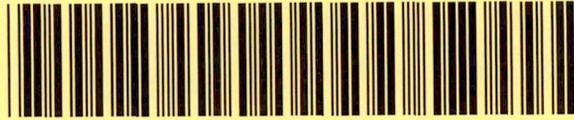


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DocumentID NONCD0002856

Site Name TOWN OF MOCKSVILLE MAINTENANCE SHOP

DocumentType Remedial Action Completion Rpt (RAC)

RptSegment

DocDate 7/10/2008

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Box SF3438

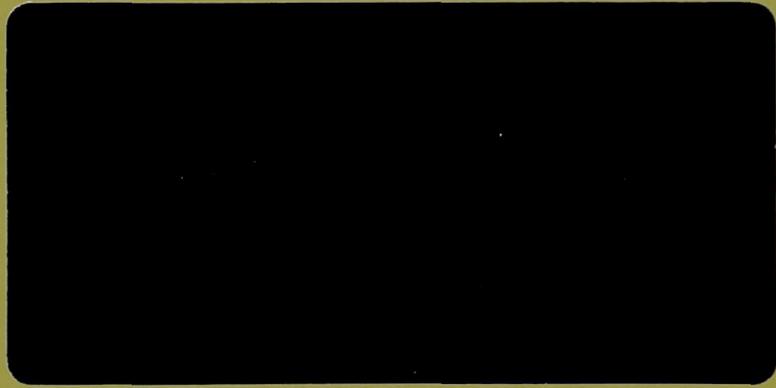
AccessLevel PUBLIC

Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat FACILITY



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**REMEDIAL INVESTIGATION REPORT  
IHSB WSRO SOIL INCIDENT NO. 0001  
TOWN OF MOCKSVILLE MAINTENANCE SHOP  
MOCKSVILLE, NORTH CAROLINA**  
S&ME Project No. 1584-07-070

Prepared for:  
Town of Mocksville  
171 Clement Street  
Mocksville, North Carolina 27028

Prepared By:  
S&ME, Inc.  
3718 Old Battleground Road  
Greensboro, North Carolina 27410

July 2008

July 10, 2008

Town of Mocksville  
171 Clement Street  
Mocksville, North Carolina 27028

Attention: Ms. Christine Sanders  
Town Manager

**Reference: Remedial Investigation Report**  
Town of Mocksville Maintenance Shop  
337 Sanford Avenue  
Mocksville, North Carolina  
IHSB WSRO Soil Incident No. 0001  
S&ME Project No. 1584-07-070

Dear Ms. Sanders:

S&ME, Inc. (S&ME) has completed the soil and groundwater assessment activities at the referenced site, and our findings are presented herein. The work was conducted in general accordance with our proposal 1584-08-P015 dated February 1, 2008, and the Work Plan for Additional Site Assessment Activities dated January 25, 2008.

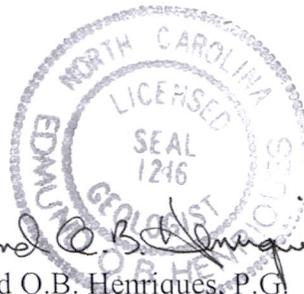
S&ME appreciates the opportunity to provide these services on this project. Please contact us at your convenience if you have any questions regarding the information presented in this report.

Sincerely,

S&ME, Inc.



Lyndal Butler  
Environmental Scientist



Edmund Q.B. Henriques, P.G.  
Environmental Department Manager

Senior Review: Wayne H. Watterson

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## 1. PROJECT INFORMATION

The subject site is currently operated as a maintenance facility for the Town of Mocksville. The subject site is located at 337 Sanford Avenue near the intersection of Sanford Avenue and Locust Street in Mocksville, North Carolina. **Figure 1** contains a USGS Topographic Map indicating the approximate location of the subject site.

The maintenance facility is comprised of two parcels. According to the Davie County, NC – GIS/Mapping System (<http://maps.co.davie.nc.us/gomaps/map/Index.cfm>), the parcels can be identified as Parcel Identified Numbers (PIDs) 5738633668 and 5738634677 and are 1.035 acres and 1.026 acres, respectively.

### 1.1 Discovery

On November 16, 2007, containers with listed hazardous materials were discovered to have been buried on the subject property. At the direction of the Town of Mocksville, on November 17, 2007, Grey Engineering, Inc. observed the excavation of the discarded containers and suspected impacted soil. Reportedly, two separate excavations were completed, each approximately 10 foot by 10 foot and 6 foot deep. The discarded containers and soil surrounding the containers were placed into roll-off box containers. Two roll-off box containers were partially filled. The contents of each roll-off box are reported to represent a separate excavation. The roll-off box containers with the excavated materials were stored at the Davie County solid waste transfer station, pending off-site disposal.

S&ME was contacted by the Town of Mocksville on November 19, 2007, and was asked to assist with the management, assessment, and closure of this incident. Based on our review of MSDS sheets provided to S&ME by the Town of Mocksville, the known or suspected wastes found at the site include: Sewercide, floating lift station degreaser, and discarded paint cans. According to the information available on the Material Safety Data Sheets, the hazardous materials in Sewercide include sodium hydroxide (CAS 1310-73-2), aluminum metal (CAS 7429-90-5), and sodium nitrate (CAS 7631-99-4). The hazardous materials in the degreaser include monocyclic terpenes (CAS 5989-27-5) and petroleum naphtha (CAS 64742-88-7).

S&ME, on behalf of the Town of Mocksville, submitted a *Notification of an Inactive Hazardous Substance or Waste Disposal Site* to the Inactive Hazardous Sites Branch (IHSB) of the North Carolina Department of Environment and Natural Resources (NCDENR). This notification was submitted to NCDENR on November 26, 2007.

### 1.2 Initial Abatement Actions

On December 5, 2007, S&ME submitted to the NCDENR-IHSB a "*Sampling and Analysis Plan*" for the soil sampling for disposal characterization of the waste contained in the two roll-off boxes. On December 5, 2007, Collin Day of the NCDENR-IHSB verbally approved the Sampling and Analysis Plan.

On December 7, 2007, S&ME collected soil samples from each of the two roll-off boxes stored at the Davie County solid waste transfer station. The samples were collected and analyzed to characterize the excavated waste for disposal. On December 7, 2007, Collin Day of the NCDENR-IHSB collected a split sample from the S&ME sample collected from roll-off bin A. The analytical results for the split sample were similar to that of the sample submitted by S&ME.

As summarized in **Table 1** and **Table 2**, the analytical results representing excavated soil and waste indicated the presence of several volatile organic compounds, semi-volatile organic compounds, and inorganic metals in the excavated material, at concentrations that were less than the corresponding NCDENR Soil Remedial Goals (SRGs). Analytical results for the TCLP analyses reported no target constituent concentrations exceeding the corresponding TCLP limits. Based on the analytical results, the removed waste stored in the two roll-off boxes were characterized as "non-hazardous waste." S&ME assisted the Town of Mocksville with the preparation of a "Special Waste" profile for the proper disposal of these materials.

Upon Republic Services, Inc.'s approval of the "Special Waste Profile," the Town of Mocksville contracted directly with Republic Services, Inc. to dispose of the excavated material stored in the roll-off boxes. On March 20, 2008, the waste contained in the two roll-off boxes was transported and disposed of at the Republic Services, Inc.'s RCRA Subtitle "D" municipal solid waste landfill. Copies of the Disposal Manifest are included in Appendix III.

## **2. METHODS OF INVESTIGATION**

No confirmation soil samples were collected at the time of removal of the soil and waste performed on November 17, 2007. To initiate an assessment of potential residual contamination associated with each of the two disposal areas, the Work Plan for Additional Site Assessment Activities was submitted to the NCDENR in general accordance with the NCDENR IHSB, *Guidelines for Assessment and Cleanup*, August 2007. The NCDENR notified S&ME that the work plan was accepted in correspondence dated February 15, 2008.

Soil sampling was performed in each of the two areas of concern to evaluate potential residual levels of contaminants of concern that may be present in the soil following the initial abatement removal actions. A Town representative present during the initial excavation and the excavator operator responsible for initial removal of the waste met with S&ME on site to visually indicate the location of each of the two excavations. The approximate excavation locations are shown on **Figure 2**.

### **2.1 Soil Investigation**

On March 4, 2008, an S&ME subcontractor used hydraulic-push techniques to advance one boring at each of the two areas of concern. The approximate location of soil borings P-1 and P-2 are shown on Figure 2. Continuous core samples were collected from the ground surface, using hollow acetate sleeves, until probe refusal was encountered. S&ME collected soil samples for laboratory analysis starting at a depth immediately beneath the apparent base of the initial abatement excavation and at approximate 5 foot

intervals. No apparent visual or olfactory impacts were observed in the collected soil samples.

The soil samples were placed in laboratory supplied containers, put on ice, and placed into a cooler for delivery to a North Carolina certified laboratory. The soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260, semivolatile organic compounds (SVOCs) by EPA Method 8270, and for the 8 RCRA Metals. Duplicate samples were collected to provide quality control.

## 2.2 Groundwater Investigation

At the same location of soil boring P-1 described above, a solid-stem auger was used to advance the borehole into the saturated zone. Following removal of the auger, a shallow groundwater monitoring well was constructed. The well screen length and depth was situated so that the top of the water table intersected the well at the well screen. Well construction details are shown on the Well Completion Report included in Appendix IV. Well installation was not attempted at location P-2 due to the relative shallow depth of probe refusal encountered at that location.

A groundwater sample was collected from the well installed at boring P-1 by hand using disposable latex gloves and a disposable bailer and was placed into laboratory prepared containers. The collected groundwater sample was analyzed for VOCs by EPA Method 8260, SVOCs by EPA Method 8270, and RCRA 8 Metals. Field blank, trip blank and duplicate samples were collected and analyzed to provide the quality control.

To reduce the potential for cross contamination, down hole tooling was decontaminated between boring locations with high pressure steam. At the termination depth of each soil boring, the borehole was abandoned by back filling with granulated bentonite and neat cement grout.

Soil generated during completion of the bore holes and purge water was placed into a labeled and sealed drum for staging pending possible off-site disposal.

## 2.3 Variances

Analysis of soil samples collected from soil probe P-2 detected elevated concentrations of total chromium. Analysis of the groundwater sample obtained from monitoring well P-1 detected barium, chromium and lead at concentrations exceeding the corresponding NCAC 2L groundwater quality standards. Based on these findings, on March 25, 2008, S&ME requested and received verbal approval from Colin Day of the NCDENR to analyze soil samples to evaluate background concentrations of metals in soil, and to resample the monitoring well using a field filter to remove suspended solids.

On April 10, 2008, monitoring well P-1 was redeveloped and a field-filtered sample was collected from the well. The sample and a duplicate quality control sample were prepared and submitted for laboratory analysis for the RCRA 8 Metals.

To initiate a review of possible natural background concentrations of chromium in soil, two soil samples, BG-SS-1 and BG-SS-2, were collected on April 10, 2008, from the locations shown on Figure 2. The soil samples were prepared and submitted for analysis

for RCRA 8 Metals. Analytical results for background soil samples BG-SS-1 and BG-SS-2 reported chromium concentrations that were less than the concentrations detected in soil samples collected from soil boring P-2.

On May 2, 2008, S&ME requested and received verbal approval from Collin Day to resample the soil at location P-2 and to analyze the soil samples for hexavalent chromium. The occurrence of trivalent chromium is typically from natural sources and it has a less restrictive cleanup goal when compared with hexavalent chromium. On May 13, 2008, three soil samples were collected from a location immediately adjacent to soil boring location P-2. The samples were submitted for analysis for hexavalent chromium by Method SW846 7196A. At the request of Mr. Day, soil samples collected from location P-2 on May 13, 2008, were also analyzed for pH. The soil pH samples were analyzed by Method 150.1.

### **3. SITE GEOLOGY AND HYDROGEOLOGY**

During S&ME's subsurface explorations, the soil probes encountered apparent fill material used to backfill the initial abatement excavations. The fill material consisted of moist, fine-grained soil with debris, including organic material and brick fragments. The underlying fill or residual soil consisted of clayey silt and sandy silt to depths at which characterization was possible. Subsurface characterizations are displayed on a Well Completion Report or Boring Log included in Appendix III.

Soil borings P-1 and P-2 encountered probe refusal in the vadose zone at depths of 31 feet and 26.5 feet below ground surface, respectively. A hollow-tube with a deadhead point was driven at location P-1 to a refusal depth of 33.7 feet. Groundwater was detected with an electronic water probe at a depth of 33.4 feet below ground surface within a temporary PVC well installed in the borehole.

Due to the apparent presence of a saturated zone at or below the depth that could be penetrated by hydraulic-push tooling, soil boring P-1 was advanced with solid-stem augers. Subsurface material resistant to the auger was encountered at a depth of 40 feet below ground surface. The depth to bedrock was not determined.

On April 10, 2008, the depth to water in monitoring well P-1 was measured with an electronic water meter at a depth of 32.8 feet below ground surface.

S&ME is unaware of the use of groundwater in the vicinity of the source area. Municipal water service is available to users in Mocksville, and the presence of water supply wells were not visually identified within 1,500 feet of the source area during previous activities performed by S&ME.

### **4. INVESTIGATION RESULTS**

#### **4.1 Soil Sample Analytical Results**

Soil analytical results are summarized in Table 3. Soil samples P1-7, P1-12, P1-17 and P1-22 were collected from soil boring P-1 from depths of 7 feet, 12 feet, 17 feet and 22 feet below ground surface, respectively. Soil samples P2-8, P2-13, P2-18 and P1-23

were collected from soil boring P-2 from depths of 8 feet, 13 feet, 18 feet and 23 feet below ground surface, respectively.

- No volatile organic compounds were detected in the soil at the sampled locations, according to Method 8260
- No semi-volatile organic compounds were detected in the soil at the sampled locations, according to Method 8270.
- Barium was detected in each soil sample at concentrations ranging from 47.1 milligrams per kilogram (mg/kg) to 171 mg/kg. No SRG has been established for Barium. The concentration of Barium detected in background soil samples BG-SS-1 and BG-SS-2 ranged from 72 mg/kg to 73.3 mg/kg. It is S&ME's opinion that the detected barium concentrations are within an expected range for natural background concentrations within the Piedmont Physiographic region.
- Lead was detected in each soil sample at concentrations ranging from 3.17 mg/kg to 15.1 mg /kg, well below the corresponding 400 mg/kg SRG for Lead. The concentrations of Lead detected in background soil samples BG-SS-1 and BG-SS-2 ranged from 11.3 mg/kg to 14.4 mg/kg.
- Chromium was detected in each soil sample collected from soil boring P-1 at concentrations ranging from 47.1 mg/kg to 72.9 mg /kg. Chromium was detected in soil sample P2-8 at a concentration of 21.9 mg/kg. Chromium was detected in soil samples P2-13, P2-18 and P2-23 at concentrations ranging from 172 mg/kg to 267 mg/kg. The concentration of Chromium detected in background soil samples BG-SS-1 and BG-SS-2 ranged from 34.3 mg/kg to 37.9 mg/kg. The SRG for hexavalent Chromium is 44 mg/kg, and the SRG for trivalent Chromium is 24,000 mg/kg.

Due to the detection of total Chromium at concentrations exceeding the lowest SRG concentration, additional soil samples were collected from sample location P2 on May 13, 2008. Based on the analytical results for soil samples collected on May 13, 2008, hexavalent Chromium was not detected in soil samples P2-13-A, P2-18-A and P2-23-A. Based on these findings, it is S&ME's opinion that the detected total Chromium concentrations represent trivalent Chromium, and as such the detected chromium concentrations are below the 24,000 mg/kg SRG for trivalent Chromium.

- The pH results for soil samples P2-13, P2-18 and P2-23 range from 6.61 to 7.46.

#### 4.2 Groundwater Analytical Results

Groundwater analytical results are summarized in **Table 4**. No volatile or semi-volatile organic compounds were detected in the groundwater collected from well P-1, according to the Methods 8260 and Method 8270.

The analytical results for soil sample P-1 and the corresponding Duplicate sample (March 5, 2008) exceeded the corresponding NCAC 2L groundwater quality standards for Barium, Chromium and Lead. No target analytes were detected in the field blank, method blank or trip blank samples associated with sample P-1. The analytical results for field-filtered sample P-1A and the corresponding Duplicate sample (April 10, 2008) resulted in concentrations of Barium below the corresponding NCAC 2L groundwater

quality standard. Chromium and Lead were not detected at method detection limits below the corresponding NCAC 2L standards.

A copy of each analytical report and corresponding Chain of Custody is included in Appendix V.

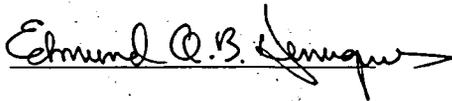
## 5. CONCLUSIONS

Upon discovery of knowledge of the burial of listed hazardous materials on the subject property, the Town of Mocksville excavated containers and suspect impacted soil from the subsurface for waste disposal at a RCRA Subtitle "D" municipal solid waste landfill. This action eliminated the primary source of contaminants.

Investigation of subsurface soil and groundwater underlying the areas of concern did not indicate the presence of the contaminants of concern at concentrations exceeding the corresponding remediation goals.

Based on the initial abatement actions performed by the Town of Mocksville in response to discovery of the release and on the investigation results documented herein, S&ME does not recommend additional activities at this time. A copy of this report should be submitted to the IHSB of the DENR.

The Inactive Hazardous Sites Program document Guidelines for Assessment and Cleanup (August 2007) states that any party wishing to receive a "No Further Action" letter must provide the request in writing. (Page 3, Section 1.4)



Edmund Q.B. Henriques, L.G.





## **APPENDIX I - TABLES**

**Table 1**  
**Summary of Analytical Results**  
**Town of Mocksville - Maintenance Yard Incident**  
**S&ME Project No. 1584-07-070**

Method 8260B-Volatile Organics			Sample ID's						SRG (mg/kg)
Parameter	Date Sample Collected	Quantitation Limit (mg/kg)	B1A (mg/kg)	B1B (mg/kg)	B1 (mg/kg)	B2A (mg/kg)	B2B (mg/kg)	B2 (mg/kg)	
N-Butyl benzene	12/7/2007	0.005	BQL	1.92	ANR	BQL	BQL	ANR	No Standard
Sec-Butylbenzene	12/7/2007	0.005	BQL	1.17	ANR	BQL	BQL	ANR	No Standard
Ethylbenzene	12/7/2007	0.005	BQL	3.72	ANR	BQL	BQL	ANR	380
l-Propylbenzene	12/7/2007	0.005	BQL	0.889	ANR	BQL	BQL	ANR	No Standard
P-Isopropyltoluene	12/7/2007	0.005	0.771	1.6	ANR	BQL	BQL	ANR	No Standard
Naphthalene	12/7/2007	0.010	1.70	2.57	ANR	BQL	BQL	ANR	11.2
Toluene	12/7/2007	0.005	BQL	4.06	ANR	BQL	BQL	ANR	132
1,2,4-Trimethylbenzene	12/7/2007	0.005	0.52	18.1	ANR	BQL	BQL	ANR	No Standard
1,3,5-Trimethylbenzene	12/7/2007	0.005	12.1	8.57	ANR	BQL	BQL	ANR	No Standard
Xylenes (total)	12/7/2007	0.005	12.2	34.7	ANR	BQL	BQL	ANR	54
Method 8270 (Semi-Volatile Organics)			Sample ID's						SRG (mg/kg)
Parameter	Date Sample Collected	Quantitation Limit (mg/kg)	B1A (mg/kg)	B1B (mg/kg)	B1 (mg/kg)	B2A (mg/kg)	B2B (mg/kg)	B2 (mg/kg)	
Anthracene	12/7/2007	0.33	ANR	ANR	0.340	ANR	ANR	BQL	4400
Benzyl Butyl Phthalate	12/7/2007	0.33	ANR	ANR	17.2	ANR	ANR	BQL	2400
Chrysene	12/7/2007	0.33	ANR	ANR	0.374	ANR	ANR	BQL	22
Fluoranthene	12/7/2007	0.33	ANR	ANR	0.588	ANR	ANR	BQL	4600
2-Methylnaphthalene	12/7/2007	0.33	ANR	ANR	0.618	ANR	ANR	BQL	11.2
Phenanthrene	12/7/2007	0.33	ANR	ANR	0.852	ANR	ANR	BQL	No Standard
Pyrene	12/7/2007	0.33	ANR	ANR	0.824	ANR	ANR	0.340	460

ANR = Analysis Not Requested

BQL = Below Quantitation Limit

SRG = NCDENR Inactive Sites Branch, Health-Based Soil Remedial Goals, Updated August 2007

Sample IDs: B1, B1A & B1B represent roll-off box #1

Sample IDs: B21, B2A & B2B represent roll-off box #2

**Table 1**  
**Summary of Analytical Results**  
**Town of Mocksville - Maintenance Yard Incident**  
**S&ME Project No. 1584-07-070**

8-RCRA Metals	Date Sample Collected	Quantitation Limit (mg/kg)	Sample ID's						SRG (mg/kg)
			B1A (mg/kg)	B1B (mg/kg)	B1 (mg/kg)	B2A (mg/kg)	B2B (mg/kg)	B2 (mg/kg)	
Arsenic	12/7/2007	1.0	ANR	ANR	BQL	ANR	ANR	BQL	4.4
Barium	12/7/2007	4.0	ANR	ANR	38.1	ANR	ANR	49.5	No standard
Cadmium	12/7/2007	0.100	ANR	ANR	0.113	ANR	ANR	0.194	7.4
Chromium	12/7/2007	1.0	ANR	ANR	13.3	ANR	ANR	21	44
Lead	12/7/2007	0.500	ANR	ANR	22.9	ANR	ANR	16.8	400
Mercury	12/7/2007	0.200	ANR	ANR	BQL	ANR	ANR	BQL	4.6
Selenium	12/7/2007	1.0	ANR	ANR	BQL	ANR	ANR	BQL	78
Silver	12/7/2007	1.0	ANR	ANR	BQL	ANR	ANR	BQL	78
Others Parameters	Date Sample Collected	Quantitation Limit (mg/kg)	B1A (mg/kg)	B1B (mg/kg)	B1 (mg/kg)	B2A (mg/kg)	B2B (mg/kg)	B2 (mg/kg)	SRG (mg/kg)
Aluminum	12/7/2007	10.0	ANR	ANR	15,300	ANR	ANR	11,600	Not applicable
Nitrate	12/7/2007	5.0	ANR	ANR	24.3	ANR	ANR	120	Not applicable

SRG = NCDENR Inactive Sites Branch, Health-Based Soil Remedial Goals, Updated August 2007  
 ANR = Analysis Not Requested      BQL = Below Quantitation Limit

Sample IDs: B1, B1A & B1B represent roll-off box #1  
 Sample IDs: B21, B2A & B2B represent roll-off box #2

**Table 2**  
**Summary of Analytical Results - TCLP & Others Parameters**  
**Town of Mocksville - Maintenance Yard Incident**  
**S&ME Project No. 1584-07-070**

TCLP Volatiles Organics						Sample ID's					
Parameters	EPA HW Number	Characteristic Levels (mg/L)	Analytical Method	Date Collected	Quantitation Limit (mg/L)	B1A (mg/L)	B1B (mg/L)	B1 (mg/L)	B2A (mg/L)	B2B (mg/L)	B2 (mg/L)
Benzene	D-018	0.500	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
Carbon Tetrachloride	D-019	0.500	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
Chlorobenzene	D-021	100	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
Chloroform	D-022	6.00	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
1,2-Dichloroethane	D-028	0.500	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
1,2-Dichloroethylene	D-029	0.700	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
Methyl Ethyl Ketone	D-035	200	8240	12/7/2007	1.000	BQL	BQL	ANR	BQL	BQL	ANR
Tetrachloroethylene	D-039	0.700	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
Trichloroethylene	D-040	0.500	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
Vinyl Chloride	D-043	0.200	8240	12/7/2007	0.050	BQL	BQL	ANR	BQL	BQL	ANR
TCLP Semi-Volatiles Organics						Sample ID's					
Parameters	EPA HW Number	Characteristic Levels (mg/L)	Analytical Method	Date Collected	Quantitation Limit (mg/L)	B1A (mg/L)	B1B (mg/L)	B1 (mg/L)	B2A (mg/L)	B2B (mg/L)	B2 (mg/L)
O-Creosol	D-023	200	8270	12/7/2007	20.0	ANR	ANR	BQL	ANR	ANR	BQL
M-Creosol	D-024	200	8270	12/7/2007	20.0	ANR	ANR	BQL	ANR	ANR	BQL
P-Creosol	D-025	200	8270	12/7/2007	20.0	ANR	ANR	BQL	ANR	ANR	BQL
Creosol	D-026	200	8270	12/7/2007	20.0	ANR	ANR	BQL	ANR	ANR	BQL
1,4-Dichlorobenzene	D-027	7.50	8270	12/7/2007	0.750	ANR	ANR	BQL	ANR	ANR	BQL
2,4-Dinitrotoluene	D-030	0.130	8270	12/7/2007	0.100	ANR	ANR	BQL	ANR	ANR	BQL
Hexachlorobenzene	D-032	0.130	8270	12/7/2007	0.100	ANR	ANR	BQL	ANR	ANR	BQL
Hexachlorobutadiene	D-033	0.500	8270	12/7/2007	0.100	ANR	ANR	BQL	ANR	ANR	BQL
Hexachloroethane	D-034	3.00	8270	12/7/2007	0.300	ANR	ANR	BQL	ANR	ANR	BQL
Nitrobenzene	D-036	2.00	8270	12/7/2007	0.200	ANR	ANR	BQL	ANR	ANR	BQL
Pentachlorophenol	D-037	100	8270	12/7/2007	10.0	ANR	ANR	BQL	ANR	ANR	BQL
Pyridine	D-038	5.00	8270	12/7/2007	0.500	ANR	ANR	BQL	ANR	ANR	BQL
2,4,5-Trichlorophenol	D-041	400	8270	12/7/2007	40.0	ANR	ANR	BQL	ANR	ANR	BQL
2,4,6-Trichlorophenol	D-042	2.00	8270	12/7/2007	0.200	ANR	ANR	BQL	ANR	ANR	BQL

ANR = Analysis Not Requested, BQL = Below Quantitation Limit

Sample IDs: B1, B1A & B1B represent roll-off box #1

Sample IDs: B21, B2A & B2B represent roll-off box #2

**Table 2**  
**Summary of Analytical Results - TCLP & Others Parameters**  
**Town of Mocksville - Maintenance Yard Incident**  
**S&ME Project No. 1584-07-070**

TCLP Metals						Sample ID's					
Parameters	EPA HW Number	Characteristic Levels (mg/L)	Analytical Method	Date Collected	Quantitation Limit (mg/L)	B1A (mg/L)	B1B (mg/L)	B1 (mg/L)	B2A (mg/L)	B2B (mg/L)	B2 (mg/L)
Arsenic	D004	5.00	6010	12/7/2007	0.020	ANR	ANR	BQL	ANR	ANR	BQL
Barium	D-005	100	6010	12/7/2007	0.080	ANR	ANR	0.347	ANR	ANR	0.462
Cadmium	D-006	1.00	6010	12/7/2007	0.005	ANR	ANR	BQL	ANR	ANR	BQL
Chromium	D-077	5.00	6010	12/7/2007	0.020	ANR	ANR	BQL	ANR	ANR	BQL
Lead	D-008	5.00	6010	12/7/2007	0.010	ANR	ANR	0.028	ANR	ANR	BQL
Mercury	D-009	0.200	7470	12/7/2007	0.002	ANR	ANR	BQL	ANR	ANR	BQL
Selenium	D-010	1.00	6010	12/7/2007	0.100	ANR	ANR	BQL	ANR	ANR	BQL
Silver	D-011	5.00	6010	12/7/2007	0.020	ANR	ANR	BQL	ANR	ANR	BQL
Other Parameters						Sample ID's					
Parameters	EPA HW Number	Characteristic Levels (mg/L)	Analytical Method	Date Collected	Quantitation Limit (mg/L)	B1A (mg/L)	B1B (mg/L)	B1 (mg/L)	B2A (mg/L)	B2B (mg/L)	B2 (mg/L)
Corrosivity	D-002		9045	12/7/2007		ANR	ANR	7.08	ANR	ANR	8.96
Ignitibility	D-001		1010	12/7/2007		ANR	ANR	WNI	ANR	ANR	WNI

ANR = Analysis Not Requested      BQL = Below Quantitation Limit

Sample IDs: B1, B1A & B1B represent roll-off box #1

Sample IDs: B21, B2A & B2B represent roll-off box #2

**Table 3**  
**Summary of Analytical Results - Soil**  
**Town of Mocksville - Maintenance Yard Incident**  
**337 Sanford Avenue, Mocksville, N.C.**  
**S&ME Project No. 1584-07-070**

8-RCRA Metals	Sample ID's										SRG (mg/kg)	
	P1-7 (mg/kg)	P1-12 (mg/kg)	P1-17 (mg/kg)	P1-22 (mg/kg)	P2-8 (mg/kg)	P2-13 (mg/kg)	P2-18 (mg/kg)	P2-23 (mg/kg)	BG-SS-1 (mg/kg)	BG-SS-2 (mg/kg)		
Sample Date	3/4/2008	3/4/2008	3/4/2008	3/4/2008	3/4/2008	3/4/2008	3/4/2008	3/4/2008	3/4/2008	4/10/2008	4/10/2008	-
Barium	47.1	72.5	61.6	72.9	70.3	81.8	138	171	73.3	72	No standard	
Lead	13.8	8.69	3.17	7.37	15.1	7.06	11.4	1.66	14.4	11.3	400	
Chromium (total)	22.2	19	15.3	13.1	21.9	172	267	201	34.3	37.9	No standard	
Sample Date		-	-	-	5/13/2008	5/13/2008	5/13/2008	5/13/2008	-	-	-	
Chromium (hexavalent)	NS	NS	NS	NS	NA	<0.54	<0.49	<0.54	NS	NS	44	
Chromium (trivalent)	ND	ND	ND	ND	ND	172	267	201	NS	NS	24,000	
pH	NS	NS	NS	NS	7.46	6.8	6.78	6.61	NS	NS	No standard	

SRG = NCDENR Inactive Sites Branch, Health-Based Soil Remedial Goals, Updated August 2007

mg/kg = milligrams per kilogram

Note: BG-SS-1 and BG-SS-2 are background soil samples

Highlight = Above SRG

NS = Not Sampled

NA = Not Analyzed

ND = None Detected

**Table 4**  
**Summary of Analytical Results - Groundwater**  
**Town of Mocksville - Maintenance Yard Incident**  
**337 Sanford Avenue, Mocksville, N.C.**  
**S&ME Project No. 1584-07-070**

8-RCRA Metals	Sample ID's				NCAC 2L Standards (ug/L)
	P-1 (ug/L)	Duplicate (ug/L)	P1-A (ug/L)	Duplicate (ug/L)	
Sample Date	3/5/2008	3/5/2008	4/10/2008	4/10/2008	-
Barium	<b>2420</b>	<b>2560</b>	53.0	75.0	2,000
Chromium	<b>549</b>	<b>573</b>	<5.0	<5.0	50
Lead	<b>164</b>	<b>163</b>	<5.0	<5.0	15

Concentrations in BOLD print exceed the corresponding NCAC 2L standards

ug/L = micrograms per Liter

Note: P-1: unfiltered sample

P1-A: filtered sample



## **APPENDIX II - FIGURES**



REFERENCE:  
 THE ABOVE GIS DATA WAS OBTAINED FROM THE FIBRE GEOGRAPHIC INFORMATION SYSTEM (GIS) DEPARTMENT WEB SITE. PLEASE NOTE THIS DATA IS FOR INFORMATIONAL PURPOSES ONLY. THIS IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISION MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON INFORMATION OBTAINED FROM THE ABOVE DATA.

SCALE:	As Shown
DATE:	1-23-08
DRAWN BY:	LSE
PROJECT NO:	1584-07-070



### Site Vicinity Map

Town of Mocksville  
 North Carolina

FIGURE NO.

**1**



REFERENCE: THE ABOVE DATA WAS OBTAINED FROM DAVIE COUNTY GEOGRAPHIC INFORMATION SYSTEMS (GIS) DEPARTMENT WEBSITE. PLEASE NOTE THIS DATA IS FOR INFORMATIONAL PURPOSES ONLY. IT IS NOT MEANT FOR DESIGN, LEGAL, OR ANY OTHER USES. THERE ARE NO GUARANTEES ABOUT ITS ACCURACY. S&ME, INC. ASSUMES NO RESPONSIBILITY FOR ANY DECISIONS MADE OR ANY ACTIONS TAKEN BY THE USER BASED UPON INFORMATION OBTAINED FROM THE ABOVE DATA.

SCALE: As Shown  
 DATE: 1-23-08  
 DRAWN BY: LSE  
 PROJECT NO: 1584-07-070



**Soil Boring and  
 Monitor Well Locations**  
 Town of Mocksville  
 North Carolina

FIGURE NO.  
**2**



≡

**APPENDIX III - COPIES OF DISPOSAL MANIFESTS**



# REPUBLIC SERVICES, INC.

213570

## NON-HAZARDOUS WASTE MANIFEST

### GENERATOR INFORMATION

Generator Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ County \_\_\_\_\_  
 State \_\_\_\_\_ Zip \_\_\_\_\_  
 Site Location (if different) \_\_\_\_\_  
 \_\_\_\_\_

### CUSTOMER/BILLING INFORMATION

Billing Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ County \_\_\_\_\_  
 State \_\_\_\_\_ Zip \_\_\_\_\_

Republic Services Approval #	Description of Waste	Volume/Weight	Expiration Date	Container Type
177			7/2002	

\*Attach Additional Sheet if necessary

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Generator/Authorized Agent Name \_\_\_\_\_ Signature \_\_\_\_\_ Date Shipped \_\_\_\_\_

### TRANSPORTER INFORMATION

Transporter Name: Republic Services DOI # 12345678  
 Address: 1234 Main St Truck Number: 12345  
 Phone Number: 123-4567

I certify no hazardous waste or other regulated substance was knowingly introduced to the waste while in my custody. The waste transported in this vehicle is the waste identified above, to the best of my knowledge.

Name of Authorized Agent \_\_\_\_\_ Signature \_\_\_\_\_ Date Delivered \_\_\_\_\_

### DISPOSAL SITE INFORMATION

Site Name: \_\_\_\_\_ Phone No. \_\_\_\_\_  
Uwharrie Environmental  
500 Landfill Road  
 Address: \_\_\_\_\_  
Mt. Gilead, NC 27306  
910-576-3697

I hereby acknowledge receipt of the above described materials -

Laura Hoover \_\_\_\_\_ Signature \_\_\_\_\_ Date Received \_\_\_\_\_

Form SW02 (2003)



# REPUBLIC SERVICES, INC.

215061

## NON-HAZARDOUS WASTE MANIFEST

### GENERATOR INFORMATION

Generator Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ County: \_\_\_\_\_  
 State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Site Location (if different): \_\_\_\_\_  
 \_\_\_\_\_

### CUSTOMER/BILLING INFORMATION

Billing Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ County: \_\_\_\_\_  
 State: \_\_\_\_\_ Zip: \_\_\_\_\_

Republic Services Approval #	Description of Waste	Volume/Weight	Expiration Date	Container Type
76-11111				

\* Attach Additional Sheet if necessary

I hereby certify that the above described materials are non-hazardous wastes as defined by 40 CFR 261 or any applicable state law. Further, that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Generator/Authorized Agent Name \_\_\_\_\_ Signature \_\_\_\_\_ Date Shipped \_\_\_\_\_

### TRANSPORTER INFORMATION

Transporter Name: Republic Services DOT # 77777  
 Address: 10000 Republic Blvd Truck Number: 12345  
Charlotte, NC 28217 Phone Number: 704-123-4567

I certify no hazardous waste or other regulated substance was knowingly introduced to the waste while in my custody. The waste transported in this vehicle is the waste identified above, to the best of my knowledge.

Name of Authorized Agent \_\_\_\_\_ Signature \_\_\_\_\_ Date Delivered \_\_\_\_\_

### DISPOSAL SITE INFORMATION

Site Name: Uwharrie Environmental Phone No. \_\_\_\_\_  
500 Landfill Road  
 Address: Mt. Gilead, NC 27306  
910-576-3697

I hereby acknowledge receipt of the above described materials

Laura Bowen \_\_\_\_\_ Laura Bowen \_\_\_\_\_ 3-21-01  
 Name (Print or Type) Signature Date Received

Form SW02 (2003)



IV



## **APPENDIX IV - WELL COMPLETION REPORT AND BORING LOG**

# COMPLETION REPORT OF WELL No. P-1

PROJECT: **Mocksville Maintenance Shop**  
 PROJECT NO: **1584-07-070**  
 PROJECT LOCATION: **Mocksville, NC**

WATER LEVEL:

DRILLING CONTRACTOR: **JD Barker**  
 DRILLING METHOD: **Macrocore**  
 DATE DRILLED: **3/4/08**

LATITUDE:  
 LONGITUDE:  
 TOP OF CASING ELEVATION:  
 DATUM: **MSL**  
 LOGGED BY: **LButler**

STRATA			WELL DETAILS	DEPTH (ft.)	LEGEND	ELEVATION (ft.)	WELL CONSTRUCTION DETAILS
DESCRIPTION	SYMBOL	DEPTH (ft.)					
		0		0.00	GS		<b>PROTECTIVE CASING</b> Diameter: Type: Interval:
Fill: Tan Brown, Red Brown and Gray Clayey Silt and Fine Sandy SILT ; Organic and Brick Debris; Moist		5		0.00	CG		
Possible Residuum: Brown Red Slightly Clayey SILT		10					<b>RISER CASING</b> Diameter: <b>1"</b> Type: <b>PVC</b> Interval: <b>1.1-29.75</b>
Residuum: Orange Tan Fine to Medium Sandy SILT ; Micaceous		15					
Gray White and Gray Tan Fine Very Sandy SILT ; Probe Refusal at 31'		20		22.25	BS		<b>GROUT</b> Type: <b>Neat Cement Grout</b> Interval: <b>0-22.25</b>
		25		26.25	FP		<b>SEAL</b> Type: <b>Bentonite</b> Interval: <b>22.25-26.25</b>
		30		29.75	TSC		<b>FILTERPACK</b> Type: <b>#2 Sand</b> Interval: <b>26.25-40</b>
Uncharacterized		35		39.75	BSC		<b>SCREEN</b> Diameter: <b>1"</b> Type: <b>0.010"</b> Interval: <b>29.75-39.75</b>
		40		40.00	TD		

MONITORING WELL - 1584-08-070 MOCKSVILLE MAINTENANCE SHOP NEW.GPJ SAME.GDT. 5/23/08

- LEGEND**
- FILTER PACK
  - BENTONITE
  - CEMENT GROUT
  - CUTTINGS / BACKFILL
  - STATIC WATER LEVEL
  - TOC TOP OF CASING
  - GS GROUND SURFACE
  - BS BENTONITE SEAL
  - FP FILTER PACK
  - TSC TOP OF SCREEN
  - BSC BOTTOM OF SCREEN
  - TD TOTAL DEPTH
  - CG CEMENT GROUT



PROJECT: Mocksville Maintenance Shop  
Mocksville, NC  
1584-07-070

**BORING LOG P-2**

DATE DRILLED: 3/4/08 ELEVATION:  
 DRILLING METHOD: Macrocore BORING DEPTH: 26.5  
 LOGGED BY: LButler WATER LEVEL:  
 DRILLER: JD Barker DRILL RIG: Geoprobe 7720 DT

NOTES:

DEPTH (feet)	GRAPHIC LOG	MATERIAL DESCRIPTION	WATER LEVEL	ELEVATION (feet-MSL)	SAMPLE NO/TYPE	STANDARD PENETRATION TEST DATA (blows/ft)					N VALUE
						10	20	30	60	80	
0 - 5	[Cross-hatched pattern]	Fill: Tan Brown, Red Brown and Gray Clayey Silt and Fine Sandy SILT ; Organic and Brick Debris; Moist									
5 - 10	[Diagonal hatching]	Possible Residuum: Brown Red Slightly Clayey SILT									
10 - 15	[Dotted pattern]	Residuum: Orange Tan Fine to Medium Sandy SILT ; Micaceous									
15 - 26.5	[Dotted pattern]	Gray White and Gray Tan Fine Very Sandy SILT Probe Refusal at 26.5'									

BORING LOG 1584-08-070 MOCKSVILLE MAINTENANCE SHOP NEW.GPJ S&ME.GDT 5/23/08

**NOTES:**

- THIS LOG IS ONLY A PORTION OF A REPORT FOR THE NAMED PROJECT AND MUST ONLY BE USED TOGETHER WITH THAT REPORT.
- BORING, SAMPLING AND PENETRATION TEST DATA IN GENERAL ACCORDANCE WITH ASTM D-1586.
- STRATIFICATION AND GROUNDWATER DEPTHS ARE NOT EXACT.
- WATER LEVEL IS AT TIME OF EXPLORATION AND WILL VARY.





v

## **APPENDIX V - ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY**



# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations



Chemical Analysis for Selected Parameters and Sampling Locations Identified as 337 Sanford Avenue  
(A S & ME, Inc. Project #1584-07-070, collected 05 March 2008)

I. Volatile Organics EPA Method 8260 B Parameter	Quantitation Limit (ppb)	P-1 (ppb)	Duplicate (ppb)	Field Blank (ppb)	Trip Blank (ppb)
Acetone	25	BQL	BQL	BQL	BQL
Acrolein	100	BQL	BQL	BQL	BQL
Acrylonitrile	100	BQL	BQL	BQL	BQL
Benzene	0.5	BQL	BQL	BQL	BQL
Bromobenzene	0.5	BQL	BQL	BQL	BQL
Bromochloromethane	0.5	BQL	BQL	BQL	BQL
Bromodichloromethane	0.5	BQL	BQL	BQL	BQL
Bromoform	1.0	BQL	BQL	BQL	BQL
Bromomethane	1.0	BQL	BQL	BQL	BQL
2-Butanone	25	BQL	BQL	BQL	BQL
Carbon Disulfide	5.0	BQL	BQL	BQL	BQL
Carbon Tetrachloride	0.5	BQL	BQL	BQL	BQL
Chlorobenzene	0.5	BQL	BQL	BQL	BQL
Chloroethane	1.0	BQL	BQL	BQL	BQL
2-Chloroethyl vinyl ether	5.0	BQL	BQL	BQL	BQL
Chloroform	0.5	BQL	BQL	BQL	BQL
Chloromethane	1.0	BQL	BQL	BQL	BQL
2-Chlorotoluene	0.5	BQL	BQL	BQL	BQL
4-Chlorotoluene	0.5	BQL	BQL	BQL	BQL
Cis-1,2-Dichloroethene	0.5	BQL	BQL	BQL	BQL
Cis-1,3-Dichloropropene	0.5	BQL	BQL	BQL	BQL
1,2-Dibromo-3-Chloropropane(DBCP)	5.0	BQL	BQL	BQL	BQL
1,2-Dibromoethane (EDB)	0.5	BQL	BQL	BQL	BQL
Dibromochloromethane	0.5	BQL	BQL	BQL	BQL
Dibromomethane	0.5	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	0.5	BQL	BQL	BQL	BQL
1,3-Dichlorobenzene	0.5	BQL	BQL	BQL	BQL
1,4-Dichlorobenzene	0.5	BQL	BQL	BQL	BQL
1,1-Dichloroethane	0.5	BQL	BQL	BQL	BQL
1,2-Dichloroethane	0.5	BQL	BQL	BQL	BQL
1,1-Dichloroethene	0.5	BQL	BQL	BQL	BQL
Dichlorofluoromethane	0.5	BQL	BQL	BQL	BQL
1,2-Dichloropropane	0.5	BQL	BQL	BQL	BQL
1,3-Dichloropropane	0.5	BQL	BQL	BQL	BQL
2,2-Dichloropropane	0.5	BQL	BQL	BQL	BQL
1,1-Dichloropropene	0.5	BQL	BQL	BQL	BQL
Ethyl Benzene	0.5	BQL	BQL	BQL	BQL
2-Hexanone	5.0	BQL	BQL	BQL	BQL
IPE	0.5	BQL	BQL	BQL	BQL
1-Propylbenzene	0.5	BQL	BQL	BQL	BQL
4-Methyl-2-Pentanone	5.0	BQL	BQL	BQL	BQL
Methyl Iodide	1.0	BQL	BQL	BQL	BQL
Methylene Chloride	5.0	BQL	BQL	BQL	BQL
MTBE	0.5	BQL	BQL	BQL	BQL
Naphthalene	0.5	BQL	BQL	BQL	BQL
N-Butylbenzene	0.5	BQL	BQL	BQL	BQL
N-Propylbenzene	0.5	BQL	BQL	BQL	BQL
p-Isopropyltoluene	0.5	BQL	BQL	BQL	BQL
Sec-Butylbenzene	0.5	BQL	BQL	BQL	BQL
Styrene	0.5	BQL	BQL	BQL	BQL
Tert-Butylbenzene	0.5	BQL	BQL	BQL	BQL
1,1,1,2-Tetrachloroethane	0.5	BQL	BQL	BQL	BQL
1,1,2,2-Tetrachloroethane	0.5	BQL	BQL	BQL	BQL
Tetrachloroethene	0.5	BQL	BQL	BQL	BQL
Toluene	0.5	BQL	BQL	BQL	BQL
Trans-1,2-Dichloroethene	0.5	BQL	BQL	BQL	BQL
Trans-1,3-Dichloropropene	0.5	BQL	BQL	BQL	BQL
Trans-1,4-Dichloro-2-butene	5.0	BQL	BQL	BQL	BQL
1,2,3-Trichlorobenzene	0.5	BQL	BQL	BQL	BQL
1,2,4-Trichlorobenzene	0.5	BQL	BQL	BQL	BQL
1,1,1-Trichloroethane	0.5	BQL	BQL	BQL	BQL
1,1,2-Trichloroethane	0.5	BQL	BQL	BQL	BQL
Trichloroethene	0.5	BQL	BQL	BQL	BQL
Trichlorofluoromethane	0.5	BQL	BQL	BQL	BQL
1,2,3-Trichloropropane	0.5	BQL	BQL	BQL	BQL
1,2,4-Trimethylbenzene	0.5	BQL	BQL	BQL	BQL
1,3,5-Trimethylbenzene	0.5	BQL	BQL	BQL	BQL
Vinyl Acetate	1.0	BQL	BQL	BQL	BQL
Vinyl Chloride	0.5	BQL	BQL	BQL	BQL
Total Xylenes	1.0	BQL	BQL	BQL	BQL
Dilution Factor		1	1	1	1
Sample Number		611502	611503	611504	611505
Sample Date		03/05/08	03/05/08	03/05/08	03/05/08
Sample Time (hrs)		1600	----	----	----



# RESEARCH & ANALYTICAL LABORATORIES, Inc.

Analytical/Process Consultations



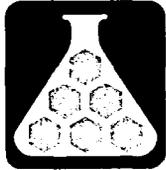
*Chemical Analysis for Selected Parameters and Sampling Locations Identified as 337 Sanford Avenue  
(A S & ME, Inc. Project #1584-07-070, collected 05 March 2008)*

II. Semi-Volatile Organics EPA Method 8270 BNA <u>Parameter</u>	Quantitation Limit <u>(ppb)</u>	P-1 <u>(ppb)</u>	Duplicate <u>(ppb)</u>	Field Blank <u>(ppb)</u>
4-Chloro-3-methylphenol	10.0	BQL	BQL	BQL
2-Chlorophenol	10.0	BQL	BQL	BQL
2,4-Dichlorophenol	10.0	BQL	BQL	BQL
2,4-Dimethylphenol	10.0	BQL	BQL	BQL
2,4-Dinitrophenol	50.0	BQL	BQL	BQL
2-Methyl-4,6-dinitrophenol	50.0	BQL	BQL	BQL
2-Nitrophenol	10.0	BQL	BQL	BQL
4-Nitrophenol	50.0	BQL	BQL	BQL
Pentachlorophenol	50.0	BQL	BQL	BQL
Phenol	10.0	BQL	BQL	BQL
2,4,6-Trichlorophenol	10.0	BQL	BQL	BQL
Acenaphthene	10.0	BQL	BQL	BQL
Acenaphthylene	10.0	BQL	BQL	BQL
Anthracene	10.0	BQL	BQL	BQL
Benzidine	50.0	BQL	BQL	BQL
Benzo(a)anthracene	10.0	BQL	BQL	BQL
Benzo(a)pyrene	10.0	BQL	BQL	BQL
Benzo(b)fluoranthene	10.0	BQL	BQL	BQL
Benzo(ghi)perylene	10.0	BQL	BQL	BQL
Benzo(k)fluoranthene	10.0	BQL	BQL	BQL
Benzyl butyl phthalate	10.0	BQL	BQL	BQL
Bis(2-chloroethoxy)methane	10.0	BQL	BQL	BQL
Bis(2-chloroethyl)ether	10.0	BQL	BQL	BQL
Bis(2-chloroisopropyl)ether	10.0	BQL	BQL	BQL
Bis(2-ethyl-hexyl)phthalate	10.0	BQL	BQL	BQL
4-Bromophenyl phenyl ether	10.0	BQL	BQL	BQL
2-Chloronaphthalene	10.0	BQL	BQL	BQL
4-Chlorophenyl phenyl ether	10.0	BQL	BQL	BQL
Chrysene	10.0	BQL	BQL	BQL
Dibenzo(a,h)anthracene	10.0	BQL	BQL	BQL
1,2-Dichlorobenzene	10.0	BQL	BQL	BQL
1,3-Dichlorobenzene	10.0	BQL	BQL	BQL
1,4-Dichlorobenzene	10.0	BQL	BQL	BQL
3,3-Dichlorobenzidine	20.0	BQL	BQL	BQL
Diethyl phthalate	10.0	BQL	BQL	BQL
Dimethyl phthalate	10.0	BQL	BQL	BQL
Di-N-Butyl phthalate	10.0	BQL	BQL	BQL
2,4-Dinitrotoluene	10.0	BQL	BQL	BQL
2,6-Dinitrotoluene	10.0	BQL	BQL	BQL
Di-N-Octyl phthalate	10.0	BQL	BQL	BQL
1,2-Diphenylhydrazine	50.0	BQL	BQL	BQL
Fluoranthene	10.0	BQL	BQL	BQL
Fluorene	10.0	BQL	BQL	BQL
Hexachlorobenzene	10.0	BQL	BQL	BQL
Hexachlorobutadiene	10.0	BQL	BQL	BQL
Hexachlorocyclopentadiene	10.0	BQL	BQL	BQL
Hexachloroethane	10.0	BQL	BQL	BQL
Indeno(1,2,3-cd) pyrene	10.0	BQL	BQL	BQL
Isophorone	10.0	BQL	BQL	BQL
2-Methylnaphthalene	10.0	BQL	BQL	BQL
Nitrobenzene	10.0	BQL	BQL	BQL
N-Nitrosodimethylamine	10.0	BQL	BQL	BQL
N-nitrosodi-n-propylamine	10.0	BQL	BQL	BQL
N-Nitrosodiphenylamine	10.0	BQL	BQL	BQL
Phenanthrene	10.0	BQL	BQL	BQL
Pyrene	10.0	BQL	BQL	BQL
1,2,4-Trichlorobenzene	10.0	BQL	BQL	BQL
2,4,6-Trichlorophenol	10.0	BQL	BQL	BQL
2-Methyl-4,6-dinitrophenol	50.0	BQL	BQL	BQL
1,2-Diphenylhydrazine	50.0	BQL	BQL	BQL
N-Nitrosodimethylamine	10.0	BQL	BQL	BQL
Dilution Factor		1	1	1
Sample Number		611502	611503	611504
Sample Date		03/05/08	03/05/08	03/05/08
Sample Time (hrs)		1600	---	---

BNA = Base-Neutral Acid Extractables

ppb = parts per billion

BQL = Below Quantitation Limits --- = Not Available



# RESEARCH & ANALYTICAL LABORATORIES, Inc.

Analytical/Process Consultations



*Chemical Analysis for Selected Parameters for Samples Identified as 337 Sanford Avenue  
(A S & ME, Inc. Project #1584-07-070, collected 05 March 2008)*

III. RCRA Metals <u>Parameter</u>	<u>P-1</u> <u>(ppb)</u>	<u>Duplicate</u> <u>(ppb)</u>	<u>Field</u> <u>Blank</u> <u>(ppb)</u>
Arsenic, Total	<50.0	<50.0	<10.0
Barium, Total	2,420	2,560	<40.0
Cadmium, Total	<5.0	<5.0	<1.00
Chromium, Total	549	573	<10.0
Lead, Total	164	163	<5.0
Mercury, Total	<0.20	<0.20	<0.20
Selenium, Total	<50.0	<50.0	<10.0
Silver, Total	<50.0	<50.0	<10.0
 Sample Number:	611502	611503	611504
Sample Collected Date:	03/05/08	03/05/08	03/05/08
Sample Collected Time (Hrs):	1600	---	---

ppb = parts per billion

BQL = Below Quantitation Limit





# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations



**Chemical Analysis for Selected Parameters and Sampling Locations Identified as Town of Mocksville-Buried Waste Incident  
(A S & ME, Inc. Project #1584-07-070, collected 04 March 2008)**

I. Volatile Organics EPA Method 8260 B Parameter	Quantitation	P1-7	P1-12	P1-17	P1-22	P1-17
	Limit (mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Acetone	0.100	BQL	BQL	BQL	BQL	BQL
Benzene	0.005	BQL	BQL	BQL	BQL	BQL
Bromobenzene	0.005	BQL	BQL	BQL	BQL	BQL
Bromochloromethane	0.005	BQL	BQL	BQL	BQL	BQL
Bromodichloromethane	0.005	BQL	BQL	BQL	BQL	BQL
Bromoform	0.005	BQL	BQL	BQL	BQL	BQL
Bromomethane	0.010	BQL	BQL	BQL	BQL	BQL
2-Butanone	0.100	BQL	BQL	BQL	BQL	BQL
N-Butylbenzene	0.005	BQL	BQL	BQL	BQL	BQL
Sec-Butylbenzene	0.005	BQL	BQL	BQL	BQL	BQL
Tert-Butylbenzene	0.005	BQL	BQL	BQL	BQL	BQL
Carbon Tetrachloride	0.010	BQL	BQL	BQL	BQL	BQL
Chlorobenzene	0.005	BQL	BQL	BQL	BQL	BQL
Dibromochloromethane	0.005	BQL	BQL	BQL	BQL	BQL
Chloroethane	0.010	BQL	BQL	BQL	BQL	BQL
Chloroform	0.005	BQL	BQL	BQL	BQL	BQL
Chloromethane	0.010	BQL	BQL	BQL	BQL	BQL
2-Chlorotoluene	0.005	BQL	BQL	BQL	BQL	BQL
4-Chlorotoluene	0.005	BQL	BQL	BQL	BQL	BQL
1,2-Dibromoethane (EDB)	0.005	BQL	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	0.005	BQL	BQL	BQL	BQL	BQL
1,3-Dichlorobenzene	0.005	BQL	BQL	BQL	BQL	BQL
1,4-Dichlorobenzene	0.005	BQL	BQL	BQL	BQL	BQL
Dichlorodifluoromethane	0.005	BQL	BQL	BQL	BQL	BQL
1,1-Dichloroethane	0.005	BQL	BQL	BQL	BQL	BQL
1,2-Dichloroethane	0.005	BQL	BQL	BQL	BQL	BQL
1,1-Dichloroethene	0.005	BQL	BQL	BQL	BQL	BQL
Cis-1,2-Dichloroethene	0.005	BQL	BQL	BQL	BQL	BQL
Trans-1,2-Dichloroethene	0.005	BQL	BQL	BQL	BQL	BQL
1,2-Dichloropropane	0.005	BQL	BQL	BQL	BQL	BQL
1,3-Dichloropropane	0.005	BQL	BQL	BQL	BQL	BQL
2,2-Dichloropropane	0.005	BQL	BQL	BQL	BQL	BQL
1,1-Dichloropropane	0.005	BQL	BQL	BQL	BQL	BQL
Cis-1,3-Dichloropropene	0.010	BQL	BQL	BQL	BQL	BQL
Trans-1,3-Dichloropropene	0.010	BQL	BQL	BQL	BQL	BQL
Ethyl Acetate	0.010	BQL	BQL	BQL	BQL	BQL
Ethyl Benzene	0.005	BQL	BQL	BQL	BQL	BQL
2-Hexanone	0.050	BQL	BQL	BQL	BQL	BQL
1-Propylbenzene	0.005	BQL	BQL	BQL	BQL	BQL
Isopropyl ether (IPE)	0.010	BQL	BQL	BQL	BQL	BQL
p-Isopropyltoluene	0.005	BQL	BQL	BQL	BQL	BQL
Methylene Chloride	0.020	BQL	BQL	BQL	BQL	BQL
4-Methyl-2-Pentanone	0.100	BQL	BQL	BQL	BQL	BQL
Methyl-Tert-Butyl ether (MTBE)	0.010	BQL	BQL	BQL	BQL	BQL
Naphthalene	0.010	BQL	BQL	BQL	BQL	BQL
N-Propylbenzene	0.005	BQL	BQL	BQL	BQL	BQL
Styrene	0.010	BQL	BQL	BQL	BQL	BQL
1,1,2,2-Tetrachloroethane	0.005	BQL	BQL	BQL	BQL	BQL
Tetrachloroethene	0.005	BQL	BQL	BQL	BQL	BQL
Toluene	0.005	BQL	BQL	BQL	BQL	BQL
1,1,1-Trichloroethane	0.005	BQL	BQL	BQL	BQL	BQL
1,1,2-Trichloroethane	0.005	BQL	BQL	BQL	BQL	BQL
Trichloroethene	0.005	BQL	BQL	BQL	BQL	BQL
Trichlorofluoromethane	0.005	BQL	BQL	BQL	BQL	BQL
1,2,3-Trichlorobenzene	0.005	BQL	BQL	BQL	BQL	BQL
1,2,4-Trichlorobenzene	0.005	BQL	BQL	BQL	BQL	BQL
1,2,3-Trichloropropane	0.015	BQL	BQL	BQL	BQL	BQL
1,2,4-Trimethylbenzene	0.005	BQL	BQL	BQL	BQL	BQL
1,3,5-Trimethylbenzene	0.005	BQL	BQL	BQL	BQL	BQL
Vinyl Acetate	0.050	BQL	BQL	BQL	BQL	BQL
Vinyl Chloride	0.010	BQL	BQL	BQL	BQL	BQL
Total Xylenes	0.005	BQL	BQL	BQL	BQL	BQL
Carbon Disulfide	0.100	BQL	BQL	BQL	BQL	BQL
Acrylonitrile	0.200	BQL	BQL	BQL	BQL	BQL
Trans-1,4-Dichloro-2-butene	0.100	BQL	BQL	BQL	BQL	BQL
Methyl Iodide	0.010	BQL	BQL	BQL	BQL	BQL
Dibromomethane	0.010	BQL	BQL	BQL	BQL	BQL
1,1,1,2-Tetrachloroethane	0.005	BQL	BQL	BQL	BQL	BQL
1,2-Dibromo-3-Chloropropane(DBCP)	0.025	BQL	BQL	BQL	BQL	BQL
Dilution Factor		1	1	1	1	1
Sample Number		611492	611493	611494	611495	611496
Sample Date		03/04/08	03/04/08	03/04/08	03/04/08	03/04/08
Sample Time (hrs)		1020	1030	1044	1053	1101

mg/kg = milligrams per kilogram = parts per million (ppm)  
BQL = Below Quantitation Limits



**Chemical Analysis for Selected Parameters and Sampling Locations Identified as Town of Mocksville-Buried Waste Incident  
(A S & ME, Inc. Project #1584-07-070, collected 04 March 2008)**

I. Volatile Organics	Quantitation	P2-8	P2-13	P2-18	P2-23
EPA Method 8260 B	Limit				
Parameter	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Acetone	0.100	BQL	BQL	BQL	BQL
Benzene	0.005	BQL	BQL	BQL	BQL
Bromobenzene	0.005	BQL	BQL	BQL	BQL
Bromochloromethane	0.005	BQL	BQL	BQL	BQL
Bromodichloromethane	0.005	BQL	BQL	BQL	BQL
Bromoform	0.005	BQL	BQL	BQL	BQL
Bromomethane	0.010	BQL	BQL	BQL	BQL
2-Butanone	0.100	BQL	BQL	BQL	BQL
N-Butylbenzene	0.005	BQL	BQL	BQL	BQL
Sec-Butylbenzene	0.005	BQL	BQL	BQL	BQL
Tert-Butylbenzene	0.005	BQL	BQL	BQL	BQL
Carbon Tetrachloride	0.010	BQL	BQL	BQL	BQL
Chlorobenzene	0.005	BQL	BQL	BQL	BQL
Dibromochloromethane	0.005	BQL	BQL	BQL	BQL
Chloroethane	0.010	BQL	BQL	BQL	BQL
Chloroform	0.005	BQL	BQL	BQL	BQL
Chloromethane	0.010	BQL	BQL	BQL	BQL
2-Chlorotoluene	0.005	BQL	BQL	BQL	BQL
4-Chlorotoluene	0.005	BQL	BQL	BQL	BQL
1,2-Dibromoethane (EDB)	0.005	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	0.005	BQL	BQL	BQL	BQL
1,3-Dichlorobenzene	0.005	BQL	BQL	BQL	BQL
1,4-Dichlorobenzene	0.005	BQL	BQL	BQL	BQL
Dichlorodifluoromethane	0.005	BQL	BQL	BQL	BQL
1,1-Dichloroethane	0.005	BQL	BQL	BQL	BQL
1,2-Dichloroethane	0.005	BQL	BQL	BQL	BQL
1,1-Dichloroethene	0.005	BQL	BQL	BQL	BQL
Cis-1,2-Dichloroethene	0.005	BQL	BQL	BQL	BQL
Trans-1,2-Dichloroethene	0.005	BQL	BQL	BQL	BQL
1,2-Dichloropropane	0.005	BQL	BQL	BQL	BQL
1,3-Dichloropropane	0.005	BQL	BQL	BQL	BQL
2,2-Dichloropropane	0.005	BQL	BQL	BQL	BQL
1,1-Dichloropropane	0.005	BQL	BQL	BQL	BQL
Cis-1,3-Dichloropropene	0.010	BQL	BQL	BQL	BQL
Trans-1,3-Dichloropropene	0.010	BQL	BQL	BQL	BQL
Ethyl Acetate	0.010	BQL	BQL	BQL	BQL
Ethyl Benzene	0.005	BQL	BQL	BQL	BQL
2-Hexanone	0.050	BQL	BQL	BQL	BQL
1-Propylbenzene	0.005	BQL	BQL	BQL	BQL
Isopropyl ether (IPE)	0.010	BQL	BQL	BQL	BQL
p-Isopropyltoluene	0.005	BQL	BQL	BQL	BQL
Methylene Chloride	0.020	BQL	BQL	BQL	BQL
4-Methyl-2-Pentanone	0.100	BQL	BQL	BQL	BQL
Methyl-Tert-Butyl ether (MTBE)	0.010	BQL	BQL	BQL	BQL
Naphthalene	0.010	BQL	BQL	BQL	BQL
N-Propylbenzene	0.005	BQL	BQL	BQL	BQL
Styrene	0.010	BQL	BQL	BQL	BQL
1,1,2,2-Tetrachloroethane	0.005	BQL	BQL	BQL	BQL
Tetrachloroethene	0.005	BQL	BQL	BQL	BQL
Toluene	0.005	BQL	BQL	BQL	BQL
1,1,1-Trichloroethane	0.005	BQL	BQL	BQL	BQL
1,1,2-Trichloroethane	0.005	BQL	BQL	BQL	BQL
Trichloroethene	0.005	BQL	BQL	BQL	BQL
Trichlorofluoromethane	0.005	BQL	BQL	BQL	BQL
1,2,3-Trichlorobenzene	0.005	BQL	BQL	BQL	BQL
1,2,4-Trichlorobenzene	0.005	BQL	BQL	BQL	BQL
1,2,3-Trichloropropane	0.015	BQL	BQL	BQL	BQL
1,2,4-Trimethylbenzene	0.005	BQL	BQL	BQL	BQL
1,3,5-Trimethylbenzene	0.005	BQL	BQL	BQL	BQL
Vinyl Acetate	0.050	BQL	BQL	BQL	BQL
Vinyl Chloride	0.010	BQL	BQL	BQL	BQL
Total Xylenes	0.005	BQL	BQL	BQL	BQL
Carbon Disulfide	0.100	BQL	BQL	BQL	BQL
Acrylonitrile	0.200	BQL	BQL	BQL	BQL
Trans-1,4-Dichloro-2-butene	0.100	BQL	BQL	BQL	BQL
Methyl Iodide	0.010	BQL	BQL	BQL	BQL
Dibromomethane	0.010	BQL	BQL	BQL	BQL
1,1,1,2-Tetrachloroethane	0.005	BQL	BQL	BQL	BQL
1,2-Dibromo-3-Chloropropane(DBCP)	0.025	BQL	BQL	BQL	BQL
Dilution Factor		1	1	1	1
<b>Sample Number</b>		611497	611498	611499	611500
<b>Sample Date</b>		03/04/08	03/04/08	03/04/08	03/04/08
<b>Sample Time (hrs)</b>		1256	1305	1321	1338

mg/kg = milligrams per kilogram = parts per million (ppm)  
BQL = Below Quantitation Limits



# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations



## Chemical Analysis for Selected Parameters and Sampling Locations Identified as Town of Mocksville-Buried Waste Incident (A S & ME, Inc. Project #1584-07-070, collected 04 March 2008)

II. Semi-Volatile Organics	Quantitation	PI-7	PI-12	PI-17	PI-22	PI-17
EPA Method 8270 BNA	Limit					
Parameter	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Acenaphthene	0.33	BQL	BQL	BQL	BQL	BQL
Acenaphthylene	0.33	BQL	BQL	BQL	BQL	BQL
Anthracene	0.33	BQL	BQL	BQL	BQL	BQL
Benzoic Acid	6.67	BQL	BQL	BQL	BQL	BQL
Benzo(a)anthracene	0.33	BQL	BQL	BQL	BQL	BQL
Benzo(b)fluoranthene	0.33	BQL	BQL	BQL	BQL	BQL
Benzo(k)fluoranthene	0.33	BQL	BQL	BQL	BQL	BQL
Benzo(ghi)perylene	0.33	BQL	BQL	BQL	BQL	BQL
Benzo(a)pyrene	0.33	BQL	BQL	BQL	BQL	BQL
Benzyl Alcohol	3.33	BQL	BQL	BQL	BQL	BQL
Bis(2-chloroethoxy)methane	0.33	BQL	BQL	BQL	BQL	BQL
Bis(2-chloroethyl)ether	0.33	BQL	BQL	BQL	BQL	BQL
Bis(2-chloroisopropyl)ether	0.33	BQL	BQL	BQL	BQL	BQL
Bis(2-ethyl-hexyl)phthalate	0.33	BQL	BQL	BQL	BQL	BQL
4-Bromophenyl phenyl ether	0.33	BQL	BQL	BQL	BQL	BQL
Benzyl butyl phthalate	0.33	BQL	BQL	BQL	BQL	BQL
4-Chloroaniline	1.65	BQL	BQL	BQL	BQL	BQL
4-Chloro-3-methylphenol	0.33	BQL	BQL	BQL	BQL	BQL
2-Chloronaphthalene	0.33	BQL	BQL	BQL	BQL	BQL
2-Chlorophenol	0.33	BQL	BQL	BQL	BQL	BQL
4-Chlorophenyl phenyl ether	0.33	BQL	BQL	BQL	BQL	BQL
Chrysene	0.33	BQL	BQL	BQL	BQL	BQL
Dibenzo(a,h)anthracene	0.33	BQL	BQL	BQL	BQL	BQL
Dibenzofuran	0.33	BQL	BQL	BQL	BQL	BQL
Di-N-Butyl phthalate	0.33	BQL	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	0.33	BQL	BQL	BQL	BQL	BQL
1,3-Dichlorobenzene	0.33	BQL	BQL	BQL	BQL	BQL
1,4-Dichlorobenzene	0.33	BQL	BQL	BQL	BQL	BQL
3,3-Dichlorobenzidine	0.66	BQL	BQL	BQL	BQL	BQL
2,4-Dichlorophenol	0.33	BQL	BQL	BQL	BQL	BQL
Diethyl phthalate	0.33	BQL	BQL	BQL	BQL	BQL
2,4-Dimethylphenol	0.33	BQL	BQL	BQL	BQL	BQL
Dimethyl phthalate	0.33	BQL	BQL	BQL	BQL	BQL
4,6-Dinitro-2-methylphenol	1.65	BQL	BQL	BQL	BQL	BQL
2,4-Dinitrophenol	1.65	BQL	BQL	BQL	BQL	BQL
2,4-Dinitrotoluene	0.33	BQL	BQL	BQL	BQL	BQL
2,6-Dinitrotoluene	0.33	BQL	BQL	BQL	BQL	BQL
Di-N-Octyl phthalate	0.33	BQL	BQL	BQL	BQL	BQL
Azobenzene	3.33	BQL	BQL	BQL	BQL	BQL
Fluoranthene	0.33	BQL	BQL	BQL	BQL	BQL
Fluorene	0.33	BQL	BQL	BQL	BQL	BQL
Hexachlorobenzene	0.33	BQL	BQL	BQL	BQL	BQL
Hexachlorobutadiene	0.33	BQL	BQL	BQL	BQL	BQL
Hexachlorocyclopentadiene	0.33	BQL	BQL	BQL	BQL	BQL
Hexachloroethane	0.33	BQL	BQL	BQL	BQL	BQL
Indeno(1,2,3-cd) pyrene	0.33	BQL	BQL	BQL	BQL	BQL
Isophorone	0.33	BQL	BQL	BQL	BQL	BQL
2-Methylnaphthalene	0.33	BQL	BQL	BQL	BQL	BQL
2-Methylphenol	1.65	BQL	BQL	BQL	BQL	BQL
4-Methylphenol	1.65	BQL	BQL	BQL	BQL	BQL
Nitrobenzene	0.33	BQL	BQL	BQL	BQL	BQL
2-Nitrophenol	0.33	BQL	BQL	BQL	BQL	BQL
4-Nitrophenol	1.65	BQL	BQL	BQL	BQL	BQL
N-Nitrosodiphenylamine	0.33	BQL	BQL	BQL	BQL	BQL
N-nitrosodi-n-propylamine	0.33	BQL	BQL	BQL	BQL	BQL
Pentachlorophenol	1.65	BQL	BQL	BQL	BQL	BQL
Phenanthrene	0.33	BQL	BQL	BQL	BQL	BQL
Phenol	0.33	BQL	BQL	BQL	BQL	BQL
Pyrene	0.33	BQL	BQL	BQL	BQL	BQL
1,2,4-Trichlorobenzene	0.33	BQL	BQL	BQL	BQL	BQL
2,4,6-Trichlorophenol	0.33	BQL	BQL	BQL	BQL	BQL
2-Methyl-4,6-dinitrophenol	1.65	BQL	BQL	BQL	BQL	BQL
Benzdine	1.65	BQL	BQL	BQL	BQL	BQL
1,2-Diphenylhydrazine	1.65	BQL	BQL	BQL	BQL	BQL
N-Nitrosodimethylamine	0.33	BQL	BQL	BQL	BQL	BQL
Dilution Factor		1	1	1	1	1
Sample Number		611492	611493	611494	611495	611496
Sample Date		03/04/08	03/04/08	03/04/08	03/04/08	03/04/08
Sample Time (hrs)		1020	1030	1044	1053	1101

mg/kg = milligrams per kilogram = parts per million (ppm)

BQL = Below Quantitation Limits

BNA = Base-Neutral Acid Extractables



# RESEARCH & ANALYTICAL LABORATORIES, Inc.

Analytical/Process Consultations



## Chemical Analysis for Selected Parameters and Sampling Locations Identified as Town of Mocksville-Buried Waste Incident (A S & ME, Inc. Project #1584-07-070, collected 04 March 2008)

II. Semi-Volatile Organics	Quantitation	P2-8	P2-13	P2-18	P2-23
EPA Method 8270 BNA	Limit				
Parameter	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Acenaphthene	0.33	BQL	BQL	BQL	BQL
Acenaphthylene	0.33	BQL	BQL	BQL	BQL
Anthracene	0.33	BQL	BQL	BQL	BQL
Benzoic Acid	6.67	BQL	BQL	BQL	BQL
Benzo(a)anthracene	0.33	BQL	BQL	BQL	BQL
Benzo(b)fluoranthene	0.33	BQL	BQL	BQL	BQL
Benzo(k)fluoranthene	0.33	BQL	BQL	BQL	BQL
Benzo(ghi)perylene	0.33	BQL	BQL	BQL	BQL
Benzo(a)pyrene	0.33	BQL	BQL	BQL	BQL
Benzyl Alcohol	3.33	BQL	BQL	BQL	BQL
Bis(2-chloroethoxy)methane	0.33	BQL	BQL	BQL	BQL
Bis(2-chloroethyl)ether	0.33	BQL	BQL	BQL	BQL
Bis(2-chloroisopropyl)ether	0.33	BQL	BQL	BQL	BQL
Bis(2-ethyl-hexyl)phthalate	0.33	BQL	BQL	BQL	BQL
4-Bromophenyl phenyl ether	0.33	BQL	BQL	BQL	BQL
Benzyl butyl phthalate	0.33	BQL	BQL	BQL	BQL
4-Chloroaniline	1.65	BQL	BQL	BQL	BQL
4-Chloro-3-methylphenol	0.33	BQL	BQL	BQL	BQL
2-Chloronaphthalene	0.33	BQL	BQL	BQL	BQL
2-Chlorophenol	0.33	BQL	BQL	BQL	BQL
4-Chlorophenyl phenyl ether	0.33	BQL	BQL	BQL	BQL
Chrysene	0.33	BQL	BQL	BQL	BQL
Dibenzo(a,h)anthracene	0.33	BQL	BQL	BQL	BQL
Dibenzofuran	0.33	BQL	BQL	BQL	BQL
Di-N-Butyl phthalate	0.33	BQL	BQL	BQL	BQL
1,2-Dichlorobenzene	0.33	BQL	BQL	BQL	BQL
1,3-Dichlorobenzene	0.33	BQL	BQL	BQL	BQL
1,4-Dichlorobenzene	0.33	BQL	BQL	BQL	BQL
3,3-Dichlorobenzidine	0.66	BQL	BQL	BQL	BQL
2,4-Dichlorophenol	0.33	BQL	BQL	BQL	BQL
Diethyl phthalate	0.33	BQL	BQL	BQL	BQL
2,4-Dimethylphenol	0.33	BQL	BQL	BQL	BQL
Dimethyl phthalate	0.33	BQL	BQL	BQL	BQL
4,6-Dinitro-2-methylphenol	1.65	BQL	BQL	BQL	BQL
2,4-Dinitrophenol	1.65	BQL	BQL	BQL	BQL
2,4-Dinitrotoluene	0.33	BQL	BQL	BQL	BQL
2,6-Dinitrotoluene	0.33	BQL	BQL	BQL	BQL
Di-N-Octyl phthalate	0.33	BQL	BQL	BQL	BQL
Azobenzene	3.33	BQL	BQL	BQL	BQL
Fluoranthene	0.33	BQL	BQL	BQL	BQL
Fluorene	0.33	BQL	BQL	BQL	BQL
Hexachlorobenzene	0.33	BQL	BQL	BQL	BQL
Hexachlorobutadiene	0.33	BQL	BQL	BQL	BQL
Hexachlorocyclopentadiene	0.33	BQL	BQL	BQL	BQL
Hexachloroethane	0.33	BQL	BQL	BQL	BQL
Indeno(1,2,3-cd) pyrene	0.33	BQL	BQL	BQL	BQL
Isophorone	0.33	BQL	BQL	BQL	BQL
2-Methylnaphthalene	0.33	BQL	BQL	BQL	BQL
2-Methylphenol	1.65	BQL	BQL	BQL	BQL
4-Methylphenol	1.65	BQL	BQL	BQL	BQL
Nitrobenzene	0.33	BQL	BQL	BQL	BQL
2-Nitrophenol	0.33	BQL	BQL	BQL	BQL
4-Nitrophenol	1.65	BQL	BQL	BQL	BQL
N-Nitrosodiphenylamine	0.33	BQL	BQL	BQL	BQL
N-nitrosodi-n-propylamine	0.33	BQL	BQL	BQL	BQL
Pentachlorophenol	1.65	BQL	BQL	BQL	BQL
Phenanthrene	0.33	BQL	BQL	BQL	BQL
Phenol	0.33	BQL	BQL	BQL	BQL
Pyrene	0.33	BQL	BQL	BQL	BQL
1,2,4-Trichlorobenzene	0.33	BQL	BQL	BQL	BQL
2,4,6-Trichlorophenol	0.33	BQL	BQL	BQL	BQL
2-Methyl-4,6-dinitrophenol	1.65	BQL	BQL	BQL	BQL
Benzidine	1.65	BQL	BQL	BQL	BQL
1,2-Diphenylhydrazine	1.65	BQL	BQL	BQL	BQL
N-Nitrosodimethylamine	0.33	BQL	BQL	BQL	BQL
Dilution Factor		1	1	1	1
Sample Number		611497	611498	611499	611500
Sample Date		03/04/08	03/04/08	03/04/08	03/04/08
Sample Time (hrs)		1256	1305	1321	1338

mg/kg = milligrams per kilogram = parts per million (ppm)

BQL = Below Quantitation Limits

BNA = Base-Neutral Acid Extractables



# RESEARCH & Analytical LABORATORIES, INC.

Analytical/Process Consultations



*Chemical Analysis for Selected Parameters and Sampling Locations Identified as Town of Mocksville-Buried Waste Incident  
(A S & ME, Inc. Project #1584-07-070, collected 04 March 2008)*

III. Total RCRA Metals	P1-7	P1-12	P1-17	P1-22	P1-17
<u>Parameter</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>
Arsenic, Total	<1.00	<1.00	<1.00	<2.00	<1.00
Barium, Total	47.1	72.5	61.6	72.9	67.1
Cadmium, Total	<0.100	<0.100	<0.100	<0.100	<0.100
Chromium, Total	22.2	19.0	15.3	13.1	13.1
Lead, Total	13.8	8.69	3.17	7.37	2.03
Mercury, Total	<0.200	<0.200	<0.200	<0.200	<0.200
Selenium, Total	<1.00	<1.00	<1.00	<2.00	<1.00
Silver, Total	<1.00	<1.00	<1.00	<2.00	<1.00
Sample Number	611492	611493	611494	611495	611496
Sample Date	03/04/08	03/04/08	03/04/08	03/04/08	03/04/08
Sample Time (hrs)	1020	1030	1044	1053	1101

mg/kg = milligrams per kilogram = parts per million (ppm)

mg/kg = milligrams per kilogram = parts per million (ppm)  
< = Less Than or Below Quantitation Limits

NR = Not Requested



# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations



*Chemical Analysis for Selected Parameters and Sampling Locations Identified as Town of Mocksville-Buried Waste Incident  
(A S & ME, Inc. Project #1584-07-070, collected 04 March 2008)*

III. Total RCRA Metals	P2-8	P2-13	P2-18	P2-23
<u>Parameter</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>
Arsenic, Total	<10.0	<1.00	<1.00	<1.00
Barium, Total	<b>70.3</b>	<b>81.8</b>	<b>138</b>	<b>171</b>
Cadmium, Total	<0.100	<0.100	<0.100	<0.100
Chromium, Total	<b>21.9</b>	<b>172</b>	<b>267</b>	<b>201</b>
Lead, Total	<b>15.1</b>	<b>7.06</b>	<b>11.4</b>	<b>1.66</b>
Mercury, Total	<0.200	<0.200	<0.200	<0.200
Selenium, Total	<10.0	<1.00	<1.00	<1.00
Silver, Total	<10.0	<1.00	<1.00	<1.00
Sample Number	611497	611498	611499	611500
Sample Date	03/04/08	03/04/08	03/04/08	03/04/08
Sample Time (hrs)	1256	1305	1321	1338

\* Higher quantitation limit due to ?

mg/kg = milligrams per kilogram = parts per million (ppm)

< = Less Than or Below Quantitation Limits

NR = Not Requested



# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical / Process Consultations  
Phone (336) 996-2841

## CHAIN OF CUSTODY RECORD

COMPANY								JOB NO.		NO. OF CONTAINERS	WATER / WASTEWATER												MISC.	REQUESTED ANALYSIS				
S&ME, Inc								1584-07-070			Incident	2L G (GMA, Herb./Pest.) 2 40ml Vials (VOC) HCL 250ml G (TOX) 250ml P (TOC) HSO <sub>4</sub> 1L G (BOD, TSS, Unpreserved, etc.) 1L P G (Phenol, Oil & Grease) H <sub>2</sub> SO <sub>4</sub> 1L P G (COD, N, P) H <sub>2</sub> SO <sub>4</sub> 1L P G (Metals, Hardness) HNO <sub>3</sub> Sterile P. G (CYANIDE) NaOH Sterile P. G (Coliform)																
STREET ADDRESS				CITY, STATE, ZIP				PROJECT				SAMPLER NAME (PLEASE PRINT)																
3718 Old Battleground Road				Greensboro NC 27410				Town of Mackville Buried Waste				Lyndal Butler																
CONTACT				PHONE				SAMPLER SIGNATURE																				
Lyndal Butler				336-288-7180				Lyndal Butler																				
SAMPLE NUMBER (LAB USE ONLY)	DATE	TIME	COMP	GRAB	TEMP °C	RES CI	CHLORINE REMOVED (Y or N)	SAMPLE MATRIX (S or W)	SAMPLE LOCATION / LD.																			
011492	3/4/08	10:20		X				S	P1-7	5																X	X	X
493	3/4/08	10:30		X				S	P1-12	5																X	X	X
494	3/4/08	10:44		X				S	P1-17	5																X	X	X
495	3/4/08	10:53		X				S	P1-22	5																X	X	X
496	3/4/08	11:01		X				S	P1-17	5																X	X	X
497	3/4/08	12:50		X				S	P2-8	5																X	X	X
498	3/4/08	13:25		X				S	P2-13	5																X	X	X
499	3/4/08	13:21		X				S	P2-18	5																X	X	X
500	3/4/08	13:38		X				S	P2-23	5																X	X	X
501								W	Tip Blank	2																X		

RELINQUISHED BY <i>Lyndal Butler</i>	DATE/TIME 3/5/08	RECEIVED BY <i>Anniferzy</i>	REMARKS: P.O.# 150343  SMM - SAMPLE TEMPERATURE AT RECEIPT 3.3 °C
RELINQUISHED BY	DATE/TIME	RECEIVED BY	



# RESEARCH & ANALYTICAL LABORATORIES, Inc.

Analytical/Process Consultations



*Chemical Analysis for Selected Parameters and Water Samples Identified as Mocksville Incident  
(A S & ME, Inc. Project #1584-07-070, collected 10 April 2008)*

<b>I. Total RCRA</b>	<b>Quantitation</b>	<b>Equipment</b>	<b>P1-A</b>	<b>Duplicate</b>
<b>Metals</b>	<b>Limit</b>	<b>Blank</b>		
<u>Parameter</u>	<u>(ppb)</u>	<u>(ppb)</u>	<u>(ppb)</u>	<u>(ppb)</u>
Arsenic	5.0	BQL	BQL	BQL
Barium	20.0	BQL	53.0	75.0
Cadmium	1.0	BQL	BQL	BQL
Chromium	5.0	BQL	BQL	BQL
Lead	5.0	BQL	BQL	BQL
Mercury	0.200	BQL	BQL	BQL
Selenium	5.0	BQL	BQL	BQL
Silver	5.0	BQL	BQL	BQL

<b>Sample Number</b>	614388	614389	614390
<b>Sample Date</b>	04/10/08	04/10/08	04/10/08
<b>Sample Time (hrs)</b>	1345	1400	1430

BQL = Below Quantitation Limits

ppb = parts per billion



# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations



*Chemical Analysis for Selected Parameters and Sampling Locations Identified as Mocksville Incident  
(A S & ME, Inc. Project #1584-07-070, collected 10 April 2008)*

I. Total RCRA Metals	Quantitation Limit	BG-SS-1	BG-SS-2
<u>Parameter</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>	<u>(mg/kg)</u>
Arsenic, Total	1.00	BQL	BQL
Barium, Total	4.00	73.3	72.0
Cadmium, Total	0.100	BQL	BQL
Chromium, Total	1.00	34.3	37.9
Lead, Total	0.500	14.4	11.3
Mercury, Total	0.200	BQL	0.434
Selenium, Total	1.00	BQL	BQL
Silver, Total	1.00	BQL	BQL
Sample Number		614391	614392
Sample Date		04/10/08	04/10/08
Sample Time (hrs)		1530	1600

mg/kg = milligrams per kilogram = parts per million (ppm)

BQL = Below Quantitation Limits





# RESEARCH & ANALYTICAL LABORATORIES, INC.

Analytical/Process Consultations



May 28, 2008

S & ME, Inc.  
3718 Old Battleground Avenue  
Greensboro, NC 27410  
Attention: Lyndal Butler

Project Name: Sanford Avenue    Project Number: 1584-07-070

I. Miscellaneous		EPA	P2-8-A	P2-13-A	P2-18-A	P2-23-A
<u>Parameter</u>	<u>Unit</u>	<u>Method</u>	<u>Results</u>	<u>Results</u>	<u>Results</u>	<u>Results</u>
pH	SU	150.1	7.46	6.80	6.78	6.61

Sample Number:	616816	616817	616818	616819
Sample Collected Date:	05/13/08	05/13/08	05/13/08	05/13/08
Sample Collected Time (Hrs):	1106	1117	1128	1135

< = Less than or below Detection Limit

---- = Not Available

SU = Standard Units

NELAC Certification Number: E87633

Client : RESEARCH & ANALYTICAL LAB  
106 SHORT STREET  
KERNERSVILLE, NC 27284  
Contact : CHRISTY PARRISH

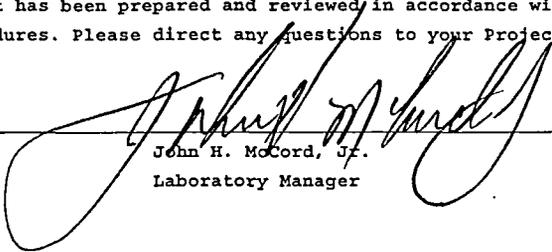
Project Number: 62822.00  
Report Date : May 21, 2008  
Page 2 of 5 Report ID: AF1223

### *Certificate of Analysis Report*

Sample ID	Client ID	Date Collected	Date Received
L08051506-01	616817 (P2-13-A)	05/13/2008 1117	05/15/2008
L08051506-02	616818 (P2-18-A)	05/13/2008 1128	05/15/2008
L08051506-03	616819 (P2-23-A)	05/13/2008 1135	05/15/2008

This data report has been prepared and reviewed in accordance with standard operating procedures. Please direct any questions to your Project Manager.

Reviewed by

  
John H. McCord, Jr.  
Laboratory Manager

# DAVIS FLOYD

## LABORATORY ANALYSIS REPORT

NELAC Certification Number: E87633

Client : RESEARCH & ANALYTICAL LAB  
106 SHORT STREET  
KERNERSVILLE, NC 27284  
Contact : CHRISTY PARRISH

Project Number: 62822.00

Report Date : May 21, 2008

Page 3 of 5 Report ID: AF1223

### Certificate of Analysis

Client ID: 616817 (P2-13-A)  
Sample ID: L08051506-01

Date Collected: 05/13/2008 1117  
Date Received : 05/15/2008

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
<i>Matrix : Soil/SL/SW</i>							
<b>Trace Metals</b>							
<i>SW846 7196A</i>							
CHROMIUM, HEXAVALENT SOLUBLE	<	0.54 U	0.54	mg/kg dry	DHR	05/15/2008	1105
<b>Wet Chemistry</b>							
<i>SM 2540G</i>							
MOISTURE, PERCENT	13.5		0.050	%	KRM	05/15/2008	1703

# DAVIS FLOYD

## LABORATORY ANALYSIS REPORT

NELAC Certification Number: E87633

Client : RESEARCH & ANALYTICAL LAB  
106 SHORT STREET  
KERNERSVILLE, NC 27284  
Contact : CHRISTY PARRISH

Project Number: 62822.00  
Report Date : May 21, 2008  
Page 4 of 5 Report ID: AF1223

### Certificate of Analysis

Client ID: 616818 (P2-18-A)  
Sample ID: L08051506-02

Date Collected: 05/13/2008 1128  
Date Received : 05/15/2008

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
<i>Matrix : Soil/SL/SW</i>							
<b>Trace Metals</b>							
<i>SW846 7196A</i>							
CHROMIUM, HEXAVALENT SOLUBLE	<	0.49	U	0.49	mg/kg dry	DHR	05/15/2008 1106
<b>Wet Chemistry</b>							
<i>SM 2540G</i>							
MOISTURE, PERCENT	13.5		0.050	%	KRM	05/15/2008	1704

# DAVIS FLOYD

## LABORATORY ANALYSIS REPORT

NELAC Certification Number: E87633

Client : RESEARCH & ANALYTICAL LAB  
106 SHORT STREET  
KERNERSVILLE, NC 27284  
Contact : CHRISTY PARRISH

Project Number: 62822.00  
Report Date : May 21, 2008  
Page 5 of 5 Report ID: AF1223

### Certificate of Analysis

Client ID: 616819 (P2-23-A)  
Sample ID: L08051506-03

Date Collected: 05/13/2008 1135  
Date Received : 05/15/2008

Parameter	Result	Qual	RDL	Units	Analyst	Date	Time
<i>Matrix : Soil/SL/SW</i>							
<b>Trace Metals</b>							
<i>SW846 7196A</i>							
CHROMIUM, HEXAVALENT SOLUBLE	<	0.54	U	0.54	mg/kg dry	DHR	05/15/2008 1107
<b>Wet Chemistry</b>							
<i>SM 2540G</i>							
MOISTURE, PERCENT	7.0		0.050	%	KRM	05/15/2008	1705

### Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>RDL</b>	Report Detection Limit	<b>MDL</b>	Method Detection Limit
<b>TIC</b>	Tentatively Identified Compounds	<b>MSL</b>	Mean Sea Level
<b>TNTC</b>	Too Numerous To Count	<b>MPN</b>	Most Probable Number
<b>BTU</b>	British Thermal Units	<b>NTU</b>	Nephelometric Turbidity Units
<b>C</b>	Degrees Centigrade	<b>F</b>	Degrees Fahrenheit
<b>umhos/cm</b>	micromhos/cm	<b>meq</b>	milliequivalents
<b>kg</b>	kilogram(s)	<b>g</b>	gram(s)
<b>mg</b>	milligram(s)	<b>ug</b>	microgram(s)
<b>l</b>	liter(s)	<b>ml</b>	milliliters(s)
<b>ul</b>	microliter(s)	<b>m3</b>	cubic meter(s)
<b>lb</b>	pound(s)	<b>ft3</b>	cubic foot(feet)
<b>ft</b>	foot(feet)	<b>su</b>	Standard Units

**mg/l, mg/kg** Units of concentration in milligrams per liter for liquids and milligrams per kilogram for solids. Also referred to as Parts Per Million or "ppm" when the assumption is made that the specific gravity or density is one (1 g/ml).

**ug/l, ug/kg** Units of concentration in micrograms per liter for liquids and micrograms per kilograms for solids. Also referred to as Parts Per Billion or "ppb" when the assumption is made that the specific gravity or density is one (1 g/ml).

**wt%** Units of concentration expressed on a weight/weight basis (e.g. grams per 100 grams).

**<** Less Than – The number following the sign is the limit of quantitation, the smallest amount of analyte that can be reliably determined using this test.

**>** Greater Than

#### Data Qualifiers:

- A** TIC is a possible aldol-condensation product resulting from sample extraction, (Organics)
- B** Analyte also detected in the method blank.
- C** Amendable Cyanide is a negative value due to an unknown interference.
- E** Estimated concentration due to interference.
- J** Estimated value below RDL or estimated value for TIC. (Organics)
- P** Concentration difference between primary and confirmation columns >25%. (Organics) The lower result is reported.
- U** Final concentration is below the detection limit.
- X** Matrix interference which requires dilution or prevents the reporting of a result. Detection limits have been adjusted where applicable.
- \*** Defined in report comments.

Solid samples (i.e. soil, sludge, and solid waste) are reported on a dry weight basis unless otherwise noted.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or biological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of the material involved, the test results will be meaningless. If you have any questions regarding the proper techniques of collecting samples, please contact us. However, we cannot be held responsible for sample integrity unless sampling has been performed by a member of our staff.

**REPRESENTATION AND LIMITATION OF LIABILITY** – The accuracy of all analytical results for samples begins as it is received by the laboratory. Integrity of the sample begins at the time it is placed in the possession of authorized Davis & Floyd, Inc. Laboratories personnel. All other warranties, expressed or implied, are disclaimed. Liability is limited to the cost of the analysis.



