	1	04/09/13 15:07
Diethyl phthalate	U		9.1	360	µg/Kg-dry	1	04/09/13 15:07
Dimethyl phthalate	U		9.2	360	µg/Kg-dry	1	04/09/13 15:07
Di-n-butyl phthalate	U		11	360	µg/Kg-dry	1	04/09/13 15:07
Di-n-octyl phthalate	U		14	180	µg/Kg-dry	1	04/09/13 15:07
Fluoranthene	U		13	33	µg/Kg-dry	1	04/09/13 15:07
Fluorene	U		9.6	33	µg/Kg-dry	1	04/09/13 15:07
Hexachlorobenzene	U		10	180	µg/Kg-dry	1	04/09/13 15:07
Hexachlorobutadiene	U		9.3	55	µg/Kg-dry	1	04/09/13 15:07
Hexachlorocyclopentadiene	U		38	360	µg/Kg-dry	1	04/09/13 15:07
Hexachloroethane	U		9.6	180	µg/Kg-dry	1	04/09/13 15:07
Indeno(1,2,3-cd)pyrene	U		21	33	µg/Kg-dry	1	04/09/13 15:07
Isophorone	U		9.6	180	µg/Kg-dry	1	04/09/13 15:07
Naphthalene	U		9.4	33	µg/Kg-dry	1	04/09/13 15:07
Nitrobenzene	U		9.5	180	µg/Kg-dry	1	04/09/13 15:07
N-Nitrosodi-n-propylamine	U		9.6	180	µg/Kg-dry	1	04/09/13 15:07
N-Nitrosodiphenylamine	U		65	180	µg/Kg-dry	1	04/09/13 15:07
Pentachlorophenol	U		16	22	µg/Kg-dry	1	04/09/13 15:07
Phenanthrene	U		33	33	µg/Kg-dry	1	04/09/13 15:07
Phenol	44	J	9.3	180	µg/Kg-dry	1	04/09/13 15:07
Pyrene	U		14	33	µg/Kg-dry	1	04/09/13 15:07
Surr: 2,4,6-Tribromophenol	85.1			34-140	%REC	1	04/09/13 15:07
Surr: 2-Fluorobiphenyl	75.2			12-100	%REC	1	04/09/13 15:07
Surr: 2-Fluorophenol	87.5			33-117	%REC	1	04/09/13 15:07
Surr: 4-Terphenyl-d14	114			25-137	%REC	1	04/09/13 15:07
Surr: Nitrobenzene-d5	72.9			37-107	%REC	1	04/09/13 15:07
Surr: Phenol-d6	85.1			40-106	%REC	1	04/09/13 15:07
VOLATILE ORGANIC COMPOUNDS			SW8260		Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane	U		14	36	µg/Kg-dry	1	04/06/13 07:12
1,1,2,2-Tetrachloroethane	U		16	36	µg/Kg-dry	1	04/06/13 07:12
1,1,2-Trichloroethane	U		13	36	µg/Kg-dry	1	04/06/13 07:12
1,1,2-Trichlorotrifluoroethane	U		13	36	µg/Kg-dry	1	04/06/13 07:12
1,1-Dichloroethane	U		13	36	µg/Kg-dry	1	04/06/13 07:12
1,1-Dichloroethene	U		15	36	µg/Kg-dry	1	04/06/13 07:12
1,2,4-Trichlorobenzene	U		19	36	µg/Kg-dry	1	04/06/13 07:12
1,2-Dibromo-3-chloropropane	U		18	36	µg/Kg-dry	1	04/06/13 07:12

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-016
Collection Date: 03/26/13 09:00 AM

Work Order: 1304246
Lab ID: 1304246-16
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		14	36	µg/Kg-dry	1	04/06/13 07:12
1,2-Dichlorobenzene	U		15	36	µg/Kg-dry	1	04/06/13 07:12
1,2-Dichloroethane	U		17	36	µg/Kg-dry	1	04/06/13 07:12
1,2-Dichloropropane	U		12	36	µg/Kg-dry	1	04/06/13 07:12
1,3-Dichlorobenzene	U		15	36	µg/Kg-dry	1	04/06/13 07:12
1,4-Dichlorobenzene	U		14	36	µg/Kg-dry	1	04/06/13 07:12
2-Butanone	U		90	240	µg/Kg-dry	1	04/06/13 07:12
2-Hexanone	U		8.9	36	µg/Kg-dry	1	04/06/13 07:12
4-Methyl-2-pentanone	U		12	36	µg/Kg-dry	1	04/06/13 07:12
Acetone	U		77	120	µg/Kg-dry	1	04/06/13 07:12
Benzene	U		15	36	µg/Kg-dry	1	04/06/13 07:12
Bromodichloromethane	U		8.1	36	µg/Kg-dry	1	04/06/13 07:12
Bromoform	U		7.1	36	µg/Kg-dry	1	04/06/13 07:12
Bromomethane	U		14	91	µg/Kg-dry	1	04/06/13 07:12
Carbon disulfide	U		18	36	µg/Kg-dry	1	04/06/13 07:12
Carbon tetrachloride	U		10	36	µg/Kg-dry	1	04/06/13 07:12
Chlorobenzene	U		15	36	µg/Kg-dry	1	04/06/13 07:12
Chloroethane	U		77	120	µg/Kg-dry	1	04/06/13 07:12
Chloroform	U		15	36	µg/Kg-dry	1	04/06/13 07:12
Chloromethane	U		20	120	µg/Kg-dry	1	04/06/13 07:12
cis-1,2-Dichloroethene	U		15	36	µg/Kg-dry	1	04/06/13 07:12
cis-1,3-Dichloropropene	U		12	36	µg/Kg-dry	1	04/06/13 07:12
Cyclohexane	U		16	36	µg/Kg-dry	1	04/06/13 07:12
Dibromochloromethane	U		6.7	36	µg/Kg-dry	1	04/06/13 07:12
Dichlorodifluoromethane	U		16	36	µg/Kg-dry	1	04/06/13 07:12
Ethylbenzene	U		13	36	µg/Kg-dry	1	04/06/13 07:12
Isopropylbenzene	U		16	36	µg/Kg-dry	1	04/06/13 07:12
Methyl acetate	U		49	240	µg/Kg-dry	1	04/06/13 07:12
Methyl tert-butyl ether	U		15	36	µg/Kg-dry	1	04/06/13 07:12
Methylcyclohexane	140		17	36	µg/Kg-dry	1	04/06/13 07:12
Methylene chloride	U		14	36	µg/Kg-dry	1	04/06/13 07:12
Styrene	U		14	36	µg/Kg-dry	1	04/06/13 07:12
Tetrachloroethene	U		16	36	µg/Kg-dry	1	04/06/13 07:12
Toluene	U		14	36	µg/Kg-dry	1	04/06/13 07:12
trans-1,2-Dichloroethene	U		11	36	µg/Kg-dry	1	04/06/13 07:12
trans-1,3-Dichloropropene	U		12	36	µg/Kg-dry	1	04/06/13 07:12
Trichloroethene	U		17	36	µg/Kg-dry	1	04/06/13 07:12
Trichlorofluoromethane	U		10	36	µg/Kg-dry	1	04/06/13 07:12
Vinyl chloride	U		16	36	µg/Kg-dry	1	04/06/13 07:12
Xylenes, Total	100	J	43	110	µg/Kg-dry	1	04/06/13 07:12

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-016
Collection Date: 03/26/13 09:00 AM

Work Order: 1304246
Lab ID: 1304246-16
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	95.2			70-130	%REC	1	04/06/13 07:12
Surr: 4-Bromofluorobenzene	97.0			70-130	%REC	1	04/06/13 07:12
Surr: Dibromofluoromethane	95.4			70-130	%REC	1	04/06/13 07:12
Surr: Toluene-d8	96.2			70-130	%REC	1	04/06/13 07:12
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.072	J	0.029	0.55	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	11	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 60 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-017
Collection Date: 03/26/13 09:10 AM

Work Order: 1304246
Lab ID: 1304246-17
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		40	45	µg/Kg-dry	1	04/09/13 17:09
Aroclor 1221	U		40	45	µg/Kg-dry	1	04/09/13 17:09
Aroclor 1232	U		40	45	µg/Kg-dry	1	04/09/13 17:09
Aroclor 1242	U		40	45	µg/Kg-dry	1	04/09/13 17:09
Aroclor 1248	U		40	45	µg/Kg-dry	1	04/09/13 17:09
Aroclor 1254	U		13	45	µg/Kg-dry	1	04/09/13 17:09
Aroclor 1260	U		13	45	µg/Kg-dry	1	04/09/13 17:09
Surr: Decachlorobiphenyl	97.1			40-140	%REC	1	04/09/13 17:09
Surr: Tetrachloro-m-xylene	81.1			45-124	%REC	1	04/09/13 17:09
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.0069	J	0.00077	0.015	mg/Kg-dry	1	04/11/13 12:38
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	1,400		0.46	3.7	mg/Kg-dry	5	04/15/13 22:15
Antimony	0.083	J	0.0074	1.8	mg/Kg-dry	5	04/14/13 05:09
Arsenic	2.2		0.25	0.74	mg/Kg-dry	5	04/14/13 05:09
Barium	6.1		0.052	1.8	mg/Kg-dry	5	04/14/13 05:09
Beryllium	0.092	J	0.015	0.74	mg/Kg-dry	5	04/14/13 05:09
Cadmium	0.072	J	0.0074	0.74	mg/Kg-dry	5	04/14/13 05:09
Chromium	4.5		0.30	1.8	mg/Kg-dry	5	04/14/13 05:09
Cobalt	1.6	J	0.0074	1.8	mg/Kg-dry	5	04/14/13 05:09
Copper	4.9		0.36	1.8	mg/Kg-dry	5	04/14/13 05:09
Iron	5,400		6.1	29	mg/Kg-dry	5	04/15/13 22:15
Lead	2.1		0.0074	1.8	mg/Kg-dry	5	04/14/13 05:09
Manganese	210		0.16	1.8	mg/Kg-dry	5	04/14/13 05:09
Nickel	5.5		0.18	1.8	mg/Kg-dry	5	04/14/13 05:09
Selenium	U		0.24	1.5	mg/Kg-dry	5	04/14/13 05:09
Silver	U		0.0074	0.74	mg/Kg-dry	5	04/14/13 05:09
Thallium	0.050	J	0.044	1.8	mg/Kg-dry	5	04/14/13 05:09
Vanadium	5.6		0.11	1.8	mg/Kg-dry	5	04/14/13 05:09
Zinc	12		0.15	3.7	mg/Kg-dry	5	04/14/13 05:09
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/8/13	Analyst: HL
<u>BatchID: 47499</u>							
1,1'-Biphenyl	U		5.5	370	µg/Kg-dry	1	04/09/13 15:39
2,4,5-Trichlorophenol	U		8.9	180	µg/Kg-dry	1	04/09/13 15:39

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-017
Collection Date: 03/26/13 09:10 AM

Work Order: 1304246
Lab ID: 1304246-17
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.9	180	µg/Kg-dry	1	04/09/13 15:39
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	04/09/13 15:39
2,4-Dimethylphenol	U		45	370	µg/Kg-dry	1	04/09/13 15:39
2,4-Dinitrophenol	U		47	740	µg/Kg-dry	1	04/09/13 15:39
2,4-Dinitrotoluene	U		10	180	µg/Kg-dry	1	04/09/13 15:39
2,6-Dinitrotoluene	U		10	180	µg/Kg-dry	1	04/09/13 15:39
2-Chloronaphthalene	U		10	89	µg/Kg-dry	1	04/09/13 15:39
2-Chlorophenol	U		10	180	µg/Kg-dry	1	04/09/13 15:39
2-Methylnaphthalene	U		11	89	µg/Kg-dry	1	04/09/13 15:39
2-Methylphenol	U		11	180	µg/Kg-dry	1	04/09/13 15:39
2-Nitroaniline	U		8.5	740	µg/Kg-dry	1	04/09/13 15:39
2-Nitrophenol	U		9.7	180	µg/Kg-dry	1	04/09/13 15:39
3,3'-Dichlorobenzidine	U		10	740	µg/Kg-dry	1	04/09/13 15:39
3-Nitroaniline	U		91	740	µg/Kg-dry	1	04/09/13 15:39
4,6-Dinitro-2-methylphenol	U		54	370	µg/Kg-dry	1	04/09/13 15:39
4-Bromophenyl phenyl ether	U		9.7	180	µg/Kg-dry	1	04/09/13 15:39
4-Chloro-3-methylphenol	U		10	180	µg/Kg-dry	1	04/09/13 15:39
4-Chloroaniline	U		14	370	µg/Kg-dry	1	04/09/13 15:39
4-Chlorophenyl phenyl ether	U		10	180	µg/Kg-dry	1	04/09/13 15:39
4-Methylphenol	U		11	180	µg/Kg-dry	1	04/09/13 15:39
4-Nitroaniline	U		16	740	µg/Kg-dry	1	04/09/13 15:39
4-Nitrophenol	U		45	740	µg/Kg-dry	1	04/09/13 15:39
Acenaphthene	U		10	33	µg/Kg-dry	1	04/09/13 15:39
Acenaphthylene	U		11	33	µg/Kg-dry	1	04/09/13 15:39
Acetophenone	U		5.6	370	µg/Kg-dry	1	04/09/13 15:39
Anthracene	U		11	33	µg/Kg-dry	1	04/09/13 15:39
Atrazine	U		11	56	µg/Kg-dry	1	04/09/13 15:39
Benzaldehyde	U		14	370	µg/Kg-dry	1	04/09/13 15:39
Benzo(a)anthracene	U		14	33	µg/Kg-dry	1	04/09/13 15:39
Benzo(a)pyrene	U		17	33	µg/Kg-dry	1	04/09/13 15:39
Benzo(b)fluoranthene	U		18	33	µg/Kg-dry	1	04/09/13 15:39
Benzo(g,h,i)perylene	U		26	33	µg/Kg-dry	1	04/09/13 15:39
Benzo(k)fluoranthene	U		15	33	µg/Kg-dry	1	04/09/13 15:39
Bis(2-chloroethoxy)methane	U		9.1	180	µg/Kg-dry	1	04/09/13 15:39
Bis(2-chloroethyl)ether	U		9.3	180	µg/Kg-dry	1	04/09/13 15:39
Bis(2-chloroisopropyl)ether	U		8.7	180	µg/Kg-dry	1	04/09/13 15:39
Bis(2-ethylhexyl)phthalate	U		11	370	µg/Kg-dry	1	04/09/13 15:39
Butyl benzyl phthalate	U		15	180	µg/Kg-dry	1	04/09/13 15:39
Caprolactam	85	J	16	370	µg/Kg-dry	1	04/09/13 15:39
Carbazole	U		13	180	µg/Kg-dry	1	04/09/13 15:39

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-017
Collection Date: 03/26/13 09:10 AM

Work Order: 1304246
Lab ID: 1304246-17
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene		U	13	33	µg/Kg-dry	1	04/09/13 15:39
Dibenzo(a,h)anthracene		U	19	33	µg/Kg-dry	1	04/09/13 15:39
Dibenzofuran		U	10	180	µg/Kg-dry	1	04/09/13 15:39
Diethyl phthalate		U	9.3	370	µg/Kg-dry	1	04/09/13 15:39
Dimethyl phthalate		U	9.3	370	µg/Kg-dry	1	04/09/13 15:39
Di-n-butyl phthalate		U	11	370	µg/Kg-dry	1	04/09/13 15:39
Di-n-octyl phthalate		U	14	180	µg/Kg-dry	1	04/09/13 15:39
Fluoranthene		U	13	33	µg/Kg-dry	1	04/09/13 15:39
Fluorene		U	9.7	33	µg/Kg-dry	1	04/09/13 15:39
Hexachlorobenzene		U	10	180	µg/Kg-dry	1	04/09/13 15:39
Hexachlorobutadiene		U	9.4	56	µg/Kg-dry	1	04/09/13 15:39
Hexachlorocyclopentadiene		U	39	370	µg/Kg-dry	1	04/09/13 15:39
Hexachloroethane		U	9.7	180	µg/Kg-dry	1	04/09/13 15:39
Indeno(1,2,3-cd)pyrene		U	21	33	µg/Kg-dry	1	04/09/13 15:39
Isophorone		U	9.7	180	µg/Kg-dry	1	04/09/13 15:39
Naphthalene		U	9.5	33	µg/Kg-dry	1	04/09/13 15:39
Nitrobenzene		U	9.6	180	µg/Kg-dry	1	04/09/13 15:39
N-Nitrosodi-n-propylamine		U	9.7	180	µg/Kg-dry	1	04/09/13 15:39
N-Nitrosodiphenylamine		U	66	180	µg/Kg-dry	1	04/09/13 15:39
Pentachlorophenol		U	16	22	µg/Kg-dry	1	04/09/13 15:39
Phenanthrene		U	33	33	µg/Kg-dry	1	04/09/13 15:39
Phenol		U	9.4	180	µg/Kg-dry	1	04/09/13 15:39
Pyrene		U	14	33	µg/Kg-dry	1	04/09/13 15:39
Surr: 2,4,6-Tribromophenol	74.6			34-140	%REC	1	04/09/13 15:39
Surr: 2-Fluorobiphenyl	82.8			12-100	%REC	1	04/09/13 15:39
Surr: 2-Fluorophenol	95.1			33-117	%REC	1	04/09/13 15:39
Surr: 4-Terphenyl-d14	115			25-137	%REC	1	04/09/13 15:39
Surr: Nitrobenzene-d5	80.5			37-107	%REC	1	04/09/13 15:39
Surr: Phenol-d6	91.3			40-106	%REC	1	04/09/13 15:39
VOLATILE ORGANIC COMPOUNDS		SW8260			Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane		U	13	34	µg/Kg-dry	1	04/06/13 07:36
1,1,2,2-Tetrachloroethane		U	15	34	µg/Kg-dry	1	04/06/13 07:36
1,1,2-Trichloroethane		U	12	34	µg/Kg-dry	1	04/06/13 07:36
1,1,2-Trichlorotrifluoroethane		U	13	34	µg/Kg-dry	1	04/06/13 07:36
1,1-Dichloroethane		U	12	34	µg/Kg-dry	1	04/06/13 07:36
1,1-Dichloroethene		U	14	34	µg/Kg-dry	1	04/06/13 07:36
1,2,4-Trichlorobenzene		U	18	34	µg/Kg-dry	1	04/06/13 07:36
1,2-Dibromo-3-chloropropane		U	17	34	µg/Kg-dry	1	04/06/13 07:36

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-017
Collection Date: 03/26/13 09:10 AM

Work Order: 1304246
Lab ID: 1304246-17
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		13	34	µg/Kg-dry	1	04/06/13 07:36
1,2-Dichlorobenzene	U		14	34	µg/Kg-dry	1	04/06/13 07:36
1,2-Dichloroethane	U		16	34	µg/Kg-dry	1	04/06/13 07:36
1,2-Dichloropropane	U		11	34	µg/Kg-dry	1	04/06/13 07:36
1,3-Dichlorobenzene	U		14	34	µg/Kg-dry	1	04/06/13 07:36
1,4-Dichlorobenzene	U		13	34	µg/Kg-dry	1	04/06/13 07:36
2-Butanone	U		84	230	µg/Kg-dry	1	04/06/13 07:36
2-Hexanone	U		8.4	34	µg/Kg-dry	1	04/06/13 07:36
4-Methyl-2-pentanone	U		12	34	µg/Kg-dry	1	04/06/13 07:36
Acetone	U		72	110	µg/Kg-dry	1	04/06/13 07:36
Benzene	U		14	34	µg/Kg-dry	1	04/06/13 07:36
Bromodichloromethane	U		7.6	34	µg/Kg-dry	1	04/06/13 07:36
Bromoform	U		6.7	34	µg/Kg-dry	1	04/06/13 07:36
Bromomethane	U		13	85	µg/Kg-dry	1	04/06/13 07:36
Carbon disulfide	U		17	34	µg/Kg-dry	1	04/06/13 07:36
Carbon tetrachloride	U		9.7	34	µg/Kg-dry	1	04/06/13 07:36
Chlorobenzene	U		14	34	µg/Kg-dry	1	04/06/13 07:36
Chloroethane	U		72	110	µg/Kg-dry	1	04/06/13 07:36
Chloroform	U		14	34	µg/Kg-dry	1	04/06/13 07:36
Chloromethane	U		19	110	µg/Kg-dry	1	04/06/13 07:36
cis-1,2-Dichloroethene	U		14	34	µg/Kg-dry	1	04/06/13 07:36
cis-1,3-Dichloropropene	U		12	34	µg/Kg-dry	1	04/06/13 07:36
Cyclohexane	U		15	34	µg/Kg-dry	1	04/06/13 07:36
Dibromochloromethane	U		6.3	34	µg/Kg-dry	1	04/06/13 07:36
Dichlorodifluoromethane	U		15	34	µg/Kg-dry	1	04/06/13 07:36
Ethylbenzene	U		13	34	µg/Kg-dry	1	04/06/13 07:36
Isopropylbenzene	U		15	34	µg/Kg-dry	1	04/06/13 07:36
Methyl acetate	U		46	230	µg/Kg-dry	1	04/06/13 07:36
Methyl tert-butyl ether	U		14	34	µg/Kg-dry	1	04/06/13 07:36
Methylcyclohexane	U		16	34	µg/Kg-dry	1	04/06/13 07:36
Methylene chloride	U		13	34	µg/Kg-dry	1	04/06/13 07:36
Styrene	U		13	34	µg/Kg-dry	1	04/06/13 07:36
Tetrachloroethene	U		15	34	µg/Kg-dry	1	04/06/13 07:36
Toluene	U		13	34	µg/Kg-dry	1	04/06/13 07:36
trans-1,2-Dichloroethene	U		10	34	µg/Kg-dry	1	04/06/13 07:36
trans-1,3-Dichloropropene	U		11	34	µg/Kg-dry	1	04/06/13 07:36
Trichloroethene	U		16	34	µg/Kg-dry	1	04/06/13 07:36
Trichlorofluoromethane	U		9.4	34	µg/Kg-dry	1	04/06/13 07:36
Vinyl chloride	U		15	34	µg/Kg-dry	1	04/06/13 07:36
Xylenes, Total	U		40	100	µg/Kg-dry	1	04/06/13 07:36

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

Revision: 1

ALS Group USA, Corp**Date:** 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032613-MJF-017
Collection Date: 03/26/13 09:10 AM

Work Order: 1304246
Lab ID: 1304246-17
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
<i>Surr: 1,2-Dichloroethane-d4</i>	94.8			70-130	%REC	1	04/06/13 07:36
<i>Surr: 4-Bromofluorobenzene</i>	96.6			70-130	%REC	1	04/06/13 07:36
<i>Surr: Dibromofluoromethane</i>	91.8			70-130	%REC	1	04/06/13 07:36
<i>Surr: Toluene-d8</i>	96.2			70-130	%REC	1	04/06/13 07:36
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
<u>BatchID:</u> 47526							
Cyanide, Total	0.041	J	0.029	0.56	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
<u>BatchID:</u> R118497							
Moisture	12	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 65 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-018
Collection Date: 03/25/13 02:50 PM

Work Order: 1304246
Lab ID: 1304246-18
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		43	48	µg/Kg-dry	1	04/09/13 18:09
Aroclor 1221	U		43	48	µg/Kg-dry	1	04/09/13 18:09
Aroclor 1232	U		43	48	µg/Kg-dry	1	04/09/13 18:09
Aroclor 1242	U		43	48	µg/Kg-dry	1	04/09/13 18:09
Aroclor 1248	U		43	48	µg/Kg-dry	1	04/09/13 18:09
Aroclor 1254	310		13	48	µg/Kg-dry	1	04/09/13 18:09
Aroclor 1260	U		13	48	µg/Kg-dry	1	04/09/13 18:09
Surr: Decachlorobiphenyl	109			40-140	%REC	1	04/09/13 18:09
Surr: Tetrachloro-m-xylene	79.1			45-124	%REC	1	04/09/13 18:09
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.12		0.00088	0.018	mg/Kg-dry	1	04/11/13 12:40
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	14,000		0.55	4.4	mg/Kg-dry	5	04/15/13 22:21
Antimony	4.5		0.0087	2.2	mg/Kg-dry	5	04/14/13 05:15
Arsenic	8.0		0.30	0.87	mg/Kg-dry	5	04/14/13 05:15
Barium	460		0.061	2.2	mg/Kg-dry	5	04/14/13 05:15
Beryllium	0.24	J	0.017	0.87	mg/Kg-dry	5	04/14/13 05:15
Cadmium	9.9		0.0087	0.87	mg/Kg-dry	5	04/14/13 05:15
Chromium	34		0.36	2.2	mg/Kg-dry	5	04/14/13 05:15
Cobalt	6.7		0.0087	2.2	mg/Kg-dry	5	04/14/13 05:15
Copper	240		0.43	2.2	mg/Kg-dry	5	04/14/13 05:15
Iron	44,000		7.2	35	mg/Kg-dry	5	04/15/13 22:21
Manganese	460		0.19	2.2	mg/Kg-dry	5	04/14/13 05:15
Nickel	41		0.22	2.2	mg/Kg-dry	5	04/14/13 05:15
Selenium	U		0.28	1.7	mg/Kg-dry	5	04/14/13 05:15
Silver	1.2		0.0087	0.87	mg/Kg-dry	5	04/14/13 05:15
Thallium	0.065	J	0.052	2.2	mg/Kg-dry	5	04/14/13 05:15
Vanadium	13		0.13	2.2	mg/Kg-dry	5	04/14/13 05:15
<u>BatchID: 47624</u>							
Lead	860		0.087	22	mg/Kg-dry	50	04/16/13 12:42
Zinc	1,100		1.8	44	mg/Kg-dry	50	04/16/13 12:42
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/7/13	Analyst: HL
<u>BatchID: 47480</u>							
1,1'-Biphenyl	U		59	3,900	µg/Kg-dry	10	04/08/13 11:12

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-018
Collection Date: 03/25/13 02:50 PM

Work Order: 1304246
Lab ID: 1304246-18
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,5-Trichlorophenol	U		95	1,900	µg/Kg-dry	10	04/08/13 11:12
2,4,6-Trichlorophenol	U		95	1,900	µg/Kg-dry	10	04/08/13 11:12
2,4-Dichlorophenol	U		120	1,900	µg/Kg-dry	10	04/08/13 11:12
2,4-Dimethylphenol	U		480	3,900	µg/Kg-dry	10	04/08/13 11:12
2,4-Dinitrophenol	U		500	7,900	µg/Kg-dry	10	04/08/13 11:12
2,4-Dinitrotoluene	U		110	1,900	µg/Kg-dry	10	04/08/13 11:12
2,6-Dinitrotoluene	U		110	1,900	µg/Kg-dry	10	04/08/13 11:12
2-Chloronaphthalene	U		110	950	µg/Kg-dry	10	04/08/13 11:12
2-Chlorophenol	U		110	1,900	µg/Kg-dry	10	04/08/13 11:12
2-Methylnaphthalene	U		120	950	µg/Kg-dry	10	04/08/13 11:12
2-Methylphenol	U		110	1,900	µg/Kg-dry	10	04/08/13 11:12
2-Nitroaniline	U		91	7,900	µg/Kg-dry	10	04/08/13 11:12
2-Nitrophenol	U		100	1,900	µg/Kg-dry	10	04/08/13 11:12
3,3'-Dichlorobenzidine	U		110	7,900	µg/Kg-dry	10	04/08/13 11:12
3-Nitroaniline	U		970	7,900	µg/Kg-dry	10	04/08/13 11:12
4,6-Dinitro-2-methylphenol	U		570	3,900	µg/Kg-dry	10	04/08/13 11:12
4-Bromophenyl phenyl ether	U		100	1,900	µg/Kg-dry	10	04/08/13 11:12
4-Chloro-3-methylphenol	U		110	1,900	µg/Kg-dry	10	04/08/13 11:12
4-Chloroaniline	U		150	3,900	µg/Kg-dry	10	04/08/13 11:12
4-Chlorophenyl phenyl ether	U		110	1,900	µg/Kg-dry	10	04/08/13 11:12
4-Methylphenol	U		120	1,900	µg/Kg-dry	10	04/08/13 11:12
4-Nitroaniline	U		180	7,900	µg/Kg-dry	10	04/08/13 11:12
4-Nitrophenol	U		480	7,900	µg/Kg-dry	10	04/08/13 11:12
Acenaphthene	U		110	360	µg/Kg-dry	10	04/08/13 11:12
Acenaphthylene	U		110	360	µg/Kg-dry	10	04/08/13 11:12
Acetophenone	U		59	3,900	µg/Kg-dry	10	04/08/13 11:12
Anthracene	280	J	120	360	µg/Kg-dry	10	04/08/13 11:12
Atrazine	U		120	590	µg/Kg-dry	10	04/08/13 11:12
Benzaldehyde	U		150	3,900	µg/Kg-dry	10	04/08/13 11:12
Benzo(a)anthracene	1,100		140	360	µg/Kg-dry	10	04/08/13 11:12
Benzo(a)pyrene	800		180	360	µg/Kg-dry	10	04/08/13 11:12
Benzo(b)fluoranthene	1,200		190	360	µg/Kg-dry	10	04/08/13 11:12
Benzo(g,h,i)perylene	560		280	360	µg/Kg-dry	10	04/08/13 11:12
Benzo(k)fluoranthene	620		160	360	µg/Kg-dry	10	04/08/13 11:12
Bis(2-chloroethoxy)methane	U		98	1,900	µg/Kg-dry	10	04/08/13 11:12
Bis(2-chloroethyl)ether	U		99	1,900	µg/Kg-dry	10	04/08/13 11:12
Bis(2-chloroisopropyl)ether	U		93	1,900	µg/Kg-dry	10	04/08/13 11:12
Bis(2-ethylhexyl)phthalate	1,800	J	120	3,900	µg/Kg-dry	10	04/08/13 11:12
Butyl benzyl phthalate	U		160	1,900	µg/Kg-dry	10	04/08/13 11:12
Caprolactam	520	J	170	3,900	µg/Kg-dry	10	04/08/13 11:12

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-018
Collection Date: 03/25/13 02:50 PM

Work Order: 1304246
Lab ID: 1304246-18
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Carbazole	U		140	1,900	µg/Kg-dry	10	04/08/13 11:12
Chrysene	1,200		130	360	µg/Kg-dry	10	04/08/13 11:12
Dibenzo(a,h)anthracene	U		200	360	µg/Kg-dry	10	04/08/13 11:12
Dibenzofuran	U		110	1,900	µg/Kg-dry	10	04/08/13 11:12
Diethyl phthalate	U		99	3,900	µg/Kg-dry	10	04/08/13 11:12
Dimethyl phthalate	U		99	3,900	µg/Kg-dry	10	04/08/13 11:12
Di-n-butyl phthalate	U		120	3,900	µg/Kg-dry	10	04/08/13 11:12
Di-n-octyl phthalate	730	J	150	1,900	µg/Kg-dry	10	04/08/13 11:12
Fluoranthene	1,400		140	360	µg/Kg-dry	10	04/08/13 11:12
Fluorene	U		100	360	µg/Kg-dry	10	04/08/13 11:12
Hexachlorobenzene	U		110	1,900	µg/Kg-dry	10	04/08/13 11:12
Hexachlorobutadiene	U		100	590	µg/Kg-dry	10	04/08/13 11:12
Hexachlorocyclopentadiene	U		420	3,900	µg/Kg-dry	10	04/08/13 11:12
Hexachloroethane	U		100	1,900	µg/Kg-dry	10	04/08/13 11:12
Indeno(1,2,3-cd)pyrene	420		230	360	µg/Kg-dry	10	04/08/13 11:12
Isophorone	U		100	1,900	µg/Kg-dry	10	04/08/13 11:12
Naphthalene	270	J	100	360	µg/Kg-dry	10	04/08/13 11:12
Nitrobenzene	U		100	1,900	µg/Kg-dry	10	04/08/13 11:12
N-Nitrosodi-n-propylamine	U		100	1,900	µg/Kg-dry	10	04/08/13 11:12
N-Nitrosodiphenylamine	U		710	1,900	µg/Kg-dry	10	04/08/13 11:12
Pentachlorophenol	U		180	240	µg/Kg-dry	10	04/08/13 11:12
Phenanthrene	690		360	360	µg/Kg-dry	10	04/08/13 11:12
Phenol	U		100	1,900	µg/Kg-dry	10	04/08/13 11:12
Pyrene	1,200		150	360	µg/Kg-dry	10	04/08/13 11:12
Surr: 2,4,6-Tribromophenol	83.2			34-140	%REC	10	04/08/13 11:12
Surr: 2-Fluorobiphenyl	69.4			12-100	%REC	10	04/08/13 11:12
Surr: 2-Fluorophenol	81.8			33-117	%REC	10	04/08/13 11:12
Surr: 4-Terphenyl-d14	86.4			25-137	%REC	10	04/08/13 11:12
Surr: Nitrobenzene-d5	71.4			37-107	%REC	10	04/08/13 11:12
Surr: Phenol-d6	80.0			40-106	%REC	10	04/08/13 11:12
VOLATILE ORGANIC COMPOUNDS		SW8260		Prep: SW5035 / 4/5/13		Analyst: AK	
BatchID: 47460							
1,1,1-Trichloroethane	U		15	38	µg/Kg-dry	1	04/06/13 08:00
1,1,2,2-Tetrachloroethane	U		17	38	µg/Kg-dry	1	04/06/13 08:00
1,1,2-Trichloroethane	U		14	38	µg/Kg-dry	1	04/06/13 08:00
1,1,2-Trichlorotrifluoroethane	U		14	38	µg/Kg-dry	1	04/06/13 08:00
1,1-Dichloroethane	U		14	38	µg/Kg-dry	1	04/06/13 08:00
1,1-Dichloroethene	U		16	38	µg/Kg-dry	1	04/06/13 08:00
1,2,4-Trichlorobenzene	U		20	38	µg/Kg-dry	1	04/06/13 08:00

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-018
Collection Date: 03/25/13 02:50 PM

Work Order: 1304246
Lab ID: 1304246-18
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromo-3-chloropropane	U		19	38	µg/Kg-dry	1	04/06/13 08:00
1,2-Dibromoethane	U		15	38	µg/Kg-dry	1	04/06/13 08:00
1,2-Dichlorobenzene	U		15	38	µg/Kg-dry	1	04/06/13 08:00
1,2-Dichloroethane	U		18	38	µg/Kg-dry	1	04/06/13 08:00
1,2-Dichloropropane	U		13	38	µg/Kg-dry	1	04/06/13 08:00
1,3-Dichlorobenzene	U		15	38	µg/Kg-dry	1	04/06/13 08:00
1,4-Dichlorobenzene	U		15	38	µg/Kg-dry	1	04/06/13 08:00
2-Butanone	U		95	260	µg/Kg-dry	1	04/06/13 08:00
2-Hexanone	U		9.4	38	µg/Kg-dry	1	04/06/13 08:00
4-Methyl-2-pentanone	U		13	38	µg/Kg-dry	1	04/06/13 08:00
Acetone	U		81	130	µg/Kg-dry	1	04/06/13 08:00
Benzene	78		15	38	µg/Kg-dry	1	04/06/13 08:00
Bromodichloromethane	U		8.6	38	µg/Kg-dry	1	04/06/13 08:00
Bromoform	U		7.5	38	µg/Kg-dry	1	04/06/13 08:00
Bromomethane	U		15	96	µg/Kg-dry	1	04/06/13 08:00
Carbon disulfide	U		19	38	µg/Kg-dry	1	04/06/13 08:00
Carbon tetrachloride	U		11	38	µg/Kg-dry	1	04/06/13 08:00
Chlorobenzene	U		16	38	µg/Kg-dry	1	04/06/13 08:00
Chloroethane	U		81	130	µg/Kg-dry	1	04/06/13 08:00
Chloroform	U		16	38	µg/Kg-dry	1	04/06/13 08:00
Chloromethane	U		21	130	µg/Kg-dry	1	04/06/13 08:00
cis-1,2-Dichloroethene	U		16	38	µg/Kg-dry	1	04/06/13 08:00
cis-1,3-Dichloropropene	U		13	38	µg/Kg-dry	1	04/06/13 08:00
Cyclohexane	U		17	38	µg/Kg-dry	1	04/06/13 08:00
Dibromochloromethane	U		7.1	38	µg/Kg-dry	1	04/06/13 08:00
Dichlorodifluoromethane	U		17	38	µg/Kg-dry	1	04/06/13 08:00
Ethylbenzene	73		14	38	µg/Kg-dry	1	04/06/13 08:00
Isopropylbenzene	U		16	38	µg/Kg-dry	1	04/06/13 08:00
Methyl acetate	140	J	51	260	µg/Kg-dry	1	04/06/13 08:00
Methyl tert-butyl ether	U		16	38	µg/Kg-dry	1	04/06/13 08:00
Methylcyclohexane	U		18	38	µg/Kg-dry	1	04/06/13 08:00
Methylene chloride	U		15	38	µg/Kg-dry	1	04/06/13 08:00
Styrene	U		14	38	µg/Kg-dry	1	04/06/13 08:00
Tetrachloroethene	U		17	38	µg/Kg-dry	1	04/06/13 08:00
Toluene	320		14	38	µg/Kg-dry	1	04/06/13 08:00
trans-1,2-Dichloroethene	U		12	38	µg/Kg-dry	1	04/06/13 08:00
trans-1,3-Dichloropropene	U		13	38	µg/Kg-dry	1	04/06/13 08:00
Trichloroethene	U		18	38	µg/Kg-dry	1	04/06/13 08:00
Trichlorofluoromethane	U		11	38	µg/Kg-dry	1	04/06/13 08:00
Vinyl chloride	U		17	38	µg/Kg-dry	1	04/06/13 08:00

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-018
Collection Date: 03/25/13 02:50 PM

Work Order: 1304246
Lab ID: 1304246-18
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Xylenes, Total	360		45	110	µg/Kg-dry	1	04/06/13 08:00
Surr: 1,2-Dichloroethane-d4	92.6			70-130	%REC	1	04/06/13 08:00
Surr: 4-Bromofluorobenzene	92.4			70-130	%REC	1	04/06/13 08:00
Surr: Dibromofluoromethane	92.4			70-130	%REC	1	04/06/13 08:00
Surr: Toluene-d8	93.4			70-130	%REC	1	04/06/13 08:00
CYANIDE, TOTAL			SW9012A		Prep: SW9014 / 4/8/13		Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.31	J	0.031	0.60	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	17	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 70 of 75

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-019
Collection Date: 03/25/13 03:00 PM

Work Order: 1304246
Lab ID: 1304246-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
PCBS							
			SW8082			Prep: SW3541 / 4/8/13	Analyst: JD
<u>BatchID: 47500</u>							
Aroclor 1016	U		37	42	µg/Kg-dry	1	04/09/13 17:29
Aroclor 1221	U		37	42	µg/Kg-dry	1	04/09/13 17:29
Aroclor 1232	U		37	42	µg/Kg-dry	1	04/09/13 17:29
Aroclor 1242	U		37	42	µg/Kg-dry	1	04/09/13 17:29
Aroclor 1248	U		37	42	µg/Kg-dry	1	04/09/13 17:29
Aroclor 1254	U		12	42	µg/Kg-dry	1	04/09/13 17:29
Aroclor 1260	U		12	42	µg/Kg-dry	1	04/09/13 17:29
Surr: Decachlorobiphenyl	98.1			40-140	%REC	1	04/09/13 17:29
Surr: Tetrachloro-m-xylene	78.1			45-124	%REC	1	04/09/13 17:29
MERCURY BY CVAA							
			SW7471			Prep: SW7471 / 4/11/13	Analyst: LR
<u>BatchID: 47602</u>							
Mercury	0.014	J	0.00079	0.016	mg/Kg-dry	1	04/11/13 12:42
METALS BY ICP-MS							
			SW6020A			Prep: SW3050B / 4/11/13	Analyst: RH
<u>BatchID: 47624</u>							
Aluminum	3,100		0.51	4.0	mg/Kg-dry	5	04/15/13 22:27
Antimony	0.088	J	0.0080	2.0	mg/Kg-dry	5	04/14/13 05:21
Arsenic	1.8		0.27	0.80	mg/Kg-dry	5	04/14/13 05:21
Barium	21		0.056	2.0	mg/Kg-dry	5	04/14/13 05:21
Beryllium	0.12	J	0.016	0.80	mg/Kg-dry	5	04/14/13 05:21
Cadmium	0.17	J	0.0080	0.80	mg/Kg-dry	5	04/14/13 05:21
Chromium	7.3		0.33	2.0	mg/Kg-dry	5	04/14/13 05:21
Cobalt	1.9	J	0.0080	2.0	mg/Kg-dry	5	04/14/13 05:21
Copper	4.7		0.39	2.0	mg/Kg-dry	5	04/14/13 05:21
Iron	6,100		6.7	32	mg/Kg-dry	5	04/15/13 22:27
Lead	12		0.0080	2.0	mg/Kg-dry	5	04/14/13 05:21
Manganese	87		0.18	2.0	mg/Kg-dry	5	04/14/13 05:21
Nickel	5.3		0.20	2.0	mg/Kg-dry	5	04/14/13 05:21
Selenium	U		0.26	1.6	mg/Kg-dry	5	04/14/13 05:21
Silver	0.017	J	0.0080	0.80	mg/Kg-dry	5	04/14/13 05:21
Thallium	U		0.048	2.0	mg/Kg-dry	5	04/14/13 05:21
Vanadium	9.4		0.12	2.0	mg/Kg-dry	5	04/14/13 05:21
Zinc	21		0.17	4.0	mg/Kg-dry	5	04/14/13 05:21
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3541 / 4/7/13	Analyst: HL
<u>BatchID: 47480</u>							
1,1'-Biphenyl	U		5.5	370	µg/Kg-dry	1	04/08/13 13:49
2,4,5-Trichlorophenol	U		8.8	180	µg/Kg-dry	1	04/08/13 13:49

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-019
Collection Date: 03/25/13 03:00 PM

Work Order: 1304246
Lab ID: 1304246-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2,4,6-Trichlorophenol	U		8.8	180	µg/Kg-dry	1	04/08/13 13:49
2,4-Dichlorophenol	U		11	180	µg/Kg-dry	1	04/08/13 13:49
2,4-Dimethylphenol	U		45	370	µg/Kg-dry	1	04/08/13 13:49
2,4-Dinitrophenol	U		47	730	µg/Kg-dry	1	04/08/13 13:49
2,4-Dinitrotoluene	U		9.9	180	µg/Kg-dry	1	04/08/13 13:49
2,6-Dinitrotoluene	U		10	180	µg/Kg-dry	1	04/08/13 13:49
2-Chloronaphthalene	U		10	88	µg/Kg-dry	1	04/08/13 13:49
2-Chlorophenol	U		9.9	180	µg/Kg-dry	1	04/08/13 13:49
2-Methylnaphthalene	U		11	88	µg/Kg-dry	1	04/08/13 13:49
2-Methylphenol	U		11	180	µg/Kg-dry	1	04/08/13 13:49
2-Nitroaniline	U		8.4	730	µg/Kg-dry	1	04/08/13 13:49
2-Nitrophenol	U		9.6	180	µg/Kg-dry	1	04/08/13 13:49
3,3'-Dichlorobenzidine	U		10	730	µg/Kg-dry	1	04/08/13 13:49
3-Nitroaniline	U		90	730	µg/Kg-dry	1	04/08/13 13:49
4,6-Dinitro-2-methylphenol	U		53	370	µg/Kg-dry	1	04/08/13 13:49
4-Bromophenyl phenyl ether	U		9.6	180	µg/Kg-dry	1	04/08/13 13:49
4-Chloro-3-methylphenol	U		10	180	µg/Kg-dry	1	04/08/13 13:49
4-Chloroaniline	U		14	370	µg/Kg-dry	1	04/08/13 13:49
4-Chlorophenyl phenyl ether	U		10	180	µg/Kg-dry	1	04/08/13 13:49
4-Methylphenol	U		11	180	µg/Kg-dry	1	04/08/13 13:49
4-Nitroaniline	U		16	730	µg/Kg-dry	1	04/08/13 13:49
4-Nitrophenol	U		45	730	µg/Kg-dry	1	04/08/13 13:49
Acenaphthene	U		10	33	µg/Kg-dry	1	04/08/13 13:49
Acenaphthylene	U		10	33	µg/Kg-dry	1	04/08/13 13:49
Acetophenone	U		5.5	370	µg/Kg-dry	1	04/08/13 13:49
Anthracene	U		11	33	µg/Kg-dry	1	04/08/13 13:49
Atrazine	U		11	55	µg/Kg-dry	1	04/08/13 13:49
Benzaldehyde	U		14	370	µg/Kg-dry	1	04/08/13 13:49
Benzo(a)anthracene	U		13	33	µg/Kg-dry	1	04/08/13 13:49
Benzo(a)pyrene	U		17	33	µg/Kg-dry	1	04/08/13 13:49
Benzo(b)fluoranthene	U		18	33	µg/Kg-dry	1	04/08/13 13:49
Benzo(g,h,i)perylene	U		26	33	µg/Kg-dry	1	04/08/13 13:49
Benzo(k)fluoranthene	U		15	33	µg/Kg-dry	1	04/08/13 13:49
Bis(2-chloroethoxy)methane	U		9.1	180	µg/Kg-dry	1	04/08/13 13:49
Bis(2-chloroethyl)ether	U		9.2	180	µg/Kg-dry	1	04/08/13 13:49
Bis(2-chloroisopropyl)ether	U		8.6	180	µg/Kg-dry	1	04/08/13 13:49
Bis(2-ethylhexyl)phthalate	30	J	11	370	µg/Kg-dry	1	04/08/13 13:49
Butyl benzyl phthalate	U		15	180	µg/Kg-dry	1	04/08/13 13:49
Caprolactam	U		16	370	µg/Kg-dry	1	04/08/13 13:49
Carbazole	U		13	180	µg/Kg-dry	1	04/08/13 13:49

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-019
Collection Date: 03/25/13 03:00 PM

Work Order: 1304246
Lab ID: 1304246-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Chrysene		U	13	33	µg/Kg-dry	1	04/08/13 13:49
Dibenzo(a,h)anthracene		U	19	33	µg/Kg-dry	1	04/08/13 13:49
Dibenzofuran		U	10	180	µg/Kg-dry	1	04/08/13 13:49
Diethyl phthalate		U	9.2	370	µg/Kg-dry	1	04/08/13 13:49
Dimethyl phthalate		U	9.2	370	µg/Kg-dry	1	04/08/13 13:49
Di-n-butyl phthalate		U	11	370	µg/Kg-dry	1	04/08/13 13:49
Di-n-octyl phthalate		U	14	180	µg/Kg-dry	1	04/08/13 13:49
Fluoranthene		U	13	33	µg/Kg-dry	1	04/08/13 13:49
Fluorene		U	9.7	33	µg/Kg-dry	1	04/08/13 13:49
Hexachlorobenzene		U	10	180	µg/Kg-dry	1	04/08/13 13:49
Hexachlorobutadiene		U	9.3	55	µg/Kg-dry	1	04/08/13 13:49
Hexachlorocyclopentadiene		U	39	370	µg/Kg-dry	1	04/08/13 13:49
Hexachloroethane		U	9.7	180	µg/Kg-dry	1	04/08/13 13:49
Indeno(1,2,3-cd)pyrene		U	21	33	µg/Kg-dry	1	04/08/13 13:49
Isophorone		U	9.6	180	µg/Kg-dry	1	04/08/13 13:49
Naphthalene		U	9.4	33	µg/Kg-dry	1	04/08/13 13:49
Nitrobenzene		U	9.6	180	µg/Kg-dry	1	04/08/13 13:49
N-Nitrosodi-n-propylamine		U	9.7	180	µg/Kg-dry	1	04/08/13 13:49
N-Nitrosodiphenylamine		U	66	180	µg/Kg-dry	1	04/08/13 13:49
Pentachlorophenol		U	16	22	µg/Kg-dry	1	04/08/13 13:49
Phenanthrene		U	33	33	µg/Kg-dry	1	04/08/13 13:49
Phenol		U	9.4	180	µg/Kg-dry	1	04/08/13 13:49
Pyrene		U	14	33	µg/Kg-dry	1	04/08/13 13:49
Surr: 2,4,6-Tribromophenol	73.1			34-140	%REC	1	04/08/13 13:49
Surr: 2-Fluorobiphenyl	72.6			12-100	%REC	1	04/08/13 13:49
Surr: 2-Fluorophenol	89.7			33-117	%REC	1	04/08/13 13:49
Surr: 4-Terphenyl-d14	109			25-137	%REC	1	04/08/13 13:49
Surr: Nitrobenzene-d5	72.0			37-107	%REC	1	04/08/13 13:49
Surr: Phenol-d6	85.7			40-106	%REC	1	04/08/13 13:49
VOLATILE ORGANIC COMPOUNDS		SW8260			Prep: SW5035 / 4/5/13		Analyst: AK
BatchID: 47460							
1,1,1-Trichloroethane		U	13	33	µg/Kg-dry	1	04/06/13 08:23
1,1,2,2-Tetrachloroethane		U	15	33	µg/Kg-dry	1	04/06/13 08:23
1,1,2-Trichloroethane		U	12	33	µg/Kg-dry	1	04/06/13 08:23
1,1,2-Trichlorotrifluoroethane		U	12	33	µg/Kg-dry	1	04/06/13 08:23
1,1-Dichloroethane		U	12	33	µg/Kg-dry	1	04/06/13 08:23
1,1-Dichloroethene		U	14	33	µg/Kg-dry	1	04/06/13 08:23
1,2,4-Trichlorobenzene		U	17	33	µg/Kg-dry	1	04/06/13 08:23
1,2-Dibromo-3-chloropropane		U	16	33	µg/Kg-dry	1	04/06/13 08:23

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-019
Collection Date: 03/25/13 03:00 PM

Work Order: 1304246
Lab ID: 1304246-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
1,2-Dibromoethane	U		13	33	µg/Kg-dry	1	04/06/13 08:23
1,2-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 08:23
1,2-Dichloroethane	U		16	33	µg/Kg-dry	1	04/06/13 08:23
1,2-Dichloropropane	U		11	33	µg/Kg-dry	1	04/06/13 08:23
1,3-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 08:23
1,4-Dichlorobenzene	U		13	33	µg/Kg-dry	1	04/06/13 08:23
2-Butanone	U		82	220	µg/Kg-dry	1	04/06/13 08:23
2-Hexanone	U		8.2	33	µg/Kg-dry	1	04/06/13 08:23
4-Methyl-2-pentanone	U		11	33	µg/Kg-dry	1	04/06/13 08:23
Acetone	U		70	110	µg/Kg-dry	1	04/06/13 08:23
Benzene	U		13	33	µg/Kg-dry	1	04/06/13 08:23
Bromodichloromethane	U		7.5	33	µg/Kg-dry	1	04/06/13 08:23
Bromoform	U		6.6	33	µg/Kg-dry	1	04/06/13 08:23
Bromomethane	U		13	83	µg/Kg-dry	1	04/06/13 08:23
Carbon disulfide	U		16	33	µg/Kg-dry	1	04/06/13 08:23
Carbon tetrachloride	U		9.5	33	µg/Kg-dry	1	04/06/13 08:23
Chlorobenzene	U		14	33	µg/Kg-dry	1	04/06/13 08:23
Chloroethane	U		71	110	µg/Kg-dry	1	04/06/13 08:23
Chloroform	U		14	33	µg/Kg-dry	1	04/06/13 08:23
Chloromethane	U		19	110	µg/Kg-dry	1	04/06/13 08:23
cis-1,2-Dichloroethene	U		13	33	µg/Kg-dry	1	04/06/13 08:23
cis-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/06/13 08:23
Cyclohexane	U		15	33	µg/Kg-dry	1	04/06/13 08:23
Dibromochloromethane	U		6.2	33	µg/Kg-dry	1	04/06/13 08:23
Dichlorodifluoromethane	U		15	33	µg/Kg-dry	1	04/06/13 08:23
Ethylbenzene	U		12	33	µg/Kg-dry	1	04/06/13 08:23
Isopropylbenzene	U		14	33	µg/Kg-dry	1	04/06/13 08:23
Methyl acetate	U		45	220	µg/Kg-dry	1	04/06/13 08:23
Methyl tert-butyl ether	U		14	33	µg/Kg-dry	1	04/06/13 08:23
Methylcyclohexane	U		15	33	µg/Kg-dry	1	04/06/13 08:23
Methylene chloride	U		13	33	µg/Kg-dry	1	04/06/13 08:23
Styrene	U		12	33	µg/Kg-dry	1	04/06/13 08:23
Tetrachloroethene	U		15	33	µg/Kg-dry	1	04/06/13 08:23
Toluene	U		12	33	µg/Kg-dry	1	04/06/13 08:23
trans-1,2-Dichloroethene	U		10	33	µg/Kg-dry	1	04/06/13 08:23
trans-1,3-Dichloropropene	U		11	33	µg/Kg-dry	1	04/06/13 08:23
Trichloroethene	U		16	33	µg/Kg-dry	1	04/06/13 08:23
Trichlorofluoromethane	U		9.2	33	µg/Kg-dry	1	04/06/13 08:23
Vinyl chloride	U		15	33	µg/Kg-dry	1	04/06/13 08:23
Xylenes, Total	U		39	100	µg/Kg-dry	1	04/06/13 08:23

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

Revision: 1

ALS Group USA, Corp

Date: 21-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: S-R2330009-032513-MJF-019
Collection Date: 03/25/13 03:00 PM

Work Order: 1304246
Lab ID: 1304246-19
Matrix: SOIL

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 1,2-Dichloroethane-d4	92.8			70-130	%REC	1	04/06/13 08:23
Surr: 4-Bromofluorobenzene	94.5			70-130	%REC	1	04/06/13 08:23
Surr: Dibromofluoromethane	92.4			70-130	%REC	1	04/06/13 08:23
Surr: Toluene-d8	94.6			70-130	%REC	1	04/06/13 08:23
CYANIDE, TOTAL			SW9012A			Prep: SW9014 / 4/8/13	Analyst: JJG
BatchID: <u>47526</u>							
Cyanide, Total	0.048	J	0.028	0.55	mg/Kg-dry	1	04/10/13 12:54
MOISTURE			A2540 G				Analyst: DC
BatchID: <u>R118497</u>							
Moisture	9.8	H	0.025	0.050	% of sample	1	04/05/13 14:30

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

Revision: 1

Analytical Results Page 75 of 75

Client: The Mannik & Smith Group, Inc.

Work Order: 1304246

Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47500**

Instrument ID **GC12**

Method: **SW8082**

MBLK		Sample ID: PBLKS1-47500-47500				Units: µg/Kg		Analysis Date: 04/09/13 09:00 AM		
Client ID:		Run ID: GC12_130409A				SeqNo: 2267701		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	40								
Aroclor 1221	U	40								
Aroclor 1232	U	40								
Aroclor 1242	U	40								
Aroclor 1248	U	40								
Aroclor 1254	U	40								
Aroclor 1260	U	40								

<i>Surr: Decachlorobiphenyl</i>	32.33	0	33.3	0	97.1	40-140	0
<i>Surr: Tetrachloro-m-xylene</i>	27.67	0	33.3	0	83.1	45-124	0

LCS		Sample ID: PLCSS1-47500-47500				Units: µg/Kg		Analysis Date: 04/09/13 09:19 AM		
Client ID:		Run ID: GC12_130409A				SeqNo: 2267702		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	738.7	40	833	0	88.7	50-130	0			
Aroclor 1260	736	40	833	0	88.4	50-130	0			
<i>Surr: Decachlorobiphenyl</i>	27.33	0	33.3	0	82.1	40-140	0			
<i>Surr: Tetrachloro-m-xylene</i>	24.67	0	33.3	0	74.1	45-124	0			

MS		Sample ID: 1304230-01B MS				Units: µg/Kg		Analysis Date: 04/09/13 11:14 AM		
Client ID:		Run ID: GC12_130409A				SeqNo: 2267698		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	843.9	39	814.5	0	104	40-140	0			
Aroclor 1260	867	39	814.5	0	106	40-140	0			
<i>Surr: Decachlorobiphenyl</i>	30.64	0	32.56	0	94.1	40-140	0			
<i>Surr: Tetrachloro-m-xylene</i>	28.03	0	32.56	0	86.1	45-124	0			

MSD		Sample ID: 1304230-01B MSD				Units: µg/Kg		Analysis Date: 04/09/13 11:33 AM		
Client ID:		Run ID: GC12_130409A				SeqNo: 2267699		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	825.9	38	796.6	0	104	40-140	843.9	2.15	50	
Aroclor 1260	849.2	38	796.6	0	107	40-140	867	2.07	50	
<i>Surr: Decachlorobiphenyl</i>	30.28	0	31.85	0	95.1	40-140	30.64	1.17	50	
<i>Surr: Tetrachloro-m-xylene</i>	26.78	0	31.85	0	84.1	45-124	28.03	4.58	50	

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47500** Instrument ID **GC12** Method: **SW8082**

The following samples were analyzed in this batch:

1304246-01B	1304246-02B	1304246-11B
1304246-12B	1304246-13B	1304246-14B
1304246-15B	1304246-16B	1304246-17B
1304246-18B	1304246-19B	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47577** Instrument ID **GC12** Method: **SW8082**

MBLK		Sample ID: PBLKS1-47577-47577				Units: µg/Kg		Analysis Date: 04/11/13 06:27 AM		
Client ID:		Run ID: GC12_130410A				SeqNo: 2271857		Prep Date: 04/10/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	U	40								
Aroclor 1221	U	40								
Aroclor 1232	U	40								
Aroclor 1242	U	40								
Aroclor 1248	U	40								
Aroclor 1254	U	40								
Aroclor 1260	U	40								
Surr: Decachlorobiphenyl	30.67	0	33.3	0	92.1	40-140	0			
Surr: Tetrachloro-m-xylene	29.33	0	33.3	0	88.1	45-124	0			

LCS		Sample ID: PLCSS1-47577-47577				Units: µg/Kg		Analysis Date: 04/11/13 06:46 AM		
Client ID:		Run ID: GC12_130410A				SeqNo: 2271858		Prep Date: 04/10/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	696	40	833	0	83.6	50-130	0			
Aroclor 1260	683.7	40	833	0	82.1	50-130	0			
Surr: Decachlorobiphenyl	51.67	0	66.6	0	77.6	40-140	0			
Surr: Tetrachloro-m-xylene	49.33	0	66.6	0	74.1	45-124	0			

MS		Sample ID: 1304400-02A MS				Units: µg/Kg		Analysis Date: 04/11/13 07:43 AM		
Client ID:		Run ID: GC12_130410A				SeqNo: 2271855		Prep Date: 04/10/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1650	40	831.6	0	198	40-140	0			S
Aroclor 1260	794	40	831.6	0	95.5	40-140	0			
Surr: Decachlorobiphenyl	58.9	0	66.48	0	88.6	40-140	0			
Surr: Tetrachloro-m-xylene	53.24	0	66.48	0	80.1	45-124	0			

MSD		Sample ID: 1304400-02A MSD				Units: µg/Kg		Analysis Date: 04/11/13 08:02 AM		
Client ID:		Run ID: GC12_130410A				SeqNo: 2271856		Prep Date: 04/10/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aroclor 1016	1658	39	822.2	0	202	40-140	1650	0.469	50	S
Aroclor 1260	890.6	39	822.2	0	108	40-140	794	11.5	50	
Surr: Decachlorobiphenyl	30.6	0	32.87	0	93.1	40-140	58.9	63.2	50	R
Surr: Tetrachloro-m-xylene	26.65	0	32.87	0	81.1	45-124	53.24	66.6	50	R

The following samples were analyzed in this batch:

1304246-05B	1304246-06B	1304246-09B
1304246-10B		

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47602** Instrument ID **HG1** Method: **SW7471**

MBLK		Sample ID: MBLK-47602-47602				Units: mg/Kg		Analysis Date: 04/11/13 11:52 AM		
Client ID:		Run ID: HG1_130411A				SeqNo: 2271446		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.001417	0.020								J

LCS		Sample ID: LCS-47602-47602				Units: mg/Kg		Analysis Date: 04/11/13 11:54 AM		
Client ID:		Run ID: HG1_130411A				SeqNo: 2271447		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1941	0.020	0.1665	0	117	80-120	0			

MS		Sample ID: 1304246-14BMS				Units: mg/Kg		Analysis Date: 04/11/13 12:23 PM		
Client ID: S-R2330009-032513-MJF-014		Run ID: HG1_130411A				SeqNo: 2271469		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1436	0.014	0.1168	0.02259	104	75-125	0			

MSD		Sample ID: 1304246-14BMSD				Units: mg/Kg		Analysis Date: 04/11/13 12:25 PM		
Client ID: S-R2330009-032513-MJF-014		Run ID: HG1_130411A				SeqNo: 2271470		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.1523	0.014	0.1191	0.02259	109	75-125	0.1436	5.84	35	

The following samples were analyzed in this batch:

1304246-01B	1304246-02B	1304246-05B
1304246-06B	1304246-09B	1304246-10B
1304246-11B	1304246-12B	1304246-13B
1304246-14B	1304246-15B	1304246-16B
1304246-17B	1304246-18B	1304246-19B

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

Revision: 1

QC Report Page: 4 of 78

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47624** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-47624-47624				Units: mg/Kg		Analysis Date: 04/12/13 09:31 PM		
Client ID:		Run ID: ICPMS1_130412A				SeqNo: 2274219		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	0.007825	0.25								J
Cadmium	U	0.10								
Cobalt	U	0.25								
Lead	0.005175	0.25								J
Thallium	U	0.25								

MBLK		Sample ID: MBLK-47624-47624				Units: mg/Kg		Analysis Date: 04/13/13 03:15 AM		
Client ID:		Run ID: ICPMS1_130412A				SeqNo: 2274433		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.00135	0.25								J
Chromium	U	0.25								
Copper	U	0.25								
Iron	U	4.0								
Manganese	U	0.25								
Nickel	U	0.25								
Selenium	U	0.25								
Silver	U	0.25								
Vanadium	U	0.25								
Zinc	0.03154	0.50								J

MBLK		Sample ID: MBLK-47624-47624				Units: mg/Kg		Analysis Date: 04/14/13 02:34 AM		
Client ID:		Run ID: ICPMS1_130413A				SeqNo: 2275394		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	U	0.25								
Beryllium	U	0.10								

MBLK		Sample ID: MBLK-47624-47624				Units: mg/Kg		Analysis Date: 04/15/13 08:07 PM		
Client ID:		Run ID: ICPMS1_130415A				SeqNo: 2277041		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	1.098	0.50	0	0	0	0-0	0			

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

Revision: 1

QC Report Page: 5 of 78

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47624** Instrument ID **ICPMS1** Method: **SW6020A**

LCS		Sample ID: LCS-47624-47624				Units: mg/Kg		Analysis Date: 04/12/13 09:37 PM		
Client ID:		Run ID: ICPMS1_130412A				SeqNo: 2274220		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Barium	4.7	0.25	5	0	94	80-120	0			
Cadmium	4.737	0.10	5	0	94.7	80-120	0			
Cobalt	4.554	0.25	5	0	91.1	80-120	0			
Lead	4.83	0.25	5	0	96.6	80-120	0			
Thallium	4.498	0.25	5	0	90	80-120	0			

LCS		Sample ID: LCS-47624-47624				Units: mg/Kg		Analysis Date: 04/13/13 03:21 AM		
Client ID:		Run ID: ICPMS1_130412A				SeqNo: 2274434		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	4.591	0.25	5	0	91.8	80-120	0			
Chromium	4.614	0.25	5	0	92.3	80-120	0			
Copper	4.59	0.25	5	0	91.8	80-120	0			
Iron	462	4.0	500	0	92.4	80-120	0			
Manganese	4.609	0.25	5	0	92.2	80-120	0			
Nickel	4.666	0.25	5	0	93.3	80-120	0			
Selenium	4.208	0.25	5	0	84.2	80-120	0			
Silver	4.62	0.25	5	0	92.4	80-120	0			
Vanadium	4.551	0.25	5	0	91	80-120	0			
Zinc	4.358	0.50	5	0	87.2	80-120	0			

LCS		Sample ID: LCS-47624-47624				Units: mg/Kg		Analysis Date: 04/14/13 02:40 AM		
Client ID:		Run ID: ICPMS1_130413A				SeqNo: 2275395		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	4.384	0.25	5	0	87.7	80-120	0			
Beryllium	4.514	0.10	5	0	90.3	80-120	0			

LCS		Sample ID: LCS-47624-47624				Units: mg/Kg		Analysis Date: 04/15/13 08:13 PM		
Client ID:		Run ID: ICPMS1_130415A				SeqNo: 2277042		Prep Date: 04/11/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	5.69	0.50	5	0	114	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47624** Instrument ID **ICPMS1** Method: **SW6020A**

MS Sample ID: 1304246-01BMS				Units: mg/Kg			Analysis Date: 04/14/13 02:52 AM			
Client ID: S-R2330009-032513-MJF-001			Run ID: ICPMS1_130413A		SeqNo: 2275397		Prep Date: 04/11/13		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	5.671	1.8	7.215	0.126	76.9	75-125	0			
Arsenic	9.6	1.8	7.215	3.252	88	75-125	0			
Barium	31.51	1.8	7.215	22.79	121	75-125	0			
Beryllium	6.1	0.72	7.215	0.2528	81	75-125	0			
Cadmium	6.739	0.72	7.215	0.1622	91.2	75-125	0			
Chromium	13.69	1.8	7.215	6.019	106	75-125	0			
Cobalt	8.882	1.8	7.215	2.442	89.3	75-125	0			
Copper	12.77	1.8	7.215	5.982	94.1	75-125	0			
Lead	13.83	1.8	7.215	6.928	95.7	75-125	0			
Manganese	314.5	1.8	7.215	247.4	930	75-125	0			SO
Nickel	13.9	1.8	7.215	6.91	96.9	75-125	0			
Selenium	6.299	1.8	7.215	0.06646	86.4	75-125	0			
Silver	6.494	1.8	7.215	0.01467	89.8	75-125	0			
Thallium	6.061	1.8	7.215	0.1851	81.4	75-125	0			
Vanadium	19.66	1.8	7.215	9.168	145	75-125	0			S
Zinc	33.01	3.6	7.215	20.42	174	75-125	0			S

MS Sample ID: 1304246-01BMS				Units: mg/Kg			Analysis Date: 04/15/13 08:25 PM			
Client ID: S-R2330009-032513-MJF-001			Run ID: ICPMS1_130415A		SeqNo: 2277044		Prep Date: 04/11/13		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	5213	3.6	7.215	3474	24100	75-125	0			SO

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47624** Instrument ID **ICPMS1** Method: **SW6020A**

MSD Sample ID: 1304246-01BMSD				Units: mg/Kg			Analysis Date: 04/14/13 02:58 AM			
Client ID: S-R2330009-032513-MJF-001			Run ID: ICPMS1_130413A		SeqNo: 2275399		Prep Date: 04/11/13		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	6.077	1.8	7.153	0.126	83.2	75-125	5.671	6.9	25	
Arsenic	9.567	1.8	7.153	3.252	88.3	75-125	9.6	0.337	25	
Barium	32.59	1.8	7.153	22.79	137	75-125	31.51	3.35	25	S
Beryllium	6.456	0.72	7.153	0.2528	86.7	75-125	6.1	5.66	25	
Cadmium	7.099	0.72	7.153	0.1622	97	75-125	6.739	5.21	25	
Chromium	14.25	1.8	7.153	6.019	115	75-125	13.69	4	25	
Cobalt	8.923	1.8	7.153	2.442	90.6	75-125	8.882	0.469	25	
Copper	12.2	1.8	7.153	5.982	86.9	75-125	12.77	4.6	25	
Lead	13.68	1.8	7.153	6.928	94.3	75-125	13.83	1.12	25	
Manganese	277.9	1.8	7.153	247.4	426	75-125	314.5	12.3	25	SO
Nickel	13.94	1.8	7.153	6.91	98.3	75-125	13.9	0.247	25	
Selenium	6.398	1.8	7.153	0.06646	88.5	75-125	6.299	1.57	25	
Silver	6.731	1.8	7.153	0.01467	93.9	75-125	6.494	3.59	25	
Thallium	6.495	1.8	7.153	0.1851	88.2	75-125	6.061	6.92	25	
Vanadium	18.65	1.8	7.153	9.168	133	75-125	19.66	5.27	25	S
Zinc	30.98	3.6	7.153	20.42	148	75-125	33.01	6.34	25	S

MSD Sample ID: 1304246-01BMSD				Units: mg/Kg			Analysis Date: 04/15/13 08:49 PM			
Client ID: S-R2330009-032513-MJF-001			Run ID: ICPMS1_130415A		SeqNo: 2277048		Prep Date: 04/11/13		DF: 5	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	4839	3.6	7.153	3474	19100	75-125	5213	7.44	25	SO

The following samples were analyzed in this batch:

1304246-01B	1304246-02B	1304246-05B
1304246-06B	1304246-09B	1304246-10B
1304246-11B	1304246-12B	1304246-13B
1304246-14B	1304246-15B	1304246-16B
1304246-17B	1304246-18B	1304246-19B

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

Revision: 1

QC Report Page: 8 of 78

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47480** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKS1-47480-47480				Units: µg/Kg		Analysis Date: 04/08/13 10:41 AM		
Client ID:		Run ID: SVMS4_130408A				SeqNo: 2266369		Prep Date: 04/07/13		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	80								
2-Chlorophenol	U	160								
2-Methylnaphthalene	U	80								
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	30								
Acenaphthylene	U	30								
Acetophenone	U	330								
Anthracene	U	30								
Atrazine	U	330								
Benzaldehyde	U	330								
Benzo(a)anthracene	U	30								
Benzo(a)pyrene	U	30								
Benzo(b)fluoranthene	U	30								
Benzo(g,h,i)perylene	U	30								
Benzo(k)fluoranthene	U	30								
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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47480		Instrument ID SVMS4		Method: SW8270				
Chrysene	U	30						
Dibenzo(a,h)anthracene	U	30						
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	30						
Fluorene	U	30						
Hexachlorobenzene	U	160						
Hexachlorobutadiene	U	160						
Hexachlorocyclopentadiene	U	330						
Hexachloroethane	U	160						
Indeno(1,2,3-cd)pyrene	U	30						
Isophorone	U	160						
Naphthalene	U	30						
Nitrobenzene	U	160						
N-Nitrosodi-n-propylamine	U	160						
N-Nitrosodiphenylamine	U	160						
Pentachlorophenol	U	330						
Phenanthrene	U	30						
Phenol	U	160						
Pyrene	U	30						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1239</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>74.4</i>	<i>34-140</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>1427</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>85.6</i>	<i>12-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>1727</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>104</i>	<i>33-117</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>1873</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>112</i>	<i>25-137</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>1420</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>85.2</i>	<i>37-107</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>1670</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>100</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47480** Instrument ID **SVMS4** Method: **SW8270**

LCS Sample ID: SLCSS1-47480-47480				Units: µg/Kg			Analysis Date: 04/08/13 08:35 AM			
Client ID:		Run ID: SVMS4_130408A		SeqNo: 2266365		Prep Date: 04/07/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	581	160	666.7	0	87.1	50-110	0			
2,4,6-Trichlorophenol	573.3	160	666.7	0	86	45-110	0			
2,4-Dichlorophenol	572	160	666.7	0	85.8	45-110	0			
2,4-Dimethylphenol	552	330	666.7	0	82.8	30-105	0			
2,4-Dinitrophenol	542	660	666.7	0	81.3	15-130	0			J
2,4-Dinitrotoluene	581.3	160	666.7	0	87.2	50-115	0			
2,6-Dinitrotoluene	659	160	666.7	0	98.8	50-110	0			
2-Chloronaphthalene	621	80	666.7	0	93.1	45-105	0			
2-Chlorophenol	665.3	160	666.7	0	99.8	45-105	0			
2-Methylnaphthalene	603.7	80	666.7	0	90.5	45-105	0			
2-Methylphenol	637.3	160	666.7	0	95.6	40-105	0			
2-Nitroaniline	664.3	660	666.7	0	99.6	45-120	0			
2-Nitrophenol	638.7	160	666.7	0	95.8	40-110	0			
3-Nitroaniline	379.7	660	666.7	0	56.9	25-150	0			J
4-Bromophenyl phenyl ether	592	160	666.7	0	88.8	45-115	0			
4-Chloro-3-methylphenol	658.7	160	666.7	0	98.8	45-115	0			
4-Chloroaniline	359.3	660	666.7	0	53.9	15-110	0			J
4-Chlorophenyl phenyl ether	532.7	160	666.7	0	79.9	45-110	0			
4-Methylphenol	665	160	666.7	0	99.7	40-105	0			
4-Nitroaniline	392.3	660	666.7	0	58.8	35-150	0			J
4-Nitrophenol	485	660	666.7	0	72.7	15-140	0			J
Acenaphthene	644.7	30	666.7	0	96.7	45-110	0			
Acenaphthylene	638.7	30	666.7	0	95.8	45-105	0			
Anthracene	650.3	30	666.7	0	97.5	55-105	0			
Benzo(a)anthracene	618	30	666.7	0	92.7	50-110	0			
Benzo(a)pyrene	732.3	30	666.7	0	110	50-110	0			
Benzo(b)fluoranthene	718.3	30	666.7	0	108	45-115	0			
Benzo(g,h,i)perylene	653.3	30	666.7	0	98	40-125	0			
Benzo(k)fluoranthene	715	30	666.7	0	107	45-115	0			
Bis(2-chloroethoxy)methane	667	160	666.7	0	100	45-110	0			
Bis(2-chloroethyl)ether	696.3	160	666.7	0	104	40-105	0			
Bis(2-chloroisopropyl)ether	721	160	666.7	0	108	20-115	0			
Bis(2-ethylhexyl)phthalate	702.7	330	666.7	0	105	45-125	0			
Butyl benzyl phthalate	719.3	160	666.7	0	108	50-125	0			
Carbazole	639	160	666.7	0	95.8	50-150	0			
Chrysene	688.7	30	666.7	0	103	55-110	0			
Dibenzo(a,h)anthracene	628.7	30	666.7	0	94.3	40-125	0			
Dibenzofuran	642.3	160	666.7	0	96.3	50-105	0			
Diethyl phthalate	628.3	330	666.7	0	94.2	50-115	0			
Dimethyl phthalate	664.7	330	666.7	0	99.7	50-110	0			
Di-n-butyl phthalate	649.3	330	666.7	0	97.4	55-110	0			
Di-n-octyl phthalate	668.3	160	666.7	0	100	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47480		Instrument ID SVMS4		Method: SW8270			
Fluoranthene	587	30	666.7	0	88	55-115	0
Fluorene	647.3	30	666.7	0	97.1	50-110	0
Hexachlorobenzene	583.3	160	666.7	0	87.5	45-120	0
Hexachlorobutadiene	551.3	160	666.7	0	82.7	40-115	0
Hexachlorocyclopentadiene	495.7	330	666.7	0	74.3	40-115	0
Hexachloroethane	583.3	160	666.7	0	87.5	35-110	0
Indeno(1,2,3-cd)pyrene	642.3	30	666.7	0	96.3	40-120	0
Isophorone	626.7	160	666.7	0	94	45-110	0
Naphthalene	619	30	666.7	0	92.8	40-105	0
Nitrobenzene	641	160	666.7	0	96.1	40-115	0
N-Nitrosodi-n-propylamine	667	160	666.7	0	100	40-115	0
N-Nitrosodiphenylamine	694	160	666.7	0	104	50-115	0
Pentachlorophenol	626.3	330	666.7	0	93.9	25-120	0
Phenanthrene	642.3	30	666.7	0	96.3	50-110	0
Phenol	658	160	666.7	0	98.7	40-100	0
Pyrene	658	30	666.7	0	98.7	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1308</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>78.5</i>	<i>34-140</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>1472</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>88.3</i>	<i>12-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>1637</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>98.2</i>	<i>33-117</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>1838</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>110</i>	<i>25-137</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>1457</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>87.4</i>	<i>37-107</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>1582</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>94.9</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47480** Instrument ID **SVMS4** Method: **SW8270**

MS Sample ID: 1304246-01B MS				Units: µg/Kg			Analysis Date: 04/08/13 09:06 AM			
Client ID: S-R2330009-032513-MJF-001			Run ID: SVMS4_130408A		SeqNo: 2266366		Prep Date: 04/07/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1161	320	1318	0	88.1	50-110	0			
2,4,6-Trichlorophenol	1129	320	1318	0	85.7	45-110	0			
2,4-Dichlorophenol	1081	320	1318	0	82	45-110	0			
2,4-Dimethylphenol	883.3	650	1318	0	67	30-105	0			
2,4-Dinitrophenol	967	1,300	1318	0	73.4	15-130	0			J
2,4-Dinitrotoluene	1144	320	1318	0	86.8	50-115	0			
2,6-Dinitrotoluene	1285	320	1318	0	97.5	50-110	0			
2-Chloronaphthalene	1180	160	1318	0	89.6	45-105	0			
2-Chlorophenol	1259	320	1318	0	95.5	45-105	0			
2-Methylnaphthalene	1239	160	1318	54.53	89.9	45-105	0			
2-Methylphenol	1153	320	1318	0	87.5	40-105	0			
2-Nitroaniline	1263	1,300	1318	0	95.9	45-120	0			J
2-Nitrophenol	1236	320	1318	0	93.8	40-110	0			
3-Nitroaniline	874.1	1,300	1318	0	66.3	25-110	0			J
4-Bromophenyl phenyl ether	1152	320	1318	0	87.4	45-115	0			
4-Chloro-3-methylphenol	1283	320	1318	0	97.3	45-115	0			
4-Chloroaniline	408.4	1,300	1318	0	31	15-110	0			J
4-Chlorophenyl phenyl ether	1026	320	1318	0	77.8	45-110	0			
4-Methylphenol	1243	320	1318	0	94.3	40-105	0			
4-Nitroaniline	1063	1,300	1318	0	80.7	35-150	0			J
4-Nitrophenol	1044	1,300	1318	0	79.2	15-140	0			J
Acenaphthene	1235	59	1318	0	93.7	45-110	0			
Acenaphthylene	1227	59	1318	0	93.1	45-105	0			
Anthracene	1287	59	1318	0	97.7	55-105	0			
Benzo(a)anthracene	1207	59	1318	23.7	89.8	50-110	0			
Benzo(a)pyrene	1425	59	1318	18.83	107	50-110	0			
Benzo(b)fluoranthene	1331	59	1318	38.95	98.1	45-115	0			
Benzo(g,h,i)perylene	1135	59	1318	0	86.1	40-125	0			
Benzo(k)fluoranthene	1360	59	1318	0	103	45-115	0			
Bis(2-chloroethoxy)methane	1244	320	1318	0	94.4	45-110	0			
Bis(2-chloroethyl)ether	1359	320	1318	0	103	40-105	0			
Bis(2-chloroisopropyl)ether	1381	320	1318	0	105	20-115	0			
Bis(2-ethylhexyl)phthalate	1379	650	1318	70.77	99.3	45-125	0			
Butyl benzyl phthalate	1411	320	1318	0	107	50-125	0			
Carbazole	1365	320	1318	0	104	50-150	0			
Chrysene	1325	59	1318	40.25	97.5	55-110	0			
Dibenzo(a,h)anthracene	1116	59	1318	0	84.7	40-125	0			
Dibenzofuran	1254	320	1318	18.5	93.7	50-105	0			
Diethyl phthalate	1246	650	1318	0	94.6	50-115	0			
Dimethyl phthalate	1275	650	1318	0	96.7	50-110	0			
Di-n-butyl phthalate	1328	650	1318	25.97	98.8	55-110	0			
Di-n-octyl phthalate	1290	320	1318	30.19	95.6	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47480		Instrument ID SVMS4		Method: SW8270			
Fluoranthene	1244	59	1318	45.77	91	55-115	0
Fluorene	1252	59	1318	0	95	50-110	0
Hexachlorobenzene	1170	320	1318	0	88.8	45-120	0
Hexachlorobutadiene	1033	320	1318	0	78.4	40-115	0
Hexachlorocyclopentadiene	876.1	650	1318	0	66.5	40-115	0
Hexachloroethane	1113	320	1318	0	84.4	35-110	0
Indeno(1,2,3-cd)pyrene	1121	59	1318	0	85.1	40-120	0
Isophorone	1188	320	1318	0	90.1	45-110	0
Naphthalene	1243	59	1318	39.28	91.4	40-105	0
Nitrobenzene	1228	320	1318	0	93.2	40-115	0
N-Nitrosodi-n-propylamine	1271	320	1318	0	96.5	40-115	0
N-Nitrosodiphenylamine	1334	320	1318	0	101	50-115	0
Pentachlorophenol	1373	650	1318	0	104	25-120	0
Phenanthrene	1354	59	1318	69.47	97.5	50-110	0
Phenol	1263	320	1318	0	95.8	40-100	0
Pyrene	1335	59	1318	43.17	98	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	2632	0	3294	0	79.9	34-140	0
<i>Surr: 2-Fluorobiphenyl</i>	2742	0	3294	0	83.3	12-100	0
<i>Surr: 2-Fluorophenol</i>	3089	0	3294	0	93.8	33-117	0
<i>Surr: 4-Terphenyl-d14</i>	3486	0	3294	0	106	25-137	0
<i>Surr: Nitrobenzene-d5</i>	2707	0	3294	0	82.2	37-107	0
<i>Surr: Phenol-d6</i>	2980	0	3294	0	90.5	40-106	0

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

Revision: 1

QC Report Page: 14 of 78

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47480** Instrument ID **SVMS4** Method: **SW8270**

MSD Sample ID: 1304246-01B MSD				Units: µg/Kg			Analysis Date: 04/08/13 09:38 AM			
Client ID: S-R2330009-032513-MJF-001				Run ID: SVMS4_130408A		SeqNo: 2266367		Prep Date: 04/07/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1082	310	1296	0	83.5	50-110	1161	7.08	30	
2,4,6-Trichlorophenol	1044	310	1296	0	80.6	45-110	1129	7.79	30	
2,4-Dichlorophenol	960.2	310	1296	0	74.1	45-110	1081	11.8	30	
2,4-Dimethylphenol	778.7	640	1296	0	60.1	30-105	883.3	12.6	30	
2,4-Dinitrophenol	839	1,300	1296	0	64.7	15-130	967	0	30	J
2,4-Dinitrotoluene	1062	310	1296	0	81.9	50-115	1144	7.46	30	
2,6-Dinitrotoluene	1152	310	1296	0	88.9	50-110	1285	10.9	30	
2-Chloronaphthalene	1042	160	1296	0	80.4	45-105	1180	12.4	30	
2-Chlorophenol	1118	310	1296	0	86.3	45-105	1259	11.8	30	
2-Methylnaphthalene	1102	160	1296	54.53	80.8	45-105	1239	11.7	30	
2-Methylphenol	1041	310	1296	0	80.3	40-105	1153	10.2	30	
2-Nitroaniline	1166	1,300	1296	0	89.9	45-120	1263	0	30	J
2-Nitrophenol	1083	310	1296	0	83.5	40-110	1236	13.3	30	
3-Nitroaniline	840.3	1,300	1296	0	64.8	25-110	874.1	0	30	J
4-Bromophenyl phenyl ether	1066	310	1296	0	82.3	45-115	1152	7.73	30	
4-Chloro-3-methylphenol	1153	310	1296	0	89	45-115	1283	10.6	30	
4-Chloroaniline	486.6	1,300	1296	0	37.5	15-110	408.4	0	30	J
4-Chlorophenyl phenyl ether	949.1	310	1296	0	73.2	45-110	1026	7.75	30	
4-Methylphenol	1104	310	1296	0	85.2	40-105	1243	11.8	30	
4-Nitroaniline	967.3	1,300	1296	0	74.6	35-150	1063	0	30	J
4-Nitrophenol	1030	1,300	1296	0	79.5	15-140	1044	0	30	J
Acenaphthene	1114	58	1296	0	86	45-110	1235	10.3	30	
Acenaphthylene	1093	58	1296	0	84.3	45-105	1227	11.5	30	
Anthracene	1236	58	1296	0	95.3	55-105	1287	4.09	30	
Benzo(a)anthracene	1203	58	1296	23.7	91	50-110	1207	0.358	30	
Benzo(a)pyrene	1166	58	1296	18.83	88.5	50-110	1425	20.1	30	
Benzo(b)fluoranthene	1187	58	1296	38.95	88.6	45-115	1331	11.5	30	
Benzo(g,h,i)perylene	1099	58	1296	0	84.8	40-125	1135	3.24	30	
Benzo(k)fluoranthene	1230	58	1296	0	94.9	45-115	1360	9.98	30	
Bis(2-chloroethoxy)methane	1120	310	1296	0	86.4	45-110	1244	10.4	30	
Bis(2-chloroethyl)ether	1158	310	1296	0	89.3	40-105	1359	16	30	
Bis(2-chloroisopropyl)ether	1216	310	1296	0	93.8	20-115	1381	12.7	30	
Bis(2-ethylhexyl)phthalate	1344	640	1296	70.77	98.3	45-125	1379	2.57	30	
Butyl benzyl phthalate	1399	310	1296	0	108	50-125	1411	0.822	30	
Carbazole	1383	310	1296	0	107	50-150	1365	1.29	30	
Chrysene	1342	58	1296	40.25	100	55-110	1325	1.28	30	
Dibenzo(a,h)anthracene	1057	58	1296	0	81.5	40-125	1116	5.45	30	
Dibenzofuran	1096	310	1296	18.5	83.1	50-105	1254	13.5	30	
Diethyl phthalate	1150	640	1296	0	88.7	50-115	1246	8.04	30	
Dimethyl phthalate	1142	640	1296	0	88.1	50-110	1275	11	30	
Di-n-butyl phthalate	1340	640	1296	25.97	101	55-110	1328	0.936	30	
Di-n-octyl phthalate	1249	310	1296	30.19	94.1	40-130	1290	3.2	30	

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47480		Instrument ID SVMS4		Method: SW8270					
Fluoranthene	1276	58	1296	45.77	95	55-115	1244	2.54	30
Fluorene	1132	58	1296	0	87.4	50-110	1252	9.99	30
Hexachlorobenzene	1166	310	1296	0	89.9	45-120	1170	0.373	30
Hexachlorobutadiene	896.7	310	1296	0	69.2	40-115	1033	14.1	30
Hexachlorocyclopentadiene	662.8	640	1296	0	51.1	40-115	876.1	27.7	30
Hexachloroethane	988	310	1296	0	76.2	35-110	1113	11.9	30
Indeno(1,2,3-cd)pyrene	1098	58	1296	0	84.7	40-120	1121	2.07	30
Isophorone	1040	310	1296	0	80.2	45-110	1188	13.3	30
Naphthalene	1100	58	1296	39.28	81.9	40-105	1243	12.2	30
Nitrobenzene	1066	310	1296	0	82.3	40-115	1228	14.1	30
N-Nitrosodi-n-propylamine	1113	310	1296	0	85.9	40-115	1271	13.3	30
N-Nitrosodiphenylamine	1300	310	1296	0	100	50-115	1334	2.6	30
Pentachlorophenol	1406	640	1296	0	108	25-120	1373	2.34	30
Phenanthrene	1324	58	1296	69.47	96.8	50-110	1354	2.24	30
Phenol	1101	310	1296	0	85	40-100	1263	13.7	30
Pyrene	1302	58	1296	43.17	97.2	45-125	1335	2.45	30
<i>Surr: 2,4,6-Tribromophenol</i>	<i>2507</i>	<i>0</i>	<i>3239</i>	<i>0</i>	<i>77.4</i>	<i>34-140</i>	<i>2632</i>	<i>4.86</i>	<i>40</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>2363</i>	<i>0</i>	<i>3239</i>	<i>0</i>	<i>73</i>	<i>12-100</i>	<i>2742</i>	<i>14.8</i>	<i>40</i>
<i>Surr: 2-Fluorophenol</i>	<i>2709</i>	<i>0</i>	<i>3239</i>	<i>0</i>	<i>83.6</i>	<i>33-117</i>	<i>3089</i>	<i>13.1</i>	<i>40</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>3468</i>	<i>0</i>	<i>3239</i>	<i>0</i>	<i>107</i>	<i>25-137</i>	<i>3486</i>	<i>0.513</i>	<i>40</i>
<i>Surr: Nitrobenzene-d5</i>	<i>2330</i>	<i>0</i>	<i>3239</i>	<i>0</i>	<i>71.9</i>	<i>37-107</i>	<i>2707</i>	<i>15</i>	<i>40</i>
<i>Surr: Phenol-d6</i>	<i>2617</i>	<i>0</i>	<i>3239</i>	<i>0</i>	<i>80.8</i>	<i>40-106</i>	<i>2980</i>	<i>13</i>	<i>40</i>

The following samples were analyzed in this batch:

1304246-01B	1304246-02B	1304246-14B
1304246-15B	1304246-18B	1304246-19B

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

Revision: 1

QC Report Page: 16 of 78

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47499** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKS1-47499-47499				Units: µg/Kg		Analysis Date: 04/09/13 09:41 AM		
Client ID:		Run ID: SVMS4_130409A				SeqNo: 2267181		Prep Date: 04/08/13		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	80								
2-Chlorophenol	U	160								
2-Methylnaphthalene	U	80								
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	30								
Acenaphthylene	U	30								
Acetophenone	U	330								
Anthracene	U	30								
Atrazine	U	330								
Benzaldehyde	U	330								
Benzo(a)anthracene	U	30								
Benzo(a)pyrene	U	30								
Benzo(b)fluoranthene	U	30								
Benzo(g,h,i)perylene	U	30								
Benzo(k)fluoranthene	U	30								
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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47499		Instrument ID SVMS4		Method: SW8270				
Chrysene	U	30						
Dibenzo(a,h)anthracene	U	30						
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	30						
Fluorene	U	30						
Hexachlorobenzene	U	160						
Hexachlorobutadiene	U	160						
Hexachlorocyclopentadiene	U	330						
Hexachloroethane	U	160						
Indeno(1,2,3-cd)pyrene	U	30						
Isophorone	U	160						
Naphthalene	U	30						
Nitrobenzene	U	160						
N-Nitrosodi-n-propylamine	U	160						
N-Nitrosodiphenylamine	U	160						
Pentachlorophenol	U	330						
Phenanthrene	U	30						
Phenol	U	160						
Pyrene	U	30						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1069</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>64.2</i>	<i>34-140</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>1335</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>80.1</i>	<i>12-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>1541</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>92.4</i>	<i>33-117</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>2067</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>124</i>	<i>25-137</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>1314</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>78.9</i>	<i>37-107</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>1465</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>87.9</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47499** Instrument ID **SVMS4** Method: **SW8270**

LCS Sample ID: SLCSS1-47499-47499				Units: µg/Kg			Analysis Date: 04/09/13 09:09 AM			
Client ID:		Run ID: SVMS4_130409A		SeqNo: 2267180		Prep Date: 04/08/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	522.3	160	666.7	0	78.3	50-110	0			
2,4,6-Trichlorophenol	511.7	160	666.7	0	76.7	45-110	0			
2,4-Dichlorophenol	495.3	160	666.7	0	74.3	45-110	0			
2,4-Dimethylphenol	360.3	330	666.7	0	54	30-105	0			
2,4-Dinitrophenol	465.7	660	666.7	0	69.8	15-130	0			J
2,4-Dinitrotoluene	536	160	666.7	0	80.4	50-115	0			
2,6-Dinitrotoluene	584.7	160	666.7	0	87.7	50-110	0			
2-Chloronaphthalene	547.7	80	666.7	0	82.1	45-105	0			
2-Chlorophenol	591	160	666.7	0	88.6	45-105	0			
2-Methylnaphthalene	530	80	666.7	0	79.5	45-105	0			
2-Methylphenol	557	160	666.7	0	83.5	40-105	0			
2-Nitroaniline	588.7	660	666.7	0	88.3	45-120	0			J
2-Nitrophenol	561.3	160	666.7	0	84.2	40-110	0			
3-Nitroaniline	370	660	666.7	0	55.5	25-150	0			J
4-Bromophenyl phenyl ether	533.3	160	666.7	0	80	45-115	0			
4-Chloro-3-methylphenol	585	160	666.7	0	87.7	45-115	0			
4-Chloroaniline	351	660	666.7	0	52.6	15-110	0			J
4-Chlorophenyl phenyl ether	483.7	160	666.7	0	72.5	45-110	0			
4-Methylphenol	572.7	160	666.7	0	85.9	40-105	0			
4-Nitroaniline	379	660	666.7	0	56.8	35-150	0			J
4-Nitrophenol	448.3	660	666.7	0	67.2	15-140	0			J
Acenaphthene	574.7	30	666.7	0	86.2	45-110	0			
Acenaphthylene	565.3	30	666.7	0	84.8	45-105	0			
Anthracene	594.7	30	666.7	0	89.2	55-105	0			
Benzo(a)anthracene	601.7	30	666.7	0	90.2	50-110	0			
Benzo(a)pyrene	600	30	666.7	0	90	50-110	0			
Benzo(b)fluoranthene	587	30	666.7	0	88	45-115	0			
Benzo(g,h,i)perylene	615.7	30	666.7	0	92.3	40-125	0			
Benzo(k)fluoranthene	641.7	30	666.7	0	96.2	45-115	0			
Bis(2-chloroethoxy)methane	575.3	160	666.7	0	86.3	45-110	0			
Bis(2-chloroethyl)ether	625.3	160	666.7	0	93.8	40-105	0			
Bis(2-chloroisopropyl)ether	639.3	160	666.7	0	95.9	20-115	0			
Bis(2-ethylhexyl)phthalate	684.7	330	666.7	0	103	45-125	0			
Butyl benzyl phthalate	717	160	666.7	0	108	50-125	0			
Carbazole	637.3	160	666.7	0	95.6	50-150	0			
Chrysene	652	30	666.7	0	97.8	55-110	0			
Dibenzo(a,h)anthracene	576.7	30	666.7	0	86.5	40-125	0			
Dibenzofuran	564.7	160	666.7	0	84.7	50-105	0			
Diethyl phthalate	572.3	330	666.7	0	85.8	50-115	0			
Dimethyl phthalate	595.3	330	666.7	0	89.3	50-110	0			
Di-n-butyl phthalate	611.3	330	666.7	0	91.7	55-110	0			
Di-n-octyl phthalate	641	160	666.7	0	96.1	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47499		Instrument ID SVMS4		Method: SW8270			
Fluoranthene	586.7	30	666.7	0	88	55-115	0
Fluorene	576.3	30	666.7	0	86.4	50-110	0
Hexachlorobenzene	538.7	160	666.7	0	80.8	45-120	0
Hexachlorobutadiene	485.3	160	666.7	0	72.8	40-115	0
Hexachlorocyclopentadiene	301	330	666.7	0	45.1	40-115	0
Hexachloroethane	527.3	160	666.7	0	79.1	35-110	0
Indeno(1,2,3-cd)pyrene	597.3	30	666.7	0	89.6	40-120	0
Isophorone	548	160	666.7	0	82.2	45-110	0
Naphthalene	540.3	30	666.7	0	81	40-105	0
Nitrobenzene	566	160	666.7	0	84.9	40-115	0
N-Nitrosodi-n-propylamine	585.7	160	666.7	0	87.8	40-115	0
N-Nitrosodiphenylamine	634	160	666.7	0	95.1	50-115	0
Pentachlorophenol	603.3	330	666.7	0	90.5	25-120	0
Phenanthrene	580.7	30	666.7	0	87.1	50-110	0
Phenol	581.3	160	666.7	0	87.2	40-100	0
Pyrene	652.7	30	666.7	0	97.9	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1180</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>70.8</i>	<i>34-140</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>1275</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>76.5</i>	<i>12-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>1446</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>86.8</i>	<i>33-117</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>1858</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>111</i>	<i>25-137</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>1258</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>75.5</i>	<i>37-107</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>1369</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>82.2</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47499** Instrument ID **SVMS4** Method: **SW8270**

MS Sample ID: 1304126-32A MS				Units: µg/Kg			Analysis Date: 04/09/13 12:30 PM			
Client ID:		Run ID: SVMS4_130409A		SeqNo: 2268814		Prep Date: 04/08/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1046	310	1309	0	79.8	50-110	0			
2,4,6-Trichlorophenol	1041	310	1309	0	79.5	45-110	0			
2,4-Dichlorophenol	1004	310	1309	0	76.7	45-110	0			
2,4-Dimethylphenol	1004	650	1309	0	76.7	30-105	0			
2,4-Dinitrophenol	976.8	1,300	1309	0	74.6	15-130	0			J
2,4-Dinitrotoluene	1049	310	1309	0	80.1	50-115	0			
2,6-Dinitrotoluene	1151	310	1309	0	87.9	50-110	0			
2-Chloronaphthalene	1126	160	1309	0	86	45-105	0			
2-Chlorophenol	1239	310	1309	0	94.6	45-105	0			
2-Methylnaphthalene	1078	160	1309	0	82.3	45-105	0			
2-Methylphenol	1167	310	1309	0	89.1	40-105	0			
2-Nitroaniline	1172	1,300	1309	0	89.5	45-120	0			J
2-Nitrophenol	1158	310	1309	0	88.4	40-110	0			
3-Nitroaniline	798.7	1,300	1309	0	61	25-110	0			J
4-Bromophenyl phenyl ether	1061	310	1309	0	81	45-115	0			
4-Chloro-3-methylphenol	1175	310	1309	0	89.7	45-115	0			
4-Chloroaniline	625.9	1,300	1309	0	47.8	15-110	0			J
4-Chlorophenyl phenyl ether	978.1	310	1309	0	74.7	45-110	0			
4-Methylphenol	1218	310	1309	0	93	40-105	0			
4-Nitroaniline	819	1,300	1309	0	62.5	35-150	0			J
4-Nitrophenol	874	1,300	1309	0	66.7	15-140	0			J
Acenaphthene	1167	59	1309	0	89.1	45-110	0			
Acenaphthylene	1150	59	1309	0	87.8	45-105	0			
Anthracene	1206	59	1309	0	92.1	55-105	0			
Benzo(a)anthracene	1185	59	1309	0	90.5	50-110	0			
Benzo(a)pyrene	1213	59	1309	0	92.6	50-110	0			
Benzo(b)fluoranthene	1139	59	1309	0	87	45-115	0			
Benzo(g,h,i)perylene	1190	59	1309	0	90.8	40-125	0			
Benzo(k)fluoranthene	1316	59	1309	0	100	45-115	0			
Bis(2-chloroethoxy)methane	1202	310	1309	0	91.8	45-110	0			
Bis(2-chloroethyl)ether	1302	310	1309	0	99.4	40-105	0			
Bis(2-chloroisopropyl)ether	1338	310	1309	0	102	20-115	0			
Bis(2-ethylhexyl)phthalate	1360	650	1309	0	104	45-125	0			
Butyl benzyl phthalate	1434	310	1309	0	109	50-125	0			
Carbazole	1290	310	1309	0	98.5	50-150	0			
Chrysene	1286	59	1309	0	98.2	55-110	0			
Dibenzo(a,h)anthracene	1137	59	1309	0	86.8	40-125	0			
Dibenzofuran	1118	310	1309	0	85.4	50-105	0			
Diethyl phthalate	1147	650	1309	0	87.6	50-115	0			
Dimethyl phthalate	1161	650	1309	0	88.7	50-110	0			
Di-n-butyl phthalate	1266	650	1309	0	96.6	55-110	0			
Di-n-octyl phthalate	1266	310	1309	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47499		Instrument ID SVMS4		Method: SW8270				
Compound	Area	Height	Area	Height	Area	Height	Area	
Fluoranthene	1204	59	1309	0	91.9	55-115	0	
Fluorene	1155	59	1309	0	88.2	50-110	0	
Hexachlorobenzene	1144	310	1309	0	87.3	45-120	0	
Hexachlorobutadiene	978.1	310	1309	0	74.7	40-115	0	
Hexachlorocyclopentadiene	472	650	1309	0	36	40-115	0	JS
Hexachloroethane	1055	310	1309	0	80.6	35-110	0	
Indeno(1,2,3-cd)pyrene	1177	59	1309	0	89.8	40-120	0	
Isophorone	1116	310	1309	0	85.2	45-110	0	
Naphthalene	1103	59	1309	0	84.2	40-105	0	
Nitrobenzene	1162	310	1309	0	88.7	40-115	0	
N-Nitrosodi-n-propylamine	1206	310	1309	0	92.1	40-115	0	
N-Nitrosodiphenylamine	1336	310	1309	0	102	50-115	0	
Pentachlorophenol	1262	650	1309	0	96.3	25-120	0	
Phenanthrene	1175	59	1309	0	89.7	50-110	0	
Phenol	1218	310	1309	0	93	40-100	0	
Pyrene	1309	59	1309	0	100	45-125	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>2391</i>	<i>0</i>	<i>3274</i>	<i>0</i>	<i>73</i>	<i>34-140</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>2573</i>	<i>0</i>	<i>3274</i>	<i>0</i>	<i>78.6</i>	<i>12-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>3018</i>	<i>0</i>	<i>3274</i>	<i>0</i>	<i>92.2</i>	<i>33-117</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>3701</i>	<i>0</i>	<i>3274</i>	<i>0</i>	<i>113</i>	<i>25-137</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>2563</i>	<i>0</i>	<i>3274</i>	<i>0</i>	<i>78.3</i>	<i>37-107</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>2874</i>	<i>0</i>	<i>3274</i>	<i>0</i>	<i>87.8</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47499** Instrument ID **SVMS4** Method: **SW8270**

MSD Sample ID: 1304126-32A MSD				Units: µg/Kg			Analysis Date: 04/09/13 01:02 PM			
Client ID:		Run ID: SVMS4_130409A		SeqNo: 2268816		Prep Date: 04/08/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1042	310	1276	0	81.6	50-110	1046	0.33	30	
2,4,6-Trichlorophenol	1039	310	1276	0	81.4	45-110	1041	0.198	30	
2,4-Dichlorophenol	975.1	310	1276	0	76.4	45-110	1004	2.95	30	
2,4-Dimethylphenol	926	630	1276	0	72.5	30-105	1004	8.12	30	
2,4-Dinitrophenol	960.4	1,300	1276	0	75.2	15-130	976.8	0	30	J
2,4-Dinitrotoluene	1021	310	1276	0	80	50-115	1049	2.68	30	
2,6-Dinitrotoluene	1140	310	1276	0	89.3	50-110	1151	0.923	30	
2-Chloronaphthalene	1086	150	1276	0	85.1	45-105	1126	3.61	30	
2-Chlorophenol	1191	310	1276	0	93.3	45-105	1239	3.89	30	
2-Methylnaphthalene	1045	150	1276	0	81.9	45-105	1078	3.05	30	
2-Methylphenol	1153	310	1276	0	90.3	40-105	1167	1.17	30	
2-Nitroaniline	1164	1,300	1276	0	91.2	45-120	1172	0	30	J
2-Nitrophenol	1115	310	1276	0	87.3	40-110	1158	3.75	30	
3-Nitroaniline	1047	1,300	1276	0	82	25-110	798.7	0	30	J
4-Bromophenyl phenyl ether	1056	310	1276	0	82.7	45-115	1061	0.483	30	
4-Chloro-3-methylphenol	1137	310	1276	0	89	45-115	1175	3.34	30	
4-Chloroaniline	666.2	1,300	1276	0	52.2	15-110	625.9	0	30	J
4-Chlorophenyl phenyl ether	963.6	310	1276	0	75.5	45-110	978.1	1.49	30	
4-Methylphenol	1187	310	1276	0	93	40-105	1218	2.61	30	
4-Nitroaniline	1093	1,300	1276	0	85.6	35-150	819	0	30	J
4-Nitrophenol	864.1	1,300	1276	0	67.7	15-140	874	0	30	J
Acenaphthene	1135	57	1276	0	88.9	45-110	1167	2.84	30	
Acenaphthylene	1127	57	1276	0	88.3	45-105	1150	2.05	30	
Anthracene	1203	57	1276	0	94.2	55-105	1206	0.252	30	
Benzo(a)anthracene	1184	57	1276	0	92.8	50-110	1185	0.0499	30	
Benzo(a)pyrene	1239	57	1276	0	97.1	50-110	1213	2.19	30	
Benzo(b)fluoranthene	1172	57	1276	0	91.8	45-115	1139	2.87	30	
Benzo(g,h,i)perylene	1235	57	1276	0	96.8	40-125	1190	3.78	30	
Benzo(k)fluoranthene	1375	57	1276	0	108	45-115	1316	4.36	30	
Bis(2-chloroethoxy)methane	1135	310	1276	0	88.9	45-110	1202	5.71	30	
Bis(2-chloroethyl)ether	1257	310	1276	0	98.4	40-105	1302	3.57	30	
Bis(2-chloroisopropyl)ether	1294	310	1276	0	101	20-115	1338	3.39	30	
Bis(2-ethylhexyl)phthalate	1318	630	1276	0	103	45-125	1360	3.14	30	
Butyl benzyl phthalate	1416	310	1276	0	111	50-125	1434	1.24	30	
Carbazole	1249	310	1276	0	97.8	50-150	1290	3.22	30	
Chrysene	1285	57	1276	0	101	55-110	1286	0.146	30	
Dibenzo(a,h)anthracene	1211	57	1276	0	94.9	40-125	1137	6.36	30	
Dibenzofuran	1090	310	1276	0	85.4	50-105	1118	2.56	30	
Diethyl phthalate	1140	630	1276	0	89.3	50-115	1147	0.638	30	
Dimethyl phthalate	1134	630	1276	0	88.8	50-110	1161	2.39	30	
Di-n-butyl phthalate	1251	630	1276	0	98	55-110	1266	1.17	30	
Di-n-octyl phthalate	1313	310	1276	0	103	40-130	1266	3.71	30	

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47499		Instrument ID SVMS4		Method: SW8270					
Fluoranthene	1210	57	1276	0	94.8	55-115	1204	0.493	30
Fluorene	1126	57	1276	0	88.2	50-110	1155	2.5	30
Hexachlorobenzene	1116	310	1276	0	87.4	45-120	1144	2.45	30
Hexachlorobutadiene	916.4	310	1276	0	71.8	40-115	978.1	6.52	30
Hexachlorocyclopentadiene	391.2	630	1276	0	30.6	40-115	472	0	30 JS
Hexachloroethane	978.3	310	1276	0	76.6	35-110	1055	7.58	30
Indeno(1,2,3-cd)pyrene	1217	57	1276	0	95.3	40-120	1177	3.38	30
Isophorone	1084	310	1276	0	84.9	45-110	1116	2.97	30
Naphthalene	1060	57	1276	0	83	40-105	1103	3.99	30
Nitrobenzene	1124	310	1276	0	88.1	40-115	1162	3.29	30
N-Nitrosodi-n-propylamine	1177	310	1276	0	92.2	40-115	1206	2.4	30
N-Nitrosodiphenylamine	1301	310	1276	0	102	50-115	1336	2.71	30
Pentachlorophenol	1277	630	1276	0	100	25-120	1262	1.21	30
Phenanthrene	1161	57	1276	0	91	50-110	1175	1.18	30
Phenol	1194	310	1276	0	93.5	40-100	1218	2.02	30
Pyrene	1279	57	1276	0	100	45-125	1309	2.36	30
<i>Surr: 2,4,6-Tribromophenol</i>	2385	0	3191	0	74.7	34-140	2391	0.259	40
<i>Surr: 2-Fluorobiphenyl</i>	2507	0	3191	0	78.6	12-100	2573	2.58	40
<i>Surr: 2-Fluorophenol</i>	2941	0	3191	0	92.2	33-117	3018	2.58	40
<i>Surr: 4-Terphenyl-d14</i>	3626	0	3191	0	114	25-137	3701	2.05	40
<i>Surr: Nitrobenzene-d5</i>	2483	0	3191	0	77.8	37-107	2563	3.15	40
<i>Surr: Phenol-d6</i>	2812	0	3191	0	88.1	40-106	2874	2.17	40

The following samples were analyzed in this batch:

1304246-11B	1304246-12B	1304246-13B
1304246-16B	1304246-17B	

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

Revision: 1

QC Report Page: 24 of 78

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47525** Instrument ID **SVMS6** Method: **SW8270**

MBLK		Sample ID: SBLKS1-47525-47525				Units: µg/Kg		Analysis Date: 04/10/13 04:06 PM		
Client ID:		Run ID: SVMS6_130410A				SeqNo: 2271609		Prep Date: 04/09/13		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	80								
2-Chlorophenol	U	160								
2-Methylnaphthalene	U	80								
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	30								
Acenaphthylene	U	30								
Acetophenone	U	330								
Anthracene	U	30								
Atrazine	U	330								
Benzaldehyde	U	330								
Benzo(a)anthracene	U	30								
Benzo(a)pyrene	U	30								
Benzo(b)fluoranthene	U	30								
Benzo(g,h,i)perylene	U	30								
Benzo(k)fluoranthene	U	30								
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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47525		Instrument ID SVMS6		Method: SW8270				
Chrysene	U	30						
Dibenzo(a,h)anthracene	U	30						
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	30						
Fluorene	U	30						
Hexachlorobenzene	U	160						
Hexachlorobutadiene	U	160						
Hexachlorocyclopentadiene	U	330						
Hexachloroethane	U	160						
Indeno(1,2,3-cd)pyrene	U	30						
Isophorone	U	160						
Naphthalene	U	30						
Nitrobenzene	U	160						
N-Nitrosodi-n-propylamine	U	160						
N-Nitrosodiphenylamine	U	160						
Pentachlorophenol	U	330						
Phenanthrene	U	30						
Phenol	U	160						
Pyrene	U	30						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1096</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>65.7</i>	<i>34-140</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>1216</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>73</i>	<i>12-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>1355</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>81.3</i>	<i>33-117</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>1702</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>102</i>	<i>25-137</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>1373</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>82.4</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.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47525** Instrument ID **SVMS6** Method: **SW8270**

LCS Sample ID: SLCSS1-47525-47525				Units: µg/Kg			Analysis Date: 04/10/13 04:31 PM			
Client ID:		Run ID: SVMS6_130410A		SeqNo: 2271612		Prep Date: 04/09/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	536	160	666.7	0	80.4	50-110	0			
2,4,6-Trichlorophenol	517.3	160	666.7	0	77.6	45-110	0			
2,4-Dichlorophenol	571	160	666.7	0	85.6	45-110	0			
2,4-Dimethylphenol	376.7	330	666.7	0	56.5	30-105	0			
2,4-Dinitrophenol	560.3	660	666.7	0	84	15-130	0			J
2,4-Dinitrotoluene	598.3	160	666.7	0	89.7	50-115	0			
2,6-Dinitrotoluene	575.7	160	666.7	0	86.3	50-110	0			
2-Chloronaphthalene	572	80	666.7	0	85.8	45-105	0			
2-Chlorophenol	591.3	160	666.7	0	88.7	45-105	0			
2-Methylnaphthalene	594	80	666.7	0	89.1	45-105	0			
2-Methylphenol	561.3	160	666.7	0	84.2	40-105	0			
2-Nitroaniline	643.3	660	666.7	0	96.5	45-120	0			J
2-Nitrophenol	584.3	160	666.7	0	87.6	40-110	0			
3-Nitroaniline	604	660	666.7	0	90.6	25-150	0			J
4-Bromophenyl phenyl ether	549.7	160	666.7	0	82.4	45-115	0			
4-Chloro-3-methylphenol	610	160	666.7	0	91.5	45-115	0			
4-Chloroaniline	326	660	666.7	0	48.9	15-110	0			J
4-Chlorophenyl phenyl ether	622.7	160	666.7	0	93.4	45-110	0			
4-Methylphenol	594	160	666.7	0	89.1	40-105	0			
4-Nitroaniline	476	660	666.7	0	71.4	35-150	0			J
4-Nitrophenol	600	660	666.7	0	90	15-140	0			J
Acenaphthene	560.7	30	666.7	0	84.1	45-110	0			
Acenaphthylene	574	30	666.7	0	86.1	45-105	0			
Anthracene	583.3	30	666.7	0	87.5	55-105	0			
Benzo(a)anthracene	597	30	666.7	0	89.5	50-110	0			
Benzo(a)pyrene	603.7	30	666.7	0	90.5	50-110	0			
Benzo(b)fluoranthene	619.3	30	666.7	0	92.9	45-115	0			
Benzo(g,h,i)perylene	603	30	666.7	0	90.4	40-125	0			
Benzo(k)fluoranthene	633.3	30	666.7	0	95	45-115	0			
Bis(2-chloroethoxy)methane	589.3	160	666.7	0	88.4	45-110	0			
Bis(2-chloroethyl)ether	578.3	160	666.7	0	86.7	40-105	0			
Bis(2-chloroisopropyl)ether	691.3	160	666.7	0	104	20-115	0			
Bis(2-ethylhexyl)phthalate	680.3	330	666.7	0	102	45-125	0			
Butyl benzyl phthalate	669.3	160	666.7	0	100	50-125	0			
Carbazole	907.7	160	666.7	0	136	50-150	0			
Chrysene	621.3	30	666.7	0	93.2	55-110	0			
Dibenzo(a,h)anthracene	654.7	30	666.7	0	98.2	40-125	0			
Dibenzofuran	578.7	160	666.7	0	86.8	50-105	0			
Diethyl phthalate	600.3	330	666.7	0	90	50-115	0			
Dimethyl phthalate	567.3	330	666.7	0	85.1	50-110	0			
Di-n-butyl phthalate	647.3	330	666.7	0	97.1	55-110	0			
Di-n-octyl phthalate	711	160	666.7	0	107	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47525		Instrument ID SVMS6		Method: SW8270			
Fluoranthene	597.3	30	666.7	0	89.6	55-115	0
Fluorene	610.7	30	666.7	0	91.6	50-110	0
Hexachlorobenzene	564.3	160	666.7	0	84.6	45-120	0
Hexachlorobutadiene	540.7	160	666.7	0	81.1	40-115	0
Hexachlorocyclopentadiene	340	330	666.7	0	51	40-115	0
Hexachloroethane	569.7	160	666.7	0	85.4	35-110	0
Indeno(1,2,3-cd)pyrene	649.3	30	666.7	0	97.4	40-120	0
Isophorone	587	160	666.7	0	88	45-110	0
Naphthalene	568	30	666.7	0	85.2	40-105	0
Nitrobenzene	579.7	160	666.7	0	86.9	40-115	0
N-Nitrosodi-n-propylamine	655.7	160	666.7	0	98.3	40-115	0
N-Nitrosodiphenylamine	606.3	160	666.7	0	90.9	50-115	0
Pentachlorophenol	520.3	330	666.7	0	78	25-120	0
Phenanthrene	564	30	666.7	0	84.6	50-110	0
Phenol	592	160	666.7	0	88.8	40-100	0
Pyrene	600.3	30	666.7	0	90	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>1368</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>82.1</i>	<i>34-140</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>1284</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>77</i>	<i>12-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>1541</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>92.4</i>	<i>33-117</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>1671</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>1448</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>86.9</i>	<i>37-107</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>1461</i>	<i>0</i>	<i>1667</i>	<i>0</i>	<i>87.7</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47525** Instrument ID **SVMS6** Method: **SW8270**

MS Sample ID: 1304230-01B MS				Units: µg/Kg			Analysis Date: 04/10/13 06:23 PM			
Client ID:		Run ID: SVMS6_130410A		SeqNo: 2271615		Prep Date: 04/09/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	1035	310	1279	0	80.9	50-110	0			
2,4,6-Trichlorophenol	989.3	310	1279	0	77.3	45-110	0			
2,4-Dichlorophenol	1094	310	1279	0	85.5	45-110	0			
2,4-Dimethylphenol	805.8	630	1279	0	63	30-105	0			
2,4-Dinitrophenol	1113	1,300	1279	0	87	15-130	0			J
2,4-Dinitrotoluene	1135	310	1279	0	88.7	50-115	0			
2,6-Dinitrotoluene	1078	310	1279	0	84.2	50-110	0			
2-Chloronaphthalene	1087	150	1279	0	85	45-105	0			
2-Chlorophenol	1129	310	1279	0	88.3	45-105	0			
2-Methylnaphthalene	1118	150	1279	0	87.4	45-105	0			
2-Methylphenol	1095	310	1279	0	85.6	40-105	0			
2-Nitroaniline	1233	1,300	1279	0	96.4	45-120	0			J
2-Nitrophenol	1129	310	1279	0	88.3	40-110	0			
3-Nitroaniline	1157	1,300	1279	0	90.4	25-110	0			J
4-Bromophenyl phenyl ether	1046	310	1279	0	81.7	45-115	0			
4-Chloro-3-methylphenol	1142	310	1279	0	89.3	45-115	0			
4-Chloroaniline	525	1,300	1279	0	41	15-110	0			J
4-Chlorophenyl phenyl ether	1181	310	1279	0	92.3	45-110	0			
4-Methylphenol	1137	310	1279	0	88.9	40-105	0			
4-Nitroaniline	663.2	1,300	1279	0	51.8	35-150	0			J
4-Nitrophenol	1158	1,300	1279	0	90.5	15-140	0			J
Acenaphthene	1059	58	1279	0	82.8	45-110	0			
Acenaphthylene	1085	58	1279	0	84.8	45-105	0			
Anthracene	1120	58	1279	0	87.6	55-105	0			
Benzo(a)anthracene	1160	58	1279	0	90.7	50-110	0			
Benzo(a)pyrene	1188	58	1279	0	92.9	50-110	0			
Benzo(b)fluoranthene	1205	58	1279	0	94.2	45-115	0			
Benzo(g,h,i)perylene	1243	58	1279	0	97.2	40-125	0			
Benzo(k)fluoranthene	1247	58	1279	0	97.5	45-115	0			
Bis(2-chloroethoxy)methane	1125	310	1279	0	87.9	45-110	0			
Bis(2-chloroethyl)ether	1101	310	1279	0	86.1	40-105	0			
Bis(2-chloroisopropyl)ether	1327	310	1279	0	104	20-115	0			
Bis(2-ethylhexyl)phthalate	1335	630	1279	0	104	45-125	0			
Butyl benzyl phthalate	1288	310	1279	0	101	50-125	0			
Carbazole	1688	310	1279	0	132	50-150	0			
Chrysene	1200	58	1279	0	93.8	55-110	0			
Dibenzo(a,h)anthracene	1306	58	1279	0	102	40-125	0			
Dibenzofuran	1099	310	1279	0	85.9	50-105	0			
Diethyl phthalate	1136	630	1279	0	88.8	50-115	0			
Dimethyl phthalate	1064	630	1279	0	83.2	50-110	0			
Di-n-butyl phthalate	1276	630	1279	0	99.8	55-110	0			
Di-n-octyl phthalate	1396	310	1279	0	109	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47525		Instrument ID SVMS6		Method: SW8270			
Fluoranthene	1179	58	1279	0	92.1	55-115	0
Fluorene	1167	58	1279	0	91.2	50-110	0
Hexachlorobenzene	1069	310	1279	0	83.5	45-120	0
Hexachlorobutadiene	1021	310	1279	0	79.8	40-115	0
Hexachlorocyclopentadiene	647.8	630	1279	0	50.6	40-115	0
Hexachloroethane	1084	310	1279	0	84.7	35-110	0
Indeno(1,2,3-cd)pyrene	1286	58	1279	0	101	40-120	0
Isophorone	1123	310	1279	0	87.8	45-110	0
Naphthalene	1080	58	1279	0	84.4	40-105	0
Nitrobenzene	1104	310	1279	0	86.3	40-115	0
N-Nitrosodi-n-propylamine	1243	310	1279	0	97.2	40-115	0
N-Nitrosodiphenylamine	1179	310	1279	0	92.2	50-115	0
Pentachlorophenol	995.1	630	1279	0	77.8	25-120	0
Phenanthrene	1092	58	1279	0	85.4	50-110	0
Phenol	1131	310	1279	0	88.4	40-100	0
Pyrene	1142	58	1279	0	89.2	45-125	0
<i>Surr: 2,4,6-Tribromophenol</i>	2699	0	3198	0	84.4	34-140	0
<i>Surr: 2-Fluorobiphenyl</i>	2502	0	3198	0	78.2	12-100	0
<i>Surr: 2-Fluorophenol</i>	3021	0	3198	0	94.5	33-117	0
<i>Surr: 4-Terphenyl-d14</i>	3219	0	3198	0	101	25-137	0
<i>Surr: Nitrobenzene-d5</i>	2807	0	3198	0	87.8	37-107	0
<i>Surr: Phenol-d6</i>	2804	0	3198	0	87.7	40-106	0

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47525** Instrument ID **SVMS6** Method: **SW8270**

MSD Sample ID: 1304230-01B MSD				Units: µg/Kg			Analysis Date: 04/10/13 06:48 PM			
Client ID:		Run ID: SVMS6_130410A		SeqNo: 2271618		Prep Date: 04/09/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	993.8	310	1276	0	77.9	50-110	1035	4.03	30	
2,4,6-Trichlorophenol	933.2	310	1276	0	73.1	45-110	989.3	5.84	30	
2,4-Dichlorophenol	1014	310	1276	0	79.5	45-110	1094	7.53	30	
2,4-Dimethylphenol	590.7	630	1276	0	46.3	30-105	805.8	0	30	J
2,4-Dinitrophenol	1153	1,300	1276	0	90.4	15-130	1113	0	30	J
2,4-Dinitrotoluene	1113	310	1276	0	87.2	50-115	1135	1.96	30	
2,6-Dinitrotoluene	1043	310	1276	0	81.7	50-110	1078	3.27	30	
2-Chloronaphthalene	995.1	150	1276	0	78	45-105	1087	8.84	30	
2-Chlorophenol	1048	310	1276	0	82.1	45-105	1129	7.47	30	
2-Methylnaphthalene	1037	150	1276	0	81.3	45-105	1118	7.49	30	
2-Methylphenol	1000	310	1276	0	78.4	40-105	1095	9.09	30	
2-Nitroaniline	1200	1,300	1276	0	94	45-120	1233	0	30	J
2-Nitrophenol	1048	310	1276	0	82.1	40-110	1129	7.47	30	
3-Nitroaniline	1105	1,300	1276	0	86.6	25-110	1157	0	30	J
4-Bromophenyl phenyl ether	997.6	310	1276	0	78.2	45-115	1046	4.69	30	
4-Chloro-3-methylphenol	1093	310	1276	0	85.6	45-115	1142	4.43	30	
4-Chloroaniline	542.8	1,300	1276	0	42.5	15-110	525	0	30	J
4-Chlorophenyl phenyl ether	1121	310	1276	0	87.8	45-110	1181	5.2	30	
4-Methylphenol	1051	310	1276	0	82.4	40-105	1137	7.84	30	
4-Nitroaniline	834.3	1,300	1276	0	65.4	35-150	663.2	0	30	J
4-Nitrophenol	1148	1,300	1276	0	89.9	15-140	1158	0	30	J
Acenaphthene	994.5	57	1276	0	77.9	45-110	1059	6.29	30	
Acenaphthylene	1014	57	1276	0	79.5	45-105	1085	6.77	30	
Anthracene	1079	57	1276	0	84.5	55-105	1120	3.8	30	
Benzo(a)anthracene	1146	57	1276	0	89.8	50-110	1160	1.2	30	
Benzo(a)pyrene	1170	57	1276	0	91.7	50-110	1188	1.56	30	
Benzo(b)fluoranthene	1213	57	1276	0	95	45-115	1205	0.59	30	
Benzo(g,h,i)perylene	1200	57	1276	0	94.1	40-125	1243	3.5	30	
Benzo(k)fluoranthene	1202	57	1276	0	94.2	45-115	1247	3.7	30	
Bis(2-chloroethoxy)methane	1045	310	1276	0	81.9	45-110	1125	7.38	30	
Bis(2-chloroethyl)ether	1016	310	1276	0	79.6	40-105	1101	8.1	30	
Bis(2-chloroisopropyl)ether	1237	310	1276	0	96.9	20-115	1327	7.03	30	
Bis(2-ethylhexyl)phthalate	1317	630	1276	0	103	45-125	1335	1.36	30	
Butyl benzyl phthalate	1280	310	1276	0	100	50-125	1288	0.604	30	
Carbazole	1780	310	1276	0	139	50-150	1688	5.31	30	
Chrysene	1172	57	1276	0	91.9	55-110	1200	2.36	30	
Dibenzo(a,h)anthracene	1292	57	1276	0	101	40-125	1306	1.04	30	
Dibenzofuran	1038	310	1276	0	81.4	50-105	1099	5.63	30	
Diethyl phthalate	1108	630	1276	0	86.8	50-115	1136	2.53	30	
Dimethyl phthalate	1028	630	1276	0	80.6	50-110	1064	3.43	30	
Di-n-butyl phthalate	1258	630	1276	0	98.6	55-110	1276	1.47	30	
Di-n-octyl phthalate	1382	310	1276	0	108	40-130	1396	0.991	30	

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47525		Instrument ID SVMS6		Method: SW8270					
Fluoranthene	1162	57	1276	0	91.1	55-115	1179	1.4	30
Fluorene	1110	57	1276	0	87	50-110	1167	5.02	30
Hexachlorobenzene	1017	310	1276	0	79.7	45-120	1069	4.97	30
Hexachlorobutadiene	943.4	310	1276	0	73.9	40-115	1021	7.86	30
Hexachlorocyclopentadiene	567.7	630	1276	0	44.5	40-115	647.8	0	30 J
Hexachloroethane	1017	310	1276	0	79.7	35-110	1084	6.4	30
Indeno(1,2,3-cd)pyrene	1279	57	1276	0	100	40-120	1286	0.554	30
Isophorone	1050	310	1276	0	82.3	45-110	1123	6.72	30
Naphthalene	996.4	57	1276	0	78.1	40-105	1080	8.07	30
Nitrobenzene	1027	310	1276	0	80.5	40-115	1104	7.27	30
N-Nitrosodi-n-propylamine	1167	310	1276	0	91.5	40-115	1243	6.3	30
N-Nitrosodiphenylamine	1136	310	1276	0	89	50-115	1179	3.73	30
Pentachlorophenol	1031	630	1276	0	80.8	25-120	995.1	3.53	30
Phenanthrene	1057	57	1276	0	82.8	50-110	1092	3.29	30
Phenol	1063	310	1276	0	83.3	40-100	1131	6.19	30
Pyrene	1116	57	1276	0	87.5	45-125	1142	2.24	30
<i>Surr: 2,4,6-Tribromophenol</i>	<i>2572</i>	<i>0</i>	<i>3189</i>	<i>0</i>	<i>80.6</i>	<i>34-140</i>	<i>2699</i>	<i>4.81</i>	<i>40</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>2295</i>	<i>0</i>	<i>3189</i>	<i>0</i>	<i>72</i>	<i>12-100</i>	<i>2502</i>	<i>8.62</i>	<i>40</i>
<i>Surr: 2-Fluorophenol</i>	<i>2655</i>	<i>0</i>	<i>3189</i>	<i>0</i>	<i>83.2</i>	<i>33-117</i>	<i>3021</i>	<i>12.9</i>	<i>40</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>3125</i>	<i>0</i>	<i>3189</i>	<i>0</i>	<i>98</i>	<i>25-137</i>	<i>3219</i>	<i>2.97</i>	<i>40</i>
<i>Surr: Nitrobenzene-d5</i>	<i>2567</i>	<i>0</i>	<i>3189</i>	<i>0</i>	<i>80.5</i>	<i>37-107</i>	<i>2807</i>	<i>8.93</i>	<i>40</i>
<i>Surr: Phenol-d6</i>	<i>2579</i>	<i>0</i>	<i>3189</i>	<i>0</i>	<i>80.9</i>	<i>40-106</i>	<i>2804</i>	<i>8.37</i>	<i>40</i>

The following samples were analyzed in this batch:

1304246-05B
1304246-10B

1304246-06B

1304246-09B

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

Revision: 1

QC Report Page: 32 of 78

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47460** Instrument ID **VMS8** Method: **SW8260**

MBLK		Sample ID: MBLK-47460-47460				Units: µg/Kg		Analysis Date: 04/05/13 04:53 PM		
Client ID:		Run ID: VMS8_130405A				SeqNo: 2263274		Prep Date: 04/05/13		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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47460	Instrument ID VMS8	Method: SW8260						
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>938</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>93.8</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>948</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>94.8</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>942.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>94.2</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>952</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.2</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47460** Instrument ID **VMS8** Method: **SW8260**

MBLK		Sample ID: MBLK-47460-47460				Units: µg/Kg		Analysis Date: 04/06/13 05:12 AM		
Client ID:		Run ID: VMS8_130405B				SeqNo: 2263492		Prep Date: 04/05/13		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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47460	Instrument ID VMS8	Method: SW8260						
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>	962	0	1000	0	96.2	70-130	0	
<i>Surr: 4-Bromofluorobenzene</i>	962.5	0	1000	0	96.2	70-130	0	
<i>Surr: Dibromofluoromethane</i>	961.5	0	1000	0	96.2	70-130	0	
<i>Surr: Toluene-d8</i>	948	0	1000	0	94.8	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47460** Instrument ID **VMS8** Method: **SW8260**

MBLK		Sample ID: MBLK-47460-47460				Units: µg/Kg		Analysis Date: 04/11/13 01:20 AM		
Client ID:		Run ID: VMS5_130410B				SeqNo: 2271574		Prep Date: 04/05/13		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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47460	Instrument ID VMS8	Method: SW8260						
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>1006</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>956</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.6</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>955</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.5</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>984.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.4</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47460** Instrument ID **VMS8** Method: **SW8260**

LCS Sample ID: LCS-47460-47460				Units: µg/Kg			Analysis Date: 04/05/13 03:41 PM			
Client ID:		Run ID: VMS8_130405A		SeqNo: 2263273		Prep Date: 04/05/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1038	30	1000	0	104	70-135	0			
1,1,2,2-Tetrachloroethane	1034	30	1000	0	103	55-130	0			
1,1,2-Trichloroethane	993	30	1000	0	99.3	60-125	0			
1,1-Dichloroethane	993	30	1000	0	99.3	75-125	0			
1,1-Dichloroethene	1021	30	1000	0	102	65-135	0			
1,2,4-Trichlorobenzene	1107	30	1000	0	111	65-130	0			
1,2-Dibromo-3-chloropropane	1028	30	1000	0	103	40-135	0			
1,2-Dibromoethane	1018	30	1000	0	102	70-125	0			
1,2-Dichlorobenzene	1020	30	1000	0	102	75-120	0			
1,2-Dichloroethane	977	30	1000	0	97.7	70-135	0			
1,2-Dichloropropane	1000	30	1000	0	100	70-120	0			
1,3-Dichlorobenzene	1007	30	1000	0	101	70-125	0			
1,4-Dichlorobenzene	1004	30	1000	0	100	70-125	0			
2-Butanone	1108	200	1000	0	111	30-160	0			
2-Hexanone	1045	30	1000	0	104	45-145	0			
4-Methyl-2-pentanone	1346	30	1000	0	135	45-145	0			
Acetone	1044	100	1000	0	104	20-160	0			
Benzene	995	30	1000	0	99.5	75-125	0			
Bromodichloromethane	1024	30	1000	0	102	70-130	0			
Bromoform	1034	30	1000	0	103	55-135	0			
Bromomethane	1128	75	1000	0	113	30-160	0			
Carbon disulfide	1121	30	1000	0	112	45-160	0			
Carbon tetrachloride	1075	30	1000	0	108	65-135	0			
Chlorobenzene	1014	30	1000	0	101	75-125	0			
Chloroethane	1000	100	1000	0	100	40-155	0			
Chloroform	965	30	1000	0	96.5	70-125	0			
Chloromethane	1073	100	1000	0	107	50-130	0			
cis-1,2-Dichloroethene	1026	30	1000	0	103	65-125	0			
cis-1,3-Dichloropropene	1052	30	1000	0	105	70-125	0			
Dibromochloromethane	1010	30	1000	0	101	65-135	0			
Dichlorodifluoromethane	1011	30	1000	0	101	35-135	0			
Ethylbenzene	1034	30	1000	0	103	75-125	0			
Isopropylbenzene	1071	30	1000	0	107	75-130	0			
Methyl tert-butyl ether	1097	30	1000	0	110	75-125	0			
Methylene chloride	951.5	30	1000	0	95.2	55-145	0			
Styrene	1064	30	1000	0	106	75-125	0			
Tetrachloroethene	1065	30	1000	0	106	64-140	0			
Toluene	984	30	1000	0	98.4	70-125	0			
trans-1,2-Dichloroethene	1020	30	1000	0	102	65-135	0			
trans-1,3-Dichloropropene	1038	30	1000	0	104	65-125	0			
Trichloroethene	1001	30	1000	0	100	75-125	0			
Trichlorofluoromethane	1089	30	1000	0	109	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47460	Instrument ID VMS8		Method: SW8260				
Vinyl chloride	1216	30	1000	0	122	60-125	0
Xylenes, Total	3075	90	3000	0	102	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>938</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>93.8</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>977</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97.7</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>984.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.4</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>970</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47460** Instrument ID **VMS8** Method: **SW8260**

LCS Sample ID: LCS-47460-47460				Units: µg/Kg			Analysis Date: 04/06/13 04:01 AM			
Client ID:		Run ID: VMS8_130405B		SeqNo: 2263491		Prep Date: 04/05/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	979.5	30	1000	0	98	70-135	0			
1,1,2,2-Tetrachloroethane	1063	30	1000	0	106	55-130	0			
1,1,2-Trichloroethane	974.5	30	1000	0	97.4	60-125	0			
1,1-Dichloroethane	928	30	1000	0	92.8	75-125	0			
1,1-Dichloroethene	936	30	1000	0	93.6	65-135	0			
1,2,4-Trichlorobenzene	1023	30	1000	0	102	65-130	0			
1,2-Dibromo-3-chloropropane	1132	30	1000	0	113	40-135	0			
1,2-Dibromoethane	1022	30	1000	0	102	70-125	0			
1,2-Dichlorobenzene	981	30	1000	0	98.1	75-120	0			
1,2-Dichloroethane	954.5	30	1000	0	95.4	70-135	0			
1,2-Dichloropropane	954.5	30	1000	0	95.4	70-120	0			
1,3-Dichlorobenzene	942.5	30	1000	0	94.2	70-125	0			
1,4-Dichlorobenzene	959.5	30	1000	0	96	70-125	0			
2-Butanone	1094	200	1000	0	109	30-160	0			
2-Hexanone	1144	30	1000	0	114	45-145	0			
4-Methyl-2-pentanone	1473	30	1000	0	147	45-145	0			S
Acetone	1078	100	1000	0	108	20-160	0			
Benzene	934.5	30	1000	0	93.4	75-125	0			
Bromodichloromethane	976	30	1000	0	97.6	70-130	0			
Bromoform	1014	30	1000	0	101	55-135	0			
Bromomethane	1085	75	1000	0	108	30-160	0			
Carbon disulfide	1007	30	1000	0	101	45-160	0			
Carbon tetrachloride	1010	30	1000	0	101	65-135	0			
Chlorobenzene	950.5	30	1000	0	95	75-125	0			
Chloroethane	909.5	100	1000	0	91	40-155	0			
Chloroform	900.5	30	1000	0	90	70-125	0			
Chloromethane	984.5	100	1000	0	98.4	50-130	0			
cis-1,2-Dichloroethene	933	30	1000	0	93.3	65-125	0			
cis-1,3-Dichloropropene	973.5	30	1000	0	97.4	70-125	0			
Dibromochloromethane	974	30	1000	0	97.4	65-135	0			
Dichlorodifluoromethane	888.5	30	1000	0	88.8	35-135	0			
Ethylbenzene	959	30	1000	0	95.9	75-125	0			
Isopropylbenzene	984.5	30	1000	0	98.4	75-130	0			
Methyl tert-butyl ether	1078	30	1000	0	108	75-125	0			
Methylene chloride	875	30	1000	0	87.5	55-145	0			
Styrene	1012	30	1000	0	101	75-125	0			
Tetrachloroethene	967	30	1000	0	96.7	64-140	0			
Toluene	908	30	1000	0	90.8	70-125	0			
trans-1,2-Dichloroethene	945.5	30	1000	0	94.6	65-135	0			
trans-1,3-Dichloropropene	949.5	30	1000	0	95	65-125	0			
Trichloroethene	934.5	30	1000	0	93.4	75-125	0			
Trichlorofluoromethane	986	30	1000	0	98.6	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47460	Instrument ID VMS8	Method: SW8260					
Vinyl chloride	1082	30	1000	0	108	60-125	0
Xylenes, Total	2869	90	3000	0	95.6	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>953.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.4</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>975.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97.6</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>985</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.5</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>961.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>96.2</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47460** Instrument ID **VMS8** Method: **SW8260**

LCS Sample ID: LCS-47460-47460				Units: µg/Kg			Analysis Date: 04/11/13 12:12 PM			
Client ID:		Run ID: VMS5_130410B		SeqNo: 2271575		Prep Date: 04/05/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	972.5	30	1000	0	97.2	70-135	0			
1,1,2,2-Tetrachloroethane	1032	30	1000	0	103	55-130	0			
1,1,2-Trichloroethane	1002	30	1000	0	100	60-125	0			
1,1-Dichloroethane	937.5	30	1000	0	93.8	75-125	0			
1,1-Dichloroethene	937.5	30	1000	0	93.8	65-135	0			
1,2,4-Trichlorobenzene	970.5	30	1000	0	97	65-130	0			
1,2-Dibromo-3-chloropropane	950	30	1000	0	95	40-135	0			
1,2-Dibromoethane	1009	30	1000	0	101	70-125	0			
1,2-Dichlorobenzene	942.5	30	1000	0	94.2	75-120	0			
1,2-Dichloroethane	957.5	30	1000	0	95.8	70-135	0			
1,2-Dichloropropane	950	30	1000	0	95	70-120	0			
1,3-Dichlorobenzene	933.5	30	1000	0	93.4	70-125	0			
1,4-Dichlorobenzene	955.5	30	1000	0	95.6	70-125	0			
2-Butanone	1025	200	1000	0	102	30-160	0			
2-Hexanone	1005	30	1000	0	100	45-145	0			
4-Methyl-2-pentanone	1454	30	1000	0	145	45-145	0			S
Acetone	948.5	100	1000	0	94.8	20-160	0			
Benzene	990.5	30	1000	0	99	75-125	0			
Bromodichloromethane	998	30	1000	0	99.8	70-130	0			
Bromoform	993	30	1000	0	99.3	55-135	0			
Bromomethane	1128	75	1000	0	113	30-160	0			
Carbon disulfide	923	30	1000	0	92.3	45-160	0			
Carbon tetrachloride	956.5	30	1000	0	95.6	65-135	0			
Chlorobenzene	1002	30	1000	0	100	75-125	0			
Chloroethane	877	100	1000	0	87.7	40-155	0			
Chloroform	881	30	1000	0	88.1	70-125	0			
Chloromethane	912	100	1000	0	91.2	50-130	0			
cis-1,2-Dichloroethene	891	30	1000	0	89.1	65-125	0			
cis-1,3-Dichloropropene	951.5	30	1000	0	95.2	70-125	0			
Dibromochloromethane	955	30	1000	0	95.5	65-135	0			
Dichlorodifluoromethane	901.5	30	1000	0	90.2	35-135	0			
Ethylbenzene	983.5	30	1000	0	98.4	75-125	0			
Isopropylbenzene	970.5	30	1000	0	97	75-130	0			
Methyl tert-butyl ether	994	30	1000	0	99.4	75-125	0			
Methylene chloride	988	30	1000	0	98.8	55-145	0			
Styrene	975	30	1000	0	97.5	75-125	0			
Tetrachloroethene	999.5	30	1000	0	100	64-140	0			
Toluene	1000	30	1000	0	100	70-125	0			
trans-1,2-Dichloroethene	930.5	30	1000	0	93	65-135	0			
trans-1,3-Dichloropropene	967	30	1000	0	96.7	65-125	0			
Trichloroethene	988	30	1000	0	98.8	75-125	0			
Trichlorofluoromethane	908.5	30	1000	0	90.8	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47460	Instrument ID VMS8	Method: SW8260					
Vinyl chloride	973	30	1000	0	97.3	60-125	0
Xylenes, Total	2860	90	3000	0	95.3	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</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>
<i>Surr: 4-Bromofluorobenzene</i>	<i>982</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.2</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>977</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97.7</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>988</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.8</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47460** Instrument ID **VMS8** Method: **SW8260**

MS Sample ID: 1304246-01A MS				Units: µg/Kg			Analysis Date: 04/06/13 12:45 PM			
Client ID: S-R2330009-032513-MJF-001			Run ID: VMS8_130405B		SeqNo: 2263503		Prep Date: 04/05/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	955.5	30	1000	0	95.6	70-135	0			
1,1,2,2-Tetrachloroethane	1038	30	1000	0	104	55-130	0			
1,1,2-Trichloroethane	957.5	30	1000	0	95.8	60-125	0			
1,1-Dichloroethane	936.5	30	1000	0	93.6	75-125	0			
1,1-Dichloroethene	933	30	1000	0	93.3	65-135	0			
1,2,4-Trichlorobenzene	928	30	1000	0	92.8	65-130	0			
1,2-Dibromo-3-chloropropane	980	30	1000	0	98	40-135	0			
1,2-Dibromoethane	985.5	30	1000	0	98.6	70-125	0			
1,2-Dichlorobenzene	964.5	30	1000	0	96.4	75-120	0			
1,2-Dichloroethane	967	30	1000	0	96.7	70-135	0			
1,2-Dichloropropane	954.5	30	1000	0	95.4	70-120	0			
1,3-Dichlorobenzene	929.5	30	1000	0	93	70-125	0			
1,4-Dichlorobenzene	942.5	30	1000	0	94.2	70-125	0			
2-Butanone	1015	200	1000	0	102	30-160	0			
2-Hexanone	1056	30	1000	0	106	45-145	0			
4-Methyl-2-pentanone	1348	30	1000	0	135	45-145	0			
Acetone	884	100	1000	0	88.4	20-160	0			
Benzene	935	30	1000	0	93.5	75-125	0			
Bromodichloromethane	936.5	30	1000	0	93.6	70-130	0			
Bromoform	932	30	1000	0	93.2	55-135	0			
Bromomethane	965	75	1000	0	96.5	30-160	0			
Carbon disulfide	896.5	30	1000	0	89.6	45-160	0			
Carbon tetrachloride	955.5	30	1000	0	95.6	65-135	0			
Chlorobenzene	948	30	1000	0	94.8	75-125	0			
Chloroethane	431.5	100	1000	0	43.2	40-155	0			
Chloroform	904.5	30	1000	0	90.4	70-125	0			
Chloromethane	988.5	100	1000	0	98.8	50-130	0			
cis-1,2-Dichloroethene	929	30	1000	0	92.9	65-125	0			
cis-1,3-Dichloropropene	925	30	1000	0	92.5	70-125	0			
Dibromochloromethane	899.5	30	1000	0	90	65-135	0			
Dichlorodifluoromethane	908.5	30	1000	0	90.8	35-135	0			
Ethylbenzene	964.5	30	1000	0	96.4	75-125	0			
Isopropylbenzene	989	30	1000	0	98.9	75-130	0			
Methyl tert-butyl ether	1051	30	1000	0	105	75-125	0			
Methylene chloride	878	30	1000	0	87.8	55-145	0			
Styrene	1003	30	1000	0	100	75-125	0			
Tetrachloroethene	940	30	1000	0	94	64-140	0			
Toluene	916.5	30	1000	0	91.6	70-125	0			
trans-1,2-Dichloroethene	933.5	30	1000	0	93.4	65-135	0			
trans-1,3-Dichloropropene	896	30	1000	0	89.6	65-125	0			
Trichloroethene	921.5	30	1000	0	92.2	75-125	0			
Trichlorofluoromethane	957.5	30	1000	0	95.8	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47460	Instrument ID VMS8	Method: SW8260					
Vinyl chloride	1078	30	1000	0	108	60-125	0
Xylenes, Total	2886	90	3000	0	96.2	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>923.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>92.4</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>958.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.8</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>936.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>93.6</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>932</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>93.2</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47460** Instrument ID **VMS8** Method: **SW8260**

MSD Sample ID: 1304246-01A MSD				Units: µg/Kg			Analysis Date: 04/06/13 01:09 PM			
Client ID: S-R2330009-032513-MJF-001				Run ID: VMS8_130405B		SeqNo: 2263504		Prep Date: 04/05/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	960.5	30	1000	0	96	70-135	955.5	0.522	30	
1,1,2,2-Tetrachloroethane	1070	30	1000	0	107	55-130	1038	3.08	30	
1,1,2-Trichloroethane	963.5	30	1000	0	96.4	60-125	957.5	0.625	30	
1,1-Dichloroethane	919.5	30	1000	0	92	75-125	936.5	1.83	30	
1,1-Dichloroethene	929.5	30	1000	0	93	65-135	933	0.376	30	
1,2,4-Trichlorobenzene	959	30	1000	0	95.9	65-130	928	3.29	30	
1,2-Dibromo-3-chloropropane	1016	30	1000	0	102	40-135	980	3.61	30	
1,2-Dibromoethane	1001	30	1000	0	100	70-125	985.5	1.56	30	
1,2-Dichlorobenzene	962.5	30	1000	0	96.2	75-120	964.5	0.208	30	
1,2-Dichloroethane	957.5	30	1000	0	95.8	70-135	967	0.987	30	
1,2-Dichloropropane	952	30	1000	0	95.2	70-120	954.5	0.262	30	
1,3-Dichlorobenzene	942.5	30	1000	0	94.2	70-125	929.5	1.39	30	
1,4-Dichlorobenzene	967	30	1000	0	96.7	70-125	942.5	2.57	30	
2-Butanone	975.5	200	1000	0	97.6	30-160	1015	3.97	30	
2-Hexanone	1115	30	1000	0	112	45-145	1056	5.44	30	
4-Methyl-2-pentanone	1416	30	1000	0	142	45-145	1348	4.92	30	
Acetone	944	100	1000	0	94.4	20-160	884	6.56	30	
Benzene	940	30	1000	0	94	75-125	935	0.533	30	
Bromodichloromethane	942.5	30	1000	0	94.2	70-130	936.5	0.639	30	
Bromoform	957.5	30	1000	0	95.8	55-135	932	2.7	30	
Bromomethane	942	75	1000	0	94.2	30-160	965	2.41	30	
Carbon disulfide	883.5	30	1000	0	88.4	45-160	896.5	1.46	30	
Carbon tetrachloride	987.5	30	1000	0	98.8	65-135	955.5	3.29	30	
Chlorobenzene	943.5	30	1000	0	94.4	75-125	948	0.476	30	
Chloroethane	419.5	100	1000	0	42	40-155	431.5	2.82	30	
Chloroform	904	30	1000	0	90.4	70-125	904.5	0.0553	30	
Chloromethane	1012	100	1000	0	101	50-130	988.5	2.4	30	
cis-1,2-Dichloroethene	907	30	1000	0	90.7	65-125	929	2.4	30	
cis-1,3-Dichloropropene	933.5	30	1000	0	93.4	70-125	925	0.915	30	
Dibromochloromethane	888.5	30	1000	0	88.8	65-135	899.5	1.23	30	
Dichlorodifluoromethane	901	30	1000	0	90.1	35-135	908.5	0.829	30	
Ethylbenzene	964	30	1000	0	96.4	75-125	964.5	0.0519	30	
Isopropylbenzene	992.5	30	1000	0	99.2	75-130	989	0.353	30	
Methyl tert-butyl ether	1084	30	1000	0	108	75-125	1051	3.14	30	
Methylene chloride	891	30	1000	0	89.1	55-145	878	1.47	30	
Styrene	1024	30	1000	0	102	75-125	1003	2.12	30	
Tetrachloroethene	953	30	1000	0	95.3	64-140	940	1.37	30	
Toluene	902.5	30	1000	0	90.2	70-125	916.5	1.54	30	
trans-1,2-Dichloroethene	930	30	1000	0	93	65-135	933.5	0.376	30	
trans-1,3-Dichloropropene	889.5	30	1000	0	89	65-125	896	0.728	30	
Trichloroethene	927	30	1000	0	92.7	75-125	921.5	0.595	30	
Trichlorofluoromethane	956.5	30	1000	0	95.6	25-185	957.5	0.104	30	

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47460	Instrument ID VMS8	Method: SW8260							
Vinyl chloride	1080	30	1000	0	108	60-125	1078	0.232	30
Xylenes, Total	2870	90	3000	0	95.7	75-125	2886	0.573	30
<i>Surr: 1,2-Dichloroethane-d4</i>	963	0	1000	0	96.3	70-130	923.5	4.19	30
<i>Surr: 4-Bromofluorobenzene</i>	986.5	0	1000	0	98.6	70-130	958.5	2.88	30
<i>Surr: Dibromofluoromethane</i>	980	0	1000	0	98	70-130	936.5	4.54	30
<i>Surr: Toluene-d8</i>	935.5	0	1000	0	93.6	70-130	932	0.375	30

The following samples were analyzed in this batch:

1304246-01A	1304246-02A	1304246-05A
1304246-09A	1304246-10A	1304246-11A
1304246-12A	1304246-13A	1304246-14A
1304246-15A	1304246-16A	1304246-17A
1304246-18A	1304246-19A	

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

MBLK		Sample ID: MBLK-47576-47576				Units: µg/Kg		Analysis Date: 04/10/13 10:41 PM		
Client ID:		Run ID: VMS7_130410A				SeqNo: 2271374		Prep Date: 04/10/13		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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260						
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>1150</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>115</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</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: 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>1054</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.

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

MBLK		Sample ID: MBLK-47576-47576				Units: µg/Kg		Analysis Date: 04/11/13 01:20 AM		
Client ID:		Run ID: VMS5_130410B				SeqNo: 2271565		Prep Date: 04/10/13		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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260						
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>1006</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>956</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.6</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>955</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.5</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>984.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.4</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

MBLK		Sample ID: MBLK-47576-47576				Units: µg/Kg		Analysis Date: 04/11/13 12:23 PM		
Client ID:		Run ID: VMS8_130410B				SeqNo: 2271670		Prep Date: 04/10/13		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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260						
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>	888.5	0	1000	0	88.8	70-130	0	
<i>Surr: 4-Bromofluorobenzene</i>	986	0	1000	0	98.6	70-130	0	
<i>Surr: Dibromofluoromethane</i>	917.5	0	1000	0	91.8	70-130	0	
<i>Surr: Toluene-d8</i>	960	0	1000	0	96	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

MBLK		Sample ID: MBLK-47576-47576				Units: µg/Kg		Analysis Date: 04/11/13 12:07 PM		
Client ID:		Run ID: VMS6_130411A				SeqNo: 2272810		Prep Date: 04/10/13		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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260						
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>1036</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>104</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>999</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.9</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</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>	
<i>Surr: Toluene-d8</i>	<i>1004</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>100</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

MBLK		Sample ID: MBLK-47576-47576				Units: µg/Kg		Analysis Date: 04/11/13 04:22 PM		
Client ID:		Run ID: VMS5_130411A				SeqNo: 2272952		Prep Date: 04/10/13		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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260						
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>	999.5	0	1000	0	100	70-130	0	
<i>Surr: 4-Bromofluorobenzene</i>	998	0	1000	0	99.8	70-130	0	
<i>Surr: Dibromofluoromethane</i>	968	0	1000	0	96.8	70-130	0	
<i>Surr: Toluene-d8</i>	1008	0	1000	0	101	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

MBLK		Sample ID: MBLK-47576-47576				Units: µg/Kg		Analysis Date: 04/12/13 11:50 AM		
Client ID:		Run ID: VMS7_130412A				SeqNo: 2273612		Prep Date: 04/10/13		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	262	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260						
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>1120</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>112</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>1023</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>102</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>999</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.9</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>1033</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>103</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

LCS Sample ID: LCS-47576-47576				Units: µg/Kg			Analysis Date: 04/10/13 09:25 PM			
Client ID:		Run ID: VMS7_130410A		SeqNo: 2271373		Prep Date: 04/10/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1045	30	1000	0	104	70-135	0			
1,1,2,2-Tetrachloroethane	1007	30	1000	0	101	55-130	0			
1,1,2-Trichloroethane	1053	30	1000	0	105	60-125	0			
1,1-Dichloroethane	1018	30	1000	0	102	75-125	0			
1,1-Dichloroethene	1122	30	1000	0	112	65-135	0			
1,2,4-Trichlorobenzene	1031	30	1000	0	103	65-130	0			
1,2-Dibromo-3-chloropropane	907	30	1000	0	90.7	40-135	0			
1,2-Dibromoethane	1101	30	1000	0	110	70-125	0			
1,2-Dichlorobenzene	957.5	30	1000	0	95.8	75-120	0			
1,2-Dichloroethane	1198	30	1000	0	120	70-135	0			
1,2-Dichloropropane	1069	30	1000	0	107	70-120	0			
1,3-Dichlorobenzene	959.5	30	1000	0	96	70-125	0			
1,4-Dichlorobenzene	988	30	1000	0	98.8	70-125	0			
2-Butanone	780.5	200	1000	0	78	30-160	0			
2-Hexanone	1100	30	1000	0	110	45-145	0			
4-Methyl-2-pentanone	1494	30	1000	0	149	45-145	0			S
Acetone	915.5	100	1000	0	91.6	20-160	0			
Benzene	1061	30	1000	0	106	75-125	0			
Bromodichloromethane	1060	30	1000	0	106	70-130	0			
Bromoform	830.5	30	1000	0	83	55-135	0			
Bromomethane	2274	75	1000	0	227	30-160	0			S
Carbon disulfide	1364	30	1000	0	136	45-160	0			
Carbon tetrachloride	1160	30	1000	0	116	65-135	0			
Chlorobenzene	1042	30	1000	0	104	75-125	0			
Chloroethane	1063	100	1000	0	106	40-155	0			
Chloroform	1074	30	1000	0	107	70-125	0			
Chloromethane	836.5	100	1000	0	83.6	50-130	0			
cis-1,2-Dichloroethene	1117	30	1000	0	112	65-125	0			
cis-1,3-Dichloropropene	1005	30	1000	0	100	70-125	0			
Dibromochloromethane	961	30	1000	0	96.1	65-135	0			
Dichlorodifluoromethane	839.5	30	1000	0	84	35-135	0			
Ethylbenzene	1012	30	1000	0	101	75-125	0			
Isopropylbenzene	973.5	30	1000	0	97.4	75-130	0			
Methyl tert-butyl ether	1110	30	1000	0	111	75-125	0			
Methylene chloride	1102	30	1000	0	110	55-145	0			
Styrene	1032	30	1000	0	103	75-125	0			
Tetrachloroethene	1058	30	1000	0	106	64-140	0			
Toluene	1048	30	1000	0	105	70-125	0			
trans-1,2-Dichloroethene	1080	30	1000	0	108	65-135	0			
trans-1,3-Dichloropropene	1049	30	1000	0	105	65-125	0			
Trichloroethene	988	30	1000	0	98.8	75-125	0			
Trichlorofluoromethane	1100	30	1000	0	110	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260					
Vinyl chloride	1044	30	1000	0	104	60-125	0
Xylenes, Total	3034	90	3000	0	101	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1142</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>114</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>1030</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>103</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>1078</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>108</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>1062</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>106</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

LCS Sample ID: LCS-47576-47576				Units: µg/Kg			Analysis Date: 04/11/13 12:12 PM			
Client ID:		Run ID: VMS5_130410B		SeqNo: 2271566		Prep Date: 04/10/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	972.5	30	1000	0	97.2	70-135	0			
1,1,2,2-Tetrachloroethane	1032	30	1000	0	103	55-130	0			
1,1,2-Trichloroethane	1002	30	1000	0	100	60-125	0			
1,1-Dichloroethane	937.5	30	1000	0	93.8	75-125	0			
1,1-Dichloroethene	937.5	30	1000	0	93.8	65-135	0			
1,2,4-Trichlorobenzene	970.5	30	1000	0	97	65-130	0			
1,2-Dibromo-3-chloropropane	950	30	1000	0	95	40-135	0			
1,2-Dibromoethane	1009	30	1000	0	101	70-125	0			
1,2-Dichlorobenzene	942.5	30	1000	0	94.2	75-120	0			
1,2-Dichloroethane	957.5	30	1000	0	95.8	70-135	0			
1,2-Dichloropropane	950	30	1000	0	95	70-120	0			
1,3-Dichlorobenzene	933.5	30	1000	0	93.4	70-125	0			
1,4-Dichlorobenzene	955.5	30	1000	0	95.6	70-125	0			
2-Butanone	1025	200	1000	0	102	30-160	0			
2-Hexanone	1005	30	1000	0	100	45-145	0			
4-Methyl-2-pentanone	1454	30	1000	0	145	45-145	0			S
Acetone	948.5	100	1000	0	94.8	20-160	0			
Benzene	990.5	30	1000	0	99	75-125	0			
Bromodichloromethane	998	30	1000	0	99.8	70-130	0			
Bromoform	993	30	1000	0	99.3	55-135	0			
Bromomethane	1128	75	1000	0	113	30-160	0			
Carbon disulfide	923	30	1000	0	92.3	45-160	0			
Carbon tetrachloride	956.5	30	1000	0	95.6	65-135	0			
Chlorobenzene	1002	30	1000	0	100	75-125	0			
Chloroethane	877	100	1000	0	87.7	40-155	0			
Chloroform	881	30	1000	0	88.1	70-125	0			
Chloromethane	912	100	1000	0	91.2	50-130	0			
cis-1,2-Dichloroethene	891	30	1000	0	89.1	65-125	0			
cis-1,3-Dichloropropene	951.5	30	1000	0	95.2	70-125	0			
Dibromochloromethane	955	30	1000	0	95.5	65-135	0			
Dichlorodifluoromethane	901.5	30	1000	0	90.2	35-135	0			
Ethylbenzene	983.5	30	1000	0	98.4	75-125	0			
Isopropylbenzene	970.5	30	1000	0	97	75-130	0			
Methyl tert-butyl ether	994	30	1000	0	99.4	75-125	0			
Methylene chloride	988	30	1000	0	98.8	55-145	0			
Styrene	975	30	1000	0	97.5	75-125	0			
Tetrachloroethene	999.5	30	1000	0	100	64-140	0			
Toluene	1000	30	1000	0	100	70-125	0			
trans-1,2-Dichloroethene	930.5	30	1000	0	93	65-135	0			
trans-1,3-Dichloropropene	967	30	1000	0	96.7	65-125	0			
Trichloroethene	988	30	1000	0	98.8	75-125	0			
Trichlorofluoromethane	908.5	30	1000	0	90.8	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576		Instrument ID VMS7		Method: SW8260			
Vinyl chloride	973	30	1000	0	97.3	60-125	0
Xylenes, Total	2860	90	3000	0	95.3	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</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>
<i>Surr: 4-Bromofluorobenzene</i>	<i>982</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.2</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>977</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97.7</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>988</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.8</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

LCS Sample ID: LCS-47576-47576				Units: µg/Kg			Analysis Date: 04/10/13 11:35 PM			
Client ID:		Run ID: VMS8_130410B		SeqNo: 2271669		Prep Date: 04/10/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1036	30	1000	0	104	70-135	0			
1,1,2,2-Tetrachloroethane	991	30	1000	0	99.1	55-130	0			
1,1,2-Trichloroethane	967.5	30	1000	0	96.8	60-125	0			
1,1-Dichloroethane	949.5	30	1000	0	95	75-125	0			
1,1-Dichloroethene	964.5	30	1000	0	96.4	65-135	0			
1,2,4-Trichlorobenzene	1157	30	1000	0	116	65-130	0			
1,2-Dibromo-3-chloropropane	1026	30	1000	0	103	40-135	0			
1,2-Dibromoethane	997	30	1000	0	99.7	70-125	0			
1,2-Dichlorobenzene	1078	30	1000	0	108	75-120	0			
1,2-Dichloroethane	991	30	1000	0	99.1	70-135	0			
1,2-Dichloropropane	991.5	30	1000	0	99.2	70-120	0			
1,3-Dichlorobenzene	1068	30	1000	0	107	70-125	0			
1,4-Dichlorobenzene	1054	30	1000	0	105	70-125	0			
2-Butanone	926	200	1000	0	92.6	30-160	0			
2-Hexanone	997.5	30	1000	0	99.8	45-145	0			
4-Methyl-2-pentanone	1299	30	1000	0	130	45-145	0			
Acetone	908.5	100	1000	0	90.8	20-160	0			
Benzene	988	30	1000	0	98.8	75-125	0			
Bromodichloromethane	1008	30	1000	0	101	70-130	0			
Bromoform	972.5	30	1000	0	97.2	55-135	0			
Bromomethane	1234	75	1000	0	123	30-160	0			
Carbon disulfide	1006	30	1000	0	101	45-160	0			
Carbon tetrachloride	1039	30	1000	0	104	65-135	0			
Chlorobenzene	1034	30	1000	0	103	75-125	0			
Chloroethane	946	100	1000	0	94.6	40-155	0			
Chloroform	939	30	1000	0	93.9	70-125	0			
Chloromethane	937.5	100	1000	0	93.8	50-130	0			
cis-1,2-Dichloroethene	967	30	1000	0	96.7	65-125	0			
cis-1,3-Dichloropropene	1006	30	1000	0	101	70-125	0			
Dibromochloromethane	983	30	1000	0	98.3	65-135	0			
Dichlorodifluoromethane	768.5	30	1000	0	76.8	35-135	0			
Ethylbenzene	1026	30	1000	0	103	75-125	0			
Isopropylbenzene	1050	30	1000	0	105	75-130	0			
Methyl tert-butyl ether	1021	30	1000	0	102	75-125	0			
Methylene chloride	892.5	30	1000	0	89.2	55-145	0			
Styrene	1085	30	1000	0	108	75-125	0			
Tetrachloroethene	1048	30	1000	0	105	64-140	0			
Toluene	978.5	30	1000	0	97.8	70-125	0			
trans-1,2-Dichloroethene	967	30	1000	0	96.7	65-135	0			
trans-1,3-Dichloropropene	996	30	1000	0	99.6	65-125	0			
Trichloroethene	996.5	30	1000	0	99.6	75-125	0			
Trichlorofluoromethane	1002	30	1000	0	100	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260					
Vinyl chloride	1056	30	1000	0	106	60-125	0
Xylenes, Total	3074	90	3000	0	102	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>924.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>92.4</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>992</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.2</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>952.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.2</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>966.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>96.6</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

LCS Sample ID: LCS-47576-47576				Units: µg/Kg			Analysis Date: 04/11/13 10:54 AM			
Client ID:		Run ID: VMS6_130411A		SeqNo: 2272809		Prep Date: 04/10/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1104	30	1000	0	110	70-135	0			
1,1,2,2-Tetrachloroethane	1064	30	1000	0	106	55-130	0			
1,1,2-Trichloroethane	1032	30	1000	0	103	60-125	0			
1,1-Dichloroethane	1051	30	1000	0	105	75-125	0			
1,1-Dichloroethene	1085	30	1000	0	108	65-135	0			
1,2,4-Trichlorobenzene	1176	30	1000	0	118	65-130	0			
1,2-Dibromo-3-chloropropane	993	30	1000	0	99.3	40-135	0			
1,2-Dibromoethane	1336	30	1000	0	134	70-125	0			S
1,2-Dichlorobenzene	1106	30	1000	0	111	75-120	0			
1,2-Dichloroethane	1085	30	1000	0	108	70-135	0			
1,2-Dichloropropane	1014	30	1000	0	101	70-120	0			
1,3-Dichlorobenzene	1097	30	1000	0	110	70-125	0			
1,4-Dichlorobenzene	1081	30	1000	0	108	70-125	0			
2-Butanone	1246	200	1000	0	125	30-160	0			
2-Hexanone	1110	30	1000	0	111	45-145	0			
4-Methyl-2-pentanone	1411	30	1000	0	141	45-145	0			
Acetone	1190	100	1000	0	119	20-160	0			
Benzene	1062	30	1000	0	106	75-125	0			
Bromodichloromethane	1110	30	1000	0	111	70-130	0			
Bromoform	911.5	30	1000	0	91.2	55-135	0			
Bromomethane	1524	75	1000	0	152	30-160	0			
Carbon disulfide	1184	30	1000	0	118	45-160	0			
Carbon tetrachloride	1081	30	1000	0	108	65-135	0			
Chlorobenzene	1058	30	1000	0	106	75-125	0			
Chloroethane	993.5	100	1000	0	99.4	40-155	0			
Chloroform	1063	30	1000	0	106	70-125	0			
Chloromethane	930.5	100	1000	0	93	50-130	0			
cis-1,2-Dichloroethene	1102	30	1000	0	110	65-125	0			
cis-1,3-Dichloropropene	1137	30	1000	0	114	70-125	0			
Dibromochloromethane	939	30	1000	0	93.9	65-135	0			
Dichlorodifluoromethane	845.5	30	1000	0	84.6	35-135	0			
Ethylbenzene	1077	30	1000	0	108	75-125	0			
Isopropylbenzene	1096	30	1000	0	110	75-130	0			
Methyl tert-butyl ether	1104	30	1000	0	110	75-125	0			
Methylene chloride	1064	30	1000	0	106	55-145	0			
Styrene	1120	30	1000	0	112	75-125	0			
Tetrachloroethene	1090	30	1000	0	109	64-140	0			
Toluene	1062	30	1000	0	106	70-125	0			
trans-1,2-Dichloroethene	1108	30	1000	0	111	65-135	0			
trans-1,3-Dichloropropene	1196	30	1000	0	120	65-125	0			
Trichloroethene	1028	30	1000	0	103	75-125	0			
Trichlorofluoromethane	954	30	1000	0	95.4	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260					
Vinyl chloride	1024	30	1000	0	102	60-125	0
Xylenes, Total	3256	90	3000	0	109	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>981.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.2</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>1005</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>100</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>1025</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>102</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>1006</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>101</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

LCS Sample ID: LCS-47576-47576				Units: µg/Kg			Analysis Date: 04/11/13 03:14 PM			
Client ID:		Run ID: VMS5_130411A		SeqNo: 2272950		Prep Date: 04/10/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1024	30	1000	0	102	70-135	0			
1,1,2,2-Tetrachloroethane	976	30	1000	0	97.6	55-130	0			
1,1,2-Trichloroethane	975.5	30	1000	0	97.6	60-125	0			
1,1-Dichloroethane	982.5	30	1000	0	98.2	75-125	0			
1,1-Dichloroethene	1004	30	1000	0	100	65-135	0			
1,2,4-Trichlorobenzene	1058	30	1000	0	106	65-130	0			
1,2-Dibromo-3-chloropropane	917	30	1000	0	91.7	40-135	0			
1,2-Dibromoethane	1012	30	1000	0	101	70-125	0			
1,2-Dichlorobenzene	949.5	30	1000	0	95	75-120	0			
1,2-Dichloroethane	993.5	30	1000	0	99.4	70-135	0			
1,2-Dichloropropane	1000	30	1000	0	100	70-120	0			
1,3-Dichlorobenzene	955.5	30	1000	0	95.6	70-125	0			
1,4-Dichlorobenzene	967	30	1000	0	96.7	70-125	0			
2-Butanone	1017	200	1000	0	102	30-160	0			
2-Hexanone	950	30	1000	0	95	45-145	0			
4-Methyl-2-pentanone	1359	30	1000	0	136	45-145	0			
Acetone	1064	100	1000	0	106	20-160	0			
Benzene	1054	30	1000	0	105	75-125	0			
Bromodichloromethane	1015	30	1000	0	102	70-130	0			
Bromoform	968.5	30	1000	0	96.8	55-135	0			
Bromomethane	1284	75	1000	0	128	30-160	0			
Carbon disulfide	995	30	1000	0	99.5	45-160	0			
Carbon tetrachloride	1012	30	1000	0	101	65-135	0			
Chlorobenzene	992.5	30	1000	0	99.2	75-125	0			
Chloroethane	931	100	1000	0	93.1	40-155	0			
Chloroform	919.5	30	1000	0	92	70-125	0			
Chloromethane	966	100	1000	0	96.6	50-130	0			
cis-1,2-Dichloroethene	959	30	1000	0	95.9	65-125	0			
cis-1,3-Dichloropropene	996	30	1000	0	99.6	70-125	0			
Dibromochloromethane	950.5	30	1000	0	95	65-135	0			
Dichlorodifluoromethane	917	30	1000	0	91.7	35-135	0			
Ethylbenzene	986	30	1000	0	98.6	75-125	0			
Isopropylbenzene	972	30	1000	0	97.2	75-130	0			
Methyl tert-butyl ether	980.5	30	1000	0	98	75-125	0			
Methylene chloride	1058	30	1000	0	106	55-145	0			
Styrene	974.5	30	1000	0	97.4	75-125	0			
Tetrachloroethene	1014	30	1000	0	101	64-140	0			
Toluene	1012	30	1000	0	101	70-125	0			
trans-1,2-Dichloroethene	1014	30	1000	0	101	65-135	0			
trans-1,3-Dichloropropene	966	30	1000	0	96.6	65-125	0			
Trichloroethene	1032	30	1000	0	103	75-125	0			
Trichlorofluoromethane	955	30	1000	0	95.5	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260					
Vinyl chloride	1044	30	1000	0	104	60-125	0
Xylenes, Total	2856	90	3000	0	95.2	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	999	0	1000	0	99.9	70-130	0
<i>Surr: 4-Bromofluorobenzene</i>	977	0	1000	0	97.7	70-130	0
<i>Surr: Dibromofluoromethane</i>	968	0	1000	0	96.8	70-130	0
<i>Surr: Toluene-d8</i>	985	0	1000	0	98.5	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

LCS Sample ID: LCS-47576-47576				Units: µg/Kg			Analysis Date: 04/12/13 10:35 AM			
Client ID:		Run ID: VMS7_130412A			SeqNo: 2273608		Prep Date: 04/10/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1140	30	1000	0	114	70-135	0			
1,1,2,2-Tetrachloroethane	991	30	1000	0	99.1	55-130	0			
1,1,2-Trichloroethane	1050	30	1000	0	105	60-125	0			
1,1-Dichloroethane	1044	30	1000	0	104	75-125	0			
1,1-Dichloroethene	1165	30	1000	0	116	65-135	0			
1,2,4-Trichlorobenzene	1088	30	1000	0	109	65-130	0			
1,2-Dibromo-3-chloropropane	914.5	30	1000	0	91.4	40-135	0			
1,2-Dibromoethane	1120	30	1000	0	112	70-125	0			
1,2-Dichlorobenzene	982	30	1000	0	98.2	75-120	0			
1,2-Dichloroethane	1276	30	1000	0	128	70-135	0			
1,2-Dichloropropane	1064	30	1000	0	106	70-120	0			
1,3-Dichlorobenzene	1031	30	1000	0	103	70-125	0			
1,4-Dichlorobenzene	1039	30	1000	0	104	70-125	0			
2-Butanone	915	200	1000	0	91.5	30-160	0			
2-Hexanone	1040	30	1000	0	104	45-145	0			
4-Methyl-2-pentanone	1448	30	1000	0	145	45-145	0			
Acetone	900	100	1000	0	90	20-160	0			
Benzene	1070	30	1000	0	107	75-125	0			
Bromodichloromethane	1130	30	1000	0	113	70-130	0			
Bromoform	879	30	1000	0	87.9	55-135	0			
Bromomethane	2240	75	1000	0	224	30-160	0			S
Carbon disulfide	1352	30	1000	0	135	45-160	0			
Carbon tetrachloride	1290	30	1000	0	129	65-135	0			
Chlorobenzene	1068	30	1000	0	107	75-125	0			
Chloroethane	1087	100	1000	0	109	40-155	0			
Chloroform	1150	30	1000	0	115	70-125	0			
Chloromethane	671.5	100	1000	0	67.2	50-130	0			
cis-1,2-Dichloroethene	1186	30	1000	0	119	65-125	0			
cis-1,3-Dichloropropene	1043	30	1000	0	104	70-125	0			
Dibromochloromethane	1030	30	1000	0	103	65-135	0			
Dichlorodifluoromethane	620	30	1000	0	62	35-135	0			
Ethylbenzene	1055	30	1000	0	106	75-125	0			
Isopropylbenzene	1048	30	1000	0	105	75-130	0			
Methyl tert-butyl ether	1061	30	1000	0	106	75-125	0			
Methylene chloride	1230	30	1000	0	123	55-145	0			B
Styrene	1079	30	1000	0	108	75-125	0			
Tetrachloroethene	1140	30	1000	0	114	64-140	0			
Toluene	1067	30	1000	0	107	70-125	0			
trans-1,2-Dichloroethene	1118	30	1000	0	112	65-135	0			
trans-1,3-Dichloropropene	1100	30	1000	0	110	65-125	0			
Trichloroethene	1024	30	1000	0	102	75-125	0			
Trichlorofluoromethane	1170	30	1000	0	117	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7		Method: SW8260				
Vinyl chloride	871	30	1000	0	87.1	60-125	0
Xylenes, Total	3146	90	3000	0	105	75-125	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>1174</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>117</i>	<i>70-130</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>1058</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>1052</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>105</i>	<i>70-130</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>1034</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>103</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

MS Sample ID: 1304224-07A MS				Units: µg/Kg			Analysis Date: 04/11/13 10:08 AM			
Client ID:		Run ID: VMS5_130410B		SeqNo: 2271562		Prep Date: 04/10/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	813.5	30	1000	0	81.4	70-135	0			
1,1,2,2-Tetrachloroethane	924.5	30	1000	0	92.4	55-130	0			
1,1,2-Trichloroethane	889	30	1000	0	88.9	60-125	0			
1,1-Dichloroethane	759.5	30	1000	0	76	75-125	0			
1,1-Dichloroethene	656	30	1000	0	65.6	65-135	0			
1,2,4-Trichlorobenzene	895.5	30	1000	0	89.6	65-130	0			
1,2-Dibromo-3-chloropropane	770	30	1000	0	77	40-135	0			
1,2-Dibromoethane	941.5	30	1000	0	94.2	70-125	0			
1,2-Dichlorobenzene	862.5	30	1000	0	86.2	75-120	0			
1,2-Dichloroethane	848.5	30	1000	0	84.8	70-135	0			
1,2-Dichloropropane	849	30	1000	0	84.9	70-120	0			
1,3-Dichlorobenzene	860.5	30	1000	0	86	70-125	0			
1,4-Dichlorobenzene	864.5	30	1000	0	86.4	70-125	0			
2-Butanone	849.5	200	1000	0	85	30-160	0			
2-Hexanone	892	30	1000	0	89.2	45-145	0			
4-Methyl-2-pentanone	1271	30	1000	0	127	45-145	0			
Acetone	970	100	1000	0	97	20-160	0			
Benzene	849	30	1000	0	84.9	75-125	0			
Bromodichloromethane	815	30	1000	0	81.5	70-130	0			
Bromoform	767.5	30	1000	0	76.8	55-135	0			
Bromomethane	618	75	1000	0	61.8	30-160	0			
Carbon disulfide	633.5	30	1000	0	63.4	45-160	0			
Carbon tetrachloride	718	30	1000	0	71.8	65-135	0			
Chlorobenzene	885	30	1000	0	88.5	75-125	0			
Chloroethane	571.5	100	1000	0	57.2	40-155	0			
Chloroform	749	30	1000	0	74.9	70-125	0			
Chloromethane	593.5	100	1000	0	59.4	50-130	0			
cis-1,2-Dichloroethene	736.5	30	1000	0	73.6	65-125	0			
cis-1,3-Dichloropropene	808	30	1000	0	80.8	70-125	0			
Dibromochloromethane	791.5	30	1000	0	79.2	65-135	0			
Dichlorodifluoromethane	293	30	1000	0	29.3	35-135	0			S
Ethylbenzene	874.5	30	1000	0	87.4	75-125	0			
Isopropylbenzene	877.5	30	1000	0	87.8	75-130	0			
Methyl tert-butyl ether	851.5	30	1000	0	85.2	75-125	0			
Methylene chloride	835.5	30	1000	40	79.6	55-145	0			
Styrene	900	30	1000	0	90	75-125	0			
Tetrachloroethene	853.5	30	1000	0	85.4	64-140	0			
Toluene	880	30	1000	0	88	70-125	0			
trans-1,2-Dichloroethene	728.5	30	1000	0	72.8	65-135	0			
trans-1,3-Dichloropropene	834	30	1000	0	83.4	65-125	0			
Trichloroethene	829	30	1000	0	82.9	75-125	0			
Trichlorofluoromethane	539.5	30	1000	0	54	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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576	Instrument ID VMS7	Method: SW8260						
Vinyl chloride	585	30	1000	0	58.5	60-125	0	S
Xylenes, Total	2558	90	3000	0	85.3	75-125	0	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>987</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>98.7</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>954.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.4</i>	<i>70-130</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>1004</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>100</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: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47576** Instrument ID **VMS7** Method: **SW8260**

MSD Sample ID: 1304224-07A MSD				Units: µg/Kg			Analysis Date: 04/11/13 10:30 AM			
Client ID:		Run ID: VMS5_130410B		SeqNo: 2271563		Prep Date: 04/10/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	792	30	1000	0	79.2	70-135	813.5	2.68	30	
1,1,2,2-Tetrachloroethane	910	30	1000	0	91	55-130	924.5	1.58	30	
1,1,2-Trichloroethane	866	30	1000	0	86.6	60-125	889	2.62	30	
1,1-Dichloroethane	763.5	30	1000	0	76.4	75-125	759.5	0.525	30	
1,1-Dichloroethene	659	30	1000	0	65.9	65-135	656	0.456	30	
1,2,4-Trichlorobenzene	932.5	30	1000	0	93.2	65-130	895.5	4.05	30	
1,2-Dibromo-3-chloropropane	771	30	1000	0	77.1	40-135	770	0.13	30	
1,2-Dibromoethane	922.5	30	1000	0	92.2	70-125	941.5	2.04	30	
1,2-Dichlorobenzene	897.5	30	1000	0	89.8	75-120	862.5	3.98	30	
1,2-Dichloroethane	847.5	30	1000	0	84.8	70-135	848.5	0.118	30	
1,2-Dichloropropane	826.5	30	1000	0	82.6	70-120	849	2.69	30	
1,3-Dichlorobenzene	880	30	1000	0	88	70-125	860.5	2.24	30	
1,4-Dichlorobenzene	858.5	30	1000	0	85.8	70-125	864.5	0.696	30	
2-Butanone	866	200	1000	0	86.6	30-160	849.5	1.92	30	
2-Hexanone	894.5	30	1000	0	89.4	45-145	892	0.28	30	
4-Methyl-2-pentanone	1282	30	1000	0	128	45-145	1271	0.823	30	
Acetone	950	100	1000	0	95	20-160	970	2.08	30	
Benzene	828.5	30	1000	0	82.8	75-125	849	2.44	30	
Bromodichloromethane	806	30	1000	0	80.6	70-130	815	1.11	30	
Bromoform	755	30	1000	0	75.5	55-135	767.5	1.64	30	
Bromomethane	620.5	75	1000	0	62	30-160	618	0.404	30	
Carbon disulfide	625	30	1000	0	62.5	45-160	633.5	1.35	30	
Carbon tetrachloride	735	30	1000	0	73.5	65-135	718	2.34	30	
Chlorobenzene	873.5	30	1000	0	87.4	75-125	885	1.31	30	
Chloroethane	576.5	100	1000	0	57.6	40-155	571.5	0.871	30	
Chloroform	769.5	30	1000	0	77	70-125	749	2.7	30	
Chloromethane	586	100	1000	0	58.6	50-130	593.5	1.27	30	
cis-1,2-Dichloroethene	760.5	30	1000	0	76	65-125	736.5	3.21	30	
cis-1,3-Dichloropropene	790	30	1000	0	79	70-125	808	2.25	30	
Dibromochloromethane	748.5	30	1000	0	74.8	65-135	791.5	5.58	30	
Dichlorodifluoromethane	293.5	30	1000	0	29.4	35-135	293	0.171	30	S
Ethylbenzene	868	30	1000	0	86.8	75-125	874.5	0.746	30	
Isopropylbenzene	907	30	1000	0	90.7	75-130	877.5	3.31	30	
Methyl tert-butyl ether	884	30	1000	0	88.4	75-125	851.5	3.75	30	
Methylene chloride	847.5	30	1000	40	80.8	55-145	835.5	1.43	30	
Styrene	881.5	30	1000	0	88.2	75-125	900	2.08	30	
Tetrachloroethene	877	30	1000	0	87.7	64-140	853.5	2.72	30	
Toluene	869.5	30	1000	0	87	70-125	880	1.2	30	
trans-1,2-Dichloroethene	750	30	1000	0	75	65-135	728.5	2.91	30	
trans-1,3-Dichloropropene	807	30	1000	0	80.7	65-125	834	3.29	30	
Trichloroethene	810	30	1000	0	81	75-125	829	2.32	30	
Trichlorofluoromethane	523	30	1000	0	52.3	25-185	539.5	3.11	30	

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 47576		Instrument ID VMS7		Method: SW8260						
Vinyl chloride	567	30	1000	0	56.7	60-125	585	3.12	30	S
Xylenes, Total	2532	90	3000	0	84.4	75-125	2558	1	30	
Surr: 1,2-Dichloroethane-d4	991	0	1000	0	99.1	70-130	987	0.404	30	
Surr: 4-Bromofluorobenzene	978.5	0	1000	0	97.8	70-130	987.5	0.916	30	
Surr: Dibromofluoromethane	976.5	0	1000	0	97.6	70-130	954.5	2.28	30	
Surr: Toluene-d8	1004	0	1000	0	100	70-130	1004	0	30	

The following samples were analyzed in this batch: | 1304246-06A |

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **47526** Instrument ID **LACHAT** Method: **SW9012A**

MBLK		Sample ID: MBLK-47526-47526				Units: mg/Kg		Analysis Date: 04/10/13 12:54 PM		
Client ID:		Run ID: LACHAT_130410A				SeqNo: 2269610		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	0.03704	0.51								J

LCS		Sample ID: LCS-47526-47526				Units: mg/Kg		Analysis Date: 04/10/13 12:54 PM		
Client ID:		Run ID: LACHAT_130410A				SeqNo: 2269611		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	2.555	0.51	2.541	0	101	85-119	0			

MS		Sample ID: 1304230-01B MS				Units: mg/Kg		Analysis Date: 04/10/13 12:54 PM		
Client ID:		Run ID: LACHAT_130410A				SeqNo: 2269613		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	2.516	0.48	2.395	0.04513	103	70-130	0			

MS		Sample ID: 1304246-19B MS				Units: mg/Kg		Analysis Date: 04/10/13 12:54 PM		
Client ID: S-R2330009-032513-MJF-019		Run ID: LACHAT_130410A				SeqNo: 2269673		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	2.442	0.50	2.49	0.04338	96.3	70-130	0			

MSD		Sample ID: 1304230-01B MSD				Units: mg/Kg		Analysis Date: 04/10/13 12:54 PM		
Client ID:		Run ID: LACHAT_130410A				SeqNo: 2269614		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	2.675	0.48	2.395	0.04513	110	70-130	2.516	6.13	30	

MSD		Sample ID: 1304246-19B MSD				Units: mg/Kg		Analysis Date: 04/10/13 12:54 PM		
Client ID: S-R2330009-032513-MJF-019		Run ID: LACHAT_130410A				SeqNo: 2269674		Prep Date: 04/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Total	2.406	0.49	2.461	0.04338	96	70-130	2.442	1.51	30	

The following samples were analyzed in this batch:

1304246-01B	1304246-02B	1304246-05B
1304246-06B	1304246-09B	1304246-10B
1304246-11B	1304246-12B	1304246-13B
1304246-14B	1304246-15B	1304246-16B
1304246-17B	1304246-18B	1304246-19B

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

Revision: 1

Client: The Mannik & Smith Group, Inc.
Work Order: 1304246
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R118497** Instrument ID **MOIST** Method: **A2540 G**

MBLK		Sample ID: WBLKS1-R118497				Units: % of sample		Analysis Date: 04/05/13 02:30 PM		
Client ID:		Run ID: MOIST_130405B				SeqNo: 2263569		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-R118497				Units: % of sample		Analysis Date: 04/05/13 02:30 PM		
Client ID:		Run ID: MOIST_130405B				SeqNo: 2263565		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: 1304021-01BDUP				Units: % of sample		Analysis Date: 04/05/13 02:30 PM		
Client ID:		Run ID: MOIST_130405B				SeqNo: 2263543		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 16.51 0.050 0 0 0 0-0 17.29 4.62 20

DUP		Sample ID: 1304246-10BDUP				Units: % of sample		Analysis Date: 04/05/13 02:30 PM		
Client ID: S-R2330009-040213-MJF-010		Run ID: MOIST_130405B				SeqNo: 2263554		Prep Date:		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Moisture 14.53 0.050 0 0 0 0-0 13.88 4.58 20

The following samples were analyzed in this batch:

1304246-01B	1304246-02B	1304246-03B
1304246-04B	1304246-05B	1304246-06B
1304246-07B	1304246-08B	1304246-09B
1304246-10B	1304246-11B	1304246-12B
1304246-13B	1304246-14B	1304246-15B
1304246-16B	1304246-17B	1304246-18B
1304246-19B		

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

Revision: 1

QC Report Page: 78 of 78



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Chain of Custody Form

Page 1 of 4

COC ID: 69719

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+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

ALS Project Manager:

ALS Work Order #:

Customer Information			Project Information			Parameter/Method Request for Analysis												
Purchase Order	3743	Project Name	Van Buren Landfill	A	VOCs													
Work Order		Project Number	R2330009	B	SVOCs													
Company Name	The Mannick & Smith Group, Inc.	Bill To Company	RACER TRUST	C	PCBs													
Send Report To	Paul J. Smith / Michael F. Hill	Invoice Attn	Accounts Payable	D	Cyanide - total													
Address	2265 Haggerty Road South Suite 100	Address	2830 Ecorse Rd	E	Cyanide - amenable													
City/State/Zip	Canton, MI 48183	City/State/Zip	Ypsilanti, MI 48198	F	Metals (including Hg) (see attached list)													
Phone	(734) 397-3100	Phone		G	Moisture													
Fax	(734) 397-3131	Fax		H														
e-Mail Address	m.f.hill@mannick-smith.com	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	SB-1A 0'-2' ALS-R2330009	3/25/13	1145	S	9	2	X										
2	032513-MSF-001	↓			N	1		X	X	X	X	X	X				
3	SB-1A 10'-11' S-R2330009	3/25/13	1215		9	2	X										
4	032513-MSF-002	↓			N	1		X	X	X	X	X	X				
5	SB-5B 6'-2' S-R2330009	3/26/13	1115		9	2	X										HOLD
6	032613-MSF-003	↓			N	1		X	X	X	X	X	X				HOLD
7	SB-5B 4'-5' S-R2330009	↓	1145		9	2	X										HOLD
8	032613-MSF-004	↓			N	1		X	X	X	X	X	X				HOLD
9	SB-5C 0'-2' S-R2330009	4/2/13	0930		9	2	X										
10	032613-MSF-005	↓			N	1		X	X	X	X	X	X				

Sampler(s) Please Print & Sign			Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:	
Michael F. Hill			Cooler		☒ 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour					
Relinquished by:	Date:	Time:	Received by:	Time:	Notes:					
Michael F. Hill	4/13/13	1600	Locked Refrigerator							
Relinquished by:	Date:	Time:	Received by (Laboratory):	Time:	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)			
Locked Refrigerator	4/4/13	1500					☒ Level II BTL OG ☐ TRF Checklist			
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):	Time:	☐ Level III Site QC/Raw Data ☐ TRF Level IV					
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					☐ Level IV SW/MSGLP ☐ Other					

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Chain of Custody Form

Page 2 of 4

COC ID: 69718

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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

Customer Information		Project Information		ALS Project Manager:														ALS Work Order #:	
Parameter/Method Request for Analysis																			
Purchase Order	3703	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	Frank J. B. Chl / Michael J. Friedrich	Invoice Attn	Accounts Payable	D	Cyanide - total														
Address	2505 Haggerty Road South Suite 100	Address	2330 Ecorse Rd	E	Cyanide - amenable														
City/State/Zip	Canton, MI 48186	City/State/Zip	Ypsilanti, MI 48198	F	Metals (including Hg)														
Phone	(734) 397-3100	Phone		G	Moisture														
Fax	(734) 397-3131	Fax		H															
e-Mail Address	m.friedrich@manniksmithgroup.com	e-Mail Address		I															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	SB-5C 17'-18'	4/13/13	10:50	S	79	2	X												
2	S.R2330009.040213.MSF.006	↓	↓	↓	-	1		X	X	X	X	X	X				Hold		
3	SB-7D 0'-2'	3/28/13	12:50	S	79	2	X										Hold		
4	S.R2330009.032813.MSF.007	↓	↓	↓	-	1		X	X	X	X	X	X				Hold		
5	SB-7D 9'-10'		13:20	S	79	2	X										Hold		
6	S.R2330009.032813.MSF.008	↓	↓	↓	-	1		X	X	X	X	X	X				Hold		
7	SB-7E 0'-2'	4/12/13	08:45		79	2	X												
8	S.R2330009.040213.MSF.009	↓	↓	↓	-	1		X	X	X	X	X	X						
9	SB-7E 5'-6'		08:50		79	2	X												
10	S.R2330009.040213.MSF.010	↓	↓	↓	-	1		X	X	X	X	X	X						
Sampler(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)				Results Due Date:											
Michael J. Friedrich				☒ 24 HRS ☐ 48 HRS ☐ 72 HRS ☐ 96 HRS				☐ 1 Week ☐ 2 Weeks ☐ 4 Weeks											
Relinquished by:	Date:	Time:	Received by:	Notes:															
Michael J. Friedrich	4/13/13	1:00	Michael J. Friedrich																
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)													
Michael J. Friedrich	4/14/13	8:30				☒ Level II SOI QS ☐ Level II SW QGRW Data ☐ Level II SW 345/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: 69717

Customer Information			Project Information				Parameter/Method Request for Analysis											
Purchase Order	3703		Project Name	van Buren Landfill			A	VOCs										
Work Order			Project Number	R2330009			B	SVOCs										
Company Name	The Martinik & Smith Group, Inc.		Bill To Company	RACER Trust			C	PCBs										
Send Report To	Frank R. Bell / mch / T. F. Smith		Invoice Attn	Accounts Payable			D	Cyanide - total										
Address	2365 Haggerty Road South Suite 100		Address	2940 Ecorse Rd			E	Cyanide - amenable										
City/State/Zip	Canton, MI 48108		City/State/Zip	Ypsilanti, MI 48198			F	Metals (including Hg)										
Phone	(734) 397-3100		Phone				G	Moisture										
Fax	(734) 397-3131		Fax				H											
e-Mail Address	mf.smith@the-martinik-smith.com		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	SB-8 0'-2'	3/28/13	1420	S	X9	2	X											
2	S.R2330009.032813.msf.011				-	1		X	X	X	X	X	X					
3	SB-9 0'-2'	3/26/13	1340	S	X9	2	X											
4	S.R2330009.032613.msf.012				-	1		X	X	X	X	X	X					
5	SB-9 10'-11'		1350	S	X9	2	X											
6	S.R2330009.032613.msf.013				-	1		X	X	X	X	X	X					
7	SB-10 0'-2'	3/25/13	1015	S	X9	2	X											
8	S.R2330009.032513.msf.014				-	1		X	X	X	X	X	X					
9	SB-10 13'-14'		1045	S	X9	2	X											
10	S.R2330009.032513.msf.015				-	1		X	X	X	X	X	X					
Sampler(s) Please Print & Sign			Shipment Method		Required Turnaround Time: (Check Box)			Results Due Date:										
Frank R. Bell			Cooler		☒ 5-7 Std. Wk. Days ☐ 5 Wk. Days ☐ 2 Wk. Days ☐ 24 Hour													
Relinquished by:	Date:	Time:	Received by:	Notes:														
Frank R. Bell	4/9/13	1600	Locked Refrigerator															
Relinquished by:	Date:	Time:	Received by (Laboratory):	Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)												
Locked Refrigerator	4/4/13	830				☒ Level II Std. QC ☐ Level III Std. QC/Flow Data ☐ Level IV SW846/CFLP ☐ TRRP Checklist ☐ TRRP Level IV												
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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Page 4 of 4

COC ID: 69716

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
+1 804 356 3158

York, PA
+1 717 505 5280

Environmental

ALS Project Manager: _____ ALS Work Order #: _____

Customer Information		Project Information		Parameter/Method Request for Analysis	
Purchase Order	3703	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	Frank T. Bell / Michael J. Friedhoff	Invoice Attn	Accounts Payable	D	Cyanide - total
Address	2365 Haggerty Road South Suits 100	Address	2030 Ecorse Rd	E	Cyanide - amenable
City/State/Zip	Canton, MI 48106	City/State/Zip	Ypsilanti, MI 48196	F	Metals (including Hg)
Phone	(734) 397-9100	Phone		G	Moisture
Fax	(734) 397-3131	Fax		H	
e-Mail Address	m.friedhoff@manniksmithgroup.com	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	SB-11 0'-2' x	3/26/13	0900	S	9	2	X										
2	S.R2330009.032613.MTF.016				-	1		X	X	X	X	X	X				
3	SB-11 6.5' - 7.5' x		0910		9	2	X										
4	S.R2330009.032613.MTF.017				-	1		X	X	X	X	X	X				
5	SB-12 0'-2' x	3/25/13	1450		9	2	X										
6	S.R2330009.032513.MTF.018				-	1		X	X	X	X	X	X				
7	SB-12 8'-9' x		1500		9	2	X										
8	S.R2330009.032513.MTF.019				-	1		X	X	X	X	X	X				
9																	
10																	

Sample(s) Please Print & Sign		Shipment Method		Required Turnaround Time: (Check Box)		Results Due Date:	
Michael J. Friedhoff		Carrier		☒ 5th-10th Wk Days ☐ 1-4 Wk Days ☐ 2 Wk Days ☐ 24 Hour			
Relinquished by:	Date: 4/3/13	Time: 1600	Received by:	Local Refrigerator		Notes:	
Relinquished by:	Date: 4/4/13	Time: 1500	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 ☐ Level III Std QC/Res 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			

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ALS Group USA, Corp

Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **05-Apr-13 08:00**

Work Order: **1304246**

Received by: **DS**

Checklist completed by Diane Shaw 05-Apr-13
eSignature Date

Reviewed by: Tom Bramish 05-Apr-13
eSignature Date

Matrices: 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 ☐	
Temperature(s)/Thermometer(s):	<u>3.2 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>4/5/2013 1:01:47 PM</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:

Revision: 1

SRC Page 1 of 1

ATTACHMENT 4

GROUND WATER SAMPLE
LABORATORY ANALYTICAL DATA REPORTS



Work Order: 1305208

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

16-May-2013



Certificate No: MN 532786



16-May-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: **1305208**

Dear Frank,

ALS Environmental received 16 samples on 04-May-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 116.

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 Group An ALS Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1305208

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>
1305208-01	W-R2330009-043013-MJF-001	Water		04/30/13 15:00	05/04/13 08:00	☐
1305208-02	W-R2330009-043013-MJF-002	Water		04/30/13 16:45	05/04/13 08:00	☐
1305208-03	W-R2330009-050113-MJF-003	Water		05/01/13 11:15	05/04/13 08:00	☐
1305208-04	W-R2330009-050113-MJF-004	Water		05/01/13 12:50	05/04/13 08:00	☐
1305208-05	W-R2330009-050113-MJF-005	Water		05/01/13 13:00	05/04/13 08:00	☐
1305208-06	W-R2330009-050113-MJF-006	Water		05/01/13 13:10	05/04/13 08:00	☐
1305208-07	W-R2330009-050113-MJF-007	Water		05/01/13 15:45	05/04/13 08:00	☐
1305208-08	W-R2330009-050213-MJF-008	Water		05/02/13 10:30	05/04/13 08:00	☐
1305208-09	W-R2330009-050213-MJF-009	Water		05/02/13 11:45	05/04/13 08:00	☐
1305208-10	W-R2330009-050213-MJF-010	Water		05/02/13 13:00	05/04/13 08:00	☐
1305208-11	W-R2330009-050213-MJF-011	Water		05/02/13 15:30	05/04/13 08:00	☐
1305208-12	W-R2330009-050213-MJF-012	Water		05/02/13 16:30	05/04/13 08:00	☐
1305208-13	W-R2330009-050313-MJF-013	Water		05/03/13 11:45	05/04/13 08:00	☐
1305208-14	W-R2330009-050313-MJF-014	Water		05/03/13 13:00	05/04/13 08:00	☐
1305208-15	W-R2330009-050313-MJF-015	Water		05/03/13 15:00	05/04/13 08:00	☐
1305208-16	Trip Blank	Water		05/03/13	05/04/13 08:00	☐

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
WorkOrder: 1305208

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 detected below quantitation 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
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
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

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1305208

Case Narrative**QC Comments:**

Batch 48213, Method SVO_625_WW, Sample SLCSW1-48213: The LCS recovery was outside of the lower control limit but within the Sporadic Marginal Exceedence limit. No qualification is necessary for Acetophenone.

Batch 48281B, Method CNA_9012_W, Sample 1305208-12D MS: The MS and MSD recoveries were below the lower control limit. The corresponding result in the parent sample may be biased low for Amenable Cyanide.

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-043013-MJF-001
Collection Date: 04/30/13 03:00 PM

Work Order: 1305208
Lab ID: 1305208-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 13:44
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: RH
<u>BatchID: 48280</u>							
Aluminum	0.0046	J	0.00078	0.050	mg/L	1	05/10/13 01:17
Antimony	0.00013	J	0.000036	0.0020	mg/L	1	05/10/13 01:17
Arsenic	U		0.00058	0.0050	mg/L	1	05/10/13 01:17
Barium	0.026	J	0.000063	0.10	mg/L	1	05/10/13 01:17
Beryllium	U		0.000082	0.0010	mg/L	1	05/10/13 01:17
Cadmium	U		0.000045	0.0010	mg/L	1	05/10/13 01:17
Chromium	0.00069	J	0.00027	0.010	mg/L	1	05/10/13 01:17
Cobalt	0.00041	J	0.000041	0.020	mg/L	1	05/10/13 01:17
Copper	0.00076	J	0.00053	0.0040	mg/L	1	05/10/13 01:17
Iron	0.013	J	0.0053	0.20	mg/L	1	05/10/13 01:17
Lead	0.000079	J	0.000051	0.0030	mg/L	1	05/10/13 01:17
Manganese	0.0074	J	0.000054	0.050	mg/L	1	05/10/13 01:17
Nickel	0.0012	J	0.00025	0.020	mg/L	1	05/10/13 01:17
Selenium	0.0017	J	0.00064	0.0050	mg/L	1	05/10/13 01:17
Silver	U		0.000042	0.00020	mg/L	1	05/10/13 01:17
Thallium	U		0.000062	0.0020	mg/L	1	05/10/13 01:17
Vanadium	U		0.00016	0.0040	mg/L	1	05/10/13 01:17
Zinc	0.0020	J	0.00048	0.050	mg/L	1	05/10/13 01:17
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/7/13	Analyst: HL
<u>BatchID: 48213</u>							
1,1'-Biphenyl	0.56	J	0.095	10	µg/L	1	05/08/13 14:02
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/08/13 14:02
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/08/13 14:02
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/08/13 14:02
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/08/13 14:02
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/08/13 14:02
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/08/13 14:02
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/08/13 14:02
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/08/13 14:02
2-Chlorophenol	U		0.73	10	µg/L	1	05/08/13 14:02
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/08/13 14:02
2-Methylphenol	U		0.60	10	µg/L	1	05/08/13 14:02
2-Nitroaniline	U		0.11	25	µg/L	1	05/08/13 14:02

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-043013-MJF-001
Collection Date: 04/30/13 03:00 PM

Work Order: 1305208
Lab ID: 1305208-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/08/13 14:02
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/08/13 14:02
3-Nitroaniline	U		2.5	25	µg/L	1	05/08/13 14:02
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/08/13 14:02
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 14:02
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/08/13 14:02
4-Chloroaniline	U		1.1	10	µg/L	1	05/08/13 14:02
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 14:02
4-Methylphenol	U		0.55	10	µg/L	1	05/08/13 14:02
4-Nitroaniline	U		1.5	25	µg/L	1	05/08/13 14:02
4-Nitrophenol	U		1.6	25	µg/L	1	05/08/13 14:02
Acenaphthene	U		0.11	5.0	µg/L	1	05/08/13 14:02
Acenaphthylene	U		0.12	5.0	µg/L	1	05/08/13 14:02
Acetophenone	U		0.090	5.0	µg/L	1	05/08/13 14:02
Anthracene	U		0.72	5.0	µg/L	1	05/08/13 14:02
Atrazine	U		3.2	5.0	µg/L	1	05/08/13 14:02
Benzaldehyde	U		0.46	10	µg/L	1	05/08/13 14:02
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/08/13 14:02
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/08/13 14:02
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/08/13 14:02
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/08/13 14:02
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/08/13 14:02
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/08/13 14:02
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/08/13 14:02
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/08/13 14:02
Bis(2-ethylhexyl)phthalate	1.1	J	0.12	5.0	µg/L	1	05/08/13 14:02
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/08/13 14:02
Caprolactam	U		4.7	10	µg/L	1	05/08/13 14:02
Carbazole	U		0.84	10	µg/L	1	05/08/13 14:02
Chrysene	U		0.71	1.0	µg/L	1	05/08/13 14:02
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/08/13 14:02
Dibenzofuran	U		0.11	4.0	µg/L	1	05/08/13 14:02
Diethyl phthalate	0.92	J	0.69	5.0	µg/L	1	05/08/13 14:02
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/08/13 14:02
Di-n-butyl phthalate	1.7	J	0.71	5.0	µg/L	1	05/08/13 14:02
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/08/13 14:02
Fluoranthene	U		0.77	1.0	µg/L	1	05/08/13 14:02
Fluorene	U		0.10	5.0	µg/L	1	05/08/13 14:02
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/08/13 14:02
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/08/13 14:02

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-043013-MJF-001
Collection Date: 04/30/13 03:00 PM

Work Order: 1305208
Lab ID: 1305208-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/08/13 14:02
Hexachloroethane	U		0.13	5.0	µg/L	1	05/08/13 14:02
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/08/13 14:02
Isophorone	U		0.12	5.0	µg/L	1	05/08/13 14:02
Naphthalene	U		0.12	5.0	µg/L	1	05/08/13 14:02
Nitrobenzene	U		0.10	3.0	µg/L	1	05/08/13 14:02
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/08/13 14:02
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/08/13 14:02
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/08/13 14:02
Phenanthrene	U		0.86	2.0	µg/L	1	05/08/13 14:02
Phenol	U		0.094	5.0	µg/L	1	05/08/13 14:02
Pyrene	U		0.65	5.0	µg/L	1	05/08/13 14:02
Surr: 2,4,6-Tribromophenol	62.4			32-115	%REC	1	05/08/13 14:02
Surr: 2-Fluorobiphenyl	65.9			32-100	%REC	1	05/08/13 14:02
Surr: 2-Fluorophenol	44.2			22-59	%REC	1	05/08/13 14:02
Surr: 4-Terphenyl-d14	89.3			23-112	%REC	1	05/08/13 14:02
Surr: Nitrobenzene-d5	60.5			31-93	%REC	1	05/08/13 14:02
Surr: Phenol-d6	23.8			13-36	%REC	1	05/08/13 14:02
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R120576							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 11:24
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 11:24
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 11:24
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 11:24
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 11:24
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 11:24
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 11:24
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 11:24
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 11:24
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 11:24
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 11:24
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 11:24
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 11:24
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 11:24
2-Butanone	U		0.22	25	µg/L	1	05/11/13 11:24
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 11:24
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 11:24
Acetone	U		0.33	50	µg/L	1	05/11/13 11:24
Benzene	U		0.18	1.0	µg/L	1	05/11/13 11:24

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-043013-MJF-001
Collection Date: 04/30/13 03:00 PM

Work Order: 1305208
Lab ID: 1305208-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 11:24
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 11:24
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 11:24
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 11:24
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 11:24
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 11:24
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 11:24
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 11:24
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 11:24
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 11:24
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 11:24
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 11:24
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 11:24
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 11:24
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 11:24
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 11:24
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 11:24
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 11:24
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 11:24
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 11:24
Styrene	U		0.11	1.0	µg/L	1	05/11/13 11:24
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 11:24
Toluene	U		0.12	1.0	µg/L	1	05/11/13 11:24
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 11:24
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 11:24
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 11:24
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 11:24
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 11:24
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 11:24
Surr: 1,2-Dichloroethane-d4	97.6			70-120	%REC	1	05/11/13 11:24
Surr: 4-Bromofluorobenzene	97.0			75-120	%REC	1	05/11/13 11:24
Surr: Dibromofluoromethane	101			85-115	%REC	1	05/11/13 11:24
Surr: Toluene-d8	98.3			85-120	%REC	1	05/11/13 11:24
CYANIDE, AMENABLE			SW9012A			Prep: SW9014 / 5/8/13	Analyst: JYG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-043013-MJF-002
Collection Date: 04/30/13 04:45 PM

Work Order: 1305208
Lab ID: 1305208-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 13:46
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: RH
<u>BatchID: 48280</u>							
Aluminum	0.0061	J	0.00078	0.050	mg/L	1	05/10/13 01:22
Antimony	0.00043	J	0.000036	0.0020	mg/L	1	05/10/13 01:22
Arsenic	0.015		0.00058	0.0050	mg/L	1	05/10/13 01:22
Barium	1.5		0.000063	0.10	mg/L	1	05/10/13 01:22
Beryllium	U		0.000082	0.0010	mg/L	1	05/10/13 01:22
Cadmium	U		0.000045	0.0010	mg/L	1	05/10/13 01:22
Chromium	0.0011	J	0.00027	0.010	mg/L	1	05/10/13 01:22
Cobalt	0.0028	J	0.000041	0.020	mg/L	1	05/10/13 01:22
Copper	0.0013	J	0.00053	0.0040	mg/L	1	05/10/13 01:22
Iron	17		0.0053	0.20	mg/L	1	05/10/13 01:22
Lead	U		0.000051	0.0030	mg/L	1	05/10/13 01:22
Manganese	0.13		0.000054	0.050	mg/L	1	05/10/13 01:22
Nickel	0.0053	J	0.00025	0.020	mg/L	1	05/10/13 01:22
Selenium	U		0.00064	0.0050	mg/L	1	05/10/13 01:22
Silver	U		0.000042	0.00020	mg/L	1	05/10/13 01:22
Thallium	U		0.000062	0.0020	mg/L	1	05/10/13 01:22
Vanadium	0.0014	J	0.00016	0.0040	mg/L	1	05/10/13 01:22
Zinc	0.0091	J	0.00048	0.050	mg/L	1	05/10/13 01:22
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/7/13	Analyst: HL
<u>BatchID: 48213</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/08/13 14:23
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/08/13 14:23
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/08/13 14:23
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/08/13 14:23
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/08/13 14:23
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/08/13 14:23
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/08/13 14:23
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/08/13 14:23
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/08/13 14:23
2-Chlorophenol	U		0.73	10	µg/L	1	05/08/13 14:23
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/08/13 14:23
2-Methylphenol	U		0.60	10	µg/L	1	05/08/13 14:23
2-Nitroaniline	U		0.11	25	µg/L	1	05/08/13 14:23

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-043013-MJF-002
Collection Date: 04/30/13 04:45 PM

Work Order: 1305208
Lab ID: 1305208-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/08/13 14:23
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/08/13 14:23
3-Nitroaniline	U		2.5	25	µg/L	1	05/08/13 14:23
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/08/13 14:23
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 14:23
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/08/13 14:23
4-Chloroaniline	U		1.1	10	µg/L	1	05/08/13 14:23
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 14:23
4-Methylphenol	U		0.55	10	µg/L	1	05/08/13 14:23
4-Nitroaniline	U		1.5	25	µg/L	1	05/08/13 14:23
4-Nitrophenol	U		1.6	25	µg/L	1	05/08/13 14:23
Acenaphthene	U		0.11	5.0	µg/L	1	05/08/13 14:23
Acenaphthylene	U		0.12	5.0	µg/L	1	05/08/13 14:23
Acetophenone	U		0.090	5.0	µg/L	1	05/08/13 14:23
Anthracene	U		0.72	5.0	µg/L	1	05/08/13 14:23
Atrazine	U		3.2	5.0	µg/L	1	05/08/13 14:23
Benzaldehyde	U		0.46	10	µg/L	1	05/08/13 14:23
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/08/13 14:23
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/08/13 14:23
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/08/13 14:23
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/08/13 14:23
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/08/13 14:23
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/08/13 14:23
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/08/13 14:23
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/08/13 14:23
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/08/13 14:23
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/08/13 14:23
Caprolactam	U		4.7	10	µg/L	1	05/08/13 14:23
Carbazole	U		0.84	10	µg/L	1	05/08/13 14:23
Chrysene	U		0.71	1.0	µg/L	1	05/08/13 14:23
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/08/13 14:23
Dibenzofuran	U		0.11	4.0	µg/L	1	05/08/13 14:23
Diethyl phthalate	1.0	J	0.69	5.0	µg/L	1	05/08/13 14:23
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/08/13 14:23
Di-n-butyl phthalate	1.7	J	0.71	5.0	µg/L	1	05/08/13 14:23
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/08/13 14:23
Fluoranthene	U		0.77	1.0	µg/L	1	05/08/13 14:23
Fluorene	U		0.10	5.0	µg/L	1	05/08/13 14:23
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/08/13 14:23
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/08/13 14:23

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-043013-MJF-002
Collection Date: 04/30/13 04:45 PM

Work Order: 1305208
Lab ID: 1305208-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/08/13 14:23
Hexachloroethane	U		0.13	5.0	µg/L	1	05/08/13 14:23
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/08/13 14:23
Isophorone	U		0.12	5.0	µg/L	1	05/08/13 14:23
Naphthalene	U		0.12	5.0	µg/L	1	05/08/13 14:23
Nitrobenzene	U		0.10	3.0	µg/L	1	05/08/13 14:23
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/08/13 14:23
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/08/13 14:23
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/08/13 14:23
Phenanthrene	U		0.86	2.0	µg/L	1	05/08/13 14:23
Phenol	U		0.094	5.0	µg/L	1	05/08/13 14:23
Pyrene	U		0.65	5.0	µg/L	1	05/08/13 14:23
Surr: 2,4,6-Tribromophenol	68.9			32-115	%REC	1	05/08/13 14:23
Surr: 2-Fluorobiphenyl	63.6			32-100	%REC	1	05/08/13 14:23
Surr: 2-Fluorophenol	39.7			22-59	%REC	1	05/08/13 14:23
Surr: 4-Terphenyl-d14	84.2			23-112	%REC	1	05/08/13 14:23
Surr: Nitrobenzene-d5	57.5			31-93	%REC	1	05/08/13 14:23
Surr: Phenol-d6	22.1			13-36	%REC	1	05/08/13 14:23

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 11:45
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 11:45
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 11:45
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 11:45
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 11:45
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 11:45
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 11:45
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 11:45
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 11:45
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 11:45
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 11:45
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 11:45
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 11:45
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 11:45
2-Butanone	U		0.22	25	µg/L	1	05/11/13 11:45
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 11:45
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 11:45
Acetone	U		0.33	50	µg/L	1	05/11/13 11:45
Benzene	0.66	J	0.18	1.0	µg/L	1	05/11/13 11:45

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-043013-MJF-002
Collection Date: 04/30/13 04:45 PM

Work Order: 1305208
Lab ID: 1305208-02
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 11:45
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 11:45
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 11:45
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 11:45
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 11:45
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 11:45
Chloroethane	7.3		0.46	5.0	µg/L	1	05/11/13 11:45
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 11:45
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 11:45
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 11:45
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 11:45
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 11:45
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 11:45
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 11:45
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 11:45
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 11:45
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 11:45
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 11:45
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 11:45
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 11:45
Styrene	U		0.11	1.0	µg/L	1	05/11/13 11:45
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 11:45
Toluene	U		0.12	1.0	µg/L	1	05/11/13 11:45
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 11:45
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 11:45
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 11:45
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 11:45
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 11:45
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 11:45
Surr: 1,2-Dichloroethane-d4	96.6			70-120	%REC	1	05/11/13 11:45
Surr: 4-Bromofluorobenzene	96.4			75-120	%REC	1	05/11/13 11:45
Surr: Dibromofluoromethane	98.0			85-115	%REC	1	05/11/13 11:45
Surr: Toluene-d8	97.5			85-120	%REC	1	05/11/13 11:45
CYANIDE, AMENABLE			SW9012A		Prep: SW9014 / 5/8/13		Analyst: JJG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-003
Collection Date: 05/01/13 11:15 AM

Work Order: 1305208
Lab ID: 1305208-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 13:48
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: RH
<u>BatchID: 48280</u>							
Aluminum	0.0061	J	0.00078	0.050	mg/L	1	05/10/13 01:27
Antimony	0.00019	J	0.000036	0.0020	mg/L	1	05/10/13 01:27
Arsenic	0.0074		0.00058	0.0050	mg/L	1	05/10/13 01:27
Barium	1.8		0.000063	0.10	mg/L	1	05/10/13 01:27
Beryllium	U		0.000082	0.0010	mg/L	1	05/10/13 01:27
Cadmium	U		0.000045	0.0010	mg/L	1	05/10/13 01:27
Chromium	0.0018	J	0.00027	0.010	mg/L	1	05/10/13 01:27
Cobalt	0.0026	J	0.000041	0.020	mg/L	1	05/10/13 01:27
Copper	U		0.00053	0.0040	mg/L	1	05/10/13 01:27
Iron	17		0.0053	0.20	mg/L	1	05/10/13 01:27
Lead	0.000054	J	0.000051	0.0030	mg/L	1	05/10/13 01:27
Manganese	0.35		0.000054	0.050	mg/L	1	05/10/13 01:27
Nickel	0.0049	J	0.00025	0.020	mg/L	1	05/10/13 01:27
Selenium	0.00066	J	0.00064	0.0050	mg/L	1	05/10/13 01:27
Silver	U		0.000042	0.00020	mg/L	1	05/10/13 01:27
Thallium	U		0.000062	0.0020	mg/L	1	05/10/13 01:27
Vanadium	0.0023	J	0.00016	0.0040	mg/L	1	05/10/13 01:27
Zinc	0.0024	J	0.00048	0.050	mg/L	1	05/10/13 01:27
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/7/13	Analyst: HL
<u>BatchID: 48213</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/08/13 14:45
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/08/13 14:45
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/08/13 14:45
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/08/13 14:45
2,4-Dimethylphenol	0.86	J	0.24	5.0	µg/L	1	05/08/13 14:45
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/08/13 14:45
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/08/13 14:45
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/08/13 14:45
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/08/13 14:45
2-Chlorophenol	U		0.73	10	µg/L	1	05/08/13 14:45
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/08/13 14:45
2-Methylphenol	U		0.60	10	µg/L	1	05/08/13 14:45
2-Nitroaniline	U		0.11	25	µg/L	1	05/08/13 14:45

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-003
Collection Date: 05/01/13 11:15 AM

Work Order: 1305208
Lab ID: 1305208-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/08/13 14:45
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/08/13 14:45
3-Nitroaniline	U		2.5	25	µg/L	1	05/08/13 14:45
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/08/13 14:45
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 14:45
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/08/13 14:45
4-Chloroaniline	U		1.1	10	µg/L	1	05/08/13 14:45
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 14:45
4-Methylphenol	U		0.55	10	µg/L	1	05/08/13 14:45
4-Nitroaniline	U		1.5	25	µg/L	1	05/08/13 14:45
4-Nitrophenol	U		1.6	25	µg/L	1	05/08/13 14:45
Acenaphthene	U		0.11	5.0	µg/L	1	05/08/13 14:45
Acenaphthylene	U		0.12	5.0	µg/L	1	05/08/13 14:45
Acetophenone	U		0.090	5.0	µg/L	1	05/08/13 14:45
Anthracene	U		0.72	5.0	µg/L	1	05/08/13 14:45
Atrazine	U		3.2	5.0	µg/L	1	05/08/13 14:45
Benzaldehyde	U		0.46	10	µg/L	1	05/08/13 14:45
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/08/13 14:45
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/08/13 14:45
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/08/13 14:45
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/08/13 14:45
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/08/13 14:45
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/08/13 14:45
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/08/13 14:45
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/08/13 14:45
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/08/13 14:45
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/08/13 14:45
Caprolactam	U		4.7	10	µg/L	1	05/08/13 14:45
Carbazole	U		0.84	10	µg/L	1	05/08/13 14:45
Chrysene	U		0.71	1.0	µg/L	1	05/08/13 14:45
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/08/13 14:45
Dibenzofuran	U		0.11	4.0	µg/L	1	05/08/13 14:45
Diethyl phthalate	1.0	J	0.69	5.0	µg/L	1	05/08/13 14:45
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/08/13 14:45
Di-n-butyl phthalate	1.7	J	0.71	5.0	µg/L	1	05/08/13 14:45
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/08/13 14:45
Fluoranthene	U		0.77	1.0	µg/L	1	05/08/13 14:45
Fluorene	1.1	J	0.10	5.0	µg/L	1	05/08/13 14:45
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/08/13 14:45
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/08/13 14:45

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-003
Collection Date: 05/01/13 11:15 AM

Work Order: 1305208
Lab ID: 1305208-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/08/13 14:45
Hexachloroethane	U		0.13	5.0	µg/L	1	05/08/13 14:45
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/08/13 14:45
Isophorone	U		0.12	5.0	µg/L	1	05/08/13 14:45
Naphthalene	U		0.12	5.0	µg/L	1	05/08/13 14:45
Nitrobenzene	U		0.10	3.0	µg/L	1	05/08/13 14:45
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/08/13 14:45
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/08/13 14:45
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/08/13 14:45
Phenanthrene	U		0.86	2.0	µg/L	1	05/08/13 14:45
Phenol	U		0.094	5.0	µg/L	1	05/08/13 14:45
Pyrene	U		0.65	5.0	µg/L	1	05/08/13 14:45
Surr: 2,4,6-Tribromophenol	71.1			32-115	%REC	1	05/08/13 14:45
Surr: 2-Fluorobiphenyl	62.1			32-100	%REC	1	05/08/13 14:45
Surr: 2-Fluorophenol	42.7			22-59	%REC	1	05/08/13 14:45
Surr: 4-Terphenyl-d14	97.3			23-112	%REC	1	05/08/13 14:45
Surr: Nitrobenzene-d5	57.5			31-93	%REC	1	05/08/13 14:45
Surr: Phenol-d6	22.5			13-36	%REC	1	05/08/13 14:45
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R120576							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 12:07
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 12:07
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 12:07
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 12:07
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 12:07
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 12:07
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 12:07
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 12:07
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 12:07
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 12:07
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 12:07
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 12:07
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 12:07
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 12:07
2-Butanone	U		0.22	25	µg/L	1	05/11/13 12:07
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 12:07
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 12:07
Acetone	4.3	J	0.33	50	µg/L	1	05/11/13 12:07
Benzene	8.6		0.18	1.0	µg/L	1	05/11/13 12:07

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-003
Collection Date: 05/01/13 11:15 AM

Work Order: 1305208
Lab ID: 1305208-03
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 12:07
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 12:07
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 12:07
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 12:07
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 12:07
Chlorobenzene	25		0.13	1.0	µg/L	1	05/11/13 12:07
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 12:07
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 12:07
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 12:07
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 12:07
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 12:07
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 12:07
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 12:07
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 12:07
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 12:07
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 12:07
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 12:07
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 12:07
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 12:07
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 12:07
Styrene	U		0.11	1.0	µg/L	1	05/11/13 12:07
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 12:07
Toluene	U		0.12	1.0	µg/L	1	05/11/13 12:07
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 12:07
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 12:07
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 12:07
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 12:07
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 12:07
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 12:07
Surr: 1,2-Dichloroethane-d4	99.0			70-120	%REC	1	05/11/13 12:07
Surr: 4-Bromofluorobenzene	96.2			75-120	%REC	1	05/11/13 12:07
Surr: Dibromofluoromethane	101			85-115	%REC	1	05/11/13 12:07
Surr: Toluene-d8	98.0			85-120	%REC	1	05/11/13 12:07
CYANIDE, AMENABLE			SW9012A		Prep: SW9014 / 5/8/13		Analyst: JYG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-004
Collection Date: 05/01/13 12:50 PM

Work Order: 1305208
Lab ID: 1305208-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
BatchID: <u>48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 13:50
METALS BY ICP-MS			SW6020A			Prep: SW3005A / 5/9/13	Analyst: RH
BatchID: <u>48280</u>							
Aluminum	0.015	J	0.00078	0.050	mg/L	1	05/10/13 01:32
Antimony	0.00017	J	0.000036	0.0020	mg/L	1	05/10/13 01:32
Arsenic	0.031		0.00058	0.0050	mg/L	1	05/10/13 01:32
Barium	1.3		0.000063	0.10	mg/L	1	05/10/13 01:32
Beryllium	U		0.000082	0.0010	mg/L	1	05/10/13 01:32
Cadmium	U		0.000045	0.0010	mg/L	1	05/10/13 01:32
Chromium	0.0015	J	0.00027	0.010	mg/L	1	05/10/13 01:32
Cobalt	0.0023	J	0.000041	0.020	mg/L	1	05/10/13 01:32
Copper	U		0.00053	0.0040	mg/L	1	05/10/13 01:32
Iron	5.3		0.0053	0.20	mg/L	1	05/10/13 01:32
Lead	0.00030	J	0.000051	0.0030	mg/L	1	05/10/13 01:32
Manganese	0.056		0.000054	0.050	mg/L	1	05/10/13 01:32
Nickel	0.0035	J	0.00025	0.020	mg/L	1	05/10/13 01:32
Selenium	0.00069	J	0.00064	0.0050	mg/L	1	05/10/13 01:32
Silver	U		0.000042	0.00020	mg/L	1	05/10/13 01:32
Thallium	U		0.000062	0.0020	mg/L	1	05/10/13 01:32
Vanadium	0.0013	J	0.00016	0.0040	mg/L	1	05/10/13 01:32
Zinc	0.0011	J	0.00048	0.050	mg/L	1	05/10/13 01:32
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270			Prep: SW3510 / 5/7/13	Analyst: HL
BatchID: <u>48213</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/08/13 15:07
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/08/13 15:07
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/08/13 15:07
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/08/13 15:07
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/08/13 15:07
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/08/13 15:07
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/08/13 15:07
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/08/13 15:07
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/08/13 15:07
2-Chlorophenol	U		0.73	10	µg/L	1	05/08/13 15:07
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/08/13 15:07
2-Methylphenol	U		0.60	10	µg/L	1	05/08/13 15:07
2-Nitroaniline	U		0.11	25	µg/L	1	05/08/13 15:07

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-004
Collection Date: 05/01/13 12:50 PM

Work Order: 1305208
Lab ID: 1305208-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/08/13 15:07
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/08/13 15:07
3-Nitroaniline	U		2.5	25	µg/L	1	05/08/13 15:07
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/08/13 15:07
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 15:07
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/08/13 15:07
4-Chloroaniline	U		1.1	10	µg/L	1	05/08/13 15:07
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 15:07
4-Methylphenol	U		0.55	10	µg/L	1	05/08/13 15:07
4-Nitroaniline	U		1.5	25	µg/L	1	05/08/13 15:07
4-Nitrophenol	U		1.6	25	µg/L	1	05/08/13 15:07
Acenaphthene	U		0.11	5.0	µg/L	1	05/08/13 15:07
Acenaphthylene	U		0.12	5.0	µg/L	1	05/08/13 15:07
Acetophenone	U		0.090	5.0	µg/L	1	05/08/13 15:07
Anthracene	U		0.72	5.0	µg/L	1	05/08/13 15:07
Atrazine	U		3.2	5.0	µg/L	1	05/08/13 15:07
Benzaldehyde	U		0.46	10	µg/L	1	05/08/13 15:07
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/08/13 15:07
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/08/13 15:07
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/08/13 15:07
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/08/13 15:07
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/08/13 15:07
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/08/13 15:07
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/08/13 15:07
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/08/13 15:07
Bis(2-ethylhexyl)phthalate	1.3	J	0.12	5.0	µg/L	1	05/08/13 15:07
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/08/13 15:07
Caprolactam	U		4.7	10	µg/L	1	05/08/13 15:07
Carbazole	1.2	J	0.84	10	µg/L	1	05/08/13 15:07
Chrysene	U		0.71	1.0	µg/L	1	05/08/13 15:07
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/08/13 15:07
Dibenzofuran	U		0.11	4.0	µg/L	1	05/08/13 15:07
Diethyl phthalate	0.99	J	0.69	5.0	µg/L	1	05/08/13 15:07
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/08/13 15:07
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	05/08/13 15:07
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/08/13 15:07
Fluoranthene	U		0.77	1.0	µg/L	1	05/08/13 15:07
Fluorene	U		0.10	5.0	µg/L	1	05/08/13 15:07
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/08/13 15:07
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/08/13 15:07

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-004
Collection Date: 05/01/13 12:50 PM

Work Order: 1305208
Lab ID: 1305208-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/08/13 15:07
Hexachloroethane	U		0.13	5.0	µg/L	1	05/08/13 15:07
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/08/13 15:07
Isophorone	U		0.12	5.0	µg/L	1	05/08/13 15:07
Naphthalene	U		0.12	5.0	µg/L	1	05/08/13 15:07
Nitrobenzene	U		0.10	3.0	µg/L	1	05/08/13 15:07
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/08/13 15:07
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/08/13 15:07
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/08/13 15:07
Phenanthrene	U		0.86	2.0	µg/L	1	05/08/13 15:07
Phenol	U		0.094	5.0	µg/L	1	05/08/13 15:07
Pyrene	U		0.65	5.0	µg/L	1	05/08/13 15:07
Surr: 2,4,6-Tribromophenol	72.6			32-115	%REC	1	05/08/13 15:07
Surr: 2-Fluorobiphenyl	63.7			32-100	%REC	1	05/08/13 15:07
Surr: 2-Fluorophenol	44.2			22-59	%REC	1	05/08/13 15:07
Surr: 4-Terphenyl-d14	88.1			23-112	%REC	1	05/08/13 15:07
Surr: Nitrobenzene-d5	57.6			31-93	%REC	1	05/08/13 15:07
Surr: Phenol-d6	22.2			13-36	%REC	1	05/08/13 15:07
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R120576							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 12:28
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 12:28
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 12:28
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 12:28
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 12:28
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 12:28
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 12:28
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 12:28
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 12:28
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 12:28
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 12:28
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 12:28
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 12:28
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 12:28
2-Butanone	U		0.22	25	µg/L	1	05/11/13 12:28
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 12:28
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 12:28
Acetone	6.9	J	0.33	50	µg/L	1	05/11/13 12:28
Benzene	U		0.18	1.0	µg/L	1	05/11/13 12:28

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-004
Collection Date: 05/01/13 12:50 PM

Work Order: 1305208
Lab ID: 1305208-04
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 12:28
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 12:28
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 12:28
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 12:28
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 12:28
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 12:28
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 12:28
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 12:28
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 12:28
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 12:28
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 12:28
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 12:28
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 12:28
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 12:28
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 12:28
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 12:28
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 12:28
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 12:28
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 12:28
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 12:28
Styrene	U		0.11	1.0	µg/L	1	05/11/13 12:28
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 12:28
Toluene	U		0.12	1.0	µg/L	1	05/11/13 12:28
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 12:28
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 12:28
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 12:28
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 12:28
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 12:28
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 12:28
Surr: 1,2-Dichloroethane-d4	97.3			70-120	%REC	1	05/11/13 12:28
Surr: 4-Bromofluorobenzene	95.0			75-120	%REC	1	05/11/13 12:28
Surr: Dibromofluoromethane	101			85-115	%REC	1	05/11/13 12:28
Surr: Toluene-d8	99.9			85-120	%REC	1	05/11/13 12:28
CYANIDE, AMENABLE			SW9012A		Prep: SW9014 / 5/8/13		Analyst: JJG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-005
Collection Date: 05/01/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 13:52
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: RH
<u>BatchID: 48280</u>							
Aluminum	0.012	J	0.00078	0.050	mg/L	1	05/10/13 03:00
Antimony	0.00027	J	0.000036	0.0020	mg/L	1	05/10/13 03:00
Arsenic	0.031		0.00058	0.0050	mg/L	1	05/10/13 03:00
Barium	1.3		0.000063	0.10	mg/L	1	05/10/13 03:00
Beryllium	U		0.000082	0.0010	mg/L	1	05/10/13 03:00
Cadmium	U		0.000045	0.0010	mg/L	1	05/10/13 03:00
Chromium	0.0019	J	0.00027	0.010	mg/L	1	05/10/13 03:00
Cobalt	0.0023	J	0.000041	0.020	mg/L	1	05/10/13 03:00
Copper	U		0.00053	0.0040	mg/L	1	05/10/13 03:00
Iron	5.4		0.0053	0.20	mg/L	1	05/10/13 03:00
Lead	0.000061	J	0.000051	0.0030	mg/L	1	05/10/13 03:00
Manganese	0.058		0.000054	0.050	mg/L	1	05/10/13 03:00
Nickel	0.0039	J	0.00025	0.020	mg/L	1	05/10/13 03:00
Selenium	0.00067	J	0.00064	0.0050	mg/L	1	05/10/13 03:00
Silver	U		0.000042	0.00020	mg/L	1	05/10/13 03:00
Thallium	0.000069	J	0.000062	0.0020	mg/L	1	05/10/13 03:00
Vanadium	0.0012	J	0.00016	0.0040	mg/L	1	05/10/13 03:00
Zinc	0.0011	J	0.00048	0.050	mg/L	1	05/10/13 03:00
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/7/13	Analyst: HL
<u>BatchID: 48213</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/08/13 15:28
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/08/13 15:28
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/08/13 15:28
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/08/13 15:28
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/08/13 15:28
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/08/13 15:28
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/08/13 15:28
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/08/13 15:28
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/08/13 15:28
2-Chlorophenol	U		0.73	10	µg/L	1	05/08/13 15:28
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/08/13 15:28
2-Methylphenol	U		0.60	10	µg/L	1	05/08/13 15:28
2-Nitroaniline	U		0.11	25	µg/L	1	05/08/13 15:28

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-005
Collection Date: 05/01/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/08/13 15:28
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/08/13 15:28
3-Nitroaniline	U		2.5	25	µg/L	1	05/08/13 15:28
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/08/13 15:28
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 15:28
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/08/13 15:28
4-Chloroaniline	U		1.1	10	µg/L	1	05/08/13 15:28
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 15:28
4-Methylphenol	U		0.55	10	µg/L	1	05/08/13 15:28
4-Nitroaniline	U		1.5	25	µg/L	1	05/08/13 15:28
4-Nitrophenol	U		1.6	25	µg/L	1	05/08/13 15:28
Acenaphthene	U		0.11	5.0	µg/L	1	05/08/13 15:28
Acenaphthylene	U		0.12	5.0	µg/L	1	05/08/13 15:28
Acetophenone	U		0.090	5.0	µg/L	1	05/08/13 15:28
Anthracene	U		0.72	5.0	µg/L	1	05/08/13 15:28
Atrazine	U		3.2	5.0	µg/L	1	05/08/13 15:28
Benzaldehyde	U		0.46	10	µg/L	1	05/08/13 15:28
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/08/13 15:28
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/08/13 15:28
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/08/13 15:28
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/08/13 15:28
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/08/13 15:28
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/08/13 15:28
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/08/13 15:28
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/08/13 15:28
Bis(2-ethylhexyl)phthalate	1.3	J	0.12	5.0	µg/L	1	05/08/13 15:28
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/08/13 15:28
Caprolactam	U		4.7	10	µg/L	1	05/08/13 15:28
Carbazole	1.2	J	0.84	10	µg/L	1	05/08/13 15:28
Chrysene	U		0.71	1.0	µg/L	1	05/08/13 15:28
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/08/13 15:28
Dibenzofuran	U		0.11	4.0	µg/L	1	05/08/13 15:28
Diethyl phthalate	0.93	J	0.69	5.0	µg/L	1	05/08/13 15:28
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/08/13 15:28
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	05/08/13 15:28
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/08/13 15:28
Fluoranthene	U		0.77	1.0	µg/L	1	05/08/13 15:28
Fluorene	U		0.10	5.0	µg/L	1	05/08/13 15:28
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/08/13 15:28
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/08/13 15:28

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-005
Collection Date: 05/01/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/08/13 15:28
Hexachloroethane	U		0.13	5.0	µg/L	1	05/08/13 15:28
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/08/13 15:28
Isophorone	U		0.12	5.0	µg/L	1	05/08/13 15:28
Naphthalene	U		0.12	5.0	µg/L	1	05/08/13 15:28
Nitrobenzene	U		0.10	3.0	µg/L	1	05/08/13 15:28
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/08/13 15:28
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/08/13 15:28
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/08/13 15:28
Phenanthrene	U		0.86	2.0	µg/L	1	05/08/13 15:28
Phenol	U		0.094	5.0	µg/L	1	05/08/13 15:28
Pyrene	U		0.65	5.0	µg/L	1	05/08/13 15:28
Surr: 2,4,6-Tribromophenol	77.4			32-115	%REC	1	05/08/13 15:28
Surr: 2-Fluorobiphenyl	67.9			32-100	%REC	1	05/08/13 15:28
Surr: 2-Fluorophenol	43.9			22-59	%REC	1	05/08/13 15:28
Surr: 4-Terphenyl-d14	106			23-112	%REC	1	05/08/13 15:28
Surr: Nitrobenzene-d5	65.1			31-93	%REC	1	05/08/13 15:28
Surr: Phenol-d6	23.6			13-36	%REC	1	05/08/13 15:28

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 12:49
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 12:49
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 12:49
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 12:49
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 12:49
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 12:49
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 12:49
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 12:49
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 12:49
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 12:49
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 12:49
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 12:49
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 12:49
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 12:49
2-Butanone	U		0.22	25	µg/L	1	05/11/13 12:49
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 12:49
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 12:49
Acetone	U		0.33	50	µg/L	1	05/11/13 12:49
Benzene	U		0.18	1.0	µg/L	1	05/11/13 12:49

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-005
Collection Date: 05/01/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-05
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 12:49
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 12:49
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 12:49
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 12:49
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 12:49
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 12:49
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 12:49
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 12:49
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 12:49
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 12:49
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 12:49
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 12:49
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 12:49
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 12:49
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 12:49
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 12:49
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 12:49
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 12:49
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 12:49
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 12:49
Styrene	U		0.11	1.0	µg/L	1	05/11/13 12:49
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 12:49
Toluene	U		0.12	1.0	µg/L	1	05/11/13 12:49
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 12:49
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 12:49
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 12:49
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 12:49
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 12:49
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 12:49
Surr: 1,2-Dichloroethane-d4	98.9			70-120	%REC	1	05/11/13 12:49
Surr: 4-Bromofluorobenzene	96.0			75-120	%REC	1	05/11/13 12:49
Surr: Dibromofluoromethane	99.8			85-115	%REC	1	05/11/13 12:49
Surr: Toluene-d8	98.4			85-120	%REC	1	05/11/13 12:49
CYANIDE, AMENABLE			SW9012A			Prep: SW9014 / 5/8/13	Analyst: JYG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-006
Collection Date: 05/01/13 01:10 PM

Work Order: 1305208
Lab ID: 1305208-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:01
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: RH
<u>BatchID: 48280</u>							
Aluminum	0.0024	J	0.00078	0.050	mg/L	1	05/10/13 03:05
Antimony	0.00011	J	0.000036	0.0020	mg/L	1	05/10/13 03:05
Arsenic	U		0.00058	0.0050	mg/L	1	05/10/13 03:05
Barium	0.0031	J	0.000063	0.10	mg/L	1	05/10/13 03:05
Beryllium	U		0.000082	0.0010	mg/L	1	05/10/13 03:05
Cadmium	U		0.000045	0.0010	mg/L	1	05/10/13 03:05
Chromium	0.00059	J	0.00027	0.010	mg/L	1	05/10/13 03:05
Cobalt	0.00079	J	0.000041	0.020	mg/L	1	05/10/13 03:05
Copper	0.00057	J	0.00053	0.0040	mg/L	1	05/10/13 03:05
Iron	0.023	J	0.0053	0.20	mg/L	1	05/10/13 03:05
Lead	0.000053	J	0.000051	0.0030	mg/L	1	05/10/13 03:05
Manganese	0.0023	J	0.000054	0.050	mg/L	1	05/10/13 03:05
Nickel	0.00060	J	0.00025	0.020	mg/L	1	05/10/13 03:05
Selenium	U		0.00064	0.0050	mg/L	1	05/10/13 03:05
Silver	U		0.000042	0.00020	mg/L	1	05/10/13 03:05
Thallium	U		0.000062	0.0020	mg/L	1	05/10/13 03:05
Vanadium	U		0.00016	0.0040	mg/L	1	05/10/13 03:05
Zinc	0.0018	J	0.00048	0.050	mg/L	1	05/10/13 03:05
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/7/13	Analyst: HL
<u>BatchID: 48213</u>							
1,1'-Biphenyl	0.56	J	0.095	10	µg/L	1	05/08/13 15:50
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/08/13 15:50
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/08/13 15:50
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/08/13 15:50
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/08/13 15:50
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/08/13 15:50
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/08/13 15:50
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/08/13 15:50
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/08/13 15:50
2-Chlorophenol	U		0.73	10	µg/L	1	05/08/13 15:50
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/08/13 15:50
2-Methylphenol	U		0.60	10	µg/L	1	05/08/13 15:50
2-Nitroaniline	U		0.11	25	µg/L	1	05/08/13 15:50

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-006
Collection Date: 05/01/13 01:10 PM

Work Order: 1305208
Lab ID: 1305208-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/08/13 15:50
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/08/13 15:50
3-Nitroaniline	U		2.5	25	µg/L	1	05/08/13 15:50
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/08/13 15:50
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 15:50
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/08/13 15:50
4-Chloroaniline	U		1.1	10	µg/L	1	05/08/13 15:50
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 15:50
4-Methylphenol	U		0.55	10	µg/L	1	05/08/13 15:50
4-Nitroaniline	U		1.5	25	µg/L	1	05/08/13 15:50
4-Nitrophenol	U		1.6	25	µg/L	1	05/08/13 15:50
Acenaphthene	U		0.11	5.0	µg/L	1	05/08/13 15:50
Acenaphthylene	U		0.12	5.0	µg/L	1	05/08/13 15:50
Acetophenone	U		0.090	5.0	µg/L	1	05/08/13 15:50
Anthracene	U		0.72	5.0	µg/L	1	05/08/13 15:50
Atrazine	U		3.2	5.0	µg/L	1	05/08/13 15:50
Benzaldehyde	U		0.46	10	µg/L	1	05/08/13 15:50
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/08/13 15:50
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/08/13 15:50
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/08/13 15:50
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/08/13 15:50
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/08/13 15:50
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/08/13 15:50
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/08/13 15:50
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/08/13 15:50
Bis(2-ethylhexyl)phthalate	1.1	J	0.12	5.0	µg/L	1	05/08/13 15:50
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/08/13 15:50
Caprolactam	U		4.7	10	µg/L	1	05/08/13 15:50
Carbazole	U		0.84	10	µg/L	1	05/08/13 15:50
Chrysene	U		0.71	1.0	µg/L	1	05/08/13 15:50
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/08/13 15:50
Dibenzofuran	U		0.11	4.0	µg/L	1	05/08/13 15:50
Diethyl phthalate	0.89	J	0.69	5.0	µg/L	1	05/08/13 15:50
Dimethyl phthalate	0.88	J	0.14	5.0	µg/L	1	05/08/13 15:50
Di-n-butyl phthalate	1.7	J	0.71	5.0	µg/L	1	05/08/13 15:50
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/08/13 15:50
Fluoranthene	U		0.77	1.0	µg/L	1	05/08/13 15:50
Fluorene	U		0.10	5.0	µg/L	1	05/08/13 15:50
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/08/13 15:50
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/08/13 15:50

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-006
Collection Date: 05/01/13 01:10 PM

Work Order: 1305208
Lab ID: 1305208-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/08/13 15:50
Hexachloroethane	U		0.13	5.0	µg/L	1	05/08/13 15:50
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/08/13 15:50
Isophorone	U		0.12	5.0	µg/L	1	05/08/13 15:50
Naphthalene	U		0.12	5.0	µg/L	1	05/08/13 15:50
Nitrobenzene	U		0.10	3.0	µg/L	1	05/08/13 15:50
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/08/13 15:50
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/08/13 15:50
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/08/13 15:50
Phenanthrene	U		0.86	2.0	µg/L	1	05/08/13 15:50
Phenol	U		0.094	5.0	µg/L	1	05/08/13 15:50
Pyrene	U		0.65	5.0	µg/L	1	05/08/13 15:50
Surr: 2,4,6-Tribromophenol	57.0			32-115	%REC	1	05/08/13 15:50
Surr: 2-Fluorobiphenyl	56.2			32-100	%REC	1	05/08/13 15:50
Surr: 2-Fluorophenol	38.5			22-59	%REC	1	05/08/13 15:50
Surr: 4-Terphenyl-d14	98.4			23-112	%REC	1	05/08/13 15:50
Surr: Nitrobenzene-d5	56.5			31-93	%REC	1	05/08/13 15:50
Surr: Phenol-d6	20.0			13-36	%REC	1	05/08/13 15:50

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 13:11
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 13:11
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 13:11
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 13:11
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 13:11
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 13:11
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 13:11
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 13:11
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 13:11
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 13:11
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 13:11
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 13:11
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 13:11
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 13:11
2-Butanone	6.2	J	0.22	25	µg/L	1	05/11/13 13:11
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 13:11
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 13:11
Acetone	4.4	J	0.33	50	µg/L	1	05/11/13 13:11
Benzene	U		0.18	1.0	µg/L	1	05/11/13 13:11

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-006
Collection Date: 05/01/13 01:10 PM

Work Order: 1305208
Lab ID: 1305208-06
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 13:11
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 13:11
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 13:11
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 13:11
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 13:11
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 13:11
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 13:11
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 13:11
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 13:11
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 13:11
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 13:11
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 13:11
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 13:11
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 13:11
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 13:11
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 13:11
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 13:11
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 13:11
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 13:11
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 13:11
Styrene	U		0.11	1.0	µg/L	1	05/11/13 13:11
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 13:11
Toluene	U		0.12	1.0	µg/L	1	05/11/13 13:11
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 13:11
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 13:11
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 13:11
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 13:11
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 13:11
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 13:11
Surr: 1,2-Dichloroethane-d4	98.6			70-120	%REC	1	05/11/13 13:11
Surr: 4-Bromofluorobenzene	96.0			75-120	%REC	1	05/11/13 13:11
Surr: Dibromofluoromethane	101			85-115	%REC	1	05/11/13 13:11
Surr: Toluene-d8	96.0			85-120	%REC	1	05/11/13 13:11
CYANIDE, AMENABLE			SW9012A		Prep: SW9014 / 5/8/13		Analyst: JJG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-007
Collection Date: 05/01/13 03:45 PM

Work Order: 1305208
Lab ID: 1305208-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:07
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: RH
<u>BatchID: 48280</u>							
Aluminum	0.0066	J	0.00078	0.050	mg/L	1	05/10/13 03:11
Antimony	0.00020	J	0.000036	0.0020	mg/L	1	05/10/13 03:11
Arsenic	0.044		0.00058	0.0050	mg/L	1	05/10/13 03:11
Beryllium	U		0.000082	0.0010	mg/L	1	05/10/13 03:11
Cadmium	U		0.000045	0.0010	mg/L	1	05/10/13 03:11
Chromium	0.0019	J	0.00027	0.010	mg/L	1	05/10/13 03:11
Cobalt	0.0024	J	0.000041	0.020	mg/L	1	05/10/13 03:11
Copper	0.00071	J	0.00053	0.0040	mg/L	1	05/10/13 03:11
Iron	28		0.0053	0.20	mg/L	1	05/10/13 03:11
Lead	0.000053	J	0.000051	0.0030	mg/L	1	05/10/13 03:11
Manganese	0.76		0.000054	0.050	mg/L	1	05/10/13 03:11
Nickel	0.0063	J	0.00025	0.020	mg/L	1	05/10/13 03:11
Selenium	U		0.00064	0.0050	mg/L	1	05/10/13 03:11
Silver	U		0.000042	0.00020	mg/L	1	05/10/13 03:11
Thallium	U		0.000062	0.0020	mg/L	1	05/10/13 03:11
Vanadium	0.0012	J	0.00016	0.0040	mg/L	1	05/10/13 03:11
Zinc	0.0075	J	0.00048	0.050	mg/L	1	05/10/13 03:11
<u>BatchID: 48280</u>							
Barium	1.7		0.00063	1.0	mg/L	10	05/10/13 15:39
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/7/13	Analyst: HL
<u>BatchID: 48213</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/08/13 16:11
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/08/13 16:11
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/08/13 16:11
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/08/13 16:11
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/08/13 16:11
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/08/13 16:11
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/08/13 16:11
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/08/13 16:11
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/08/13 16:11
2-Chlorophenol	U		0.73	10	µg/L	1	05/08/13 16:11
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/08/13 16:11
2-Methylphenol	U		0.60	10	µg/L	1	05/08/13 16:11

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-007
Collection Date: 05/01/13 03:45 PM

Work Order: 1305208
Lab ID: 1305208-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitroaniline	U		0.11	25	µg/L	1	05/08/13 16:11
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/08/13 16:11
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/08/13 16:11
3-Nitroaniline	U		2.5	25	µg/L	1	05/08/13 16:11
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/08/13 16:11
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 16:11
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/08/13 16:11
4-Chloroaniline	U		1.1	10	µg/L	1	05/08/13 16:11
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 16:11
4-Methylphenol	U		0.55	10	µg/L	1	05/08/13 16:11
4-Nitroaniline	U		1.5	25	µg/L	1	05/08/13 16:11
4-Nitrophenol	U		1.6	25	µg/L	1	05/08/13 16:11
Acenaphthene	U		0.11	5.0	µg/L	1	05/08/13 16:11
Acenaphthylene	U		0.12	5.0	µg/L	1	05/08/13 16:11
Acetophenone	U		0.090	5.0	µg/L	1	05/08/13 16:11
Anthracene	U		0.72	5.0	µg/L	1	05/08/13 16:11
Atrazine	U		3.2	5.0	µg/L	1	05/08/13 16:11
Benzaldehyde	U		0.46	10	µg/L	1	05/08/13 16:11
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/08/13 16:11
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/08/13 16:11
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/08/13 16:11
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/08/13 16:11
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/08/13 16:11
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/08/13 16:11
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/08/13 16:11
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/08/13 16:11
Bis(2-ethylhexyl)phthalate	1.1	J	0.12	5.0	µg/L	1	05/08/13 16:11
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/08/13 16:11
Caprolactam	U		4.7	10	µg/L	1	05/08/13 16:11
Carbazole	U		0.84	10	µg/L	1	05/08/13 16:11
Chrysene	U		0.71	1.0	µg/L	1	05/08/13 16:11
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/08/13 16:11
Dibenzofuran	U		0.11	4.0	µg/L	1	05/08/13 16:11
Diethyl phthalate	0.91	J	0.69	5.0	µg/L	1	05/08/13 16:11
Dimethyl phthalate	0.92	J	0.14	5.0	µg/L	1	05/08/13 16:11
Di-n-butyl phthalate	1.7	J	0.71	5.0	µg/L	1	05/08/13 16:11
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/08/13 16:11
Fluoranthene	U		0.77	1.0	µg/L	1	05/08/13 16:11
Fluorene	U		0.10	5.0	µg/L	1	05/08/13 16:11
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/08/13 16:11

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-007
Collection Date: 05/01/13 03:45 PM

Work Order: 1305208
Lab ID: 1305208-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/08/13 16:11
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/08/13 16:11
Hexachloroethane	U		0.13	5.0	µg/L	1	05/08/13 16:11
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/08/13 16:11
Isophorone	U		0.12	5.0	µg/L	1	05/08/13 16:11
Naphthalene	U		0.12	5.0	µg/L	1	05/08/13 16:11
Nitrobenzene	U		0.10	3.0	µg/L	1	05/08/13 16:11
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/08/13 16:11
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/08/13 16:11
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/08/13 16:11
Phenanthrene	U		0.86	2.0	µg/L	1	05/08/13 16:11
Phenol	U		0.094	5.0	µg/L	1	05/08/13 16:11
Pyrene	U		0.65	5.0	µg/L	1	05/08/13 16:11
Surr: 2,4,6-Tribromophenol	69.9			32-115	%REC	1	05/08/13 16:11
Surr: 2-Fluorobiphenyl	63.3			32-100	%REC	1	05/08/13 16:11
Surr: 2-Fluorophenol	42.5			22-59	%REC	1	05/08/13 16:11
Surr: 4-Terphenyl-d14	94.3			23-112	%REC	1	05/08/13 16:11
Surr: Nitrobenzene-d5	56.6			31-93	%REC	1	05/08/13 16:11
Surr: Phenol-d6	22.3			13-36	%REC	1	05/08/13 16:11

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 13:32
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 13:32
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 13:32
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 13:32
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 13:32
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 13:32
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 13:32
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 13:32
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 13:32
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 13:32
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 13:32
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 13:32
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 13:32
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 13:32
2-Butanone	U		0.22	25	µg/L	1	05/11/13 13:32
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 13:32
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 13:32
Acetone	U		0.33	50	µg/L	1	05/11/13 13:32

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050113-MJF-007
Collection Date: 05/01/13 03:45 PM

Work Order: 1305208
Lab ID: 1305208-07
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzene	U		0.18	1.0	µg/L	1	05/11/13 13:32
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 13:32
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 13:32
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 13:32
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 13:32
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 13:32
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 13:32
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 13:32
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 13:32
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 13:32
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 13:32
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 13:32
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 13:32
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 13:32
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 13:32
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 13:32
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 13:32
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 13:32
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 13:32
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 13:32
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 13:32
Styrene	U		0.11	1.0	µg/L	1	05/11/13 13:32
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 13:32
Toluene	U		0.12	1.0	µg/L	1	05/11/13 13:32
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 13:32
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 13:32
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 13:32
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 13:32
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 13:32
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 13:32
Surr: 1,2-Dichloroethane-d4	95.4			70-120	%REC	1	05/11/13 13:32
Surr: 4-Bromofluorobenzene	96.2			75-120	%REC	1	05/11/13 13:32
Surr: Dibromofluoromethane	98.7			85-115	%REC	1	05/11/13 13:32
Surr: Toluene-d8	99.0			85-120	%REC	1	05/11/13 13:32
CYANIDE, AMENABLE			SW9012A			Prep: SW9014 / 5/8/13	Analyst: JYG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-008
Collection Date: 05/02/13 10:30 AM

Work Order: 1305208
Lab ID: 1305208-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:09
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: RH
<u>BatchID: 48280</u>							
Aluminum	0.0064	J	0.00078	0.050	mg/L	1	05/10/13 03:16
Antimony	0.00084	J	0.000036	0.0020	mg/L	1	05/10/13 03:16
Arsenic	0.00087	J	0.00058	0.0050	mg/L	1	05/10/13 03:16
Barium	0.45		0.000063	0.10	mg/L	1	05/10/13 03:16
Beryllium	U		0.000082	0.0010	mg/L	1	05/10/13 03:16
Cadmium	U		0.000045	0.0010	mg/L	1	05/10/13 03:16
Chromium	0.0014	J	0.00027	0.010	mg/L	1	05/10/13 03:16
Cobalt	0.0034	J	0.000041	0.020	mg/L	1	05/10/13 03:16
Copper	0.0021	J	0.00053	0.0040	mg/L	1	05/10/13 03:16
Iron	3.4		0.0053	0.20	mg/L	1	05/10/13 03:16
Lead	0.000074	J	0.000051	0.0030	mg/L	1	05/10/13 03:16
Manganese	0.53		0.000054	0.050	mg/L	1	05/10/13 03:16
Nickel	0.011	J	0.00025	0.020	mg/L	1	05/10/13 03:16
Selenium	U		0.00064	0.0050	mg/L	1	05/10/13 03:16
Silver	U		0.000042	0.00020	mg/L	1	05/10/13 03:16
Thallium	U		0.000062	0.0020	mg/L	1	05/10/13 03:16
Vanadium	0.0012	J	0.00016	0.0040	mg/L	1	05/10/13 03:16
Zinc	0.040	J	0.00048	0.050	mg/L	1	05/10/13 03:16
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/7/13	Analyst: HL
<u>BatchID: 48213</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/08/13 16:33
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/08/13 16:33
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/08/13 16:33
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/08/13 16:33
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/08/13 16:33
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/08/13 16:33
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/08/13 16:33
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/08/13 16:33
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/08/13 16:33
2-Chlorophenol	U		0.73	10	µg/L	1	05/08/13 16:33
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/08/13 16:33
2-Methylphenol	U		0.60	10	µg/L	1	05/08/13 16:33
2-Nitroaniline	U		0.11	25	µg/L	1	05/08/13 16:33

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-008
Collection Date: 05/02/13 10:30 AM

Work Order: 1305208
Lab ID: 1305208-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/08/13 16:33
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/08/13 16:33
3-Nitroaniline	U		2.5	25	µg/L	1	05/08/13 16:33
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/08/13 16:33
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 16:33
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/08/13 16:33
4-Chloroaniline	U		1.1	10	µg/L	1	05/08/13 16:33
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/08/13 16:33
4-Methylphenol	U		0.55	10	µg/L	1	05/08/13 16:33
4-Nitroaniline	U		1.5	25	µg/L	1	05/08/13 16:33
4-Nitrophenol	U		1.6	25	µg/L	1	05/08/13 16:33
Acenaphthene	U		0.11	5.0	µg/L	1	05/08/13 16:33
Acenaphthylene	U		0.12	5.0	µg/L	1	05/08/13 16:33
Acetophenone	U		0.090	5.0	µg/L	1	05/08/13 16:33
Anthracene	U		0.72	5.0	µg/L	1	05/08/13 16:33
Atrazine	U		3.2	5.0	µg/L	1	05/08/13 16:33
Benzaldehyde	U		0.46	10	µg/L	1	05/08/13 16:33
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/08/13 16:33
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/08/13 16:33
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/08/13 16:33
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/08/13 16:33
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/08/13 16:33
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/08/13 16:33
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/08/13 16:33
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/08/13 16:33
Bis(2-ethylhexyl)phthalate	1.1	J	0.12	5.0	µg/L	1	05/08/13 16:33
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/08/13 16:33
Caprolactam	U		4.7	10	µg/L	1	05/08/13 16:33
Carbazole	U		0.84	10	µg/L	1	05/08/13 16:33
Chrysene	U		0.71	1.0	µg/L	1	05/08/13 16:33
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/08/13 16:33
Dibenzofuran	U		0.11	4.0	µg/L	1	05/08/13 16:33
Diethyl phthalate	0.95	J	0.69	5.0	µg/L	1	05/08/13 16:33
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/08/13 16:33
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	05/08/13 16:33
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/08/13 16:33
Fluoranthene	U		0.77	1.0	µg/L	1	05/08/13 16:33
Fluorene	U		0.10	5.0	µg/L	1	05/08/13 16:33
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/08/13 16:33
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/08/13 16:33

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-008
Collection Date: 05/02/13 10:30 AM

Work Order: 1305208
Lab ID: 1305208-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/08/13 16:33
Hexachloroethane	U		0.13	5.0	µg/L	1	05/08/13 16:33
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/08/13 16:33
Isophorone	U		0.12	5.0	µg/L	1	05/08/13 16:33
Naphthalene	U		0.12	5.0	µg/L	1	05/08/13 16:33
Nitrobenzene	U		0.10	3.0	µg/L	1	05/08/13 16:33
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/08/13 16:33
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/08/13 16:33
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/08/13 16:33
Phenanthrene	U		0.86	2.0	µg/L	1	05/08/13 16:33
Phenol	U		0.094	5.0	µg/L	1	05/08/13 16:33
Pyrene	U		0.65	5.0	µg/L	1	05/08/13 16:33
Surr: 2,4,6-Tribromophenol	68.5			32-115	%REC	1	05/08/13 16:33
Surr: 2-Fluorobiphenyl	65.2			32-100	%REC	1	05/08/13 16:33
Surr: 2-Fluorophenol	38.8			22-59	%REC	1	05/08/13 16:33
Surr: 4-Terphenyl-d14	81.3			23-112	%REC	1	05/08/13 16:33
Surr: Nitrobenzene-d5	51.7			31-93	%REC	1	05/08/13 16:33
Surr: Phenol-d6	21.2			13-36	%REC	1	05/08/13 16:33

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 13:54
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 13:54
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 13:54
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 13:54
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 13:54
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 13:54
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 13:54
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 13:54
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 13:54
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 13:54
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 13:54
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 13:54
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 13:54
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 13:54
2-Butanone	U		0.22	25	µg/L	1	05/11/13 13:54
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 13:54
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 13:54
Acetone	U		0.33	50	µg/L	1	05/11/13 13:54
Benzene	U		0.18	1.0	µg/L	1	05/11/13 13:54

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-008
Collection Date: 05/02/13 10:30 AM

Work Order: 1305208
Lab ID: 1305208-08
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 13:54
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 13:54
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 13:54
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 13:54
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 13:54
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 13:54
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 13:54
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 13:54
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 13:54
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 13:54
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 13:54
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 13:54
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 13:54
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 13:54
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 13:54
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 13:54
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 13:54
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 13:54
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 13:54
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 13:54
Styrene	U		0.11	1.0	µg/L	1	05/11/13 13:54
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 13:54
Toluene	U		0.12	1.0	µg/L	1	05/11/13 13:54
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 13:54
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 13:54
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 13:54
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 13:54
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 13:54
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 13:54
Surr: 1,2-Dichloroethane-d4	97.4			70-120	%REC	1	05/11/13 13:54
Surr: 4-Bromofluorobenzene	96.6			75-120	%REC	1	05/11/13 13:54
Surr: Dibromofluoromethane	99.2			85-115	%REC	1	05/11/13 13:54
Surr: Toluene-d8	99.4			85-120	%REC	1	05/11/13 13:54
CYANIDE, AMENABLE			SW9012A		Prep: SW9014 / 5/8/13		Analyst: JYG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-009
Collection Date: 05/02/13 11:45 AM

Work Order: 1305208
Lab ID: 1305208-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:11
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: ML
<u>BatchID: 48285</u>							
Aluminum	0.010	J	0.00078	0.050	mg/L	1	05/09/13 22:18
Antimony	0.00051	J	0.000036	0.0020	mg/L	1	05/09/13 22:18
Arsenic	0.0015	J	0.00058	0.0050	mg/L	1	05/09/13 22:18
Barium	0.22		0.000063	0.10	mg/L	1	05/09/13 22:18
Beryllium	U		0.000082	0.0010	mg/L	1	05/09/13 22:18
Cadmium	0.000047	J	0.000045	0.0010	mg/L	1	05/09/13 22:18
Chromium	0.00086	J	0.00027	0.010	mg/L	1	05/09/13 22:18
Cobalt	0.0015	J	0.000041	0.020	mg/L	1	05/09/13 22:18
Copper	0.0032	J	0.00053	0.0040	mg/L	1	05/09/13 22:18
Iron	2.0		0.0053	0.20	mg/L	1	05/09/13 22:18
Lead	0.00011	J	0.000051	0.0030	mg/L	1	05/09/13 22:18
Manganese	0.067		0.000054	0.050	mg/L	1	05/09/13 22:18
Nickel	0.0049	J	0.00025	0.020	mg/L	1	05/09/13 22:18
Selenium	0.00098	J	0.00064	0.0050	mg/L	1	05/09/13 22:18
Silver	U		0.000042	0.00020	mg/L	1	05/09/13 22:18
Thallium	0.00049	J	0.000062	0.0020	mg/L	1	05/09/13 22:18
Vanadium	0.00053	J	0.00016	0.0040	mg/L	1	05/09/13 22:18
Zinc	0.0023	J	0.00048	0.050	mg/L	1	05/09/13 22:18
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/8/13	Analyst: RM
<u>BatchID: 48246</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/09/13 10:26
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/09/13 10:26
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/09/13 10:26
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/09/13 10:26
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/09/13 10:26
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/09/13 10:26
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/09/13 10:26
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/09/13 10:26
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/09/13 10:26
2-Chlorophenol	U		0.73	10	µg/L	1	05/09/13 10:26
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/09/13 10:26
2-Methylphenol	U		0.60	10	µg/L	1	05/09/13 10:26
2-Nitroaniline	U		0.11	25	µg/L	1	05/09/13 10:26

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-009
Collection Date: 05/02/13 11:45 AM

Work Order: 1305208
Lab ID: 1305208-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/09/13 10:26
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/09/13 10:26
3-Nitroaniline	U		2.5	25	µg/L	1	05/09/13 10:26
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/09/13 10:26
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 10:26
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/09/13 10:26
4-Chloroaniline	U		1.1	10	µg/L	1	05/09/13 10:26
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 10:26
4-Methylphenol	U		0.55	10	µg/L	1	05/09/13 10:26
4-Nitroaniline	U		1.5	25	µg/L	1	05/09/13 10:26
4-Nitrophenol	U		1.6	25	µg/L	1	05/09/13 10:26
Acenaphthene	U		0.11	5.0	µg/L	1	05/09/13 10:26
Acenaphthylene	U		0.12	5.0	µg/L	1	05/09/13 10:26
Acetophenone	U		0.090	5.0	µg/L	1	05/09/13 10:26
Anthracene	U		0.72	5.0	µg/L	1	05/09/13 10:26
Atrazine	U		3.2	5.0	µg/L	1	05/09/13 10:26
Benzaldehyde	U		0.46	10	µg/L	1	05/09/13 10:26
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/09/13 10:26
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/09/13 10:26
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/09/13 10:26
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/09/13 10:26
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/09/13 10:26
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/09/13 10:26
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/09/13 10:26
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/09/13 10:26
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/09/13 10:26
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/09/13 10:26
Caprolactam	U		4.7	10	µg/L	1	05/09/13 10:26
Carbazole	U		0.84	10	µg/L	1	05/09/13 10:26
Chrysene	U		0.71	1.0	µg/L	1	05/09/13 10:26
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/09/13 10:26
Dibenzofuran	U		0.11	4.0	µg/L	1	05/09/13 10:26
Diethyl phthalate	U		0.69	5.0	µg/L	1	05/09/13 10:26
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/09/13 10:26
Di-n-butyl phthalate	1.4	J	0.71	5.0	µg/L	1	05/09/13 10:26
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/09/13 10:26
Fluoranthene	U		0.77	1.0	µg/L	1	05/09/13 10:26
Fluorene	U		0.10	5.0	µg/L	1	05/09/13 10:26
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/09/13 10:26
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/09/13 10:26

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-009
Collection Date: 05/02/13 11:45 AM

Work Order: 1305208
Lab ID: 1305208-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/09/13 10:26
Hexachloroethane	U		0.13	5.0	µg/L	1	05/09/13 10:26
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/09/13 10:26
Isophorone	U		0.12	5.0	µg/L	1	05/09/13 10:26
Naphthalene	U		0.12	5.0	µg/L	1	05/09/13 10:26
Nitrobenzene	U		0.10	3.0	µg/L	1	05/09/13 10:26
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/09/13 10:26
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/09/13 10:26
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/09/13 10:26
Phenanthrene	U		0.86	2.0	µg/L	1	05/09/13 10:26
Phenol	U		0.094	5.0	µg/L	1	05/09/13 10:26
Pyrene	U		0.65	5.0	µg/L	1	05/09/13 10:26
Surr: 2,4,6-Tribromophenol	64.1			32-115	%REC	1	05/09/13 10:26
Surr: 2-Fluorobiphenyl	63.9			32-100	%REC	1	05/09/13 10:26
Surr: 2-Fluorophenol	37.0			22-59	%REC	1	05/09/13 10:26
Surr: 4-Terphenyl-d14	88.7			23-112	%REC	1	05/09/13 10:26
Surr: Nitrobenzene-d5	65.7			31-93	%REC	1	05/09/13 10:26
Surr: Phenol-d6	23.9			13-36	%REC	1	05/09/13 10:26
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R120576							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 14:15
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 14:15
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 14:15
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 14:15
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 14:15
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 14:15
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 14:15
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 14:15
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 14:15
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 14:15
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 14:15
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 14:15
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 14:15
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 14:15
2-Butanone	U		0.22	25	µg/L	1	05/11/13 14:15
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 14:15
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 14:15
Acetone	U		0.33	50	µg/L	1	05/11/13 14:15
Benzene	U		0.18	1.0	µg/L	1	05/11/13 14:15

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-009
Collection Date: 05/02/13 11:45 AM

Work Order: 1305208
Lab ID: 1305208-09
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 14:15
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 14:15
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 14:15
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 14:15
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 14:15
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 14:15
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 14:15
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 14:15
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 14:15
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 14:15
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 14:15
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 14:15
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 14:15
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 14:15
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 14:15
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 14:15
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 14:15
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 14:15
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 14:15
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 14:15
Styrene	U		0.11	1.0	µg/L	1	05/11/13 14:15
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 14:15
Toluene	U		0.12	1.0	µg/L	1	05/11/13 14:15
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 14:15
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 14:15
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 14:15
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 14:15
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 14:15
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 14:15
Surr: 1,2-Dichloroethane-d4	96.6			70-120	%REC	1	05/11/13 14:15
Surr: 4-Bromofluorobenzene	94.6			75-120	%REC	1	05/11/13 14:15
Surr: Dibromofluoromethane	101			85-115	%REC	1	05/11/13 14:15
Surr: Toluene-d8	97.2			85-120	%REC	1	05/11/13 14:15
CYANIDE, AMENABLE			SW9012A	Prep: SW9014 / 5/8/13		Analyst: JYG	
<u>BatchID: 48261</u>							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-010
Collection Date: 05/02/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA			SW7470		Prep: SW7470 / 5/13/13		Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:13
METALS BY ICP-MS			SW6020A		Prep: SW3005A / 5/9/13		Analyst: ML
<u>BatchID: 48285</u>							
Aluminum	0.013	J	0.00078	0.050	mg/L	1	05/09/13 22:24
Antimony	0.00021	J	0.000036	0.0020	mg/L	1	05/09/13 22:24
Arsenic	U		0.00058	0.0050	mg/L	1	05/09/13 22:24
Barium	0.41		0.000063	0.10	mg/L	1	05/09/13 22:24
Beryllium	U		0.000082	0.0010	mg/L	1	05/09/13 22:24
Cadmium	U		0.000045	0.0010	mg/L	1	05/09/13 22:24
Chromium	0.00084	J	0.00027	0.010	mg/L	1	05/09/13 22:24
Cobalt	0.0027	J	0.000041	0.020	mg/L	1	05/09/13 22:24
Copper	U		0.00053	0.0040	mg/L	1	05/09/13 22:24
Iron	11		0.0053	0.20	mg/L	1	05/09/13 22:24
Lead	U		0.000051	0.0030	mg/L	1	05/09/13 22:24
Manganese	0.49		0.000054	0.050	mg/L	1	05/09/13 22:24
Nickel	0.0028	J	0.00025	0.020	mg/L	1	05/09/13 22:24
Selenium	U		0.00064	0.0050	mg/L	1	05/09/13 22:24
Silver	U		0.000042	0.00020	mg/L	1	05/09/13 22:24
Thallium	U		0.000062	0.0020	mg/L	1	05/09/13 22:24
Vanadium	0.00085	J	0.00016	0.0040	mg/L	1	05/09/13 22:24
Zinc	0.0011	J	0.00048	0.050	mg/L	1	05/09/13 22:24
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270		Prep: SW3510 / 5/8/13		Analyst: RM
<u>BatchID: 48246</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/09/13 10:46
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/09/13 10:46
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/09/13 10:46
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/09/13 10:46
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/09/13 10:46
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/09/13 10:46
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/09/13 10:46
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/09/13 10:46
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/09/13 10:46
2-Chlorophenol	U		0.73	10	µg/L	1	05/09/13 10:46
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/09/13 10:46
2-Methylphenol	U		0.60	10	µg/L	1	05/09/13 10:46
2-Nitroaniline	U		0.11	25	µg/L	1	05/09/13 10:46

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-010
Collection Date: 05/02/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/09/13 10:46
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/09/13 10:46
3-Nitroaniline	U		2.5	25	µg/L	1	05/09/13 10:46
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/09/13 10:46
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 10:46
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/09/13 10:46
4-Chloroaniline	U		1.1	10	µg/L	1	05/09/13 10:46
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 10:46
4-Methylphenol	U		0.55	10	µg/L	1	05/09/13 10:46
4-Nitroaniline	U		1.5	25	µg/L	1	05/09/13 10:46
4-Nitrophenol	U		1.6	25	µg/L	1	05/09/13 10:46
Acenaphthene	U		0.11	5.0	µg/L	1	05/09/13 10:46
Acenaphthylene	U		0.12	5.0	µg/L	1	05/09/13 10:46
Acetophenone	U		0.090	5.0	µg/L	1	05/09/13 10:46
Anthracene	U		0.72	5.0	µg/L	1	05/09/13 10:46
Atrazine	U		3.2	5.0	µg/L	1	05/09/13 10:46
Benzaldehyde	U		0.46	10	µg/L	1	05/09/13 10:46
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/09/13 10:46
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/09/13 10:46
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/09/13 10:46
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/09/13 10:46
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/09/13 10:46
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/09/13 10:46
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/09/13 10:46
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/09/13 10:46
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/09/13 10:46
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/09/13 10:46
Caprolactam	U		4.7	10	µg/L	1	05/09/13 10:46
Carbazole	U		0.84	10	µg/L	1	05/09/13 10:46
Chrysene	U		0.71	1.0	µg/L	1	05/09/13 10:46
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/09/13 10:46
Dibenzofuran	U		0.11	4.0	µg/L	1	05/09/13 10:46
Diethyl phthalate	U		0.69	5.0	µg/L	1	05/09/13 10:46
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/09/13 10:46
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	05/09/13 10:46
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/09/13 10:46
Fluoranthene	U		0.77	1.0	µg/L	1	05/09/13 10:46
Fluorene	U		0.10	5.0	µg/L	1	05/09/13 10:46
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/09/13 10:46
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/09/13 10:46

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-010
Collection Date: 05/02/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/09/13 10:46
Hexachloroethane	U		0.13	5.0	µg/L	1	05/09/13 10:46
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/09/13 10:46
Isophorone	U		0.12	5.0	µg/L	1	05/09/13 10:46
Naphthalene	U		0.12	5.0	µg/L	1	05/09/13 10:46
Nitrobenzene	U		0.10	3.0	µg/L	1	05/09/13 10:46
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/09/13 10:46
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/09/13 10:46
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/09/13 10:46
Phenanthrene	U		0.86	2.0	µg/L	1	05/09/13 10:46
Phenol	U		0.094	5.0	µg/L	1	05/09/13 10:46
Pyrene	U		0.65	5.0	µg/L	1	05/09/13 10:46
Surr: 2,4,6-Tribromophenol	68.0			32-115	%REC	1	05/09/13 10:46
Surr: 2-Fluorobiphenyl	62.9			32-100	%REC	1	05/09/13 10:46
Surr: 2-Fluorophenol	37.9			22-59	%REC	1	05/09/13 10:46
Surr: 4-Terphenyl-d14	75.7			23-112	%REC	1	05/09/13 10:46
Surr: Nitrobenzene-d5	64.6			31-93	%REC	1	05/09/13 10:46
Surr: Phenol-d6	24.9			13-36	%REC	1	05/09/13 10:46

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 14:37
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 14:37
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 14:37
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 14:37
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 14:37
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 14:37
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 14:37
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 14:37
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 14:37
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 14:37
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 14:37
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 14:37
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 14:37
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 14:37
2-Butanone	U		0.22	25	µg/L	1	05/11/13 14:37
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 14:37
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 14:37
Acetone	U		0.33	50	µg/L	1	05/11/13 14:37
Benzene	U		0.18	1.0	µg/L	1	05/11/13 14:37

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-010
Collection Date: 05/02/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-10
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 14:37
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 14:37
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 14:37
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 14:37
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 14:37
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 14:37
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 14:37
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 14:37
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 14:37
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 14:37
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 14:37
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 14:37
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 14:37
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 14:37
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 14:37
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 14:37
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 14:37
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 14:37
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 14:37
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 14:37
Styrene	U		0.11	1.0	µg/L	1	05/11/13 14:37
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 14:37
Toluene	U		0.12	1.0	µg/L	1	05/11/13 14:37
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 14:37
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 14:37
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 14:37
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 14:37
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 14:37
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 14:37
Surr: 1,2-Dichloroethane-d4	99.5			70-120	%REC	1	05/11/13 14:37
Surr: 4-Bromofluorobenzene	97.0			75-120	%REC	1	05/11/13 14:37
Surr: Dibromofluoromethane	105			85-115	%REC	1	05/11/13 14:37
Surr: Toluene-d8	96.2			85-120	%REC	1	05/11/13 14:37
CYANIDE, AMENABLE			SW9012A		Prep: SW9014 / 5/8/13		Analyst: JJG
BatchID: 48261							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/08/13 13:38

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-011
Collection Date: 05/02/13 03:30 PM

Work Order: 1305208
Lab ID: 1305208-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:15
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: ML
<u>BatchID: 48285</u>							
Aluminum	0.014	J	0.00078	0.050	mg/L	1	05/09/13 22:30
Antimony	0.00022	J	0.000036	0.0020	mg/L	1	05/09/13 22:30
Arsenic	0.0014	J	0.00058	0.0050	mg/L	1	05/09/13 22:30
Barium	1.1		0.000063	0.10	mg/L	1	05/09/13 22:30
Beryllium	U		0.000082	0.0010	mg/L	1	05/09/13 22:30
Cadmium	U		0.000045	0.0010	mg/L	1	05/09/13 22:30
Chromium	0.0019	J	0.00027	0.010	mg/L	1	05/09/13 22:30
Cobalt	0.0040	J	0.000041	0.020	mg/L	1	05/09/13 22:30
Copper	U		0.00053	0.0040	mg/L	1	05/09/13 22:30
Iron	15		0.0053	0.20	mg/L	1	05/09/13 22:30
Lead	0.00017	J	0.000051	0.0030	mg/L	1	05/09/13 22:30
Manganese	1.5		0.000054	0.050	mg/L	1	05/09/13 22:30
Nickel	0.0033	J	0.00025	0.020	mg/L	1	05/09/13 22:30
Selenium	U		0.00064	0.0050	mg/L	1	05/09/13 22:30
Silver	U		0.000042	0.00020	mg/L	1	05/09/13 22:30
Thallium	U		0.000062	0.0020	mg/L	1	05/09/13 22:30
Vanadium	0.00099	J	0.00016	0.0040	mg/L	1	05/09/13 22:30
Zinc	0.0088	J	0.00048	0.050	mg/L	1	05/09/13 22:30
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/8/13	Analyst: RM
<u>BatchID: 48246</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/09/13 11:06
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/09/13 11:06
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/09/13 11:06
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/09/13 11:06
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/09/13 11:06
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/09/13 11:06
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/09/13 11:06
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/09/13 11:06
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/09/13 11:06
2-Chlorophenol	U		0.73	10	µg/L	1	05/09/13 11:06
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/09/13 11:06
2-Methylphenol	U		0.60	10	µg/L	1	05/09/13 11:06
2-Nitroaniline	U		0.11	25	µg/L	1	05/09/13 11:06

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-011
Collection Date: 05/02/13 03:30 PM

Work Order: 1305208
Lab ID: 1305208-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/09/13 11:06
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/09/13 11:06
3-Nitroaniline	U		2.5	25	µg/L	1	05/09/13 11:06
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/09/13 11:06
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 11:06
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/09/13 11:06
4-Chloroaniline	U		1.1	10	µg/L	1	05/09/13 11:06
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 11:06
4-Methylphenol	U		0.55	10	µg/L	1	05/09/13 11:06
4-Nitroaniline	U		1.5	25	µg/L	1	05/09/13 11:06
4-Nitrophenol	U		1.6	25	µg/L	1	05/09/13 11:06
Acenaphthene	U		0.11	5.0	µg/L	1	05/09/13 11:06
Acenaphthylene	U		0.12	5.0	µg/L	1	05/09/13 11:06
Acetophenone	U		0.090	5.0	µg/L	1	05/09/13 11:06
Anthracene	U		0.72	5.0	µg/L	1	05/09/13 11:06
Atrazine	U		3.2	5.0	µg/L	1	05/09/13 11:06
Benzaldehyde	U		0.46	10	µg/L	1	05/09/13 11:06
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/09/13 11:06
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/09/13 11:06
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/09/13 11:06
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/09/13 11:06
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/09/13 11:06
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/09/13 11:06
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/09/13 11:06
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/09/13 11:06
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/09/13 11:06
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/09/13 11:06
Caprolactam	U		4.7	10	µg/L	1	05/09/13 11:06
Carbazole	U		0.84	10	µg/L	1	05/09/13 11:06
Chrysene	U		0.71	1.0	µg/L	1	05/09/13 11:06
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/09/13 11:06
Dibenzofuran	U		0.11	4.0	µg/L	1	05/09/13 11:06
Diethyl phthalate	U		0.69	5.0	µg/L	1	05/09/13 11:06
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/09/13 11:06
Di-n-butyl phthalate	1.2	J	0.71	5.0	µg/L	1	05/09/13 11:06
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/09/13 11:06
Fluoranthene	U		0.77	1.0	µg/L	1	05/09/13 11:06
Fluorene	U		0.10	5.0	µg/L	1	05/09/13 11:06
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/09/13 11:06
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/09/13 11:06

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-011
Collection Date: 05/02/13 03:30 PM

Work Order: 1305208
Lab ID: 1305208-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/09/13 11:06
Hexachloroethane	U		0.13	5.0	µg/L	1	05/09/13 11:06
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/09/13 11:06
Isophorone	U		0.12	5.0	µg/L	1	05/09/13 11:06
Naphthalene	U		0.12	5.0	µg/L	1	05/09/13 11:06
Nitrobenzene	U		0.10	3.0	µg/L	1	05/09/13 11:06
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/09/13 11:06
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/09/13 11:06
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/09/13 11:06
Phenanthrene	U		0.86	2.0	µg/L	1	05/09/13 11:06
Phenol	U		0.094	5.0	µg/L	1	05/09/13 11:06
Pyrene	U		0.65	5.0	µg/L	1	05/09/13 11:06
Surr: 2,4,6-Tribromophenol	72.2			32-115	%REC	1	05/09/13 11:06
Surr: 2-Fluorobiphenyl	60.6			32-100	%REC	1	05/09/13 11:06
Surr: 2-Fluorophenol	40.7			22-59	%REC	1	05/09/13 11:06
Surr: 4-Terphenyl-d14	92.9			23-112	%REC	1	05/09/13 11:06
Surr: Nitrobenzene-d5	61.4			31-93	%REC	1	05/09/13 11:06
Surr: Phenol-d6	26.3			13-36	%REC	1	05/09/13 11:06

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 14:58
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 14:58
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 14:58
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 14:58
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 14:58
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 14:58
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 14:58
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 14:58
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 14:58
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 14:58
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 14:58
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 14:58
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 14:58
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 14:58
2-Butanone	U		0.22	25	µg/L	1	05/11/13 14:58
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 14:58
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 14:58
Acetone	U		0.33	50	µg/L	1	05/11/13 14:58
Benzene	U		0.18	1.0	µg/L	1	05/11/13 14:58

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-011
Collection Date: 05/02/13 03:30 PM

Work Order: 1305208
Lab ID: 1305208-11
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 14:58
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 14:58
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 14:58
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 14:58
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 14:58
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 14:58
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 14:58
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 14:58
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 14:58
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 14:58
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 14:58
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 14:58
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 14:58
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 14:58
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 14:58
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 14:58
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 14:58
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 14:58
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 14:58
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 14:58
Styrene	U		0.11	1.0	µg/L	1	05/11/13 14:58
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 14:58
Toluene	U		0.12	1.0	µg/L	1	05/11/13 14:58
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 14:58
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 14:58
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 14:58
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 14:58
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 14:58
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 14:58
Surr: 1,2-Dichloroethane-d4	96.4			70-120	%REC	1	05/11/13 14:58
Surr: 4-Bromofluorobenzene	95.2			75-120	%REC	1	05/11/13 14:58
Surr: Dibromofluoromethane	98.8			85-115	%REC	1	05/11/13 14:58
Surr: Toluene-d8	98.0			85-120	%REC	1	05/11/13 14:58

CYANIDE, AMENABLE

SW9012A

Analyst: JJG

BatchID: 48281B

Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/13/13 10:39

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-012
Collection Date: 05/02/13 04:30 PM

Work Order: 1305208
Lab ID: 1305208-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA	SW7470			Prep: SW7470 / 5/13/13		Analyst: LR	
BatchID: 48316							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:17
METALS BY ICP-MS	SW6020A			Prep: SW3005A / 5/9/13		Analyst: ML	
BatchID: 48285							
Aluminum	0.0075	J	0.00078	0.050	mg/L	1	05/09/13 22:36
Antimony	0.00015	J	0.000036	0.0020	mg/L	1	05/09/13 22:36
Arsenic	0.0037	J	0.00058	0.0050	mg/L	1	05/09/13 22:36
Barium	0.48		0.000063	0.10	mg/L	1	05/09/13 22:36
Beryllium	U		0.000082	0.0010	mg/L	1	05/09/13 22:36
Cadmium	U		0.000045	0.0010	mg/L	1	05/09/13 22:36
Chromium	0.0016	J	0.00027	0.010	mg/L	1	05/09/13 22:36
Cobalt	0.0015	J	0.000041	0.020	mg/L	1	05/09/13 22:36
Copper	U		0.00053	0.0040	mg/L	1	05/09/13 22:36
Iron	18		0.0053	0.20	mg/L	1	05/09/13 22:36
Lead	0.00031	J	0.000051	0.0030	mg/L	1	05/09/13 22:36
Manganese	0.64		0.000054	0.050	mg/L	1	05/09/13 22:36
Nickel	0.0050	J	0.00025	0.020	mg/L	1	05/09/13 22:36
Selenium	U		0.00064	0.0050	mg/L	1	05/09/13 22:36
Silver	U		0.000042	0.00020	mg/L	1	05/09/13 22:36
Thallium	U		0.000062	0.0020	mg/L	1	05/09/13 22:36
Vanadium	0.00099	J	0.00016	0.0040	mg/L	1	05/09/13 22:36
Zinc	0.0021	J	0.00048	0.050	mg/L	1	05/09/13 22:36
SEMI-VOLATILE ORGANIC COMPOUNDS	SW8270			Prep: SW3510 / 5/8/13		Analyst: RM	
BatchID: 48246							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/09/13 11:26
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/09/13 11:26
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/09/13 11:26
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/09/13 11:26
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/09/13 11:26
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/09/13 11:26
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/09/13 11:26
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/09/13 11:26
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/09/13 11:26
2-Chlorophenol	U		0.73	10	µg/L	1	05/09/13 11:26
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/09/13 11:26
2-Methylphenol	U		0.60	10	µg/L	1	05/09/13 11:26
2-Nitroaniline	U		0.11	25	µg/L	1	05/09/13 11:26

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-012
Collection Date: 05/02/13 04:30 PM

Work Order: 1305208
Lab ID: 1305208-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/09/13 11:26
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/09/13 11:26
3-Nitroaniline	U		2.5	25	µg/L	1	05/09/13 11:26
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/09/13 11:26
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 11:26
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/09/13 11:26
4-Chloroaniline	U		1.1	10	µg/L	1	05/09/13 11:26
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 11:26
4-Methylphenol	U		0.55	10	µg/L	1	05/09/13 11:26
4-Nitroaniline	U		1.5	25	µg/L	1	05/09/13 11:26
4-Nitrophenol	U		1.6	25	µg/L	1	05/09/13 11:26
Acenaphthene	U		0.11	5.0	µg/L	1	05/09/13 11:26
Acenaphthylene	U		0.12	5.0	µg/L	1	05/09/13 11:26
Acetophenone	U		0.090	5.0	µg/L	1	05/09/13 11:26
Anthracene	U		0.72	5.0	µg/L	1	05/09/13 11:26
Atrazine	U		3.2	5.0	µg/L	1	05/09/13 11:26
Benzaldehyde	U		0.46	10	µg/L	1	05/09/13 11:26
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/09/13 11:26
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/09/13 11:26
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/09/13 11:26
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/09/13 11:26
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/09/13 11:26
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/09/13 11:26
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/09/13 11:26
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/09/13 11:26
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/09/13 11:26
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/09/13 11:26
Caprolactam	U		4.7	10	µg/L	1	05/09/13 11:26
Carbazole	U		0.84	10	µg/L	1	05/09/13 11:26
Chrysene	U		0.71	1.0	µg/L	1	05/09/13 11:26
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/09/13 11:26
Dibenzofuran	U		0.11	4.0	µg/L	1	05/09/13 11:26
Diethyl phthalate	U		0.69	5.0	µg/L	1	05/09/13 11:26
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/09/13 11:26
Di-n-butyl phthalate	1.4	J	0.71	5.0	µg/L	1	05/09/13 11:26
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/09/13 11:26
Fluoranthene	U		0.77	1.0	µg/L	1	05/09/13 11:26
Fluorene	U		0.10	5.0	µg/L	1	05/09/13 11:26
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/09/13 11:26
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/09/13 11:26

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-012
Collection Date: 05/02/13 04:30 PM

Work Order: 1305208
Lab ID: 1305208-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/09/13 11:26
Hexachloroethane	U		0.13	5.0	µg/L	1	05/09/13 11:26
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/09/13 11:26
Isophorone	U		0.12	5.0	µg/L	1	05/09/13 11:26
Naphthalene	U		0.12	5.0	µg/L	1	05/09/13 11:26
Nitrobenzene	U		0.10	3.0	µg/L	1	05/09/13 11:26
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/09/13 11:26
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/09/13 11:26
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/09/13 11:26
Phenanthrene	U		0.86	2.0	µg/L	1	05/09/13 11:26
Phenol	U		0.094	5.0	µg/L	1	05/09/13 11:26
Pyrene	U		0.65	5.0	µg/L	1	05/09/13 11:26
Surr: 2,4,6-Tribromophenol	62.8			32-115	%REC	1	05/09/13 11:26
Surr: 2-Fluorobiphenyl	57.1			32-100	%REC	1	05/09/13 11:26
Surr: 2-Fluorophenol	37.5			22-59	%REC	1	05/09/13 11:26
Surr: 4-Terphenyl-d14	83.0			23-112	%REC	1	05/09/13 11:26
Surr: Nitrobenzene-d5	56.7			31-93	%REC	1	05/09/13 11:26
Surr: Phenol-d6	23.6			13-36	%REC	1	05/09/13 11:26
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: RS	
BatchID: R120576							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 15:20
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 15:20
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 15:20
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 15:20
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 15:20
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 15:20
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 15:20
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 15:20
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 15:20
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 15:20
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 15:20
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 15:20
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 15:20
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 15:20
2-Butanone	U		0.22	25	µg/L	1	05/11/13 15:20
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 15:20
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 15:20
Acetone	U		0.33	50	µg/L	1	05/11/13 15:20
Benzene	2.8		0.18	1.0	µg/L	1	05/11/13 15:20

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050213-MJF-012
Collection Date: 05/02/13 04:30 PM

Work Order: 1305208
Lab ID: 1305208-12
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 15:20
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 15:20
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 15:20
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 15:20
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 15:20
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 15:20
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 15:20
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 15:20
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 15:20
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 15:20
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 15:20
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 15:20
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 15:20
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 15:20
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 15:20
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 15:20
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 15:20
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 15:20
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 15:20
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 15:20
Styrene	U		0.11	1.0	µg/L	1	05/11/13 15:20
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 15:20
Toluene	U		0.12	1.0	µg/L	1	05/11/13 15:20
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 15:20
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 15:20
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 15:20
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 15:20
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 15:20
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 15:20
Surr: 1,2-Dichloroethane-d4	96.8			70-120	%REC	1	05/11/13 15:20
Surr: 4-Bromofluorobenzene	94.6			75-120	%REC	1	05/11/13 15:20
Surr: Dibromofluoromethane	99.4			85-115	%REC	1	05/11/13 15:20
Surr: Toluene-d8	97.0			85-120	%REC	1	05/11/13 15:20

CYANIDE, AMENABLE

SW9012A

Analyst: JJG

BatchID: 48281B

Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/13/13 10:39

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-013
Collection Date: 05/03/13 11:45 AM

Work Order: 1305208
Lab ID: 1305208-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:19
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: ML
<u>BatchID: 48285</u>							
Aluminum	0.011	J	0.00078	0.050	mg/L	1	05/09/13 22:42
Antimony	0.00021	J	0.000036	0.0020	mg/L	1	05/09/13 22:42
Arsenic	0.0012	J	0.00058	0.0050	mg/L	1	05/09/13 22:42
Barium	0.38		0.000063	0.10	mg/L	1	05/09/13 22:42
Beryllium	U		0.000082	0.0010	mg/L	1	05/09/13 22:42
Cadmium	U		0.000045	0.0010	mg/L	1	05/09/13 22:42
Chromium	0.00056	J	0.00027	0.010	mg/L	1	05/09/13 22:42
Cobalt	0.0015	J	0.000041	0.020	mg/L	1	05/09/13 22:42
Copper	U		0.00053	0.0040	mg/L	1	05/09/13 22:42
Iron	6.2		0.0053	0.20	mg/L	1	05/09/13 22:42
Lead	U		0.000051	0.0030	mg/L	1	05/09/13 22:42
Manganese	0.18		0.000054	0.050	mg/L	1	05/09/13 22:42
Nickel	0.0044	J	0.00025	0.020	mg/L	1	05/09/13 22:42
Selenium	U		0.00064	0.0050	mg/L	1	05/09/13 22:42
Silver	U		0.000042	0.00020	mg/L	1	05/09/13 22:42
Thallium	U		0.000062	0.0020	mg/L	1	05/09/13 22:42
Vanadium	0.00089	J	0.00016	0.0040	mg/L	1	05/09/13 22:42
Zinc	0.0020	J	0.00048	0.050	mg/L	1	05/09/13 22:42
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/8/13	Analyst: RM
<u>BatchID: 48246</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/09/13 11:46
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/09/13 11:46
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/09/13 11:46
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/09/13 11:46
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/09/13 11:46
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/09/13 11:46
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/09/13 11:46
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/09/13 11:46
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/09/13 11:46
2-Chlorophenol	U		0.73	10	µg/L	1	05/09/13 11:46
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/09/13 11:46
2-Methylphenol	U		0.60	10	µg/L	1	05/09/13 11:46
2-Nitroaniline	U		0.11	25	µg/L	1	05/09/13 11:46

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-013
Collection Date: 05/03/13 11:45 AM

Work Order: 1305208
Lab ID: 1305208-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/09/13 11:46
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/09/13 11:46
3-Nitroaniline	U		2.5	25	µg/L	1	05/09/13 11:46
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/09/13 11:46
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 11:46
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/09/13 11:46
4-Chloroaniline	U		1.1	10	µg/L	1	05/09/13 11:46
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 11:46
4-Methylphenol	U		0.55	10	µg/L	1	05/09/13 11:46
4-Nitroaniline	U		1.5	25	µg/L	1	05/09/13 11:46
4-Nitrophenol	U		1.6	25	µg/L	1	05/09/13 11:46
Acenaphthene	U		0.11	5.0	µg/L	1	05/09/13 11:46
Acenaphthylene	U		0.12	5.0	µg/L	1	05/09/13 11:46
Acetophenone	U		0.090	5.0	µg/L	1	05/09/13 11:46
Anthracene	U		0.72	5.0	µg/L	1	05/09/13 11:46
Atrazine	U		3.2	5.0	µg/L	1	05/09/13 11:46
Benzaldehyde	U		0.46	10	µg/L	1	05/09/13 11:46
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/09/13 11:46
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/09/13 11:46
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/09/13 11:46
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/09/13 11:46
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/09/13 11:46
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/09/13 11:46
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/09/13 11:46
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/09/13 11:46
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/09/13 11:46
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/09/13 11:46
Caprolactam	U		4.7	10	µg/L	1	05/09/13 11:46
Carbazole	U		0.84	10	µg/L	1	05/09/13 11:46
Chrysene	U		0.71	1.0	µg/L	1	05/09/13 11:46
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/09/13 11:46
Dibenzofuran	U		0.11	4.0	µg/L	1	05/09/13 11:46
Diethyl phthalate	U		0.69	5.0	µg/L	1	05/09/13 11:46
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/09/13 11:46
Di-n-butyl phthalate	1.4	J	0.71	5.0	µg/L	1	05/09/13 11:46
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/09/13 11:46
Fluoranthene	U		0.77	1.0	µg/L	1	05/09/13 11:46
Fluorene	U		0.10	5.0	µg/L	1	05/09/13 11:46
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/09/13 11:46
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/09/13 11:46

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-013
Collection Date: 05/03/13 11:45 AM

Work Order: 1305208
Lab ID: 1305208-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/09/13 11:46
Hexachloroethane	U		0.13	5.0	µg/L	1	05/09/13 11:46
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/09/13 11:46
Isophorone	U		0.12	5.0	µg/L	1	05/09/13 11:46
Naphthalene	U		0.12	5.0	µg/L	1	05/09/13 11:46
Nitrobenzene	U		0.10	3.0	µg/L	1	05/09/13 11:46
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/09/13 11:46
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/09/13 11:46
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/09/13 11:46
Phenanthrene	U		0.86	2.0	µg/L	1	05/09/13 11:46
Phenol	U		0.094	5.0	µg/L	1	05/09/13 11:46
Pyrene	U		0.65	5.0	µg/L	1	05/09/13 11:46
Surr: 2,4,6-Tribromophenol	69.8			32-115	%REC	1	05/09/13 11:46
Surr: 2-Fluorobiphenyl	64.7			32-100	%REC	1	05/09/13 11:46
Surr: 2-Fluorophenol	39.0			22-59	%REC	1	05/09/13 11:46
Surr: 4-Terphenyl-d14	85.1			23-112	%REC	1	05/09/13 11:46
Surr: Nitrobenzene-d5	65.6			31-93	%REC	1	05/09/13 11:46
Surr: Phenol-d6	24.9			13-36	%REC	1	05/09/13 11:46

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U	0.14	1.0	µg/L	1	05/11/13 15:41
1,1,2,2-Tetrachloroethane	U	0.13	1.0	µg/L	1	05/11/13 15:41
1,1,2-Trichloroethane	U	0.084	1.0	µg/L	1	05/11/13 15:41
1,1,2-Trichlorotrifluoroethane	U	0.18	1.0	µg/L	1	05/11/13 15:41
1,1-Dichloroethane	U	0.11	1.0	µg/L	1	05/11/13 15:41
1,1-Dichloroethene	U	0.12	1.0	µg/L	1	05/11/13 15:41
1,2,4-Trichlorobenzene	U	0.16	5.0	µg/L	1	05/11/13 15:41
1,2-Dibromo-3-chloropropane	U	0.31	1.0	µg/L	1	05/11/13 15:41
1,2-Dibromoethane	U	0.16	1.0	µg/L	1	05/11/13 15:41
1,2-Dichlorobenzene	U	0.13	1.0	µg/L	1	05/11/13 15:41
1,2-Dichloroethane	U	0.15	1.0	µg/L	1	05/11/13 15:41
1,2-Dichloropropane	U	0.13	1.0	µg/L	1	05/11/13 15:41
1,3-Dichlorobenzene	U	0.16	1.0	µg/L	1	05/11/13 15:41
1,4-Dichlorobenzene	U	0.15	1.0	µg/L	1	05/11/13 15:41
2-Butanone	U	0.22	25	µg/L	1	05/11/13 15:41
2-Hexanone	U	0.12	50	µg/L	1	05/11/13 15:41
4-Methyl-2-pentanone	U	0.096	50	µg/L	1	05/11/13 15:41
Acetone	U	0.33	50	µg/L	1	05/11/13 15:41
Benzene	U	0.18	1.0	µg/L	1	05/11/13 15:41

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-013
Collection Date: 05/03/13 11:45 AM

Work Order: 1305208
Lab ID: 1305208-13
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 15:41
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 15:41
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 15:41
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 15:41
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 15:41
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 15:41
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 15:41
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 15:41
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 15:41
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 15:41
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 15:41
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 15:41
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 15:41
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 15:41
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 15:41
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 15:41
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 15:41
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 15:41
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 15:41
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 15:41
Styrene	U		0.11	1.0	µg/L	1	05/11/13 15:41
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 15:41
Toluene	U		0.12	1.0	µg/L	1	05/11/13 15:41
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 15:41
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 15:41
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 15:41
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 15:41
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 15:41
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 15:41
Surr: 1,2-Dichloroethane-d4	96.9			70-120	%REC	1	05/11/13 15:41
Surr: 4-Bromofluorobenzene	94.8			75-120	%REC	1	05/11/13 15:41
Surr: Dibromofluoromethane	99.6			85-115	%REC	1	05/11/13 15:41
Surr: Toluene-d8	99.0			85-120	%REC	1	05/11/13 15:41
CYANIDE, AMENABLE			SW9012A			Analyst: JJG	
BatchID: 48281B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/13/13 10:39

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-014
Collection Date: 05/03/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:28
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: ML
<u>BatchID: 48285</u>							
Aluminum	0.0034	J	0.00078	0.050	mg/L	1	05/09/13 22:48
Antimony	0.0011	J	0.000036	0.0020	mg/L	1	05/09/13 22:48
Arsenic	0.00093	J	0.00058	0.0050	mg/L	1	05/09/13 22:48
Barium	0.093	J	0.000063	0.10	mg/L	1	05/09/13 22:48
Beryllium	U		0.000082	0.0010	mg/L	1	05/09/13 22:48
Cadmium	0.000063	J	0.000045	0.0010	mg/L	1	05/09/13 22:48
Chromium	0.00044	J	0.00027	0.010	mg/L	1	05/09/13 22:48
Cobalt	0.00055	J	0.000041	0.020	mg/L	1	05/09/13 22:48
Copper	0.0052		0.00053	0.0040	mg/L	1	05/09/13 22:48
Iron	0.17	J	0.0053	0.20	mg/L	1	05/09/13 22:48
Lead	0.00025	J	0.000051	0.0030	mg/L	1	05/09/13 22:48
Manganese	0.069		0.000054	0.050	mg/L	1	05/09/13 22:48
Nickel	0.0048	J	0.00025	0.020	mg/L	1	05/09/13 22:48
Selenium	U		0.00064	0.0050	mg/L	1	05/09/13 22:48
Silver	U		0.000042	0.00020	mg/L	1	05/09/13 22:48
Thallium	U		0.000062	0.0020	mg/L	1	05/09/13 22:48
Vanadium	0.00028	J	0.00016	0.0040	mg/L	1	05/09/13 22:48
Zinc	0.010	J	0.00048	0.050	mg/L	1	05/09/13 22:48
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/8/13	Analyst: RM
<u>BatchID: 48246</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/09/13 12:06
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/09/13 12:06
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/09/13 12:06
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/09/13 12:06
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/09/13 12:06
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/09/13 12:06
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/09/13 12:06
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/09/13 12:06
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/09/13 12:06
2-Chlorophenol	U		0.73	10	µg/L	1	05/09/13 12:06
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/09/13 12:06
2-Methylphenol	U		0.60	10	µg/L	1	05/09/13 12:06
2-Nitroaniline	U		0.11	25	µg/L	1	05/09/13 12:06

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-014
Collection Date: 05/03/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/09/13 12:06
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/09/13 12:06
3-Nitroaniline	U		2.5	25	µg/L	1	05/09/13 12:06
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/09/13 12:06
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 12:06
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/09/13 12:06
4-Chloroaniline	U		1.1	10	µg/L	1	05/09/13 12:06
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 12:06
4-Methylphenol	U		0.55	10	µg/L	1	05/09/13 12:06
4-Nitroaniline	U		1.5	25	µg/L	1	05/09/13 12:06
4-Nitrophenol	U		1.6	25	µg/L	1	05/09/13 12:06
Acenaphthene	U		0.11	5.0	µg/L	1	05/09/13 12:06
Acenaphthylene	U		0.12	5.0	µg/L	1	05/09/13 12:06
Acetophenone	U		0.090	5.0	µg/L	1	05/09/13 12:06
Anthracene	U		0.72	5.0	µg/L	1	05/09/13 12:06
Atrazine	U		3.2	5.0	µg/L	1	05/09/13 12:06
Benzaldehyde	U		0.46	10	µg/L	1	05/09/13 12:06
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/09/13 12:06
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/09/13 12:06
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/09/13 12:06
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/09/13 12:06
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/09/13 12:06
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/09/13 12:06
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/09/13 12:06
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/09/13 12:06
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/09/13 12:06
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/09/13 12:06
Caprolactam	U		4.7	10	µg/L	1	05/09/13 12:06
Carbazole	U		0.84	10	µg/L	1	05/09/13 12:06
Chrysene	U		0.71	1.0	µg/L	1	05/09/13 12:06
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/09/13 12:06
Dibenzofuran	U		0.11	4.0	µg/L	1	05/09/13 12:06
Diethyl phthalate	U		0.69	5.0	µg/L	1	05/09/13 12:06
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/09/13 12:06
Di-n-butyl phthalate	1.3	J	0.71	5.0	µg/L	1	05/09/13 12:06
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/09/13 12:06
Fluoranthene	U		0.77	1.0	µg/L	1	05/09/13 12:06
Fluorene	U		0.10	5.0	µg/L	1	05/09/13 12:06
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/09/13 12:06
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/09/13 12:06

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-014
Collection Date: 05/03/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/09/13 12:06
Hexachloroethane	U		0.13	5.0	µg/L	1	05/09/13 12:06
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/09/13 12:06
Isophorone	U		0.12	5.0	µg/L	1	05/09/13 12:06
Naphthalene	U		0.12	5.0	µg/L	1	05/09/13 12:06
Nitrobenzene	U		0.10	3.0	µg/L	1	05/09/13 12:06
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/09/13 12:06
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/09/13 12:06
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/09/13 12:06
Phenanthrene	U		0.86	2.0	µg/L	1	05/09/13 12:06
Phenol	U		0.094	5.0	µg/L	1	05/09/13 12:06
Pyrene	U		0.65	5.0	µg/L	1	05/09/13 12:06
Surr: 2,4,6-Tribromophenol	60.6			32-115	%REC	1	05/09/13 12:06
Surr: 2-Fluorobiphenyl	55.1			32-100	%REC	1	05/09/13 12:06
Surr: 2-Fluorophenol	32.1			22-59	%REC	1	05/09/13 12:06
Surr: 4-Terphenyl-d14	84.3			23-112	%REC	1	05/09/13 12:06
Surr: Nitrobenzene-d5	55.5			31-93	%REC	1	05/09/13 12:06
Surr: Phenol-d6	21.1			13-36	%REC	1	05/09/13 12:06

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 16:02
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 16:02
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 16:02
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 16:02
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 16:02
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 16:02
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 16:02
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 16:02
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 16:02
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 16:02
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 16:02
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 16:02
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 16:02
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 16:02
2-Butanone	U		0.22	25	µg/L	1	05/11/13 16:02
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 16:02
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 16:02
Acetone	4.0	J	0.33	50	µg/L	1	05/11/13 16:02
Benzene	U		0.18	1.0	µg/L	1	05/11/13 16:02

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-014
Collection Date: 05/03/13 01:00 PM

Work Order: 1305208
Lab ID: 1305208-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 16:02
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 16:02
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 16:02
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 16:02
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 16:02
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 16:02
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 16:02
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 16:02
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 16:02
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 16:02
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 16:02
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 16:02
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 16:02
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 16:02
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 16:02
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 16:02
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 16:02
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 16:02
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 16:02
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 16:02
Styrene	U		0.11	1.0	µg/L	1	05/11/13 16:02
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 16:02
Toluene	U		0.12	1.0	µg/L	1	05/11/13 16:02
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 16:02
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 16:02
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 16:02
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 16:02
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 16:02
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 16:02
Surr: 1,2-Dichloroethane-d4	97.0			70-120	%REC	1	05/11/13 16:02
Surr: 4-Bromofluorobenzene	95.6			75-120	%REC	1	05/11/13 16:02
Surr: Dibromofluoromethane	102			85-115	%REC	1	05/11/13 16:02
Surr: Toluene-d8	96.4			85-120	%REC	1	05/11/13 16:02
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 48281B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/13/13 10:39

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-015
Collection Date: 05/03/13 03:00 PM

Work Order: 1305208
Lab ID: 1305208-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/13/13	Analyst: LR
<u>BatchID: 48316</u>							
Mercury	U		0.00010	0.00020	mg/L	1	05/13/13 14:30
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/9/13	Analyst: ML
<u>BatchID: 48285</u>							
Aluminum	0.025	J	0.00078	0.050	mg/L	1	05/09/13 22:54
Antimony	0.00040	J	0.000036	0.0020	mg/L	1	05/09/13 22:54
Arsenic	U		0.00058	0.0050	mg/L	1	05/09/13 22:54
Barium	0.027	J	0.000063	0.10	mg/L	1	05/09/13 22:54
Beryllium	U		0.000082	0.0010	mg/L	1	05/09/13 22:54
Cadmium	U		0.000045	0.0010	mg/L	1	05/09/13 22:54
Chromium	0.0011	J	0.00027	0.010	mg/L	1	05/09/13 22:54
Cobalt	0.0015	J	0.000041	0.020	mg/L	1	05/09/13 22:54
Copper	0.0040		0.00053	0.0040	mg/L	1	05/09/13 22:54
Iron	0.050	J	0.0053	0.20	mg/L	1	05/09/13 22:54
Lead	0.000069	J	0.000051	0.0030	mg/L	1	05/09/13 22:54
Manganese	0.022	J	0.000054	0.050	mg/L	1	05/09/13 22:54
Nickel	0.0064	J	0.00025	0.020	mg/L	1	05/09/13 22:54
Selenium	U		0.00064	0.0050	mg/L	1	05/09/13 22:54
Silver	U		0.000042	0.00020	mg/L	1	05/09/13 22:54
Thallium	U		0.000062	0.0020	mg/L	1	05/09/13 22:54
Vanadium	U		0.00016	0.0040	mg/L	1	05/09/13 22:54
Zinc	0.0019	J	0.00048	0.050	mg/L	1	05/09/13 22:54
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/8/13	Analyst: RM
<u>BatchID: 48246</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	05/09/13 12:26
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	05/09/13 12:26
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	05/09/13 12:26
2,4-Dichlorophenol	U		0.22	10	µg/L	1	05/09/13 12:26
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	05/09/13 12:26
2,4-Dinitrophenol	U		0.76	25	µg/L	1	05/09/13 12:26
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	05/09/13 12:26
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	05/09/13 12:26
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	05/09/13 12:26
2-Chlorophenol	U		0.73	10	µg/L	1	05/09/13 12:26
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	05/09/13 12:26
2-Methylphenol	U		0.60	10	µg/L	1	05/09/13 12:26
2-Nitroaniline	U		0.11	25	µg/L	1	05/09/13 12:26

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-015
Collection Date: 05/03/13 03:00 PM

Work Order: 1305208
Lab ID: 1305208-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		0.19	5.0	µg/L	1	05/09/13 12:26
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	05/09/13 12:26
3-Nitroaniline	U		2.5	25	µg/L	1	05/09/13 12:26
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	05/09/13 12:26
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 12:26
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	05/09/13 12:26
4-Chloroaniline	U		1.1	10	µg/L	1	05/09/13 12:26
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	05/09/13 12:26
4-Methylphenol	U		0.55	10	µg/L	1	05/09/13 12:26
4-Nitroaniline	U		1.5	25	µg/L	1	05/09/13 12:26
4-Nitrophenol	U		1.6	25	µg/L	1	05/09/13 12:26
Acenaphthene	U		0.11	5.0	µg/L	1	05/09/13 12:26
Acenaphthylene	U		0.12	5.0	µg/L	1	05/09/13 12:26
Acetophenone	U		0.090	5.0	µg/L	1	05/09/13 12:26
Anthracene	U		0.72	5.0	µg/L	1	05/09/13 12:26
Atrazine	U		3.2	5.0	µg/L	1	05/09/13 12:26
Benzaldehyde	U		0.46	10	µg/L	1	05/09/13 12:26
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	05/09/13 12:26
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	05/09/13 12:26
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	05/09/13 12:26
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	05/09/13 12:26
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	05/09/13 12:26
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	05/09/13 12:26
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	05/09/13 12:26
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	05/09/13 12:26
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	05/09/13 12:26
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	05/09/13 12:26
Caprolactam	U		4.7	10	µg/L	1	05/09/13 12:26
Carbazole	U		0.84	10	µg/L	1	05/09/13 12:26
Chrysene	U		0.71	1.0	µg/L	1	05/09/13 12:26
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	05/09/13 12:26
Dibenzofuran	U		0.11	4.0	µg/L	1	05/09/13 12:26
Diethyl phthalate	U		0.69	5.0	µg/L	1	05/09/13 12:26
Dimethyl phthalate	U		0.14	5.0	µg/L	1	05/09/13 12:26
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	05/09/13 12:26
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	05/09/13 12:26
Fluoranthene	U		0.77	1.0	µg/L	1	05/09/13 12:26
Fluorene	U		0.10	5.0	µg/L	1	05/09/13 12:26
Hexachlorobenzene	U		0.10	0.50	µg/L	1	05/09/13 12:26
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	05/09/13 12:26

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-015
Collection Date: 05/03/13 03:00 PM

Work Order: 1305208
Lab ID: 1305208-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	05/09/13 12:26
Hexachloroethane	U		0.13	5.0	µg/L	1	05/09/13 12:26
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	05/09/13 12:26
Isophorone	U		0.12	5.0	µg/L	1	05/09/13 12:26
Naphthalene	U		0.12	5.0	µg/L	1	05/09/13 12:26
Nitrobenzene	U		0.10	3.0	µg/L	1	05/09/13 12:26
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	05/09/13 12:26
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	05/09/13 12:26
Pentachlorophenol	U		0.11	1.0	µg/L	1	05/09/13 12:26
Phenanthrene	U		0.86	2.0	µg/L	1	05/09/13 12:26
Phenol	U		0.094	5.0	µg/L	1	05/09/13 12:26
Pyrene	U		0.65	5.0	µg/L	1	05/09/13 12:26
Surr: 2,4,6-Tribromophenol	48.7			32-115	%REC	1	05/09/13 12:26
Surr: 2-Fluorobiphenyl	41.5			32-100	%REC	1	05/09/13 12:26
Surr: 2-Fluorophenol	28.6			22-59	%REC	1	05/09/13 12:26
Surr: 4-Terphenyl-d14	84.0			23-112	%REC	1	05/09/13 12:26
Surr: Nitrobenzene-d5	42.9			31-93	%REC	1	05/09/13 12:26
Surr: Phenol-d6	18.4			13-36	%REC	1	05/09/13 12:26

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: RS

BatchID: R120576

1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 16:24
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 16:24
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 16:24
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 16:24
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 16:24
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 16:24
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 16:24
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 16:24
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 16:24
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 16:24
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 16:24
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 16:24
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 16:24
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 16:24
2-Butanone	U		0.22	25	µg/L	1	05/11/13 16:24
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 16:24
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 16:24
Acetone	U		0.33	50	µg/L	1	05/11/13 16:24
Benzene	U		0.18	1.0	µg/L	1	05/11/13 16:24

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R2330009-050313-MJF-015
Collection Date: 05/03/13 03:00 PM

Work Order: 1305208
Lab ID: 1305208-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 16:24
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 16:24
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 16:24
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 16:24
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 16:24
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 16:24
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 16:24
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 16:24
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 16:24
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 16:24
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 16:24
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 16:24
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 16:24
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 16:24
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 16:24
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 16:24
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 16:24
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 16:24
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 16:24
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 16:24
Styrene	U		0.11	1.0	µg/L	1	05/11/13 16:24
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 16:24
Toluene	U		0.12	1.0	µg/L	1	05/11/13 16:24
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 16:24
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 16:24
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 16:24
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 16:24
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 16:24
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 16:24
Surr: 1,2-Dichloroethane-d4	96.8			70-120	%REC	1	05/11/13 16:24
Surr: 4-Bromofluorobenzene	95.2			75-120	%REC	1	05/11/13 16:24
Surr: Dibromofluoromethane	104			85-115	%REC	1	05/11/13 16:24
Surr: Toluene-d8	95.0			85-120	%REC	1	05/11/13 16:24
CYANIDE, AMENABLE			SW9012A			Analyst: JJG	
BatchID: 48281B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	05/13/13 10:39

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: Trip Blank
Collection Date: 05/03/13

Work Order: 1305208
Lab ID: 1305208-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260				Analyst: RS
<u>BatchID: R120576</u>							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	05/11/13 11:02
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	05/11/13 11:02
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	05/11/13 11:02
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	05/11/13 11:02
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	05/11/13 11:02
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 11:02
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	05/11/13 11:02
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	05/11/13 11:02
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	05/11/13 11:02
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 11:02
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	05/11/13 11:02
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	05/11/13 11:02
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	05/11/13 11:02
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	05/11/13 11:02
2-Butanone	U		0.22	25	µg/L	1	05/11/13 11:02
2-Hexanone	U		0.12	50	µg/L	1	05/11/13 11:02
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	05/11/13 11:02
Acetone	U		0.33	50	µg/L	1	05/11/13 11:02
Benzene	U		0.18	1.0	µg/L	1	05/11/13 11:02
Bromodichloromethane	U		0.12	1.0	µg/L	1	05/11/13 11:02
Bromoform	U		0.15	1.0	µg/L	1	05/11/13 11:02
Bromomethane	U		0.21	5.0	µg/L	1	05/11/13 11:02
Carbon disulfide	U		0.17	5.0	µg/L	1	05/11/13 11:02
Carbon tetrachloride	U		0.12	1.0	µg/L	1	05/11/13 11:02
Chlorobenzene	U		0.13	1.0	µg/L	1	05/11/13 11:02
Chloroethane	U		0.46	5.0	µg/L	1	05/11/13 11:02
Chloroform	U		0.15	1.0	µg/L	1	05/11/13 11:02
Chloromethane	U		0.16	5.0	µg/L	1	05/11/13 11:02
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	05/11/13 11:02
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	05/11/13 11:02
Cyclohexane	U		0.22	1.0	µg/L	1	05/11/13 11:02
Dibromochloromethane	U		0.13	5.0	µg/L	1	05/11/13 11:02
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	05/11/13 11:02
Ethylbenzene	U		0.13	1.0	µg/L	1	05/11/13 11:02
Isopropylbenzene	U		0.14	5.0	µg/L	1	05/11/13 11:02
Methyl acetate	U		0.19	10	µg/L	1	05/11/13 11:02
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	05/11/13 11:02

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

ALS Group USA, Corp

Date: 16-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: Trip Blank
Collection Date: 05/03/13

Work Order: 1305208
Lab ID: 1305208-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.99	1.0	µg/L	1	05/11/13 11:02
Methylene chloride	U		0.19	5.0	µg/L	1	05/11/13 11:02
Styrene	U		0.11	1.0	µg/L	1	05/11/13 11:02
Tetrachloroethene	U		0.15	1.0	µg/L	1	05/11/13 11:02
Toluene	U		0.12	1.0	µg/L	1	05/11/13 11:02
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	05/11/13 11:02
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	05/11/13 11:02
Trichloroethene	U		0.14	1.0	µg/L	1	05/11/13 11:02
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	05/11/13 11:02
Vinyl chloride	U		0.17	1.0	µg/L	1	05/11/13 11:02
Xylenes, Total	U		0.29	3.0	µg/L	1	05/11/13 11:02
Surr: 1,2-Dichloroethane-d4	98.1			70-120	%REC	1	05/11/13 11:02
Surr: 4-Bromofluorobenzene	94.2			75-120	%REC	1	05/11/13 11:02
Surr: Dibromofluoromethane	101			85-115	%REC	1	05/11/13 11:02
Surr: Toluene-d8	97.0			85-120	%REC	1	05/11/13 11:02

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

Client: The Mannik & Smith Group, Inc.

Work Order: 1305208

Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48316

Instrument ID HG1

Method: SW7470

MBLK		Sample ID: MBLK-48316-48316				Units: mg/L		Analysis Date: 05/13/13 01:40 PM		
Client ID:		Run ID: HG1_130513A				SeqNo: 2316142		Prep Date: 05/13/13		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-48316-48316				Units: mg/L		Analysis Date: 05/13/13 01:42 PM		
Client ID:		Run ID: HG1_130513A				SeqNo: 2316143		Prep Date: 05/13/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001916 0.00020 0.002 0 95.8 80-120 0

MS		Sample ID: 1305208-06CMS				Units: mg/L		Analysis Date: 05/13/13 02:03 PM		
Client ID: W-R2330009-050113-MJF-006		Run ID: HG1_130513A				SeqNo: 2316153		Prep Date: 05/13/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001952 0.00020 0.002 0.000001 97.6 75-125 0

MSD		Sample ID: 1305208-06CMSD				Units: mg/L		Analysis Date: 05/13/13 02:05 PM		
Client ID: W-R2330009-050113-MJF-006		Run ID: HG1_130513A				SeqNo: 2316154		Prep Date: 05/13/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001896 0.00020 0.002 0.000001 94.8 75-125 0.001952 2.91 20

The following samples were analyzed in this batch:

1305208-01C	1305208-02C	1305208-03C
1305208-04C	1305208-05C	1305208-06C
1305208-07C	1305208-08C	1305208-09C
1305208-10C	1305208-11C	1305208-12C
1305208-13C	1305208-14C	1305208-15C

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48280** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-48280-48280				Units: mg/L		Analysis Date: 05/09/13 01:28 PM		
Client ID:		Run ID: ICPMS2_130509A				SeqNo: 2312042		Prep Date: 05/09/13		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	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	U	0.0050								
Vanadium	U	0.0050								
Zinc	U	0.010								

LCS		Sample ID: LCS-48280-48280				Units: mg/L		Analysis Date: 05/09/13 01:33 PM		
Client ID:		Run ID: ICPMS2_130509A				SeqNo: 2312053		Prep Date: 05/09/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.08556	0.010	0.1	0	85.6	80-120	0			
Antimony	0.09173	0.0050	0.1	0	91.7	80-120	0			
Arsenic	0.0907	0.0050	0.1	0	90.7	80-120	0			
Barium	0.0915	0.0050	0.1	0	91.5	80-120	0			
Beryllium	0.08757	0.0020	0.1	0	87.6	80-120	0			
Cadmium	0.09135	0.0020	0.1	0	91.4	80-120	0			
Chromium	0.08673	0.0050	0.1	0	86.7	80-120	0			
Cobalt	0.08657	0.0050	0.1	0	86.6	80-120	0			
Copper	0.08845	0.0050	0.1	0	88.4	80-120	0			
Iron	8.708	0.080	10	0	87.1	80-120	0			
Lead	0.09076	0.0050	0.1	0	90.8	80-120	0			
Manganese	0.08608	0.0050	0.1	0	86.1	80-120	0			
Nickel	0.08752	0.0050	0.1	0	87.5	80-120	0			
Selenium	0.08941	0.0050	0.1	0	89.4	80-120	0			
Silver	0.09276	0.0050	0.1	0	92.8	80-120	0			
Thallium	0.08652	0.0050	0.1	0	86.5	80-120	0			
Vanadium	0.088	0.0050	0.1	0	88	80-120	0			
Zinc	0.08857	0.010	0.1	0	88.6	80-120	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48280** Instrument ID **ICPMS2** Method: **SW6020A**

MS Sample ID: 13041217-24CMS				Units: mg/L			Analysis Date: 05/09/13 01:49 PM			
Client ID:		Run ID: ICPMS2_130509A		SeqNo: 2312068		Prep Date: 05/09/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1702	0.010	0.1	0.08573	84.5	75-125	0			
Antimony	0.0931	0.0050	0.1	0.001264	91.8	75-125	0			
Arsenic	0.09271	0.0050	0.1	0.0009123	91.8	75-125	0			
Barium	0.1238	0.0050	0.1	0.03233	91.5	75-125	0			
Beryllium	0.0863	0.0020	0.1	-0.0000347	86.3	75-125	0			
Cadmium	0.09021	0.0020	0.1	0.00005047	90.2	75-125	0			
Chromium	0.08648	0.0050	0.1	0.0006489	85.8	75-125	0			
Cobalt	0.08556	0.0050	0.1	0.00003047	85.5	75-125	0			
Copper	0.08767	0.0050	0.1	0.0003819	87.3	75-125	0			
Iron	9.605	0.080	10	0.9277	86.8	75-125	0			
Lead	0.1009	0.0050	0.1	0.009715	91.2	75-125	0			
Manganese	0.1473	0.0050	0.1	0.05618	91.1	75-125	0			
Nickel	0.08682	0.0050	0.1	0.0001843	86.6	75-125	0			
Selenium	0.09015	0.0050	0.1	0.0004405	89.7	75-125	0			
Silver	0.0917	0.0050	0.1	2.883E-07	91.7	75-125	0			
Thallium	0.08595	0.0050	0.1	-0.00005815	86	75-125	0			
Vanadium	0.0974	0.0050	0.1	0.00839	89	75-125	0			
Zinc	0.08788	0.010	0.1	0.0008343	87	75-125	0			

MSD Sample ID: 13041217-24CMSD				Units: mg/L			Analysis Date: 05/09/13 01:55 PM			
Client ID:		Run ID: ICPMS2_130509A		SeqNo: 2312069		Prep Date: 05/09/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.169	0.010	0.1	0.08573	83.3	75-125	0.1702	0.708	20	
Antimony	0.09302	0.0050	0.1	0.001264	91.8	75-125	0.0931	0.086	20	
Arsenic	0.09214	0.0050	0.1	0.0009123	91.2	75-125	0.09271	0.617	20	
Barium	0.124	0.0050	0.1	0.03233	91.7	75-125	0.1238	0.161	20	
Beryllium	0.0853	0.0020	0.1	-0.0000347	85.3	75-125	0.0863	1.17	20	
Cadmium	0.09031	0.0020	0.1	0.00005047	90.3	75-125	0.09021	0.111	20	
Chromium	0.08646	0.0050	0.1	0.0006489	85.8	75-125	0.08648	0.0231	20	
Cobalt	0.08442	0.0050	0.1	0.00003047	84.4	75-125	0.08556	1.34	20	
Copper	0.08655	0.0050	0.1	0.0003819	86.2	75-125	0.08767	1.29	20	
Iron	9.551	0.080	10	0.9277	86.2	75-125	9.605	0.564	20	
Lead	0.1006	0.0050	0.1	0.009715	90.9	75-125	0.1009	0.298	20	
Manganese	0.1451	0.0050	0.1	0.05618	88.9	75-125	0.1473	1.5	20	
Nickel	0.0855	0.0050	0.1	0.0001843	85.3	75-125	0.08682	1.53	20	
Selenium	0.09001	0.0050	0.1	0.0004405	89.6	75-125	0.09015	0.155	20	
Silver	0.09134	0.0050	0.1	2.883E-07	91.3	75-125	0.0917	0.393	20	
Thallium	0.08509	0.0050	0.1	-0.00005815	85.1	75-125	0.08595	1.01	20	
Vanadium	0.09563	0.0050	0.1	0.00839	87.2	75-125	0.0974	1.83	20	
Zinc	0.08698	0.010	0.1	0.0008343	86.1	75-125	0.08788	1.03	20	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48280** Instrument ID **ICPMS2** Method: **SW6020A**

The following samples were analyzed in this batch:	1305208-01C	1305208-02C	1305208-03C
	1305208-04C	1305208-05C	1305208-06C
	1305208-07C	1305208-08C	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48285** Instrument ID **ICPMS1** Method: **SW6020A**

MBLK		Sample ID: MBLK-48285-48285				Units: mg/L		Analysis Date: 05/09/13 09:48 PM		
Client ID:		Run ID: ICPMS1_130509A				SeqNo: 2312534		Prep Date: 05/09/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.004973	0.010								J
Antimony	U	0.0050								
Arsenic	U	0.0050								
Barium	0.0002867	0.0050								J
Beryllium	U	0.0020								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Lead	U	0.0050								
Manganese	0.0007708	0.0050								J
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0050								
Vanadium	U	0.0050								
Zinc	U	0.010								

MBLK		Sample ID: MBLK-48285-48285				Units: mg/L		Analysis Date: 05/10/13 11:22 AM		
Client ID:		Run ID: ICPMS1_130510A				SeqNo: 2313224		Prep Date: 05/09/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Iron	0.006899	0.080								J

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48285** Instrument ID **ICPMS1** Method: **SW6020A**

LCS		Sample ID: LCS-48285-48285				Units: mg/L		Analysis Date: 05/09/13 10:12 PM		
Client ID:		Run ID: ICPMS1_130509A				SeqNo: 2312538		Prep Date: 05/09/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.08791	0.010	0.1	0	87.9	80-120	0			
Antimony	0.09515	0.0050	0.1	0	95.2	80-120	0			
Arsenic	0.09576	0.0050	0.1	0	95.8	80-120	0			
Barium	0.08977	0.0050	0.1	0	89.8	80-120	0			
Beryllium	0.08925	0.0020	0.1	0	89.2	80-120	0			
Cadmium	0.09417	0.0020	0.1	0	94.2	80-120	0			
Chromium	0.09143	0.0050	0.1	0	91.4	80-120	0			
Cobalt	0.08842	0.0050	0.1	0	88.4	80-120	0			
Copper	0.0933	0.0050	0.1	0	93.3	80-120	0			
Iron	9.244	0.080	10	0	92.4	80-120	0			
Lead	0.09024	0.0050	0.1	0	90.2	80-120	0			
Manganese	0.09182	0.0050	0.1	0	91.8	80-120	0			
Nickel	0.09313	0.0050	0.1	0	93.1	80-120	0			
Selenium	0.09169	0.0050	0.1	0	91.7	80-120	0			
Silver	0.09282	0.0050	0.1	0	92.8	80-120	0			
Thallium	0.08557	0.0050	0.1	0	85.6	80-120	0			
Vanadium	0.0921	0.0050	0.1	0	92.1	80-120	0			
Zinc	0.09895	0.010	0.1	0	99	80-120	0			

MS		Sample ID: 1305272-01BMS				Units: mg/L		Analysis Date: 05/10/13 12:52 AM		
Client ID:		Run ID: ICPMS1_130509A				SeqNo: 2312565		Prep Date: 05/09/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1419	0.010	0.1	0.0272	115	75-125	0			
Antimony	0.08818	0.0050	0.1	0.0000112	88.2	75-125	0			
Arsenic	0.1108	0.0050	0.1	0.01439	96.4	75-125	0			
Barium	0.1222	0.0050	0.1	0.02896	93.2	75-125	0			
Beryllium	0.08421	0.0020	0.1	-0.0000118	84.2	75-125	0			
Cadmium	0.08914	0.0020	0.1	0.00002055	89.1	75-125	0			
Chromium	0.08902	0.0050	0.1	0.000405	88.6	75-125	0			
Cobalt	0.08273	0.0050	0.1	0.0002943	82.4	75-125	0			
Copper	0.08434	0.0050	0.1	0.0002777	84.1	75-125	0			
Iron	9.876	0.080	10	1.115	87.6	75-125	0			
Lead	0.09394	0.0050	0.1	9.222E-07	93.9	75-125	0			
Manganese	0.2595	0.0050	0.1	0.1698	89.7	75-125	0			
Nickel	0.08479	0.0050	0.1	0.000915	83.9	75-125	0			
Selenium	0.09013	0.0050	0.1	0.0006623	89.5	75-125	0			
Silver	0.0792	0.0050	0.1	-0.00001366	79.2	75-125	0			
Thallium	0.08958	0.0050	0.1	-0.0001086	89.7	75-125	0			
Vanadium	0.09346	0.0050	0.1	0.000161	93.3	75-125	0			
Zinc	0.0855	0.010	0.1	0.0006284	84.9	75-125	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48285** Instrument ID **ICPMS1** Method: **SW6020A**

MSD		Sample ID: 1305272-01BMSD				Units: mg/L		Analysis Date: 05/10/13 12:58 AM		
Client ID:		Run ID: ICPMS1_130509A				SeqNo: 2312566		Prep Date: 05/09/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1392	0.010	0.1	0.0272	112	75-125	0.1419	1.92	20	
Antimony	0.08875	0.0050	0.1	0.0000112	88.7	75-125	0.08818	0.644	20	
Arsenic	0.1095	0.0050	0.1	0.01439	95.1	75-125	0.1108	1.18	20	
Barium	0.1206	0.0050	0.1	0.02896	91.6	75-125	0.1222	1.32	20	
Beryllium	0.08496	0.0020	0.1	-0.0000118	85	75-125	0.08421	0.887	20	
Cadmium	0.08853	0.0020	0.1	0.00002055	88.5	75-125	0.08914	0.687	20	
Chromium	0.08942	0.0050	0.1	0.000405	89	75-125	0.08902	0.448	20	
Cobalt	0.08322	0.0050	0.1	0.0002943	82.9	75-125	0.08273	0.591	20	
Copper	0.08448	0.0050	0.1	0.0002777	84.2	75-125	0.08434	0.166	20	
Iron	9.955	0.080	10	1.115	88.4	75-125	9.876	0.797	20	
Lead	0.09414	0.0050	0.1	9.222E-07	94.1	75-125	0.09394	0.213	20	
Manganese	0.2615	0.0050	0.1	0.1698	91.7	75-125	0.2595	0.768	20	
Nickel	0.08594	0.0050	0.1	0.000915	85	75-125	0.08479	1.35	20	
Selenium	0.09135	0.0050	0.1	0.0006623	90.7	75-125	0.09013	1.34	20	
Silver	0.07992	0.0050	0.1	-0.00001366	79.9	75-125	0.0792	0.905	20	
Thallium	0.09063	0.0050	0.1	-0.0001086	90.7	75-125	0.08958	1.17	20	
Vanadium	0.09405	0.0050	0.1	0.000161	93.9	75-125	0.09346	0.629	20	
Zinc	0.0856	0.010	0.1	0.0006284	85	75-125	0.0855	0.117	20	

The following samples were analyzed in this batch:

1305208-09C	1305208-10C	1305208-11C
1305208-12C	1305208-13C	1305208-14C
1305208-15C		

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MBLK		Sample ID: SBLKW1-48213-48213				Units: µg/L		Analysis Date: 05/08/13 08:58 AM		
Client ID:		Run ID: SVMS7_130508A				SeqNo: 2311780		Prep Date: 05/07/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	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	20								
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-Nitrophenol	U	5.0								
3,3'-Dichlorobenzidine	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-Nitrophenol	U	20								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Acetophenone	U	10								
Anthracene	U	5.0								
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								
Carbazole	U	10								
Chrysene	U	5.0								
Dibenzo(a,h)anthracene	U	5.0								
Dibenzofuran	U	5.0								
Diethyl phthalate	1.18	20								J
Dimethyl phthalate	U	20								
Di-n-butyl phthalate	U	5.0								
Di-n-octyl phthalate	U	5.0								
Fluoranthene	U	5.0								

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213	Instrument ID SVMS7	Method: E625
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>	29.45	0 50 0 58.9 38-115 0
<i>Surr: 2-Fluorobiphenyl</i>	30.97	0 50 0 61.9 32-100 0
<i>Surr: 2-Fluorophenol</i>	25.21	0 50 0 50.4 22-59 0
<i>Surr: 4-Terphenyl-d14</i>	43.59	0 50 0 87.2 23-112 0
<i>Surr: Nitrobenzene-d5</i>	28.48	0 50 0 57 31-93 0
<i>Surr: Phenol-d6</i>	13.74	0 50 0 27.5 13-36 0

MBLK	Sample ID: SBLKW1-48213-48213				Units: µg/L		Analysis Date: 05/08/13 08:58 AM			
Client ID:			Run ID: SVMS7_130508A		SeqNo: 2313099		Prep Date: 05/07/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,6-Trichlorophenol	U	5.0								
2,4-Dichlorophenol	U	10								
2,4-Dimethylphenol	U	5.0								
2,4-Dinitrophenol	U	20								
2-Chlorophenol	U	5.0								
2-Nitrophenol	U	5.0								
4,6-Dinitro-2-methylphenol	U	20								
4-Chloro-3-methylphenol	U	5.0								
4-Nitrophenol	U	20								
Pentachlorophenol	U	20								
Phenol	U	5.0								
Surr: 2,4,6-Tribromophenol	29.45	0	50	0	58.9	41-99	0			
Surr: 2-Fluorophenol	25.21	0	50	0	50.4	22-56	0			
Surr: Phenol-d6	13.74	0	50	0	27.5	18-39	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MBLK		Sample ID: SBLKW1-48213-48213				Units: µg/L		Analysis Date: 05/08/13 08:58 AM		
Client ID:		Run ID: SVMS7_130508A				SeqNo: 2313106		Prep Date: 05/07/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,6-Trichlorophenol	U	5.0								
2,4-Dichlorophenol	U	10								
2,4-Dimethylphenol	U	5.0								
2,4-Dinitrophenol	U	20								
2,4-Dinitrotoluene	U	5.0								
2,6-Dinitrotoluene	U	5.0								
2-Chloronaphthalene	U	5.0								
2-Chlorophenol	U	5.0								
2-Nitrophenol	U	5.0								
3,3'-Dichlorobenzidine	U	20								
4,6-Dinitro-2-methylphenol	U	20								
4-Bromophenyl phenyl ether	U	5.0								
4-Chloro-3-methylphenol	U	5.0								
4-Chlorophenyl phenyl ether	U	5.0								
4-Nitrophenol	U	20								
Acenaphthene	U	5.0								
Acenaphthylene	U	5.0								
Anthracene	U	5.0								
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								
Chrysene	U	5.0								
Dibenzo(a,h)anthracene	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								

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213	Instrument ID SVMS7	Method: E625						
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>29.45</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>58.9</i>	<i>21-125</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>30.97</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>61.9</i>	<i>36-94</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>25.21</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>50.4</i>	<i>10-75</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>43.59</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>87.2</i>	<i>26-119</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>28.48</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>57</i>	<i>41-104</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>13.74</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>27.5</i>	<i>11-50</i>	<i>0</i>	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MBLK		Sample ID: SBLKW1-48213-48213				Units: µg/L		Analysis Date: 05/08/13 08:58 AM		
Client ID:		Run ID: SVMS7_130508A				SeqNo: 2313159		Prep Date: 05/07/13		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: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213		Instrument ID SVMS7		Method: E625				
Chrysene	U	5.0						
Dibenzo(a,h)anthracene	U	5.0						
Dibenzofuran	U	5.0						
Diethyl phthalate	1.18	20						J
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>29.45</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>58.9</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>30.97</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>61.9</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>25.21</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>50.4</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>43.59</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>87.2</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>28.48</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>57</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>13.74</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>27.5</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: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

LCS Sample ID: SLCSW1-48213-48213				Units: µg/L			Analysis Date: 05/08/13 08:35 AM			
Client ID:		Run ID: SVMS7_130508A		SeqNo: 2311779		Prep Date: 05/07/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	13.79	5.0	20	0	69	50-110	0			
2,4,6-Trichlorophenol	14.09	5.0	20	0	70.4	50-115	0			
2,4-Dichlorophenol	11.89	10	20	0	59.4	50-105	0			
2,4-Dimethylphenol	10.78	5.0	20	0	53.9	30-110	0			
2,4-Dinitrophenol	14.68	20	20	0	73.4	15-140	0			J
2,4-Dinitrotoluene	15.85	5.0	20	0	79.2	50-120	0			
2,6-Dinitrotoluene	14.34	5.0	20	0	71.7	50-115	0			
2-Chloronaphthalene	12.72	5.0	20	0	63.6	50-105	0			
2-Chlorophenol	12.63	5.0	20	0	63.2	35-105	0			
2-Methylnaphthalene	12.09	5.0	20	0	60.4	45-105	0			
2-Nitrophenol	11.89	5.0	20	0	59.4	40-115	0			
4,6-Dinitro-2-methylphenol	14.28	20	20	0	71.4	40-130	0			J
4-Bromophenyl phenyl ether	12.58	5.0	20	0	62.9	50-115	0			
4-Chloro-3-methylphenol	12.85	5.0	20	0	64.2	45-110	0			
4-Chloroaniline	13.7	20	20	0	68.5	15-110	0			J
4-Chlorophenyl phenyl ether	12.31	5.0	20	0	61.6	50-110	0			
4-Methylphenol	10.25	5.0	20	0	51.2	30-110	0			
4-Nitrophenol	7.58	20	20	0	37.9	1-58	0			J
Acenaphthene	12.04	5.0	20	0	60.2	45-110	0			
Acenaphthylene	12.08	5.0	20	0	60.4	50-105	0			
Acetophenone	14.38	10	20	0	71.9	80-120	0			S
Anthracene	12.66	5.0	20	0	63.3	55-110	0			
Benzo(a)anthracene	14.84	5.0	20	0	74.2	55-110	0			
Benzo(a)pyrene	15.15	5.0	20	0	75.8	55-110	0			
Benzo(b)fluoranthene	14.56	5.0	20	0	72.8	45-120	0			
Benzo(g,h,i)perylene	16.43	5.0	20	0	82.2	40-125	0			
Benzo(k)fluoranthene	13.16	5.0	20	0	65.8	45-125	0			
Bis(2-chloroethoxy)methane	11.99	5.0	20	0	60	45-105	0			
Bis(2-chloroethyl)ether	14.92	5.0	20	0	74.6	35-110	0			
Bis(2-chloroisopropyl)ether	13.48	5.0	20	0	67.4	25-130	0			
Bis(2-ethylhexyl)phthalate	14.63	5.0	20	0	73.2	40-125	0			
Butyl benzyl phthalate	13.13	5.0	20	0	65.6	45-115	0			
Carbazole	13.97	10	20	0	69.8	50-130	0			
Chrysene	14.03	5.0	20	0	70.2	55-110	0			
Dibenzo(a,h)anthracene	16.06	5.0	20	0	80.3	40-125	0			
Diethyl phthalate	14.56	20	20	0	72.8	40-120	0			J
Dimethyl phthalate	13.68	20	20	0	68.4	25-125	0			J
Di-n-butyl phthalate	13.55	5.0	20	0	67.8	55-115	0			
Di-n-octyl phthalate	15.98	5.0	20	0	79.9	35-135	0			
Fluoranthene	16.65	5.0	20	0	83.2	55-115	0			
Fluorene	12.76	5.0	20	0	63.8	50-110	0			
Hexachlorobenzene	13.24	5.0	20	0	66.2	50-110	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213	Instrument ID SVMS7			Method: E625				
Hexachlorobutadiene	11.86	5.0	20	0	59.3	25-105	0	
Hexachlorocyclopentadiene	10.02	20	20	0	50.1	25-105	0	J
Hexachloroethane	13.23	5.0	20	0	66.2	30-95	0	
Indeno(1,2,3-cd)pyrene	16.9	5.0	20	0	84.5	45-125	0	
Isophorone	12.89	5.0	20	0	64.4	50-110	0	
Naphthalene	11.91	5.0	20	0	59.6	40-100	0	
Nitrobenzene	12.26	5.0	20	0	61.3	45-110	0	
N-Nitrosodi-n-propylamine	14.8	5.0	20	0	74	35-130	0	
N-Nitrosodiphenylamine	12.52	5.0	20	0	62.6	50-110	0	
Pentachlorophenol	14.68	20	20	0	73.4	40-115	0	J
Phenanthrene	12.81	5.0	20	0	64	50-115	0	
Phenol	4.66	5.0	20	0	23.3	12-43	0	J
Pyrene	12.79	5.0	20	0	64	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	33.08	0	50	0	66.2	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	30.23	0	50	0	60.5	32-100	0	
<i>Surr: 2-Fluorophenol</i>	19.37	0	50	0	38.7	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	41.08	0	50	0	82.2	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	28.52	0	50	0	57	31-93	0	
<i>Surr: Phenol-d6</i>	11.23	0	50	0	22.5	13-36	0	

LCS		Sample ID: SLCSW1-48213-48213			Units: µg/L		Analysis Date: 05/08/13 08:35 AM			
Client ID:		Run ID: SVMS7_130508A			SeqNo: 2313098		Prep Date: 05/07/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Chlorophenol	12.63	5.0	20	0	63.2	25-85	0			
4-Chloro-3-methylphenol	12.85	5.0	20	0	64.2	19-103	0			
4-Nitrophenol	7.58	20	20	0	37.9	1-58	0			J
Pentachlorophenol	14.68	20	20	0	73.4	9-103	0			J
Phenol	4.66	5.0	20	0	23.3	12-43	0			J
<i>Surr: 2,4,6-Tribromophenol</i>	33.08	0	50	0	66.2	41-99	0			
<i>Surr: 2-Fluorophenol</i>	19.37	0	50	0	38.7	22-56	0			
<i>Surr: Phenol-d6</i>	11.23	0	50	0	22.5	18-39	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

LCS Sample ID: SLCSW1-48213-48213				Units: µg/L			Analysis Date: 05/08/13 08:35 AM			
Client ID:		Run ID: SVMS7_130508A		SeqNo: 2313105		Prep Date: 05/07/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	15.85	5.0	20	0	79.2	50-120	0			
2-Chlorophenol	12.63	5.0	20	0	63.2	35-105	0			
4-Chloro-3-methylphenol	12.85	5.0	20	0	64.2	45-110	0			
4-Nitrophenol	7.58	20	20	0	37.9	1-58	0			J
Acenaphthene	12.04	5.0	20	0	60.2	45-110	0			
Acenaphthylene	12.08	5.0	20	0	60.4	50-105	0			
Anthracene	12.66	5.0	20	0	63.3	55-110	0			
Benzo(a)anthracene	14.84	5.0	20	0	74.2	55-110	0			
Benzo(a)pyrene	15.15	5.0	20	0	75.8	55-110	0			
Benzo(b)fluoranthene	14.56	5.0	20	0	72.8	45-120	0			
Benzo(g,h,i)perylene	16.43	5.0	20	0	82.2	40-125	0			
Benzo(k)fluoranthene	13.16	5.0	20	0	65.8	45-125	0			
Butyl benzyl phthalate	13.13	5.0	20	0	65.6	45-115	0			
Chrysene	14.03	5.0	20	0	70.2	55-110	0			
Dibenzo(a,h)anthracene	16.06	5.0	20	0	80.3	40-125	0			
Diethyl phthalate	14.56	20	20	0	72.8	40-120	0			J
Dimethyl phthalate	13.68	20	20	0	68.4	25-125	0			J
Fluoranthene	16.65	5.0	20	0	83.2	55-115	0			
Fluorene	12.76	5.0	20	0	63.8	50-110	0			
Indeno(1,2,3-cd)pyrene	16.9	5.0	20	0	84.5	45-125	0			
Naphthalene	11.91	5.0	20	0	59.6	40-100	0			
N-Nitrosodi-n-propylamine	14.8	5.0	20	0	74	35-130	0			
Pentachlorophenol	14.68	20	20	0	73.4	40-115	0			J
Phenanthrene	12.81	5.0	20	0	64	50-115	0			
Phenol	4.66	5.0	20	0	23.3	12-43	0			J
Pyrene	12.79	5.0	20	0	64	50-130	0			
Surr: 2,4,6-Tribromophenol	33.08	0	50	0	66.2	38-115	0			
Surr: 2-Fluorobiphenyl	30.23	0	50	0	60.5	32-100	0			
Surr: 2-Fluorophenol	19.37	0	50	0	38.7	22-59	0			
Surr: 4-Terphenyl-d14	41.08	0	50	0	82.2	23-112	0			
Surr: Nitrobenzene-d5	28.52	0	50	0	57	31-93	0			
Surr: Phenol-d6	11.23	0	50	0	22.5	13-36	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

LCS Sample ID: SLCSW1-48213-48213				Units: µg/L			Analysis Date: 05/08/13 08:35 AM			
Client ID:		Run ID: SVMS7_130508A		SeqNo: 2313158		Prep Date: 05/07/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	13.79	5.0	20	0	69	50-110	0			
2,4,6-Trichlorophenol	14.09	5.0	20	0	70.4	50-115	0			
2,4-Dichlorophenol	11.89	10	20	0	59.4	50-105	0			
2,4-Dimethylphenol	10.78	5.0	20	0	53.9	30-110	0			
2,4-Dinitrophenol	14.68	5.0	20	0	73.4	15-140	0			
2,4-Dinitrotoluene	15.85	5.0	20	0	79.2	50-120	0			
2,6-Dinitrotoluene	14.34	5.0	20	0	71.7	50-115	0			
2-Chloronaphthalene	12.72	5.0	20	0	63.6	50-105	0			
2-Chlorophenol	12.63	5.0	20	0	63.2	35-105	0			
2-Methylnaphthalene	12.09	5.0	20	0	60.4	45-105	0			
2-Methylphenol	11.28	5.0	20	0	56.4	40-110	0			
2-Nitroaniline	13.32	20	20	0	66.6	50-115	0			J
2-Nitrophenol	11.89	5.0	20	0	59.4	40-115	0			
3-Nitroaniline	14.04	20	20	0	70.2	20-125	0			J
4,6-Dinitro-2-methylphenol	14.28	20	20	0	71.4	40-130	0			J
4-Bromophenyl phenyl ether	12.58	5.0	20	0	62.9	50-115	0			
4-Chloro-3-methylphenol	12.85	5.0	20	0	64.2	45-110	0			
4-Chloroaniline	13.7	20	20	0	68.5	15-110	0			J
4-Chlorophenyl phenyl ether	12.31	5.0	20	0	61.6	50-110	0			
4-Methylphenol	10.25	5.0	20	0	51.2	30-110	0			
4-Nitroaniline	13.85	20	20	0	69.2	35-150	0			J
4-Nitrophenol	7.58	20	20	0	37.9	1-58	0			J
Acenaphthene	12.04	5.0	20	0	60.2	45-110	0			
Acenaphthylene	12.08	5.0	20	0	60.4	50-105	0			
Anthracene	12.66	5.0	20	0	63.3	55-110	0			
Benzo(a)anthracene	14.84	5.0	20	0	74.2	55-110	0			
Benzo(a)pyrene	15.15	5.0	20	0	75.8	55-110	0			
Benzo(b)fluoranthene	14.56	5.0	20	0	72.8	45-120	0			
Benzo(g,h,i)perylene	16.43	5.0	20	0	82.2	40-125	0			
Benzo(k)fluoranthene	13.16	5.0	20	0	65.8	45-125	0			
Bis(2-chloroethoxy)methane	11.99	5.0	20	0	60	45-105	0			
Bis(2-chloroethyl)ether	14.92	5.0	20	0	74.6	35-110	0			
Bis(2-chloroisopropyl)ether	13.48	5.0	20	0	67.4	25-130	0			
Bis(2-ethylhexyl)phthalate	14.63	5.0	20	0	73.2	40-125	0			
Butyl benzyl phthalate	13.13	5.0	20	0	65.6	45-115	0			
Carbazole	13.97	10	20	0	69.8	50-150	0			
Chrysene	14.03	5.0	20	0	70.2	55-110	0			
Dibenzo(a,h)anthracene	16.06	5.0	20	0	80.3	40-125	0			
Dibenzofuran	13.46	5.0	20	0	67.3	55-105	0			
Diethyl phthalate	14.56	20	20	0	72.8	40-120	0			J
Dimethyl phthalate	13.68	20	20	0	68.4	25-125	0			J
Di-n-butyl phthalate	13.55	5.0	20	0	67.8	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213		Instrument ID SVMS7		Method: E625			
Di-n-octyl phthalate	15.98	5.0	20	0	79.9	35-135	0
Fluoranthene	16.65	5.0	20	0	83.2	55-115	0
Fluorene	12.76	5.0	20	0	63.8	50-110	0
Hexachlorobenzene	13.24	5.0	20	0	66.2	50-110	0
Hexachlorobutadiene	11.86	5.0	20	0	59.3	25-105	0
Hexachlorocyclopentadiene	10.02	20	20	0	50.1	25-105	0 J
Hexachloroethane	13.23	5.0	20	0	66.2	30-95	0
Indeno(1,2,3-cd)pyrene	16.9	5.0	20	0	84.5	45-125	0
Isophorone	12.89	5.0	20	0	64.4	50-110	0
Naphthalene	11.91	5.0	20	0	59.6	40-100	0
Nitrobenzene	12.26	5.0	20	0	61.3	45-110	0
N-Nitrosodi-n-propylamine	14.8	5.0	20	0	74	35-130	0
N-Nitrosodiphenylamine	12.52	5.0	20	0	62.6	50-110	0
Pentachlorophenol	14.68	20	20	0	73.4	40-115	0 J
Phenanthrene	12.81	5.0	20	0	64	50-115	0
Phenol	4.66	5.0	20	0	23.3	12-43	0 J
Pyrene	12.79	5.0	20	0	64	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>33.08</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>66.2</i>	<i>38-115</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>30.23</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>60.5</i>	<i>32-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>19.37</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>41.08</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>82.2</i>	<i>23-112</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>28.52</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>57</i>	<i>31-93</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>11.23</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>22.5</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: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MS Sample ID: 1305189-01A MS				Units: µg/L			Analysis Date: 05/08/13 10:05 AM			
Client ID:		Run ID: SVMS7_130508A		SeqNo: 2311781		Prep Date: 05/07/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	257.4	100	400	0	64.4	50-110	0			
2,4,6-Trichlorophenol	264	100	400	0	66	50-115	0			
2,4-Dichlorophenol	249.4	200	400	0	62.4	50-105	0			
2,4-Dimethylphenol	198.4	100	400	0	49.6	30-110	0			
2,4-Dinitrophenol	304.8	400	400	0	76.2	15-140	0			J
2,4-Dinitrotoluene	268.6	100	400	0	67.2	50-120	0			
2,6-Dinitrotoluene	244.4	100	400	0	61.1	50-115	0			
2-Chloronaphthalene	235.6	100	400	0	58.9	50-105	0			
2-Chlorophenol	252	100	400	0	63	35-105	0			
2-Methylnaphthalene	248.6	100	400	0	62.2	45-105	0			
2-Nitrophenol	247.8	100	400	0	62	40-115	0			
4,6-Dinitro-2-methylphenol	267.2	400	400	0	66.8	40-130	0			J
4-Bromophenyl phenyl ether	246	100	400	0	61.5	50-115	0			
4-Chloro-3-methylphenol	261.2	100	400	0	65.3	45-110	0			
4-Chloroaniline	268.6	400	400	0	67.2	15-110	0			J
4-Chlorophenyl phenyl ether	226.8	100	400	0	56.7	50-110	0			
4-Methylphenol	195.6	100	400	0	48.9	30-110	0			
4-Nitrophenol	144.8	400	400	0	36.2	1-58	0			J
Acenaphthene	223	100	400	0	55.8	45-110	0			
Acenaphthylene	220.4	100	400	0	55.1	50-105	0			
Acetophenone	272.4	200	400	0	68.1	80-120	0			S
Anthracene	229.6	100	400	0	57.4	55-110	0			
Benzo(a)anthracene	274.2	100	400	0	68.6	55-110	0			
Benzo(a)pyrene	286.6	100	400	0	71.6	55-110	0			
Benzo(b)fluoranthene	284.6	100	400	0	71.2	45-120	0			
Benzo(g,h,i)perylene	271.8	100	400	0	68	40-125	0			
Benzo(k)fluoranthene	260.4	100	400	0	65.1	45-125	0			
Bis(2-chloroethoxy)methane	252.6	100	400	0	63.2	45-105	0			
Bis(2-chloroethyl)ether	275.6	100	400	0	68.9	35-110	0			
Bis(2-chloroisopropyl)ether	262.6	100	400	0	65.6	25-130	0			
Bis(2-ethylhexyl)phthalate	305.2	100	400	0	76.3	40-125	0			
Butyl benzyl phthalate	281	100	400	0	70.2	45-115	0			
Carbazole	244	200	400	0	61	50-130	0			
Chrysene	260.2	100	400	0	65	55-110	0			
Dibenzo(a,h)anthracene	270.8	100	400	0	67.7	40-125	0			
Diethyl phthalate	252.8	400	400	17.8	58.8	40-120	0			J
Dimethyl phthalate	242.2	400	400	0	60.6	25-125	0			J
Di-n-butyl phthalate	256	100	400	33.2	55.7	55-115	0			
Di-n-octyl phthalate	364.6	100	400	0	91.2	35-135	0			
Fluoranthene	279.2	100	400	0	69.8	55-115	0			
Fluorene	226	100	400	0	56.5	50-110	0			
Hexachlorobenzene	254.2	100	400	0	63.6	50-110	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213	Instrument ID SVMS7			Method: E625			
Hexachlorobutadiene	249.8	100	400	0	62.4	25-105	0
Hexachlorocyclopentadiene	198	400	400	0	49.5	25-105	0
Hexachloroethane	249.4	100	400	0	62.4	30-95	0
Indeno(1,2,3-cd)pyrene	281.6	100	400	0	70.4	45-125	0
Isophorone	263.4	100	400	0	65.8	50-110	0
Naphthalene	246	100	400	0	61.5	40-100	0
Nitrobenzene	249	100	400	0	62.2	45-110	0
N-Nitrosodi-n-propylamine	286.2	100	400	0	71.6	35-130	0
N-Nitrosodiphenylamine	237.8	100	400	0	59.4	50-110	0
Pentachlorophenol	280.6	400	400	0	70.2	40-115	0
Phenanthrene	235.4	100	400	0	58.8	50-115	0
Phenol	89.2	100	400	0	22.3	12-43	0
Pyrene	286	100	400	0	71.5	50-130	0
Surr: 2,4,6-Tribromophenol	638.4	0	1000	0	63.8	38-115	0
Surr: 2-Fluorobiphenyl	577.2	0	1000	0	57.7	32-100	0
Surr: 2-Fluorophenol	393	0	1000	0	39.3	22-59	0
Surr: 4-Terphenyl-d14	907.2	0	1000	0	90.7	23-112	0
Surr: Nitrobenzene-d5	583.2	0	1000	0	58.3	31-93	0
Surr: Phenol-d6	222.4	0	1000	0	22.2	13-36	0

MS		Sample ID: 1305189-01A MS				Units: µg/L		Analysis Date: 05/08/13 10:05 AM		
Client ID:		Run ID: SVMS7_130508A				SeqNo: 2313100		Prep Date: 05/07/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Chlorophenol	252	100	400	0	63	25-85	0			
4-Chloro-3-methylphenol	261.2	100	400	0	65.3	19-103	0			
4-Nitrophenol	144.8	400	400	0	36.2	1-58	0			J
Pentachlorophenol	280.6	400	400	0	70.2	9-103	0			J
Phenol	89.2	100	400	0	22.3	12-110	0			J
Surr: 2,4,6-Tribromophenol	638.4	0	1000	0	63.8	41-99	0			
Surr: 2-Fluorophenol	393	0	1000	0	39.3	22-56	0			
Surr: Phenol-d6	222.4	0	1000	0	22.2	18-39	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MS				Sample ID: 1305189-01A MS			Units: µg/L		Analysis Date: 05/08/13 10:05 AM	
Client ID:				Run ID: SVMS7_130508A			SeqNo: 2313107		Prep Date: 05/07/13	
							DF: 1			
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	268.6	100	400	0	67.2	50-120	0			
2-Chlorophenol	252	100	400	0	63	35-105	0			
4-Chloro-3-methylphenol	261.2	100	400	0	65.3	45-110	0			
4-Nitrophenol	144.8	400	400	0	36.2	58-58	0			JS
Acenaphthene	223	100	400	0	55.8	45-110	0			
Acenaphthylene	220.4	100	400	0	55.1	50-105	0			
Anthracene	229.6	100	400	0	57.4	55-110	0			
Benzo(a)anthracene	274.2	100	400	0	68.6	55-110	0			
Benzo(a)pyrene	286.6	100	400	0	71.6	55-110	0			
Benzo(b)fluoranthene	284.6	100	400	0	71.2	45-120	0			
Benzo(g,h,i)perylene	271.8	100	400	0	68	40-125	0			
Benzo(k)fluoranthene	260.4	100	400	0	65.1	45-125	0			
Butyl benzyl phthalate	281	100	400	0	70.2	45-115	0			
Chrysene	260.2	100	400	0	65	55-110	0			
Dibenzo(a,h)anthracene	270.8	100	400	0	67.7	40-125	0			
Diethyl phthalate	252.8	400	400	17.8	58.8	40-120	0			J
Dimethyl phthalate	242.2	400	400	0	60.6	25-125	0			J
Fluoranthene	279.2	100	400	0	69.8	55-115	0			
Fluorene	226	100	400	0	56.5	50-110	0			
Indeno(1,2,3-cd)pyrene	281.6	100	400	0	70.4	45-125	0			
Naphthalene	246	100	400	0	61.5	40-110	0			
N-Nitrosodi-n-propylamine	286.2	100	400	0	71.6	35-130	0			
Pentachlorophenol	280.6	400	400	0	70.2	40-115	0			J
Phenanthrene	235.4	100	400	0	58.8	50-115	0			
Phenol	89.2	100	400	0	22.3	12-43	0			J
Pyrene	286	100	400	0	71.5	50-130	0			
Surr: 2,4,6-Tribromophenol	638.4	0	1000	0	63.8	38-115	0			
Surr: 2-Fluorobiphenyl	577.2	0	1000	0	57.7	32-100	0			
Surr: 2-Fluorophenol	393	0	1000	0	39.3	22-59	0			
Surr: 4-Terphenyl-d14	907.2	0	1000	0	90.7	23-112	0			
Surr: Nitrobenzene-d5	583.2	0	1000	0	58.3	31-93	0			
Surr: Phenol-d6	222.4	0	1000	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: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MS Sample ID: 1305189-01A MS				Units: µg/L			Analysis Date: 05/08/13 10:05 AM			
Client ID:		Run ID: SVMS7_130508A		SeqNo: 2313169		Prep Date: 05/07/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	257.4	100	400	0	64.4	50-110	0			
2,4,6-Trichlorophenol	264	100	400	0	66	50-115	0			
2,4-Dichlorophenol	249.4	200	400	0	62.4	50-105	0			
2,4-Dimethylphenol	198.4	100	400	0	49.6	30-110	0			
2,4-Dinitrophenol	304.8	100	400	0	76.2	15-140	0			
2,4-Dinitrotoluene	268.6	100	400	0	67.2	50-120	0			
2,6-Dinitrotoluene	244.4	100	400	0	61.1	50-115	0			
2-Chloronaphthalene	235.6	100	400	0	58.9	50-105	0			
2-Chlorophenol	252	100	400	0	63	35-105	0			
2-Methylnaphthalene	248.6	100	400	0	62.2	45-105	0			
2-Methylphenol	221.4	100	400	0	55.4	40-110	0			
2-Nitroaniline	238.8	400	400	0	59.7	50-115	0			J
2-Nitrophenol	247.8	100	400	0	62	40-115	0			
3-Nitroaniline	245.4	400	400	0	61.4	20-125	0			J
4,6-Dinitro-2-methylphenol	267.2	400	400	0	66.8	40-130	0			J
4-Bromophenyl phenyl ether	246	100	400	0	61.5	50-115	0			
4-Chloro-3-methylphenol	261.2	100	400	0	65.3	45-110	0			
4-Chloroaniline	268.6	400	400	0	67.2	15-110	0			J
4-Chlorophenyl phenyl ether	226.8	100	400	0	56.7	50-110	0			
4-Methylphenol	195.6	100	400	0	48.9	30-110	0			
4-Nitroaniline	241.8	400	400	0	60.4	35-150	0			J
4-Nitrophenol	144.8	400	400	0	36.2	1-58	0			J
Acenaphthene	223	100	400	0	55.8	45-110	0			
Acenaphthylene	220.4	100	400	0	55.1	50-105	0			
Anthracene	229.6	100	400	0	57.4	55-110	0			
Benzo(a)anthracene	274.2	100	400	0	68.6	55-110	0			
Benzo(a)pyrene	286.6	100	400	0	71.6	55-110	0			
Benzo(b)fluoranthene	284.6	100	400	0	71.2	45-120	0			
Benzo(g,h,i)perylene	271.8	100	400	0	68	40-125	0			
Benzo(k)fluoranthene	260.4	100	400	0	65.1	45-125	0			
Bis(2-chloroethoxy)methane	252.6	100	400	0	63.2	45-105	0			
Bis(2-chloroethyl)ether	275.6	100	400	0	68.9	35-110	0			
Bis(2-chloroisopropyl)ether	262.6	100	400	0	65.6	25-130	0			
Bis(2-ethylhexyl)phthalate	305.2	100	400	0	76.3	40-125	0			
Butyl benzyl phthalate	281	100	400	0	70.2	45-115	0			
Carbazole	244	200	400	0	61	50-150	0			
Chrysene	260.2	100	400	0	65	55-110	0			
Dibenzo(a,h)anthracene	270.8	100	400	0	67.7	40-125	0			
Dibenzofuran	242.6	100	400	0	60.6	55-105	0			
Diethyl phthalate	252.8	400	400	17.8	58.8	40-120	0			J
Dimethyl phthalate	242.2	400	400	0	60.6	25-125	0			J
Di-n-butyl phthalate	256	100	400	33.2	55.7	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213		Instrument ID SVMS7		Method: E625				
Di-n-octyl phthalate	364.6	100	400	0	91.2	35-135	0	
Fluoranthene	279.2	100	400	0	69.8	55-115	0	
Fluorene	226	100	400	0	56.5	50-110	0	
Hexachlorobenzene	254.2	100	400	0	63.6	50-110	0	
Hexachlorobutadiene	249.8	100	400	0	62.4	25-105	0	
Hexachlorocyclopentadiene	198	400	400	0	49.5	25-105	0	J
Hexachloroethane	249.4	100	400	0	62.4	30-95	0	
Indeno(1,2,3-cd)pyrene	281.6	100	400	0	70.4	45-125	0	
Isophorone	263.4	100	400	0	65.8	50-110	0	
Naphthalene	246	100	400	0	61.5	40-100	0	
Nitrobenzene	249	100	400	0	62.2	45-110	0	
N-Nitrosodi-n-propylamine	286.2	100	400	0	71.6	35-130	0	
N-Nitrosodiphenylamine	237.8	100	400	0	59.4	50-110	0	
Pentachlorophenol	280.6	400	400	0	70.2	40-115	0	J
Phenanthrene	235.4	100	400	0	58.8	50-115	0	
Phenol	89.2	100	400	0	22.3	12-43	0	J
Pyrene	286	100	400	0	71.5	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>638.4</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>63.8</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>577.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>57.7</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>393</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>39.3</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>907.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>90.7</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>583.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>58.3</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>222.4</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.

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MSD Sample ID: 1305189-01A MSD				Units: µg/L			Analysis Date: 05/08/13 10:27 AM			
Client ID:		Run ID: SVMS7_130508A			SeqNo: 2311782		Prep Date: 05/07/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	283.8	100	400	0	71	50-110	257.4	9.76	30	
2,4,6-Trichlorophenol	282.4	100	400	0	70.6	50-115	264	6.73	30	
2,4-Dichlorophenol	253.6	200	400	0	63.4	50-105	249.4	1.67	30	
2,4-Dimethylphenol	199	100	400	0	49.8	30-110	198.4	0.302	30	
2,4-Dinitrophenol	345.4	400	400	0	86.4	15-140	304.8	0	30	J
2,4-Dinitrotoluene	316	100	400	0	79	50-120	268.6	16.2	30	
2,6-Dinitrotoluene	280.2	100	400	0	70	50-115	244.4	13.6	30	
2-Chloronaphthalene	257.6	100	400	0	64.4	50-105	235.6	8.92	30	
2-Chlorophenol	260.4	100	400	0	65.1	35-105	252	3.28	30	
2-Methylnaphthalene	250.2	100	400	0	62.6	45-105	248.6	0.642	30	
2-Nitrophenol	253.2	100	400	0	63.3	40-115	247.8	2.16	30	
4,6-Dinitro-2-methylphenol	293.2	400	400	0	73.3	40-130	267.2	0	30	J
4-Bromophenyl phenyl ether	263.8	100	400	0	66	50-115	246	6.98	30	
4-Chloro-3-methylphenol	262.8	100	400	0	65.7	45-110	261.2	0.611	30	
4-Chloroaniline	255.6	400	400	0	63.9	15-110	268.6	0	30	J
4-Chlorophenyl phenyl ether	251.2	100	400	0	62.8	50-110	226.8	10.2	30	
4-Methylphenol	198.6	100	400	0	49.6	30-110	195.6	1.52	30	
4-Nitrophenol	173.2	400	400	0	43.3	1-58	144.8	0	30	J
Acenaphthene	248.6	100	400	0	62.2	45-110	223	10.9	30	
Acenaphthylene	249	100	400	0	62.2	50-105	220.4	12.2	30	
Acetophenone	297.4	200	400	0	74.4	80-120	272.4	8.78	30	S
Anthracene	250.4	100	400	0	62.6	55-110	229.6	8.67	30	
Benzo(a)anthracene	300.6	100	400	0	75.2	55-110	274.2	9.19	30	
Benzo(a)pyrene	310.2	100	400	0	77.6	55-110	286.6	7.91	30	
Benzo(b)fluoranthene	298	100	400	0	74.5	45-120	284.6	4.6	30	
Benzo(g,h,i)perylene	322.8	100	400	0	80.7	40-125	271.8	17.2	30	
Benzo(k)fluoranthene	267.4	100	400	0	66.8	45-125	260.4	2.65	30	
Bis(2-chloroethoxy)methane	255.4	100	400	0	63.8	45-105	252.6	1.1	30	
Bis(2-chloroethyl)ether	300.6	100	400	0	75.2	35-110	275.6	8.68	30	
Bis(2-chloroisopropyl)ether	283.2	100	400	0	70.8	25-130	262.6	7.55	30	
Bis(2-ethylhexyl)phthalate	315.4	100	400	0	78.8	40-125	305.2	3.29	30	
Butyl benzyl phthalate	283	100	400	0	70.8	45-115	281	0.709	30	
Carbazole	279.8	200	400	0	70	50-130	244	13.7	30	
Chrysene	287.4	100	400	0	71.8	55-110	260.2	9.93	30	
Dibenzo(a,h)anthracene	318	100	400	0	79.5	40-125	270.8	16	30	
Diethyl phthalate	285.2	400	400	17.8	66.8	40-120	252.8	0	30	J
Dimethyl phthalate	272.6	400	400	0	68.2	25-125	242.2	0	30	J
Di-n-butyl phthalate	283.2	100	400	33.2	62.5	55-115	256	10.1	30	
Di-n-octyl phthalate	351.8	100	400	0	88	35-135	364.6	3.57	30	
Fluoranthene	331.6	100	400	0	82.9	55-115	279.2	17.2	30	
Fluorene	255.2	100	400	0	63.8	50-110	226	12.1	30	
Hexachlorobenzene	269.2	100	400	0	67.3	50-110	254.2	5.73	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213	Instrument ID SVMS7			Method: E625					
Hexachlorobutadiene	245.2	100	400	0	61.3	25-105	249.8	1.86	30
Hexachlorocyclopentadiene	209.4	400	400	0	52.4	25-105	198	0	30 J
Hexachloroethane	268.4	100	400	0	67.1	30-95	249.4	7.34	30
Indeno(1,2,3-cd)pyrene	338.8	100	400	0	84.7	45-125	281.6	18.4	30
Isophorone	269	100	400	0	67.2	50-110	263.4	2.1	30
Naphthalene	252	100	400	0	63	40-100	246	2.41	30
Nitrobenzene	262	100	400	0	65.5	45-110	249	5.09	30
N-Nitrosodi-n-propylamine	304.6	100	400	0	76.2	35-130	286.2	6.23	30
N-Nitrosodiphenylamine	253.4	100	400	0	63.4	50-110	237.8	6.35	30
Pentachlorophenol	310.8	400	400	0	77.7	40-115	280.6	0	30 J
Phenanthrene	260.6	100	400	0	65.2	50-115	235.4	10.2	30
Phenol	99.4	100	400	0	24.8	12-43	89.2	0	30 J
Pyrene	270.2	100	400	0	67.6	50-130	286	5.68	30
<i>Surr: 2,4,6-Tribromophenol</i>	<i>660</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>66</i>	<i>38-115</i>	<i>638.4</i>	<i>3.33</i>	<i>40</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>612.4</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>61.2</i>	<i>32-100</i>	<i>577.2</i>	<i>5.92</i>	<i>40</i>
<i>Surr: 2-Fluorophenol</i>	<i>418.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>41.8</i>	<i>22-59</i>	<i>393</i>	<i>6.21</i>	<i>40</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>842.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>84.3</i>	<i>23-112</i>	<i>907.2</i>	<i>7.36</i>	<i>40</i>
<i>Surr: Nitrobenzene-d5</i>	<i>599.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>60</i>	<i>31-93</i>	<i>583.2</i>	<i>2.77</i>	<i>40</i>
<i>Surr: Phenol-d6</i>	<i>241</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>24.1</i>	<i>13-36</i>	<i>222.4</i>	<i>8.03</i>	<i>40</i>

MSD		Sample ID: 1305189-01A MSD				Units: µg/L		Analysis Date: 05/08/13 10:27 AM		
Client ID:		Run ID: SVMS7_130508A				SeqNo: 2313101		Prep Date: 05/07/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2-Chlorophenol	260.4	100	400	0	65.1	25-85	252	3.28	40	
4-Chloro-3-methylphenol	262.8	100	400	0	65.7	19-103	261.2	0.611	42	
4-Nitrophenol	173.2	400	400	0	43.3	1-58	144.8	0	50	J
Pentachlorophenol	310.8	400	400	0	77.7	9-103	280.6	0	50	J
Phenol	99.4	100	400	0	24.8	12-110	89.2	0	42	J
<i>Surr: 2,4,6-Tribromophenol</i>	<i>660</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>66</i>	<i>41-99</i>	<i>638.4</i>	<i>3.33</i>	<i>40</i>	
<i>Surr: 2-Fluorophenol</i>	<i>418.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>41.8</i>	<i>22-56</i>	<i>393</i>	<i>6.21</i>	<i>40</i>	
<i>Surr: Phenol-d6</i>	<i>241</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>24.1</i>	<i>18-39</i>	<i>222.4</i>	<i>8.03</i>	<i>40</i>	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MSD Sample ID: 1305189-01A MSD				Units: µg/L			Analysis Date: 05/08/13 10:27 AM			
Client ID:		Run ID: SVMS7_130508A		SeqNo: 2313108		Prep Date: 05/07/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4-Dinitrotoluene	316	100	400	0	79	50-120	268.6	16.2	35	
2-Chlorophenol	260.4	100	400	0	65.1	35-105	252	3.28	32	
4-Chloro-3-methylphenol	262.8	100	400	0	65.7	45-110	261.2	0.611	31	
4-Nitrophenol	173.2	400	400	0	43.3	1-58	144.8	0	43	J
Acenaphthene	248.6	100	400	0	62.2	45-110	223	10.9	44	
Acenaphthylene	249	100	400	0	62.2	50-105	220.4	12.2	26	
Anthracene	250.4	100	400	0	62.6	55-110	229.6	8.67	21	
Benzo(a)anthracene	300.6	100	400	0	75.2	55-110	274.2	9.19	30	
Benzo(a)pyrene	310.2	100	400	0	77.6	55-110	286.6	7.91	32	
Benzo(b)fluoranthene	298	100	400	0	74.5	45-120	284.6	4.6	34	
Benzo(g,h,i)perylene	322.8	100	400	0	80.7	40-125	271.8	17.2	27	
Benzo(k)fluoranthene	267.4	100	400	0	66.8	45-125	260.4	2.65	27	
Butyl benzyl phthalate	283	100	400	0	70.8	45-115	281	0.709	30	
Chrysene	287.4	100	400	0	71.8	55-110	260.2	9.93	33	
Dibenzo(a,h)anthracene	318	100	400	0	79.5	40-125	270.8	16	35	
Diethyl phthalate	285.2	400	400	17.8	66.8	40-120	252.8	0	30	J
Dimethyl phthalate	272.6	400	400	0	68.2	25-125	242.2	0	30	J
Fluoranthene	331.6	100	400	0	82.9	55-115	279.2	17.2	29	
Fluorene	255.2	100	400	0	63.8	50-110	226	12.1	25	
Indeno(1,2,3-cd)pyrene	338.8	100	400	0	84.7	45-125	281.6	18.4	34	
Naphthalene	252	100	400	0	63	40-100	246	2.41	40	
N-Nitrosodi-n-propylamine	304.6	100	400	0	76.2	35-130	286.2	6.23	36	
Pentachlorophenol	310.8	400	400	0	77.7	40-115	280.6	0	34	J
Phenanthrene	260.6	100	400	0	65.2	50-115	235.4	10.2	22	
Phenol	99.4	100	400	0	24.8	12-43	89.2	0	34	J
Pyrene	270.2	100	400	0	67.6	50-130	286	5.68	22	
Surr: 2,4,6-Tribromophenol	660	0	1000	0	66	38-115	638.4	3.33	40	
Surr: 2-Fluorobiphenyl	612.4	0	1000	0	61.2	32-100	577.2	5.92	40	
Surr: 2-Fluorophenol	418.2	0	1000	0	41.8	22-59	393	6.21	40	
Surr: 4-Terphenyl-d14	842.8	0	1000	0	84.3	23-112	907.2	7.36	40	
Surr: Nitrobenzene-d5	599.6	0	1000	0	60	31-93	583.2	2.77	40	
Surr: Phenol-d6	241	0	1000	0	24.1	13-36	222.4	8.03	40	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48213** Instrument ID **SVMS7** Method: **E625**

MSD Sample ID: 1305189-01A MSD				Units: µg/L			Analysis Date: 05/08/13 10:27 AM			
Client ID:		Run ID: SVMS7_130508A		SeqNo: 2313172		Prep Date: 05/07/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	283.8	100	400	0	71	50-110	257.4	9.76	30	
2,4,6-Trichlorophenol	282.4	100	400	0	70.6	50-115	264	6.73	30	
2,4-Dichlorophenol	253.6	200	400	0	63.4	50-105	249.4	1.67	30	
2,4-Dimethylphenol	199	100	400	0	49.8	30-110	198.4	0.302	30	
2,4-Dinitrophenol	345.4	100	400	0	86.4	15-140	304.8	12.5	30	
2,4-Dinitrotoluene	316	100	400	0	79	50-120	268.6	16.2	30	
2,6-Dinitrotoluene	280.2	100	400	0	70	50-115	244.4	13.6	30	
2-Chloronaphthalene	257.6	100	400	0	64.4	50-105	235.6	8.92	30	
2-Chlorophenol	260.4	100	400	0	65.1	35-105	252	3.28	30	
2-Methylnaphthalene	250.2	100	400	0	62.6	45-105	248.6	0.642	30	
2-Methylphenol	223.4	100	400	0	55.8	40-110	221.4	0.899	30	
2-Nitroaniline	269.4	400	400	0	67.4	50-115	238.8	0	30	J
2-Nitrophenol	253.2	100	400	0	63.3	40-115	247.8	2.16	30	
3-Nitroaniline	261	400	400	0	65.2	20-125	245.4	0	30	J
4,6-Dinitro-2-methylphenol	293.2	400	400	0	73.3	40-130	267.2	0	30	J
4-Bromophenyl phenyl ether	263.8	100	400	0	66	50-115	246	6.98	30	
4-Chloro-3-methylphenol	262.8	100	400	0	65.7	45-110	261.2	0.611	30	
4-Chloroaniline	255.6	400	400	0	63.9	15-110	268.6	0	30	J
4-Chlorophenyl phenyl ether	251.2	100	400	0	62.8	50-110	226.8	10.2	30	
4-Methylphenol	198.6	100	400	0	49.6	30-110	195.6	1.52	30	
4-Nitroaniline	281.4	400	400	0	70.4	35-150	241.8	0	30	J
4-Nitrophenol	173.2	400	400	0	43.3	1-58	144.8	0	0	J
Acenaphthene	248.6	100	400	0	62.2	45-110	223	10.9	30	
Acenaphthylene	249	100	400	0	62.2	50-105	220.4	12.2	30	
Anthracene	250.4	100	400	0	62.6	55-110	229.6	8.67	30	
Benzo(a)anthracene	300.6	100	400	0	75.2	55-110	274.2	9.19	30	
Benzo(a)pyrene	310.2	100	400	0	77.6	55-110	286.6	7.91	30	
Benzo(b)fluoranthene	298	100	400	0	74.5	45-120	284.6	4.6	30	
Benzo(g,h,i)perylene	322.8	100	400	0	80.7	40-125	271.8	17.2	30	
Benzo(k)fluoranthene	267.4	100	400	0	66.8	45-125	260.4	2.65	30	
Bis(2-chloroethoxy)methane	255.4	100	400	0	63.8	45-105	252.6	1.1	30	
Bis(2-chloroethyl)ether	300.6	100	400	0	75.2	35-110	275.6	8.68	30	
Bis(2-chloroisopropyl)ether	283.2	100	400	0	70.8	25-130	262.6	7.55	30	
Bis(2-ethylhexyl)phthalate	315.4	100	400	0	78.8	40-125	305.2	3.29	30	
Butyl benzyl phthalate	283	100	400	0	70.8	45-115	281	0.709	30	
Carbazole	279.8	200	400	0	70	50-150	244	13.7	30	
Chrysene	287.4	100	400	0	71.8	55-110	260.2	9.93	30	
Dibenzo(a,h)anthracene	318	100	400	0	79.5	40-125	270.8	16	30	
Dibenzofuran	272	100	400	0	68	55-105	242.6	11.4	30	
Diethyl phthalate	285.2	400	400	17.8	66.8	40-120	252.8	0	30	J
Dimethyl phthalate	272.6	400	400	0	68.2	25-125	242.2	0	30	J
Di-n-butyl phthalate	283.2	100	400	33.2	62.5	55-115	256	10.1	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48213		Instrument ID SVMS7		Method: E625						
Di-n-octyl phthalate	351.8	100	400	0	88	35-135	364.6	3.57	30	
Fluoranthene	331.6	100	400	0	82.9	55-115	279.2	17.2	30	
Fluorene	255.2	100	400	0	63.8	50-110	226	12.1	30	
Hexachlorobenzene	269.2	100	400	0	67.3	50-110	254.2	5.73	30	
Hexachlorobutadiene	245.2	100	400	0	61.3	25-105	249.8	1.86	30	
Hexachlorocyclopentadiene	209.4	400	400	0	52.4	25-105	198	0	30	J
Hexachloroethane	268.4	100	400	0	67.1	30-95	249.4	7.34	30	
Indeno(1,2,3-cd)pyrene	338.8	100	400	0	84.7	45-125	281.6	18.4	30	
Isophorone	269	100	400	0	67.2	50-110	263.4	2.1	30	
Naphthalene	252	100	400	0	63	40-100	246	2.41	30	
Nitrobenzene	262	100	400	0	65.5	45-110	249	5.09	30	
N-Nitrosodi-n-propylamine	304.6	100	400	0	76.2	35-130	286.2	6.23	30	
N-Nitrosodiphenylamine	253.4	100	400	0	63.4	50-110	237.8	6.35	30	
Pentachlorophenol	310.8	400	400	0	77.7	40-115	280.6	0	30	J
Phenanthrene	260.6	100	400	0	65.2	50-115	235.4	10.2	30	
Phenol	99.4	100	400	0	24.8	12-43	89.2	0	30	J
Pyrene	270.2	100	400	0	67.6	50-130	286	5.68	30	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>660</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>66</i>	<i>38-115</i>	<i>638.4</i>	<i>3.33</i>	<i>40</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>612.4</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>61.2</i>	<i>32-100</i>	<i>577.2</i>	<i>5.92</i>	<i>40</i>	
<i>Surr: 2-Fluorophenol</i>	<i>418.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>41.8</i>	<i>22-59</i>	<i>393</i>	<i>6.21</i>	<i>40</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>842.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>84.3</i>	<i>23-112</i>	<i>907.2</i>	<i>7.36</i>	<i>40</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>599.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>60</i>	<i>31-93</i>	<i>583.2</i>	<i>2.77</i>	<i>40</i>	
<i>Surr: Phenol-d6</i>	<i>241</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>24.1</i>	<i>13-36</i>	<i>222.4</i>	<i>8.03</i>	<i>40</i>	

The following samples were analyzed in this batch:

1305208-01B	1305208-02B	1305208-03B
1305208-04B	1305208-05B	1305208-06B
1305208-07B	1305208-08B	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48246** Instrument ID **SVMS6** Method: **SW8270**

MBLK		Sample ID: SBLKW1-48246-48246				Units: µg/L		Analysis Date: 05/09/13 08:28 AM		
Client ID:		Run ID: SVMS6_130509A				SeqNo: 2315479		Prep Date: 05/08/13		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: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48246		Instrument ID SVMS6		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>	26.9	0	50	0	53.8	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	28.38	0	50	0	56.8	32-100	0	
<i>Surr: 2-Fluorophenol</i>	18.71	0	50	0	37.4	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	43.37	0	50	0	86.7	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	28.37	0	50	0	56.7	31-93	0	
<i>Surr: Phenol-d6</i>	10.93	0	50	0	21.9	13-36	0	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48246** Instrument ID **SVMS6** Method: **SW8270**

LCS Sample ID: SLCSW1-48246-48246				Units: µg/L			Analysis Date: 05/09/13 08:48 AM			
Client ID:		Run ID: SVMS6_130509A		SeqNo: 2315480		Prep Date: 05/08/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	13.31	5.0	20	0	66.6	50-110	0			
2,4,6-Trichlorophenol	12.34	5.0	20	0	61.7	50-115	0			
2,4-Dichlorophenol	12.57	10	20	0	62.8	50-105	0			
2,4-Dimethylphenol	10.94	5.0	20	0	54.7	30-110	0			
2,4-Dinitrophenol	12.52	5.0	20	0	62.6	15-140	0			
2,4-Dinitrotoluene	15.66	5.0	20	0	78.3	50-120	0			
2,6-Dinitrotoluene	12.6	5.0	20	0	63	50-115	0			
2-Chloronaphthalene	11.96	5.0	20	0	59.8	50-105	0			
2-Chlorophenol	13.62	5.0	20	0	68.1	35-105	0			
2-Methylnaphthalene	11.98	5.0	20	0	59.9	45-105	0			
2-Methylphenol	12.75	5.0	20	0	63.8	40-110	0			
2-Nitroaniline	12.99	20	20	0	65	50-115	0			J
2-Nitrophenol	11.98	5.0	20	0	59.9	40-115	0			
3-Nitroaniline	14.64	20	20	0	73.2	20-125	0			J
4,6-Dinitro-2-methylphenol	13.47	20	20	0	67.4	40-130	0			J
4-Bromophenyl phenyl ether	12.36	5.0	20	0	61.8	50-115	0			
4-Chloro-3-methylphenol	13.05	5.0	20	0	65.2	45-110	0			
4-Chloroaniline	13.94	20	20	0	69.7	15-110	0			J
4-Chlorophenyl phenyl ether	12.34	5.0	20	0	61.7	50-110	0			
4-Methylphenol	11.34	5.0	20	0	56.7	30-110	0			
4-Nitroaniline	11.37	20	20	0	56.8	35-150	0			J
4-Nitrophenol	5.35	20	20	0	26.8	1-58	0			J
Acenaphthene	12.52	5.0	20	0	62.6	45-110	0			
Acenaphthylene	12.62	5.0	20	0	63.1	50-105	0			
Anthracene	13.83	5.0	20	0	69.2	55-110	0			
Benzo(a)anthracene	13.86	5.0	20	0	69.3	55-110	0			
Benzo(a)pyrene	13.98	5.0	20	0	69.9	55-110	0			
Benzo(b)fluoranthene	13.74	5.0	20	0	68.7	45-120	0			
Benzo(g,h,i)perylene	14.4	5.0	20	0	72	40-125	0			
Benzo(k)fluoranthene	14.22	5.0	20	0	71.1	45-125	0			
Bis(2-chloroethoxy)methane	12.64	5.0	20	0	63.2	45-105	0			
Bis(2-chloroethyl)ether	16.22	5.0	20	0	81.1	35-110	0			
Bis(2-chloroisopropyl)ether	12.57	5.0	20	0	62.8	25-130	0			
Bis(2-ethylhexyl)phthalate	16.49	5.0	20	0	82.4	40-125	0			
Butyl benzyl phthalate	14.07	5.0	20	0	70.4	45-115	0			
Carbazole	14.35	10	20	0	71.8	50-150	0			
Chrysene	14.86	5.0	20	0	74.3	55-110	0			
Dibenzo(a,h)anthracene	14.19	5.0	20	0	71	40-125	0			
Dibenzofuran	12.36	5.0	20	0	61.8	55-105	0			
Diethyl phthalate	13.66	20	20	0	68.3	40-120	0			J
Dimethyl phthalate	13.3	20	20	0	66.5	25-125	0			J
Di-n-butyl phthalate	14.16	5.0	20	0	70.8	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48246		Instrument ID SVMS6		Method: SW8270			
Di-n-octyl phthalate	17.75	5.0	20	0	88.8	35-135	0
Fluoranthene	14.85	5.0	20	0	74.2	55-115	0
Fluorene	12.78	5.0	20	0	63.9	50-110	0
Hexachlorobenzene	11.69	5.0	20	0	58.4	50-110	0
Hexachlorobutadiene	10.93	5.0	20	0	54.6	25-105	0
Hexachlorocyclopentadiene	6.33	20	20	0	31.6	25-105	0 J
Hexachloroethane	12.98	5.0	20	0	64.9	30-95	0
Indeno(1,2,3-cd)pyrene	14.39	5.0	20	0	72	45-125	0
Isophorone	12.57	5.0	20	0	62.8	50-110	0
Naphthalene	11.49	5.0	20	0	57.4	40-100	0
Nitrobenzene	12.89	5.0	20	0	64.4	45-110	0
N-Nitrosodi-n-propylamine	14.01	5.0	20	0	70	35-130	0
N-Nitrosodiphenylamine	12.97	5.0	20	0	64.8	50-110	0
Pentachlorophenol	11.79	20	20	0	59	40-115	0 J
Phenanthrene	12.52	5.0	20	0	62.6	50-115	0
Phenol	5.78	5.0	20	0	28.9	12-43	0
Pyrene	14.02	5.0	20	0	70.1	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	29.47	0	50	0	58.9	38-115	0
<i>Surr: 2-Fluorobiphenyl</i>	28.84	0	50	0	57.7	32-100	0
<i>Surr: 2-Fluorophenol</i>	21.97	0	50	0	43.9	22-59	0
<i>Surr: 4-Terphenyl-d14</i>	42.15	0	50	0	84.3	23-112	0
<i>Surr: Nitrobenzene-d5</i>	30.8	0	50	0	61.6	31-93	0
<i>Surr: Phenol-d6</i>	13.9	0	50	0	27.8	13-36	0

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48246** Instrument ID **SVMS6** Method: **SW8270**

MS Sample ID: 1305241-32C MS				Units: µg/L			Analysis Date: 05/09/13 09:07 AM			
Client ID:		Run ID: SVMS6_130509A		SeqNo: 2315481		Prep Date: 05/08/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	16.24	5.0	20	0	81.2	50-110	0			
2,4,6-Trichlorophenol	14.85	5.0	20	0	74.2	50-115	0			
2,4-Dichlorophenol	14.53	10	20	0	72.6	50-105	0			
2,4-Dimethylphenol	13.74	5.0	20	0	68.7	30-110	0			
2,4-Dinitrophenol	19.29	5.0	20	0	96.4	15-140	0			
2,4-Dinitrotoluene	17.7	5.0	20	0	88.5	50-120	0			
2,6-Dinitrotoluene	14.51	5.0	20	0	72.6	50-115	0			
2-Chloronaphthalene	13.64	5.0	20	0	68.2	50-105	0			
2-Chlorophenol	13.66	5.0	20	0	68.3	35-105	0			
2-Methylnaphthalene	13.55	5.0	20	0	67.8	45-105	0			
2-Methylphenol	12.37	5.0	20	0	61.8	40-110	0			
2-Nitroaniline	17.22	20	20	0	86.1	50-115	0			J
2-Nitrophenol	13.21	5.0	20	0	66	40-115	0			
3-Nitroaniline	16.27	20	20	0	81.4	20-125	0			J
4,6-Dinitro-2-methylphenol	15.87	20	20	0	79.4	40-130	0			J
4-Bromophenyl phenyl ether	14.42	5.0	20	0	72.1	50-115	0			
4-Chloro-3-methylphenol	15.06	5.0	20	0	75.3	45-110	0			
4-Chloroaniline	15.16	20	20	0	75.8	15-110	0			J
4-Chlorophenyl phenyl ether	14.43	5.0	20	0	72.2	50-110	0			
4-Methylphenol	10.9	5.0	20	0	54.5	30-110	0			
4-Nitroaniline	12.97	20	20	0	64.8	35-150	0			J
4-Nitrophenol	7.07	20	20	0	35.4	1-58	0			J
Acenaphthene	14.56	5.0	20	0	72.8	45-110	0			
Acenaphthylene	14.38	5.0	20	0	71.9	50-105	0			
Anthracene	16.03	5.0	20	0	80.2	55-110	0			
Benzo(a)anthracene	15.69	5.0	20	0	78.4	55-110	0			
Benzo(a)pyrene	15.86	5.0	20	0	79.3	55-110	0			
Benzo(b)fluoranthene	15.59	5.0	20	0	78	45-120	0			
Benzo(g,h,i)perylene	13.99	5.0	20	0	70	40-125	0			
Benzo(k)fluoranthene	15.33	5.0	20	0	76.6	45-125	0			
Bis(2-chloroethoxy)methane	14.11	5.0	20	0	70.6	45-105	0			
Bis(2-chloroethyl)ether	16.07	5.0	20	0	80.4	35-110	0			
Bis(2-chloroisopropyl)ether	13.81	5.0	20	0	69	25-130	0			
Bis(2-ethylhexyl)phthalate	20.47	5.0	20	0	102	40-125	0			
Butyl benzyl phthalate	17.93	5.0	20	0	89.6	45-115	0			
Carbazole	16.23	10	20	0	81.2	50-150	0			
Chrysene	15.98	5.0	20	0	79.9	55-110	0			
Dibenzo(a,h)anthracene	14.45	5.0	20	0	72.2	40-125	0			
Dibenzofuran	14.27	5.0	20	0	71.4	55-105	0			
Diethyl phthalate	15.81	20	20	0	79	40-120	0			J
Dimethyl phthalate	15.38	20	20	0	76.9	25-125	0			J
Di-n-butyl phthalate	16.48	5.0	20	0	82.4	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48246		Instrument ID SVMS6		Method: SW8270					
Di-n-octyl phthalate	23.99	5.0	20	0	120	35-135	0		
Fluoranthene	16.88	5.0	20	0	84.4	55-115	0		
Fluorene	15.01	5.0	20	0	75	50-110	0		
Hexachlorobenzene	12.75	5.0	20	0	63.8	50-110	0		
Hexachlorobutadiene	12.12	5.0	20	0	60.6	25-105	0		
Hexachlorocyclopentadiene	8.16	20	20	0	40.8	25-105	0		J
Hexachloroethane	14.48	5.0	20	0	72.4	30-95	0		
Indeno(1,2,3-cd)pyrene	14.68	5.0	20	0	73.4	45-125	0		
Isophorone	14.65	5.0	20	0	73.2	50-110	0		
Naphthalene	12.37	5.0	20	0	61.8	40-100	0		
Nitrobenzene	13.72	5.0	20	0	68.6	45-110	0		
N-Nitrosodi-n-propylamine	16.3	5.0	20	0	81.5	35-130	0		
N-Nitrosodiphenylamine	15.31	5.0	20	0	76.6	50-110	0		
Pentachlorophenol	15.64	20	20	0	78.2	40-115	0		J
Phenanthrene	14.13	5.0	20	0	70.6	50-115	0		
Phenol	4.86	5.0	20	0	24.3	12-43	0		J
Pyrene	15.88	5.0	20	0	79.4	50-130	0		
<i>Surr: 2,4,6-Tribromophenol</i>	34.6	0	50	0	69.2	38-115	0		
<i>Surr: 2-Fluorobiphenyl</i>	31.52	0	50	0	63	32-100	0		
<i>Surr: 2-Fluorophenol</i>	18.12	0	50	0	36.2	22-59	0		
<i>Surr: 4-Terphenyl-d14</i>	45.23	0	50	0	90.5	23-112	0		
<i>Surr: Nitrobenzene-d5</i>	33.14	0	50	0	66.3	31-93	0		
<i>Surr: Phenol-d6</i>	11.54	0	50	0	23.1	13-36	0		

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48246** Instrument ID **SVMS6** Method: **SW8270**

MSD Sample ID: 1305241-32C MSD				Units: µg/L			Analysis Date: 05/09/13 09:27 AM			
Client ID:		Run ID: SVMS6_130509A			SeqNo: 2315482		Prep Date: 05/08/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	16.39	5.0	20	0	82	50-110	16.24	0.919	30	
2,4,6-Trichlorophenol	15.28	5.0	20	0	76.4	50-115	14.85	2.85	30	
2,4-Dichlorophenol	14.58	10	20	0	72.9	50-105	14.53	0.344	30	
2,4-Dimethylphenol	13.93	5.0	20	0	69.6	30-110	13.74	1.37	30	
2,4-Dinitrophenol	19.61	5.0	20	0	98	15-140	19.29	1.65	30	
2,4-Dinitrotoluene	17.48	5.0	20	0	87.4	50-120	17.7	1.25	30	
2,6-Dinitrotoluene	14.69	5.0	20	0	73.4	50-115	14.51	1.23	30	
2-Chloronaphthalene	13.63	5.0	20	0	68.2	50-105	13.64	0.0733	30	
2-Chlorophenol	13.93	5.0	20	0	69.6	35-105	13.66	1.96	30	
2-Methylnaphthalene	13.5	5.0	20	0	67.5	45-105	13.55	0.37	30	
2-Methylphenol	12.45	5.0	20	0	62.2	40-110	12.37	0.645	30	
2-Nitroaniline	16.17	20	20	0	80.8	50-115	17.22	0	30	J
2-Nitrophenol	13.73	5.0	20	0	68.6	40-115	13.21	3.86	30	
3-Nitroaniline	15.39	20	20	0	77	20-125	16.27	0	30	J
4,6-Dinitro-2-methylphenol	16.64	20	20	0	83.2	40-130	15.87	0	30	J
4-Bromophenyl phenyl ether	15.39	5.0	20	0	77	50-115	14.42	6.51	30	
4-Chloro-3-methylphenol	15.2	5.0	20	0	76	45-110	15.06	0.925	30	
4-Chloroaniline	13.76	20	20	0	68.8	15-110	15.16	0	30	J
4-Chlorophenyl phenyl ether	14.45	5.0	20	0	72.2	50-110	14.43	0.139	30	
4-Methylphenol	11.28	5.0	20	0	56.4	30-110	10.9	3.43	30	
4-Nitroaniline	12.32	20	20	0	61.6	35-150	12.97	0	30	J
4-Nitrophenol	6.09	20	20	0	30.4	1-58	7.07	0	0	J
Acenaphthene	14.52	5.0	20	0	72.6	45-110	14.56	0.275	30	
Acenaphthylene	14.16	5.0	20	0	70.8	50-105	14.38	1.54	30	
Anthracene	16.76	5.0	20	0	83.8	55-110	16.03	4.45	30	
Benzo(a)anthracene	16.64	5.0	20	0	83.2	55-110	15.69	5.88	30	
Benzo(a)pyrene	17.01	5.0	20	0	85	55-110	15.86	7	30	
Benzo(b)fluoranthene	17.5	5.0	20	0	87.5	45-120	15.59	11.5	30	
Benzo(g,h,i)perylene	13.76	5.0	20	0	68.8	40-125	13.99	1.66	30	
Benzo(k)fluoranthene	16.9	5.0	20	0	84.5	45-125	15.33	9.74	30	
Bis(2-chloroethoxy)methane	13.79	5.0	20	0	69	45-105	14.11	2.29	30	
Bis(2-chloroethyl)ether	13.92	5.0	20	0	69.6	35-110	16.07	14.3	30	
Bis(2-chloroisopropyl)ether	13.76	5.0	20	0	68.8	25-130	13.81	0.363	30	
Bis(2-ethylhexyl)phthalate	22.85	5.0	20	0	114	40-125	20.47	11	30	
Butyl benzyl phthalate	19.59	5.0	20	0	98	45-115	17.93	8.85	30	
Carbazole	16.44	10	20	0	82.2	50-150	16.23	1.29	30	
Chrysene	16.75	5.0	20	0	83.8	55-110	15.98	4.71	30	
Dibenzo(a,h)anthracene	14.43	5.0	20	0	72.2	40-125	14.45	0.139	30	
Dibenzofuran	14.13	5.0	20	0	70.6	55-105	14.27	0.986	30	
Diethyl phthalate	15.73	20	20	0	78.6	40-120	15.81	0	30	J
Dimethyl phthalate	15.1	20	20	0	75.5	25-125	15.38	0	30	J
Di-n-butyl phthalate	17.39	5.0	20	0	87	55-115	16.48	5.37	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48246		Instrument ID SVMS6		Method: SW8270						
Di-n-octyl phthalate	28.87	5.0	20	0	144	35-135	23.99	18.5	30	S
Fluoranthene	16.85	5.0	20	0	84.2	55-115	16.88	0.178	30	
Fluorene	14.89	5.0	20	0	74.4	50-110	15.01	0.803	30	
Hexachlorobenzene	13.44	5.0	20	0	67.2	50-110	12.75	5.27	30	
Hexachlorobutadiene	12.4	5.0	20	0	62	25-105	12.12	2.28	30	
Hexachlorocyclopentadiene	8.97	20	20	0	44.8	25-105	8.16	0	30	J
Hexachloroethane	14.69	5.0	20	0	73.4	30-95	14.48	1.44	30	
Indeno(1,2,3-cd)pyrene	14.73	5.0	20	0	73.6	45-125	14.68	0.34	30	
Isophorone	14.41	5.0	20	0	72	50-110	14.65	1.65	30	
Naphthalene	12.58	5.0	20	0	62.9	40-100	12.37	1.68	30	
Nitrobenzene	14.17	5.0	20	0	70.8	45-110	13.72	3.23	30	
N-Nitrosodi-n-propylamine	15.65	5.0	20	0	78.2	35-130	16.3	4.07	30	
N-Nitrosodiphenylamine	16.21	5.0	20	0	81	50-110	15.31	5.71	30	
Pentachlorophenol	16.36	20	20	0	81.8	40-115	15.64	0	30	J
Phenanthrene	14.8	5.0	20	0	74	50-115	14.13	4.63	30	
Phenol	5.37	5.0	20	0	26.8	12-43	4.86	9.97	30	
Pyrene	18.01	5.0	20	0	90	50-130	15.88	12.6	30	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>37.17</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>74.3</i>	<i>38-115</i>	<i>34.6</i>	<i>7.16</i>	<i>40</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>31.76</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>63.5</i>	<i>32-100</i>	<i>31.52</i>	<i>0.759</i>	<i>40</i>	
<i>Surr: 2-Fluorophenol</i>	<i>20.37</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>40.7</i>	<i>22-59</i>	<i>18.12</i>	<i>11.7</i>	<i>40</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>51.69</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>103</i>	<i>23-112</i>	<i>45.23</i>	<i>13.3</i>	<i>40</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>34.03</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>68.1</i>	<i>31-93</i>	<i>33.14</i>	<i>2.65</i>	<i>40</i>	
<i>Surr: Phenol-d6</i>	<i>12.93</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>25.9</i>	<i>13-36</i>	<i>11.54</i>	<i>11.4</i>	<i>40</i>	

The following samples were analyzed in this batch:

1305208-09B	1305208-10B	1305208-11B
1305208-12B	1305208-13B	1305208-14B
1305208-15B		

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R120576** Instrument ID **VMS9** Method: **SW8260**

MBLK		Sample ID: VBLKW1-130511-R120576				Units: µg/L		Analysis Date: 05/11/13 09:58 AM		
Client ID:		Run ID: VMS9_130511A				SeqNo: 2314566		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: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R120576	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>19.43</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.2</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>18.87</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>94.4</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>20.29</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>101</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.45</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.2</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: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R120576** Instrument ID **VMS9** Method: **SW8260**

LCS		Sample ID: VLCSW1-130511-R120576				Units: µg/L		Analysis Date: 05/11/13 09:16 AM		
Client ID:		Run ID: VMS9_130511A				SeqNo: 2314565		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	18.02	1.0	20	0	90.1	65-130	0			
1,1,2-Trichloroethane	18.58	1.0	20	0	92.9	75-125	0			
1,1-Dichloroethane	19.24	1.0	20	0	96.2	70-135	0			
1,1-Dichloroethene	20.27	1.0	20	0	101	70-130	0			
1,2,4-Trichlorobenzene	19.52	1.0	20	0	97.6	65-135	0			
1,2-Dibromo-3-chloropropane	16.6	1.0	20	0	83	50-130	0			
1,2-Dibromoethane	19.13	1.0	20	0	95.6	80-120	0			
1,2-Dichlorobenzene	19.33	1.0	20	0	96.6	70-120	0			
1,2-Dichloroethane	19.43	1.0	20	0	97.2	70-130	0			
1,2-Dichloropropane	19.64	2.0	20	0	98.2	75-125	0			
1,3-Dichlorobenzene	19.82	2.0	20	0	99.1	75-125	0			
1,4-Dichlorobenzene	19.38	2.0	20	0	96.9	75-125	0			
2-Butanone	16.82	5.0	20	0	84.1	30-150	0			
2-Hexanone	16.17	5.0	20	0	80.8	55-130	0			
4-Methyl-2-pentanone	19.39	5.0	20	0	97	60-135	0			
Acetone	17.85	20	20	0	89.2	40-140	0			J
Benzene	19.57	1.0	20	0	97.8	80-120	0			
Bromodichloromethane	21.19	1.0	20	0	106	75-120	0			
Bromoform	19.09	1.0	20	0	95.4	70-130	0			
Bromomethane	20.04	1.0	20	0	100	30-145	0			
Carbon disulfide	23.11	2.5	20	0	116	35-165	0			
Carbon tetrachloride	17.93	1.0	20	0	89.6	65-140	0			
Chlorobenzene	19.8	1.0	20	0	99	80-120	0			
Chloroethane	21.41	1.0	20	0	107	60-135	0			
Chloroform	19.69	1.0	20	0	98.4	65-135	0			
Chloromethane	18.54	1.0	20	0	92.7	70-125	0			
cis-1,2-Dichloroethene	19.36	1.0	20	0	96.8	70-125	0			
cis-1,3-Dichloropropene	20.67	1.0	20	0	103	70-130	0			
Dibromochloromethane	19.71	1.0	20	0	98.6	60-135	0			
Dichlorodifluoromethane	20.28	1.0	20	0	101	30-155	0			
Ethylbenzene	19.58	1.0	20	0	97.9	75-125	0			
Isopropylbenzene	20.22	1.0	20	0	101	75-125	0			
Methyl tert-butyl ether	18.76	5.0	20	0	93.8	65-125	0			
Methylene chloride	18.64	5.0	20	0	93.2	55-140	0			
Styrene	20.46	1.0	20	0	102	65-135	0			
Tetrachloroethene	16.03	2.0	20	0	80.2	45-150	0			
Toluene	19.51	1.0	20	0	97.6	75-120	0			
trans-1,2-Dichloroethene	20.16	1.0	20	0	101	60-140	0			
trans-1,3-Dichloropropene	19.86	1.0	20	0	99.3	55-140	0			
Trichloroethene	17.95	1.0	20	0	89.8	70-125	0			
Trichlorofluoromethane	20.46	1.0	20	0	102	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R120576	Instrument ID VMS9		Method: SW8260				
Vinyl chloride	19.35	1.0	20	0	96.8	50-145	0
Xylenes, Total	58.23	3.0	60	0	97	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.17</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>95.8</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.4</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>21.43</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>107</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.57</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.8</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: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R120576** Instrument ID **VMS9** Method: **SW8260**

MS Sample ID: 1305208-01A MS				Units: µg/L			Analysis Date: 05/11/13 05:49 PM			
Client ID: W-R2330009-043013-MJF-001			Run ID: VMS9_130511A		SeqNo: 2314583		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	22.14	1.0	20	0	111	65-130	0			
1,1,2,2-Tetrachloroethane	18.05	1.0	20	0	90.2	65-130	0			
1,1,2-Trichloroethane	19.04	1.0	20	0	95.2	75-125	0			
1,1-Dichloroethane	20.51	1.0	20	0	103	70-135	0			
1,1-Dichloroethene	22.57	1.0	20	0	113	70-130	0			
1,2,4-Trichlorobenzene	19.73	1.0	20	0	98.6	65-135	0			
1,2-Dibromo-3-chloropropane	15.99	1.0	20	0	80	50-130	0			
1,2-Dibromoethane	18.89	1.0	20	0	94.4	80-120	0			
1,2-Dichlorobenzene	19.89	1.0	20	0	99.4	70-120	0			
1,2-Dichloroethane	19.81	1.0	20	0	99	70-130	0			
1,2-Dichloropropane	20.2	2.0	20	0	101	75-125	0			
1,3-Dichlorobenzene	20.51	2.0	20	0	103	75-125	0			
1,4-Dichlorobenzene	19.95	2.0	20	0	99.8	75-125	0			
2-Butanone	17.37	5.0	20	0	86.8	30-150	0			
2-Hexanone	16.6	5.0	20	0	83	55-130	0			
4-Methyl-2-pentanone	20.6	5.0	20	0	103	60-135	0			
Acetone	15.6	20	20	0	78	40-140	0			J
Benzene	20.96	1.0	20	0	105	80-120	0			
Bromodichloromethane	20.34	1.0	20	0	102	75-120	0			
Bromoform	17.61	1.0	20	0	88	70-130	0			
Bromomethane	21.55	1.0	20	0	108	30-145	0			
Carbon disulfide	23.49	2.5	20	0	117	35-165	0			
Carbon tetrachloride	18.7	1.0	20	0	93.5	65-140	0			
Chlorobenzene	20.74	1.0	20	0	104	80-120	0			
Chloroethane	23.28	1.0	20	0	116	60-135	0			
Chloroform	20.67	1.0	20	0	103	65-135	0			
Chloromethane	20.43	1.0	20	0	102	70-125	0			
cis-1,2-Dichloroethene	20.58	1.0	20	0	103	70-125	0			
cis-1,3-Dichloropropene	20.34	1.0	20	0	102	70-130	0			
Dibromochloromethane	18.19	1.0	20	0	91	60-135	0			
Dichlorodifluoromethane	23.2	1.0	20	0	116	30-155	0			
Ethylbenzene	22.08	1.0	20	0	110	75-125	0			
Isopropylbenzene	21.93	1.0	20	0	110	75-125	0			
Methyl tert-butyl ether	18.99	5.0	20	0	95	65-125	0			
Methylene chloride	19.07	5.0	20	0	95.4	55-140	0			
Styrene	21.71	1.0	20	0	109	65-135	0			
Tetrachloroethene	19.59	2.0	20	0	98	45-150	0			
Toluene	20.93	1.0	20	0	105	75-120	0			
trans-1,2-Dichloroethene	22.24	1.0	20	0	111	60-140	0			
trans-1,3-Dichloropropene	19.4	1.0	20	0	97	55-140	0			
Trichloroethene	19.35	1.0	20	0	96.8	70-125	0			
Trichlorofluoromethane	24.07	1.0	20	0	120	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R120576		Instrument ID VMS9		Method: SW8260				
Vinyl chloride	22.82	1.0	20	0	114	50-145	0	
Xylenes, Total	64.27	3.0	60	0	107	75-130	0	
<i>Surr: 1,2-Dichloroethane-d4</i>	19.13	0	20	0	95.6	70-120	0	
<i>Surr: 4-Bromofluorobenzene</i>	20.6	0	20	0	103	75-120	0	
<i>Surr: Dibromofluoromethane</i>	20.66	0	20	0	103	85-115	0	
<i>Surr: Toluene-d8</i>	19.71	0	20	0	98.6	85-120	0	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R120576** Instrument ID **VMS9** Method: **SW8260**

MSD Sample ID: 1305208-01A MSD				Units: µg/L			Analysis Date: 05/11/13 06:11 PM			
Client ID: W-R2330009-043013-MJF-001			Run ID: VMS9_130511A		SeqNo: 2314584		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	23.06	1.0	20	0	115	65-130	22.14	4.07	30	
1,1,2,2-Tetrachloroethane	17.76	1.0	20	0	88.8	65-130	18.05	1.62	30	
1,1,2-Trichloroethane	19.08	1.0	20	0	95.4	75-125	19.04	0.21	30	
1,1-Dichloroethane	21.37	1.0	20	0	107	70-135	20.51	4.11	30	
1,1-Dichloroethene	23.36	1.0	20	0	117	70-130	22.57	3.44	30	
1,2,4-Trichlorobenzene	19.94	1.0	20	0	99.7	65-135	19.73	1.06	30	
1,2-Dibromo-3-chloropropane	15.32	1.0	20	0	76.6	50-130	15.99	4.28	30	
1,2-Dibromoethane	19.38	1.0	20	0	96.9	80-120	18.89	2.56	30	
1,2-Dichlorobenzene	20.31	1.0	20	0	102	70-120	19.89	2.09	30	
1,2-Dichloroethane	19.84	1.0	20	0	99.2	70-130	19.81	0.151	30	
1,2-Dichloropropane	21.25	2.0	20	0	106	75-125	20.2	5.07	30	
1,3-Dichlorobenzene	21.3	2.0	20	0	106	75-125	20.51	3.78	30	
1,4-Dichlorobenzene	20.26	2.0	20	0	101	75-125	19.95	1.54	30	
2-Butanone	17.44	5.0	20	0	87.2	30-150	17.37	0.402	30	
2-Hexanone	16.28	5.0	20	0	81.4	55-130	16.6	1.95	30	
4-Methyl-2-pentanone	19.85	5.0	20	0	99.2	60-135	20.6	3.71	30	
Acetone	16.36	20	20	0	81.8	40-140	15.6	0	30	J
Benzene	21.57	1.0	20	0	108	80-120	20.96	2.87	30	
Bromodichloromethane	20.9	1.0	20	0	104	75-120	20.34	2.72	30	
Bromoform	17.88	1.0	20	0	89.4	70-130	17.61	1.52	30	
Bromomethane	21.52	1.0	20	0	108	30-145	21.55	0.139	30	
Carbon disulfide	24.47	2.5	20	0	122	35-165	23.49	4.09	30	
Carbon tetrachloride	20.1	1.0	20	0	100	65-140	18.7	7.22	30	
Chlorobenzene	20.79	1.0	20	0	104	80-120	20.74	0.241	30	
Chloroethane	24.8	1.0	20	0	124	60-135	23.28	6.32	30	
Chloroform	20.9	1.0	20	0	104	65-135	20.67	1.11	30	
Chloromethane	20.76	1.0	20	0	104	70-125	20.43	1.6	30	
cis-1,2-Dichloroethene	20.79	1.0	20	0	104	70-125	20.58	1.02	30	
cis-1,3-Dichloropropene	21.15	1.0	20	0	106	70-130	20.34	3.9	30	
Dibromochloromethane	18.72	1.0	20	0	93.6	60-135	18.19	2.87	30	
Dichlorodifluoromethane	23.73	1.0	20	0	119	30-155	23.2	2.26	30	
Ethylbenzene	21.52	1.0	20	0	108	75-125	22.08	2.57	30	
Isopropylbenzene	22.06	1.0	20	0	110	75-125	21.93	0.591	30	
Methyl tert-butyl ether	19.75	5.0	20	0	98.8	65-125	18.99	3.92	30	
Methylene chloride	19.79	5.0	20	0	99	55-140	19.07	3.71	30	
Styrene	21.7	1.0	20	0	108	65-135	21.71	0.0461	30	
Tetrachloroethene	20.11	2.0	20	0	101	45-150	19.59	2.62	30	
Toluene	21.12	1.0	20	0	106	75-120	20.93	0.904	30	
trans-1,2-Dichloroethene	22.72	1.0	20	0	114	60-140	22.24	2.14	30	
trans-1,3-Dichloropropene	19.51	1.0	20	0	97.6	55-140	19.4	0.565	30	
Trichloroethene	20.15	1.0	20	0	101	70-125	19.35	4.05	30	
Trichlorofluoromethane	24.24	1.0	20	0	121	60-145	24.07	0.704	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R120576	Instrument ID VMS9			Method: SW8260					
Vinyl chloride	22.85	1.0	20	0	114	50-145	22.82	0.131	30
Xylenes, Total	62.63	3.0	60	0	104	75-130	64.27	2.58	30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.36</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>96.8</i>	<i>70-120</i>	<i>19.13</i>	<i>1.2</i>	<i>30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.03</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>100</i>	<i>75-120</i>	<i>20.6</i>	<i>2.81</i>	<i>30</i>
<i>Surr: Dibromofluoromethane</i>	<i>21.06</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>105</i>	<i>85-115</i>	<i>20.66</i>	<i>1.92</i>	<i>30</i>
<i>Surr: Toluene-d8</i>	<i>19.47</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.4</i>	<i>85-120</i>	<i>19.71</i>	<i>1.23</i>	<i>30</i>

The following samples were analyzed in this batch:

1305208-01A	1305208-02A	1305208-03A
1305208-04A	1305208-05A	1305208-06A
1305208-07A	1305208-08A	1305208-09A
1305208-10A	1305208-11A	1305208-12A
1305208-13A	1305208-14A	1305208-15A
1305208-16A		

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48261** Instrument ID **LACHAT** Method: **SW9012A**

MBLK		Sample ID: MBLK-48261-48261				Units: mg/L		Analysis Date: 05/08/13 01:38 PM		
Client ID:		Run ID: LACHAT_130508E				SeqNo: 2310302		Prep Date: 05/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.002499	0.0050								J

LCS		Sample ID: LCS-48261-48261				Units: mg/L		Analysis Date: 05/08/13 01:38 PM		
Client ID:		Run ID: LACHAT_130508E				SeqNo: 2310303		Prep Date: 05/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.2818	0.0050	0.25	0	113	83-120	0			

MS		Sample ID: 1305208-01D MS				Units: mg/L		Analysis Date: 05/08/13 01:38 PM		
Client ID: W-R2330009-043013-MJF-001		Run ID: LACHAT_130508E				SeqNo: 2310305		Prep Date: 05/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.2281	0.0050	0.25	0	91.3	70-130	0			

MSD		Sample ID: 1305208-01D MSD				Units: mg/L		Analysis Date: 05/08/13 01:38 PM		
Client ID: W-R2330009-043013-MJF-001		Run ID: LACHAT_130508E				SeqNo: 2310306		Prep Date: 05/08/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.2346	0.0050	0.25	0	93.9	70-130	0.2281	2.81	30	

The following samples were analyzed in this batch:

1305208-01D	1305208-02D	1305208-03D
1305208-04D	1305208-05D	1305208-06D
1305208-07D	1305208-08D	1305208-09D
1305208-10D		

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305208
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48281B** Instrument ID **LACHAT** Method: **SW9012A**

MBLK	Sample ID: MBLK-48281-48281B					Units: mg/L		Analysis Date: 05/13/13 10:39 AM		
Client ID:	Run ID: LACHAT_130513A				SeqNo: 2315379		Prep Date: 05/09/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.0016	0.0050								J

LCS	Sample ID: LCS-48281-48281B					Units: mg/L		Analysis Date: 05/13/13 10:39 AM		
Client ID:	Run ID: LACHAT_130513A				SeqNo: 2315380		Prep Date: 05/09/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.2535	0.0050	0.25	0	101	83-120	0			

MS	Sample ID: 1305208-12D MS					Units: mg/L		Analysis Date: 05/13/13 10:39 AM		
Client ID: W-R2330009-050213-MJF-012	Run ID: LACHAT_130513A				SeqNo: 2315383		Prep Date: 05/09/13		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	0.25	0	0	70-130	0			S

MSD	Sample ID: 1305208-12D MSD					Units: mg/L		Analysis Date: 05/13/13 10:39 AM		
Client ID: W-R2330009-050213-MJF-012	Run ID: LACHAT_130513A				SeqNo: 2315384		Prep Date: 05/09/13		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	0.25	0	0	70-130	0	0	30	S

The following samples were analyzed in this batch:

1305208-11D	1305208-12D	1305208-13D
1305208-14D	1305208-15D	

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



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Page 1 of 2

COC ID: 69723

Environmental

Customer Information				Project Information				ALS Project Manager: <u>TBS</u> ALS Work Order #: <u>1305208</u>											
Parameter/Method Request for Analysis																			
Purchase Order		Project Name	Van Buren Landfill	A	VOCs (See Attached)														
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)														
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	Moisture														
Phone	(734) 397-3100	Phone		H															
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-R2330009-043013-MTF-001	4/30/13	1500	W	1/2/4/	3/1/1/2	X	X			X	X					
2	W-R2330009-043013-MTF-002	4/30/13	1645	W	1/2/4/	3/1/1/2	X	X			X	X					
3	W-R2330009-050113-MTF-003	5/1/13	1115	W			X	X			X	X					
4	W-R2330009-050113-MTF-004	5/1/13	1250	W			X	X			X	X					
5	W-R2330009-050113-MTF-005	5/1/13	1300	W			X	X			X	X					
6	W-R2330009-050113-MTF-006	5/1/13	1310	W			X	X			X	X					
7	W-R2330009-050113-MTF-007	5/1/13	1545	W			X	X			X	X					
8	W-R2330009-050213-MTF-008	5/2/13	1030	W			X	X			X	X					
9	W-R2330009-050213-MTF-009	5/2/13	1145	W			X	X			X	X					
10	W-R2330009-050213-MTF-010	5/2/13	1300	W			X	X			X	X					

Sampler(s) Please Print & Sign <u>Michael Friedhoff</u>		Shipment Method <u>Courier</u>		Required Turnaround Time: (Check Box) ☒ Std 1D WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour				Results Due Date:	
Relinquished by: <u>Michael Friedhoff</u>		Date: <u>5/3/13</u>		Time: <u>1630</u>		Received by: <u>[Signature]</u>		Notes: <u>TAL Metals (See Attached)</u>	
Relinquished by: <u>[Signature]</u>		Date: <u>5/3/13</u>		Time: <u>1400</u>		Received by (Laboratory): <u>[Signature]</u>		Cooler ID	
Logged by (Laboratory): <u>[Signature]</u>		Date: <u>5/4/13</u>		Time: <u>0900</u>		Checked by (Laboratory): <u>TBS</u>		Cooler Temp. <u>5.0°C</u>	
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									

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.
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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Page 2 of 2

COC ID: 69722

Environmental

ALS Project Manager:

TBB

ALS Work Order #:

1305208

Customer Information

Project Information

Parameter/Method Request for Analysis

Purchase Order		Project Name	Van Buren Landfill	A	VOCs	(See attached)
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)	
Phone	(734) 397-3100	Phone		G	Moisture	
Fax	(734) 397-3131	Fax		H		
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
11	W-R2330009-050213-MTF-011	5/2/13	1530	W	1/2/4/-	3/1/1/2	X	X			X	X					
12	W-R2330009-050213-MTF-012	5/2/13	1630	W			X	X			X	X					
13	W-R2330009-050313-MTF-013	5/3/13	1145	W			X	X			X	X					
14	W-R2330009-050313-MTF-014	5/3/13	1300	W			X	X			X	X					
15	W-R2330009-050315-MTF-015	5/3/13	1500	W	1/2/4/-	3/1/1/1	X	X			X	X					
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign Michael Friedhoff / 3/2/13		Shipment Method Caravan		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ Other ☐ 2 WK Days ☐ 24 Hour				Results Due Date:	
Relinquished by: Michael Friedhoff / 3/2/13		Date: 5/3/13	Time: 1630	Received by: [Signature]		Notes: TAL Metals (See attached)			
Relinquished by: [Signature]		Date: 5/3/13	Time: 1900	Received by (Laboratory): [Signature]		Cooler ID	Cooler Temp.	QC Package: (Check One Box Below)	
Logged by (Laboratory): DCS		Date: 5/4/13	Time: 0900	Checked by (Laboratory): TBB			5.0°C	☒ Level II Std QC	☐ TRRP Checklist
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								☐ Level III Std QC/Raw Data	☐ TRRP Level IV
								☐ Level IV SW846/CLP	
								☐ Other	

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Sample Receipt Checklist

Client Name: **MANNIK&SMITH**

Date/Time Received: **04-May-13 08:00**

Work Order: **1305208**

Received by: **DS**

Checklist completed by *Diane Shaw* 04-May-13
eSignature Date

Reviewed by: *Tom Bramish* 04-May-13
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 ☐	
Temperature(s)/Thermometer(s):	<u>5.0 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>5/4/2013 9:45:29 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: 1305567

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

28-May-2013



Certificate No: MN 532786



28-May-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: **1305567**

Dear Frank,

ALS Environmental received 1 sample on 15-May-2013 08:00 AM 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 33.

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: Bill Carey

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: 1305567

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>
1305567-01	W-R233009-051013-MJF-016	Water		5/10/2013 10:45	5/15/2013 08:00	☐

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
WorkOrder: 1305567

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 detected below quantitation 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
MBLK	Method Blank
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
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

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Work Order: 1305567

Case Narrative

Batch 48504, Method ICP_6020_W, Sample 1305570-09DMS and MSD: The MS and/or MSD recovery was outside of the control. The parent sample is unrelated to this Work Order.

Batch R120974, Method VOC_8260_W, Sample 1305641-02A MS and MSD: The MS and/or MSD recovery was outside the control limit. The parent sample is unrelated to this Work Order.

Batch R120974, Method VOC_8260_W, Sample VLCSW1-130517: The LCS and/or LCSD recovery was above the upper control limit. The sample results for this analyte may be biased high for this analyte: 1,2-Dibromo-3-Chloropropane, 2-Butanone, Acetone, 2-Hexanone, and 4-Methyl-2-Pentanone

Batch R121062A, Method VOC_8260_W, Sample VLCSW2-130520: The LCS and/or LCSD recovery was above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for this analyte: Chloromethane and 4-Methyl-2-Pentanone

ALS Group USA, Corp

Date: 28-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R233009-051013-MJF-016
Collection Date: 5/10/2013 10:45 AM

Work Order: 1305567
Lab ID: 1305567-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 5/16/13	Analyst: LR
<u>BatchID: 48473</u>							
Mercury	U		0.00010	0.00020	mg/L	1	5/16/2013 16:47
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 5/17/13	Analyst: RH
<u>BatchID: 48504</u>							
Aluminum	0.026	J	0.00078	0.050	mg/L	1	5/20/2013 22:11
Antimony	0.00043	J	0.000036	0.0020	mg/L	1	5/20/2013 22:11
Arsenic	0.0046	J	0.00058	0.0050	mg/L	1	5/20/2013 22:11
Barium	0.34		0.000063	0.10	mg/L	1	5/20/2013 22:11
Beryllium	U		0.000082	0.0010	mg/L	1	5/20/2013 22:11
Cadmium	0.000046	J	0.000045	0.0010	mg/L	1	5/20/2013 22:11
Chromium	0.0012	J	0.00027	0.010	mg/L	1	5/20/2013 22:11
Cobalt	0.0034	J	0.000041	0.020	mg/L	1	5/20/2013 22:11
Copper	0.013		0.00053	0.0040	mg/L	1	5/20/2013 22:11
Iron	4.1		0.0053	0.20	mg/L	1	5/20/2013 22:11
Lead	0.0017	J	0.000051	0.0030	mg/L	1	5/20/2013 22:11
Manganese	0.88		0.000054	0.050	mg/L	1	5/20/2013 22:11
Nickel	0.013	J	0.00025	0.020	mg/L	1	5/20/2013 22:11
Selenium	U		0.00064	0.0050	mg/L	1	5/20/2013 22:11
Silver	U		0.000042	0.00020	mg/L	1	5/20/2013 22:11
Thallium	0.000093	J	0.000062	0.0020	mg/L	1	5/20/2013 22:11
Vanadium	0.0011	J	0.00016	0.0040	mg/L	1	5/20/2013 22:11
Zinc	0.051		0.00048	0.050	mg/L	1	5/20/2013 22:11
SEMI-VOLATILE ORGANIC COMPOUNDS							
			SW8270			Prep: SW3510 / 5/17/13	Analyst: RM
<u>BatchID: 48488</u>							
1,1'-Biphenyl	U		0.76	80	µg/L	1	5/20/2013 22:48
2,4,5-Trichlorophenol	U		0.92	40	µg/L	1	5/20/2013 22:48
2,4,6-Trichlorophenol	U		0.86	32	µg/L	1	5/20/2013 22:48
2,4-Dichlorophenol	U		1.7	80	µg/L	1	5/20/2013 22:48
2,4-Dimethylphenol	U		2.0	40	µg/L	1	5/20/2013 22:48
2,4-Dinitrophenol	U		6.1	200	µg/L	1	5/20/2013 22:48
2,4-Dinitrotoluene	U		6.3	40	µg/L	1	5/20/2013 22:48
2,6-Dinitrotoluene	U		6.6	40	µg/L	1	5/20/2013 22:48
2-Chloronaphthalene	U		1.0	40	µg/L	1	5/20/2013 22:48
2-Chlorophenol	U		5.8	80	µg/L	1	5/20/2013 22:48
2-Methylnaphthalene	U		1.0	40	µg/L	1	5/20/2013 22:48
2-Methylphenol	U		4.8	80	µg/L	1	5/20/2013 22:48
2-Nitroaniline	U		0.85	200	µg/L	1	5/20/2013 22:48

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

ALS Group USA, Corp

Date: 28-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R233009-051013-MJF-016
Collection Date: 5/10/2013 10:45 AM

Work Order: 1305567
Lab ID: 1305567-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
2-Nitrophenol	U		1.5	40	µg/L	1	5/20/2013 22:48
3,3'-Dichlorobenzidine	U		4.3	8.0	µg/L	1	5/20/2013 22:48
3-Nitroaniline	U		20	200	µg/L	1	5/20/2013 22:48
4,6-Dinitro-2-methylphenol	U		2.7	160	µg/L	1	5/20/2013 22:48
4-Bromophenyl phenyl ether	U		0.89	40	µg/L	1	5/20/2013 22:48
4-Chloro-3-methylphenol	U		5.2	40	µg/L	1	5/20/2013 22:48
4-Chloroaniline	U		9.0	80	µg/L	1	5/20/2013 22:48
4-Chlorophenyl phenyl ether	U		0.86	40	µg/L	1	5/20/2013 22:48
4-Methylphenol	U		4.4	80	µg/L	1	5/20/2013 22:48
4-Nitroaniline	U		12	200	µg/L	1	5/20/2013 22:48
4-Nitrophenol	U		12	200	µg/L	1	5/20/2013 22:48
Acenaphthene	U		0.90	40	µg/L	1	5/20/2013 22:48
Acenaphthylene	U		0.99	40	µg/L	1	5/20/2013 22:48
Acetophenone	U		0.72	40	µg/L	1	5/20/2013 22:48
Anthracene	U		5.8	40	µg/L	1	5/20/2013 22:48
Atrazine	U		25	40	µg/L	1	5/20/2013 22:48
Benzaldehyde	U		3.7	80	µg/L	1	5/20/2013 22:48
Benzo(a)anthracene	U		4.6	8.0	µg/L	1	5/20/2013 22:48
Benzo(a)pyrene	U		0.82	8.0	µg/L	1	5/20/2013 22:48
Benzo(b)fluoranthene	U		5.9	8.0	µg/L	1	5/20/2013 22:48
Benzo(g,h,i)perylene	U		5.6	8.0	µg/L	1	5/20/2013 22:48
Benzo(k)fluoranthene	U		1.4	8.0	µg/L	1	5/20/2013 22:48
Bis(2-chloroethoxy)methane	U		1.1	40	µg/L	1	5/20/2013 22:48
Bis(2-chloroethyl)ether	U		0.89	8.0	µg/L	1	5/20/2013 22:48
Bis(2-chloroisopropyl)ether	U		0.94	40	µg/L	1	5/20/2013 22:48
Bis(2-ethylhexyl)phthalate	U		0.94	40	µg/L	1	5/20/2013 22:48
Butyl benzyl phthalate	U		0.86	40	µg/L	1	5/20/2013 22:48
Caprolactam	U		38	80	µg/L	1	5/20/2013 22:48
Carbazole	U		6.7	80	µg/L	1	5/20/2013 22:48
Chrysene	U		5.7	8.0	µg/L	1	5/20/2013 22:48
Dibenzo(a,h)anthracene	U		5.4	16	µg/L	1	5/20/2013 22:48
Dibenzofuran	U		0.91	32	µg/L	1	5/20/2013 22:48
Diethyl phthalate	U		5.5	40	µg/L	1	5/20/2013 22:48
Dimethyl phthalate	U		1.1	40	µg/L	1	5/20/2013 22:48
Di-n-butyl phthalate	U		5.7	40	µg/L	1	5/20/2013 22:48
Di-n-octyl phthalate	U		0.98	40	µg/L	1	5/20/2013 22:48
Fluoranthene	U		6.2	8.0	µg/L	1	5/20/2013 22:48
Fluorene	U		0.82	40	µg/L	1	5/20/2013 22:48
Hexachlorobenzene	U		0.82	4.0	µg/L	1	5/20/2013 22:48
Hexachlorobutadiene	U		0.99	4.0	µg/L	1	5/20/2013 22:48

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

ALS Group USA, Corp

Date: 28-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R233009-051013-MJF-016
Collection Date: 5/10/2013 10:45 AM

Work Order: 1305567
Lab ID: 1305567-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Hexachlorocyclopentadiene	U		1.5	40	µg/L	1	5/20/2013 22:48
Hexachloroethane	U		1.0	40	µg/L	1	5/20/2013 22:48
Indeno(1,2,3-cd)pyrene	U		5.6	16	µg/L	1	5/20/2013 22:48
Isophorone	U		0.93	40	µg/L	1	5/20/2013 22:48
Naphthalene	U		0.98	40	µg/L	1	5/20/2013 22:48
Nitrobenzene	U		0.82	24	µg/L	1	5/20/2013 22:48
N-Nitrosodi-n-propylamine	U		1.0	40	µg/L	1	5/20/2013 22:48
N-Nitrosodiphenylamine	U		6.5	40	µg/L	1	5/20/2013 22:48
Pentachlorophenol	U		0.88	8.0	µg/L	1	5/20/2013 22:48
Phenanthrene	U		6.9	16	µg/L	1	5/20/2013 22:48
Phenol	U		0.75	40	µg/L	1	5/20/2013 22:48
Pyrene	U		5.2	40	µg/L	1	5/20/2013 22:48
Surr: 2,4,6-Tribromophenol	59.1			32-115	%REC	1	5/20/2013 22:48
Surr: 2-Fluorobiphenyl	46.4			32-100	%REC	1	5/20/2013 22:48
Surr: 2-Fluorophenol	29.9			22-59	%REC	1	5/20/2013 22:48
Surr: 4-Terphenyl-d14	87.6			23-112	%REC	1	5/20/2013 22:48
Surr: Nitrobenzene-d5	51.5			31-93	%REC	1	5/20/2013 22:48
Surr: Phenol-d6	19.4			13-36	%REC	1	5/20/2013 22:48

VOLATILE ORGANIC COMPOUNDS

SW8260

Analyst: AK

BatchID: R121062

1,1,1-Trichloroethane	U	0.68	5.0	µg/L	5	5/21/2013 05:25
1,1,2,2-Tetrachloroethane	U	0.65	5.0	µg/L	5	5/21/2013 05:25
1,1,2-Trichloroethane	U	0.42	5.0	µg/L	5	5/21/2013 05:25
1,1,2-Trichlorotrifluoroethane	U	0.90	5.0	µg/L	5	5/21/2013 05:25
1,1-Dichloroethane	U	0.55	5.0	µg/L	5	5/21/2013 05:25
1,1-Dichloroethene	U	0.58	5.0	µg/L	5	5/21/2013 05:25
1,2,4-Trichlorobenzene	U	0.82	25	µg/L	5	5/21/2013 05:25
1,2-Dibromo-3-chloropropane	U	1.6	5.0	µg/L	5	5/21/2013 05:25
1,2-Dibromoethane	U	0.82	5.0	µg/L	5	5/21/2013 05:25
1,2-Dichlorobenzene	U	0.66	5.0	µg/L	5	5/21/2013 05:25
1,2-Dichloroethane	U	0.76	5.0	µg/L	5	5/21/2013 05:25
1,2-Dichloropropane	U	0.66	5.0	µg/L	5	5/21/2013 05:25
1,3-Dichlorobenzene	U	0.80	5.0	µg/L	5	5/21/2013 05:25
1,4-Dichlorobenzene	U	0.73	5.0	µg/L	5	5/21/2013 05:25
2-Butanone	U	1.1	120	µg/L	5	5/21/2013 05:25
2-Hexanone	U	0.60	250	µg/L	5	5/21/2013 05:25
4-Methyl-2-pentanone	U	0.48	250	µg/L	5	5/21/2013 05:25
Benzene	U	0.92	5.0	µg/L	5	5/21/2013 05:25
Bromodichloromethane	U	0.58	5.0	µg/L	5	5/21/2013 05:25

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

ALS Group USA, Corp

Date: 28-May-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R2330009)
Sample ID: W-R233009-051013-MJF-016
Collection Date: 5/10/2013 10:45 AM

Work Order: 1305567
Lab ID: 1305567-01
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Bromoform	U		0.74	5.0	µg/L	5	5/21/2013 05:25
Bromomethane	U		1.1	25	µg/L	5	5/21/2013 05:25
Carbon disulfide	U		0.87	25	µg/L	5	5/21/2013 05:25
Carbon tetrachloride	U		0.62	5.0	µg/L	5	5/21/2013 05:25
Chlorobenzene	U		0.63	5.0	µg/L	5	5/21/2013 05:25
Chloroethane	U		2.3	25	µg/L	5	5/21/2013 05:25
Chloroform	U		0.76	5.0	µg/L	5	5/21/2013 05:25
Chloromethane	U		0.80	25	µg/L	5	5/21/2013 05:25
cis-1,2-Dichloroethene	U		0.56	5.0	µg/L	5	5/21/2013 05:25
cis-1,3-Dichloropropene	U		0.40	5.0	µg/L	5	5/21/2013 05:25
Cyclohexane	U		1.1	5.0	µg/L	5	5/21/2013 05:25
Dibromochloromethane	U		0.66	25	µg/L	5	5/21/2013 05:25
Dichlorodifluoromethane	U		0.99	25	µg/L	5	5/21/2013 05:25
Ethylbenzene	U		0.67	5.0	µg/L	5	5/21/2013 05:25
Isopropylbenzene	U		0.68	25	µg/L	5	5/21/2013 05:25
Methyl acetate	380		0.96	50	µg/L	5	5/21/2013 05:25
Methyl tert-butyl ether	U		0.35	25	µg/L	5	5/21/2013 05:25
Methylcyclohexane	U		4.9	5.0	µg/L	5	5/21/2013 05:25
Methylene chloride	U		0.93	25	µg/L	5	5/21/2013 05:25
Styrene	U		0.54	5.0	µg/L	5	5/21/2013 05:25
Tetrachloroethene	U		0.76	5.0	µg/L	5	5/21/2013 05:25
Toluene	U		0.61	5.0	µg/L	5	5/21/2013 05:25
trans-1,2-Dichloroethene	U		0.62	5.0	µg/L	5	5/21/2013 05:25
trans-1,3-Dichloropropene	U		0.74	5.0	µg/L	5	5/21/2013 05:25
Trichloroethene	U		0.68	5.0	µg/L	5	5/21/2013 05:25
Trichlorofluoromethane	U		0.90	5.0	µg/L	5	5/21/2013 05:25
Vinyl chloride	U		0.86	5.0	µg/L	5	5/21/2013 05:25
Xylenes, Total	U		1.4	15	µg/L	5	5/21/2013 05:25
Surr: 1,2-Dichloroethane-d4	99.7			70-120	%REC	5	5/21/2013 05:25
Surr: 4-Bromofluorobenzene	102			75-120	%REC	5	5/21/2013 05:25
Surr: Dibromofluoromethane	99.2			85-115	%REC	5	5/21/2013 05:25
Surr: Toluene-d8	97.9			85-120	%REC	5	5/21/2013 05:25
BatchID: R121062							
Acetone	590		8.2	500	µg/L	25	5/21/2013 04:38
Surr: 1,2-Dichloroethane-d4	98.4			70-120	%REC	25	5/21/2013 04:38
Surr: 4-Bromofluorobenzene	104			75-120	%REC	25	5/21/2013 04:38
Surr: Dibromofluoromethane	98.0			85-115	%REC	25	5/21/2013 04:38
Surr: Toluene-d8	97.6			85-120	%REC	25	5/21/2013 04:38

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48473** Instrument ID **HG1** Method: **SW7470**

MBLK		Sample ID: MBLK-48473-48473				Units: mg/L		Analysis Date: 5/16/2013 04:18 PM		
Client ID:		Run ID: HG1_130516A				SeqNo: 2321741		Prep Date: 5/16/2013		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-48473-48473				Units: mg/L		Analysis Date: 5/16/2013 04:20 PM		
Client ID:		Run ID: HG1_130516A				SeqNo: 2321742		Prep Date: 5/16/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002039 0.00020 0.002 0 102 80-120 0

MS		Sample ID: 1305509-06BMS				Units: mg/L		Analysis Date: 5/16/2013 04:37 PM		
Client ID:		Run ID: HG1_130516A				SeqNo: 2321750		Prep Date: 5/16/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.02002 0.0020 0.02 0.00049 97.6 75-125 0

MSD		Sample ID: 1305509-06BMSD				Units: mg/L		Analysis Date: 5/16/2013 04:45 PM		
Client ID:		Run ID: HG1_130516A				SeqNo: 2321754		Prep Date: 5/16/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.01993 0.0020 0.02 0.00049 97.2 75-125 0.02002 0.451 20

The following samples were analyzed in this batch:

1305567-01C

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48504** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK	Sample ID: MBLK-48504-48504					Units: mg/L		Analysis Date: 5/17/2013 08:37 PM		
Client ID:	Run ID: ICPMS2_130517A				SeqNo: 2323546		Prep Date: 5/17/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.0050								
Arsenic	U	0.0050								
Barium	U	0.0050								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	0.01921	0.080								J
Lead	U	0.0050								
Manganese	U	0.0050								
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0050								
Vanadium	U	0.0050								
Zinc	U	0.010								

MBLK	Sample ID: MBLK-48504-48504					Units: mg/L		Analysis Date: 5/20/2013 12:39 PM		
Client ID:	Run ID: ICPMS2_130520A				SeqNo: 2324939		Prep Date: 5/17/2013		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.001428	0.010								J

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48504** Instrument ID **ICPMS2** Method: **SW6020A**

LCS		Sample ID: LCS-48504-48504				Units: mg/L		Analysis Date: 5/17/2013 08:42 PM		
Client ID:		Run ID: ICPMS2_130517A				SeqNo: 2323547		Prep Date: 5/17/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.08855	0.0050	0.1	0	88.6	80-120	0			
Arsenic	0.09687	0.0050	0.1	0	96.9	80-120	0			
Barium	0.09541	0.0050	0.1	0	95.4	80-120	0			
Cadmium	0.09455	0.0020	0.1	0	94.6	80-120	0			
Chromium	0.09545	0.0050	0.1	0	95.4	80-120	0			
Cobalt	0.09886	0.0050	0.1	0	98.9	80-120	0			
Copper	0.09777	0.0050	0.1	0	97.8	80-120	0			
Iron	9.892	0.080	10	0	98.9	80-120	0			
Lead	0.0924	0.0050	0.1	0	92.4	80-120	0			
Manganese	0.1008	0.0050	0.1	0	101	80-120	0			
Nickel	0.09831	0.0050	0.1	0	98.3	80-120	0			
Selenium	0.09383	0.0050	0.1	0	93.8	80-120	0			
Silver	0.08721	0.0050	0.1	0	87.2	80-120	0			
Thallium	0.09057	0.0050	0.1	0	90.6	80-120	0			
Vanadium	0.1057	0.0050	0.1	0	106	80-120	0			
Zinc	0.09586	0.010	0.1	0	95.9	80-120	0			

LCS		Sample ID: LCS-48504-48504				Units: mg/L		Analysis Date: 5/20/2013 12:44 PM		
Client ID:		Run ID: ICPMS2_130520A				SeqNo: 2324940		Prep Date: 5/17/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1018	0.010	0.1	0	102	80-120	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48504** Instrument ID **ICPMS2** Method: **SW6020A**

MS		Sample ID: 1305570-09DMS				Units: mg/L		Analysis Date: 5/17/2013 10:50 PM		
Client ID:		Run ID: ICPMS2_130517A				SeqNo: 2323575		Prep Date: 5/17/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1038	0.010	0.1	0.003024	101	75-125	0			
Antimony	0.09386	0.0050	0.1	0.00001706	93.8	75-125	0			
Arsenic	0.1019	0.0050	0.1	0.005676	96.2	75-125	0			
Barium	0.3074	0.0050	0.1	0.2169	90.5	75-125	0			
Beryllium	0.08635	0.0020	0.1	-0.00002895	86.4	75-125	0			
Cadmium	0.09398	0.0020	0.1	0.00003829	93.9	75-125	0			
Chromium	0.09227	0.0050	0.1	0.0003071	92	75-125	0			
Cobalt	0.09199	0.0050	0.1	0.001531	90.5	75-125	0			
Copper	0.09051	0.0050	0.1	0.001421	89.1	75-125	0			
Iron	77.79	0.080	10	69.61	81.8	75-125	0			O
Lead	0.09252	0.0050	0.1	0.00002868	92.5	75-125	0			
Nickel	0.09531	0.0050	0.1	0.005451	89.9	75-125	0			
Selenium	0.09376	0.0050	0.1	0.0002096	93.6	75-125	0			
Silver	0.08781	0.0050	0.1	-0.00001567	87.8	75-125	0			
Thallium	0.09039	0.0050	0.1	-0.0002227	90.6	75-125	0			
Vanadium	0.09857	0.0050	0.1	0.0001462	98.4	75-125	0			
Zinc	0.09732	0.010	0.1	0.007791	89.5	75-125	0			

MS		Sample ID: 1305570-09DMS				Units: mg/L		Analysis Date: 5/20/2013 10:48 PM		
Client ID:		Run ID: ICPMS2_130520A				SeqNo: 2325974		Prep Date: 5/17/2013		DF: 10
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	2.6	0.050	0.1	2.523	77	75-125	0			O

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48504** Instrument ID **ICPMS2** Method: **SW6020A**

MSD Sample ID: 1305570-09DMSD				Units: mg/L		Analysis Date: 5/17/2013 10:56 PM				
Client ID:		Run ID: ICPMS2_130517A		SeqNo: 2323576		Prep Date: 5/17/2013		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1007	0.010	0.1	0.003024	97.7	75-125	0.1038	3.03	20	
Antimony	0.09259	0.0050	0.1	0.00001706	92.6	75-125	0.09386	1.36	20	
Arsenic	0.1009	0.0050	0.1	0.005676	95.2	75-125	0.1019	0.986	20	
Barium	0.3049	0.0050	0.1	0.2169	88	75-125	0.3074	0.817	20	
Beryllium	0.08514	0.0020	0.1	-0.00002895	85.2	75-125	0.08635	1.41	20	
Cadmium	0.09319	0.0020	0.1	0.00003829	93.2	75-125	0.09398	0.844	20	
Chromium	0.09123	0.0050	0.1	0.0003071	90.9	75-125	0.09227	1.13	20	
Cobalt	0.09045	0.0050	0.1	0.001531	88.9	75-125	0.09199	1.69	20	
Copper	0.08894	0.0050	0.1	0.001421	87.5	75-125	0.09051	1.75	20	
Iron	76.13	0.080	10	69.61	65.2	75-125	77.79	2.16	20	SO
Lead	0.09186	0.0050	0.1	0.00002868	91.8	75-125	0.09252	0.716	20	
Nickel	0.09357	0.0050	0.1	0.005451	88.1	75-125	0.09531	1.84	20	
Selenium	0.09216	0.0050	0.1	0.0002096	92	75-125	0.09376	1.72	20	
Silver	0.08725	0.0050	0.1	-0.00001567	87.3	75-125	0.08781	0.64	20	
Thallium	0.09072	0.0050	0.1	-0.0002227	90.9	75-125	0.09039	0.364	20	
Vanadium	0.09651	0.0050	0.1	0.0001462	96.4	75-125	0.09857	2.11	20	
Zinc	0.09531	0.010	0.1	0.007791	87.5	75-125	0.09732	2.09	20	

MSD Sample ID: 1305570-09DMSD				Units: mg/L		Analysis Date: 5/20/2013 10:53 PM				
Client ID:		Run ID: ICPMS2_130520A		SeqNo: 2325975		Prep Date: 5/17/2013		DF: 10		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Manganese	2.572	0.050	0.1	2.523	49	75-125	2.6	1.08	20	SO

The following samples were analyzed in this batch: 1305567-01C

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48488** Instrument ID **SVMS6** Method: **SW8270**

MBLK				Sample ID: SBLKW1-48488-48488		Units: µg/L		Analysis Date: 5/20/2013 05:25 PM			
Client ID:			Run ID: SVMS6_130520A			SeqNo: 2326518		Prep Date: 5/17/2013		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: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48488		Instrument ID SVMS6		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>29.24</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>58.5</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>30.74</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>61.5</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>19.97</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>39.9</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>52.83</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>106</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>31.94</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>63.9</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>12.21</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>24.4</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: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48488** Instrument ID **SVMS6** Method: **SW8270**

LCS		Sample ID: SLCSW1-48488-48488				Units: µg/L		Analysis Date: 5/20/2013 05:45 PM		
Client ID:		Run ID: SVMS6_130520A				SeqNo: 2326519		Prep Date: 5/17/2013		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	13.88	5.0	20	0	69.4	50-110	0			
2,4,6-Trichlorophenol	13.34	5.0	20	0	66.7	50-115	0			
2,4-Dichlorophenol	13.32	10	20	0	66.6	50-105	0			
2,4-Dimethylphenol	10.7	5.0	20	0	53.5	30-110	0			
2,4-Dinitrophenol	13.78	5.0	20	0	68.9	15-140	0			
2,4-Dinitrotoluene	14.59	5.0	20	0	73	50-120	0			
2,6-Dinitrotoluene	13.92	5.0	20	0	69.6	50-115	0			
2-Chloronaphthalene	12.98	5.0	20	0	64.9	50-105	0			
2-Chlorophenol	13.22	5.0	20	0	66.1	35-105	0			
2-Methylnaphthalene	13.12	5.0	20	0	65.6	45-105	0			
2-Methylphenol	11.48	5.0	20	0	57.4	40-110	0			
2-Nitroaniline	13.67	20	20	0	68.4	50-115	0			J
2-Nitrophenol	12.56	5.0	20	0	62.8	40-115	0			
3-Nitroaniline	13.04	20	20	0	65.2	20-125	0			J
4,6-Dinitro-2-methylphenol	14.62	20	20	0	73.1	40-130	0			J
4-Bromophenyl phenyl ether	13.97	5.0	20	0	69.8	50-115	0			
4-Chloro-3-methylphenol	13.2	5.0	20	0	66	45-110	0			
4-Chloroaniline	13.74	20	20	0	68.7	15-110	0			J
4-Chlorophenyl phenyl ether	13.93	5.0	20	0	69.6	50-110	0			
4-Methylphenol	10.36	5.0	20	0	51.8	30-110	0			
4-Nitroaniline	12.59	20	20	0	63	35-150	0			J
4-Nitrophenol	5.34	20	20	0	26.7	1-58	0			J
Acenaphthene	13.61	5.0	20	0	68	45-110	0			
Acenaphthylene	13.46	5.0	20	0	67.3	50-105	0			
Anthracene	14.96	5.0	20	0	74.8	55-110	0			
Benzo(a)anthracene	15.91	5.0	20	0	79.6	55-110	0			
Benzo(a)pyrene	17.4	5.0	20	0	87	55-110	0			
Benzo(b)fluoranthene	17.37	5.0	20	0	86.8	45-120	0			
Benzo(g,h,i)perylene	16.59	5.0	20	0	83	40-125	0			
Benzo(k)fluoranthene	17.33	5.0	20	0	86.6	45-125	0			
Bis(2-chloroethoxy)methane	13.34	5.0	20	0	66.7	45-105	0			
Bis(2-chloroethyl)ether	13.24	5.0	20	0	66.2	35-110	0			
Bis(2-chloroisopropyl)ether	15.07	5.0	20	0	75.4	25-130	0			
Bis(2-ethylhexyl)phthalate	15.87	5.0	20	0	79.4	40-125	0			
Butyl benzyl phthalate	15.41	5.0	20	0	77	45-115	0			
Carbazole	15.91	10	20	0	79.6	50-150	0			
Chrysene	16.63	5.0	20	0	83.2	55-110	0			
Dibenzo(a,h)anthracene	16.88	5.0	20	0	84.4	40-125	0			
Dibenzofuran	13.38	5.0	20	0	66.9	55-105	0			
Diethyl phthalate	15.42	20	20	0	77.1	40-120	0			J
Dimethyl phthalate	14.57	20	20	0	72.8	25-125	0			J
Di-n-butyl phthalate	16.7	5.0	20	0	83.5	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48488		Instrument ID SVMS6		Method: SW8270				
Di-n-octyl phthalate	15.84	5.0	20	0	79.2	35-135	0	
Fluoranthene	15.99	5.0	20	0	80	55-115	0	
Fluorene	13.82	5.0	20	0	69.1	50-110	0	
Hexachlorobenzene	14.02	5.0	20	0	70.1	50-110	0	
Hexachlorobutadiene	12.2	5.0	20	0	61	25-105	0	
Hexachlorocyclopentadiene	9.97	20	20	0	49.8	25-105	0	J
Hexachloroethane	13.76	5.0	20	0	68.8	30-95	0	
Indeno(1,2,3-cd)pyrene	16.4	5.0	20	0	82	45-125	0	
Isophorone	13.96	5.0	20	0	69.8	50-110	0	
Naphthalene	12.88	5.0	20	0	64.4	40-100	0	
Nitrobenzene	13.61	5.0	20	0	68	45-110	0	
N-Nitrosodi-n-propylamine	15.85	5.0	20	0	79.2	35-130	0	
N-Nitrosodiphenylamine	14.23	5.0	20	0	71.2	50-110	0	
Pentachlorophenol	14.76	20	20	0	73.8	40-115	0	J
Phenanthrene	14.1	5.0	20	0	70.5	50-115	0	
Phenol	5.23	5.0	20	0	26.2	12-43	0	
Pyrene	17.16	5.0	20	0	85.8	50-130	0	
<i>Surr: 2,4,6-Tribromophenol</i>	32.55	0	50	0	65.1	38-115	0	
<i>Surr: 2-Fluorobiphenyl</i>	31.36	0	50	0	62.7	32-100	0	
<i>Surr: 2-Fluorophenol</i>	20.31	0	50	0	40.6	22-59	0	
<i>Surr: 4-Terphenyl-d14</i>	49.18	0	50	0	98.4	23-112	0	
<i>Surr: Nitrobenzene-d5</i>	34.97	0	50	0	69.9	31-93	0	
<i>Surr: Phenol-d6</i>	13.09	0	50	0	26.2	13-36	0	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48488** Instrument ID **SVMS6** Method: **SW8270**

MS Sample ID: 1305509-02A MS				Units: µg/L			Analysis Date: 5/20/2013 08:31 PM			
Client ID:		Run ID: SVMS6_130520A		SeqNo: 2326521		Prep Date: 5/17/2013		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	291.6	100	400	0	72.9	50-110	0			
2,4,6-Trichlorophenol	281.6	100	400	0	70.4	50-115	0			
2,4-Dichlorophenol	273.2	200	400	0	68.3	50-105	0			
2,4-Dimethylphenol	260.2	100	400	0	65	30-110	0			
2,4-Dinitrophenol	284.4	100	400	0	71.1	15-140	0			
2,4-Dinitrotoluene	289.6	100	400	0	72.4	50-120	0			
2,6-Dinitrotoluene	283	100	400	0	70.8	50-115	0			
2-Chloronaphthalene	271.4	100	400	0	67.8	50-105	0			
2-Chlorophenol	269.2	100	400	0	67.3	35-105	0			
2-Methylnaphthalene	264.8	100	400	0	66.2	45-105	0			
2-Methylphenol	238.6	100	400	0	59.6	40-110	0			
2-Nitroaniline	284	400	400	0	71	50-115	0			J
2-Nitrophenol	257.6	100	400	0	64.4	40-115	0			
3-Nitroaniline	281.6	400	400	0	70.4	20-125	0			J
4,6-Dinitro-2-methylphenol	279	400	400	0	69.8	40-130	0			J
4-Bromophenyl phenyl ether	282.2	100	400	0	70.6	50-115	0			
4-Chloro-3-methylphenol	275.6	100	400	0	68.9	45-110	0			
4-Chloroaniline	288	400	400	0	72	15-110	0			J
4-Chlorophenyl phenyl ether	281.4	100	400	0	70.4	50-110	0			
4-Methylphenol	212.4	100	400	0	53.1	30-110	0			
4-Nitroaniline	263.4	400	400	0	65.8	35-150	0			J
4-Nitrophenol	95.6	400	400	0	23.9	1-58	0			J
Acenaphthene	285.2	100	400	0	71.3	45-110	0			
Acenaphthylene	281.6	100	400	0	70.4	50-105	0			
Anthracene	300.6	100	400	0	75.2	55-110	0			
Benzo(a)anthracene	316.6	100	400	0	79.2	55-110	0			
Benzo(a)pyrene	347	100	400	0	86.8	55-110	0			
Benzo(b)fluoranthene	336.8	100	400	0	84.2	45-120	0			
Benzo(g,h,i)perylene	332.6	100	400	0	83.2	40-125	0			
Benzo(k)fluoranthene	340	100	400	0	85	45-125	0			
Bis(2-chloroethoxy)methane	271.4	100	400	0	67.8	45-105	0			
Bis(2-chloroethyl)ether	262	100	400	0	65.5	35-110	0			
Bis(2-chloroisopropyl)ether	295.6	100	400	0	73.9	25-130	0			
Bis(2-ethylhexyl)phthalate	315.8	100	400	0	79	40-125	0			
Butyl benzyl phthalate	302.4	100	400	0	75.6	45-115	0			
Carbazole	315.4	200	400	0	78.8	50-150	0			
Chrysene	331.2	100	400	0	82.8	55-110	0			
Dibenzo(a,h)anthracene	339.6	100	400	0	84.9	40-125	0			
Dibenzofuran	278	100	400	0	69.5	55-105	0			
Diethyl phthalate	304	400	400	0	76	40-120	0			J
Dimethyl phthalate	297.6	400	400	0	74.4	25-125	0			J
Di-n-butyl phthalate	317.8	100	400	0	79.4	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48488		Instrument ID SVMS6		Method: SW8270			
Di-n-octyl phthalate	303	100	400	0	75.8	35-135	0
Fluoranthene	311.2	100	400	0	77.8	55-115	0
Fluorene	283.6	100	400	0	70.9	50-110	0
Hexachlorobenzene	280	100	400	0	70	50-110	0
Hexachlorobutadiene	254.2	100	400	0	63.6	25-105	0
Hexachlorocyclopentadiene	209.4	400	400	0	52.4	25-105	0 J
Hexachloroethane	272	100	400	0	68	30-95	0
Indeno(1,2,3-cd)pyrene	327.8	100	400	0	82	45-125	0
Isophorone	283.2	100	400	0	70.8	50-110	0
Naphthalene	257.8	100	400	0	64.4	40-100	0
Nitrobenzene	279.8	100	400	0	70	45-110	0
N-Nitrosodi-n-propylamine	312.8	100	400	0	78.2	35-130	0
N-Nitrosodiphenylamine	291.6	100	400	0	72.9	50-110	0
Pentachlorophenol	312.6	400	400	0	78.2	40-115	0 J
Phenanthrene	283.4	100	400	0	70.8	50-115	0
Phenol	99.6	100	400	0	24.9	12-43	0 J
Pyrene	334.2	100	400	0	83.6	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	670.2	0	1000	0	67	38-115	0
<i>Surr: 2-Fluorobiphenyl</i>	662.2	0	1000	0	66.2	32-100	0
<i>Surr: 2-Fluorophenol</i>	406	0	1000	0	40.6	22-59	0
<i>Surr: 4-Terphenyl-d14</i>	982.6	0	1000	0	98.3	23-112	0
<i>Surr: Nitrobenzene-d5</i>	714.6	0	1000	0	71.5	31-93	0
<i>Surr: Phenol-d6</i>	250.8	0	1000	0	25.1	13-36	0

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **48488** Instrument ID **SVMS6** Method: **SW8270**

MSD Sample ID: 1305509-02A MSD				Units: µg/L			Analysis Date: 5/20/2013 08:50 PM			
Client ID:		Run ID: SVMS6_130520A		SeqNo: 2326522		Prep Date: 5/17/2013		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	288.4	100	400	0	72.1	50-110	291.6	1.1	30	
2,4,6-Trichlorophenol	272	100	400	0	68	50-115	281.6	3.47	30	
2,4-Dichlorophenol	262.6	200	400	0	65.6	50-105	273.2	3.96	30	
2,4-Dimethylphenol	230.8	100	400	0	57.7	30-110	260.2	12	30	
2,4-Dinitrophenol	295.4	100	400	0	73.8	15-140	284.4	3.79	30	
2,4-Dinitrotoluene	300.6	100	400	0	75.2	50-120	289.6	3.73	30	
2,6-Dinitrotoluene	280.4	100	400	0	70.1	50-115	283	0.923	30	
2-Chloronaphthalene	250.2	100	400	0	62.6	50-105	271.4	8.13	30	
2-Chlorophenol	258.4	100	400	0	64.6	35-105	269.2	4.09	30	
2-Methylnaphthalene	253	100	400	0	63.2	45-105	264.8	4.56	30	
2-Methylphenol	237	100	400	0	59.2	40-110	238.6	0.673	30	
2-Nitroaniline	278.8	400	400	0	69.7	50-115	284	0	30	J
2-Nitrophenol	240.4	100	400	0	60.1	40-115	257.6	6.91	30	
3-Nitroaniline	284.2	400	400	0	71	20-125	281.6	0	30	J
4,6-Dinitro-2-methylphenol	287.2	400	400	0	71.8	40-130	279	0	30	J
4-Bromophenyl phenyl ether	277.4	100	400	0	69.4	50-115	282.2	1.72	30	
4-Chloro-3-methylphenol	279.6	100	400	0	69.9	45-110	275.6	1.44	30	
4-Chloroaniline	277.2	400	400	0	69.3	15-110	288	0	30	J
4-Chlorophenyl phenyl ether	279.8	100	400	0	70	50-110	281.4	0.57	30	
4-Methylphenol	218.6	100	400	0	54.6	30-110	212.4	2.88	30	
4-Nitroaniline	274.6	400	400	0	68.6	35-150	263.4	0	30	J
4-Nitrophenol	110	400	400	0	27.5	1-58	95.6	0	0	J
Acenaphthene	271.4	100	400	0	67.8	45-110	285.2	4.96	30	
Acenaphthylene	267.2	100	400	0	66.8	50-105	281.6	5.25	30	
Anthracene	292	100	400	0	73	55-110	300.6	2.9	30	
Benzo(a)anthracene	318.2	100	400	0	79.6	55-110	316.6	0.504	30	
Benzo(a)pyrene	343.8	100	400	0	86	55-110	347	0.926	30	
Benzo(b)fluoranthene	337.4	100	400	0	84.4	45-120	336.8	0.178	30	
Benzo(g,h,i)perylene	308.4	100	400	0	77.1	40-125	332.6	7.55	30	
Benzo(k)fluoranthene	352.4	100	400	0	88.1	45-125	340	3.58	30	
Bis(2-chloroethoxy)methane	262.8	100	400	0	65.7	45-105	271.4	3.22	30	
Bis(2-chloroethyl)ether	249.6	100	400	0	62.4	35-110	262	4.85	30	
Bis(2-chloroisopropyl)ether	290.2	100	400	0	72.6	25-130	295.6	1.84	30	
Bis(2-ethylhexyl)phthalate	329.6	100	400	0	82.4	40-125	315.8	4.28	30	
Butyl benzyl phthalate	321.2	100	400	0	80.3	45-115	302.4	6.03	30	
Carbazole	305.2	200	400	0	76.3	50-150	315.4	3.29	30	
Chrysene	329.4	100	400	0	82.4	55-110	331.2	0.545	30	
Dibenzo(a,h)anthracene	320.6	100	400	0	80.2	40-125	339.6	5.76	30	
Dibenzofuran	265.4	100	400	0	66.4	55-105	278	4.64	30	
Diethyl phthalate	319.2	400	400	0	79.8	40-120	304	0	30	J
Dimethyl phthalate	302.4	400	400	0	75.6	25-125	297.6	0	30	J
Di-n-butyl phthalate	336	100	400	0	84	55-115	317.8	5.57	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: 48488	Instrument ID SVMS6			Method: SW8270					
Di-n-octyl phthalate	335.2	100	400	0	83.8	35-135	303	10.1	30
Fluoranthene	310	100	400	0	77.5	55-115	311.2	0.386	30
Fluorene	281.6	100	400	0	70.4	50-110	283.6	0.708	30
Hexachlorobenzene	274	100	400	0	68.5	50-110	280	2.17	30
Hexachlorobutadiene	236.8	100	400	0	59.2	25-105	254.2	7.09	30
Hexachlorocyclopentadiene	198.6	400	400	0	49.6	25-105	209.4	0	30 J
Hexachloroethane	253.6	100	400	0	63.4	30-95	272	7	30
Indeno(1,2,3-cd)pyrene	309	100	400	0	77.2	45-125	327.8	5.9	30
Isophorone	276.2	100	400	0	69	50-110	283.2	2.5	30
Naphthalene	244.6	100	400	0	61.2	40-100	257.8	5.25	30
Nitrobenzene	259.8	100	400	0	65	45-110	279.8	7.41	30
N-Nitrosodi-n-propylamine	313.8	100	400	0	78.4	35-130	312.8	0.319	30
N-Nitrosodiphenylamine	283.8	100	400	0	71	50-110	291.6	2.71	30
Pentachlorophenol	320.6	400	400	0	80.2	40-115	312.6	0	30 J
Phenanthrene	277.4	100	400	0	69.4	50-115	283.4	2.14	30
Phenol	104	100	400	0	26	12-43	99.6	4.32	30
Pyrene	349.2	100	400	0	87.3	50-130	334.2	4.39	30
<i>Surr: 2,4,6-Tribromophenol</i>	<i>670.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>67</i>	<i>38-115</i>	<i>670.2</i>	<i>0</i>	<i>40</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>608.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>60.9</i>	<i>32-100</i>	<i>662.2</i>	<i>8.4</i>	<i>40</i>
<i>Surr: 2-Fluorophenol</i>	<i>396.4</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>39.6</i>	<i>22-59</i>	<i>406</i>	<i>2.39</i>	<i>40</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>1021</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>102</i>	<i>23-112</i>	<i>982.6</i>	<i>3.81</i>	<i>40</i>
<i>Surr: Nitrobenzene-d5</i>	<i>659.4</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>65.9</i>	<i>31-93</i>	<i>714.6</i>	<i>8.03</i>	<i>40</i>
<i>Surr: Phenol-d6</i>	<i>258.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>25.8</i>	<i>13-36</i>	<i>250.8</i>	<i>2.91</i>	<i>40</i>

The following samples were analyzed in this batch:

1305567-01B

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R121062A** Instrument ID **VMS8** Method: **SW8260**

MBLK		Sample ID: VBLKW2-130520-R121062A				Units: µg/L		Analysis Date: 5/21/2013 12:19 PM		
Client ID:		Run ID: VMS8_130520B				SeqNo: 2326199		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: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R121062A	Instrument ID VMS8	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>19.29</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>96.4</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.35</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>18.73</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>93.6</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.22</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>96.1</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: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R121062A** Instrument ID **VMS8** Method: **SW8260**

LCS		Sample ID: VLCSW2-130520-R121062A				Units: µg/L		Analysis Date: 5/20/2013 11:31 PM		
Client ID:		Run ID: VMS8_130520B				SeqNo: 2326175		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	20.41	1.0	20	0	102	65-130	0			
1,1,2,2-Tetrachloroethane	19.49	1.0	20	0	97.4	65-130	0			
1,1,2-Trichloroethane	19.46	1.0	20	0	97.3	75-125	0			
1,1-Dichloroethane	19.43	1.0	20	0	97.2	70-135	0			
1,1-Dichloroethene	18.56	1.0	20	0	92.8	70-130	0			
1,2,4-Trichlorobenzene	19.52	1.0	20	0	97.6	65-135	0			
1,2-Dibromo-3-chloropropane	19.07	1.0	20	0	95.4	50-130	0			
1,2-Dibromoethane	24.76	1.0	20	0	124	80-120	0			S
1,2-Dichlorobenzene	18.57	1.0	20	0	92.8	70-120	0			
1,2-Dichloroethane	19.8	1.0	20	0	99	70-130	0			
1,2-Dichloropropane	19.14	2.0	20	0	95.7	75-125	0			
1,3-Dichlorobenzene	18.94	2.0	20	0	94.7	75-125	0			
1,4-Dichlorobenzene	18.67	2.0	20	0	93.4	75-125	0			
2-Butanone	22.33	5.0	20	0	112	30-150	0			
2-Hexanone	19.61	5.0	20	0	98	55-130	0			
4-Methyl-2-pentanone	27.95	5.0	20	0	140	60-135	0			S
Acetone	23.2	20	20	0	116	40-140	0			
Benzene	18.8	1.0	20	0	94	80-120	0			
Bromodichloromethane	20.65	1.0	20	0	103	75-120	0			
Bromoform	18.93	1.0	20	0	94.6	70-130	0			
Bromomethane	15.7	1.0	20	0	78.5	30-145	0			
Carbon disulfide	19.78	2.5	20	0	98.9	35-165	0			
Carbon tetrachloride	20.83	1.0	20	0	104	65-140	0			
Chlorobenzene	18.99	1.0	20	0	95	80-120	0			
Chloroethane	15.24	1.0	20	0	76.2	60-135	0			
Chloroform	20.04	1.0	20	0	100	65-135	0			
Chloromethane	15.03	1.0	20	0	75.2	70-125	0			
cis-1,2-Dichloroethene	20.01	1.0	20	0	100	70-125	0			
cis-1,3-Dichloropropene	19.42	1.0	20	0	97.1	70-130	0			
Dibromochloromethane	20.06	1.0	20	0	100	60-135	0			
Dichlorodifluoromethane	13.84	1.0	20	0	69.2	30-155	0			
Ethylbenzene	19.09	1.0	20	0	95.4	75-125	0			
Isopropylbenzene	19.47	1.0	20	0	97.4	75-125	0			
Methyl tert-butyl ether	21.25	5.0	20	0	106	65-125	0			
Methylene chloride	18.33	5.0	20	0	91.6	55-140	0			
Styrene	19.43	1.0	20	0	97.2	65-135	0			
Tetrachloroethene	18.64	2.0	20	0	93.2	45-150	0			
Toluene	19.01	1.0	20	0	95	75-120	0			
trans-1,2-Dichloroethene	19.92	1.0	20	0	99.6	60-140	0			
trans-1,3-Dichloropropene	18.82	1.0	20	0	94.1	55-140	0			
Trichloroethene	19.37	1.0	20	0	96.8	70-125	0			
Trichlorofluoromethane	17.89	1.0	20	0	89.4	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R121062A	Instrument ID VMS8		Method: SW8260				
Vinyl chloride	15.38	1.0	20	0	76.9	50-145	0
Xylenes, Total	57.3	3.0	60	0	95.5	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.33</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>96.6</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.98</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>19.44</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.2</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.26</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>96.3</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: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R121062A** Instrument ID **VMS8** Method: **SW8260**

MS				Sample ID: 1305641-01A MS			Units: µg/L		Analysis Date: 5/21/2013 08:34 AM	
Client ID:				Run ID: VMS8_130520B			SeqNo: 2326196		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	172.8	1.0	20	121	259	65-130	0			SEO
1,1,2,2-Tetrachloroethane	18.01	1.0	20	0	90	65-130	0			
1,1,2-Trichloroethane	19.22	1.0	20	0	96.1	75-125	0			
1,1-Dichloroethane	87.6	1.0	20	60	138	70-135	0			S
1,1-Dichloroethene	27.9	1.0	20	0	140	70-130	0			S
1,2,4-Trichlorobenzene	18.37	1.0	20	0	91.8	65-135	0			
1,2-Dibromo-3-chloropropane	17.13	1.0	20	0	85.6	50-130	0			
1,2-Dibromoethane	23.69	1.0	20	0	118	80-120	0			
1,2-Dichlorobenzene	18.92	1.0	20	0	94.6	70-120	0			
1,2-Dichloroethane	19.87	1.0	20	0	99.4	70-130	0			
1,2-Dichloropropane	19.97	2.0	20	0	99.8	75-125	0			
1,3-Dichlorobenzene	19.27	2.0	20	0	96.4	75-125	0			
1,4-Dichlorobenzene	18.89	2.0	20	0	94.4	75-125	0			
2-Butanone	18.46	5.0	20	0	92.3	30-150	0			
2-Hexanone	17.25	5.0	20	0	86.2	55-130	0			
4-Methyl-2-pentanone	25.13	5.0	20	0	126	60-135	0			
Acetone	19.59	20	20	0	98	40-140	0			J
Benzene	20.11	1.0	20	0	101	80-120	0			
Bromodichloromethane	20.69	1.0	20	0	103	75-120	0			
Bromoform	17.16	1.0	20	0	85.8	70-130	0			
Bromomethane	17.64	1.0	20	0	88.2	30-145	0			
Carbon disulfide	20.6	2.5	20	0	103	35-165	0			
Carbon tetrachloride	22.97	1.0	20	0	115	65-140	0			
Chlorobenzene	19.56	1.0	20	0	97.8	80-120	0			
Chloroethane	16.86	1.0	20	0	84.3	60-135	0			
Chloroform	21.33	1.0	20	0	107	65-135	0			
Chloromethane	14.95	1.0	20	0	74.8	70-125	0			
cis-1,2-Dichloroethene	47.52	1.0	20	0	238	70-125	0			S
cis-1,3-Dichloropropene	18.83	1.0	20	0	94.2	70-130	0			
Dibromochloromethane	19.31	1.0	20	0	96.6	60-135	0			
Dichlorodifluoromethane	14.69	1.0	20	0	73.4	30-155	0			
Ethylbenzene	19.88	1.0	20	0	99.4	75-125	0			
Isopropylbenzene	20.33	1.0	20	0	102	75-125	0			
Methyl tert-butyl ether	21.5	5.0	20	0	108	65-125	0			
Methylene chloride	18.16	5.0	20	0	90.8	55-140	0			
Styrene	19.35	1.0	20	0	96.8	65-135	0			
Tetrachloroethene	20.84	2.0	20	0	104	45-150	0			
Toluene	19.77	1.0	20	0	98.8	75-120	0			
trans-1,2-Dichloroethene	22.34	1.0	20	0	112	60-140	0			
trans-1,3-Dichloropropene	18.19	1.0	20	0	91	55-140	0			
Trichloroethene	202.1	1.0	20	160	211	70-125	0			SEO
Trichlorofluoromethane	20.16	1.0	20	0	101	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R121062A	Instrument ID VMS8		Method: SW8260				
Vinyl chloride	17.02	1.0	20	0	85.1	50-145	0
Xylenes, Total	60.55	3.0	60	0	101	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.5</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.5</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>21.12</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>106</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.75</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.8</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.62</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.1</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: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: **R121062A** Instrument ID **VMS8** Method: **SW8260**

MSD Sample ID: 1305641-01A MSD				Units: µg/L			Analysis Date: 5/21/2013 08:58 AM			
Client ID:		Run ID: VMS8_130520B		SeqNo: 2326197		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	172.3	1.0	20	121	257	65-130	172.8	0.301	30	SEO
1,1,2,2-Tetrachloroethane	17.95	1.0	20	0	89.8	65-130	18.01	0.334	30	
1,1,2-Trichloroethane	19.04	1.0	20	0	95.2	75-125	19.22	0.941	30	
1,1-Dichloroethane	86.87	1.0	20	60	134	70-135	87.6	0.837	30	
1,1-Dichloroethene	27.42	1.0	20	0	137	70-130	27.9	1.74	30	S
1,2,4-Trichlorobenzene	18.62	1.0	20	0	93.1	65-135	18.37	1.35	30	
1,2-Dibromo-3-chloropropane	18.36	1.0	20	0	91.8	50-130	17.13	6.93	30	
1,2-Dibromoethane	23.43	1.0	20	0	117	80-120	23.69	1.1	30	
1,2-Dichlorobenzene	19.19	1.0	20	0	96	70-120	18.92	1.42	30	
1,2-Dichloroethane	19.72	1.0	20	0	98.6	70-130	19.87	0.758	30	
1,2-Dichloropropane	19.6	2.0	20	0	98	75-125	19.97	1.87	30	
1,3-Dichlorobenzene	19.64	2.0	20	0	98.2	75-125	19.27	1.9	30	
1,4-Dichlorobenzene	18.64	2.0	20	0	93.2	75-125	18.89	1.33	30	
2-Butanone	18.81	5.0	20	0	94	30-150	18.46	1.88	30	
2-Hexanone	16.74	5.0	20	0	83.7	55-130	17.25	3	30	
4-Methyl-2-pentanone	25.62	5.0	20	0	128	60-135	25.13	1.93	30	
Acetone	20.38	20	20	0	102	40-140	19.59	3.95	30	
Benzene	19.78	1.0	20	0	98.9	80-120	20.11	1.65	30	
Bromodichloromethane	20.97	1.0	20	0	105	75-120	20.69	1.34	30	
Bromoform	17.63	1.0	20	0	88.2	70-130	17.16	2.7	30	
Bromomethane	17.73	1.0	20	0	88.6	30-145	17.64	0.509	30	
Carbon disulfide	20.79	2.5	20	0	104	35-165	20.6	0.918	30	
Carbon tetrachloride	23.29	1.0	20	0	116	65-140	22.97	1.38	30	
Chlorobenzene	19.65	1.0	20	0	98.2	80-120	19.56	0.459	30	
Chloroethane	16.68	1.0	20	0	83.4	60-135	16.86	1.07	30	
Chloroform	21.22	1.0	20	0	106	65-135	21.33	0.517	30	
Chloromethane	15.09	1.0	20	0	75.4	70-125	14.95	0.932	30	
cis-1,2-Dichloroethene	46.9	1.0	20	0	234	70-125	47.52	1.31	30	S
cis-1,3-Dichloropropene	18.82	1.0	20	0	94.1	70-130	18.83	0.0531	30	
Dibromochloromethane	19.04	1.0	20	0	95.2	60-135	19.31	1.41	30	
Dichlorodifluoromethane	14.42	1.0	20	0	72.1	30-155	14.69	1.86	30	
Ethylbenzene	19.66	1.0	20	0	98.3	75-125	19.88	1.11	30	
Isopropylbenzene	20.12	1.0	20	0	101	75-125	20.33	1.04	30	
Methyl tert-butyl ether	21.04	5.0	20	0	105	65-125	21.5	2.16	30	
Methylene chloride	17.67	5.0	20	0	88.4	55-140	18.16	2.74	30	
Styrene	19.14	1.0	20	0	95.7	65-135	19.35	1.09	30	
Tetrachloroethene	20.74	2.0	20	0	104	45-150	20.84	0.481	30	
Toluene	19.49	1.0	20	0	97.4	75-120	19.77	1.43	30	
trans-1,2-Dichloroethene	22.23	1.0	20	0	111	60-140	22.34	0.494	30	
trans-1,3-Dichloropropene	18	1.0	20	0	90	55-140	18.19	1.05	30	
Trichloroethene	200.2	1.0	20	160	201	70-125	202.1	0.964	30	SEO
Trichlorofluoromethane	20.28	1.0	20	0	101	60-145	20.16	0.593	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1305567
Project: RACER - Van Buren Landfill (R2330009)

QC BATCH REPORT

Batch ID: R121062A		Instrument ID VMS8		Method: SW8260					
Vinyl chloride	17	1.0	20	0	85	50-145	17.02	0.118	30
Xylenes, Total	58.76	3.0	60	0	97.9	75-130	60.55	3	30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.74</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.7</i>	<i>70-120</i>	<i>19.5</i>	<i>1.22</i>	<i>30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>21.19</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>106</i>	<i>75-120</i>	<i>21.12</i>	<i>0.331</i>	<i>30</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.91</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.6</i>	<i>85-115</i>	<i>19.75</i>	<i>0.807</i>	<i>30</i>
<i>Surr: Toluene-d8</i>	<i>19.38</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>96.9</i>	<i>85-120</i>	<i>19.62</i>	<i>1.23</i>	<i>30</i>

The following samples were analyzed in this batch: | 1305567-01A |

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



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: 69721

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: TJB

ALS Work Order #: 3055107

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	RACEIR 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)
City/State/Zip	Canton, MI 48188	City/State/Zip	Ypsilanti, MI 48198	G	Moisture
Phone	(734) 397-3100	Phone		H	
Fax	(734) 397-3131	Fax		I	
e-Mail Address		e-Mail Address		J	<u>(*)</u>

No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	W.R2330009-051013-MTF.016	5/10/13	1045	W	1-1/2	3/1/1	X	X				X					
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Sampler(s) Please Print & Sign <u>Michael Friedhoff / RCL Z</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:			
Relinquished by: <u>Michael Friedhoff / RCL Z</u>		Date: <u>5/10/13</u> Time: <u>13:00</u>		Received by: <u>[Signature]</u>		Notes: <u>SAMPLE: HOT! (Leachate?)</u>					
Relinquished by: <u>[Signature]</u>		Date: <u>5/14/13</u> Time: <u>1200</u>		Received by Laboratory: <u>[Signature]</u>		Cooler ID:		Cooler Temp.: <u>5-8°</u>		QC Package: (Check One Box Below)	
Logged by (Laboratory): <u>[Signature]</u>		Date: <u>5/15/13</u> Time: <u>1000</u>		Checked by (Laboratory): <u>TJB</u>						☒ Level II Std QC ☐ TRRP CheckList	
										☐ Level III Std QC/Raw Data ☐ TRRP Level IV	
										☐ Level IV SW846/CLP	
										☐ Other	

Sample Receipt Checklist

Client Name: MANNIK&SMITH

Date/Time Received: 15-May-13 08:00

Work Order: 1305567

Received by: DS

Checklist completed by Diane Shaw 15-May-13
eSignature Date

Reviewed by: Tom Bramish 15-May-13
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 ☐	
Temperature(s)/Thermometer(s):	<u>5.8 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>5/15/2013 10:07:25 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:	<u>Limited sample volume for SVOC analysis.</u>		

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:

 ALS Environmental 3352 128th Avenue Holland, Michigan 49424 Tel. +1 616 399 6070 Fax. +1 616 399 6185	CUSTODY SEAL		Seal Broken By:
	Date: 5/14/13	Time:	Date:
	Name:		
	Company:		

 ALS Environmental 3352 128th Avenue Holland, Michigan 49424 Tel. +1 616 399 6070 Fax. +1 616 399 6185	CUSTODY SEAL		Seal Broken By:
	Date: 5/14/13	Time:	Date:
	Name:		
	Company:		

 ALS Environmental 3352 128th Avenue Holland, Michigan 49424 Tel. +1 616 399 6070 Fax. +1 616 399 6185	CUSTODY SEAL		Seal Broken By:
	Date: 5/14/13	Time:	Date:
	Name:		
	Company:		

 ALS Environmental 3352 128th Avenue Holland, Michigan 49424 Tel. +1 616 399 6070 Fax. +1 616 399 6185	CUSTODY SEAL		Seal Broken By:
	Date: 5/15	Time:	Date:
	Name:		
	Company:		

CITY		PLACE AN "X" BELOW		SHIPPER'S COMPANY		PHONE #		PHONE #	
SPECIAL SERVICE	CONTACT	STREET ADDRESS		STREET ADDRESS		STATE, ZIP CODE		CITY	
GROUNDS SERVICE		CITY		ACCOUNT NO.		WEIGHT		\$ CHARGES	
AIR SERVICE		DECLARED VALUE \$				LBS.		OZ.	
AIR & GROUND COMBINED		ADD'L INSURANCE COST \$							
CANCELLED CHECKS OR CASH LETTERS		PIECES		(DESCRIPTION OF WHAT IS BEING SHIPPED: BOX, BAG, ENVELOPE)					
OTHER (LIST COMMODITIES)									
SPECIAL INSTRUCTIONS									

☐ PREPAID ☐ BILL TO ACCT. ☐ C.O.D.		
RECEIVED, Subject to rates and tariffs in effect on the date hereof		
PICKED UP BY	DATE	TIME
DRIVER:		A.M.
ROUTE #:		P.M.

RECEIVED BY	DATE	TIME
		A.M.
		P.M.
ROUTE #:		

The property described above, in apparent good order, except as noted (contents and conditions of packages unknown), marked, consigned and destined as shown below, which said company agrees to carry to its usual place of delivery at said destination if within the territory of its highway operations. It is mutually agreed as to each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions of the carrier's tariff, which are hereby agreed to by the shipper and accepted for himself and his assigns.

Except for "cash letters", the released or declared value of this shipment is specifically declared not to be in excess of \$100.00, unless a greater value is declared in writing on this Bill of Lading for which additional charges will be assessed. Carrier's liability with respect to "cash letter" shipments is limited in its tariffs.

Except on "cash letter" shipments, claims, if any, must be filed in writing within thirty (30) days after pickup. Claims involving "cash letter" shipments must be filed in writing within three (3) days after pickup. Claimant shall give oral notice to carrier as soon as it becomes aware of a potential claim involving a "cash letter" shipment.

CARRIER SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES.

Work Order: 1308398

Project Name:

RACER - Van Buren Landfill (R23300009)

The Mannik & Smith Group, Inc.

Mike Friedhoff

2365 Haggerty Road South

Suite 100

Canton, MI 48188

(734) 397-3100

21-Aug-2013



Certificate No: MN 532786



21-Aug-2013

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

Re: **RACER - Van Buren Landfill (R23300009)**

Work Order: **1308398**

Dear Mike,

ALS Environmental received 17 samples on 10-Aug-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 139.

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 (R23300009)
Work Order: 1308398

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>
1308398-01	W-R2330009-080613-ZTR-001	Groundwater		08/06/13 15:29	08/10/13 08:00	☐
1308398-02	W-R2330009-080713-ZTR-002	Groundwater		08/07/13 08:25	08/10/13 08:00	☐
1308398-03	W-R2330009-080713-ZTR-003	Groundwater		08/07/13 09:28	08/10/13 08:00	☐
1308398-04	W-R2330009-080713-ZTR-004	Groundwater		08/07/13 11:41	08/10/13 08:00	☐
1308398-05	W-R2330009-080713-ZTR-005	Groundwater		08/07/13 13:59	08/10/13 08:00	☐
1308398-06	W-R2330009-080713-ZTR-006	Groundwater		08/07/13 15:37	08/10/13 08:00	☐
1308398-07	W-R2330009-080713-ZTR-007	Groundwater		08/07/13 16:59	08/10/13 08:00	☐
1308398-08	W-R2330009-080713-ZTR-008	Groundwater		08/07/13 18:28	08/10/13 08:00	☐
1308398-09	W-R2330009-080813-ZTR-009	Groundwater		08/08/13 09:55	08/10/13 08:00	☐
1308398-10	W-R2330009-080813-ZTR-010	Groundwater		08/08/13 11:39	08/10/13 08:00	☐
1308398-11	W-R2330009-080813-ZTR-011	Groundwater		08/08/13 11:59	08/10/13 08:00	☐
1308398-12	W-R2330009-080813-ZTR-012	Groundwater		08/08/13 12:35	08/10/13 08:00	☐
1308398-13	W-R2330009-080813-ZTR-013	Groundwater		08/08/13 13:48	08/10/13 08:00	☐
1308398-14	Trip Blank #1	Water		08/08/13	08/10/13 08:00	☐
1308398-15	Trip Blank #2	Water		08/08/13	08/10/13 08:00	☐
1308398-16	Trip Blank #3	Water		08/08/13	08/10/13 08:00	☐
1308398-17	Trip Blank #4	Water		08/08/13	08/10/13 08:00	☐

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
WorkOrder: 1308398

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

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Work Order: 1308398

Case Narrative**QC Comments:**

Batch R125026, Method VOC_8260_W, Sample 1308398-01A MS: The MS and MSD recoveries were above the upper control limit. The corresponding results in the parent sample were non-detect. No qualification is required for 1,1 Dichloroethene and 4-Methyl-2-pentanone.

Batch R125056A, Method VOC_8260_W, Sample VLCSW1-130813: The LCS recoveries were above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 4-Methyl-2-pentanone and MTBE.

Batch R125084, Method VOC_8260_W, Sample VLCSW2-130813: The LCS recoveries were above the upper control limit. All sample results in the batch were non-detect. No qualification is necessary for 4-Methyl-2-pentanone and Acetone.

Batch R125084, Method VOC_8260_W, Sample 1308398-09A MSD: The MSD recovery was above the upper control limit. The corresponding result in the parent sample was non-detect. No qualification is required for 4-Methyl-2-pentanone.

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080613-ZTR-001
Collection Date: 08/06/13 03:29 PM

Work Order: 1308398
Lab ID: 1308398-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:31
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:33
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.039	J	0.00078	0.050	mg/L	1	08/15/13 18:58
Antimony	0.00039	J	0.000036	0.0020	mg/L	1	08/15/13 18:58
Arsenic	0.018		0.00058	0.0050	mg/L	1	08/15/13 18:58
Barium	0.51		0.000063	0.10	mg/L	1	08/15/13 18:58
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 18:58
Cadmium	0.00043	J	0.000045	0.0010	mg/L	1	08/15/13 18:58
Chromium	0.0014	J	0.00027	0.010	mg/L	1	08/15/13 18:58
Cobalt	0.0038	J	0.000041	0.020	mg/L	1	08/15/13 18:58
Copper	0.0022	J	0.00053	0.0040	mg/L	1	08/15/13 18:58
Iron	8.1		0.0053	0.20	mg/L	1	08/15/13 18:58
Lead	0.00047	J	0.000051	0.0030	mg/L	1	08/15/13 18:58
Manganese	0.91		0.000054	0.050	mg/L	1	08/15/13 18:58
Nickel	0.014	J	0.00025	0.020	mg/L	1	08/15/13 18:58
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 18:58
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 18:58
Thallium	0.00047	J	0.000062	0.0020	mg/L	1	08/15/13 18:58
Vanadium	0.0014	J	0.00016	0.0040	mg/L	1	08/15/13 18:58
Zinc	0.044	J	0.00048	0.050	mg/L	1	08/15/13 18:58
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0053	J	0.00078	0.050	mg/L	1	08/15/13 20:10
Antimony	0.00048	J	0.000036	0.0020	mg/L	1	08/15/13 20:10
Arsenic	0.017		0.00058	0.0050	mg/L	1	08/15/13 20:10
Barium	0.52		0.000063	0.10	mg/L	1	08/15/13 20:10
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 20:10
Cadmium	0.00021	J	0.000045	0.0010	mg/L	1	08/15/13 20:10
Chromium	0.0012	J	0.00027	0.010	mg/L	1	08/15/13 20:10
Cobalt	0.0043	J	0.000041	0.020	mg/L	1	08/15/13 20:10
Copper	0.0031	J	0.00053	0.0040	mg/L	1	08/15/13 20:10
Iron	7.7		0.0053	0.20	mg/L	1	08/15/13 20:10

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080613-ZTR-001
Collection Date: 08/06/13 03:29 PM

Work Order: 1308398
Lab ID: 1308398-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000096	J	0.000051	0.0030	mg/L	1	08/15/13 20:10
Manganese	0.88		0.000054	0.050	mg/L	1	08/15/13 20:10
Nickel	0.014	J	0.00025	0.020	mg/L	1	08/15/13 20:10
Selenium		U	0.00064	0.0050	mg/L	1	08/15/13 20:10
Silver		U	0.000042	0.00020	mg/L	1	08/15/13 20:10
Thallium		U	0.000062	0.0020	mg/L	1	08/15/13 20:10
Vanadium	0.0012	J	0.00016	0.0040	mg/L	1	08/15/13 20:10
Zinc	0.039	J	0.00048	0.050	mg/L	1	08/15/13 20:10
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 8/12/13		Analyst: HL	
<u>BatchID: 50452</u>							
1,1'-Biphenyl		U	0.095	10	µg/L	1	08/12/13 20:56
2,4,5-Trichlorophenol		U	0.12	5.0	µg/L	1	08/12/13 20:56
2,4,6-Trichlorophenol		U	0.11	4.0	µg/L	1	08/12/13 20:56
2,4-Dichlorophenol		U	0.22	10	µg/L	1	08/12/13 20:56
2,4-Dimethylphenol		U	0.24	5.0	µg/L	1	08/12/13 20:56
2,4-Dinitrophenol		U	0.76	25	µg/L	1	08/12/13 20:56
2,4-Dinitrotoluene		U	0.78	5.0	µg/L	1	08/12/13 20:56
2,6-Dinitrotoluene		U	0.82	5.0	µg/L	1	08/12/13 20:56
2-Chloronaphthalene		U	0.13	5.0	µg/L	1	08/12/13 20:56
2-Chlorophenol		U	0.73	10	µg/L	1	08/12/13 20:56
2-Methylnaphthalene		U	0.13	5.0	µg/L	1	08/12/13 20:56
2-Methylphenol		U	0.60	10	µg/L	1	08/12/13 20:56
2-Nitroaniline		U	0.11	25	µg/L	1	08/12/13 20:56
2-Nitrophenol		U	0.19	5.0	µg/L	1	08/12/13 20:56
3,3' -Dichlorobenzidine		U	0.54	1.0	µg/L	1	08/12/13 20:56
3-Nitroaniline		U	2.5	25	µg/L	1	08/12/13 20:56
4,6-Dinitro-2-methylphenol		U	0.34	20	µg/L	1	08/12/13 20:56
4-Bromophenyl phenyl ether		U	0.11	5.0	µg/L	1	08/12/13 20:56
4-Chloro-3-methylphenol		U	0.65	5.0	µg/L	1	08/12/13 20:56
4-Chloroaniline		U	1.1	10	µg/L	1	08/12/13 20:56
4-Chlorophenyl phenyl ether		U	0.11	5.0	µg/L	1	08/12/13 20:56
4-Methylphenol		U	0.55	10	µg/L	1	08/12/13 20:56
4-Nitroaniline		U	1.5	25	µg/L	1	08/12/13 20:56
4-Nitrophenol		U	1.6	25	µg/L	1	08/12/13 20:56
Acenaphthene		U	0.11	5.0	µg/L	1	08/12/13 20:56
Acenaphthylene		U	0.12	5.0	µg/L	1	08/12/13 20:56
Acetophenone		U	0.090	5.0	µg/L	1	08/12/13 20:56
Anthracene		U	0.72	5.0	µg/L	1	08/12/13 20:56
Atrazine		U	0.13	5.0	µg/L	1	08/12/13 20:56

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080613-ZTR-001
Collection Date: 08/06/13 03:29 PM

Work Order: 1308398
Lab ID: 1308398-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/12/13 20:56
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/12/13 20:56
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/12/13 20:56
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/12/13 20:56
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/12/13 20:56
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/12/13 20:56
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/12/13 20:56
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/12/13 20:56
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/12/13 20:56
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/12/13 20:56
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/12/13 20:56
Caprolactam	U		4.7	10	µg/L	1	08/12/13 20:56
Carbazole	U		0.84	10	µg/L	1	08/12/13 20:56
Chrysene	U		0.71	1.0	µg/L	1	08/12/13 20:56
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/12/13 20:56
Dibenzofuran	U		0.11	4.0	µg/L	1	08/12/13 20:56
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/12/13 20:56
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/12/13 20:56
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/12/13 20:56
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/12/13 20:56
Fluoranthene	U		0.77	1.0	µg/L	1	08/12/13 20:56
Fluorene	U		0.10	5.0	µg/L	1	08/12/13 20:56
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/12/13 20:56
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/12/13 20:56
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/12/13 20:56
Hexachloroethane	U		0.13	5.0	µg/L	1	08/12/13 20:56
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/12/13 20:56
Isophorone	U		0.12	5.0	µg/L	1	08/12/13 20:56
Naphthalene	U		0.12	5.0	µg/L	1	08/12/13 20:56
Nitrobenzene	U		0.10	3.0	µg/L	1	08/12/13 20:56
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/12/13 20:56
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/12/13 20:56
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/12/13 20:56
Phenanthrene	U		0.86	2.0	µg/L	1	08/12/13 20:56
Phenol	U		0.094	5.0	µg/L	1	08/12/13 20:56
Pyrene	U		0.65	5.0	µg/L	1	08/12/13 20:56
Surr: 2,4,6-Tribromophenol	84.2			32-115	%REC	1	08/12/13 20:56
Surr: 2-Fluorobiphenyl	54.2			32-100	%REC	1	08/12/13 20:56
Surr: 2-Fluorophenol	35.0			22-59	%REC	1	08/12/13 20:56
Surr: 4-Terphenyl-d14	82.0			23-112	%REC	1	08/12/13 20:56

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080613-ZTR-001
Collection Date: 08/06/13 03:29 PM

Work Order: 1308398
Lab ID: 1308398-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	60.5			31-93	%REC	1	08/12/13 20:56
Surr: Phenol-d6	21.7			13-36	%REC	1	08/12/13 20:56
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125026							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 09:55
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 09:55
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 09:55
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 09:55
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 09:55
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 09:55
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 09:55
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 09:55
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 09:55
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 09:55
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 09:55
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 09:55
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 09:55
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 09:55
2-Butanone	U		0.22	25	µg/L	1	08/13/13 09:55
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 09:55
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 09:55
Acetone	5.5	J	0.33	50	µg/L	1	08/13/13 09:55
Benzene	U		0.18	1.0	µg/L	1	08/13/13 09:55
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 09:55
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 09:55
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 09:55
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 09:55
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 09:55
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 09:55
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 09:55
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 09:55
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 09:55
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 09:55
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 09:55
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 09:55
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 09:55
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 09:55
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 09:55
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 09:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080613-ZTR-001
Collection Date: 08/06/13 03:29 PM

Work Order: 1308398
Lab ID: 1308398-01
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 09:55
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 09:55
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 09:55
Methylene chloride	U		0.19	5.0	µg/L	1	08/13/13 09:55
Styrene	U		0.11	1.0	µg/L	1	08/13/13 09:55
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 09:55
Toluene	U		0.12	1.0	µg/L	1	08/13/13 09:55
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 09:55
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 09:55
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 09:55
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 09:55
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 09:55
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 09:55
Surr: 1,2-Dichloroethane-d4	94.8			70-120	%REC	1	08/13/13 09:55
Surr: 4-Bromofluorobenzene	110			75-120	%REC	1	08/13/13 09:55
Surr: Dibromofluoromethane	94.8			85-115	%REC	1	08/13/13 09:55
Surr: Toluene-d8	94.0			85-120	%REC	1	08/13/13 09:55
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50539B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-002
Collection Date: 08/07/13 08:25 AM

Work Order: 1308398
Lab ID: 1308398-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:35
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:37
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.047	J	0.00078	0.050	mg/L	1	08/15/13 19:03
Antimony	0.00011	J	0.000036	0.0020	mg/L	1	08/15/13 19:03
Arsenic	0.0060		0.00058	0.0050	mg/L	1	08/15/13 19:03
Barium	0.54		0.000063	0.10	mg/L	1	08/15/13 19:03
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 19:03
Cadmium	0.00019	J	0.000045	0.0010	mg/L	1	08/15/13 19:03
Chromium	0.00094	J	0.00027	0.010	mg/L	1	08/15/13 19:03
Cobalt	0.0019	J	0.000041	0.020	mg/L	1	08/15/13 19:03
Copper	0.0044		0.00053	0.0040	mg/L	1	08/15/13 19:03
Iron	22		0.0053	0.20	mg/L	1	08/15/13 19:03
Lead	0.00029	J	0.000051	0.0030	mg/L	1	08/15/13 19:03
Manganese	0.79		0.000054	0.050	mg/L	1	08/15/13 19:03
Nickel	0.0075	J	0.00025	0.020	mg/L	1	08/15/13 19:03
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 19:03
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 19:03
Thallium	0.000097	J	0.000062	0.0020	mg/L	1	08/15/13 19:03
Vanadium	0.0013	J	0.00016	0.0040	mg/L	1	08/15/13 19:03
Zinc	0.0038	J	0.00048	0.050	mg/L	1	08/15/13 19:03
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0068	J	0.00078	0.050	mg/L	1	08/15/13 20:15
Antimony	0.00015	J	0.000036	0.0020	mg/L	1	08/15/13 20:15
Arsenic	0.0055		0.00058	0.0050	mg/L	1	08/15/13 20:15
Barium	0.55		0.000063	0.10	mg/L	1	08/15/13 20:15
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 20:15
Cadmium	0.00025	J	0.000045	0.0010	mg/L	1	08/15/13 20:15
Chromium	0.00076	J	0.00027	0.010	mg/L	1	08/15/13 20:15
Cobalt	0.0024	J	0.000041	0.020	mg/L	1	08/15/13 20:15
Copper	0.0035	J	0.00053	0.0040	mg/L	1	08/15/13 20:15
Iron	21		0.0053	0.20	mg/L	1	08/15/13 20:15

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-002
Collection Date: 08/07/13 08:25 AM

Work Order: 1308398
Lab ID: 1308398-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000063	J	0.000051	0.0030	mg/L	1	08/15/13 20:15
Manganese	0.75		0.000054	0.050	mg/L	1	08/15/13 20:15
Nickel	0.0076	J	0.00025	0.020	mg/L	1	08/15/13 20:15
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 20:15
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 20:15
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 20:15
Vanadium	0.0013	J	0.00016	0.0040	mg/L	1	08/15/13 20:15
Zinc	0.0032	J	0.00048	0.050	mg/L	1	08/15/13 20:15

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 8/12/13

Analyst: HL

BatchID: 50452

1,1'-Biphenyl	U	0.095	10	µg/L	1	08/12/13 21:27
2,4,5-Trichlorophenol	U	0.12	5.0	µg/L	1	08/12/13 21:27
2,4,6-Trichlorophenol	U	0.11	4.0	µg/L	1	08/12/13 21:27
2,4-Dichlorophenol	U	0.22	10	µg/L	1	08/12/13 21:27
2,4-Dimethylphenol	U	0.24	5.0	µg/L	1	08/12/13 21:27
2,4-Dinitrophenol	U	0.76	25	µg/L	1	08/12/13 21:27
2,4-Dinitrotoluene	U	0.78	5.0	µg/L	1	08/12/13 21:27
2,6-Dinitrotoluene	U	0.82	5.0	µg/L	1	08/12/13 21:27
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	08/12/13 21:27
2-Chlorophenol	U	0.73	10	µg/L	1	08/12/13 21:27
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	08/12/13 21:27
2-Methylphenol	U	0.60	10	µg/L	1	08/12/13 21:27
2-Nitroaniline	U	0.11	25	µg/L	1	08/12/13 21:27
2-Nitrophenol	U	0.19	5.0	µg/L	1	08/12/13 21:27
3,3'-Dichlorobenzidine	U	0.54	1.0	µg/L	1	08/12/13 21:27
3-Nitroaniline	U	2.5	25	µg/L	1	08/12/13 21:27
4,6-Dinitro-2-methylphenol	U	0.34	20	µg/L	1	08/12/13 21:27
4-Bromophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/12/13 21:27
4-Chloro-3-methylphenol	U	0.65	5.0	µg/L	1	08/12/13 21:27
4-Chloroaniline	U	1.1	10	µg/L	1	08/12/13 21:27
4-Chlorophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/12/13 21:27
4-Methylphenol	U	0.55	10	µg/L	1	08/12/13 21:27
4-Nitroaniline	U	1.5	25	µg/L	1	08/12/13 21:27
4-Nitrophenol	U	1.6	25	µg/L	1	08/12/13 21:27
Acenaphthene	U	0.11	5.0	µg/L	1	08/12/13 21:27
Acenaphthylene	U	0.12	5.0	µg/L	1	08/12/13 21:27
Acetophenone	U	0.090	5.0	µg/L	1	08/12/13 21:27
Anthracene	U	0.72	5.0	µg/L	1	08/12/13 21:27
Atrazine	U	0.13	5.0	µg/L	1	08/12/13 21:27

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-002
Collection Date: 08/07/13 08:25 AM

Work Order: 1308398
Lab ID: 1308398-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/12/13 21:27
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/12/13 21:27
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/12/13 21:27
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/12/13 21:27
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/12/13 21:27
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/12/13 21:27
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/12/13 21:27
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/12/13 21:27
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/12/13 21:27
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/12/13 21:27
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/12/13 21:27
Caprolactam	U		4.7	10	µg/L	1	08/12/13 21:27
Carbazole	U		0.84	10	µg/L	1	08/12/13 21:27
Chrysene	U		0.71	1.0	µg/L	1	08/12/13 21:27
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/12/13 21:27
Dibenzofuran	U		0.11	4.0	µg/L	1	08/12/13 21:27
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/12/13 21:27
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/12/13 21:27
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/12/13 21:27
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/12/13 21:27
Fluoranthene	U		0.77	1.0	µg/L	1	08/12/13 21:27
Fluorene	U		0.10	5.0	µg/L	1	08/12/13 21:27
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/12/13 21:27
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/12/13 21:27
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/12/13 21:27
Hexachloroethane	U		0.13	5.0	µg/L	1	08/12/13 21:27
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/12/13 21:27
Isophorone	U		0.12	5.0	µg/L	1	08/12/13 21:27
Naphthalene	U		0.12	5.0	µg/L	1	08/12/13 21:27
Nitrobenzene	U		0.10	3.0	µg/L	1	08/12/13 21:27
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/12/13 21:27
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/12/13 21:27
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/12/13 21:27
Phenanthrene	U		0.86	2.0	µg/L	1	08/12/13 21:27
Phenol	U		0.094	5.0	µg/L	1	08/12/13 21:27
Pyrene	U		0.65	5.0	µg/L	1	08/12/13 21:27
Surr: 2,4,6-Tribromophenol	84.6			32-115	%REC	1	08/12/13 21:27
Surr: 2-Fluorobiphenyl	65.6			32-100	%REC	1	08/12/13 21:27
Surr: 2-Fluorophenol	44.7			22-59	%REC	1	08/12/13 21:27
Surr: 4-Terphenyl-d14	83.5			23-112	%REC	1	08/12/13 21:27

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-002
Collection Date: 08/07/13 08:25 AM

Work Order: 1308398
Lab ID: 1308398-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	67.9			31-93	%REC	1	08/12/13 21:27
Surr: Phenol-d6	23.7			13-36	%REC	1	08/12/13 21:27
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125026							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 10:20
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 10:20
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 10:20
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 10:20
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 10:20
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 10:20
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 10:20
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 10:20
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 10:20
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 10:20
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 10:20
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 10:20
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 10:20
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 10:20
2-Butanone	U		0.22	25	µg/L	1	08/13/13 10:20
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 10:20
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 10:20
Acetone	U		0.33	50	µg/L	1	08/13/13 10:20
Benzene	4.0		0.18	1.0	µg/L	1	08/13/13 10:20
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 10:20
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 10:20
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 10:20
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 10:20
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 10:20
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 10:20
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 10:20
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 10:20
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 10:20
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 10:20
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 10:20
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 10:20
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 10:20
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 10:20
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 10:20
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 10:20

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-002
Collection Date: 08/07/13 08:25 AM

Work Order: 1308398
Lab ID: 1308398-02
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 10:20
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 10:20
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 10:20
Methylene chloride	U		0.19	5.0	µg/L	1	08/13/13 10:20
Styrene	U		0.11	1.0	µg/L	1	08/13/13 10:20
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 10:20
Toluene	U		0.12	1.0	µg/L	1	08/13/13 10:20
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 10:20
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 10:20
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 10:20
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 10:20
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 10:20
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 10:20
Surr: 1,2-Dichloroethane-d4	93.4			70-120	%REC	1	08/13/13 10:20
Surr: 4-Bromofluorobenzene	105			75-120	%REC	1	08/13/13 10:20
Surr: Dibromofluoromethane	92.8			85-115	%REC	1	08/13/13 10:20
Surr: Toluene-d8	92.4			85-120	%REC	1	08/13/13 10:20
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50539B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-003
Collection Date: 08/07/13 09:28 AM

Work Order: 1308398
Lab ID: 1308398-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:39
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:41
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.17		0.00078	0.050	mg/L	1	08/15/13 19:09
Antimony	0.00015	J	0.000036	0.0020	mg/L	1	08/15/13 19:09
Arsenic	0.0012	J	0.00058	0.0050	mg/L	1	08/15/13 19:09
Barium	1.4		0.000063	0.10	mg/L	1	08/15/13 19:09
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 19:09
Cadmium	0.00027	J	0.000045	0.0010	mg/L	1	08/15/13 19:09
Chromium	0.0012	J	0.00027	0.010	mg/L	1	08/15/13 19:09
Cobalt	0.0014	J	0.000041	0.020	mg/L	1	08/15/13 19:09
Copper	0.0061		0.00053	0.0040	mg/L	1	08/15/13 19:09
Iron	18		0.0053	0.20	mg/L	1	08/15/13 19:09
Lead	0.00036	J	0.000051	0.0030	mg/L	1	08/15/13 19:09
Manganese	0.47		0.000054	0.050	mg/L	1	08/15/13 19:09
Nickel	0.0043	J	0.00025	0.020	mg/L	1	08/15/13 19:09
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 19:09
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 19:09
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 19:09
Vanadium	0.0017	J	0.00016	0.0040	mg/L	1	08/15/13 19:09
Zinc	0.0045	J	0.00048	0.050	mg/L	1	08/15/13 19:09
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0069	J	0.00078	0.050	mg/L	1	08/15/13 20:21
Antimony	0.00026	J	0.000036	0.0020	mg/L	1	08/15/13 20:21
Arsenic	0.00093	J	0.00058	0.0050	mg/L	1	08/15/13 20:21
Barium	1.5		0.000063	0.10	mg/L	1	08/15/13 20:21
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 20:21
Cadmium	0.00030	J	0.000045	0.0010	mg/L	1	08/15/13 20:21
Chromium	0.00073	J	0.00027	0.010	mg/L	1	08/15/13 20:21
Cobalt	0.0024	J	0.000041	0.020	mg/L	1	08/15/13 20:21
Copper	0.0036	J	0.00053	0.0040	mg/L	1	08/15/13 20:21
Iron	17		0.0053	0.20	mg/L	1	08/15/13 20:21

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-003
Collection Date: 08/07/13 09:28 AM

Work Order: 1308398
Lab ID: 1308398-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000062	J	0.000051	0.0030	mg/L	1	08/15/13 20:21
Manganese	0.42		0.000054	0.050	mg/L	1	08/15/13 20:21
Nickel	0.0042	J	0.00025	0.020	mg/L	1	08/15/13 20:21
Selenium		U	0.00064	0.0050	mg/L	1	08/15/13 20:21
Silver		U	0.000042	0.00020	mg/L	1	08/15/13 20:21
Thallium		U	0.000062	0.0020	mg/L	1	08/15/13 20:21
Vanadium	0.0012	J	0.00016	0.0040	mg/L	1	08/15/13 20:21
Zinc	0.0027	J	0.00048	0.050	mg/L	1	08/15/13 20:21
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 8/12/13		Analyst: HL	
<u>BatchID: 50452</u>							
1,1'-Biphenyl		U	0.095	10	µg/L	1	08/12/13 21:58
2,4,5-Trichlorophenol		U	0.12	5.0	µg/L	1	08/12/13 21:58
2,4,6-Trichlorophenol		U	0.11	4.0	µg/L	1	08/12/13 21:58
2,4-Dichlorophenol		U	0.22	10	µg/L	1	08/12/13 21:58
2,4-Dimethylphenol		U	0.24	5.0	µg/L	1	08/12/13 21:58
2,4-Dinitrophenol		U	0.76	25	µg/L	1	08/12/13 21:58
2,4-Dinitrotoluene		U	0.78	5.0	µg/L	1	08/12/13 21:58
2,6-Dinitrotoluene		U	0.82	5.0	µg/L	1	08/12/13 21:58
2-Chloronaphthalene		U	0.13	5.0	µg/L	1	08/12/13 21:58
2-Chlorophenol		U	0.73	10	µg/L	1	08/12/13 21:58
2-Methylnaphthalene		U	0.13	5.0	µg/L	1	08/12/13 21:58
2-Methylphenol		U	0.60	10	µg/L	1	08/12/13 21:58
2-Nitroaniline		U	0.11	25	µg/L	1	08/12/13 21:58
2-Nitrophenol		U	0.19	5.0	µg/L	1	08/12/13 21:58
3,3'-Dichlorobenzidine		U	0.54	1.0	µg/L	1	08/12/13 21:58
3-Nitroaniline		U	2.5	25	µg/L	1	08/12/13 21:58
4,6-Dinitro-2-methylphenol		U	0.34	20	µg/L	1	08/12/13 21:58
4-Bromophenyl phenyl ether		U	0.11	5.0	µg/L	1	08/12/13 21:58
4-Chloro-3-methylphenol		U	0.65	5.0	µg/L	1	08/12/13 21:58
4-Chloroaniline		U	1.1	10	µg/L	1	08/12/13 21:58
4-Chlorophenyl phenyl ether		U	0.11	5.0	µg/L	1	08/12/13 21:58
4-Methylphenol		U	0.55	10	µg/L	1	08/12/13 21:58
4-Nitroaniline		U	1.5	25	µg/L	1	08/12/13 21:58
4-Nitrophenol		U	1.6	25	µg/L	1	08/12/13 21:58
Acenaphthene		U	0.11	5.0	µg/L	1	08/12/13 21:58
Acenaphthylene		U	0.12	5.0	µg/L	1	08/12/13 21:58
Acetophenone		U	0.090	5.0	µg/L	1	08/12/13 21:58
Anthracene		U	0.72	5.0	µg/L	1	08/12/13 21:58
Atrazine		U	0.13	5.0	µg/L	1	08/12/13 21:58

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-003
Collection Date: 08/07/13 09:28 AM

Work Order: 1308398
Lab ID: 1308398-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/12/13 21:58
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/12/13 21:58
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/12/13 21:58
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/12/13 21:58
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/12/13 21:58
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/12/13 21:58
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/12/13 21:58
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/12/13 21:58
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/12/13 21:58
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/12/13 21:58
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/12/13 21:58
Caprolactam	U		4.7	10	µg/L	1	08/12/13 21:58
Carbazole	U		0.84	10	µg/L	1	08/12/13 21:58
Chrysene	U		0.71	1.0	µg/L	1	08/12/13 21:58
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/12/13 21:58
Dibenzofuran	U		0.11	4.0	µg/L	1	08/12/13 21:58
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/12/13 21:58
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/12/13 21:58
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/12/13 21:58
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/12/13 21:58
Fluoranthene	U		0.77	1.0	µg/L	1	08/12/13 21:58
Fluorene	U		0.10	5.0	µg/L	1	08/12/13 21:58
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/12/13 21:58
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/12/13 21:58
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/12/13 21:58
Hexachloroethane	U		0.13	5.0	µg/L	1	08/12/13 21:58
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/12/13 21:58
Isophorone	U		0.12	5.0	µg/L	1	08/12/13 21:58
Naphthalene	U		0.12	5.0	µg/L	1	08/12/13 21:58
Nitrobenzene	U		0.10	3.0	µg/L	1	08/12/13 21:58
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/12/13 21:58
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/12/13 21:58
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/12/13 21:58
Phenanthrene	U		0.86	2.0	µg/L	1	08/12/13 21:58
Phenol	U		0.094	5.0	µg/L	1	08/12/13 21:58
Pyrene	U		0.65	5.0	µg/L	1	08/12/13 21:58
Surr: 2,4,6-Tribromophenol	87.8			32-115	%REC	1	08/12/13 21:58
Surr: 2-Fluorobiphenyl	66.3			32-100	%REC	1	08/12/13 21:58
Surr: 2-Fluorophenol	37.1			22-59	%REC	1	08/12/13 21:58
Surr: 4-Terphenyl-d14	67.6			23-112	%REC	1	08/12/13 21:58

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-003
Collection Date: 08/07/13 09:28 AM

Work Order: 1308398
Lab ID: 1308398-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	69.4			31-93	%REC	1	08/12/13 21:58
Surr: Phenol-d6	24.6			13-36	%REC	1	08/12/13 21:58
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK	
BatchID: R125056							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 20:43
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 20:43
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 20:43
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 20:43
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 20:43
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 20:43
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 20:43
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 20:43
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 20:43
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 20:43
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 20:43
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 20:43
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 20:43
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 20:43
2-Butanone	U		0.22	25	µg/L	1	08/13/13 20:43
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 20:43
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 20:43
Acetone	U		0.33	50	µg/L	1	08/13/13 20:43
Benzene	U		0.18	1.0	µg/L	1	08/13/13 20:43
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 20:43
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 20:43
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 20:43
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 20:43
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 20:43
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 20:43
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 20:43
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 20:43
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 20:43
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 20:43
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 20:43
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 20:43
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 20:43
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 20:43
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 20:43
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 20:43

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-003
Collection Date: 08/07/13 09:28 AM

Work Order: 1308398
Lab ID: 1308398-03
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 20:43
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 20:43
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 20:43
Methylene chloride	U		0.19	5.0	µg/L	1	08/13/13 20:43
Styrene	U		0.11	1.0	µg/L	1	08/13/13 20:43
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 20:43
Toluene	U		0.12	1.0	µg/L	1	08/13/13 20:43
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 20:43
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 20:43
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 20:43
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 20:43
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 20:43
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 20:43
Surr: 1,2-Dichloroethane-d4	98.0			70-120	%REC	1	08/13/13 20:43
Surr: 4-Bromofluorobenzene	107			75-120	%REC	1	08/13/13 20:43
Surr: Dibromofluoromethane	95.4			85-115	%REC	1	08/13/13 20:43
Surr: Toluene-d8	94.8			85-120	%REC	1	08/13/13 20:43
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: <u>50539B</u>							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-004
Collection Date: 08/07/13 11:41 AM

Work Order: 1308398
Lab ID: 1308398-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:43
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:53
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.12		0.00078	0.050	mg/L	1	08/15/13 19:15
Antimony	0.00028	J	0.000036	0.0020	mg/L	1	08/15/13 19:15
Arsenic	0.0039	J	0.00058	0.0050	mg/L	1	08/15/13 19:15
Barium	0.30		0.000063	0.10	mg/L	1	08/15/13 19:15
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 19:15
Cadmium	0.00011	J	0.000045	0.0010	mg/L	1	08/15/13 19:15
Chromium	0.00084	J	0.00027	0.010	mg/L	1	08/15/13 19:15
Cobalt	0.00095	J	0.000041	0.020	mg/L	1	08/15/13 19:15
Copper	0.0054		0.00053	0.0040	mg/L	1	08/15/13 19:15
Iron	4.0		0.0053	0.20	mg/L	1	08/15/13 19:15
Lead	0.00024	J	0.000051	0.0030	mg/L	1	08/15/13 19:15
Manganese	0.044	J	0.000054	0.050	mg/L	1	08/15/13 19:15
Nickel	0.0056	J	0.00025	0.020	mg/L	1	08/15/13 19:15
Selenium	0.0036	J	0.00064	0.0050	mg/L	1	08/15/13 19:15
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 19:15
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 19:15
Vanadium	0.00076	J	0.00016	0.0040	mg/L	1	08/15/13 19:15
Zinc	0.0044	J	0.00048	0.050	mg/L	1	08/15/13 19:15
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0052	J	0.00078	0.050	mg/L	1	08/15/13 20:26
Antimony	0.00040	J	0.000036	0.0020	mg/L	1	08/15/13 20:26
Arsenic	0.0038	J	0.00058	0.0050	mg/L	1	08/15/13 20:26
Barium	0.32		0.000063	0.10	mg/L	1	08/15/13 20:26
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 20:26
Cadmium	0.000063	J	0.000045	0.0010	mg/L	1	08/15/13 20:26
Chromium	0.0045	J	0.00027	0.010	mg/L	1	08/15/13 20:26
Cobalt	0.0019	J	0.000041	0.020	mg/L	1	08/15/13 20:26
Copper	0.0035	J	0.00053	0.0040	mg/L	1	08/15/13 20:26
Iron	4.0		0.0053	0.20	mg/L	1	08/15/13 20:26

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-004
Collection Date: 08/07/13 11:41 AM

Work Order: 1308398
Lab ID: 1308398-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	08/15/13 20:26
Manganese	0.046	J	0.000054	0.050	mg/L	1	08/15/13 20:26
Nickel	0.0072	J	0.00025	0.020	mg/L	1	08/15/13 20:26
Selenium	0.0042	J	0.00064	0.0050	mg/L	1	08/15/13 20:26
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 20:26
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 20:26
Vanadium	0.00060	J	0.00016	0.0040	mg/L	1	08/15/13 20:26
Zinc	0.0024	J	0.00048	0.050	mg/L	1	08/15/13 20:26

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 8/12/13

Analyst: HL

BatchID: 50452

1,1'-Biphenyl	U		0.095	10	µg/L	1	08/12/13 22:29
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	08/12/13 22:29
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	08/12/13 22:29
2,4-Dichlorophenol	U		0.22	10	µg/L	1	08/12/13 22:29
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	08/12/13 22:29
2,4-Dinitrophenol	U		0.76	25	µg/L	1	08/12/13 22:29
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	08/12/13 22:29
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	08/12/13 22:29
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	08/12/13 22:29
2-Chlorophenol	U		0.73	10	µg/L	1	08/12/13 22:29
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	08/12/13 22:29
2-Methylphenol	U		0.60	10	µg/L	1	08/12/13 22:29
2-Nitroaniline	U		0.11	25	µg/L	1	08/12/13 22:29
2-Nitrophenol	U		0.19	5.0	µg/L	1	08/12/13 22:29
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	08/12/13 22:29
3-Nitroaniline	U		2.5	25	µg/L	1	08/12/13 22:29
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	08/12/13 22:29
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/12/13 22:29
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	08/12/13 22:29
4-Chloroaniline	U		1.1	10	µg/L	1	08/12/13 22:29
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/12/13 22:29
4-Methylphenol	U		0.55	10	µg/L	1	08/12/13 22:29
4-Nitroaniline	U		1.5	25	µg/L	1	08/12/13 22:29
4-Nitrophenol	U		1.6	25	µg/L	1	08/12/13 22:29
Acenaphthene	U		0.11	5.0	µg/L	1	08/12/13 22:29
Acenaphthylene	U		0.12	5.0	µg/L	1	08/12/13 22:29
Acetophenone	U		0.090	5.0	µg/L	1	08/12/13 22:29
Anthracene	U		0.72	5.0	µg/L	1	08/12/13 22:29
Atrazine	U		0.13	5.0	µg/L	1	08/12/13 22:29

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-004
Collection Date: 08/07/13 11:41 AM

Work Order: 1308398
Lab ID: 1308398-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/12/13 22:29
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/12/13 22:29
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/12/13 22:29
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/12/13 22:29
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/12/13 22:29
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/12/13 22:29
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/12/13 22:29
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/12/13 22:29
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/12/13 22:29
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/12/13 22:29
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/12/13 22:29
Caprolactam	U		4.7	10	µg/L	1	08/12/13 22:29
Carbazole	U		0.84	10	µg/L	1	08/12/13 22:29
Chrysene	U		0.71	1.0	µg/L	1	08/12/13 22:29
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/12/13 22:29
Dibenzofuran	U		0.11	4.0	µg/L	1	08/12/13 22:29
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/12/13 22:29
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/12/13 22:29
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/12/13 22:29
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/12/13 22:29
Fluoranthene	U		0.77	1.0	µg/L	1	08/12/13 22:29
Fluorene	U		0.10	5.0	µg/L	1	08/12/13 22:29
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/12/13 22:29
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/12/13 22:29
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/12/13 22:29
Hexachloroethane	U		0.13	5.0	µg/L	1	08/12/13 22:29
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/12/13 22:29
Isophorone	U		0.12	5.0	µg/L	1	08/12/13 22:29
Naphthalene	U		0.12	5.0	µg/L	1	08/12/13 22:29
Nitrobenzene	U		0.10	3.0	µg/L	1	08/12/13 22:29
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/12/13 22:29
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/12/13 22:29
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/12/13 22:29
Phenanthrene	U		0.86	2.0	µg/L	1	08/12/13 22:29
Phenol	U		0.094	5.0	µg/L	1	08/12/13 22:29
Pyrene	U		0.65	5.0	µg/L	1	08/12/13 22:29
Surr: 2,4,6-Tribromophenol	83.8			32-115	%REC	1	08/12/13 22:29
Surr: 2-Fluorobiphenyl	46.8			32-100	%REC	1	08/12/13 22:29
Surr: 2-Fluorophenol	31.1			22-59	%REC	1	08/12/13 22:29
Surr: 4-Terphenyl-d14	84.6			23-112	%REC	1	08/12/13 22:29

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-004
Collection Date: 08/07/13 11:41 AM

Work Order: 1308398
Lab ID: 1308398-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	50.2			31-93	%REC	1	08/12/13 22:29
Surr: Phenol-d6	19.5			13-36	%REC	1	08/12/13 22:29
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125029							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 06:49
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 06:49
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 06:49
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 06:49
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 06:49
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 06:49
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 06:49
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 06:49
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 06:49
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 06:49
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 06:49
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 06:49
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 06:49
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 06:49
2-Butanone	U		0.22	25	µg/L	1	08/13/13 06:49
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 06:49
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 06:49
Acetone	U		0.33	50	µg/L	1	08/13/13 06:49
Benzene	U		0.18	1.0	µg/L	1	08/13/13 06:49
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 06:49
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 06:49
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 06:49
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 06:49
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 06:49
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 06:49
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 06:49
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 06:49
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 06:49
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 06:49
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 06:49
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 06:49
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 06:49
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 06:49
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 06:49
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 06:49

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-004
Collection Date: 08/07/13 11:41 AM

Work Order: 1308398
Lab ID: 1308398-04
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 06:49
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 06:49
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 06:49
Methylene chloride	U		0.19	5.0	µg/L	1	08/13/13 06:49
Styrene	U		0.11	1.0	µg/L	1	08/13/13 06:49
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 06:49
Toluene	U		0.12	1.0	µg/L	1	08/13/13 06:49
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 06:49
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 06:49
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 06:49
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 06:49
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 06:49
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 06:49
Surr: 1,2-Dichloroethane-d4	98.6			70-120	%REC	1	08/13/13 06:49
Surr: 4-Bromofluorobenzene	97.9			75-120	%REC	1	08/13/13 06:49
Surr: Dibromofluoromethane	98.0			85-115	%REC	1	08/13/13 06:49
Surr: Toluene-d8	97.7			85-120	%REC	1	08/13/13 06:49
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50539B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-005
Collection Date: 08/07/13 01:59 PM

Work Order: 1308398
Lab ID: 1308398-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:55
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:57
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0045	J	0.00078	0.050	mg/L	1	08/15/13 19:20
Antimony	0.00022	J	0.000036	0.0020	mg/L	1	08/15/13 19:20
Arsenic	U		0.00058	0.0050	mg/L	1	08/15/13 19:20
Barium	0.48		0.000063	0.10	mg/L	1	08/15/13 19:20
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 19:20
Cadmium	0.00029	J	0.000045	0.0010	mg/L	1	08/15/13 19:20
Chromium	0.00080	J	0.00027	0.010	mg/L	1	08/15/13 19:20
Cobalt	0.0024	J	0.000041	0.020	mg/L	1	08/15/13 19:20
Copper	0.0027	J	0.00053	0.0040	mg/L	1	08/15/13 19:20
Iron	16		0.0053	0.20	mg/L	1	08/15/13 19:20
Lead	U		0.000051	0.0030	mg/L	1	08/15/13 19:20
Manganese	0.077		0.000054	0.050	mg/L	1	08/15/13 19:20
Nickel	0.0040	J	0.00025	0.020	mg/L	1	08/15/13 19:20
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 19:20
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 19:20
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 19:20
Vanadium	0.0010	J	0.00016	0.0040	mg/L	1	08/15/13 19:20
Zinc	0.0024	J	0.00048	0.050	mg/L	1	08/15/13 19:20
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.17		0.00078	0.050	mg/L	1	08/15/13 20:32
Antimony	0.00012	J	0.000036	0.0020	mg/L	1	08/15/13 20:32
Arsenic	U		0.00058	0.0050	mg/L	1	08/15/13 20:32
Barium	0.49		0.000063	0.10	mg/L	1	08/15/13 20:32
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 20:32
Cadmium	0.00029	J	0.000045	0.0010	mg/L	1	08/15/13 20:32
Chromium	0.0014	J	0.00027	0.010	mg/L	1	08/15/13 20:32
Cobalt	0.0015	J	0.000041	0.020	mg/L	1	08/15/13 20:32
Copper	0.0026	J	0.00053	0.0040	mg/L	1	08/15/13 20:32
Iron	16		0.0053	0.20	mg/L	1	08/15/13 20:32

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-005
Collection Date: 08/07/13 01:59 PM

Work Order: 1308398
Lab ID: 1308398-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.00030	J	0.000051	0.0030	mg/L	1	08/15/13 20:32
Manganese	0.080		0.000054	0.050	mg/L	1	08/15/13 20:32
Nickel	0.0040	J	0.00025	0.020	mg/L	1	08/15/13 20:32
Selenium	0.0010	J	0.00064	0.0050	mg/L	1	08/15/13 20:32
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 20:32
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 20:32
Vanadium	0.0014	J	0.00016	0.0040	mg/L	1	08/15/13 20:32
Zinc	0.0035	J	0.00048	0.050	mg/L	1	08/15/13 20:32

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 8/12/13

Analyst: HL

BatchID: 50452

1,1'-Biphenyl	U	0.095	10	µg/L	1	08/12/13 22:59
2,4,5-Trichlorophenol	U	0.12	5.0	µg/L	1	08/12/13 22:59
2,4,6-Trichlorophenol	U	0.11	4.0	µg/L	1	08/12/13 22:59
2,4-Dichlorophenol	U	0.22	10	µg/L	1	08/12/13 22:59
2,4-Dimethylphenol	U	0.24	5.0	µg/L	1	08/12/13 22:59
2,4-Dinitrophenol	U	0.76	25	µg/L	1	08/12/13 22:59
2,4-Dinitrotoluene	U	0.78	5.0	µg/L	1	08/12/13 22:59
2,6-Dinitrotoluene	U	0.82	5.0	µg/L	1	08/12/13 22:59
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	08/12/13 22:59
2-Chlorophenol	U	0.73	10	µg/L	1	08/12/13 22:59
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	08/12/13 22:59
2-Methylphenol	U	0.60	10	µg/L	1	08/12/13 22:59
2-Nitroaniline	U	0.11	25	µg/L	1	08/12/13 22:59
2-Nitrophenol	U	0.19	5.0	µg/L	1	08/12/13 22:59
3,3'-Dichlorobenzidine	U	0.54	1.0	µg/L	1	08/12/13 22:59
3-Nitroaniline	U	2.5	25	µg/L	1	08/12/13 22:59
4,6-Dinitro-2-methylphenol	U	0.34	20	µg/L	1	08/12/13 22:59
4-Bromophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/12/13 22:59
4-Chloro-3-methylphenol	U	0.65	5.0	µg/L	1	08/12/13 22:59
4-Chloroaniline	U	1.1	10	µg/L	1	08/12/13 22:59
4-Chlorophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/12/13 22:59
4-Methylphenol	U	0.55	10	µg/L	1	08/12/13 22:59
4-Nitroaniline	U	1.5	25	µg/L	1	08/12/13 22:59
4-Nitrophenol	U	1.6	25	µg/L	1	08/12/13 22:59
Acenaphthene	U	0.11	5.0	µg/L	1	08/12/13 22:59
Acenaphthylene	U	0.12	5.0	µg/L	1	08/12/13 22:59
Acetophenone	U	0.090	5.0	µg/L	1	08/12/13 22:59
Anthracene	U	0.72	5.0	µg/L	1	08/12/13 22:59
Atrazine	U	0.13	5.0	µg/L	1	08/12/13 22:59

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-005
Collection Date: 08/07/13 01:59 PM

Work Order: 1308398
Lab ID: 1308398-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/12/13 22:59
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/12/13 22:59
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/12/13 22:59
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/12/13 22:59
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/12/13 22:59
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/12/13 22:59
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/12/13 22:59
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/12/13 22:59
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/12/13 22:59
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/12/13 22:59
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/12/13 22:59
Caprolactam	U		4.7	10	µg/L	1	08/12/13 22:59
Carbazole	U		0.84	10	µg/L	1	08/12/13 22:59
Chrysene	U		0.71	1.0	µg/L	1	08/12/13 22:59
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/12/13 22:59
Dibenzofuran	U		0.11	4.0	µg/L	1	08/12/13 22:59
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/12/13 22:59
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/12/13 22:59
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/12/13 22:59
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/12/13 22:59
Fluoranthene	U		0.77	1.0	µg/L	1	08/12/13 22:59
Fluorene	U		0.10	5.0	µg/L	1	08/12/13 22:59
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/12/13 22:59
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/12/13 22:59
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/12/13 22:59
Hexachloroethane	U		0.13	5.0	µg/L	1	08/12/13 22:59
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/12/13 22:59
Isophorone	U		0.12	5.0	µg/L	1	08/12/13 22:59
Naphthalene	U		0.12	5.0	µg/L	1	08/12/13 22:59
Nitrobenzene	U		0.10	3.0	µg/L	1	08/12/13 22:59
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/12/13 22:59
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/12/13 22:59
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/12/13 22:59
Phenanthrene	U		0.86	2.0	µg/L	1	08/12/13 22:59
Phenol	U		0.094	5.0	µg/L	1	08/12/13 22:59
Pyrene	U		0.65	5.0	µg/L	1	08/12/13 22:59
Surr: 2,4,6-Tribromophenol	80.4			32-115	%REC	1	08/12/13 22:59
Surr: 2-Fluorobiphenyl	46.4			32-100	%REC	1	08/12/13 22:59
Surr: 2-Fluorophenol	27.6			22-59	%REC	1	08/12/13 22:59
Surr: 4-Terphenyl-d14	77.9			23-112	%REC	1	08/12/13 22:59

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-005
Collection Date: 08/07/13 01:59 PM

Work Order: 1308398
Lab ID: 1308398-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	46.8			31-93	%REC	1	08/12/13 22:59
Surr: Phenol-d6	17.4			13-36	%REC	1	08/12/13 22:59
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125029							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 07:13
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 07:13
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 07:13
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 07:13
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 07:13
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 07:13
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 07:13
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 07:13
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 07:13
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 07:13
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 07:13
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 07:13
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 07:13
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 07:13
2-Butanone	U		0.22	25	µg/L	1	08/13/13 07:13
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 07:13
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 07:13
Acetone	U		0.33	50	µg/L	1	08/13/13 07:13
Benzene	U		0.18	1.0	µg/L	1	08/13/13 07:13
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 07:13
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 07:13
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 07:13
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 07:13
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 07:13
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 07:13
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 07:13
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 07:13
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 07:13
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 07:13
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 07:13
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 07:13
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 07:13
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 07:13
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 07:13
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 07:13

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-005
Collection Date: 08/07/13 01:59 PM

Work Order: 1308398
Lab ID: 1308398-05
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 07:13
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 07:13
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 07:13
Methylene chloride	U		0.19	5.0	µg/L	1	08/13/13 07:13
Styrene	U		0.11	1.0	µg/L	1	08/13/13 07:13
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 07:13
Toluene	U		0.12	1.0	µg/L	1	08/13/13 07:13
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 07:13
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 07:13
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 07:13
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 07:13
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 07:13
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 07:13
Surr: 1,2-Dichloroethane-d4	100			70-120	%REC	1	08/13/13 07:13
Surr: 4-Bromofluorobenzene	96.6			75-120	%REC	1	08/13/13 07:13
Surr: Dibromofluoromethane	99.8			85-115	%REC	1	08/13/13 07:13
Surr: Toluene-d8	99.4			85-120	%REC	1	08/13/13 07:13
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50539B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-006
Collection Date: 08/07/13 03:37 PM

Work Order: 1308398
Lab ID: 1308398-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 13:59
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:01
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.022	J	0.00078	0.050	mg/L	1	08/15/13 19:26
Antimony	0.000079	J	0.000036	0.0020	mg/L	1	08/15/13 19:26
Arsenic	U		0.00058	0.0050	mg/L	1	08/15/13 19:26
Barium	0.057	J	0.000063	0.10	mg/L	1	08/15/13 19:26
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 19:26
Cadmium	U		0.000045	0.0010	mg/L	1	08/15/13 19:26
Chromium	0.00049	J	0.00027	0.010	mg/L	1	08/15/13 19:26
Cobalt	0.00051	J	0.000041	0.020	mg/L	1	08/15/13 19:26
Copper	0.0027	J	0.00053	0.0040	mg/L	1	08/15/13 19:26
Iron	0.27		0.0053	0.20	mg/L	1	08/15/13 19:26
Lead	U		0.000051	0.0030	mg/L	1	08/15/13 19:26
Manganese	0.058		0.000054	0.050	mg/L	1	08/15/13 19:26
Nickel	0.0022	J	0.00025	0.020	mg/L	1	08/15/13 19:26
Selenium	0.00074	J	0.00064	0.0050	mg/L	1	08/15/13 19:26
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 19:26
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 19:26
Vanadium	0.00024	J	0.00016	0.0040	mg/L	1	08/15/13 19:26
Zinc	0.0025	J	0.00048	0.050	mg/L	1	08/15/13 19:26
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0040	J	0.00078	0.050	mg/L	1	08/15/13 20:37
Antimony	0.00012	J	0.000036	0.0020	mg/L	1	08/15/13 20:37
Arsenic	U		0.00058	0.0050	mg/L	1	08/15/13 20:37
Barium	0.061	J	0.000063	0.10	mg/L	1	08/15/13 20:37
Beryllium	U		0.000082	0.0010	mg/L	1	08/19/13 14:46
Cadmium	U		0.000045	0.0010	mg/L	1	08/15/13 20:37
Chromium	0.00053	J	0.00027	0.010	mg/L	1	08/15/13 20:37
Cobalt	0.00093	J	0.000041	0.020	mg/L	1	08/15/13 20:37
Copper	0.0020	J	0.00053	0.0040	mg/L	1	08/15/13 20:37
Iron	0.27		0.0053	0.20	mg/L	1	08/15/13 20:37

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-006
Collection Date: 08/07/13 03:37 PM

Work Order: 1308398
Lab ID: 1308398-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	08/15/13 20:37
Manganese	0.061		0.000054	0.050	mg/L	1	08/15/13 20:37
Nickel	0.0022	J	0.00025	0.020	mg/L	1	08/15/13 20:37
Selenium	0.0011	J	0.00064	0.0050	mg/L	1	08/15/13 20:37
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 20:37
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 20:37
Vanadium	0.00023	J	0.00016	0.0040	mg/L	1	08/15/13 20:37
Zinc	0.0022	J	0.00048	0.050	mg/L	1	08/15/13 20:37

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 8/12/13

Analyst: HL

BatchID: 50452

1,1'-Biphenyl	U		0.095	10	µg/L	1	08/12/13 23:30
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	08/12/13 23:30
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	08/12/13 23:30
2,4-Dichlorophenol	U		0.22	10	µg/L	1	08/12/13 23:30
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	08/12/13 23:30
2,4-Dinitrophenol	U		0.76	25	µg/L	1	08/12/13 23:30
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	08/12/13 23:30
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	08/12/13 23:30
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	08/12/13 23:30
2-Chlorophenol	U		0.73	10	µg/L	1	08/12/13 23:30
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	08/12/13 23:30
2-Methylphenol	U		0.60	10	µg/L	1	08/12/13 23:30
2-Nitroaniline	U		0.11	25	µg/L	1	08/12/13 23:30
2-Nitrophenol	U		0.19	5.0	µg/L	1	08/12/13 23:30
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	08/12/13 23:30
3-Nitroaniline	U		2.5	25	µg/L	1	08/12/13 23:30
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	08/12/13 23:30
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/12/13 23:30
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	08/12/13 23:30
4-Chloroaniline	U		1.1	10	µg/L	1	08/12/13 23:30
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/12/13 23:30
4-Methylphenol	U		0.55	10	µg/L	1	08/12/13 23:30
4-Nitroaniline	U		1.5	25	µg/L	1	08/12/13 23:30
4-Nitrophenol	U		1.6	25	µg/L	1	08/12/13 23:30
Acenaphthene	U		0.11	5.0	µg/L	1	08/12/13 23:30
Acenaphthylene	U		0.12	5.0	µg/L	1	08/12/13 23:30
Acetophenone	U		0.090	5.0	µg/L	1	08/12/13 23:30
Anthracene	U		0.72	5.0	µg/L	1	08/12/13 23:30
Atrazine	U		0.13	5.0	µg/L	1	08/12/13 23:30

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-006
Collection Date: 08/07/13 03:37 PM

Work Order: 1308398
Lab ID: 1308398-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/12/13 23:30
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/12/13 23:30
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/12/13 23:30
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/12/13 23:30
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/12/13 23:30
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/12/13 23:30
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/12/13 23:30
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/12/13 23:30
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/12/13 23:30
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/12/13 23:30
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/12/13 23:30
Caprolactam	U		4.7	10	µg/L	1	08/12/13 23:30
Carbazole	U		0.84	10	µg/L	1	08/12/13 23:30
Chrysene	U		0.71	1.0	µg/L	1	08/12/13 23:30
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/12/13 23:30
Dibenzofuran	U		0.11	4.0	µg/L	1	08/12/13 23:30
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/12/13 23:30
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/12/13 23:30
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/12/13 23:30
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/12/13 23:30
Fluoranthene	U		0.77	1.0	µg/L	1	08/12/13 23:30
Fluorene	U		0.10	5.0	µg/L	1	08/12/13 23:30
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/12/13 23:30
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/12/13 23:30
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/12/13 23:30
Hexachloroethane	U		0.13	5.0	µg/L	1	08/12/13 23:30
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/12/13 23:30
Isophorone	U		0.12	5.0	µg/L	1	08/12/13 23:30
Naphthalene	U		0.12	5.0	µg/L	1	08/12/13 23:30
Nitrobenzene	U		0.10	3.0	µg/L	1	08/12/13 23:30
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/12/13 23:30
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/12/13 23:30
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/12/13 23:30
Phenanthrene	U		0.86	2.0	µg/L	1	08/12/13 23:30
Phenol	U		0.094	5.0	µg/L	1	08/12/13 23:30
Pyrene	U		0.65	5.0	µg/L	1	08/12/13 23:30
Surr: 2,4,6-Tribromophenol	73.0			32-115	%REC	1	08/12/13 23:30
Surr: 2-Fluorobiphenyl	65.3			32-100	%REC	1	08/12/13 23:30
Surr: 2-Fluorophenol	38.4			22-59	%REC	1	08/12/13 23:30
Surr: 4-Terphenyl-d14	72.3			23-112	%REC	1	08/12/13 23:30

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-006
Collection Date: 08/07/13 03:37 PM

Work Order: 1308398
Lab ID: 1308398-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	66.8			31-93	%REC	1	08/12/13 23:30
Surr: Phenol-d6	24.0			13-36	%REC	1	08/12/13 23:30
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK	
BatchID: R125056							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 21:08
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 21:08
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 21:08
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 21:08
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 21:08
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 21:08
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 21:08
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 21:08
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 21:08
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 21:08
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 21:08
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 21:08
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 21:08
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 21:08
2-Butanone	U		0.22	25	µg/L	1	08/13/13 21:08
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 21:08
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 21:08
Acetone	U		0.33	50	µg/L	1	08/13/13 21:08
Benzene	U		0.18	1.0	µg/L	1	08/13/13 21:08
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 21:08
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 21:08
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 21:08
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 21:08
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 21:08
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 21:08
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 21:08
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 21:08
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 21:08
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 21:08
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 21:08
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 21:08
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 21:08
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 21:08
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 21:08
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 21:08

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-006
Collection Date: 08/07/13 03:37 PM

Work Order: 1308398
Lab ID: 1308398-06
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 21:08
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 21:08
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 21:08
Methylene chloride	U		0.19	5.0	µg/L	1	08/13/13 21:08
Styrene	U		0.11	1.0	µg/L	1	08/13/13 21:08
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 21:08
Toluene	U		0.12	1.0	µg/L	1	08/13/13 21:08
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 21:08
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 21:08
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 21:08
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 21:08
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 21:08
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 21:08
Surr: 1,2-Dichloroethane-d4	97.6			70-120	%REC	1	08/13/13 21:08
Surr: 4-Bromofluorobenzene	105			75-120	%REC	1	08/13/13 21:08
Surr: Dibromofluoromethane	95.0			85-115	%REC	1	08/13/13 21:08
Surr: Toluene-d8	93.2			85-120	%REC	1	08/13/13 21:08
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50539B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-007
Collection Date: 08/07/13 04:59 PM

Work Order: 1308398
Lab ID: 1308398-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:04
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:06
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.067		0.00078	0.050	mg/L	1	08/15/13 19:31
Antimony	0.00021	J	0.000036	0.0020	mg/L	1	08/15/13 19:31
Arsenic	0.023		0.00058	0.0050	mg/L	1	08/15/13 19:31
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 19:31
Cadmium	0.00017	J	0.000045	0.0010	mg/L	1	08/15/13 19:31
Chromium	0.0015	J	0.00027	0.010	mg/L	1	08/15/13 19:31
Cobalt	0.0034	J	0.000041	0.020	mg/L	1	08/15/13 19:31
Copper	0.0033	J	0.00053	0.0040	mg/L	1	08/15/13 19:31
Iron	25		0.0053	0.20	mg/L	1	08/15/13 19:31
Lead	0.00025	J	0.000051	0.0030	mg/L	1	08/15/13 19:31
Manganese	0.12		0.000054	0.050	mg/L	1	08/15/13 19:31
Nickel	0.0080	J	0.00025	0.020	mg/L	1	08/15/13 19:31
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 19:31
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 19:31
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 19:31
Vanadium	0.0020	J	0.00016	0.0040	mg/L	1	08/15/13 19:31
Zinc	0.0060	J	0.00048	0.050	mg/L	1	08/15/13 19:31
<u>BatchID:</u> 50531							
Barium	1.7		0.00063	1.0	mg/L	10	08/16/13 16:23
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0053	J	0.00078	0.050	mg/L	1	08/15/13 22:15
Antimony	0.00027	J	0.000036	0.0020	mg/L	1	08/15/13 22:15
Arsenic	0.023		0.00058	0.0050	mg/L	1	08/15/13 22:15
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 22:15
Cadmium	0.00010	J	0.000045	0.0010	mg/L	1	08/15/13 22:15
Chromium	0.0013	J	0.00027	0.010	mg/L	1	08/15/13 22:15
Cobalt	0.0037	J	0.000041	0.020	mg/L	1	08/15/13 22:15
Copper	0.0012	J	0.00053	0.0040	mg/L	1	08/15/13 22:15
Iron	25		0.0053	0.20	mg/L	1	08/15/13 22:15

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-007
Collection Date: 08/07/13 04:59 PM

Work Order: 1308398
Lab ID: 1308398-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000076	J	0.000051	0.0030	mg/L	1	08/15/13 22:15
Manganese	0.12		0.000054	0.050	mg/L	1	08/15/13 22:15
Nickel	0.0074	J	0.00025	0.020	mg/L	1	08/15/13 22:15
Selenium		U	0.00064	0.0050	mg/L	1	08/15/13 22:15
Silver		U	0.000042	0.00020	mg/L	1	08/15/13 22:15
Thallium		U	0.000062	0.0020	mg/L	1	08/15/13 22:15
Vanadium	0.0017	J	0.00016	0.0040	mg/L	1	08/15/13 22:15
Zinc	0.0056	J	0.00048	0.050	mg/L	1	08/15/13 22:15
<u>BatchID: 50531</u>							
Barium	1.9		0.00063	1.0	mg/L	10	08/16/13 16:39
SEMI-VOLATILE ORGANIC COMPOUNDS		SW8270		Prep: SW3510 / 8/12/13		Analyst: HL	
<u>BatchID: 50452</u>							
1,1`-Biphenyl		U	0.095	10	µg/L	1	08/13/13 12:01
2,4,5-Trichlorophenol		U	0.12	5.0	µg/L	1	08/13/13 12:01
2,4,6-Trichlorophenol		U	0.11	4.0	µg/L	1	08/13/13 12:01
2,4-Dichlorophenol		U	0.22	10	µg/L	1	08/13/13 12:01
2,4-Dimethylphenol		U	0.24	5.0	µg/L	1	08/13/13 12:01
2,4-Dinitrophenol		U	0.76	25	µg/L	1	08/13/13 12:01
2,4-Dinitrotoluene		U	0.78	5.0	µg/L	1	08/13/13 12:01
2,6-Dinitrotoluene		U	0.82	5.0	µg/L	1	08/13/13 12:01
2-Chloronaphthalene		U	0.13	5.0	µg/L	1	08/13/13 12:01
2-Chlorophenol		U	0.73	10	µg/L	1	08/13/13 12:01
2-Methylnaphthalene		U	0.13	5.0	µg/L	1	08/13/13 12:01
2-Methylphenol		U	0.60	10	µg/L	1	08/13/13 12:01
2-Nitroaniline		U	0.11	25	µg/L	1	08/13/13 12:01
2-Nitrophenol		U	0.19	5.0	µg/L	1	08/13/13 12:01
3,3`-Dichlorobenzidine		U	0.54	1.0	µg/L	1	08/13/13 12:01
3-Nitroaniline		U	2.5	25	µg/L	1	08/13/13 12:01
4,6-Dinitro-2-methylphenol		U	0.34	20	µg/L	1	08/13/13 12:01
4-Bromophenyl phenyl ether		U	0.11	5.0	µg/L	1	08/13/13 12:01
4-Chloro-3-methylphenol		U	0.65	5.0	µg/L	1	08/13/13 12:01
4-Chloroaniline		U	1.1	10	µg/L	1	08/13/13 12:01
4-Chlorophenyl phenyl ether		U	0.11	5.0	µg/L	1	08/13/13 12:01
4-Methylphenol		U	0.55	10	µg/L	1	08/13/13 12:01
4-Nitroaniline		U	1.5	25	µg/L	1	08/13/13 12:01
4-Nitrophenol		U	1.6	25	µg/L	1	08/13/13 12:01
Acenaphthene		U	0.11	5.0	µg/L	1	08/13/13 12:01
Acenaphthylene		U	0.12	5.0	µg/L	1	08/13/13 12:01
Acetophenone		U	0.090	5.0	µg/L	1	08/13/13 12:01

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-007
Collection Date: 08/07/13 04:59 PM

Work Order: 1308398
Lab ID: 1308398-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Anthracene	U		0.72	5.0	µg/L	1	08/13/13 12:01
Atrazine	U		0.13	5.0	µg/L	1	08/13/13 12:01
Benzaldehyde	U		0.46	10	µg/L	1	08/13/13 12:01
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/13/13 12:01
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/13/13 12:01
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/13/13 12:01
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/13/13 12:01
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/13/13 12:01
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/13/13 12:01
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/13/13 12:01
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/13/13 12:01
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/13/13 12:01
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/13/13 12:01
Caprolactam	U		4.7	10	µg/L	1	08/13/13 12:01
Carbazole	U		0.84	10	µg/L	1	08/13/13 12:01
Chrysene	U		0.71	1.0	µg/L	1	08/13/13 12:01
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/13/13 12:01
Dibenzofuran	U		0.11	4.0	µg/L	1	08/13/13 12:01
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/13/13 12:01
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/13/13 12:01
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/13/13 12:01
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/13/13 12:01
Fluoranthene	U		0.77	1.0	µg/L	1	08/13/13 12:01
Fluorene	U		0.10	5.0	µg/L	1	08/13/13 12:01
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/13/13 12:01
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/13/13 12:01
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/13/13 12:01
Hexachloroethane	U		0.13	5.0	µg/L	1	08/13/13 12:01
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/13/13 12:01
Isophorone	U		0.12	5.0	µg/L	1	08/13/13 12:01
Naphthalene	U		0.12	5.0	µg/L	1	08/13/13 12:01
Nitrobenzene	U		0.10	3.0	µg/L	1	08/13/13 12:01
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/13/13 12:01
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/13/13 12:01
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/13/13 12:01
Phenanthrene	U		0.86	2.0	µg/L	1	08/13/13 12:01
Phenol	U		0.094	5.0	µg/L	1	08/13/13 12:01
Pyrene	U		0.65	5.0	µg/L	1	08/13/13 12:01
Surr: 2,4,6-Tribromophenol	92.7			32-115	%REC	1	08/13/13 12:01
Surr: 2-Fluorobiphenyl	64.7			32-100	%REC	1	08/13/13 12:01

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-007
Collection Date: 08/07/13 04:59 PM

Work Order: 1308398
Lab ID: 1308398-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	41.2			22-59	%REC	1	08/13/13 12:01
Surr: 4-Terphenyl-d14	87.8			23-112	%REC	1	08/13/13 12:01
Surr: Nitrobenzene-d5	71.9			31-93	%REC	1	08/13/13 12:01
Surr: Phenol-d6	25.4			13-36	%REC	1	08/13/13 12:01
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: AK	
BatchID: R125056							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 21:32
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 21:32
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 21:32
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 21:32
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 21:32
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 21:32
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 21:32
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 21:32
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 21:32
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 21:32
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 21:32
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 21:32
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 21:32
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 21:32
2-Butanone	U		0.22	25	µg/L	1	08/13/13 21:32
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 21:32
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 21:32
Acetone	U		0.33	50	µg/L	1	08/13/13 21:32
Benzene	0.78	J	0.18	1.0	µg/L	1	08/13/13 21:32
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 21:32
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 21:32
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 21:32
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 21:32
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 21:32
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 21:32
Chloroethane	6.9		0.46	5.0	µg/L	1	08/13/13 21:32
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 21:32
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 21:32
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 21:32
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 21:32
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 21:32
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 21:32
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 21:32

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-007
Collection Date: 08/07/13 04:59 PM

Work Order: 1308398
Lab ID: 1308398-07
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 21:32
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 21:32
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 21:32
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 21:32
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 21:32
Methylene chloride	U		0.19	5.0	µg/L	1	08/13/13 21:32
Styrene	U		0.11	1.0	µg/L	1	08/13/13 21:32
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 21:32
Toluene	U		0.12	1.0	µg/L	1	08/13/13 21:32
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 21:32
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 21:32
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 21:32
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 21:32
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 21:32
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 21:32
Surr: 1,2-Dichloroethane-d4	94.9			70-120	%REC	1	08/13/13 21:32
Surr: 4-Bromofluorobenzene	109			75-120	%REC	1	08/13/13 21:32
Surr: Dibromofluoromethane	95.1			85-115	%REC	1	08/13/13 21:32
Surr: Toluene-d8	94.2			85-120	%REC	1	08/13/13 21:32
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50539B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-008
Collection Date: 08/07/13 06:28 PM

Work Order: 1308398
Lab ID: 1308398-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:08
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:10
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.051		0.00078	0.050	mg/L	1	08/15/13 19:37
Antimony	0.00016	J	0.000036	0.0020	mg/L	1	08/15/13 19:37
Arsenic	0.0041	J	0.00058	0.0050	mg/L	1	08/15/13 19:37
Barium	0.47		0.000063	0.10	mg/L	1	08/15/13 19:37
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 19:37
Cadmium	0.00012	J	0.000045	0.0010	mg/L	1	08/15/13 19:37
Chromium	0.0012	J	0.00027	0.010	mg/L	1	08/15/13 19:37
Cobalt	0.0015	J	0.000041	0.020	mg/L	1	08/15/13 19:37
Copper	0.0038	J	0.00053	0.0040	mg/L	1	08/15/13 19:37
Iron	8.2		0.0053	0.20	mg/L	1	08/15/13 19:37
Lead	0.00080	J	0.000051	0.0030	mg/L	1	08/15/13 19:37
Manganese	0.20		0.000054	0.050	mg/L	1	08/15/13 19:37
Nickel	0.0068	J	0.00025	0.020	mg/L	1	08/15/13 19:37
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 19:37
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 19:37
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 19:37
Vanadium	0.0013	J	0.00016	0.0040	mg/L	1	08/15/13 19:37
Zinc	0.0040	J	0.00048	0.050	mg/L	1	08/15/13 19:37
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0063	J	0.00078	0.050	mg/L	1	08/15/13 22:20
Antimony	0.00020	J	0.000036	0.0020	mg/L	1	08/15/13 22:20
Arsenic	0.0039	J	0.00058	0.0050	mg/L	1	08/15/13 22:20
Barium	0.46		0.000063	0.10	mg/L	1	08/15/13 22:20
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 22:20
Cadmium	0.000098	J	0.000045	0.0010	mg/L	1	08/15/13 22:20
Chromium	0.00094	J	0.00027	0.010	mg/L	1	08/15/13 22:20
Cobalt	0.0023	J	0.000041	0.020	mg/L	1	08/15/13 22:20
Copper	0.0016	J	0.00053	0.0040	mg/L	1	08/15/13 22:20
Iron	8.1		0.0053	0.20	mg/L	1	08/15/13 22:20

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-008
Collection Date: 08/07/13 06:28 PM

Work Order: 1308398
Lab ID: 1308398-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000074	J	0.000051	0.0030	mg/L	1	08/15/13 22:20
Manganese	0.20		0.000054	0.050	mg/L	1	08/15/13 22:20
Nickel	0.0066	J	0.00025	0.020	mg/L	1	08/15/13 22:20
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 22:20
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 22:20
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 22:20
Vanadium	0.00091	J	0.00016	0.0040	mg/L	1	08/15/13 22:20
Zinc	0.0030	J	0.00048	0.050	mg/L	1	08/15/13 22:20

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 8/12/13

Analyst: HL

BatchID: 50452

1,1'-Biphenyl	U	0.095	10	µg/L	1	08/13/13 12:32
2,4,5-Trichlorophenol	U	0.12	5.0	µg/L	1	08/13/13 12:32
2,4,6-Trichlorophenol	U	0.11	4.0	µg/L	1	08/13/13 12:32
2,4-Dichlorophenol	U	0.22	10	µg/L	1	08/13/13 12:32
2,4-Dimethylphenol	U	0.24	5.0	µg/L	1	08/13/13 12:32
2,4-Dinitrophenol	U	0.76	25	µg/L	1	08/13/13 12:32
2,4-Dinitrotoluene	U	0.78	5.0	µg/L	1	08/13/13 12:32
2,6-Dinitrotoluene	U	0.82	5.0	µg/L	1	08/13/13 12:32
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	08/13/13 12:32
2-Chlorophenol	U	0.73	10	µg/L	1	08/13/13 12:32
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	08/13/13 12:32
2-Methylphenol	U	0.60	10	µg/L	1	08/13/13 12:32
2-Nitroaniline	U	0.11	25	µg/L	1	08/13/13 12:32
2-Nitrophenol	U	0.19	5.0	µg/L	1	08/13/13 12:32
3,3'-Dichlorobenzidine	U	0.54	1.0	µg/L	1	08/13/13 12:32
3-Nitroaniline	U	2.5	25	µg/L	1	08/13/13 12:32
4,6-Dinitro-2-methylphenol	U	0.34	20	µg/L	1	08/13/13 12:32
4-Bromophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/13/13 12:32
4-Chloro-3-methylphenol	U	0.65	5.0	µg/L	1	08/13/13 12:32
4-Chloroaniline	U	1.1	10	µg/L	1	08/13/13 12:32
4-Chlorophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/13/13 12:32
4-Methylphenol	U	0.55	10	µg/L	1	08/13/13 12:32
4-Nitroaniline	U	1.5	25	µg/L	1	08/13/13 12:32
4-Nitrophenol	U	1.6	25	µg/L	1	08/13/13 12:32
Acenaphthene	U	0.11	5.0	µg/L	1	08/13/13 12:32
Acenaphthylene	U	0.12	5.0	µg/L	1	08/13/13 12:32
Acetophenone	U	0.090	5.0	µg/L	1	08/13/13 12:32
Anthracene	U	0.72	5.0	µg/L	1	08/13/13 12:32
Atrazine	U	0.13	5.0	µg/L	1	08/13/13 12:32

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-008
Collection Date: 08/07/13 06:28 PM

Work Order: 1308398
Lab ID: 1308398-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/13/13 12:32
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/13/13 12:32
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/13/13 12:32
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/13/13 12:32
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/13/13 12:32
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/13/13 12:32
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/13/13 12:32
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/13/13 12:32
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/13/13 12:32
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/13/13 12:32
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/13/13 12:32
Caprolactam	U		4.7	10	µg/L	1	08/13/13 12:32
Carbazole	U		0.84	10	µg/L	1	08/13/13 12:32
Chrysene	U		0.71	1.0	µg/L	1	08/13/13 12:32
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/13/13 12:32
Dibenzofuran	U		0.11	4.0	µg/L	1	08/13/13 12:32
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/13/13 12:32
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/13/13 12:32
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/13/13 12:32
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/13/13 12:32
Fluoranthene	U		0.77	1.0	µg/L	1	08/13/13 12:32
Fluorene	U		0.10	5.0	µg/L	1	08/13/13 12:32
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/13/13 12:32
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/13/13 12:32
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/13/13 12:32
Hexachloroethane	U		0.13	5.0	µg/L	1	08/13/13 12:32
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/13/13 12:32
Isophorone	U		0.12	5.0	µg/L	1	08/13/13 12:32
Naphthalene	U		0.12	5.0	µg/L	1	08/13/13 12:32
Nitrobenzene	U		0.10	3.0	µg/L	1	08/13/13 12:32
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/13/13 12:32
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/13/13 12:32
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/13/13 12:32
Phenanthrene	U		0.86	2.0	µg/L	1	08/13/13 12:32
Phenol	U		0.094	5.0	µg/L	1	08/13/13 12:32
Pyrene	U		0.65	5.0	µg/L	1	08/13/13 12:32
Surr: 2,4,6-Tribromophenol	86.5			32-115	%REC	1	08/13/13 12:32
Surr: 2-Fluorobiphenyl	68.9			32-100	%REC	1	08/13/13 12:32
Surr: 2-Fluorophenol	41.5			22-59	%REC	1	08/13/13 12:32
Surr: 4-Terphenyl-d14	89.3			23-112	%REC	1	08/13/13 12:32

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-008
Collection Date: 08/07/13 06:28 PM

Work Order: 1308398
Lab ID: 1308398-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	69.8			31-93	%REC	1	08/13/13 12:32
Surr: Phenol-d6	26.1			13-36	%REC	1	08/13/13 12:32
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125084							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/14/13 05:28
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/14/13 05:28
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/14/13 05:28
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/14/13 05:28
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/14/13 05:28
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 05:28
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/14/13 05:28
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/14/13 05:28
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/14/13 05:28
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 05:28
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/14/13 05:28
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/14/13 05:28
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/14/13 05:28
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/14/13 05:28
2-Butanone	U		0.22	25	µg/L	1	08/14/13 05:28
2-Hexanone	U		0.12	50	µg/L	1	08/14/13 05:28
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/14/13 05:28
Acetone	U		0.33	50	µg/L	1	08/14/13 05:28
Benzene	U		0.18	1.0	µg/L	1	08/14/13 05:28
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/14/13 05:28
Bromoform	U		0.15	1.0	µg/L	1	08/14/13 05:28
Bromomethane	U		0.21	5.0	µg/L	1	08/14/13 05:28
Carbon disulfide	U		0.17	5.0	µg/L	1	08/14/13 05:28
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/14/13 05:28
Chlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 05:28
Chloroethane	U		0.46	5.0	µg/L	1	08/14/13 05:28
Chloroform	U		0.15	1.0	µg/L	1	08/14/13 05:28
Chloromethane	U		0.16	5.0	µg/L	1	08/14/13 05:28
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/14/13 05:28
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/14/13 05:28
Cyclohexane	U		0.22	1.0	µg/L	1	08/14/13 05:28
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/14/13 05:28
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/14/13 05:28
Ethylbenzene	U		0.13	1.0	µg/L	1	08/14/13 05:28
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/14/13 05:28

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080713-ZTR-008
Collection Date: 08/07/13 06:28 PM

Work Order: 1308398
Lab ID: 1308398-08
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/14/13 05:28
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/14/13 05:28
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/14/13 05:28
Methylene chloride	U		0.19	5.0	µg/L	1	08/14/13 05:28
Styrene	U		0.11	1.0	µg/L	1	08/14/13 05:28
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/14/13 05:28
Toluene	U		0.12	1.0	µg/L	1	08/14/13 05:28
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 05:28
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/14/13 05:28
Trichloroethene	U		0.14	1.0	µg/L	1	08/14/13 05:28
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/14/13 05:28
Vinyl chloride	U		0.17	1.0	µg/L	1	08/14/13 05:28
Xylenes, Total	U		0.29	3.0	µg/L	1	08/14/13 05:28
Surr: 1,2-Dichloroethane-d4	101			70-120	%REC	1	08/14/13 05:28
Surr: 4-Bromofluorobenzene	97.6			75-120	%REC	1	08/14/13 05:28
Surr: Dibromofluoromethane	98.0			85-115	%REC	1	08/14/13 05:28
Surr: Toluene-d8	99.0			85-120	%REC	1	08/14/13 05:28
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: <u>50539B</u>							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-009
Collection Date: 08/08/13 09:55 AM

Work Order: 1308398
Lab ID: 1308398-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:12
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:20
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.33		0.00078	0.050	mg/L	1	08/15/13 19:58
Antimony	0.00022	J	0.000036	0.0020	mg/L	1	08/15/13 19:58
Arsenic	0.034		0.00058	0.0050	mg/L	1	08/15/13 19:58
Barium	1.5		0.000063	0.10	mg/L	1	08/15/13 19:58
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 19:58
Cadmium	0.00084	J	0.000045	0.0010	mg/L	1	08/15/13 19:58
Chromium	0.0021	J	0.00027	0.010	mg/L	1	08/15/13 19:58
Cobalt	0.0023	J	0.000041	0.020	mg/L	1	08/15/13 19:58
Copper	0.0035	J	0.00053	0.0040	mg/L	1	08/15/13 19:58
Iron	5.3		0.0053	0.20	mg/L	1	08/15/13 19:58
Lead	0.0021	J	0.000051	0.0030	mg/L	1	08/15/13 19:58
Manganese	0.056		0.000054	0.050	mg/L	1	08/15/13 19:58
Nickel	0.0049	J	0.00025	0.020	mg/L	1	08/15/13 19:58
Selenium	0.00075	J	0.00064	0.0050	mg/L	1	08/15/13 19:58
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 19:58
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 19:58
Vanadium	0.0022	J	0.00016	0.0040	mg/L	1	08/15/13 19:58
Zinc	0.010	J	0.00048	0.050	mg/L	1	08/15/13 19:58
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0067	J	0.00078	0.050	mg/L	1	08/15/13 22:26
Antimony	0.00027	J	0.000036	0.0020	mg/L	1	08/15/13 22:26
Arsenic	0.031		0.00058	0.0050	mg/L	1	08/15/13 22:26
Barium	1.4		0.000063	0.10	mg/L	1	08/15/13 22:26
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 22:26
Cadmium	0.00016	J	0.000045	0.0010	mg/L	1	08/15/13 22:26
Chromium	0.0016	J	0.00027	0.010	mg/L	1	08/15/13 22:26
Cobalt	0.0031	J	0.000041	0.020	mg/L	1	08/15/13 22:26
Copper	0.0021	J	0.00053	0.0040	mg/L	1	08/15/13 22:26
Iron	4.3		0.0053	0.20	mg/L	1	08/15/13 22:26

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-009
Collection Date: 08/08/13 09:55 AM

Work Order: 1308398
Lab ID: 1308398-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000069	J	0.000051	0.0030	mg/L	1	08/15/13 22:26
Manganese	0.050		0.000054	0.050	mg/L	1	08/15/13 22:26
Nickel	0.0043	J	0.00025	0.020	mg/L	1	08/15/13 22:26
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 22:26
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 22:26
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 22:26
Vanadium	0.0014	J	0.00016	0.0040	mg/L	1	08/15/13 22:26
Zinc	0.0031	J	0.00048	0.050	mg/L	1	08/15/13 22:26

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 8/12/13

Analyst: HL

BatchID: 50452

1,1'-Biphenyl	U	0.095	10	µg/L	1	08/13/13 01:02
2,4,5-Trichlorophenol	U	0.12	5.0	µg/L	1	08/13/13 01:02
2,4,6-Trichlorophenol	U	0.11	4.0	µg/L	1	08/13/13 01:02
2,4-Dichlorophenol	U	0.22	10	µg/L	1	08/13/13 01:02
2,4-Dimethylphenol	U	0.24	5.0	µg/L	1	08/13/13 01:02
2,4-Dinitrophenol	U	0.76	25	µg/L	1	08/13/13 01:02
2,4-Dinitrotoluene	U	0.78	5.0	µg/L	1	08/13/13 01:02
2,6-Dinitrotoluene	U	0.82	5.0	µg/L	1	08/13/13 01:02
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	08/13/13 01:02
2-Chlorophenol	U	0.73	10	µg/L	1	08/13/13 01:02
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	08/13/13 01:02
2-Methylphenol	U	0.60	10	µg/L	1	08/13/13 01:02
2-Nitroaniline	U	0.11	25	µg/L	1	08/13/13 01:02
2-Nitrophenol	U	0.19	5.0	µg/L	1	08/13/13 01:02
3,3'-Dichlorobenzidine	U	0.54	1.0	µg/L	1	08/13/13 01:02
3-Nitroaniline	U	2.5	25	µg/L	1	08/13/13 01:02
4,6-Dinitro-2-methylphenol	U	0.34	20	µg/L	1	08/13/13 01:02
4-Bromophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/13/13 01:02
4-Chloro-3-methylphenol	U	0.65	5.0	µg/L	1	08/13/13 01:02
4-Chloroaniline	U	1.1	10	µg/L	1	08/13/13 01:02
4-Chlorophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/13/13 01:02
4-Methylphenol	U	0.55	10	µg/L	1	08/13/13 01:02
4-Nitroaniline	U	1.5	25	µg/L	1	08/13/13 01:02
4-Nitrophenol	U	1.6	25	µg/L	1	08/13/13 01:02
Acenaphthene	U	0.11	5.0	µg/L	1	08/13/13 01:02
Acenaphthylene	U	0.12	5.0	µg/L	1	08/13/13 01:02
Acetophenone	U	0.090	5.0	µg/L	1	08/13/13 01:02
Anthracene	U	0.72	5.0	µg/L	1	08/13/13 01:02
Atrazine	U	0.13	5.0	µg/L	1	08/13/13 01:02

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-009
Collection Date: 08/08/13 09:55 AM

Work Order: 1308398
Lab ID: 1308398-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/13/13 01:02
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/13/13 01:02
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/13/13 01:02
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/13/13 01:02
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/13/13 01:02
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/13/13 01:02
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/13/13 01:02
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/13/13 01:02
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/13/13 01:02
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/13/13 01:02
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/13/13 01:02
Caprolactam	U		4.7	10	µg/L	1	08/13/13 01:02
Carbazole	U		0.84	10	µg/L	1	08/13/13 01:02
Chrysene	U		0.71	1.0	µg/L	1	08/13/13 01:02
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/13/13 01:02
Dibenzofuran	U		0.11	4.0	µg/L	1	08/13/13 01:02
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/13/13 01:02
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/13/13 01:02
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/13/13 01:02
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/13/13 01:02
Fluoranthene	U		0.77	1.0	µg/L	1	08/13/13 01:02
Fluorene	U		0.10	5.0	µg/L	1	08/13/13 01:02
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/13/13 01:02
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/13/13 01:02
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/13/13 01:02
Hexachloroethane	U		0.13	5.0	µg/L	1	08/13/13 01:02
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/13/13 01:02
Isophorone	U		0.12	5.0	µg/L	1	08/13/13 01:02
Naphthalene	U		0.12	5.0	µg/L	1	08/13/13 01:02
Nitrobenzene	U		0.10	3.0	µg/L	1	08/13/13 01:02
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/13/13 01:02
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/13/13 01:02
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/13/13 01:02
Phenanthrene	U		0.86	2.0	µg/L	1	08/13/13 01:02
Phenol	U		0.094	5.0	µg/L	1	08/13/13 01:02
Pyrene	U		0.65	5.0	µg/L	1	08/13/13 01:02
Surr: 2,4,6-Tribromophenol	92.6			32-115	%REC	1	08/13/13 01:02
Surr: 2-Fluorobiphenyl	70.2			32-100	%REC	1	08/13/13 01:02
Surr: 2-Fluorophenol	46.6			22-59	%REC	1	08/13/13 01:02
Surr: 4-Terphenyl-d14	94.7			23-112	%REC	1	08/13/13 01:02

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-009
Collection Date: 08/08/13 09:55 AM

Work Order: 1308398
Lab ID: 1308398-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	78.2			31-93	%REC	1	08/13/13 01:02
Surr: Phenol-d6	28.5			13-36	%REC	1	08/13/13 01:02
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125084							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/14/13 05:51
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/14/13 05:51
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/14/13 05:51
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/14/13 05:51
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/14/13 05:51
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 05:51
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/14/13 05:51
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/14/13 05:51
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/14/13 05:51
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 05:51
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/14/13 05:51
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/14/13 05:51
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/14/13 05:51
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/14/13 05:51
2-Butanone	U		0.22	25	µg/L	1	08/14/13 05:51
2-Hexanone	U		0.12	50	µg/L	1	08/14/13 05:51
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/14/13 05:51
Acetone	U		0.33	50	µg/L	1	08/14/13 05:51
Benzene	U		0.18	1.0	µg/L	1	08/14/13 05:51
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/14/13 05:51
Bromoform	U		0.15	1.0	µg/L	1	08/14/13 05:51
Bromomethane	U		0.21	5.0	µg/L	1	08/14/13 05:51
Carbon disulfide	U		0.17	5.0	µg/L	1	08/14/13 05:51
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/14/13 05:51
Chlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 05:51
Chloroethane	U		0.46	5.0	µg/L	1	08/14/13 05:51
Chloroform	U		0.15	1.0	µg/L	1	08/14/13 05:51
Chloromethane	U		0.16	5.0	µg/L	1	08/14/13 05:51
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/14/13 05:51
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/14/13 05:51
Cyclohexane	U		0.22	1.0	µg/L	1	08/14/13 05:51
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/14/13 05:51
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/14/13 05:51
Ethylbenzene	U		0.13	1.0	µg/L	1	08/14/13 05:51
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/14/13 05:51

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-009
Collection Date: 08/08/13 09:55 AM

Work Order: 1308398
Lab ID: 1308398-09
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/14/13 05:51
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/14/13 05:51
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/14/13 05:51
Methylene chloride	U		0.19	5.0	µg/L	1	08/14/13 05:51
Styrene	U		0.11	1.0	µg/L	1	08/14/13 05:51
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/14/13 05:51
Toluene	U		0.12	1.0	µg/L	1	08/14/13 05:51
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 05:51
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/14/13 05:51
Trichloroethene	U		0.14	1.0	µg/L	1	08/14/13 05:51
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/14/13 05:51
Vinyl chloride	U		0.17	1.0	µg/L	1	08/14/13 05:51
Xylenes, Total	U		0.29	3.0	µg/L	1	08/14/13 05:51
Surr: 1,2-Dichloroethane-d4	101			70-120	%REC	1	08/14/13 05:51
Surr: 4-Bromofluorobenzene	98.9			75-120	%REC	1	08/14/13 05:51
Surr: Dibromofluoromethane	97.6			85-115	%REC	1	08/14/13 05:51
Surr: Toluene-d8	98.4			85-120	%REC	1	08/14/13 05:51
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50539B							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 13:55

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-010
Collection Date: 08/08/13 11:39 AM

Work Order: 1308398
Lab ID: 1308398-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:22
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/15/13	Analyst: LR
<u>BatchID:</u> 50560							
Mercury	U		0.00010	0.00020	mg/L	1	08/15/13 14:28
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.026	J	0.00078	0.050	mg/L	1	08/15/13 20:04
Antimony	0.00027	J	0.000036	0.0020	mg/L	1	08/15/13 20:04
Arsenic	0.0065		0.00058	0.0050	mg/L	1	08/15/13 20:04
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 20:04
Cadmium	0.00029	J	0.000045	0.0010	mg/L	1	08/15/13 20:04
Chromium	0.0022	J	0.00027	0.010	mg/L	1	08/15/13 20:04
Cobalt	0.0031	J	0.000041	0.020	mg/L	1	08/15/13 20:04
Copper	0.0034	J	0.00053	0.0040	mg/L	1	08/15/13 20:04
Iron	17		0.0053	0.20	mg/L	1	08/15/13 20:04
Lead	0.0073		0.000051	0.0030	mg/L	1	08/15/13 20:04
Manganese	0.60		0.000054	0.050	mg/L	1	08/15/13 20:04
Nickel	0.0075	J	0.00025	0.020	mg/L	1	08/15/13 20:04
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 20:04
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 20:04
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 20:04
Vanadium	0.0024	J	0.00016	0.0040	mg/L	1	08/15/13 20:04
Zinc	0.0096	J	0.00048	0.050	mg/L	1	08/15/13 20:04
<u>BatchID:</u> 50531							
Barium	1.7		0.00063	1.0	mg/L	10	08/19/13 11:49
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50531							
Aluminum	0.0081	J	0.00078	0.050	mg/L	1	08/15/13 22:31
Antimony	0.00031	J	0.000036	0.0020	mg/L	1	08/15/13 22:31
Arsenic	0.0067		0.00058	0.0050	mg/L	1	08/15/13 22:31
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 22:31
Cadmium	0.00022	J	0.000045	0.0010	mg/L	1	08/15/13 22:31
Chromium	0.0020	J	0.00027	0.010	mg/L	1	08/15/13 22:31
Cobalt	0.0035	J	0.000041	0.020	mg/L	1	08/15/13 22:31
Copper	0.0027	J	0.00053	0.0040	mg/L	1	08/15/13 22:31
Iron	17		0.0053	0.20	mg/L	1	08/15/13 22:31

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-010
Collection Date: 08/08/13 11:39 AM

Work Order: 1308398
Lab ID: 1308398-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.0024	J	0.000051	0.0030	mg/L	1	08/15/13 22:31
Manganese	0.60		0.000054	0.050	mg/L	1	08/15/13 22:31
Nickel	0.0076	J	0.00025	0.020	mg/L	1	08/15/13 22:31
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 22:31
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 22:31
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 22:31
Vanadium	0.0023	J	0.00016	0.0040	mg/L	1	08/15/13 22:31
Zinc	0.0052	J	0.00048	0.050	mg/L	1	08/15/13 22:31
<u>BatchID: 50531</u>							
Barium	1.8		0.00063	1.0	mg/L	10	08/16/13 16:45
SEMI-VOLATILE ORGANIC COMPOUNDS		SW8270		Prep: SW3510 / 8/12/13		Analyst: HL	
<u>BatchID: 50452</u>							
1,1'-Biphenyl	U		0.095	10	µg/L	1	08/13/13 01:33
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	08/13/13 01:33
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	08/13/13 01:33
2,4-Dichlorophenol	U		0.22	10	µg/L	1	08/13/13 01:33
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	08/13/13 01:33
2,4-Dinitrophenol	U		0.76	25	µg/L	1	08/13/13 01:33
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	08/13/13 01:33
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	08/13/13 01:33
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	08/13/13 01:33
2-Chlorophenol	U		0.73	10	µg/L	1	08/13/13 01:33
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	08/13/13 01:33
2-Methylphenol	U		0.60	10	µg/L	1	08/13/13 01:33
2-Nitroaniline	U		0.11	25	µg/L	1	08/13/13 01:33
2-Nitrophenol	U		0.19	5.0	µg/L	1	08/13/13 01:33
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	08/13/13 01:33
3-Nitroaniline	U		2.5	25	µg/L	1	08/13/13 01:33
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	08/13/13 01:33
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/13/13 01:33
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	08/13/13 01:33
4-Chloroaniline	U		1.1	10	µg/L	1	08/13/13 01:33
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/13/13 01:33
4-Methylphenol	U		0.55	10	µg/L	1	08/13/13 01:33
4-Nitroaniline	U		1.5	25	µg/L	1	08/13/13 01:33
4-Nitrophenol	U		1.6	25	µg/L	1	08/13/13 01:33
Acenaphthene	U		0.11	5.0	µg/L	1	08/13/13 01:33
Acenaphthylene	U		0.12	5.0	µg/L	1	08/13/13 01:33
Acetophenone	U		0.090	5.0	µg/L	1	08/13/13 01:33

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-010
Collection Date: 08/08/13 11:39 AM

Work Order: 1308398
Lab ID: 1308398-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Anthracene	U		0.72	5.0	µg/L	1	08/13/13 01:33
Atrazine	U		0.13	5.0	µg/L	1	08/13/13 01:33
Benzaldehyde	U		0.46	10	µg/L	1	08/13/13 01:33
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/13/13 01:33
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/13/13 01:33
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/13/13 01:33
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/13/13 01:33
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/13/13 01:33
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/13/13 01:33
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/13/13 01:33
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/13/13 01:33
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/13/13 01:33
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/13/13 01:33
Caprolactam	U		4.7	10	µg/L	1	08/13/13 01:33
Carbazole	U		0.84	10	µg/L	1	08/13/13 01:33
Chrysene	U		0.71	1.0	µg/L	1	08/13/13 01:33
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/13/13 01:33
Dibenzofuran	U		0.11	4.0	µg/L	1	08/13/13 01:33
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/13/13 01:33
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/13/13 01:33
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/13/13 01:33
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/13/13 01:33
Fluoranthene	U		0.77	1.0	µg/L	1	08/13/13 01:33
Fluorene	U		0.10	5.0	µg/L	1	08/13/13 01:33
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/13/13 01:33
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/13/13 01:33
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/13/13 01:33
Hexachloroethane	U		0.13	5.0	µg/L	1	08/13/13 01:33
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/13/13 01:33
Isophorone	U		0.12	5.0	µg/L	1	08/13/13 01:33
Naphthalene	U		0.12	5.0	µg/L	1	08/13/13 01:33
Nitrobenzene	U		0.10	3.0	µg/L	1	08/13/13 01:33
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/13/13 01:33
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/13/13 01:33
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/13/13 01:33
Phenanthrene	U		0.86	2.0	µg/L	1	08/13/13 01:33
Phenol	U		0.094	5.0	µg/L	1	08/13/13 01:33
Pyrene	U		0.65	5.0	µg/L	1	08/13/13 01:33
Surr: 2,4,6-Tribromophenol	95.2			32-115	%REC	1	08/13/13 01:33
Surr: 2-Fluorobiphenyl	68.8			32-100	%REC	1	08/13/13 01:33

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-010
Collection Date: 08/08/13 11:39 AM

Work Order: 1308398
Lab ID: 1308398-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	43.8			22-59	%REC	1	08/13/13 01:33
Surr: 4-Terphenyl-d14	98.6			23-112	%REC	1	08/13/13 01:33
Surr: Nitrobenzene-d5	72.5			31-93	%REC	1	08/13/13 01:33
Surr: Phenol-d6	27.3			13-36	%REC	1	08/13/13 01:33
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125084							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/14/13 06:15
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/14/13 06:15
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/14/13 06:15
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/14/13 06:15
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/14/13 06:15
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 06:15
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/14/13 06:15
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/14/13 06:15
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/14/13 06:15
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 06:15
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/14/13 06:15
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/14/13 06:15
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/14/13 06:15
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/14/13 06:15
2-Butanone	U		0.22	25	µg/L	1	08/14/13 06:15
2-Hexanone	U		0.12	50	µg/L	1	08/14/13 06:15
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/14/13 06:15
Acetone	U		0.33	50	µg/L	1	08/14/13 06:15
Benzene	8.5		0.18	1.0	µg/L	1	08/14/13 06:15
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/14/13 06:15
Bromoform	U		0.15	1.0	µg/L	1	08/14/13 06:15
Bromomethane	U		0.21	5.0	µg/L	1	08/14/13 06:15
Carbon disulfide	U		0.17	5.0	µg/L	1	08/14/13 06:15
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/14/13 06:15
Chlorobenzene	24		0.13	1.0	µg/L	1	08/14/13 06:15
Chloroethane	U		0.46	5.0	µg/L	1	08/14/13 06:15
Chloroform	U		0.15	1.0	µg/L	1	08/14/13 06:15
Chloromethane	U		0.16	5.0	µg/L	1	08/14/13 06:15
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/14/13 06:15
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/14/13 06:15
Cyclohexane	U		0.22	1.0	µg/L	1	08/14/13 06:15
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/14/13 06:15
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/14/13 06:15

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-010
Collection Date: 08/08/13 11:39 AM

Work Order: 1308398
Lab ID: 1308398-10
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.13	1.0	µg/L	1	08/14/13 06:15
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/14/13 06:15
Methyl acetate	U		0.19	10	µg/L	1	08/14/13 06:15
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/14/13 06:15
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/14/13 06:15
Methylene chloride	U		0.19	5.0	µg/L	1	08/14/13 06:15
Styrene	U		0.11	1.0	µg/L	1	08/14/13 06:15
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/14/13 06:15
Toluene	U		0.12	1.0	µg/L	1	08/14/13 06:15
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 06:15
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/14/13 06:15
Trichloroethene	U		0.14	1.0	µg/L	1	08/14/13 06:15
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/14/13 06:15
Vinyl chloride	U		0.17	1.0	µg/L	1	08/14/13 06:15
Xylenes, Total	U		0.29	3.0	µg/L	1	08/14/13 06:15
Surr: 1,2-Dichloroethane-d4	102			70-120	%REC	1	08/14/13 06:15
Surr: 4-Bromofluorobenzene	100			75-120	%REC	1	08/14/13 06:15
Surr: Dibromofluoromethane	101			85-115	%REC	1	08/14/13 06:15
Surr: Toluene-d8	101			85-120	%REC	1	08/14/13 06:15
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50551C							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 17:19

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-011
Collection Date: 08/08/13 11:59 AM

Work Order: 1308398
Lab ID: 1308398-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/16/13	Analyst: LR
<u>BatchID:</u> 50606							
Mercury	U		0.00010	0.00020	mg/L	1	08/19/13 13:28
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/16/13	Analyst: LR
<u>BatchID:</u> 50606							
Mercury	U		0.00010	0.00020	mg/L	1	08/19/13 13:30
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50530							
Aluminum	0.025	J	0.00078	0.050	mg/L	1	08/15/13 22:37
Antimony	0.00026	J	0.000036	0.0020	mg/L	1	08/15/13 22:37
Arsenic	0.0067		0.00058	0.0050	mg/L	1	08/15/13 22:37
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 22:37
Cadmium	0.00040	J	0.000045	0.0010	mg/L	1	08/15/13 22:37
Chromium	0.0020	J	0.00027	0.010	mg/L	1	08/15/13 22:37
Cobalt	0.0031	J	0.000041	0.020	mg/L	1	08/15/13 22:37
Copper	0.0034	J	0.00053	0.0040	mg/L	1	08/15/13 22:37
Iron	17		0.0053	0.20	mg/L	1	08/15/13 22:37
Lead	0.0072		0.000051	0.0030	mg/L	1	08/15/13 22:37
Manganese	0.58		0.000054	0.050	mg/L	1	08/15/13 22:37
Nickel	0.0074	J	0.00025	0.020	mg/L	1	08/15/13 22:37
Selenium	0.00075	J	0.00064	0.0050	mg/L	1	08/15/13 22:37
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 22:37
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 22:37
Vanadium	0.0022	J	0.00016	0.0040	mg/L	1	08/15/13 22:37
Zinc	0.0085	J	0.00048	0.050	mg/L	1	08/15/13 22:37
<u>BatchID:</u> 50530							
Barium	1.7		0.00063	1.0	mg/L	10	08/19/13 11:55
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50530							
Aluminum	0.0074	J	0.00078	0.050	mg/L	1	08/15/13 22:54
Antimony	0.00025	J	0.000036	0.0020	mg/L	1	08/15/13 22:54
Arsenic	0.0064		0.00058	0.0050	mg/L	1	08/15/13 22:54
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 22:54
Cadmium	0.00027	J	0.000045	0.0010	mg/L	1	08/15/13 22:54
Chromium	0.0020	J	0.00027	0.010	mg/L	1	08/15/13 22:54
Cobalt	0.0031	J	0.000041	0.020	mg/L	1	08/15/13 22:54
Copper	0.0024	J	0.00053	0.0040	mg/L	1	08/15/13 22:54
Iron	17		0.0053	0.20	mg/L	1	08/15/13 22:54

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-011
Collection Date: 08/08/13 11:59 AM

Work Order: 1308398
Lab ID: 1308398-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.0027	J	0.000051	0.0030	mg/L	1	08/15/13 22:54
Manganese	0.60		0.000054	0.050	mg/L	1	08/15/13 22:54
Nickel	0.0074	J	0.00025	0.020	mg/L	1	08/15/13 22:54
Selenium	0.00079	J	0.00064	0.0050	mg/L	1	08/15/13 22:54
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 22:54
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 22:54
Vanadium	0.0022	J	0.00016	0.0040	mg/L	1	08/15/13 22:54
Zinc	0.0049	J	0.00048	0.050	mg/L	1	08/15/13 22:54
BatchID: 50530							
Barium	1.7		0.00063	1.0	mg/L	10	08/16/13 17:06
SEMI-VOLATILE ORGANIC COMPOUNDS			SW8270	Prep: SW3510 / 8/12/13		Analyst: HL	
BatchID: 50452							
1,1'-Biphenyl	U		0.095	10	µg/L	1	08/13/13 02:03
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	08/13/13 02:03
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	08/13/13 02:03
2,4-Dichlorophenol	U		0.22	10	µg/L	1	08/13/13 02:03
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	08/13/13 02:03
2,4-Dinitrophenol	U		0.76	25	µg/L	1	08/13/13 02:03
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	08/13/13 02:03
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	08/13/13 02:03
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	08/13/13 02:03
2-Chlorophenol	U		0.73	10	µg/L	1	08/13/13 02:03
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	08/13/13 02:03
2-Methylphenol	U		0.60	10	µg/L	1	08/13/13 02:03
2-Nitroaniline	U		0.11	25	µg/L	1	08/13/13 02:03
2-Nitrophenol	U		0.19	5.0	µg/L	1	08/13/13 02:03
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	08/13/13 02:03
3-Nitroaniline	U		2.5	25	µg/L	1	08/13/13 02:03
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	08/13/13 02:03
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/13/13 02:03
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	08/13/13 02:03
4-Chloroaniline	U		1.1	10	µg/L	1	08/13/13 02:03
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/13/13 02:03
4-Methylphenol	U		0.55	10	µg/L	1	08/13/13 02:03
4-Nitroaniline	U		1.5	25	µg/L	1	08/13/13 02:03
4-Nitrophenol	U		1.6	25	µg/L	1	08/13/13 02:03
Acenaphthene	U		0.11	5.0	µg/L	1	08/13/13 02:03
Acenaphthylene	U		0.12	5.0	µg/L	1	08/13/13 02:03
Acetophenone	U		0.090	5.0	µg/L	1	08/13/13 02:03

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-011
Collection Date: 08/08/13 11:59 AM

Work Order: 1308398
Lab ID: 1308398-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Anthracene	U		0.72	5.0	µg/L	1	08/13/13 02:03
Atrazine	U		0.13	5.0	µg/L	1	08/13/13 02:03
Benzaldehyde	U		0.46	10	µg/L	1	08/13/13 02:03
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/13/13 02:03
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/13/13 02:03
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/13/13 02:03
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/13/13 02:03
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/13/13 02:03
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/13/13 02:03
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/13/13 02:03
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/13/13 02:03
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/13/13 02:03
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/13/13 02:03
Caprolactam	U		4.7	10	µg/L	1	08/13/13 02:03
Carbazole	U		0.84	10	µg/L	1	08/13/13 02:03
Chrysene	U		0.71	1.0	µg/L	1	08/13/13 02:03
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/13/13 02:03
Dibenzofuran	U		0.11	4.0	µg/L	1	08/13/13 02:03
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/13/13 02:03
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/13/13 02:03
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/13/13 02:03
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/13/13 02:03
Fluoranthene	U		0.77	1.0	µg/L	1	08/13/13 02:03
Fluorene	U		0.10	5.0	µg/L	1	08/13/13 02:03
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/13/13 02:03
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/13/13 02:03
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/13/13 02:03
Hexachloroethane	U		0.13	5.0	µg/L	1	08/13/13 02:03
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/13/13 02:03
Isophorone	U		0.12	5.0	µg/L	1	08/13/13 02:03
Naphthalene	U		0.12	5.0	µg/L	1	08/13/13 02:03
Nitrobenzene	U		0.10	3.0	µg/L	1	08/13/13 02:03
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/13/13 02:03
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/13/13 02:03
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/13/13 02:03
Phenanthrene	U		0.86	2.0	µg/L	1	08/13/13 02:03
Phenol	U		0.094	5.0	µg/L	1	08/13/13 02:03
Pyrene	U		0.65	5.0	µg/L	1	08/13/13 02:03
Surr: 2,4,6-Tribromophenol	88.6			32-115	%REC	1	08/13/13 02:03
Surr: 2-Fluorobiphenyl	61.2			32-100	%REC	1	08/13/13 02:03

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-011
Collection Date: 08/08/13 11:59 AM

Work Order: 1308398
Lab ID: 1308398-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: 2-Fluorophenol	37.9			22-59	%REC	1	08/13/13 02:03
Surr: 4-Terphenyl-d14	85.1			23-112	%REC	1	08/13/13 02:03
Surr: Nitrobenzene-d5	63.3			31-93	%REC	1	08/13/13 02:03
Surr: Phenol-d6	24.0			13-36	%REC	1	08/13/13 02:03
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125084							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/14/13 06:38
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/14/13 06:38
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/14/13 06:38
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/14/13 06:38
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/14/13 06:38
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 06:38
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/14/13 06:38
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/14/13 06:38
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/14/13 06:38
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 06:38
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/14/13 06:38
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/14/13 06:38
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/14/13 06:38
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/14/13 06:38
2-Butanone	U		0.22	25	µg/L	1	08/14/13 06:38
2-Hexanone	U		0.12	50	µg/L	1	08/14/13 06:38
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/14/13 06:38
Acetone	U		0.33	50	µg/L	1	08/14/13 06:38
Benzene	8.2		0.18	1.0	µg/L	1	08/14/13 06:38
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/14/13 06:38
Bromoform	U		0.15	1.0	µg/L	1	08/14/13 06:38
Bromomethane	U		0.21	5.0	µg/L	1	08/14/13 06:38
Carbon disulfide	U		0.17	5.0	µg/L	1	08/14/13 06:38
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/14/13 06:38
Chlorobenzene	23		0.13	1.0	µg/L	1	08/14/13 06:38
Chloroethane	U		0.46	5.0	µg/L	1	08/14/13 06:38
Chloroform	U		0.15	1.0	µg/L	1	08/14/13 06:38
Chloromethane	U		0.16	5.0	µg/L	1	08/14/13 06:38
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/14/13 06:38
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/14/13 06:38
Cyclohexane	U		0.22	1.0	µg/L	1	08/14/13 06:38
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/14/13 06:38
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/14/13 06:38

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-011
Collection Date: 08/08/13 11:59 AM

Work Order: 1308398
Lab ID: 1308398-11
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Ethylbenzene	U		0.13	1.0	µg/L	1	08/14/13 06:38
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/14/13 06:38
Methyl acetate	U		0.19	10	µg/L	1	08/14/13 06:38
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/14/13 06:38
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/14/13 06:38
Methylene chloride	U		0.19	5.0	µg/L	1	08/14/13 06:38
Styrene	U		0.11	1.0	µg/L	1	08/14/13 06:38
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/14/13 06:38
Toluene	U		0.12	1.0	µg/L	1	08/14/13 06:38
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 06:38
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/14/13 06:38
Trichloroethene	U		0.14	1.0	µg/L	1	08/14/13 06:38
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/14/13 06:38
Vinyl chloride	U		0.17	1.0	µg/L	1	08/14/13 06:38
Xylenes, Total	U		0.29	3.0	µg/L	1	08/14/13 06:38
Surr: 1,2-Dichloroethane-d4	101			70-120	%REC	1	08/14/13 06:38
Surr: 4-Bromofluorobenzene	97.6			75-120	%REC	1	08/14/13 06:38
Surr: Dibromofluoromethane	97.6			85-115	%REC	1	08/14/13 06:38
Surr: Toluene-d8	98.8			85-120	%REC	1	08/14/13 06:38
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50551C							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 17:19

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-012
Collection Date: 08/08/13 12:35 PM

Work Order: 1308398
Lab ID: 1308398-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/16/13	Analyst: LR
<u>BatchID:</u> 50606							
Mercury	U		0.00010	0.00020	mg/L	1	08/19/13 13:32
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/16/13	Analyst: LR
<u>BatchID:</u> 50606							
Mercury	U		0.00010	0.00020	mg/L	1	08/19/13 13:34
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50530							
Aluminum	0.0034	J	0.00078	0.050	mg/L	1	08/15/13 22:43
Antimony	U		0.000036	0.0020	mg/L	1	08/15/13 22:43
Arsenic	U		0.00058	0.0050	mg/L	1	08/15/13 22:43
Barium	0.0027	J	0.000063	0.10	mg/L	1	08/15/13 22:43
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 22:43
Cadmium	0.000049	J	0.000045	0.0010	mg/L	1	08/15/13 22:43
Chromium	0.00028	J	0.00027	0.010	mg/L	1	08/15/13 22:43
Cobalt	U		0.000041	0.020	mg/L	1	08/15/13 22:43
Copper	0.0015	J	0.00053	0.0040	mg/L	1	08/15/13 22:43
Iron	0.026	J	0.0053	0.20	mg/L	1	08/15/13 22:43
Lead	0.000053	J	0.000051	0.0030	mg/L	1	08/15/13 22:43
Manganese	0.00038	J	0.000054	0.050	mg/L	1	08/15/13 22:43
Nickel	U		0.00025	0.020	mg/L	1	08/15/13 22:43
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 22:43
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 22:43
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 22:43
Vanadium	U		0.00016	0.0040	mg/L	1	08/15/13 22:43
Zinc	0.0041	J	0.00048	0.050	mg/L	1	08/15/13 22:43
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50530							
Aluminum	0.0017	J	0.00078	0.050	mg/L	1	08/15/13 23:00
Antimony	0.000080	J	0.000036	0.0020	mg/L	1	08/15/13 23:00
Arsenic	U		0.00058	0.0050	mg/L	1	08/15/13 23:00
Barium	0.0022	J	0.000063	0.10	mg/L	1	08/15/13 23:00
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 23:00
Cadmium	U		0.000045	0.0010	mg/L	1	08/15/13 23:00
Chromium	U		0.00027	0.010	mg/L	1	08/15/13 23:00
Cobalt	0.00046	J	0.000041	0.020	mg/L	1	08/15/13 23:00
Copper	0.0011	J	0.00053	0.0040	mg/L	1	08/15/13 23:00
Iron	0.021	J	0.0053	0.20	mg/L	1	08/15/13 23:00

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-012
Collection Date: 08/08/13 12:35 PM

Work Order: 1308398
Lab ID: 1308398-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	U		0.000051	0.0030	mg/L	1	08/15/13 23:00
Manganese	0.0010	J	0.000054	0.050	mg/L	1	08/15/13 23:00
Nickel	0.00046	J	0.00025	0.020	mg/L	1	08/15/13 23:00
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 23:00
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 23:00
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 23:00
Vanadium	U		0.00016	0.0040	mg/L	1	08/15/13 23:00
Zinc	0.0031	J	0.00048	0.050	mg/L	1	08/15/13 23:00

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 8/12/13

Analyst: HL

BatchID: 50452

1,1'-Biphenyl	U		0.095	10	µg/L	1	08/13/13 02:34
2,4,5-Trichlorophenol	U		0.12	5.0	µg/L	1	08/13/13 02:34
2,4,6-Trichlorophenol	U		0.11	4.0	µg/L	1	08/13/13 02:34
2,4-Dichlorophenol	U		0.22	10	µg/L	1	08/13/13 02:34
2,4-Dimethylphenol	U		0.24	5.0	µg/L	1	08/13/13 02:34
2,4-Dinitrophenol	U		0.76	25	µg/L	1	08/13/13 02:34
2,4-Dinitrotoluene	U		0.78	5.0	µg/L	1	08/13/13 02:34
2,6-Dinitrotoluene	U		0.82	5.0	µg/L	1	08/13/13 02:34
2-Chloronaphthalene	U		0.13	5.0	µg/L	1	08/13/13 02:34
2-Chlorophenol	U		0.73	10	µg/L	1	08/13/13 02:34
2-Methylnaphthalene	U		0.13	5.0	µg/L	1	08/13/13 02:34
2-Methylphenol	U		0.60	10	µg/L	1	08/13/13 02:34
2-Nitroaniline	U		0.11	25	µg/L	1	08/13/13 02:34
2-Nitrophenol	U		0.19	5.0	µg/L	1	08/13/13 02:34
3,3'-Dichlorobenzidine	U		0.54	1.0	µg/L	1	08/13/13 02:34
3-Nitroaniline	U		2.5	25	µg/L	1	08/13/13 02:34
4,6-Dinitro-2-methylphenol	U		0.34	20	µg/L	1	08/13/13 02:34
4-Bromophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/13/13 02:34
4-Chloro-3-methylphenol	U		0.65	5.0	µg/L	1	08/13/13 02:34
4-Chloroaniline	U		1.1	10	µg/L	1	08/13/13 02:34
4-Chlorophenyl phenyl ether	U		0.11	5.0	µg/L	1	08/13/13 02:34
4-Methylphenol	U		0.55	10	µg/L	1	08/13/13 02:34
4-Nitroaniline	U		1.5	25	µg/L	1	08/13/13 02:34
4-Nitrophenol	U		1.6	25	µg/L	1	08/13/13 02:34
Acenaphthene	U		0.11	5.0	µg/L	1	08/13/13 02:34
Acenaphthylene	U		0.12	5.0	µg/L	1	08/13/13 02:34
Acetophenone	U		0.090	5.0	µg/L	1	08/13/13 02:34
Anthracene	U		0.72	5.0	µg/L	1	08/13/13 02:34
Atrazine	U		0.13	5.0	µg/L	1	08/13/13 02:34

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-012
Collection Date: 08/08/13 12:35 PM

Work Order: 1308398
Lab ID: 1308398-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/13/13 02:34
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/13/13 02:34
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/13/13 02:34
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/13/13 02:34
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/13/13 02:34
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/13/13 02:34
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/13/13 02:34
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/13/13 02:34
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/13/13 02:34
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/13/13 02:34
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/13/13 02:34
Caprolactam	U		4.7	10	µg/L	1	08/13/13 02:34
Carbazole	U		0.84	10	µg/L	1	08/13/13 02:34
Chrysene	U		0.71	1.0	µg/L	1	08/13/13 02:34
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/13/13 02:34
Dibenzofuran	U		0.11	4.0	µg/L	1	08/13/13 02:34
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/13/13 02:34
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/13/13 02:34
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/13/13 02:34
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/13/13 02:34
Fluoranthene	U		0.77	1.0	µg/L	1	08/13/13 02:34
Fluorene	U		0.10	5.0	µg/L	1	08/13/13 02:34
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/13/13 02:34
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/13/13 02:34
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/13/13 02:34
Hexachloroethane	U		0.13	5.0	µg/L	1	08/13/13 02:34
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/13/13 02:34
Isophorone	U		0.12	5.0	µg/L	1	08/13/13 02:34
Naphthalene	U		0.12	5.0	µg/L	1	08/13/13 02:34
Nitrobenzene	U		0.10	3.0	µg/L	1	08/13/13 02:34
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/13/13 02:34
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/13/13 02:34
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/13/13 02:34
Phenanthrene	U		0.86	2.0	µg/L	1	08/13/13 02:34
Phenol	U		0.094	5.0	µg/L	1	08/13/13 02:34
Pyrene	U		0.65	5.0	µg/L	1	08/13/13 02:34
Surr: 2,4,6-Tribromophenol	69.6			32-115	%REC	1	08/13/13 02:34
Surr: 2-Fluorobiphenyl	63.1			32-100	%REC	1	08/13/13 02:34
Surr: 2-Fluorophenol	38.9			22-59	%REC	1	08/13/13 02:34
Surr: 4-Terphenyl-d14	89.5			23-112	%REC	1	08/13/13 02:34

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-012
Collection Date: 08/08/13 12:35 PM

Work Order: 1308398
Lab ID: 1308398-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	63.6			31-93	%REC	1	08/13/13 02:34
Surr: Phenol-d6	23.3			13-36	%REC	1	08/13/13 02:34
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125084							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/14/13 07:02
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/14/13 07:02
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/14/13 07:02
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/14/13 07:02
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/14/13 07:02
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 07:02
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/14/13 07:02
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/14/13 07:02
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/14/13 07:02
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 07:02
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/14/13 07:02
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/14/13 07:02
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/14/13 07:02
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/14/13 07:02
2-Butanone	2.8	J	0.22	25	µg/L	1	08/14/13 07:02
2-Hexanone	U		0.12	50	µg/L	1	08/14/13 07:02
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/14/13 07:02
Acetone	0.79	J	0.33	50	µg/L	1	08/14/13 07:02
Benzene	U		0.18	1.0	µg/L	1	08/14/13 07:02
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/14/13 07:02
Bromoform	U		0.15	1.0	µg/L	1	08/14/13 07:02
Bromomethane	U		0.21	5.0	µg/L	1	08/14/13 07:02
Carbon disulfide	U		0.17	5.0	µg/L	1	08/14/13 07:02
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/14/13 07:02
Chlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 07:02
Chloroethane	U		0.46	5.0	µg/L	1	08/14/13 07:02
Chloroform	1.3		0.15	1.0	µg/L	1	08/14/13 07:02
Chloromethane	U		0.16	5.0	µg/L	1	08/14/13 07:02
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/14/13 07:02
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/14/13 07:02
Cyclohexane	U		0.22	1.0	µg/L	1	08/14/13 07:02
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/14/13 07:02
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/14/13 07:02
Ethylbenzene	U		0.13	1.0	µg/L	1	08/14/13 07:02
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/14/13 07:02

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-012
Collection Date: 08/08/13 12:35 PM

Work Order: 1308398
Lab ID: 1308398-12
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/14/13 07:02
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/14/13 07:02
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/14/13 07:02
Methylene chloride	U		0.19	5.0	µg/L	1	08/14/13 07:02
Styrene	U		0.11	1.0	µg/L	1	08/14/13 07:02
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/14/13 07:02
Toluene	U		0.12	1.0	µg/L	1	08/14/13 07:02
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 07:02
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/14/13 07:02
Trichloroethene	U		0.14	1.0	µg/L	1	08/14/13 07:02
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/14/13 07:02
Vinyl chloride	U		0.17	1.0	µg/L	1	08/14/13 07:02
Xylenes, Total	U		0.29	3.0	µg/L	1	08/14/13 07:02
Surr: 1,2-Dichloroethane-d4	100			70-120	%REC	1	08/14/13 07:02
Surr: 4-Bromofluorobenzene	97.9			75-120	%REC	1	08/14/13 07:02
Surr: Dibromofluoromethane	99.8			85-115	%REC	1	08/14/13 07:02
Surr: Toluene-d8	99.7			85-120	%REC	1	08/14/13 07:02
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: <u>50551C</u>							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 17:19

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-013
Collection Date: 08/08/13 01:48 PM

Work Order: 1308398
Lab ID: 1308398-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
MERCURY BY CVAA							
			SW7470			Prep: SW7470 / 8/16/13	Analyst: LR
<u>BatchID:</u> 50606							
Mercury	U		0.00010	0.00020	mg/L	1	08/19/13 13:36
MERCURY BY CVAA (DISSOLVED)							
			SW7470			Prep: SW7470 / 8/16/13	Analyst: LR
<u>BatchID:</u> 50606							
Mercury	U		0.00010	0.00020	mg/L	1	08/19/13 13:42
METALS BY ICP-MS							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50530							
Aluminum	0.013	J	0.00078	0.050	mg/L	1	08/15/13 22:48
Antimony	0.00013	J	0.000036	0.0020	mg/L	1	08/15/13 22:48
Arsenic	0.052		0.00058	0.0050	mg/L	1	08/15/13 22:48
Barium	1.3		0.000063	0.10	mg/L	1	08/15/13 22:48
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 22:48
Cadmium	0.00022	J	0.000045	0.0010	mg/L	1	08/15/13 22:48
Chromium	0.0010	J	0.00027	0.010	mg/L	1	08/15/13 22:48
Cobalt	0.0014	J	0.000041	0.020	mg/L	1	08/15/13 22:48
Copper	0.0021	J	0.00053	0.0040	mg/L	1	08/15/13 22:48
Iron	31		0.0053	0.20	mg/L	1	08/15/13 22:48
Lead	0.00017	J	0.000051	0.0030	mg/L	1	08/15/13 22:48
Manganese	0.44		0.000054	0.050	mg/L	1	08/15/13 22:48
Nickel	0.0052	J	0.00025	0.020	mg/L	1	08/15/13 22:48
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 22:48
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 22:48
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 22:48
Vanadium	0.0015	J	0.00016	0.0040	mg/L	1	08/15/13 22:48
Zinc	0.0046	J	0.00048	0.050	mg/L	1	08/15/13 22:48
METALS BY ICP-MS (DISSOLVED)							
			SW6020A			Prep: SW3005A / 8/14/13	Analyst: RH
<u>BatchID:</u> 50530							
Aluminum	0.0047	J	0.00078	0.050	mg/L	1	08/15/13 23:05
Antimony	0.00021	J	0.000036	0.0020	mg/L	1	08/15/13 23:05
Arsenic	0.052		0.00058	0.0050	mg/L	1	08/15/13 23:05
Barium	1.3		0.000063	0.10	mg/L	1	08/15/13 23:05
Beryllium	U		0.000082	0.0010	mg/L	1	08/15/13 23:05
Cadmium	0.00024	J	0.000045	0.0010	mg/L	1	08/15/13 23:05
Chromium	0.00091	J	0.00027	0.010	mg/L	1	08/15/13 23:05
Cobalt	0.0022	J	0.000041	0.020	mg/L	1	08/15/13 23:05
Copper	0.0017	J	0.00053	0.0040	mg/L	1	08/15/13 23:05
Iron	30		0.0053	0.20	mg/L	1	08/15/13 23:05

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-013
Collection Date: 08/08/13 01:48 PM

Work Order: 1308398
Lab ID: 1308398-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Lead	0.000068	J	0.000051	0.0030	mg/L	1	08/15/13 23:05
Manganese	0.43		0.000054	0.050	mg/L	1	08/15/13 23:05
Nickel	0.0052	J	0.00025	0.020	mg/L	1	08/15/13 23:05
Selenium	U		0.00064	0.0050	mg/L	1	08/15/13 23:05
Silver	U		0.000042	0.00020	mg/L	1	08/15/13 23:05
Thallium	U		0.000062	0.0020	mg/L	1	08/15/13 23:05
Vanadium	0.0014	J	0.00016	0.0040	mg/L	1	08/15/13 23:05
Zinc	0.0029	J	0.00048	0.050	mg/L	1	08/15/13 23:05

SEMI-VOLATILE ORGANIC COMPOUNDS

SW8270

Prep: SW3510 / 8/12/13

Analyst: HL

BatchID: 50452

1,1'-Biphenyl	U	0.095	10	µg/L	1	08/13/13 03:05
2,4,5-Trichlorophenol	U	0.12	5.0	µg/L	1	08/13/13 03:05
2,4,6-Trichlorophenol	U	0.11	4.0	µg/L	1	08/13/13 03:05
2,4-Dichlorophenol	U	0.22	10	µg/L	1	08/13/13 03:05
2,4-Dimethylphenol	U	0.24	5.0	µg/L	1	08/13/13 03:05
2,4-Dinitrophenol	U	0.76	25	µg/L	1	08/13/13 03:05
2,4-Dinitrotoluene	U	0.78	5.0	µg/L	1	08/13/13 03:05
2,6-Dinitrotoluene	U	0.82	5.0	µg/L	1	08/13/13 03:05
2-Chloronaphthalene	U	0.13	5.0	µg/L	1	08/13/13 03:05
2-Chlorophenol	U	0.73	10	µg/L	1	08/13/13 03:05
2-Methylnaphthalene	U	0.13	5.0	µg/L	1	08/13/13 03:05
2-Methylphenol	U	0.60	10	µg/L	1	08/13/13 03:05
2-Nitroaniline	U	0.11	25	µg/L	1	08/13/13 03:05
2-Nitrophenol	U	0.19	5.0	µg/L	1	08/13/13 03:05
3,3'-Dichlorobenzidine	U	0.54	1.0	µg/L	1	08/13/13 03:05
3-Nitroaniline	U	2.5	25	µg/L	1	08/13/13 03:05
4,6-Dinitro-2-methylphenol	U	0.34	20	µg/L	1	08/13/13 03:05
4-Bromophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/13/13 03:05
4-Chloro-3-methylphenol	U	0.65	5.0	µg/L	1	08/13/13 03:05
4-Chloroaniline	U	1.1	10	µg/L	1	08/13/13 03:05
4-Chlorophenyl phenyl ether	U	0.11	5.0	µg/L	1	08/13/13 03:05
4-Methylphenol	U	0.55	10	µg/L	1	08/13/13 03:05
4-Nitroaniline	U	1.5	25	µg/L	1	08/13/13 03:05
4-Nitrophenol	U	1.6	25	µg/L	1	08/13/13 03:05
Acenaphthene	U	0.11	5.0	µg/L	1	08/13/13 03:05
Acenaphthylene	U	0.12	5.0	µg/L	1	08/13/13 03:05
Acetophenone	U	0.090	5.0	µg/L	1	08/13/13 03:05
Anthracene	U	0.72	5.0	µg/L	1	08/13/13 03:05
Atrazine	U	0.13	5.0	µg/L	1	08/13/13 03:05

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-013
Collection Date: 08/08/13 01:48 PM

Work Order: 1308398
Lab ID: 1308398-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Benzaldehyde	U		0.46	10	µg/L	1	08/13/13 03:05
Benzo(a)anthracene	U		0.57	1.0	µg/L	1	08/13/13 03:05
Benzo(a)pyrene	U		0.10	1.0	µg/L	1	08/13/13 03:05
Benzo(b)fluoranthene	U		0.74	1.0	µg/L	1	08/13/13 03:05
Benzo(g,h,i)perylene	U		0.70	1.0	µg/L	1	08/13/13 03:05
Benzo(k)fluoranthene	U		0.17	1.0	µg/L	1	08/13/13 03:05
Bis(2-chloroethoxy)methane	U		0.13	5.0	µg/L	1	08/13/13 03:05
Bis(2-chloroethyl)ether	U		0.11	1.0	µg/L	1	08/13/13 03:05
Bis(2-chloroisopropyl)ether	U		0.12	5.0	µg/L	1	08/13/13 03:05
Bis(2-ethylhexyl)phthalate	U		0.12	5.0	µg/L	1	08/13/13 03:05
Butyl benzyl phthalate	U		0.11	5.0	µg/L	1	08/13/13 03:05
Caprolactam	U		4.7	10	µg/L	1	08/13/13 03:05
Carbazole	U		0.84	10	µg/L	1	08/13/13 03:05
Chrysene	U		0.71	1.0	µg/L	1	08/13/13 03:05
Dibenzo(a,h)anthracene	U		0.67	2.0	µg/L	1	08/13/13 03:05
Dibenzofuran	U		0.11	4.0	µg/L	1	08/13/13 03:05
Diethyl phthalate	U		0.69	5.0	µg/L	1	08/13/13 03:05
Dimethyl phthalate	U		0.14	5.0	µg/L	1	08/13/13 03:05
Di-n-butyl phthalate	U		0.71	5.0	µg/L	1	08/13/13 03:05
Di-n-octyl phthalate	U		0.12	5.0	µg/L	1	08/13/13 03:05
Fluoranthene	U		0.77	1.0	µg/L	1	08/13/13 03:05
Fluorene	U		0.10	5.0	µg/L	1	08/13/13 03:05
Hexachlorobenzene	U		0.10	0.50	µg/L	1	08/13/13 03:05
Hexachlorobutadiene	U		0.12	0.50	µg/L	1	08/13/13 03:05
Hexachlorocyclopentadiene	U		0.18	5.0	µg/L	1	08/13/13 03:05
Hexachloroethane	U		0.13	5.0	µg/L	1	08/13/13 03:05
Indeno(1,2,3-cd)pyrene	U		0.69	2.0	µg/L	1	08/13/13 03:05
Isophorone	U		0.12	5.0	µg/L	1	08/13/13 03:05
Naphthalene	U		0.12	5.0	µg/L	1	08/13/13 03:05
Nitrobenzene	U		0.10	3.0	µg/L	1	08/13/13 03:05
N-Nitrosodi-n-propylamine	U		0.13	5.0	µg/L	1	08/13/13 03:05
N-Nitrosodiphenylamine	U		0.81	5.0	µg/L	1	08/13/13 03:05
Pentachlorophenol	U		0.11	1.0	µg/L	1	08/13/13 03:05
Phenanthrene	U		0.86	2.0	µg/L	1	08/13/13 03:05
Phenol	U		0.094	5.0	µg/L	1	08/13/13 03:05
Pyrene	U		0.65	5.0	µg/L	1	08/13/13 03:05
Surr: 2,4,6-Tribromophenol	85.9			32-115	%REC	1	08/13/13 03:05
Surr: 2-Fluorobiphenyl	65.2			32-100	%REC	1	08/13/13 03:05
Surr: 2-Fluorophenol	39.6			22-59	%REC	1	08/13/13 03:05
Surr: 4-Terphenyl-d14	88.2			23-112	%REC	1	08/13/13 03:05

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-013
Collection Date: 08/08/13 01:48 PM

Work Order: 1308398
Lab ID: 1308398-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Surr: Nitrobenzene-d5	66.4			31-93	%REC	1	08/13/13 03:05
Surr: Phenol-d6	24.3			13-36	%REC	1	08/13/13 03:05
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125084							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/14/13 07:25
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/14/13 07:25
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/14/13 07:25
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/14/13 07:25
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/14/13 07:25
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 07:25
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/14/13 07:25
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/14/13 07:25
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/14/13 07:25
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 07:25
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/14/13 07:25
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/14/13 07:25
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/14/13 07:25
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/14/13 07:25
2-Butanone	U		0.22	25	µg/L	1	08/14/13 07:25
2-Hexanone	U		0.12	50	µg/L	1	08/14/13 07:25
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/14/13 07:25
Acetone	U		0.33	50	µg/L	1	08/14/13 07:25
Benzene	U		0.18	1.0	µg/L	1	08/14/13 07:25
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/14/13 07:25
Bromoform	U		0.15	1.0	µg/L	1	08/14/13 07:25
Bromomethane	U		0.21	5.0	µg/L	1	08/14/13 07:25
Carbon disulfide	U		0.17	5.0	µg/L	1	08/14/13 07:25
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/14/13 07:25
Chlorobenzene	U		0.13	1.0	µg/L	1	08/14/13 07:25
Chloroethane	U		0.46	5.0	µg/L	1	08/14/13 07:25
Chloroform	U		0.15	1.0	µg/L	1	08/14/13 07:25
Chloromethane	U		0.16	5.0	µg/L	1	08/14/13 07:25
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/14/13 07:25
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/14/13 07:25
Cyclohexane	U		0.22	1.0	µg/L	1	08/14/13 07:25
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/14/13 07:25
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/14/13 07:25
Ethylbenzene	U		0.13	1.0	µg/L	1	08/14/13 07:25
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/14/13 07:25

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: W-R2330009-080813-ZTR-013
Collection Date: 08/08/13 01:48 PM

Work Order: 1308398
Lab ID: 1308398-13
Matrix: GROUNDWATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methyl acetate	U		0.19	10	µg/L	1	08/14/13 07:25
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/14/13 07:25
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/14/13 07:25
Methylene chloride	U		0.19	5.0	µg/L	1	08/14/13 07:25
Styrene	U		0.11	1.0	µg/L	1	08/14/13 07:25
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/14/13 07:25
Toluene	U		0.12	1.0	µg/L	1	08/14/13 07:25
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/14/13 07:25
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/14/13 07:25
Trichloroethene	U		0.14	1.0	µg/L	1	08/14/13 07:25
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/14/13 07:25
Vinyl chloride	U		0.17	1.0	µg/L	1	08/14/13 07:25
Xylenes, Total	U		0.29	3.0	µg/L	1	08/14/13 07:25
Surr: 1,2-Dichloroethane-d4	103			70-120	%REC	1	08/14/13 07:25
Surr: 4-Bromofluorobenzene	98.9			75-120	%REC	1	08/14/13 07:25
Surr: Dibromofluoromethane	98.4			85-115	%REC	1	08/14/13 07:25
Surr: Toluene-d8	98.8			85-120	%REC	1	08/14/13 07:25
CYANIDE, AMENABLE			SW9012A				Analyst: JJG
BatchID: 50551C							
Cyanide, Amenable	U		0.0010	0.0050	mg/L	1	08/14/13 17:19

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: Trip Blank #1
Collection Date: 08/08/13

Work Order: 1308398
Lab ID: 1308398-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260				Analyst: BG
<u>BatchID: R125026</u>							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 02:58
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 02:58
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 02:58
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 02:58
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 02:58
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 02:58
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 02:58
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 02:58
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 02:58
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 02:58
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 02:58
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 02:58
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 02:58
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 02:58
2-Butanone	U		0.22	25	µg/L	1	08/13/13 02:58
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 02:58
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 02:58
Acetone	U		0.33	50	µg/L	1	08/13/13 02:58
Benzene	U		0.18	1.0	µg/L	1	08/13/13 02:58
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 02:58
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 02:58
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 02:58
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 02:58
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 02:58
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 02:58
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 02:58
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 02:58
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 02:58
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 02:58
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 02:58
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 02:58
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 02:58
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 02:58
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 02:58
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 02:58
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 02:58
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 02:58

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: Trip Blank #1
Collection Date: 08/08/13

Work Order: 1308398
Lab ID: 1308398-14
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 02:58
Methylene chloride	2.5	J	0.19	5.0	µg/L	1	08/13/13 02:58
Styrene	U		0.11	1.0	µg/L	1	08/13/13 02:58
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 02:58
Toluene	U		0.12	1.0	µg/L	1	08/13/13 02:58
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 02:58
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 02:58
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 02:58
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 02:58
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 02:58
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 02:58
Surr: 1,2-Dichloroethane-d4	96.6			70-120	%REC	1	08/13/13 02:58
Surr: 4-Bromofluorobenzene	107			75-120	%REC	1	08/13/13 02:58
Surr: Dibromofluoromethane	95.8			85-115	%REC	1	08/13/13 02:58
Surr: Toluene-d8	92.2			85-120	%REC	1	08/13/13 02:58

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: Trip Blank #2
Collection Date: 08/08/13

Work Order: 1308398
Lab ID: 1308398-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260				Analyst: BG
<u>BatchID: R125026</u>							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 03:23
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 03:23
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 03:23
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 03:23
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 03:23
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 03:23
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 03:23
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 03:23
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 03:23
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 03:23
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 03:23
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 03:23
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 03:23
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 03:23
2-Butanone	U		0.22	25	µg/L	1	08/13/13 03:23
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 03:23
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 03:23
Acetone	U		0.33	50	µg/L	1	08/13/13 03:23
Benzene	U		0.18	1.0	µg/L	1	08/13/13 03:23
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 03:23
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 03:23
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 03:23
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 03:23
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 03:23
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 03:23
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 03:23
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 03:23
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 03:23
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 03:23
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 03:23
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 03:23
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 03:23
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 03:23
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 03:23
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 03:23
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 03:23
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 03:23

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: Trip Blank #2
Collection Date: 08/08/13

Work Order: 1308398
Lab ID: 1308398-15
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 03:23
Methylene chloride	2.5	J	0.19	5.0	µg/L	1	08/13/13 03:23
Styrene	U		0.11	1.0	µg/L	1	08/13/13 03:23
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 03:23
Toluene	U		0.12	1.0	µg/L	1	08/13/13 03:23
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 03:23
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 03:23
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 03:23
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 03:23
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 03:23
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 03:23
Surr: 1,2-Dichloroethane-d4	93.5			70-120	%REC	1	08/13/13 03:23
Surr: 4-Bromofluorobenzene	105			75-120	%REC	1	08/13/13 03:23
Surr: Dibromofluoromethane	93.7			85-115	%REC	1	08/13/13 03:23
Surr: Toluene-d8	92.5			85-120	%REC	1	08/13/13 03:23

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: Trip Blank #3
Collection Date: 08/08/13

Work Order: 1308398
Lab ID: 1308398-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260				Analyst: BG
<u>BatchID: R125026</u>							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 03:47
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 03:47
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 03:47
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 03:47
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 03:47
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 03:47
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 03:47
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 03:47
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 03:47
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 03:47
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 03:47
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 03:47
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 03:47
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 03:47
2-Butanone	U		0.22	25	µg/L	1	08/13/13 03:47
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 03:47
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 03:47
Acetone	1.5	J	0.33	50	µg/L	1	08/13/13 03:47
Benzene	U		0.18	1.0	µg/L	1	08/13/13 03:47
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 03:47
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 03:47
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 03:47
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 03:47
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 03:47
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 03:47
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 03:47
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 03:47
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 03:47
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 03:47
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 03:47
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 03:47
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 03:47
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 03:47
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 03:47
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 03:47
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 03:47
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 03:47

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: Trip Blank #3
Collection Date: 08/08/13

Work Order: 1308398
Lab ID: 1308398-16
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 03:47
Methylene chloride	2.6	J	0.19	5.0	µg/L	1	08/13/13 03:47
Styrene	U		0.11	1.0	µg/L	1	08/13/13 03:47
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 03:47
Toluene	U		0.12	1.0	µg/L	1	08/13/13 03:47
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 03:47
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 03:47
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 03:47
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 03:47
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 03:47
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 03:47
Surr: 1,2-Dichloroethane-d4	94.8			70-120	%REC	1	08/13/13 03:47
Surr: 4-Bromofluorobenzene	106			75-120	%REC	1	08/13/13 03:47
Surr: Dibromofluoromethane	93.4			85-115	%REC	1	08/13/13 03:47
Surr: Toluene-d8	92.2			85-120	%REC	1	08/13/13 03:47

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: Trip Blank #4
Collection Date: 08/08/13

Work Order: 1308398
Lab ID: 1308398-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			SW8260			Analyst: BG	
BatchID: R125026							
1,1,1-Trichloroethane	U		0.14	1.0	µg/L	1	08/13/13 04:12
1,1,2,2-Tetrachloroethane	U		0.13	1.0	µg/L	1	08/13/13 04:12
1,1,2-Trichloroethane	U		0.084	1.0	µg/L	1	08/13/13 04:12
1,1,2-Trichlorotrifluoroethane	U		0.18	1.0	µg/L	1	08/13/13 04:12
1,1-Dichloroethane	U		0.11	1.0	µg/L	1	08/13/13 04:12
1,1-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 04:12
1,2,4-Trichlorobenzene	U		0.16	5.0	µg/L	1	08/13/13 04:12
1,2-Dibromo-3-chloropropane	U		0.31	1.0	µg/L	1	08/13/13 04:12
1,2-Dibromoethane	U		0.16	1.0	µg/L	1	08/13/13 04:12
1,2-Dichlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 04:12
1,2-Dichloroethane	U		0.15	1.0	µg/L	1	08/13/13 04:12
1,2-Dichloropropane	U		0.13	1.0	µg/L	1	08/13/13 04:12
1,3-Dichlorobenzene	U		0.16	1.0	µg/L	1	08/13/13 04:12
1,4-Dichlorobenzene	U		0.15	1.0	µg/L	1	08/13/13 04:12
2-Butanone	U		0.22	25	µg/L	1	08/13/13 04:12
2-Hexanone	U		0.12	50	µg/L	1	08/13/13 04:12
4-Methyl-2-pentanone	U		0.096	50	µg/L	1	08/13/13 04:12
Acetone	2.4	J	0.33	50	µg/L	1	08/13/13 04:12
Benzene	U		0.18	1.0	µg/L	1	08/13/13 04:12
Bromodichloromethane	U		0.12	1.0	µg/L	1	08/13/13 04:12
Bromoform	U		0.15	1.0	µg/L	1	08/13/13 04:12
Bromomethane	U		0.21	5.0	µg/L	1	08/13/13 04:12
Carbon disulfide	U		0.17	5.0	µg/L	1	08/13/13 04:12
Carbon tetrachloride	U		0.12	1.0	µg/L	1	08/13/13 04:12
Chlorobenzene	U		0.13	1.0	µg/L	1	08/13/13 04:12
Chloroethane	U		0.46	5.0	µg/L	1	08/13/13 04:12
Chloroform	U		0.15	1.0	µg/L	1	08/13/13 04:12
Chloromethane	U		0.16	5.0	µg/L	1	08/13/13 04:12
cis-1,2-Dichloroethene	U		0.11	1.0	µg/L	1	08/13/13 04:12
cis-1,3-Dichloropropene	U		0.081	1.0	µg/L	1	08/13/13 04:12
Cyclohexane	U		0.22	1.0	µg/L	1	08/13/13 04:12
Dibromochloromethane	U		0.13	5.0	µg/L	1	08/13/13 04:12
Dichlorodifluoromethane	U		0.20	5.0	µg/L	1	08/13/13 04:12
Ethylbenzene	U		0.13	1.0	µg/L	1	08/13/13 04:12
Isopropylbenzene	U		0.14	5.0	µg/L	1	08/13/13 04:12
Methyl acetate	U		0.19	10	µg/L	1	08/13/13 04:12
Methyl tert-butyl ether	U		0.070	5.0	µg/L	1	08/13/13 04:12

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

ALS Group USA, Corp

Date: 21-Aug-13

Client: The Mannik & Smith Group, Inc.
Project: RACER - Van Buren Landfill (R23300009)
Sample ID: Trip Blank #4
Collection Date: 08/08/13

Work Order: 1308398
Lab ID: 1308398-17
Matrix: WATER

Analyses	Result	Qual	MDL	Report Limit	Units	Dilution Factor	Date Analyzed
Methylcyclohexane	U		0.99	1.0	µg/L	1	08/13/13 04:12
Methylene chloride	2.5	J	0.19	5.0	µg/L	1	08/13/13 04:12
Styrene	U		0.11	1.0	µg/L	1	08/13/13 04:12
Tetrachloroethene	U		0.15	1.0	µg/L	1	08/13/13 04:12
Toluene	U		0.12	1.0	µg/L	1	08/13/13 04:12
trans-1,2-Dichloroethene	U		0.12	1.0	µg/L	1	08/13/13 04:12
trans-1,3-Dichloropropene	U		0.15	1.0	µg/L	1	08/13/13 04:12
Trichloroethene	U		0.14	1.0	µg/L	1	08/13/13 04:12
Trichlorofluoromethane	U		0.18	1.0	µg/L	1	08/13/13 04:12
Vinyl chloride	U		0.17	1.0	µg/L	1	08/13/13 04:12
Xylenes, Total	U		0.29	3.0	µg/L	1	08/13/13 04:12
Surr: 1,2-Dichloroethane-d4	97.4			70-120	%REC	1	08/13/13 04:12
Surr: 4-Bromofluorobenzene	112			75-120	%REC	1	08/13/13 04:12
Surr: Dibromofluoromethane	97.3			85-115	%REC	1	08/13/13 04:12
Surr: Toluene-d8	95.8			85-120	%REC	1	08/13/13 04:12

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

Client: The Mannik & Smith Group, Inc.

Work Order: 1308398

Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50560

Instrument ID HG1

Method: SW7470

MBLK		Sample ID: MBLK-50560-50560				Units: mg/L		Analysis Date: 08/15/13 01:27 PM		
Client ID:		Run ID: HG1_130815A				SeqNo: 2415015		Prep Date: 08/15/13		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-50560-50560				Units: mg/L		Analysis Date: 08/15/13 01:29 PM		
Client ID:		Run ID: HG1_130815A				SeqNo: 2415016		Prep Date: 08/15/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001984 0.00020 0.002 0 99.2 80-120 0

MS		Sample ID: 1308398-10DMS				Units: mg/L		Analysis Date: 08/15/13 02:24 PM		
Client ID: W-R2330009-080813-ZTR-010		Run ID: HG1_130815A				SeqNo: 2415043		Prep Date: 08/15/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002113 0.00020 0.002 0.000028 104 75-125 0

MSD		Sample ID: 1308398-10DMSD				Units: mg/L		Analysis Date: 08/15/13 02:26 PM		
Client ID: W-R2330009-080813-ZTR-010		Run ID: HG1_130815A				SeqNo: 2415044		Prep Date: 08/15/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.002048 0.00020 0.002 0.000028 101 75-125 0.002113 3.12 20

The following samples were analyzed in this batch:

1308398-01D	1308398-01E	1308398-02D
1308398-02E	1308398-03D	1308398-03E
1308398-04D	1308398-04E	1308398-05D
1308398-05E	1308398-06D	1308398-06E
1308398-07D	1308398-07E	1308398-08D
1308398-08E	1308398-09D	1308398-09E
1308398-10D	1308398-10E	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50606** Instrument ID **HG1** Method: **SW7470**

MBLK	Sample ID: MBLK-50606-50606					Units: mg/L		Analysis Date: 08/19/13 01:23 PM		
Client ID:	Run ID: HG1_130819A				SeqNo: 2417628		Prep Date: 08/16/13		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-50606-50606					Units: mg/L		Analysis Date: 08/19/13 01:26 PM		
Client ID:	Run ID: HG1_130819A				SeqNo: 2417629		Prep Date: 08/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001952 0.00020 0.002 0 97.6 80-120 0

MS	Sample ID: 1308398-13DMS					Units: mg/L		Analysis Date: 08/19/13 01:38 PM		
Client ID: W-R2330009-080813-ZTR-013	Run ID: HG1_130819A				SeqNo: 2417635		Prep Date: 08/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001929 0.00020 0.002 0.000016 95.6 75-125 0

MSD	Sample ID: 1308398-13DMSD					Units: mg/L		Analysis Date: 08/19/13 01:40 PM		
Client ID: W-R2330009-080813-ZTR-013	Run ID: HG1_130819A				SeqNo: 2417636		Prep Date: 08/16/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Mercury 0.001858 0.00020 0.002 0.000016 92.1 75-125 0.001929 3.75 20

The following samples were analyzed in this batch:

1308398-11D	1308398-11E	1308398-12D
1308398-12E	1308398-13D	1308398-13E

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50530** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK	Sample ID: MBLK-50530-50530					Units: mg/L		Analysis Date: 08/14/13 12:46 PM		
Client ID:	Run ID: ICPMS2_130814A				SeqNo: 2413933		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.0050								
Arsenic	U	0.0050								
Barium	U	0.0050								
Lead	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0050								

MBLK	Sample ID: MBLK-50530-50530					Units: mg/L		Analysis Date: 08/14/13 02:58 PM		
Client ID:	Run ID: ICPMS2_130814A				SeqNo: 2413956		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	U	0.0020								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	U	0.080								
Manganese	U	0.0050								
Nickel	U	0.0050								
Vanadium	U	0.0050								
Zinc	0.0009595	0.010								J

MBLK	Sample ID: MBLK-50530-50530					Units: mg/L		Analysis Date: 08/14/13 04:47 PM		
Client ID:	Run ID: ICPMS2_130814A				SeqNo: 2414183		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.00124	0.010								J
Chromium	U	0.0050								

MBLK	Sample ID: MBLK-50530-50530					Units: mg/L		Analysis Date: 08/15/13 03:37 PM		
Client ID:	Run ID: ICPMS2_130815A				SeqNo: 2415445		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	U	0.0020								

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50530** Instrument ID **ICPMS2** Method: **SW6020A**

LCS Sample ID: LCS-50530-50530				Units: mg/L			Analysis Date: 08/14/13 12:57 PM			
Client ID:		Run ID: ICPMS2_130814A		SeqNo: 2413935		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09307	0.0050	0.1	0	93.1	80-120	0			
Arsenic	0.09328	0.0050	0.1	0	93.3	80-120	0			
Barium	0.0981	0.0050	0.1	0	98.1	80-120	0			
Lead	0.09487	0.0050	0.1	0	94.9	80-120	0			
Selenium	0.0929	0.0050	0.1	0	92.9	80-120	0			
Silver	0.101	0.0050	0.1	0	101	80-120	0			
Thallium	0.09512	0.0050	0.1	0	95.1	80-120	0			

LCS Sample ID: LCS-50530-50530				Units: mg/L			Analysis Date: 08/14/13 03:03 PM			
Client ID:		Run ID: ICPMS2_130814A		SeqNo: 2413957		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cadmium	0.09697	0.0020	0.1	0	97	80-120	0			
Cobalt	0.09111	0.0050	0.1	0	91.1	80-120	0			
Copper	0.09416	0.0050	0.1	0	94.2	80-120	0			
Iron	9.001	0.080	10	0	90	80-120	0			
Manganese	0.09234	0.0050	0.1	0	92.3	80-120	0			
Nickel	0.0919	0.0050	0.1	0	91.9	80-120	0			
Vanadium	0.09307	0.0050	0.1	0	93.1	80-120	0			
Zinc	0.09488	0.010	0.1	0	94.9	80-120	0			

LCS Sample ID: LCS-50530-50530				Units: mg/L			Analysis Date: 08/14/13 04:52 PM			
Client ID:		Run ID: ICPMS2_130814A		SeqNo: 2414184		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.09883	0.010	0.1	0	98.8	80-120	0			
Chromium	0.09079	0.0050	0.1	0	90.8	80-120	0			

LCS Sample ID: LCS-50530-50530				Units: mg/L			Analysis Date: 08/15/13 03:14 PM			
Client ID:		Run ID: ICPMS2_130815A		SeqNo: 2415438		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.1027	0.0020	0.1	0	103	80-120	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50530** Instrument ID **ICPMS2** Method: **SW6020A**

MS Sample ID: 1308414-01BMS				Units: mg/L			Analysis Date: 08/14/13 02:39 PM			
Client ID:		Run ID: ICPMS2_130814A		SeqNo: 2413953		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.0913	0.0050	0.1	0.0001065	91.2	75-125	0			
Arsenic	0.1024	0.0050	0.1	0.002506	99.9	75-125	0			
Barium	0.2904	0.0050	0.1	0.1867	104	75-125	0			
Cadmium	0.1007	0.0020	0.1	0.0003755	100	75-125	0			
Cobalt	0.09748	0.0050	0.1	0.0007359	96.7	75-125	0			
Copper	0.09849	0.0050	0.1	0.001679	96.8	75-125	0			
Iron	11.7	0.080	10	1.674	100	75-125	0			
Lead	0.09787	0.0050	0.1	0.002092	95.8	75-125	0			
Manganese	0.4405	0.0050	0.1	0.3349	106	75-125	0			
Nickel	0.09867	0.0050	0.1	0.002386	96.3	75-125	0			
Selenium	0.09696	0.0050	0.1	0.0005082	96.5	75-125	0			
Silver	0.09587	0.0050	0.1	0.000005201	95.9	75-125	0			
Thallium	0.09609	0.0050	0.1	0.0005123	95.6	75-125	0			
Vanadium	0.1046	0.0050	0.1	0.0002207	104	75-125	0			
Zinc	0.1078	0.010	0.1	0.006653	101	75-125	0			

MS Sample ID: 1308414-01BMS				Units: mg/L			Analysis Date: 08/14/13 05:03 PM			
Client ID:		Run ID: ICPMS2_130814A		SeqNo: 2414186		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.3072	0.010	0.1	0.1429	164	75-125	0			S
Chromium	0.08989	0.0050	0.1	0.001097	88.8	75-125	0			

MS Sample ID: 1308414-01BMS				Units: mg/L			Analysis Date: 08/15/13 03:26 PM			
Client ID:		Run ID: ICPMS2_130815A		SeqNo: 2415441		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09903	0.0020	0.1	0.00000572	99	75-125	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50530** Instrument ID **ICPMS2** Method: **SW6020A**

MSD Sample ID: 1308414-01BMSD				Units: mg/L		Analysis Date: 08/14/13 02:46 PM				
Client ID:		Run ID: ICPMS2_130814A		SeqNo: 2413954		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.09219	0.0050	0.1	0.0001065	92.1	75-125	0.0913	0.97	20	
Arsenic	0.1034	0.0050	0.1	0.002506	101	75-125	0.1024	0.972	20	
Barium	0.2896	0.0050	0.1	0.1867	103	75-125	0.2904	0.276	20	
Cadmium	0.1002	0.0020	0.1	0.0003755	99.8	75-125	0.1007	0.498	20	
Cobalt	0.09605	0.0050	0.1	0.0007359	95.3	75-125	0.09748	1.48	20	
Copper	0.09654	0.0050	0.1	0.001679	94.9	75-125	0.09849	2	20	
Iron	11.44	0.080	10	1.674	97.7	75-125	11.7	2.25	20	
Lead	0.09654	0.0050	0.1	0.002092	94.4	75-125	0.09787	1.37	20	
Manganese	0.4341	0.0050	0.1	0.3349	99.2	75-125	0.4405	1.46	20	
Nickel	0.09698	0.0050	0.1	0.002386	94.6	75-125	0.09867	1.73	20	
Selenium	0.09824	0.0050	0.1	0.0005082	97.7	75-125	0.09696	1.31	20	
Silver	0.0965	0.0050	0.1	0.000005201	96.5	75-125	0.09587	0.655	20	
Thallium	0.09539	0.0050	0.1	0.0005123	94.9	75-125	0.09609	0.731	20	
Vanadium	0.1033	0.0050	0.1	0.0002207	103	75-125	0.1046	1.25	20	
Zinc	0.1029	0.010	0.1	0.006653	96.2	75-125	0.1078	4.65	20	

MSD Sample ID: 1308414-01BMSD				Units: mg/L		Analysis Date: 08/14/13 05:09 PM				
Client ID:		Run ID: ICPMS2_130814A		SeqNo: 2414187		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.327	0.010	0.1	0.1429	184	75-125	0.3072	6.24	20	S
Chromium	0.0924	0.0050	0.1	0.001097	91.3	75-125	0.08989	2.75	20	

MSD Sample ID: 1308414-01BMSD				Units: mg/L		Analysis Date: 08/15/13 03:32 PM				
Client ID:		Run ID: ICPMS2_130815A		SeqNo: 2415443		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.09781	0.0020	0.1	0.00000572	97.8	75-125	0.09903	1.24	20	

The following samples were analyzed in this batch:

1308398-11D	1308398-11E	1308398-12D
1308398-12E	1308398-13D	1308398-13E

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50531** Instrument ID **ICPMS2** Method: **SW6020A**

MBLK		Sample ID: MBLK-50531-50531				Units: mg/L		Analysis Date: 08/15/13 06:47 PM		
Client ID:		Run ID: ICPMS2_130815A				SeqNo: 2415487		Prep Date: 08/14/13		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	0.00004918	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	0.0001273	0.0050								J
Manganese	U	0.0050								
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0050								
Vanadium	U	0.0050								
Zinc	0.0009758	0.010								J

LCS		Sample ID: LCS-50531-50531				Units: mg/L		Analysis Date: 08/15/13 06:53 PM		
Client ID:		Run ID: ICPMS2_130815A				SeqNo: 2415488		Prep Date: 08/14/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1006	0.010	0.1	0	101	80-120	0			
Antimony	0.1029	0.0050	0.1	0	103	80-120	0			
Arsenic	0.1025	0.0050	0.1	0	102	80-120	0			
Barium	0.1008	0.0050	0.1	0	101	80-120	0			
Beryllium	0.1038	0.0020	0.1	0	104	80-120	0			
Cadmium	0.1013	0.0020	0.1	0	101	80-120	0			
Chromium	0.1004	0.0050	0.1	0	100	80-120	0			
Cobalt	0.1005	0.0050	0.1	0	100	80-120	0			
Copper	0.09656	0.0050	0.1	0	96.6	80-120	0			
Iron	9.962	0.080	10	0	99.6	80-120	0			
Lead	0.1008	0.0050	0.1	0	101	80-120	0			
Manganese	0.1021	0.0050	0.1	0	102	80-120	0			
Nickel	0.09696	0.0050	0.1	0	97	80-120	0			
Selenium	0.1012	0.0050	0.1	0	101	80-120	0			
Silver	0.1045	0.0050	0.1	0	104	80-120	0			
Thallium	0.09074	0.0050	0.1	0	90.7	80-120	0			
Vanadium	0.1049	0.0050	0.1	0	105	80-120	0			
Zinc	0.1039	0.010	0.1	0	104	80-120	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50531** Instrument ID **ICPMS2** Method: **SW6020A**

MS Sample ID: 1308398-06EMS				Units: mg/L		Analysis Date: 08/15/13 08:43 PM				
Client ID: W-R2330009-080713-ZTR-006			Run ID: ICPMS2_130815A		SeqNo: 2415515		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1074	0.010	0.1	0.003964	103	75-125	0			
Antimony	0.1007	0.0050	0.1	0.0001189	101	75-125	0			
Arsenic	0.1018	0.0050	0.1	0.0003985	101	75-125	0			
Barium	0.1623	0.0050	0.1	0.0606	102	75-125	0			
Cadmium	0.09961	0.0020	0.1	-0.00003804	99.6	75-125	0			
Chromium	0.0965	0.0050	0.1	0.0005271	96	75-125	0			
Cobalt	0.09698	0.0050	0.1	0.000928	96.1	75-125	0			
Copper	0.09237	0.0050	0.1	0.00205	90.3	75-125	0			
Iron	9.974	0.080	10	0.2697	97	75-125	0			
Lead	0.1018	0.0050	0.1	0.00003455	102	75-125	0			
Manganese	0.1611	0.0050	0.1	0.06065	100	75-125	0			
Nickel	0.09386	0.0050	0.1	0.002194	91.7	75-125	0			
Selenium	0.1007	0.0050	0.1	0.001118	99.6	75-125	0			
Silver	0.0984	0.0050	0.1	0.000001534	98.4	75-125	0			
Thallium	0.09491	0.0050	0.1	0.000005044	94.9	75-125	0			
Vanadium	0.1055	0.0050	0.1	0.0002315	105	75-125	0			
Zinc	0.09805	0.010	0.1	0.002248	95.8	75-125	0			

MS Sample ID: 1308398-06EMS				Units: mg/L		Analysis Date: 08/19/13 02:51 PM				
Client ID: W-R2330009-080713-ZTR-006			Run ID: ICPMS2_130819A		SeqNo: 2417881		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.1088	0.0020	0.1	0.00001159	109	75-125	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50531** Instrument ID **ICPMS2** Method: **SW6020A**

MSD Sample ID: 1308398-06EMSD				Units: mg/L		Analysis Date: 08/15/13 08:48 PM				
Client ID: W-R2330009-080713-ZTR-006			Run ID: ICPMS2_130815A		SeqNo: 2415516		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.104	0.010	0.1	0.003964	100	75-125	0.1074	3.22	20	
Antimony	0.09775	0.0050	0.1	0.0001189	97.6	75-125	0.1007	2.97	20	
Arsenic	0.09948	0.0050	0.1	0.0003985	99.1	75-125	0.1018	2.31	20	
Barium	0.1619	0.0050	0.1	0.0606	101	75-125	0.1623	0.247	20	
Cadmium	0.09978	0.0020	0.1	-0.00003804	99.8	75-125	0.09961	0.171	20	
Chromium	0.09356	0.0050	0.1	0.0005271	93	75-125	0.0965	3.09	20	
Cobalt	0.09562	0.0050	0.1	0.000928	94.7	75-125	0.09698	1.41	20	
Copper	0.09179	0.0050	0.1	0.00205	89.7	75-125	0.09237	0.63	20	
Iron	9.849	0.080	10	0.2697	95.8	75-125	9.974	1.26	20	
Lead	0.101	0.0050	0.1	0.00003455	101	75-125	0.1018	0.789	20	
Manganese	0.1593	0.0050	0.1	0.06065	98.6	75-125	0.1611	1.12	20	
Nickel	0.09287	0.0050	0.1	0.002194	90.7	75-125	0.09386	1.06	20	
Selenium	0.09764	0.0050	0.1	0.001118	96.5	75-125	0.1007	3.09	20	
Silver	0.09566	0.0050	0.1	0.000001534	95.7	75-125	0.0984	2.82	20	
Thallium	0.09503	0.0050	0.1	0.000005044	95	75-125	0.09491	0.126	20	
Vanadium	0.1052	0.0050	0.1	0.0002315	105	75-125	0.1055	0.285	20	
Zinc	0.09738	0.010	0.1	0.002248	95.1	75-125	0.09805	0.686	20	

MSD Sample ID: 1308398-06EMSD				Units: mg/L		Analysis Date: 08/19/13 03:00 PM				
Client ID: W-R2330009-080713-ZTR-006			Run ID: ICPMS2_130819A		SeqNo: 2417882		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Beryllium	0.1075	0.0020	0.1	0.00001159	107	75-125	0.1088	1.2	20	

The following samples were analyzed in this batch:

1308398-01D	1308398-01E	1308398-02D
1308398-02E	1308398-03D	1308398-03E
1308398-04D	1308398-04E	1308398-05D
1308398-05E	1308398-06D	1308398-06E
1308398-07D	1308398-07E	1308398-08D
1308398-08E	1308398-09D	1308398-09E
1308398-10D	1308398-10E	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50452** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKW1-50452-50452				Units: µg/L		Analysis Date: 08/12/13 03:33 PM		
Client ID:		Run ID: SVMS4_130812A				SeqNo: 2411802		Prep Date: 08/12/13		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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50452	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>27.61</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>55.2</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>28.1</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>56.2</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>19.18</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>38.4</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>42.21</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>84.4</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>29.27</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>58.5</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>11.44</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>22.9</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50452** Instrument ID **SVMS4** Method: **SW8270**

MBLK		Sample ID: SBLKW1-50452-50452				Units: µg/L		Analysis Date: 08/12/13 03:33 PM		
Client ID:		Run ID: SVMS4_130812A				SeqNo: 2411807		Prep Date: 08/12/13		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	0.10								
2-Chlorophenol	U	5.0								
2-Methylnaphthalene	U	0.10								
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	0.10								
Acenaphthylene	U	0.10								
Acetophenone	U	1.0								
Anthracene	U	0.12								
Atrazine	U	1.0								
Benzaldehyde	U	1.0								
Benzo(a)anthracene	U	0.10								
Benzo(a)pyrene	U	0.10								
Benzo(b)fluoranthene	U	0.15								
Benzo(g,h,i)perylene	U	0.20								
Benzo(k)fluoranthene	U	0.15								
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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50452		Instrument ID SVMS4		Method: SW8270				
Chrysene	U	0.15						
Dibenzo(a,h)anthracene	U	0.20						
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	0.15						
Fluorene	U	0.10						
Hexachlorobenzene	U	5.0						
Hexachlorobutadiene	U	5.0						
Hexachlorocyclopentadiene	U	20						
Hexachloroethane	U	5.0						
Indeno(1,2,3-cd)pyrene	U	0.20						
Isophorone	U	5.0						
Naphthalene	U	1.2						
Nitrobenzene	U	5.0						
N-Nitrosodi-n-propylamine	U	5.0						
N-Nitrosodiphenylamine	U	5.0						
Pentachlorophenol	U	20						
Phenanthrene	U	0.10						
Phenol	U	5.0						
Pyrene	U	0.20						
<i>Surr: 2,4,6-Tribromophenol</i>	<i>27.61</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>55.2</i>	<i>38-115</i>	<i>0</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>28.1</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>56.2</i>	<i>32-100</i>	<i>0</i>	
<i>Surr: 2-Fluorophenol</i>	<i>19.18</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>38.4</i>	<i>22-59</i>	<i>0</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>42.21</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>84.4</i>	<i>23-112</i>	<i>0</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>29.27</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>58.5</i>	<i>31-93</i>	<i>0</i>	
<i>Surr: Phenol-d6</i>	<i>11.44</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>22.9</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50452** Instrument ID **SVMS4** Method: **SW8270**

LCS Sample ID: SLCSW1-50452-50452				Units: µg/L			Analysis Date: 08/12/13 03:01 PM			
Client ID:		Run ID: SVMS4_130812A		SeqNo: 2411801		Prep Date: 08/12/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	12.72	5.0	20	0	63.6	50-110	0			
2,4,6-Trichlorophenol	13.24	5.0	20	0	66.2	50-115	0			
2,4-Dichlorophenol	13.27	10	20	0	66.4	50-105	0			
2,4-Dimethylphenol	11.15	5.0	20	0	55.8	30-110	0			
2,4-Dinitrophenol	11.55	5.0	20	0	57.8	15-140	0			
2,4-Dinitrotoluene	15.02	5.0	20	0	75.1	50-120	0			
2,6-Dinitrotoluene	15.09	5.0	20	0	75.4	50-115	0			
2-Chloronaphthalene	13.55	5.0	20	0	67.8	50-105	0			
2-Chlorophenol	12.79	5.0	20	0	64	35-105	0			
2-Methylnaphthalene	13.56	5.0	20	0	67.8	45-105	0			
2-Methylphenol	11.32	5.0	20	0	56.6	40-110	0			
2-Nitroaniline	15.91	20	20	0	79.6	50-115	0			J
2-Nitrophenol	12.21	5.0	20	0	61	40-115	0			
3-Nitroaniline	17.23	20	20	0	86.2	20-125	0			J
4,6-Dinitro-2-methylphenol	13.27	20	20	0	66.4	40-130	0			J
4-Bromophenyl phenyl ether	15.02	5.0	20	0	75.1	50-115	0			
4-Chloro-3-methylphenol	12.78	5.0	20	0	63.9	45-110	0			
4-Chloroaniline	15.81	20	20	0	79	15-110	0			J
4-Chlorophenyl phenyl ether	15.05	5.0	20	0	75.2	50-110	0			
4-Methylphenol	9.62	5.0	20	0	48.1	30-110	0			
4-Nitroaniline	19.05	20	20	0	95.2	35-150	0			J
4-Nitrophenol	4.11	20	20	0	20.6	1-58	0			J
Acenaphthene	13.78	5.0	20	0	68.9	45-110	0			
Acenaphthylene	13.9	5.0	20	0	69.5	50-105	0			
Anthracene	15.46	5.0	20	0	77.3	55-110	0			
Benzo(a)anthracene	15.74	5.0	20	0	78.7	55-110	0			
Benzo(a)pyrene	17.63	5.0	20	0	88.2	55-110	0			
Benzo(b)fluoranthene	14.95	5.0	20	0	74.8	45-120	0			
Benzo(g,h,i)perylene	19.97	5.0	20	0	99.8	40-125	0			
Benzo(k)fluoranthene	18.04	5.0	20	0	90.2	45-125	0			
Bis(2-chloroethoxy)methane	13.75	5.0	20	0	68.8	45-105	0			
Bis(2-chloroethyl)ether	14.53	5.0	20	0	72.6	35-110	0			
Bis(2-chloroisopropyl)ether	13.47	5.0	20	0	67.4	25-130	0			
Bis(2-ethylhexyl)phthalate	16.33	5.0	20	0	81.6	40-125	0			
Butyl benzyl phthalate	14.96	5.0	20	0	74.8	45-115	0			
Carbazole	17.26	10	20	0	86.3	50-150	0			
Chrysene	16.62	5.0	20	0	83.1	55-110	0			
Dibenzo(a,h)anthracene	19.32	5.0	20	0	96.6	40-125	0			
Dibenzofuran	14.27	5.0	20	0	71.4	55-105	0			
Diethyl phthalate	16.08	20	20	0	80.4	40-120	0			J
Dimethyl phthalate	15.2	20	20	0	76	25-125	0			J
Di-n-butyl phthalate	16.6	5.0	20	0	83	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50452		Instrument ID SVMS4		Method: SW8270			
Di-n-octyl phthalate	16.23	5.0	20	0	81.2	35-135	0
Fluoranthene	16.03	5.0	20	0	80.2	55-115	0
Fluorene	14.77	5.0	20	0	73.8	50-110	0
Hexachlorobenzene	15.85	5.0	20	0	79.2	50-110	0
Hexachlorobutadiene	13.37	5.0	20	0	66.8	25-105	0
Hexachlorocyclopentadiene	7.35	20	20	0	36.8	25-105	0 J
Hexachloroethane	13.54	5.0	20	0	67.7	30-95	0
Indeno(1,2,3-cd)pyrene	19.42	5.0	20	0	97.1	45-125	0
Isophorone	13.85	5.0	20	0	69.2	50-110	0
Naphthalene	12.78	5.0	20	0	63.9	40-100	0
Nitrobenzene	13.35	5.0	20	0	66.8	45-110	0
N-Nitrosodi-n-propylamine	14.77	5.0	20	0	73.8	35-130	0
N-Nitrosodiphenylamine	16.2	5.0	20	0	81	50-110	0
Pentachlorophenol	13.67	20	20	0	68.4	40-115	0 J
Phenanthrene	15.12	5.0	20	0	75.6	50-115	0
Phenol	5.33	5.0	20	0	26.6	12-43	0
Pyrene	16.84	5.0	20	0	84.2	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>33.81</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>67.6</i>	<i>38-115</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>28.37</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>56.7</i>	<i>32-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>17.49</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>43.05</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>86.1</i>	<i>23-112</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>29.42</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>58.8</i>	<i>31-93</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>10.94</i>	<i>0</i>	<i>50</i>	<i>0</i>	<i>21.9</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50452** Instrument ID **SVMS4** Method: **SW8270**

LCS		Sample ID: SLCSW1-50452-50452				Units: µg/L		Analysis Date: 08/12/13 03:01 PM		
Client ID:		Run ID: SVMS4_130812A				SeqNo: 2411806		Prep Date: 08/12/13		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	12.72	5.0	20	0	63.6	50-110	0			
2,4,6-Trichlorophenol	13.24	5.0	20	0	66.2	50-115	0			
2,4-Dichlorophenol	13.27	10	20	0	66.4	50-105	0			
2,4-Dimethylphenol	11.15	5.0	20	0	55.8	30-110	0			
2,4-Dinitrophenol	11.55	5.0	20	0	57.8	15-140	0			
2,4-Dinitrotoluene	15.02	5.0	20	0	75.1	50-120	0			
2,6-Dinitrotoluene	15.09	5.0	20	0	75.4	50-115	0			
2-Chloronaphthalene	13.55	0.10	20	0	67.8	50-105	0			
2-Chlorophenol	12.79	5.0	20	0	64	35-105	0			
2-Methylnaphthalene	13.56	0.10	20	0	67.8	45-105	0			
2-Methylphenol	11.32	5.0	20	0	56.6	40-110	0			
2-Nitroaniline	15.91	20	20	0	79.6	50-115	0			J
2-Nitrophenol	12.21	5.0	20	0	61	40-115	0			
3-Nitroaniline	17.23	20	20	0	86.2	20-125	0			J
4,6-Dinitro-2-methylphenol	13.27	20	20	0	66.4	40-130	0			J
4-Bromophenyl phenyl ether	15.02	5.0	20	0	75.1	50-115	0			
4-Chloro-3-methylphenol	12.78	5.0	20	0	63.9	45-110	0			
4-Chloroaniline	15.81	20	20	0	79	15-110	0			J
4-Chlorophenyl phenyl ether	15.05	5.0	20	0	75.2	50-110	0			
4-Methylphenol	9.62	5.0	20	0	48.1	30-110	0			
4-Nitroaniline	19.05	20	20	0	95.2	35-150	0			J
4-Nitrophenol	4.11	20	20	0	20.6	1-58	0			J
Acenaphthene	13.78	0.10	20	0	68.9	45-110	0			
Acenaphthylene	13.9	0.10	20	0	69.5	50-105	0			
Anthracene	15.46	0.12	20	0	77.3	55-110	0			
Benzo(a)anthracene	15.74	0.10	20	0	78.7	55-110	0			
Benzo(a)pyrene	17.63	0.10	20	0	88.2	55-110	0			
Benzo(b)fluoranthene	14.95	0.15	20	0	74.8	45-120	0			
Benzo(g,h,i)perylene	19.97	0.20	20	0	99.8	40-125	0			
Benzo(k)fluoranthene	18.04	0.15	20	0	90.2	45-125	0			
Bis(2-chloroethoxy)methane	13.75	5.0	20	0	68.8	45-105	0			
Bis(2-chloroethyl)ether	14.53	5.0	20	0	72.6	35-110	0			
Bis(2-chloroisopropyl)ether	13.47	5.0	20	0	67.4	25-130	0			
Bis(2-ethylhexyl)phthalate	16.33	5.0	20	0	81.6	40-125	0			
Butyl benzyl phthalate	14.96	5.0	20	0	74.8	45-115	0			
Carbazole	17.26	10	20	0	86.3	50-150	0			
Chrysene	16.62	0.15	20	0	83.1	55-110	0			
Dibenzo(a,h)anthracene	19.32	0.20	20	0	96.6	40-125	0			
Dibenzofuran	14.27	5.0	20	0	71.4	55-105	0			
Diethyl phthalate	16.08	20	20	0	80.4	40-120	0			J
Dimethyl phthalate	15.2	20	20	0	76	25-125	0			J
Di-n-butyl phthalate	16.6	5.0	20	0	83	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50452		Instrument ID SVMS4		Method: SW8270			
Di-n-octyl phthalate	16.23	5.0	20	0	81.2	35-135	0
Fluoranthene	16.03	0.15	20	0	80.2	55-115	0
Fluorene	14.77	0.10	20	0	73.8	50-110	0
Hexachlorobenzene	15.85	5.0	20	0	79.2	50-110	0
Hexachlorobutadiene	13.37	5.0	20	0	66.8	25-105	0
Hexachlorocyclopentadiene	7.35	20	20	0	36.8	25-105	0
Hexachloroethane	13.54	5.0	20	0	67.7	30-95	0
Indeno(1,2,3-cd)pyrene	19.42	0.20	20	0	97.1	45-125	0
Isophorone	13.85	5.0	20	0	69.2	50-110	0
Naphthalene	12.78	1.2	20	0	63.9	40-100	0
Nitrobenzene	13.35	5.0	20	0	66.8	45-110	0
N-Nitrosodi-n-propylamine	14.77	5.0	20	0	73.8	35-130	0
N-Nitrosodiphenylamine	16.2	5.0	20	0	81	50-110	0
Pentachlorophenol	13.67	20	20	0	68.4	40-115	0
Phenanthrene	15.12	0.10	20	0	75.6	50-115	0
Phenol	5.33	5.0	20	0	26.6	12-43	0
Pyrene	16.84	0.20	20	0	84.2	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	33.81	0	50	0	67.6	38-115	0
<i>Surr: 2-Fluorobiphenyl</i>	28.37	0	50	0	56.7	32-100	0
<i>Surr: 2-Fluorophenol</i>	17.49	0	50	0	35	22-59	0
<i>Surr: 4-Terphenyl-d14</i>	43.05	0	50	0	86.1	23-112	0
<i>Surr: Nitrobenzene-d5</i>	29.42	0	50	0	58.8	31-93	0
<i>Surr: Phenol-d6</i>	10.94	0	50	0	21.9	13-36	0

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50452** Instrument ID **SVMS4** Method: **SW8270**

MS Sample ID: 1308352-02A MS				Units: µg/L			Analysis Date: 08/12/13 05:19 PM			
Client ID:		Run ID: SVMS4_130812A		SeqNo: 2411803		Prep Date: 08/12/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	270.2	100	400	0	67.6	50-110	0			
2,4,6-Trichlorophenol	277.8	100	400	0	69.4	50-115	0			
2,4-Dichlorophenol	300.8	200	400	0	75.2	50-105	0			
2,4-Dimethylphenol	272	100	400	0	68	30-110	0			
2,4-Dinitrophenol	355.4	100	400	0	88.8	15-140	0			
2,4-Dinitrotoluene	312	100	400	0	78	50-120	0			
2,6-Dinitrotoluene	298.6	100	400	0	74.6	50-115	0			
2-Chloronaphthalene	271	100	400	0	67.8	50-105	0			
2-Chlorophenol	262.2	100	400	0	65.6	35-105	0			
2-Methylnaphthalene	319.2	100	400	0	79.8	45-105	0			
2-Methylphenol	240.8	100	400	0	60.2	40-110	0			
2-Nitroaniline	315.4	400	400	0	78.8	50-115	0			J
2-Nitrophenol	304.6	100	400	0	76.2	40-115	0			
3-Nitroaniline	363.6	400	400	0	90.9	20-125	0			J
4,6-Dinitro-2-methylphenol	323.8	400	400	0	81	40-130	0			J
4-Bromophenyl phenyl ether	293.4	100	400	0	73.4	50-115	0			
4-Chloro-3-methylphenol	327.2	100	400	0	81.8	45-110	0			
4-Chloroaniline	319.6	400	400	0	79.9	15-110	0			J
4-Chlorophenyl phenyl ether	289	100	400	0	72.2	50-110	0			
4-Methylphenol	211	100	400	0	52.8	30-110	0			
4-Nitroaniline	412.4	400	400	0	103	35-150	0			
4-Nitrophenol	87	400	400	0	21.8	1-58	0			J
Acenaphthene	268.6	100	400	0	67.2	45-110	0			
Acenaphthylene	271.2	100	400	0	67.8	50-105	0			
Anthracene	324.8	100	400	0	81.2	55-110	0			
Benzo(a)anthracene	324.6	100	400	0	81.2	55-110	0			
Benzo(a)pyrene	354.8	100	400	0	88.7	55-110	0			
Benzo(b)fluoranthene	300.2	100	400	0	75	45-120	0			
Benzo(g,h,i)perylene	406	100	400	0	102	40-125	0			
Benzo(k)fluoranthene	358.6	100	400	0	89.6	45-125	0			
Bis(2-chloroethoxy)methane	352.6	100	400	0	88.2	45-105	0			
Bis(2-chloroethyl)ether	332.8	100	400	0	83.2	35-110	0			
Bis(2-chloroisopropyl)ether	271.6	100	400	0	67.9	25-130	0			
Bis(2-ethylhexyl)phthalate	339.2	100	400	0	84.8	40-125	0			
Butyl benzyl phthalate	352.6	100	400	0	88.2	45-115	0			
Carbazole	330.2	200	400	0	82.6	50-150	0			
Chrysene	342.8	100	400	0	85.7	55-110	0			
Dibenzo(a,h)anthracene	396.8	100	400	0	99.2	40-125	0			
Dibenzofuran	287.4	100	400	0	71.8	55-105	0			
Diethyl phthalate	322.2	400	400	0	80.6	40-120	0			J
Dimethyl phthalate	300.8	400	400	0	75.2	25-125	0			J
Di-n-butyl phthalate	353.6	100	400	0	88.4	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50452		Instrument ID SVMS4		Method: SW8270			
Di-n-octyl phthalate	356	100	400	0	89	35-135	0
Fluoranthene	341	100	400	0	85.2	55-115	0
Fluorene	289	100	400	0	72.2	50-110	0
Hexachlorobenzene	316.6	100	400	0	79.2	50-110	0
Hexachlorobutadiene	298.6	100	400	0	74.6	25-105	0
Hexachlorocyclopentadiene	163.6	400	400	0	40.9	25-105	0 J
Hexachloroethane	266.4	100	400	0	66.6	30-95	0
Indeno(1,2,3-cd)pyrene	397	100	400	0	99.2	45-125	0
Isophorone	339.2	100	400	0	84.8	50-110	0
Naphthalene	271	100	400	0	67.8	40-100	0
Nitrobenzene	319.4	100	400	0	79.8	45-110	0
N-Nitrosodi-n-propylamine	304	100	400	0	76	35-130	0
N-Nitrosodiphenylamine	304.8	100	400	0	76.2	50-110	0
Pentachlorophenol	349	400	400	0	87.2	40-115	0 J
Phenanthrene	309.2	100	400	0	77.3	50-115	0
Phenol	107.6	100	400	0	26.9	12-43	0
Pyrene	349	100	400	0	87.2	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	<i>702</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>70.2</i>	<i>38-115</i>	<i>0</i>
<i>Surr: 2-Fluorobiphenyl</i>	<i>564.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>56.5</i>	<i>32-100</i>	<i>0</i>
<i>Surr: 2-Fluorophenol</i>	<i>368</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>36.8</i>	<i>22-59</i>	<i>0</i>
<i>Surr: 4-Terphenyl-d14</i>	<i>891.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>89.1</i>	<i>23-112</i>	<i>0</i>
<i>Surr: Nitrobenzene-d5</i>	<i>716.4</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>71.6</i>	<i>31-93</i>	<i>0</i>
<i>Surr: Phenol-d6</i>	<i>208.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>20.9</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50452** Instrument ID **SVMS4** Method: **SW8270**

MS Sample ID: 1308352-02A MS				Units: µg/L			Analysis Date: 08/12/13 05:19 PM			
Client ID:		Run ID: SVMS4_130812A		SeqNo: 2411808		Prep Date: 08/12/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	270.2	100	400	0	67.6	50-110	0			
2,4,6-Trichlorophenol	277.8	100	400	0	69.4	50-115	0			
2,4-Dichlorophenol	300.8	200	400	0	75.2	50-105	0			
2,4-Dimethylphenol	272	100	400	0	68	30-110	0			
2,4-Dinitrophenol	355.4	100	400	0	88.8	15-140	0			
2,4-Dinitrotoluene	312	100	400	0	78	50-120	0			
2,6-Dinitrotoluene	298.6	100	400	0	74.6	50-115	0			
2-Chloronaphthalene	271	2.0	400	0	67.8	50-105	0			
2-Chlorophenol	262.2	100	400	0	65.6	35-105	0			
2-Methylnaphthalene	319.2	2.0	400	0	79.8	45-105	0			
2-Methylphenol	240.8	100	400	0	60.2	40-110	0			
2-Nitroaniline	315.4	400	400	0	78.8	50-115	0			J
2-Nitrophenol	304.6	100	400	0	76.2	40-115	0			
3-Nitroaniline	363.6	400	400	0	90.9	20-125	0			J
4,6-Dinitro-2-methylphenol	323.8	400	400	0	81	40-130	0			J
4-Bromophenyl phenyl ether	293.4	100	400	0	73.4	50-115	0			
4-Chloro-3-methylphenol	327.2	100	400	0	81.8	45-110	0			
4-Chloroaniline	319.6	400	400	0	79.9	15-110	0			J
4-Chlorophenyl phenyl ether	289	100	400	0	72.2	50-110	0			
4-Methylphenol	211	100	400	0	52.8	30-110	0			
4-Nitroaniline	412.4	400	400	0	103	35-150	0			
4-Nitrophenol	87	400	400	0	21.8	1-58	0			J
Acenaphthene	268.6	2.0	400	0	67.2	45-110	0			
Acenaphthylene	271.2	2.0	400	0	67.8	50-105	0			
Anthracene	324.8	2.4	400	0	81.2	55-110	0			
Benzo(a)anthracene	324.6	2.0	400	0	81.2	55-110	0			
Benzo(a)pyrene	354.8	2.0	400	0	88.7	55-110	0			
Benzo(b)fluoranthene	300.2	3.0	400	0	75	45-120	0			
Benzo(g,h,i)perylene	406	4.0	400	0	102	40-125	0			
Benzo(k)fluoranthene	358.6	3.0	400	0	89.6	45-125	0			
Bis(2-chloroethoxy)methane	352.6	100	400	0	88.2	45-105	0			
Bis(2-chloroethyl)ether	332.8	100	400	0	83.2	35-110	0			
Bis(2-chloroisopropyl)ether	271.6	100	400	0	67.9	25-130	0			
Bis(2-ethylhexyl)phthalate	339.2	100	400	0	84.8	40-125	0			
Butyl benzyl phthalate	352.6	100	400	0	88.2	45-115	0			
Carbazole	330.2	200	400	0	82.6	50-150	0			
Chrysene	342.8	3.0	400	0	85.7	55-110	0			
Dibenzo(a,h)anthracene	396.8	4.0	400	0	99.2	40-125	0			
Dibenzofuran	287.4	100	400	0	71.8	55-105	0			
Diethyl phthalate	322.2	400	400	0	80.6	40-120	0			J
Dimethyl phthalate	300.8	400	400	0	75.2	25-125	0			J
Di-n-butyl phthalate	353.6	100	400	0	88.4	55-115	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50452		Instrument ID SVMS4		Method: SW8270			
Di-n-octyl phthalate	356	100	400	0	89	35-135	0
Fluoranthene	341	3.0	400	0	85.2	55-115	0
Fluorene	289	2.0	400	0	72.2	50-110	0
Hexachlorobenzene	316.6	100	400	0	79.2	50-110	0
Hexachlorobutadiene	298.6	100	400	0	74.6	25-105	0
Hexachlorocyclopentadiene	163.6	400	400	0	40.9	25-105	0
Hexachloroethane	266.4	100	400	0	66.6	30-95	0
Indeno(1,2,3-cd)pyrene	397	4.0	400	0	99.2	45-125	0
Isophorone	339.2	100	400	0	84.8	50-110	0
Naphthalene	271	24	400	0	67.8	40-100	0
Nitrobenzene	319.4	100	400	0	79.8	45-110	0
N-Nitrosodi-n-propylamine	304	100	400	0	76	35-130	0
N-Nitrosodiphenylamine	304.8	100	400	0	76.2	50-110	0
Pentachlorophenol	349	400	400	0	87.2	40-115	0
Phenanthrene	309.2	2.0	400	0	77.3	50-115	0
Phenol	107.6	100	400	0	26.9	12-43	0
Pyrene	349	4.0	400	0	87.2	50-130	0
<i>Surr: 2,4,6-Tribromophenol</i>	702	0	1000	0	70.2	38-115	0
<i>Surr: 2-Fluorobiphenyl</i>	564.8	0	1000	0	56.5	32-100	0
<i>Surr: 2-Fluorophenol</i>	368	0	1000	0	36.8	22-59	0
<i>Surr: 4-Terphenyl-d14</i>	891.2	0	1000	0	89.1	23-112	0
<i>Surr: Nitrobenzene-d5</i>	716.4	0	1000	0	71.6	31-93	0
<i>Surr: Phenol-d6</i>	208.6	0	1000	0	20.9	13-36	0

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50452** Instrument ID **SVMS4** Method: **SW8270**

MSD Sample ID: 1308352-02A MSD				Units: µg/L			Analysis Date: 08/12/13 05:50 PM			
Client ID:		Run ID: SVMS4_130812A		SeqNo: 2411804		Prep Date: 08/12/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	265	100	400	0	66.2	50-110	270.2	1.94	30	
2,4,6-Trichlorophenol	268	100	400	0	67	50-115	277.8	3.59	30	
2,4-Dichlorophenol	299.2	200	400	0	74.8	50-105	300.8	0.533	30	
2,4-Dimethylphenol	262	100	400	0	65.5	30-110	272	3.75	30	
2,4-Dinitrophenol	336.4	100	400	0	84.1	15-140	355.4	5.49	30	
2,4-Dinitrotoluene	305.2	100	400	0	76.3	50-120	312	2.2	30	
2,6-Dinitrotoluene	288.2	100	400	0	72	50-115	298.6	3.54	30	
2-Chloronaphthalene	262.8	100	400	0	65.7	50-105	271	3.07	30	
2-Chlorophenol	262	100	400	0	65.5	35-105	262.2	0.0763	30	
2-Methylnaphthalene	312.2	100	400	0	78	45-105	319.2	2.22	30	
2-Methylphenol	239.8	100	400	0	60	40-110	240.8	0.416	30	
2-Nitroaniline	308.8	400	400	0	77.2	50-115	315.4	0	30	J
2-Nitrophenol	293	100	400	0	73.2	40-115	304.6	3.88	30	
3-Nitroaniline	363.4	400	400	0	90.8	20-125	363.6	0	30	J
4,6-Dinitro-2-methylphenol	306.2	400	400	0	76.6	40-130	323.8	0	30	J
4-Bromophenyl phenyl ether	286.4	100	400	0	71.6	50-115	293.4	2.41	30	
4-Chloro-3-methylphenol	319.2	100	400	0	79.8	45-110	327.2	2.48	30	
4-Chloroaniline	330.8	400	400	0	82.7	15-110	319.6	0	30	J
4-Chlorophenyl phenyl ether	283.4	100	400	0	70.8	50-110	289	1.96	30	
4-Methylphenol	224	100	400	0	56	30-110	211	5.98	30	
4-Nitroaniline	407	400	400	0	102	35-150	412.4	1.32	30	
4-Nitrophenol	80.2	400	400	0	20	1-58	87	0	0	J
Acenaphthene	265	100	400	0	66.2	45-110	268.6	1.35	30	
Acenaphthylene	262.6	100	400	0	65.6	50-105	271.2	3.22	30	
Anthracene	314.6	100	400	0	78.6	55-110	324.8	3.19	30	
Benzo(a)anthracene	317.4	100	400	0	79.4	55-110	324.6	2.24	30	
Benzo(a)pyrene	346.8	100	400	0	86.7	55-110	354.8	2.28	30	
Benzo(b)fluoranthene	297.6	100	400	0	74.4	45-120	300.2	0.87	30	
Benzo(g,h,i)perylene	392.8	100	400	0	98.2	40-125	406	3.3	30	
Benzo(k)fluoranthene	352.4	100	400	0	88.1	45-125	358.6	1.74	30	
Bis(2-chloroethoxy)methane	336.8	100	400	0	84.2	45-105	352.6	4.58	30	
Bis(2-chloroethyl)ether	319.2	100	400	0	79.8	35-110	332.8	4.17	30	
Bis(2-chloroisopropyl)ether	269.2	100	400	0	67.3	25-130	271.6	0.888	30	
Bis(2-ethylhexyl)phthalate	338.4	100	400	0	84.6	40-125	339.2	0.236	30	
Butyl benzyl phthalate	348.8	100	400	0	87.2	45-115	352.6	1.08	30	
Carbazole	332.4	200	400	0	83.1	50-150	330.2	0.664	30	
Chrysene	335.6	100	400	0	83.9	55-110	342.8	2.12	30	
Dibenzo(a,h)anthracene	385	100	400	0	96.2	40-125	396.8	3.02	30	
Dibenzofuran	274.2	100	400	0	68.6	55-105	287.4	4.7	30	
Diethyl phthalate	317.4	400	400	0	79.4	40-120	322.2	0	30	J
Dimethyl phthalate	293	400	400	0	73.2	25-125	300.8	0	30	J
Di-n-butyl phthalate	345.6	100	400	0	86.4	55-115	353.6	2.29	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50452		Instrument ID SVMS4		Method: SW8270						
Di-n-octyl phthalate	347.6	100	400	0	86.9	35-135	356	2.39	30	
Fluoranthene	328.2	100	400	0	82	55-115	341	3.83	30	
Fluorene	282.8	100	400	0	70.7	50-110	289	2.17	30	
Hexachlorobenzene	309.6	100	400	0	77.4	50-110	316.6	2.24	30	
Hexachlorobutadiene	298.8	100	400	0	74.7	25-105	298.6	0.067	30	
Hexachlorocyclopentadiene	160.6	400	400	0	40.2	25-105	163.6	0	30	J
Hexachloroethane	260.4	100	400	0	65.1	30-95	266.4	2.28	30	
Indeno(1,2,3-cd)pyrene	388.8	100	400	0	97.2	45-125	397	2.09	30	
Isophorone	325	100	400	0	81.2	50-110	339.2	4.28	30	
Naphthalene	265.6	100	400	0	66.4	40-100	271	2.01	30	
Nitrobenzene	309.4	100	400	0	77.4	45-110	319.4	3.18	30	
N-Nitrosodi-n-propylamine	287	100	400	0	71.8	35-130	304	5.75	30	
N-Nitrosodiphenylamine	313	100	400	0	78.2	50-110	304.8	2.65	30	
Pentachlorophenol	336.8	400	400	0	84.2	40-115	349	0	30	J
Phenanthrene	302.4	100	400	0	75.6	50-115	309.2	2.22	30	
Phenol	116.8	100	400	0	29.2	12-43	107.6	8.2	30	
Pyrene	341	100	400	0	85.2	50-130	349	2.32	30	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>687.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>68.8</i>	<i>38-115</i>	<i>702</i>	<i>2.04</i>	<i>40</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>549.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>54.9</i>	<i>32-100</i>	<i>564.8</i>	<i>2.8</i>	<i>40</i>	
<i>Surr: 2-Fluorophenol</i>	<i>393.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>39.4</i>	<i>22-59</i>	<i>368</i>	<i>6.77</i>	<i>40</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>887.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>88.8</i>	<i>23-112</i>	<i>891.2</i>	<i>0.405</i>	<i>40</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>688.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>68.9</i>	<i>31-93</i>	<i>716.4</i>	<i>3.96</i>	<i>40</i>	
<i>Surr: Phenol-d6</i>	<i>268.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>26.8</i>	<i>13-36</i>	<i>208.6</i>	<i>25</i>	<i>40</i>	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50452** Instrument ID **SVMS4** Method: **SW8270**

MSD Sample ID: 1308352-02A MSD				Units: µg/L			Analysis Date: 08/12/13 05:50 PM			
Client ID:		Run ID: SVMS4_130812A		SeqNo: 2411809		Prep Date: 08/12/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
2,4,5-Trichlorophenol	265	100	400	0	66.2	50-110	270.2	1.94	30	
2,4,6-Trichlorophenol	268	100	400	0	67	50-115	277.8	3.59	30	
2,4-Dichlorophenol	299.2	200	400	0	74.8	50-105	300.8	0.533	30	
2,4-Dimethylphenol	262	100	400	0	65.5	30-110	272	3.75	30	
2,4-Dinitrophenol	336.4	100	400	0	84.1	15-140	355.4	5.49	30	
2,4-Dinitrotoluene	305.2	100	400	0	76.3	50-120	312	2.2	30	
2,6-Dinitrotoluene	288.2	100	400	0	72	50-115	298.6	3.54	30	
2-Chloronaphthalene	262.8	2.0	400	0	65.7	50-105	271	3.07	30	
2-Chlorophenol	262	100	400	0	65.5	35-105	262.2	0.0763	30	
2-Methylnaphthalene	312.2	2.0	400	0	78	45-105	319.2	2.22	30	
2-Methylphenol	239.8	100	400	0	60	40-110	240.8	0.416	30	
2-Nitroaniline	308.8	400	400	0	77.2	50-115	315.4	0	30	J
2-Nitrophenol	293	100	400	0	73.2	40-115	304.6	3.88	30	
3-Nitroaniline	363.4	400	400	0	90.8	20-125	363.6	0	30	J
4,6-Dinitro-2-methylphenol	306.2	400	400	0	76.6	40-130	323.8	0	30	J
4-Bromophenyl phenyl ether	286.4	100	400	0	71.6	50-115	293.4	2.41	30	
4-Chloro-3-methylphenol	319.2	100	400	0	79.8	45-110	327.2	2.48	30	
4-Chloroaniline	330.8	400	400	0	82.7	15-110	319.6	0	30	J
4-Chlorophenyl phenyl ether	283.4	100	400	0	70.8	50-110	289	1.96	30	
4-Methylphenol	224	100	400	0	56	30-110	211	5.98	30	
4-Nitroaniline	407	400	400	0	102	35-150	412.4	1.32	30	
4-Nitrophenol	80.2	400	400	0	20	1-58	87	0	0	J
Acenaphthene	265	2.0	400	0	66.2	45-110	268.6	1.35	30	
Acenaphthylene	262.6	2.0	400	0	65.6	50-105	271.2	3.22	30	
Anthracene	314.6	2.4	400	0	78.6	55-110	324.8	3.19	30	
Benzo(a)anthracene	317.4	2.0	400	0	79.4	55-110	324.6	2.24	30	
Benzo(a)pyrene	346.8	2.0	400	0	86.7	55-110	354.8	2.28	30	
Benzo(b)fluoranthene	297.6	3.0	400	0	74.4	45-120	300.2	0.87	30	
Benzo(g,h,i)perylene	392.8	4.0	400	0	98.2	40-125	406	3.3	30	
Benzo(k)fluoranthene	352.4	3.0	400	0	88.1	45-125	358.6	1.74	30	
Bis(2-chloroethoxy)methane	336.8	100	400	0	84.2	45-105	352.6	4.58	30	
Bis(2-chloroethyl)ether	319.2	100	400	0	79.8	35-110	332.8	4.17	30	
Bis(2-chloroisopropyl)ether	269.2	100	400	0	67.3	25-130	271.6	0.888	30	
Bis(2-ethylhexyl)phthalate	338.4	100	400	0	84.6	40-125	339.2	0.236	30	
Butyl benzyl phthalate	348.8	100	400	0	87.2	45-115	352.6	1.08	30	
Carbazole	332.4	200	400	0	83.1	50-150	330.2	0.664	30	
Chrysene	335.6	3.0	400	0	83.9	55-110	342.8	2.12	30	
Dibenzo(a,h)anthracene	385	4.0	400	0	96.2	40-125	396.8	3.02	30	
Dibenzofuran	274.2	100	400	0	68.6	55-105	287.4	4.7	30	
Diethyl phthalate	317.4	400	400	0	79.4	40-120	322.2	0	30	J
Dimethyl phthalate	293	400	400	0	73.2	25-125	300.8	0	30	J
Di-n-butyl phthalate	345.6	100	400	0	86.4	55-115	353.6	2.29	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: 50452		Instrument ID SVMS4		Method: SW8270						
Di-n-octyl phthalate	347.6	100	400	0	86.9	35-135	356	2.39	30	
Fluoranthene	328.2	3.0	400	0	82	55-115	341	3.83	30	
Fluorene	282.8	2.0	400	0	70.7	50-110	289	2.17	30	
Hexachlorobenzene	309.6	100	400	0	77.4	50-110	316.6	2.24	30	
Hexachlorobutadiene	298.8	100	400	0	74.7	25-105	298.6	0.067	30	
Hexachlorocyclopentadiene	160.6	400	400	0	40.2	25-105	163.6	0	30	J
Hexachloroethane	260.4	100	400	0	65.1	30-95	266.4	2.28	30	
Indeno(1,2,3-cd)pyrene	388.8	4.0	400	0	97.2	45-125	397	2.09	30	
Isophorone	325	100	400	0	81.2	50-110	339.2	4.28	30	
Naphthalene	265.6	24	400	0	66.4	40-100	271	2.01	30	
Nitrobenzene	309.4	100	400	0	77.4	45-110	319.4	3.18	30	
N-Nitrosodi-n-propylamine	287	100	400	0	71.8	35-130	304	5.75	30	
N-Nitrosodiphenylamine	313	100	400	0	78.2	50-110	304.8	2.65	30	
Pentachlorophenol	336.8	400	400	0	84.2	40-115	349	0	30	J
Phenanthrene	302.4	2.0	400	0	75.6	50-115	309.2	2.22	30	
Phenol	116.8	100	400	0	29.2	12-43	107.6	8.2	30	
Pyrene	341	4.0	400	0	85.2	50-130	349	2.32	30	
<i>Surr: 2,4,6-Tribromophenol</i>	<i>687.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>68.8</i>	<i>38-115</i>	<i>702</i>	<i>2.04</i>	<i>40</i>	
<i>Surr: 2-Fluorobiphenyl</i>	<i>549.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>54.9</i>	<i>32-100</i>	<i>564.8</i>	<i>2.8</i>	<i>40</i>	
<i>Surr: 2-Fluorophenol</i>	<i>393.8</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>39.4</i>	<i>22-59</i>	<i>368</i>	<i>6.77</i>	<i>40</i>	
<i>Surr: 4-Terphenyl-d14</i>	<i>887.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>88.8</i>	<i>23-112</i>	<i>891.2</i>	<i>0.405</i>	<i>40</i>	
<i>Surr: Nitrobenzene-d5</i>	<i>688.6</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>68.9</i>	<i>31-93</i>	<i>716.4</i>	<i>3.96</i>	<i>40</i>	
<i>Surr: Phenol-d6</i>	<i>268.2</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>26.8</i>	<i>13-36</i>	<i>208.6</i>	<i>25</i>	<i>40</i>	

The following samples were analyzed in this batch:

1308398-01B	1308398-02B	1308398-03B
1308398-04B	1308398-05B	1308398-06B
1308398-07B	1308398-08B	1308398-09B
1308398-10B	1308398-11B	1308398-12B
1308398-13B		

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125026** Instrument ID **VMS8** Method: **SW8260**

MBLK		Sample ID: VBLKW2-130812-R125026				Units: µg/L		Analysis Date: 08/13/13 02:34 AM		
Client ID:		Run ID: VMS8_130812B				SeqNo: 2411919		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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125026	Instrument ID VMS8	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>19.09</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>95.4</i>	<i>70-120</i>	<i>0</i>	
<i>Surr: 4-Bromofluorobenzene</i>	<i>21.65</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>108</i>	<i>75-120</i>	<i>0</i>	
<i>Surr: Dibromofluoromethane</i>	<i>19.14</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>95.7</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>18.81</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>94</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125026** Instrument ID **VMS8** Method: **SW8260**

LCS Sample ID: VLCSW2-130812-R125026				Units: µg/L			Analysis Date: 08/13/13 01:20 AM			
Client ID:		Run ID: VMS8_130812B			SeqNo: 2411918		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	20.05	1.0	20	0	100	65-130	0			
1,1,2,2-Tetrachloroethane	20.32	1.0	20	0	102	65-130	0			
1,1,2-Trichloroethane	20	1.0	20	0	100	75-125	0			
1,1-Dichloroethane	19.63	1.0	20	0	98.2	70-135	0			
1,1-Dichloroethene	20.11	1.0	20	0	101	70-130	0			
1,2,4-Trichlorobenzene	19.85	1.0	20	0	99.2	65-135	0			
1,2-Dibromo-3-chloropropane	19.93	1.0	20	0	99.6	50-130	0			
1,2-Dibromoethane	21.71	1.0	20	0	109	80-120	0			
1,2-Dichlorobenzene	19.24	1.0	20	0	96.2	70-120	0			
1,2-Dichloroethane	20.17	1.0	20	0	101	70-130	0			
1,2-Dichloropropane	19.72	2.0	20	0	98.6	75-125	0			
1,3-Dichlorobenzene	18.91	2.0	20	0	94.6	75-125	0			
1,4-Dichlorobenzene	19.41	2.0	20	0	97	75-125	0			
2-Butanone	25.33	5.0	20	0	127	30-150	0			
2-Hexanone	19.6	5.0	20	0	98	55-130	0			
4-Methyl-2-pentanone	26.81	5.0	20	0	134	60-135	0			
Acetone	25.9	20	20	0	130	40-140	0			
Benzene	19.48	1.0	20	0	97.4	80-120	0			
Bromodichloromethane	20.62	1.0	20	0	103	75-120	0			
Bromoform	20.85	1.0	20	0	104	70-130	0			
Bromomethane	18.16	1.0	20	0	90.8	30-145	0			
Carbon disulfide	23.12	2.5	20	0	116	35-165	0			
Carbon tetrachloride	20.37	1.0	20	0	102	65-140	0			
Chlorobenzene	19.62	1.0	20	0	98.1	80-120	0			
Chloroethane	15.79	1.0	20	0	79	60-135	0			
Chloroform	20.13	1.0	20	0	101	65-135	0			
Chloromethane	17.88	1.0	20	0	89.4	70-125	0			
cis-1,2-Dichloroethene	19.83	1.0	20	0	99.2	70-125	0			
cis-1,3-Dichloropropene	20.24	1.0	20	0	101	70-130	0			
Dibromochloromethane	20.03	1.0	20	0	100	60-135	0			
Dichlorodifluoromethane	15.27	1.0	20	0	76.4	30-155	0			
Ethylbenzene	19.46	1.0	20	0	97.3	75-125	0			
Isopropylbenzene	18.82	1.0	20	0	94.1	75-125	0			
Methyl tert-butyl ether	23.66	5.0	20	0	118	65-125	0			
Methylene chloride	19.72	5.0	20	0	98.6	55-140	0			
Styrene	20.47	1.0	20	0	102	65-135	0			
Tetrachloroethene	21.18	2.0	20	0	106	45-150	0			
Toluene	19.23	1.0	20	0	96.2	75-120	0			
trans-1,2-Dichloroethene	20.12	1.0	20	0	101	60-140	0			
trans-1,3-Dichloropropene	19.21	1.0	20	0	96	55-140	0			
Trichloroethene	20.01	1.0	20	0	100	70-125	0			
Trichlorofluoromethane	16.6	1.0	20	0	83	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125026	Instrument ID VMS8		Method: SW8260				
Vinyl chloride	15.94	1.0	20	0	79.7	50-145	0
Xylenes, Total	57.28	3.0	60	0	95.5	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	19.22	0	20	0	96.1	70-120	0
<i>Surr: 4-Bromofluorobenzene</i>	19.97	0	20	0	99.8	75-120	0
<i>Surr: Dibromofluoromethane</i>	19.55	0	20	0	97.8	85-115	0
<i>Surr: Toluene-d8</i>	19.5	0	20	0	97.5	85-120	0

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125026** Instrument ID **VMS8** Method: **SW8260**

MS Sample ID: 1308398-01A MS				Units: µg/L			Analysis Date: 08/13/13 11:09 AM			
Client ID: W-R2330009-080613-ZTR-001			Run ID: VMS8_130812B		SeqNo: 2411926		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	23.09	1.0	20	0	115	65-130	0			
1,1,2,2-Tetrachloroethane	20.24	1.0	20	0	101	65-130	0			
1,1,2-Trichloroethane	19.19	1.0	20	0	96	75-125	0			
1,1-Dichloroethane	21.69	1.0	20	0	108	70-135	0			
1,1-Dichloroethene	26.82	1.0	20	0	134	70-130	0			S
1,2,4-Trichlorobenzene	15.69	1.0	20	0	78.4	65-135	0			
1,2-Dibromo-3-chloropropane	19.38	1.0	20	0	96.9	50-130	0			
1,2-Dibromoethane	21.22	1.0	20	0	106	80-120	0			
1,2-Dichlorobenzene	18.84	1.0	20	0	94.2	70-120	0			
1,2-Dichloroethane	20.84	1.0	20	0	104	70-130	0			
1,2-Dichloropropane	20.76	2.0	20	0	104	75-125	0			
1,3-Dichlorobenzene	18.99	2.0	20	0	95	75-125	0			
1,4-Dichlorobenzene	18.88	2.0	20	0	94.4	75-125	0			
2-Butanone	14.85	5.0	20	0	74.2	30-150	0			
2-Hexanone	21.84	5.0	20	0	109	55-130	0			
4-Methyl-2-pentanone	30.62	5.0	20	0	153	60-135	0			S
Acetone	16.2	20	20	5.46	53.7	40-140	0			J
Benzene	21.58	1.0	20	0	108	80-120	0			
Bromodichloromethane	20.93	1.0	20	0	105	75-120	0			
Bromoform	16.99	1.0	20	0	85	70-130	0			
Bromomethane	16.72	1.0	20	0	83.6	30-145	0			
Carbon disulfide	25.95	2.5	20	0	130	35-165	0			
Carbon tetrachloride	23.75	1.0	20	0	119	65-140	0			
Chlorobenzene	20.24	1.0	20	0	101	80-120	0			
Chloroethane	16.12	1.0	20	0	80.6	60-135	0			
Chloroform	21.56	1.0	20	0	108	65-135	0			
Chloromethane	20.14	1.0	20	0	101	70-125	0			
cis-1,2-Dichloroethene	21.62	1.0	20	0	108	70-125	0			
cis-1,3-Dichloropropene	19.86	1.0	20	0	99.3	70-130	0			
Dibromochloromethane	17.76	1.0	20	0	88.8	60-135	0			
Dichlorodifluoromethane	16.29	1.0	20	0	81.4	30-155	0			
Ethylbenzene	20.63	1.0	20	0	103	75-125	0			
Isopropylbenzene	20.75	1.0	20	0	104	75-125	0			
Methyl tert-butyl ether	23.17	5.0	20	0	116	65-125	0			
Methylene chloride	21.63	5.0	20	0	108	55-140	0			
Styrene	20.6	1.0	20	0	103	65-135	0			
Tetrachloroethene	21.68	2.0	20	0	108	45-150	0			
Toluene	20.11	1.0	20	0	101	75-120	0			
trans-1,2-Dichloroethene	22.48	1.0	20	0	112	60-140	0			
trans-1,3-Dichloropropene	18.06	1.0	20	0	90.3	55-140	0			
Trichloroethene	22.42	1.0	20	0	112	70-125	0			
Trichlorofluoromethane	20.17	1.0	20	0	101	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125026		Instrument ID VMS8		Method: SW8260			
Vinyl chloride	18.65	1.0	20	0	93.2	50-145	0
Xylenes, Total	61.14	3.0	60	0	102	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.75</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.8</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.23</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>19.96</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.8</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.17</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>95.8</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125026** Instrument ID **VMS8** Method: **SW8260**

MSD Sample ID: 1308398-01A MSD				Units: µg/L			Analysis Date: 08/13/13 11:34 AM			
Client ID: W-R2330009-080613-ZTR-001			Run ID: VMS8_130812B		SeqNo: 2411927		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	23.16	1.0	20	0	116	65-130	23.09	0.303	30	
1,1,2,2-Tetrachloroethane	20.9	1.0	20	0	104	65-130	20.24	3.21	30	
1,1,2-Trichloroethane	19.62	1.0	20	0	98.1	75-125	19.19	2.22	30	
1,1-Dichloroethane	21.58	1.0	20	0	108	70-135	21.69	0.508	30	
1,1-Dichloroethene	26.59	1.0	20	0	133	70-130	26.82	0.861	30	S
1,2,4-Trichlorobenzene	17.49	1.0	20	0	87.4	65-135	15.69	10.8	30	
1,2-Dibromo-3-chloropropane	19.84	1.0	20	0	99.2	50-130	19.38	2.35	30	
1,2-Dibromoethane	21.05	1.0	20	0	105	80-120	21.22	0.804	30	
1,2-Dichlorobenzene	19.55	1.0	20	0	97.8	70-120	18.84	3.7	30	
1,2-Dichloroethane	20.24	1.0	20	0	101	70-130	20.84	2.92	30	
1,2-Dichloropropane	20.24	2.0	20	0	101	75-125	20.76	2.54	30	
1,3-Dichlorobenzene	19.53	2.0	20	0	97.6	75-125	18.99	2.8	30	
1,4-Dichlorobenzene	19.43	2.0	20	0	97.2	75-125	18.88	2.87	30	
2-Butanone	14.46	5.0	20	0	72.3	30-150	14.85	2.66	30	
2-Hexanone	23.42	5.0	20	0	117	55-130	21.84	6.98	30	
4-Methyl-2-pentanone	31.53	5.0	20	0	158	60-135	30.62	2.93	30	S
Acetone	16.34	20	20	5.46	54.4	40-140	16.2	0	30	J
Benzene	21.63	1.0	20	0	108	80-120	21.58	0.231	30	
Bromodichloromethane	20.41	1.0	20	0	102	75-120	20.93	2.52	30	
Bromoform	17.21	1.0	20	0	86	70-130	16.99	1.29	30	
Bromomethane	15.96	1.0	20	0	79.8	30-145	16.72	4.65	30	
Carbon disulfide	28.16	2.5	20	0	141	35-165	25.95	8.17	30	
Carbon tetrachloride	24.17	1.0	20	0	121	65-140	23.75	1.75	30	
Chlorobenzene	20.33	1.0	20	0	102	80-120	20.24	0.444	30	
Chloroethane	16.31	1.0	20	0	81.6	60-135	16.12	1.17	30	
Chloroform	21.34	1.0	20	0	107	65-135	21.56	1.03	30	
Chloromethane	20.21	1.0	20	0	101	70-125	20.14	0.347	30	
cis-1,2-Dichloroethene	21.28	1.0	20	0	106	70-125	21.62	1.59	30	
cis-1,3-Dichloropropene	19.24	1.0	20	0	96.2	70-130	19.86	3.17	30	
Dibromochloromethane	17.68	1.0	20	0	88.4	60-135	17.76	0.451	30	
Dichlorodifluoromethane	16.16	1.0	20	0	80.8	30-155	16.29	0.801	30	
Ethylbenzene	20.58	1.0	20	0	103	75-125	20.63	0.243	30	
Isopropylbenzene	20.8	1.0	20	0	104	75-125	20.75	0.241	30	
Methyl tert-butyl ether	22.19	5.0	20	0	111	65-125	23.17	4.32	30	
Methylene chloride	21.33	5.0	20	0	107	55-140	21.63	1.4	30	
Styrene	21.22	1.0	20	0	106	65-135	20.6	2.97	30	
Tetrachloroethene	21.55	2.0	20	0	108	45-150	21.68	0.601	30	
Toluene	20.03	1.0	20	0	100	75-120	20.11	0.399	30	
trans-1,2-Dichloroethene	22.22	1.0	20	0	111	60-140	22.48	1.16	30	
trans-1,3-Dichloropropene	17.65	1.0	20	0	88.2	55-140	18.06	2.3	30	
Trichloroethene	22.16	1.0	20	0	111	70-125	22.42	1.17	30	
Trichlorofluoromethane	20.15	1.0	20	0	101	60-145	20.17	0.0992	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125026		Instrument ID VMS8		Method: SW8260					
Vinyl chloride	18.62	1.0	20	0	93.1	50-145	18.65	0.161	30
Xylenes, Total	61.14	3.0	60	0	102	75-130	61.14	0	30
<i>Surr: 1,2-Dichloroethane-d4</i>	19.64	0	20	0	98.2	70-120	19.75	0.559	30
<i>Surr: 4-Bromofluorobenzene</i>	21.45	0	20	0	107	75-120	20.23	5.85	30
<i>Surr: Dibromofluoromethane</i>	20.04	0	20	0	100	85-115	19.96	0.4	30
<i>Surr: Toluene-d8</i>	19.4	0	20	0	97	85-120	19.17	1.19	30

The following samples were analyzed in this batch:

1308398-01A	1308398-02A	1308398-14A
1308398-15A	1308398-16A	1308398-17A

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125029** Instrument ID **VMS5** Method: **SW8260**

MBLK		Sample ID: VBLKW2-130812-R125029				Units: µg/L		Analysis Date: 08/13/13 12:09 PM		
Client ID:		Run ID: VMS5_130812A				SeqNo: 2412106		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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125029	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						
Surr: 1,2-Dichloroethane-d4	19.35	0	20	0	96.8	70-120	0	
Surr: 4-Bromofluorobenzene	20.02	0	20	0	100	75-120	0	
Surr: Dibromofluoromethane	20.11	0	20	0	101	85-115	0	
Surr: Toluene-d8	19.96	0	20	0	99.8	85-120	0	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125029** Instrument ID **VMS5** Method: **SW8260**

LCS		Sample ID: VLCSW2-130812-R125029				Units: µg/L		Analysis Date: 08/12/13 11:22 PM		
Client ID:		Run ID: VMS5_130812A				SeqNo: 2412082		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	22.42	1.0	20	0	112	65-130	0			
1,1,2,2-Tetrachloroethane	19.73	1.0	20	0	98.6	65-130	0			
1,1,2-Trichloroethane	19.75	1.0	20	0	98.8	75-125	0			
1,1-Dichloroethane	21.58	1.0	20	0	108	70-135	0			
1,1-Dichloroethene	21.27	1.0	20	0	106	70-130	0			
1,2,4-Trichlorobenzene	23.06	1.0	20	0	115	65-135	0			
1,2-Dibromo-3-chloropropane	17.76	1.0	20	0	88.8	50-130	0			
1,2-Dibromoethane	21.33	1.0	20	0	107	80-120	0			
1,2-Dichlorobenzene	20.68	1.0	20	0	103	70-120	0			
1,2-Dichloroethane	20.95	1.0	20	0	105	70-130	0			
1,2-Dichloropropane	21.13	2.0	20	0	106	75-125	0			
1,3-Dichlorobenzene	21.45	2.0	20	0	107	75-125	0			
1,4-Dichlorobenzene	21.83	2.0	20	0	109	75-125	0			
2-Butanone	22.88	5.0	20	0	114	30-150	0			
2-Hexanone	21.55	5.0	20	0	108	55-130	0			
4-Methyl-2-pentanone	26.34	5.0	20	0	132	60-135	0			
Acetone	21.54	20	20	0	108	40-140	0			
Benzene	22.39	1.0	20	0	112	80-120	0			
Bromodichloromethane	21.99	1.0	20	0	110	75-120	0			
Bromoform	20.62	1.0	20	0	103	70-130	0			
Bromomethane	27.55	1.0	20	0	138	30-145	0			
Carbon disulfide	23.49	2.5	20	0	117	35-165	0			
Carbon tetrachloride	22.1	1.0	20	0	110	65-140	0			
Chlorobenzene	22.71	1.0	20	0	114	80-120	0			
Chloroethane	20.95	1.0	20	0	105	60-135	0			
Chloroform	21.34	1.0	20	0	107	65-135	0			
Chloromethane	21.39	1.0	20	0	107	70-125	0			
cis-1,2-Dichloroethene	20.98	1.0	20	0	105	70-125	0			
cis-1,3-Dichloropropene	20.88	1.0	20	0	104	70-130	0			
Dibromochloromethane	20.78	1.0	20	0	104	60-135	0			
Dichlorodifluoromethane	20.86	1.0	20	0	104	30-155	0			
Ethylbenzene	22.58	1.0	20	0	113	75-125	0			
Isopropylbenzene	22.12	1.0	20	0	111	75-125	0			
Methyl tert-butyl ether	22.91	5.0	20	0	115	65-125	0			
Methylene chloride	19.58	5.0	20	0	97.9	55-140	0			
Styrene	22.71	1.0	20	0	114	65-135	0			
Tetrachloroethene	22.95	2.0	20	0	115	45-150	0			
Toluene	21.63	1.0	20	0	108	75-120	0			
trans-1,2-Dichloroethene	21.38	1.0	20	0	107	60-140	0			
trans-1,3-Dichloropropene	20.78	1.0	20	0	104	55-140	0			
Trichloroethene	21.11	1.0	20	0	106	70-125	0			
Trichlorofluoromethane	21	1.0	20	0	105	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125029		Instrument ID VMS5		Method: SW8260			
Vinyl chloride	21.23	1.0	20	0	106	50-145	0
Xylenes, Total	69.45	3.0	60	0	116	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.67</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.4</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.25</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>20.36</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</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125029** Instrument ID **VMS5** Method: **SW8260**

MS Sample ID: 1308404-01A MS				Units: µg/L			Analysis Date: 08/13/13 09:10 AM			
Client ID:		Run ID: VMS5_130812A			SeqNo: 2412104		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	22.23	1.0	20	0	111	65-130	0			
1,1,2,2-Tetrachloroethane	19.21	1.0	20	0	96	65-130	0			
1,1,2-Trichloroethane	18.2	1.0	20	0	91	75-125	0			
1,1-Dichloroethane	19.31	1.0	20	0	96.6	70-135	0			
1,1-Dichloroethene	21.04	1.0	20	0	105	70-130	0			
1,2,4-Trichlorobenzene	19.4	1.0	20	0	97	65-135	0			
1,2-Dibromo-3-chloropropane	17.16	1.0	20	0	85.8	50-130	0			
1,2-Dibromoethane	18.78	1.0	20	0	93.9	80-120	0			
1,2-Dichlorobenzene	19.29	1.0	20	0	96.4	70-120	0			
1,2-Dichloroethane	18.52	1.0	20	0	92.6	70-130	0			
1,2-Dichloropropane	18.88	2.0	20	0	94.4	75-125	0			
1,3-Dichlorobenzene	19.85	2.0	20	0	99.2	75-125	0			
1,4-Dichlorobenzene	19.98	2.0	20	0	99.9	75-125	0			
2-Butanone	20.98	5.0	20	0	105	30-150	0			
2-Hexanone	22.3	5.0	20	0	112	55-130	0			
4-Methyl-2-pentanone	28.01	5.0	20	0	140	60-135	0			S
Acetone	23.92	20	20	0	120	40-140	0			
Benzene	20.46	1.0	20	0	102	80-120	0			
Bromodichloromethane	18.72	1.0	20	0	93.6	75-120	0			
Bromoform	16.44	1.0	20	0	82.2	70-130	0			
Bromomethane	13.44	1.0	20	0	67.2	30-145	0			
Carbon disulfide	23.67	2.5	20	0.4	116	35-165	0			
Carbon tetrachloride	21.95	1.0	20	0	110	65-140	0			
Chlorobenzene	20.47	1.0	20	0	102	80-120	0			
Chloroethane	20.03	1.0	20	0	100	60-135	0			
Chloroform	19.12	1.0	20	0	95.6	65-135	0			
Chloromethane	19.41	1.0	20	0	97	70-125	0			
cis-1,2-Dichloroethene	19.44	1.0	20	0	97.2	70-125	0			
cis-1,3-Dichloropropene	17.61	1.0	20	0	88	70-130	0			
Dibromochloromethane	16.94	1.0	20	0	84.7	60-135	0			
Dichlorodifluoromethane	21.29	1.0	20	0	106	30-155	0			
Ethylbenzene	21.98	1.0	20	0	110	75-125	0			
Isopropylbenzene	21.41	1.0	20	0	107	75-125	0			
Methyl tert-butyl ether	19.65	5.0	20	0	98.2	65-125	0			
Methylene chloride	17.59	5.0	20	0	88	55-140	0			
Styrene	20.41	1.0	20	0	102	65-135	0			
Tetrachloroethene	22.3	2.0	20	0	112	45-150	0			
Toluene	20.43	1.0	20	0	102	75-120	0			
trans-1,2-Dichloroethene	21.11	1.0	20	0	106	60-140	0			
trans-1,3-Dichloropropene	17.44	1.0	20	0	87.2	55-140	0			
Trichloroethene	19.99	1.0	20	0	100	70-125	0			
Trichlorofluoromethane	21.71	1.0	20	0	109	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125029		Instrument ID VMS5		Method: SW8260				
Vinyl chloride	20.67	1.0	20	0	103	50-145	0	
Xylenes, Total	64.45	3.0	60	0	107	75-130	0	
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.59</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98</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>19.21</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>96</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.59</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.

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125029** Instrument ID **VMS5** Method: **SW8260**

MSD Sample ID: 1308404-01A MSD				Units: µg/L			Analysis Date: 08/13/13 09:33 AM			
Client ID:		Run ID: VMS5_130812A			SeqNo: 2412105		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	21.56	1.0	20	0	108	65-130	22.23	3.06	30	
1,1,2,2-Tetrachloroethane	18.99	1.0	20	0	95	65-130	19.21	1.15	30	
1,1,2-Trichloroethane	18.03	1.0	20	0	90.2	75-125	18.2	0.938	30	
1,1-Dichloroethane	19.14	1.0	20	0	95.7	70-135	19.31	0.884	30	
1,1-Dichloroethene	20.83	1.0	20	0	104	70-130	21.04	1	30	
1,2,4-Trichlorobenzene	21.7	1.0	20	0	108	65-135	19.4	11.2	30	
1,2-Dibromo-3-chloropropane	18.29	1.0	20	0	91.4	50-130	17.16	6.38	30	
1,2-Dibromoethane	18.63	1.0	20	0	93.2	80-120	18.78	0.802	30	
1,2-Dichlorobenzene	19.75	1.0	20	0	98.8	70-120	19.29	2.36	30	
1,2-Dichloroethane	18.68	1.0	20	0	93.4	70-130	18.52	0.86	30	
1,2-Dichloropropane	18.3	2.0	20	0	91.5	75-125	18.88	3.12	30	
1,3-Dichlorobenzene	20.55	2.0	20	0	103	75-125	19.85	3.47	30	
1,4-Dichlorobenzene	20.28	2.0	20	0	101	75-125	19.98	1.49	30	
2-Butanone	21.68	5.0	20	0	108	30-150	20.98	3.28	30	
2-Hexanone	22.91	5.0	20	0	115	55-130	22.3	2.7	30	
4-Methyl-2-pentanone	28.57	5.0	20	0	143	60-135	28.01	1.98	30	S
Acetone	25.16	20	20	0	126	40-140	23.92	5.05	30	
Benzene	20.19	1.0	20	0	101	80-120	20.46	1.33	30	
Bromodichloromethane	18.34	1.0	20	0	91.7	75-120	18.72	2.05	30	
Bromoform	16.01	1.0	20	0	80	70-130	16.44	2.65	30	
Bromomethane	15.61	1.0	20	0	78	30-145	13.44	14.9	30	
Carbon disulfide	22.85	2.5	20	0.4	112	35-165	23.67	3.53	30	
Carbon tetrachloride	21.97	1.0	20	0	110	65-140	21.95	0.0911	30	
Chlorobenzene	20.71	1.0	20	0	104	80-120	20.47	1.17	30	
Chloroethane	19.63	1.0	20	0	98.2	60-135	20.03	2.02	30	
Chloroform	19.23	1.0	20	0	96.2	65-135	19.12	0.574	30	
Chloromethane	18.85	1.0	20	0	94.2	70-125	19.41	2.93	30	
cis-1,2-Dichloroethene	18.94	1.0	20	0	94.7	70-125	19.44	2.61	30	
cis-1,3-Dichloropropene	17.52	1.0	20	0	87.6	70-130	17.61	0.512	30	
Dibromochloromethane	17.29	1.0	20	0	86.4	60-135	16.94	2.04	30	
Dichlorodifluoromethane	20.54	1.0	20	0	103	30-155	21.29	3.59	30	
Ethylbenzene	21.95	1.0	20	0	110	75-125	21.98	0.137	30	
Isopropylbenzene	22.32	1.0	20	0	112	75-125	21.41	4.16	30	
Methyl tert-butyl ether	19.86	5.0	20	0	99.3	65-125	19.65	1.06	30	
Methylene chloride	17.27	5.0	20	0	86.4	55-140	17.59	1.84	30	
Styrene	20.54	1.0	20	0	103	65-135	20.41	0.635	30	
Tetrachloroethene	23.04	2.0	20	0	115	45-150	22.3	3.26	30	
Toluene	20.38	1.0	20	0	102	75-120	20.43	0.245	30	
trans-1,2-Dichloroethene	19.97	1.0	20	0	99.8	60-140	21.11	5.55	30	
trans-1,3-Dichloropropene	17.67	1.0	20	0	88.4	55-140	17.44	1.31	30	
Trichloroethene	20.03	1.0	20	0	100	70-125	19.99	0.2	30	
Trichlorofluoromethane	21.03	1.0	20	0	105	60-145	21.71	3.18	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125029		Instrument ID VMS5		Method: SW8260					
Vinyl chloride	20.64	1.0	20	0	103	50-145	20.67	0.145	30
Xylenes, Total	65.52	3.0	60	0	109	75-130	64.45	1.65	30
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.38</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>102</i>	<i>70-120</i>	<i>19.59</i>	<i>3.95</i>	<i>30</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>19.68</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98.4</i>	<i>75-120</i>	<i>19.99</i>	<i>1.56</i>	<i>30</i>
<i>Surr: Dibromofluoromethane</i>	<i>19.5</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.5</i>	<i>85-115</i>	<i>19.21</i>	<i>1.5</i>	<i>30</i>
<i>Surr: Toluene-d8</i>	<i>19.86</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.3</i>	<i>85-120</i>	<i>19.59</i>	<i>1.37</i>	<i>30</i>
The following samples were analyzed in this batch:									
		1308398-04A		1308398-05A					

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125056A** Instrument ID **VMS8** Method: **SW8260**

MBLK		Sample ID: VBLKW1-130813-R125056A				Units: µg/L		Analysis Date: 08/13/13 02:57 PM		
Client ID:		Run ID: VMS8_130813A				SeqNo: 2413120		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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125056A	Instrument ID VMS8	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>18.8</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>94</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>18.41</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>92</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>18.21</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>91</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125056A** Instrument ID **VMS8** Method: **SW8260**

LCS		Sample ID: VLCSW1-130813-R125056A				Units: µg/L		Analysis Date: 08/13/13 01:43 PM		
Client ID:		Run ID: VMS8_130813A				SeqNo: 2413116		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	22.23	1.0	20	0	111	65-130	0			
1,1,2,2-Tetrachloroethane	21.67	1.0	20	0	108	65-130	0			
1,1,2-Trichloroethane	21.55	1.0	20	0	108	75-125	0			
1,1-Dichloroethane	21.33	1.0	20	0	107	70-135	0			
1,1-Dichloroethene	22.01	1.0	20	0	110	70-130	0			
1,2,4-Trichlorobenzene	22.42	1.0	20	0	112	65-135	0			
1,2-Dibromo-3-chloropropane	23.5	1.0	20	0	118	50-130	0			
1,2-Dibromoethane	23.14	1.0	20	0	116	80-120	0			
1,2-Dichlorobenzene	21.32	1.0	20	0	107	70-120	0			
1,2-Dichloroethane	21.63	1.0	20	0	108	70-130	0			
1,2-Dichloropropane	21.61	2.0	20	0	108	75-125	0			
1,3-Dichlorobenzene	20.83	2.0	20	0	104	75-125	0			
1,4-Dichlorobenzene	21.14	2.0	20	0	106	75-125	0			
2-Butanone	28	5.0	20	0	140	30-150	0			
2-Hexanone	23.55	5.0	20	0	118	55-130	0			
4-Methyl-2-pentanone	32.12	5.0	20	0	161	60-135	0			S
Acetone	23.28	20	20	0	116	40-140	0			
Benzene	21.55	1.0	20	0	108	80-120	0			
Bromodichloromethane	22.27	1.0	20	0	111	75-120	0			
Bromoform	21.76	1.0	20	0	109	70-130	0			
Bromomethane	19.2	1.0	20	0	96	30-145	0			
Carbon disulfide	26.2	2.5	20	0	131	35-165	0			
Carbon tetrachloride	22.67	1.0	20	0	113	65-140	0			
Chlorobenzene	20.93	1.0	20	0	105	80-120	0			
Chloroethane	18.3	1.0	20	0	91.5	60-135	0			
Chloroform	21.75	1.0	20	0	109	65-135	0			
Chloromethane	20.72	1.0	20	0	104	70-125	0			
cis-1,2-Dichloroethene	21.86	1.0	20	0	109	70-125	0			
cis-1,3-Dichloropropene	22.11	1.0	20	0	111	70-130	0			
Dibromochloromethane	21.01	1.0	20	0	105	60-135	0			
Dichlorodifluoromethane	17.8	1.0	20	0	89	30-155	0			
Ethylbenzene	20.97	1.0	20	0	105	75-125	0			
Isopropylbenzene	20.51	1.0	20	0	103	75-125	0			
Methyl tert-butyl ether	25.64	5.0	20	0	128	65-125	0			S
Methylene chloride	22.05	5.0	20	0	110	55-140	0			
Styrene	21.5	1.0	20	0	108	65-135	0			
Tetrachloroethene	23.18	2.0	20	0	116	45-150	0			
Toluene	20.69	1.0	20	0	103	75-120	0			
trans-1,2-Dichloroethene	22.16	1.0	20	0	111	60-140	0			
trans-1,3-Dichloropropene	20.71	1.0	20	0	104	55-140	0			
Trichloroethene	21.96	1.0	20	0	110	70-125	0			
Trichlorofluoromethane	18.57	1.0	20	0	92.8	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125056A		Instrument ID VMS8		Method: SW8260			
Vinyl chloride	18.05	1.0	20	0	90.2	50-145	0
Xylenes, Total	61.73	3.0	60	0	103	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>19.84</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.2</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>20.2</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>19.88</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>99.4</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.5</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.5</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125056A** Instrument ID **VMS8** Method: **SW8260**

MS Sample ID: 1308403-01A MS				Units: µg/L			Analysis Date: 08/13/13 11:35 PM			
Client ID:		Run ID: VMS8_130813A		SeqNo: 2413134		Prep Date:		DF: 50		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1010	50	1000	0	101	65-130	0			
1,1,2,2-Tetrachloroethane	981	50	1000	0	98.1	65-130	0			
1,1,2-Trichloroethane	980	50	1000	0	98	75-125	0			
1,1-Dichloroethane	1002	50	1000	0	100	70-135	0			
1,1-Dichloroethene	1050	50	1000	0	105	70-130	0			
1,2,4-Trichlorobenzene	887	50	1000	0	88.7	65-135	0			
1,2-Dibromo-3-chloropropane	983.5	50	1000	0	98.4	50-130	0			
1,2-Dibromoethane	1052	50	1000	0	105	80-120	0			
1,2-Dichlorobenzene	945	50	1000	0	94.5	70-120	0			
1,2-Dichloroethane	997.5	50	1000	0	99.8	70-130	0			
1,2-Dichloropropane	1004	100	1000	0	100	75-125	0			
1,3-Dichlorobenzene	914	100	1000	0	91.4	75-125	0			
1,4-Dichlorobenzene	914.5	100	1000	0	91.4	75-125	0			
2-Butanone	1360	250	1000	0	136	30-150	0			
2-Hexanone	1068	250	1000	0	107	55-130	0			
4-Methyl-2-pentanone	1422	250	1000	0	142	60-135	0			S
Acetone	1350	1,000	1000	0	135	40-140	0			
Benzene	997	50	1000	0	99.7	80-120	0			
Bromodichloromethane	990	50	1000	0	99	75-120	0			
Bromoform	931	50	1000	0	93.1	70-130	0			
Bromomethane	624.5	50	1000	0	62.4	30-145	0			
Carbon disulfide	1151	120	1000	0	115	35-165	0			
Carbon tetrachloride	1036	50	1000	0	104	65-140	0			
Chlorobenzene	941.5	50	1000	0	94.2	80-120	0			
Chloroethane	759	50	1000	0	75.9	60-135	0			
Chloroform	1010	50	1000	0	101	65-135	0			
Chloromethane	899.5	50	1000	0	90	70-125	0			
cis-1,2-Dichloroethene	998.5	50	1000	0	99.8	70-125	0			
cis-1,3-Dichloropropene	999.5	50	1000	0	100	70-130	0			
Dibromochloromethane	903	50	1000	0	90.3	60-135	0			
Dichlorodifluoromethane	796.5	50	1000	0	79.6	30-155	0			
Ethylbenzene	943	50	1000	0	94.3	75-125	0			
Isopropylbenzene	913.5	50	1000	0	91.4	75-125	0			
Methyl tert-butyl ether	1193	250	1000	0	119	65-125	0			
Methylene chloride	1026	250	1000	0	103	55-140	0			
Styrene	977.5	50	1000	0	97.8	65-135	0			
Tetrachloroethene	1164	100	1000	0	116	45-150	0			
Toluene	1014	50	1000	85.5	92.9	75-120	0			
trans-1,2-Dichloroethene	1008	50	1000	0	101	60-140	0			
trans-1,3-Dichloropropene	912	50	1000	0	91.2	55-140	0			
Trichloroethene	1040	50	1000	0	104	70-125	0			
Trichlorofluoromethane	859.5	50	1000	0	86	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125056A		Instrument ID VMS8		Method: SW8260			
Vinyl chloride	813	50	1000	0	81.3	50-145	0
Xylenes, Total	3442	150	3000	747	89.8	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>956.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>95.6</i>	<i>70-120</i>	<i>0</i>
<i>Surr: 4-Bromofluorobenzene</i>	<i>993.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>99.4</i>	<i>75-120</i>	<i>0</i>
<i>Surr: Dibromofluoromethane</i>	<i>970.5</i>	<i>0</i>	<i>1000</i>	<i>0</i>	<i>97</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>954</i>	<i>0</i>	<i>1000</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.

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125056A** Instrument ID **VMS8** Method: **SW8260**

MSD Sample ID: 1308403-01A MSD				Units: µg/L			Analysis Date: 08/13/13 11:59 PM			
Client ID:		Run ID: VMS8_130813A		SeqNo: 2413135		Prep Date:		DF: 50		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	1013	50	1000	0	101	65-130	1010	0.297	30	
1,1,2,2-Tetrachloroethane	966	50	1000	0	96.6	65-130	981	1.54	30	
1,1,2-Trichloroethane	954.5	50	1000	0	95.4	75-125	980	2.64	30	
1,1-Dichloroethane	978.5	50	1000	0	97.8	70-135	1002	2.37	30	
1,1-Dichloroethene	1014	50	1000	0	101	70-130	1050	3.44	30	
1,2,4-Trichlorobenzene	875.5	50	1000	0	87.6	65-135	887	1.3	30	
1,2-Dibromo-3-chloropropane	936	50	1000	0	93.6	50-130	983.5	4.95	30	
1,2-Dibromoethane	1034	50	1000	0	103	80-120	1052	1.63	30	
1,2-Dichlorobenzene	921.5	50	1000	0	92.2	70-120	945	2.52	30	
1,2-Dichloroethane	994	50	1000	0	99.4	70-130	997.5	0.351	30	
1,2-Dichloropropane	984.5	100	1000	0	98.4	75-125	1004	1.91	30	
1,3-Dichlorobenzene	909	100	1000	0	90.9	75-125	914	0.549	30	
1,4-Dichlorobenzene	930	100	1000	0	93	75-125	914.5	1.68	30	
2-Butanone	1336	250	1000	0	134	30-150	1360	1.78	30	
2-Hexanone	1046	250	1000	0	105	55-130	1068	2.08	30	
4-Methyl-2-pentanone	1426	250	1000	0	143	60-135	1422	0.351	30	S
Acetone	1284	1,000	1000	0	128	40-140	1350	5.01	30	
Benzene	986	50	1000	0	98.6	80-120	997	1.11	30	
Bromodichloromethane	986	50	1000	0	98.6	75-120	990	0.405	30	
Bromoform	934.5	50	1000	0	93.4	70-130	931	0.375	30	
Bromomethane	677	50	1000	0	67.7	30-145	624.5	8.07	30	
Carbon disulfide	1126	120	1000	0	113	35-165	1151	2.24	30	
Carbon tetrachloride	1009	50	1000	0	101	65-140	1036	2.69	30	
Chlorobenzene	936.5	50	1000	0	93.6	80-120	941.5	0.532	30	
Chloroethane	749	50	1000	0	74.9	60-135	759	1.33	30	
Chloroform	988	50	1000	0	98.8	65-135	1010	2.25	30	
Chloromethane	927	50	1000	0	92.7	70-125	899.5	3.01	30	
cis-1,2-Dichloroethene	978.5	50	1000	0	97.8	70-125	998.5	2.02	30	
cis-1,3-Dichloropropene	995.5	50	1000	0	99.6	70-130	999.5	0.401	30	
Dibromochloromethane	891	50	1000	0	89.1	60-135	903	1.34	30	
Dichlorodifluoromethane	791.5	50	1000	0	79.2	30-155	796.5	0.63	30	
Ethylbenzene	945.5	50	1000	0	94.6	75-125	943	0.265	30	
Isopropylbenzene	918	50	1000	0	91.8	75-125	913.5	0.491	30	
Methyl tert-butyl ether	1178	250	1000	0	118	65-125	1193	1.27	30	
Methylene chloride	981.5	250	1000	0	98.2	55-140	1026	4.43	30	
Styrene	971	50	1000	0	97.1	65-135	977.5	0.667	30	
Tetrachloroethene	1107	100	1000	0	111	45-150	1164	4.98	30	
Toluene	986.5	50	1000	85.5	90.1	75-120	1014	2.8	30	
trans-1,2-Dichloroethene	980.5	50	1000	0	98	60-140	1008	2.77	30	
trans-1,3-Dichloropropene	899	50	1000	0	89.9	55-140	912	1.44	30	
Trichloroethene	1016	50	1000	0	102	70-125	1040	2.29	30	
Trichlorofluoromethane	855	50	1000	0	85.5	60-145	859.5	0.525	30	

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Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125056A		Instrument ID VMS8		Method: SW8260					
Vinyl chloride	809	50	1000	0	80.9	50-145	813	0.493	30
Xylenes, Total	3455	150	3000	747	90.3	75-130	3442	0.392	30
<i>Surr: 1,2-Dichloroethane-d4</i>	974	0	1000	0	97.4	70-120	956.5	1.81	30
<i>Surr: 4-Bromofluorobenzene</i>	1024	0	1000	0	102	75-120	993.5	3.02	30
<i>Surr: Dibromofluoromethane</i>	1000	0	1000	0	100	85-115	970.5	3.04	30
<i>Surr: Toluene-d8</i>	964.5	0	1000	0	96.4	85-120	954	1.09	30

The following samples were analyzed in this batch:

1308398-03A

1308398-06A

1308398-07A

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125084** Instrument ID **VMS5** Method: **SW8260**

MBLK		Sample ID: VBLKW2-130813-R125084				Units: µg/L		Analysis Date: 08/13/13 11:58 PM		
Client ID:		Run ID: VMS5_130813B				SeqNo: 2413081		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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125084		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>20.09</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>19.43</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.2</i>	<i>85-115</i>	<i>0</i>	
<i>Surr: Toluene-d8</i>	<i>19.56</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.8</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125084** Instrument ID **VMS5** Method: **SW8260**

LCS		Sample ID: VLCSW2-130813-R125084				Units: µg/L		Analysis Date: 08/13/13 11:11 PM		
Client ID:		Run ID: VMS5_130813B				SeqNo: 2413080		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	21.41	1.0	20	0	107	65-130	0			
1,1,2,2-Tetrachloroethane	20.34	1.0	20	0	102	65-130	0			
1,1,2-Trichloroethane	19.8	1.0	20	0	99	75-125	0			
1,1-Dichloroethane	19.23	1.0	20	0	96.2	70-135	0			
1,1-Dichloroethene	20.09	1.0	20	0	100	70-130	0			
1,2,4-Trichlorobenzene	22.35	1.0	20	0	112	65-135	0			
1,2-Dibromo-3-chloropropane	18.32	1.0	20	0	91.6	50-130	0			
1,2-Dibromoethane	20.4	1.0	20	0	102	80-120	0			
1,2-Dichlorobenzene	21.24	1.0	20	0	106	70-120	0			
1,2-Dichloroethane	19.25	1.0	20	0	96.2	70-130	0			
1,2-Dichloropropane	19.54	2.0	20	0	97.7	75-125	0			
1,3-Dichlorobenzene	21.37	2.0	20	0	107	75-125	0			
1,4-Dichlorobenzene	21.75	2.0	20	0	109	75-125	0			
2-Butanone	22.5	5.0	20	0	112	30-150	0			
2-Hexanone	21.59	5.0	20	0	108	55-130	0			
4-Methyl-2-pentanone	28.22	5.0	20	0	141	60-135	0			S
Acetone	29.45	20	20	0	147	40-140	0			S
Benzene	21.06	1.0	20	0	105	80-120	0			
Bromodichloromethane	19.97	1.0	20	0	99.8	75-120	0			
Bromoform	18.35	1.0	20	0	91.8	70-130	0			
Bromomethane	20.1	1.0	20	0	100	30-145	0			
Carbon disulfide	21.41	2.5	20	0	107	35-165	0			
Carbon tetrachloride	22.37	1.0	20	0	112	65-140	0			
Chlorobenzene	21.87	1.0	20	0	109	80-120	0			
Chloroethane	18.31	1.0	20	0	91.6	60-135	0			
Chloroform	19.58	1.0	20	0	97.9	65-135	0			
Chloromethane	16.76	1.0	20	0	83.8	70-125	0			
cis-1,2-Dichloroethene	19.39	1.0	20	0	97	70-125	0			
cis-1,3-Dichloropropene	19.22	1.0	20	0	96.1	70-130	0			
Dibromochloromethane	18.82	1.0	20	0	94.1	60-135	0			
Dichlorodifluoromethane	15.19	1.0	20	0	76	30-155	0			
Ethylbenzene	22.79	1.0	20	0	114	75-125	0			
Isopropylbenzene	22.44	1.0	20	0	112	75-125	0			
Methyl tert-butyl ether	20.51	5.0	20	0	103	65-125	0			
Methylene chloride	17.74	5.0	20	0	88.7	55-140	0			
Styrene	21.8	1.0	20	0	109	65-135	0			
Tetrachloroethene	23.36	2.0	20	0	117	45-150	0			
Toluene	21.15	1.0	20	0	106	75-120	0			
trans-1,2-Dichloroethene	19.89	1.0	20	0	99.4	60-140	0			
trans-1,3-Dichloropropene	19.57	1.0	20	0	97.8	55-140	0			
Trichloroethene	20.5	1.0	20	0	102	70-125	0			
Trichlorofluoromethane	19.42	1.0	20	0	97.1	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125084	Instrument ID VMS5			Method: SW8260			
Vinyl chloride	17.43	1.0	20	0	87.2	50-145	0
Xylenes, Total	68.64	3.0	60	0	114	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.07</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>19.97</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>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>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.

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125084** Instrument ID **VMS5** Method: **SW8260**

MS				Sample ID: 1308398-09A MS			Units: µg/L		Analysis Date: 08/14/13 08:12 AM	
Client ID: W-R2330009-080813-ZTR-009				Run ID: VMS5_130813B			SeqNo: 2413105		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	21.23	1.0	20	0	106	65-130	0			
1,1,2,2-Tetrachloroethane	19.36	1.0	20	0	96.8	65-130	0			
1,1,2-Trichloroethane	18.3	1.0	20	0	91.5	75-125	0			
1,1-Dichloroethane	19.03	1.0	20	0	95.2	70-135	0			
1,1-Dichloroethene	19.52	1.0	20	0	97.6	70-130	0			
1,2,4-Trichlorobenzene	18.9	1.0	20	0	94.5	65-135	0			
1,2-Dibromo-3-chloropropane	16.71	1.0	20	0	83.6	50-130	0			
1,2-Dibromoethane	19.33	1.0	20	0	96.6	80-120	0			
1,2-Dichlorobenzene	19.47	1.0	20	0	97.4	70-120	0			
1,2-Dichloroethane	18.77	1.0	20	0	93.8	70-130	0			
1,2-Dichloropropane	18.59	2.0	20	0	93	75-125	0			
1,3-Dichlorobenzene	19.98	2.0	20	0	99.9	75-125	0			
1,4-Dichlorobenzene	19.77	2.0	20	0	98.8	75-125	0			
2-Butanone	21.67	5.0	20	0	108	30-150	0			
2-Hexanone	21.09	5.0	20	0	105	55-130	0			
4-Methyl-2-pentanone	27.09	5.0	20	0	135	60-135	0			S
Acetone	24.4	20	20	0	122	40-140	0			
Benzene	20.25	1.0	20	0	101	80-120	0			
Bromodichloromethane	18.5	1.0	20	0	92.5	75-120	0			
Bromoform	16.61	1.0	20	0	83	70-130	0			
Bromomethane	13.66	1.0	20	0	68.3	30-145	0			
Carbon disulfide	21.86	2.5	20	0	109	35-165	0			
Carbon tetrachloride	21.19	1.0	20	0	106	65-140	0			
Chlorobenzene	20.55	1.0	20	0	103	80-120	0			
Chloroethane	19.09	1.0	20	0	95.4	60-135	0			
Chloroform	19.39	1.0	20	0	97	65-135	0			
Chloromethane	16.88	1.0	20	0	84.4	70-125	0			
cis-1,2-Dichloroethene	18.97	1.0	20	0	94.8	70-125	0			
cis-1,3-Dichloropropene	17.2	1.0	20	0	86	70-130	0			
Dibromochloromethane	17.11	1.0	20	0	85.6	60-135	0			
Dichlorodifluoromethane	15.56	1.0	20	0	77.8	30-155	0			
Ethylbenzene	21.78	1.0	20	0	109	75-125	0			
Isopropylbenzene	21.59	1.0	20	0	108	75-125	0			
Methyl tert-butyl ether	19.96	5.0	20	0	99.8	65-125	0			
Methylene chloride	17.58	5.0	20	0	87.9	55-140	0			
Styrene	20.37	1.0	20	0	102	65-135	0			
Tetrachloroethene	22.61	2.0	20	0	113	45-150	0			
Toluene	20.42	1.0	20	0	102	75-120	0			
trans-1,2-Dichloroethene	20.46	1.0	20	0	102	60-140	0			
trans-1,3-Dichloropropene	17.34	1.0	20	0	86.7	55-140	0			
Trichloroethene	20.14	1.0	20	0	101	70-125	0			
Trichlorofluoromethane	19.17	1.0	20	0	95.8	60-145	0			

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125084	Instrument ID VMS5		Method: SW8260				
Vinyl chloride	18.67	1.0	20	0	93.4	50-145	0
Xylenes, Total	64.75	3.0	60	0	108	75-130	0
<i>Surr: 1,2-Dichloroethane-d4</i>	<i>20.03</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>20.09</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>19.61</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>98</i>	<i>85-115</i>	<i>0</i>
<i>Surr: Toluene-d8</i>	<i>19.48</i>	<i>0</i>	<i>20</i>	<i>0</i>	<i>97.4</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: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **R125084** Instrument ID **VMS5** Method: **SW8260**

MSD Sample ID: 1308398-09A MSD				Units: µg/L			Analysis Date: 08/14/13 08:36 AM			
Client ID: W-R2330009-080813-ZTR-009			Run ID: VMS5_130813B		SeqNo: 2413106		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	21.02	1.0	20	0	105	65-130	21.23	0.994	30	
1,1,2,2-Tetrachloroethane	19.09	1.0	20	0	95.4	65-130	19.36	1.4	30	
1,1,2-Trichloroethane	18.18	1.0	20	0	90.9	75-125	18.3	0.658	30	
1,1-Dichloroethane	18.61	1.0	20	0	93	70-135	19.03	2.23	30	
1,1-Dichloroethene	18.94	1.0	20	0	94.7	70-130	19.52	3.02	30	
1,2,4-Trichlorobenzene	21.5	1.0	20	0	108	65-135	18.9	12.9	30	
1,2-Dibromo-3-chloropropane	16.76	1.0	20	0	83.8	50-130	16.71	0.299	30	
1,2-Dibromoethane	19.19	1.0	20	0	96	80-120	19.33	0.727	30	
1,2-Dichlorobenzene	19.68	1.0	20	0	98.4	70-120	19.47	1.07	30	
1,2-Dichloroethane	18.36	1.0	20	0	91.8	70-130	18.77	2.21	30	
1,2-Dichloropropane	18.76	2.0	20	0	93.8	75-125	18.59	0.91	30	
1,3-Dichlorobenzene	20.42	2.0	20	0	102	75-125	19.98	2.18	30	
1,4-Dichlorobenzene	19.79	2.0	20	0	99	75-125	19.77	0.101	30	
2-Butanone	21.65	5.0	20	0	108	30-150	21.67	0.0923	30	
2-Hexanone	21.68	5.0	20	0	108	55-130	21.09	2.76	30	
4-Methyl-2-pentanone	27.66	5.0	20	0	138	60-135	27.09	2.08	30	S
Acetone	24.89	20	20	0	124	40-140	24.4	1.99	30	
Benzene	20.25	1.0	20	0	101	80-120	20.25	0	30	
Bromodichloromethane	18.75	1.0	20	0	93.8	75-120	18.5	1.34	30	
Bromoform	16.88	1.0	20	0	84.4	70-130	16.61	1.61	30	
Bromomethane	13.62	1.0	20	0	68.1	30-145	13.66	0.293	30	
Carbon disulfide	21.02	2.5	20	0	105	35-165	21.86	3.92	30	
Carbon tetrachloride	21.21	1.0	20	0	106	65-140	21.19	0.0943	30	
Chlorobenzene	20.45	1.0	20	0	102	80-120	20.55	0.488	30	
Chloroethane	18.96	1.0	20	0	94.8	60-135	19.09	0.683	30	
Chloroform	19.14	1.0	20	0	95.7	65-135	19.39	1.3	30	
Chloromethane	16.71	1.0	20	0	83.6	70-125	16.88	1.01	30	
cis-1,2-Dichloroethene	18.2	1.0	20	0	91	70-125	18.97	4.14	30	
cis-1,3-Dichloropropene	17.55	1.0	20	0	87.8	70-130	17.2	2.01	30	
Dibromochloromethane	16.77	1.0	20	0	83.8	60-135	17.11	2.01	30	
Dichlorodifluoromethane	14.76	1.0	20	0	73.8	30-155	15.56	5.28	30	
Ethylbenzene	21.71	1.0	20	0	109	75-125	21.78	0.322	30	
Isopropylbenzene	22.21	1.0	20	0	111	75-125	21.59	2.83	30	
Methyl tert-butyl ether	19.39	5.0	20	0	97	65-125	19.96	2.9	30	
Methylene chloride	17.21	5.0	20	0	86	55-140	17.58	2.13	30	
Styrene	20.24	1.0	20	0	101	65-135	20.37	0.64	30	
Tetrachloroethene	22.73	2.0	20	0	114	45-150	22.61	0.529	30	
Toluene	20.14	1.0	20	0	101	75-120	20.42	1.38	30	
trans-1,2-Dichloroethene	19.2	1.0	20	0	96	60-140	20.46	6.35	30	
trans-1,3-Dichloropropene	17.35	1.0	20	0	86.8	55-140	17.34	0.0577	30	
Trichloroethene	19.6	1.0	20	0	98	70-125	20.14	2.72	30	
Trichlorofluoromethane	19.02	1.0	20	0	95.1	60-145	19.17	0.786	30	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: R125084		Instrument ID VMS5		Method: SW8260					
Vinyl chloride	17.86	1.0	20	0	89.3	50-145	18.67	4.43	30
Xylenes, Total	65.25	3.0	60	0	109	75-130	64.75	0.769	30
Surr: 1,2-Dichloroethane-d4	20.39	0	20	0	102	70-120	20.03	1.78	30
Surr: 4-Bromofluorobenzene	19.82	0	20	0	99.1	75-120	20.09	1.35	30
Surr: Dibromofluoromethane	19.62	0	20	0	98.1	85-115	19.61	0.051	30
Surr: Toluene-d8	19.65	0	20	0	98.2	85-120	19.48	0.869	30

The following samples were analyzed in this batch:	1308398-08A	1308398-09A	1308398-10A	
	1308398-11A	1308398-12A	1308398-13A	

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50539B** Instrument ID **LACHAT** Method: **SW9012A**

MBLK	Sample ID: MBLK-50539-50539B					Units: mg/L		Analysis Date: 08/14/13 01:55 PM		
Client ID:	Run ID: LACHAT_130814B				SeqNo: 2413971		Prep Date: 08/14/13		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-50539-50539B					Units: mg/L		Analysis Date: 08/14/13 01:55 PM		
Client ID:	Run ID: LACHAT_130814B				SeqNo: 2413972		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.267 0.0050 0.25 0 107 83-120 0

MS	Sample ID: 1308398-01C MS					Units: mg/L		Analysis Date: 08/14/13 01:55 PM		
Client ID: W-R2330009-080613-ZTR-001	Run ID: LACHAT_130814B				SeqNo: 2413974		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2045 0.0050 0.25 0 81.8 70-130 0

MSD	Sample ID: 1308398-01C MSD					Units: mg/L		Analysis Date: 08/14/13 01:55 PM		
Client ID: W-R2330009-080613-ZTR-001	Run ID: LACHAT_130814B				SeqNo: 2413975		Prep Date: 08/14/13		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Cyanide, Amenable 0.2094 0.0050 0.25 0 83.8 70-130 0.2045 2.37 30

The following samples were analyzed in this batch:

1308398-01C	1308398-02C	1308398-03C
1308398-04C	1308398-05C	1308398-06C
1308398-07C	1308398-08C	1308398-09C

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

Client: The Mannik & Smith Group, Inc.
Work Order: 1308398
Project: RACER - Van Buren Landfill (R23300009)

QC BATCH REPORT

Batch ID: **50551C** Instrument ID **LACHAT** Method: **SW9012A**

MBLK		Sample ID: MBLK-50551-50551C				Units: mg/L		Analysis Date: 08/14/13 05:19 PM		
Client ID:		Run ID: LACHAT_130814C		SeqNo: 2414303		Prep Date: 08/14/13		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-50551-50551C				Units: mg/L		Analysis Date: 08/14/13 05:19 PM		
Client ID:		Run ID: LACHAT_130814C		SeqNo: 2414304		Prep Date: 08/14/13		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Cyanide, Amenable	0.2383	0.0050	0.25	0	95.3	83-120	0			

The following samples were analyzed in this batch:

1308398-10C	1308398-11C	1308398-12C
1308398-13C		

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



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Chain of Custody Form

Page 1 of 2

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Environmental

Customer Information				Project Information				ALS Project Manager: ALS Work Order #: 1308398											
Parameter/Method Request for Analysis																			
Purchase Order		Project Name	Van Buren Landfill	A	VOCs														
Work Order		Project Number	R23300009	B	SVOCs														
Company Name	The Mannik & Smith Group, Inc.	Bill To Company	RACER Trust	C	PCBs														
Send Report To	MIKE FRIEDHOFF, FRANK BIEHL	Invoice Attn	Accounts Payable	D	Cyanide - total														
Address	2365 Haggerty Road South	Address	2930 Ecorse Rd	E	Cyanide - amenable														
	Sulte 100			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-R2330009-080613-ZTR-001	8/6/13	1529	GW	1,2,4	8	X	X			X	X		X			
✓ 2	W-R2330009-080713-ZTR-002	8/7/13	0825	GW	1,2,4	8	X	X			X	X		X			
✓ 3	W-R2330009-080713-ZTR-003	8/7/13	0928	GW	1,2,4	8	X	X			X	X		X			
✓ 4	W-R2330009-080713-ZTR-004	8/7/13	1141	GW	1,2,4	8	X	X			X	X		X			
✓ 5	W-R2330009-080713-ZTR-005	8/7/13	1359	GW	1,2,4	8	X	X			X	X		X			
✓ 6	W-R2330009-080713-ZTR-006	8/7/13	1537	GW	1,2,4	8	X	X			X	X		X			
✓ 7	W-R2330009-080713-ZTR-007	8/7/13	1659	GW	1,2,4	8	X	X			X	X		X			
✓ 8	W-R2330009-080713-ZTR-008	8/7/13	1828	GW	1,2,4	8	X	X			X	X		X			
✓ 9	W-R2330009-080813-ZTR-009	8/8/13	0955	GW	1,2,4	8	X	X			X	X		X			
✓ 10	W-R2330009-080813-ZTR-010	8/8/13	1139	GW	1,2,4	8	X	X			X	X		X			

Sampler(s) Please Print & Sign ZACH ROGERS		Shipment Method COURIER		Required Turnaround Time: (Check Box) ☒ Std 10 WK Days ☐ 5 WK Days ☐ Other		Results Due Date: 8/9/13 1900	
Relinquished by: [Signature]	Date: 8/8/13	Time: 1710	Received by: MCG FRIDGE	Notes: REL: [Signature]		Cooler ID	
Relinquished by: [Signature]	Date: 8/9/13	Time: 1015	Received by (Laboratory): [Signature]	Cooler Temp.		QC Package: (Check One Box Below)	
Logged by (Laboratory): [Signature]	Date: 8/10/13	Time: 0900	Checked by (Laboratory): [Signature]	24°C		☒ Level II Std QC	
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				24°C		☐ Level III Std QC/Raw Data	
				20°C		☐ Level IV SWB46/CLP	
						☐ Other	

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: **10-Aug-13 08:00**

Work Order: **1308398**

Received by: **DS**

Checklist completed by <u>Diane Shaw</u>	10-Aug-13	Reviewed by: <u>Alex Csaszar</u>	12-Aug-13
eSignature	Date	eSignature	Date

Matrices: **Groundwater**

Carrier name: **ALSHN**

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>2.4, 3.4, 2.0, 2.4 c</u>		
Cooler(s)/Kit(s):			
Date/Time sample(s) sent to storage:	<u>8/10/2013 9:27:29 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: