

**PRELIMINARY SITE ASSESSMENT
JOHNSON CONCRETE COMPANY
KLUMAC ROAD AND NORTH CAROLINA/NORFOLK SOUTHERN RAILROAD
INTERSECTION
SALISBURY, ROWAN COUNTY, NORTH CAROLINA
NCDOT PROJECT: U-3459
WBS ELEMENT: 34951.1.1**

Prepared for:

NC Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

Prepared by:

Solutions-IES
1101 Nowell Road
Raleigh, North Carolina 27607
www.solution-IES.com

Solutions-IES Project No. 3210.06A3.NDOT

August 25, 2006

Dottie Schmitt

Dottie R. Schmitt
Environmental Specialist



Sheri L. Knox, P.E.
Project Manager

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	BACKGROUND AND SITE DESCRIPTION	1
3.0	FIELD ACTIVITIES	2
4.0	SAMPLING RESULTS	4
5.0	DISCUSSION AND CONCLUSIONS.....	4
6.0	WEBSITE REFERENCES	6

TABLES

TABLE 1 – SUMMARY OF FIELD SCREENING RESULTS

TABLE 2 – SUMMARY OF LABORATORY ANALYTICAL RESULTS

TABLE 3 – COMPARISON OF AREA CHROMIUM SOIL CONCENTRATIONS

FIGURES

FIGURE 1 – SITE LOCATION MAP

FIGURE 2 – SITE MAP

FIGURE 3 – BORING LOCATIONS

APPENDICES

APPENDIX A – PHOTOGRAPH

APPENDIX B – GEOPHYSICAL INVESTIGATION

APPENDIX C – BORING LOGS

APPENDIX D – LABORATORY ANALYTICAL REPORTS

APPENDIX E – GPS COORDINATES

1.0 INTRODUCTION

The North Carolina Department of Transportation (NCDOT) is considering shifting the alignment of Klumac Road (NC SR-2541) located in Salisbury, Rowan County, North Carolina to the west of its present location. If the alignment of Klumac Road is shifted, it will be necessary for the NCDOT to acquire properties located within the proposed right-of-way. On May 24, 2006, Solutions-IES submitted a proposal to conduct limited Preliminary Site Assessments (PSAs) for five parcels of land located within the proposed right-of-way that are of concern to the NCDOT. This report summarizes the results of field activities conducted during the PSA for a portion of the property identified by NCDOT as Johnson Concrete Company (**Figure 1**). The portion of the right-of-way, or Study Area, for this site is located east of the fence line separating the Johnson Concrete Company from the Former FCX Chemical located west of the fence line (**Figure 2**). The property itself is presently owned by Johnson Concrete Company. The scope of work executed at the site was performed in general accordance with Solutions-IES proposal NC06527P dated May 24, 2006, and was initiated based on a Notice to Proceed issued by the NCDOT Geotechnical Engineering Unit on June 20, 2006 under contract 7000007053, dated June 5, 2006.

2.0 BACKGROUND AND SITE DESCRIPTION

The subject property is located at the southwestern corner of Klumac Road and North Carolina Railroad/Norfolk Southern Railroad within the City Limits of Salisbury, Rowan County, North Carolina (site). According to information provided by the NCDOT, the parcel currently houses a manufacturing facility that produces concrete masonry products. Located on the 5-acre site are multiple buildings that house various aspects of the concrete manufacturing process. Concrete masonry products are also stored on site and partially block access to the Study Area. The surface of the site is covered with a mixture of concrete, asphalt and grass. Solutions-IES understands through NCDOT that underground storage tanks (USTs) are not currently present at the property. Two Duke Energy electrical towers are located in the vicinity of the Study Area. One tower is located in the southwestern corner of the property and one tower is located in the northern edge of the Study Area. A photograph of the Study Area at the site is presented in **Appendix A**. A former fertilizer plant known as the Former FCX Chemical Plant is located adjacent to and west of the Study Area.

Solutions-IES reviewed information documented in a variety of websites to assist in identifying potential contaminants of interest (COIs) that could impact the right-of-way or easement for each of the properties

investigated. Section 6.0 provides a summary of the websites utilized in this information review. Cleaning solvents and concrete additives are typically used in the concrete manufacturing process, and petroleum fuels were typically used during operations. Additionally, a petroleum fuel release from a UST occurred at the Johnson Concrete facility (Incident #17922). Therefore, there is a possibility that these constituents may have been released from this site to the subsurface in the vicinity of the proposed right-of-way. Based on this information, Solution-IES elected to analyze for parameters that would be representative of possible COIs from a typical concrete manufacturing facility (see Section 6.0, References 1, 2, 3, 4, 5, 6, 7, 10, 11, and 12). Because the Johnson Concrete Company Study Area is located immediately adjacent to the Former FCX facility (Figure 2), analytical parameters that would be representative of typical fertilizer plant COIs were also included in the analytical parameters for the Johnson Concrete Study Area (see Section 6.0, References 14, 15, and 16).

3.0 FIELD ACTIVITIES

Prior to mobilizing to the site to conduct subsurface sampling, Solutions-IES contacted North Carolina One Call and the City of Salisbury Public Utilities Department to locate underground utilities in the Study Area of the site. Pyramid Environmental & Engineering, P.C. (Pyramid) was contracted to perform an electromagnetic survey of the subsurface in the proposed right-of-way and easement area. Pyramid surveyed the Study Area on June 26 and June 29, 2006. The electromagnetic survey equipment (EM61) identified various magnetic anomalies within the Study Area, and Pyramid returned to the Study Area to perform a ground penetrating radar (GPR) survey utilizing a “Geophysical Survey Systems SIR 2000” instrument. Results of the surveys suggested the locations of buried utilities along the northern portion of the site, but did not indicate the presence of buried metallic USTs. The EM61 images are included on **Figures 6 and 7 in Appendix B**. A GPR image was not included in the geophysical report for the site.

After reviewing the geophysical report, Solutions-IES mobilized to the site and obtained soil samples from locations previously identified by NCDOT within the Study Area. These activities were conducted on July 17 and 18, 2006. A total of eight soil borings (borings JOHNB1 through JOHNB8) were collected from the Study Area locations depicted on **Figure 3**. These borings were labeled “JOHN” for Johnson Concrete Company. Soil boring JOHNB1 was advanced to a total depth of 16 feet below ground surface (ft bgs) while borings JOHNB2 through JOHNB8 were advanced to a total depth of 8 ft bgs. Soil moisture in samples collected from the borings suggests a depth to groundwater between 8 and 10 ft bgs.

Therefore, soil borings advanced after JOHNB1 were terminated at the estimated depth to groundwater. All borings were advanced with a truck-mounted Geoprobe[®]. Borings JOHNB1 through JOHNB8 were generally spaced approximately 100 feet apart on the north-south axis of the site parallel to the property boundary shared with the Former FCX Chemical property. Borings were located between 20 and 28 feet from the FCX property line (**Figure 3**). When combined with locations of the soil borings completed on the Former FCX Chemical property (which were also installed at approximately 100 foot intervals east of the property line) the final sampling scheme provided coverage approximately every 50 feet along the proposed easement.

Soil samples were obtained from each boring using a MacroCore[®] sampler fitted with single-use, disposable polyvinyl chloride liners. Each liner was four feet in length. Upon retrieval, each soil sample was split into two aliquots of two feet in length. The aliquots were placed in separate resealable plastic bags. One bag was placed on ice for possible laboratory analysis, and the remaining bag was sealed and placed at ambient temperature for field screening with a flame ionization detector (FID).

Volatile organic compounds (VOCs) were allowed to accumulate in the headspace of each bag for approximately 20 minutes, after which time each sealed bag was scanned with the FID. The FID readings were entered on the boring logs along with the soil description and indications of staining or odors, if present. Logs for each boring are presented in **Appendix C**. Soils from the Johnson Concrete Company Study Area generally consisted of clayey silt (ML) and silty clay (CL).

Headspace screening of the soil samples revealed the presence of volatile vapors in several of the samples screened with the FID. Concentrations ranged from 0.1 part per million (ppm) (JOHNB5, 0-8 ft bgs) to 84.3 ppm (JOHNB3, 6-8 ft bgs). These measurements are presented in **Table 1**. No distinguishable odors were noted in these soil samples.

Soil samples for laboratory analysis were retained from each boring at the sample intervals identified in **Table 1**. These samples were selected for analysis as they presented the highest FID measurements within the borings, or, if no volatile vapors were present, were obtained from the deepest interval. The samples were placed in laboratory-supplied containers and stored on ice pending shipment to Pace Analytical Services, Inc. in Huntersville, NC. Sample information was recorded on the chain-of-custody and the samples submitted for chemical analysis of select metals (arsenic, barium, cadmium, chromium,

lead, selenium, and silver) by EPA Method 6010, mercury by EPA Method 7471, ammonia by Modified EPA Method 350.1, nitrate by Modified EPA Method 353.2, pH by EPA Method 9045, VOCs by EPA Method 8260, semi-volatile organic compounds (SVOCs) by EPA Method 8270, organochlorine pesticides by EPA Method 8081, formaldehyde by EPA Method 8315A, and chlorinated herbicides by EPA Method 8151A.

4.0 SAMPLING RESULTS

The analytical data indicate the presence of metals, including arsenic, barium, chromium, lead and mercury in concentrations above the laboratory reporting limit. Total chromium is present in concentrations exceeding the North Carolina Department of Environment and Natural Resources (NCDENR) Soil-to-Groundwater Maximum Soil Contamination Concentrations (MSCCs) in soil samples from borings JOHNB4, JOHNB7 and JOHNB8. Toluene was detected in a single sample (JOHNB6 4-6) at a concentration of 0.031 mg/kg, but did not exceed the MSCC of 7 mg/kg. Nitrate was detected in two samples (JOHNB7 and JOHN B8) at concentrations of 8.4 and 46 mg/kg, respectively. Analytical data for the remaining samples revealed no SVOCs, herbicides, pesticides, formaldehyde, or ammonia in concentrations above the laboratory reporting limits. Soil pH indicates that the soil is acidic and falls outside of the neutral range of 6 to 8 in soil samples from borings JOHNB1, JOHNB2, JOHNB5, JOHNB7 and JOHNB8 located on the northern portion of the Study Area. These analytical data are summarized in **Table 2**. Laboratory reports associated with these samples are presented in **Appendix D**.

5.0 DISCUSSION AND CONCLUSIONS

The geophysical survey conducted at the site did not reveal buried metallic USTs within the Study Area. The survey did suggest metallic anomalies in locations consistent with the presence of buried utility lines or conduits and miscellaneous metal objects.

Solutions-IES advanced eight soil borings at the site to determine the presence or absence of COIs in the Study Area, as well as document soil conditions. Soil samples obtained from the borings and screened with an FID revealed the presence of volatile vapors in some samples at concentrations ranging from 0.1 to 84.3 ppm. However, the analytical data for soil samples submitted for chemical analysis showed that VOCs, SVOCs, herbicides, pesticides formaldehyde, and ammonia were not detectable, with the exception of one report of toluene in JOHNB6 4-6, which did not exceed the regulatory limit.

Nitrate was detected in two samples (JOHNB7 and JOHNB8) above the laboratory reporting limit. However, there is no applicable regulatory limit for the concentration of nitrate in soil. Additionally, the pH of the soil samples collected on the northern end of the site was more acidic than samples collected from the rest of the Study Area.

The results revealed the presence of select metals, with chromium detected at concentrations exceeding the MSCC standard in three of the seven samples submitted for analysis. The analytical method utilized for the chromium analyses did not speciate trivalent and hexavalent chromium. Regardless, these results do not exceed the North Carolina Industrial/Commercial Soil Cleanup Level for chromium, which is 613,200 mg/kg for trivalent chromium, and 1,226 mg/kg for hexavalent chromium, as provided in the North Carolina Underground Storage Tank Section “Guidelines for Assessment and Corrective Action” (UST Guidelines) (April 2001). Data collected from other Study Areas along the Grade Separation at Klumac Road suggest that the range of chromium detected in the Johnson Concrete Company area is similar to chromium concentrations detected in surrounding properties. Chromium analyses were also performed on soil borings collected from the Drive Shaft Shop Study Area and the Former FCX Chemical Study Areas. These properties are located north and west of the Johnson Concrete Company (**Figure 2**). **Table 3** provides a summary of data from these three locations. Given the range of chromium concentrations (14 to 74 mg/kg) and average concentration across the area soils (34 ± 17 mg/kg), it is likely that most of the chromium results for Johnson Concrete Company reflect background concentrations naturally present in area soils. Only the concentration in JOHNB4 6-8 (74mg/kg) appears slightly higher than the typical concentration of chromium found across the site. However, additional investigation may be necessary to confirm the background concentrations of chromium.

Results and conclusions summarized within this report are similar to those discussed within the Former FCX Chemical Report submitted as part of the Klumac Road realignment project. See the FCX Chemical PSA Report for details regarding soil sampling and analysis performed at this property.

6.0 WEBSITE REFERENCES

- 1) <http://arcims.webgis.net/nc/rowan/default.asp>
- 2) <http://ust.enr.state.nc.us/database.html>
- 3) <http://h2o.enr.state.nc.us/aps/gpu.htm>
- 4) <http://www.wastenotnc.org/sfhome/ihsbrnch.htm>
- 5) http://h2o.enr.state.nc.us/su/State_SW_Mngt_Program.htm
- 6) <http://www.epa.gov/epaoswer/osw/hazwaste.htm>
- 7) <http://www.epa.gov/superfund/sites/cursites/index.htm>
- 8) http://oaspub.epa.gov/enviro/multisys2.get_list_tri?tri_fac_id=47201NTNDR8251S
- 9) <http://www.epa.gov/compliance/resources/publications/assistance/sectors/notebooks/stclglsln.pdf>
- 10) <http://matse1.mse.uiuc.edu/concrete/prin.html>
- 11) <http://www.lib.ncsu.edu:2420/knovel2/Toc.jsp?BookID=356&VerticalID=0>
- 12) http://cementamericas.com/mag/cement_cement_concrete_environment/index.html
- 13) <https://www.esa.doc.gov/comments%20dept%20of%20commerce%20on%20gas%20prices%20i mpact%20-%20may%2016%20-%20ez.doc>
- 14) <http://www.esa.org/science/Issues/FileEnglish/issue3.pdf>
- 15) <http://pirg.uwaterloo.ca/download/docs/rubber.html>
- 16) www.sbcfire.org/hazmat/env_terms.asp
- 17) http://www.atsdr.cdc.gov/HAC/PHA/trent/tre_p1.html
- 18) http://www.cpuc.ca.gov/Environment/info/esa/corona/corona_hazards.htm

TABLES

TABLE 1
Summary of Field Screening Results
Johnson Concrete Company
Salisbury, Rowan County, NC
WBS Element: 34951.1.1, TIP #: U-3459
Solutions-IES Project No. 3210.06A3.NDOT
Sample Collection Date: 7/17/06 and 7/18/06

Sample Depth Below Ground Surface	Soil Borings							
	JOHNB1	JOHNB2	JOHNB3	JOHNB4	JOHNB5	JOHNB6	JOHNB7	JOHNB8
	FID Reading (ppm)							
0 - 2 feet	ND	ND	ND	ND	0.1	0.6	0.6	1.7
2 - 4 feet	ND	ND	ND	ND	0.1	0.9	3.4	1.8
4 - 6 feet	ND	ND	2.9	0	0.1	26.5	2.2	2.3
6 - 8 feet	ND	ND	84.3	ND	0.1	2.0	8.1	1.3
8 - 10 feet	ND	NS	NS	NS	NS	NS	NS	NS
10 - 12 feet	ND	NS	NS	NS	NS	NS	NS	NS
12 - 14 feet	ND	NS	NS	NS	NS	NS	NS	NS
14 - 16 feet	ND	NS	NS	NS	NS	NS	NS	NS

NOTES:

FID = Flame Ionization Detector

FID readings were obtained with a Photovac MicroFID Flame Ionization Detector

ND = Not detected

NR = No recovery

NS = No sample taken

ppm = parts per million

Samples denoted by shaded cells were submitted for laboratory analysis.

TABLE 2
Summary of Laboratory Analytical Results
Johnson Concrete Company
Salisbury, Rowan County, NC
WBS Element: 34951.1.1, TIP #: U-3459
Solutions-IES Project No. 3210.06A3.NDOT

LOCATION			JOHNSON CONCRETE COMPANY							
Sample ID			JOHNB1 14-16	JOHNB2 6-8	JOHNB3 6-8	JOHNB4 6-8	JOHNB5 6-8	JOHNB6 4-6	JOHNB7 6-8	JOHNB8 4-6
Depth (ft bgs)			14-16	6-8	6-8	6-8	6-8	4-6	6-8	4-6
Date Collected			7/17/2006	7/17/2006	7/18/2006	7/18/2006	7/18/2006	7/18/2006	7/17/2006	7/17/2006
Parameter	Regulatory Limit ¹	Units								
SVOCs (EPA Method 3545 / 8270)										
All results less than laboratory reporting limit										
Herbicides (EPA Method 3550/8151A)										
All results less than laboratory reporting limit										
Pesticides (EPA Method 3545/8081)										
All results less than laboratory reporting limit										
VOCs (EPA Method 5035 / 8260)										
Toluene	7	mg/kg	<0.0065	<.0065	<0.0061	<0.0056	<0.0055	0.031	<0.0073	<0.008
METALS (EPA Method 7471 for Mercury, EPA Method 3050 / 6010 for all others)										
Arsenic	NS	mg/kg	1.4	2.9	1.3	2.0	1.2	1.3	1.9	2.1
Barium	848	mg/kg	110	62	120	35	110	26	39	51
Chromium	27	mg/kg	14	27	8.2	74	13	23	44	44
Lead	270	mg/kg	3.9	14	4.3	8.2	6.3	6.9	8.2	8.5
Mercury	NS	mg/kg	0.022	0.032	0.0084	0.039	0.026	0.026	0.024	0.023
OTHER ANALYSES										
Formaldehyde	NS	mg/kg	<1.0 H	<1.1 H	<1.2 H	<1.3 H	<1.4 H	<1.5 H	<1.6 H	<1.7 H
Nitrogen, Nitrate	NS	mg/kg	<12	<8.1	<7.9	<8.6	<9.7	<6.5	8.4	46
pH	NS	units	4.54	4.71	7.21	7.18	5.35	6.66	4.33	4.10

NOTES:

- Bold values indicate detected concentrations
- ft bgs = feet below ground surface
- H = holding time for preparation or analysis exceeded
- mg/kg = milligrams per kilogram
- MSCCs = Soil-to-Groundwater Maximum Soil Contaminant Concentrations
- NS = No standard
- Shaded values exceed Regulatory Limits
- SVOCs = Semi Volatile Organic Compounds
- VOCs = Volatile Organic Compounds

¹Regulatory limit for toluene and inorganic compounds is the MSCC from "Guidelines for Assessment and Corrective Action", North Carolina Underground Storage Tank Section, State of North Carolina Department of Environment and Natural Resources [NCDENR] Division of Waste Management, April 2001.

TABLE 3
Comparison of Area Chromium Soil Concentrations
Salisbury, Rowan County, NC
WBS Element: 34951.1.1, TIP #: U-3459
Solutions-IES Project No. 3210.06A3.NDOT

Study Area Location	Sample Date	Sample ID	Sample Depth	Chromium Concentrations	Residential Clean up Levels, Total Chromium ¹	Industrial /Commercial Clean up Levels, Total Chromium ¹	Residential Clean up Levels, Trivalent Chromium ¹	Industrial /Commercial Clean up Levels, Trivalent Chromium ¹	Residential Clean up Levels, Hexavalent Chromium ¹	Industrial/Commercial Clean up Levels, Hexavalent Chromium ¹
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Drive Shaft Shop	7/17/2006	INDB1 6-8	6 - 8	61	47	1226	23460	613200	47	1226
Drive Shaft Shop	7/17/2006	INDB2 6-8	6 - 8	46	47	1226	23460	613200	47	1226
Drive Shaft Shop	7/17/2006	INDB3 4-6	4 - 6	27	47	1226	23460	613200	47	1226
Drive Shaft Shop	7/17/2006	INDB4 4-6	4 - 6	31	47	1226	23460	613200	47	1226
Drive Shaft Shop	7/17/2006	INDB5 4-6	4 - 6	23	47	1226	23460	613200	47	1226
Drive Shaft Shop	7/17/2006	INDB6 4-6	4 - 6	43	47	1226	23460	613200	47	1226
Drive Shaft Shop	7/17/2006	INDB7 6-8	6 - 8	24	47	1226	23460	613200	47	1226
Johnson Concrete Plant	7/17/2006	JOHNB1 14-16	14 - 16	14	47	1226	23460	613200	47	1226
Johnson Concrete Plant	7/17/2006	JOHNB2 6-8	6 - 8	27	47	1226	23460	613200	47	1226
Johnson Concrete Plant	7/18/2006	JOHNB3 6-8	6 - 8	8.2	47	1226	23460	613200	47	1226
Johnson Concrete Plant	7/18/2006	JOHNB4 6-8	6 - 8	74	47	1226	23460	613200	47	1226
Johnson Concrete Plant	7/18/2006	JOHNB5 6-8	6 - 8	13	47	1226	23460	613200	47	1226
Johnson Concrete Plant	7/18/2006	JOHNB6 4-6	4 - 6	23	47	1226	23460	613200	47	1226
Johnson Concrete Plant	7/18/2006	JOHNB7 6-8	6 - 8	44	47	1226	23460	613200	47	1226
Johnson Concrete Plant	7/18/2006	JOHNB8 4-6	4 - 6	51	47	1226	23460	613200	47	1226
Former FCX Chemical Plant	7/17/2006	FCXB1 6-8	6 - 8	16	47	1226	23460	613200	47	1226
Former FCX Chemical Plant	7/17/2006	FCXB2 6-8	6 - 8	52	47	1226	23460	613200	47	1226
Former FCX Chemical Plant	7/17/2006	FCXB3 6-8	6 - 8	42	47	1226	23460	613200	47	1226
Former FCX Chemical Plant	7/17/2006	FCXB4 6-8	6 - 8	24	47	1226	23460	613200	47	1226
Former FCX Chemical Plant	7/17/2006	FCXB5 6-8	6 - 8	42	47	1226	23460	613200	47	1226

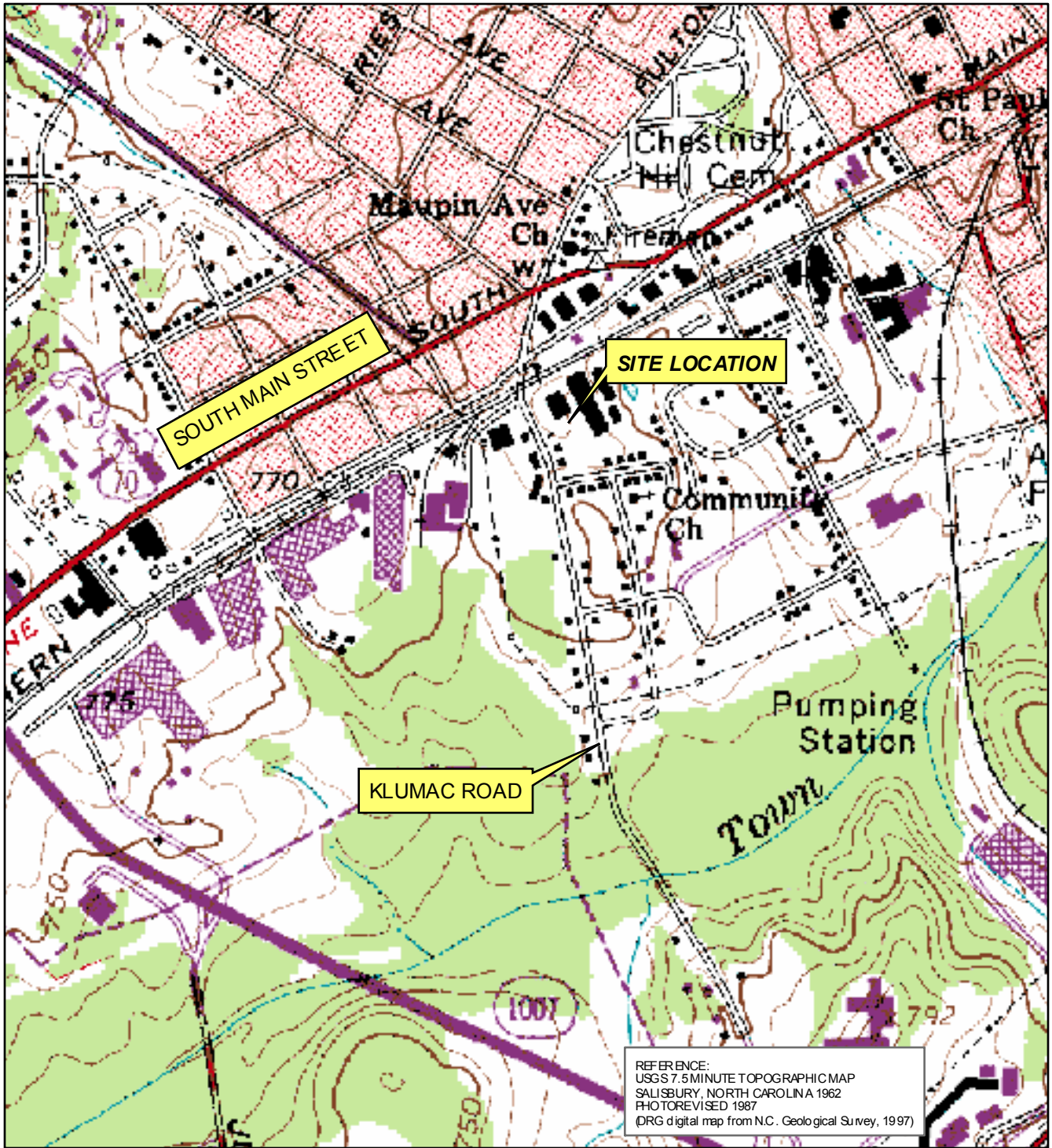
Average chromium concentration = (mg/kg)	34
Standard deviation	17

NOTES:

- Bold values indicate detected concentrations
- ft bgs = feet below ground surface
- mg/kg = milligrams per kilogram

¹ Residential and Industrial/Commercial soil clean up levels from Table 4 of "Guidelines for Assessment and Corrective Action", North Carolina Underground Storage Tank Section, State of North Carolina Department of Environment and Natural Resources Division of Waste Management, April 2001.

FIGURES



1:10,000

SITE LOCATION MAP

JOHNSTON CONCRETE COMPANY
 GRADE SEPARATION AT KLUMAC ROAD
 KLUMAC ROAD
 SALISBURY, ROWAN COUNTY, NC
 WBS ELEMENT 31951.1.1; STATE PROJECT U-3459



1101 Nowell Road, Raleigh, NC 27609 Phone (919) 873-1060, Fax (919) 873-1074	
Created by: RT	Projected: 3210.06A3.NDOT
Checked by: SK	Date: AUGUST 2006
File: Figure 1.mxd	
Software: ESRI ArcMap 9.1	FIGURE 1

PROJECT NUMBER
321B.06A3.NOOT

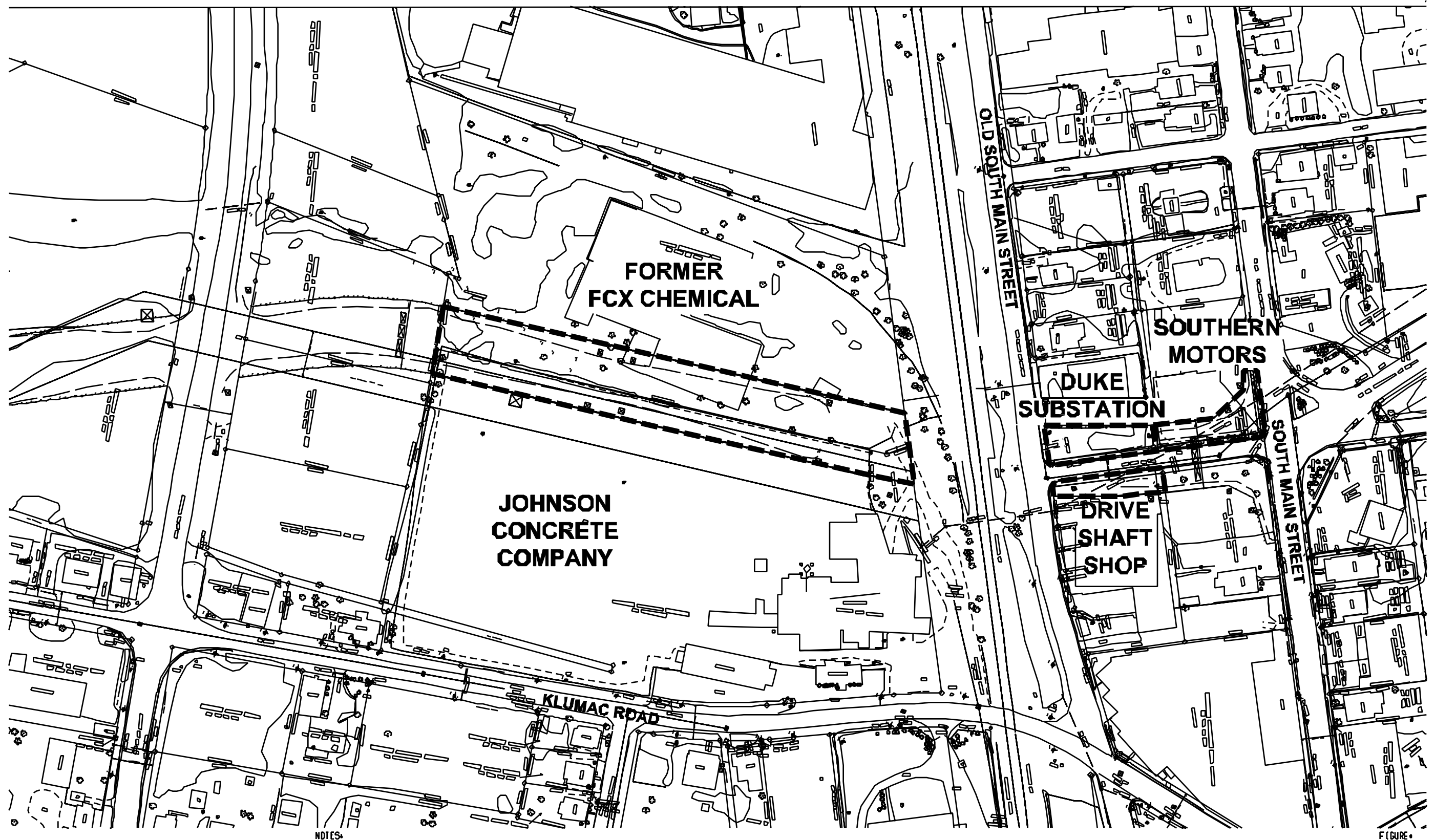
DRAFTER
RT

CHECKED BY
SK

PROJECT MANAGER
SK

DATE
AUGUST 2006

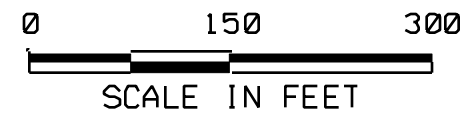
FILE
F102.DGN



NOTES

FIGURE

NOTES:



FILE FIG3.DGN DATE AUGUST 2006 PROJECT MANAGER SK CHECKED BY SK DRAFTER RT PROJECT NUMBER 3210.06R3.0001

ENKAY PROPERTIES, LLC
DB 834 PG 330

FORMER FCX CHEMICAL

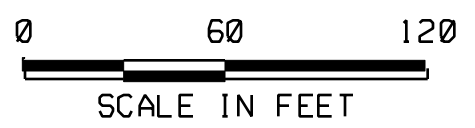
STUDY AREA

JOHNSON CONCRETE COMPANY

GR

LEGEND

SMB1  SOIL BORING LOCATION



JOHNSON CONCRETE COMPANY
GRADE SEPARATION AT KLUMAC ROAD
SALISBURY, ROWAN COUNTY, NC
WBS ELEMENT 31951.1.1; STATE PROJECT U-3459

SOIL BORING LOCATIONS

FIGURE-
3

APPENDIX A
PHOTOGRAPH



Photograph 1– View from south to north along Johnson Concrete / FCX property line.

APPENDIX B

GEOPHYSICAL INVESTIGATION

Pyramid Project # 2006-176

GEOPHYSICAL INVESTIGATION REPORT
GEOPHYSICAL SURVEYS FOR THE DETECTION OF METALLIC UST'S

Klumac Road Realignment Project
Salisbury, North Carolina
State Project Number 34951.1.1 (TIP # U3459)

July 14, 2006

Report prepared for: **Sheri Knox, PE**
Solutions Industrial & Environmental Services Inc.
1101 Nowell Rd.
Raleigh, NC 27607

Prepared by: 
Douglas Canavello, PG

PYRAMID ENVIRONMENTAL & ENGINEERING, P.C.
700 NORTH EUGENE ST.
GREENSBORO, NC 27401
(336) 335-3174

Solutions Industrial & Environmental Services Inc.
GEOPHYSICAL SURVEYS FOR THE DETECTION OF METALLIC UST'S
Klumac Road Realignment Project
State Project Number 34951.1.1 (TIP # U3459)

TABLE OF CONTENTS

- 1.0 INTRODUCTION
- 2.0 FIELD METHODOLOGY
- 3.0 DISCUSSION OF RESULTS
 - 3.1 East "A" Avenue Sites
 - 3.2 Johnson Concrete & Former FCX Chemical Sites
- 4.0 SUMMARY & CONCLUSIONS
- 5.0 LIMITATIONS

FIGURES

- Figure 1 Site Map & Photographs
- Figure 2 Geophysical Equipment
- Figure 3 East "A" Avenue Sites – Geophysical Survey Line Locations
- Figure 4 East "A" Avenue Sites – EM61 Bottom Coil Results
- Figure 5 East "A" Avenue Sites – EM61 Differential Results
- Figure 6 Johnson Concrete & FCX Chemical Sites – Geophysical Survey Line Locations
- Figure 7 Johnson Concrete & FCX Chemical Sites – EM61 Metal Detection Results

1.0 INTRODUCTION

Pyramid Environmental & Engineering, P.C. conducted geophysical investigations for Solutions Industrial & Environmental Services, Inc. during the period of June 26 through July 7, 2006, within the proposed Right-of-Way (ROW) areas at five sites along the proposed Klumac Road realignment project area in Salisbury, North Carolina. The work was done as part of the North Carolina Department of Transportation (NCDOT) road-widening project under State Project WBS Element 34951.1.1 (TIP # U-3459). The five sites are located along or adjacent to the intersection of Old South Main Street and East “A” Avenue in Salisbury.

Geophysical investigations were conducted across the eastern edges of the Southern Motors and the Duke Power substation properties located along the west side of East “A” Avenue. Investigations were also conducted along the western edge of The Drive Shaftshop property located along the east side of East “A” Avenue. The western edge of the former FCX Chemical site and the eastern portion of the Johnson Concrete facility, located south of Old Main Street, were also included in the geophysical investigation. The geophysical surveys were conducted to determine if unknown metallic underground storage tanks (USTs) were present beneath the proposed ROW area of each site.

Solutions Industrial and Environmental Services representative, Ms. Sheri Knox, PE, provided maps to Pyramid Environmental during the week of May 22, 2006 that outlined the geophysical survey area of each site. A site map and photographs showing the geophysical survey areas of the five sites are presented in **Figure 1**.

2.0 FIELD METHODOLOGY

Prior to conducting the geophysical investigations, a 10-foot by 20-foot survey grid was established across the proposed ROW areas of the five sites using water-based marking paint and pin flags. These marks were used as X-Y coordinates for location control when collecting the geophysical data and establishing base maps for the geophysical results.

The geophysical investigations consisted of electromagnetic (EM) induction-metal detection surveys and ground penetrating radar (GPR) surveys. The EM surveys were performed using a Geonics EM61-MK1 metal detection instrument. According to the manufacturer's specifications, the EM61 can detect a metal drum down to a maximum depth of approximately 8 feet. The EM61 data were digitally collected at each site along parallel northerly-southerly trending survey lines spaced five feet apart. The data were downloaded to a computer and reviewed in the office using the Geonics DAT61W and Surfer for Windows Version 7.0 software programs.

Contour plots of the EM61 bottom coil results and the EM61 differential results for each site are included in this report. The bottom coil results represent the most sensitive component of the EM61 instrument and detect metal objects regardless of size. The bottom coil response can be used to delineate metal conduits or utility lines, small, isolated metal objects, and areas containing insignificant metal debris.

The differential results are obtained from the difference between the top and bottom coils of the EM61 instrument. The differential results focus on the larger metal objects such as drums and USTs and ignore the smaller insignificant metal objects.

GPR surveys were conducted across selected EM61 differential anomalies and steel-reinforced concrete using a GSSI SIR-2000 unit equipped with a 400 MHz antenna. GPR data were digitally collected in a continuous mode along X and/or Y survey lines, spaced two to five feet apart using a vertical scan of 512 samples, at a rate of 48 scans per second. An 80 MHz high pass filter and an 800 MHz low pass filter were used during data acquisition with the 400 MHz antenna. GPR data were collected down to a maximum depth of approximately five feet, based on an estimated two-way travel time of 10 nanoseconds per foot.

The GPR data were downloaded to a field computer and later reviewed in the office using Radprint software. The locations of GPR survey areas or individual GPR survey lines are shown as dashed, purple rectangles or solid purple lines, respectively on the EM61 differential contour plots. Photos of

the EM61 and GPR instruments are shown in **Figure 2**. During the weeks of June 26 and July 10, 2006, preliminary contour plots of the EM61 bottom coil and the differential results were emailed to Ms. Knox and Ms. Heather Markell.

3.0 DISCUSSION OF RESULTS

3.1 East Avenue “A” Sites

The East Avenue “A” sites consist of the geophysical survey areas across portions of the Southern Motors, Duke Power substation, and The Driveshaft Shop properties. **Figure 3** shows the geophysical survey area and the geophysical survey lines across the above three properties. The red dots on the plot represent the approximate locations of the EM61 metal detection survey lines. Each dot represents a data point location. The purple lines represent the approximate locations of the GPR survey lines that were acquired across selected EM61 anomalies and areas containing steel reinforced concrete.

The bottom coil results and the differential results are presented in **Figures 4 and 5**, respectively. The linear EM61 bottom coil anomalies intersecting grid coordinates X=40 Y=88, X=40 Y=380, X=60 Y=62, X=60 Y=120, X=64 Y=360, X=70 Y=250, X=70 Y=287, and X=120 Y=114, are probably in response to buried utility lines or conduits. The linear anomaly intersecting grid coordinates X=45 Y=180, is probably in response to the metal fence that surrounds the Duke Power substation property. The majority of the remaining bottom coil anomalies are probably in response to known cultural features such as manhole covers, storm sewer grates, and steel reinforced concrete.

GPR surveys conducted across the differential anomalies centered near grid coordinates X=5 Y=202, X=40 Y=237, and X=73 Y=390, suggest the anomalies are in response to miscellaneous metal debris or conduits. GPR surveys conducted across the concrete pavement centered near grid coordinates X=15 Y=410, and X=115 Y=160, suggest the metal detection anomalies recorded at these areas are probably in response to steel reinforcement in the concrete. The geophysical

investigation did not detect the presence of buried metallic USTs within the surveyed areas of the Southern Motors, The Driveshaft Shop and the Duke Power substation properties.

3.2 Johnson Concrete & Former FCX Chemical Sites

Figure 6 shows the geophysical survey area across the western portion of the Johnson Concrete facility and the eastern edge of the former FCX Chemical property. Similar to Figure 3, the red dots on the plot represent the approximate locations of the EM61 metal detection survey lines. Each dot represents a data point location. The purple lines represent the approximate locations of the GPR survey lines that were acquired across selected EM61 anomalies and areas containing steel reinforced concrete. The plot shows that nearly half of the proposed ROW area on the Johnson Concrete property contains concrete culverts, equipment and other supplies that obstructed the geophysical investigation.

The bottom coil results and the differential results for the Johnson Concrete and former FCX Chemical properties are presented in **Figure 7**. The linear EM61 bottom coil anomaly intersecting grid coordinates X=80 Y=750, is probably in response to a buried utility line or conduit. The numerous bottom coil anomalies located around X=20 Y=270, and X=90 Y=680, are probably in response to buried, miscellaneous, metal debris or objects. The remaining anomalies are probably in response to adjacent supplies, surface equipment or steel reinforced concrete.

GPR surveys conducted across the large steel reinforced concrete slab and the adjacent concrete footing centered near grid coordinates X=25 Y=380, and X=17 Y=530, respectively, suggest that these two areas do not contain metallic USTs. GPR surveys conducted across the EM61 differential anomalies centered near grid coordinates X=67 Y=385, X=85 Y=690, and X=102 Y=270, suggest that the metal detection anomalies are probably in response to miscellaneous metal debris. The

geophysical investigation results suggest the surveyed portions of the Johnson Concrete facility and the former FCX Chemical property do not contain buried metallic USTs.

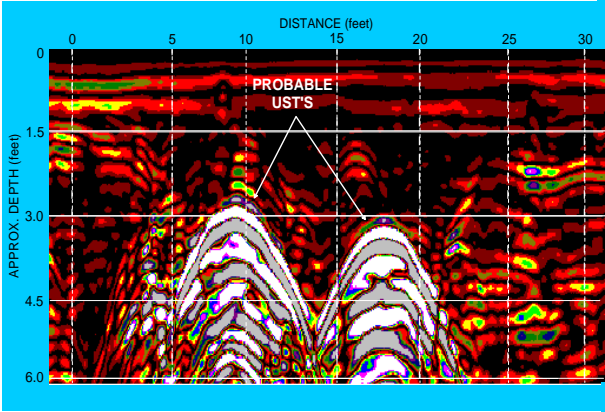
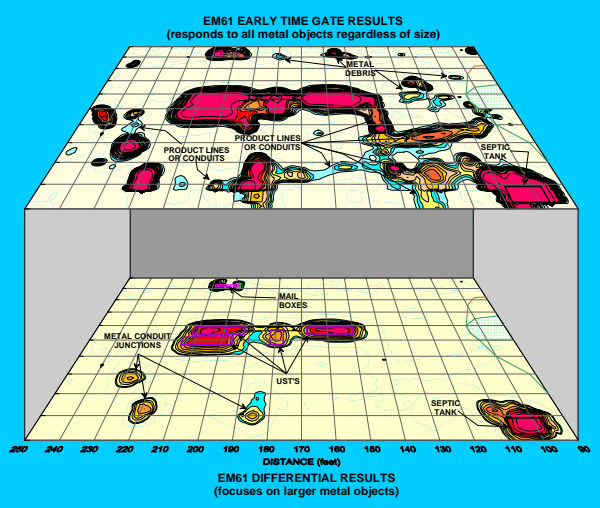
4.0 SUMMARY & CONCLUSIONS

Our evaluation of the EM61 and GPR data collected across the proposed ROW areas at the Klumac Road Realignment site located along Old South Main Street and East “A” Avenue in Salisbury, North Carolina provides the following summary and conclusions:

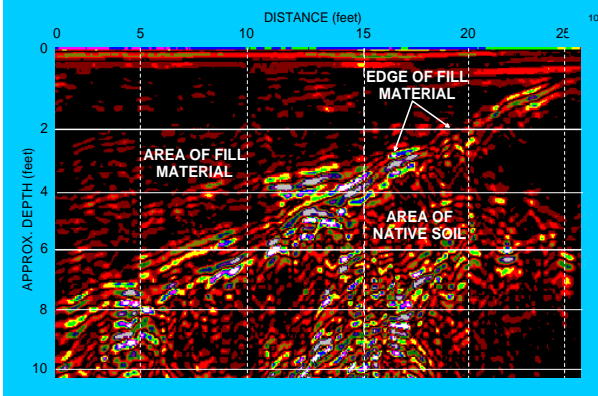
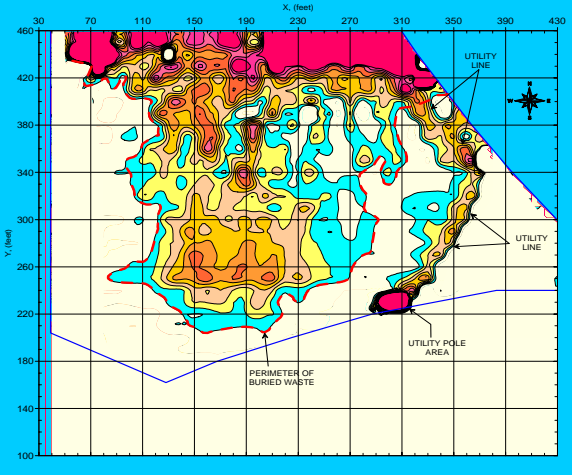
- The EM61 and GPR surveys provided reliable results for the detection of metallic USTs within the surveyed portions of the Southern Motors, Duke Power substation, The Driveshaft Shop, Johnson Concrete, and the former FCX Chemical properties.
- GPR surveys were conducted across selected EM61 differential anomalies and across areas containing steel reinforced concrete.
- At the East “A” Avenue sites, the linear EM61 anomalies intersecting grid coordinates X=40 Y=88, X=40 Y=380, X=60 Y=62, X=60 Y=120, X=64 Y=360, X=70 Y=250, X=70 Y=287, and X=120 Y=114, are probably in response to buried utility lines or conduits. The remaining metal detection anomalies are probably in response to known cultural features or to buried miscellaneous metal debris.
- The linear EM61 anomaly intersecting grid coordinates X=80 Y=750, at the Johnson Concrete property is probably in response to a buried utility line or conduit. The remaining metal detection anomalies recorded at the Johnson Concrete and the former FCX Chemical properties are probably in response to adjacent surface equipment, steel reinforced concrete, or buried miscellaneous metal debris.
- The geophysical investigations results did not detect the presence of metallic USTs within the surveyed portions of the five properties.

5.0 LIMITATIONS

EM61 and GPR surveys have been performed and this report prepared for Solutions Industrial & Environmental Services, Inc. in accordance with generally accepted guidelines for EM61 and GPR surveys. It is generally recognized that the results of the EM61 and GPR are non-unique and may not represent actual subsurface conditions. The EM61 and GPR results obtained for this project do not conclusively determine that metallic USTs are not present across the surveyed portions of the five sites but only suggest that none were detected. Some anomalies may be attributed to other surface or subsurface conditions or cultural interference.



FIGURES





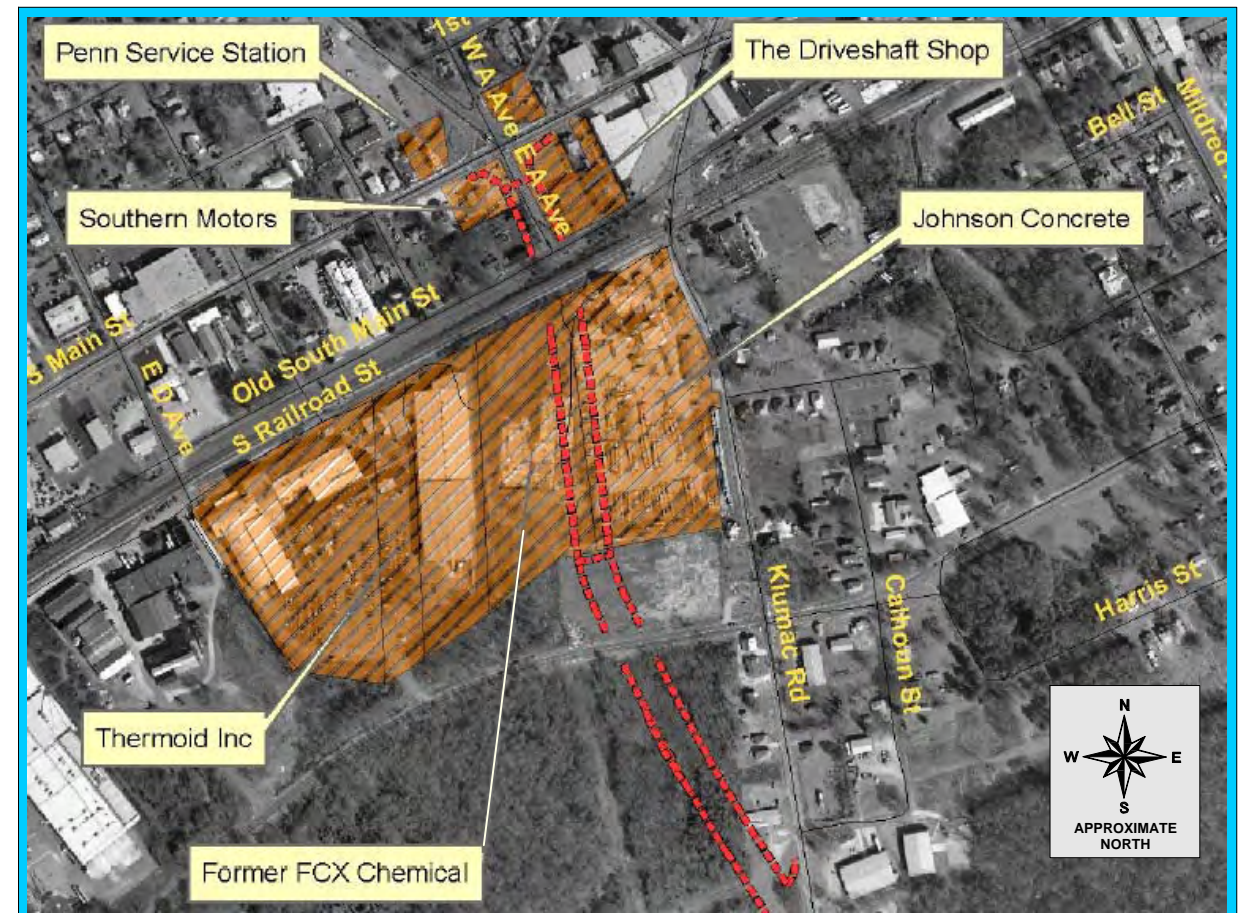
The photo shows the geophysical survey area across portions of the Southern Motors, The Driveshaft Shop and the Duke Power substation properties located along East "A" Avenue. The photo is veiwed in a northerly direction.



The photo shows the geophysical survey area across the western edge of the Johnson Concrete facility. The photo is veiwed in a northerly direction.



The photo shows the geophysical survey area across the eastern edge of the Former FCX Chemical site located contingent to the Johnson Concrete facility shown above. The photo is veiwed in a northerly direction.



The photo shows the locations of the Southern Motors, Duke Power substation, The Driveshaft Shop, Johnson Concrete, and the former FCX Chemical properties where geophysical investigations were conducted. The map was obtained from Solutions-IES/NC DOT.



CLIENT	SOLUTIONS INDUSTRIAL & ENVIRONMENTAL		DATE	07/14/06	DRWN	MJD
SITE	KLUMAC ROAD REALIGNMENT PROJECT		LAY		CHKD	
CITY	SALISBURY	STATE	NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		J-NO	2006-176	FIGURE	

SITE MAP AND PHOTOGRAPHS



The photo shows the Geonics EM61 metal detector that was used to conduct the metal detection survey at the Old South Main Street and East "A" Avenue sites in Salisbury, North Carolina on June 26, 27, and July 7, 2006. The instrument has a maximum investigating depth of approximately 8 feet.



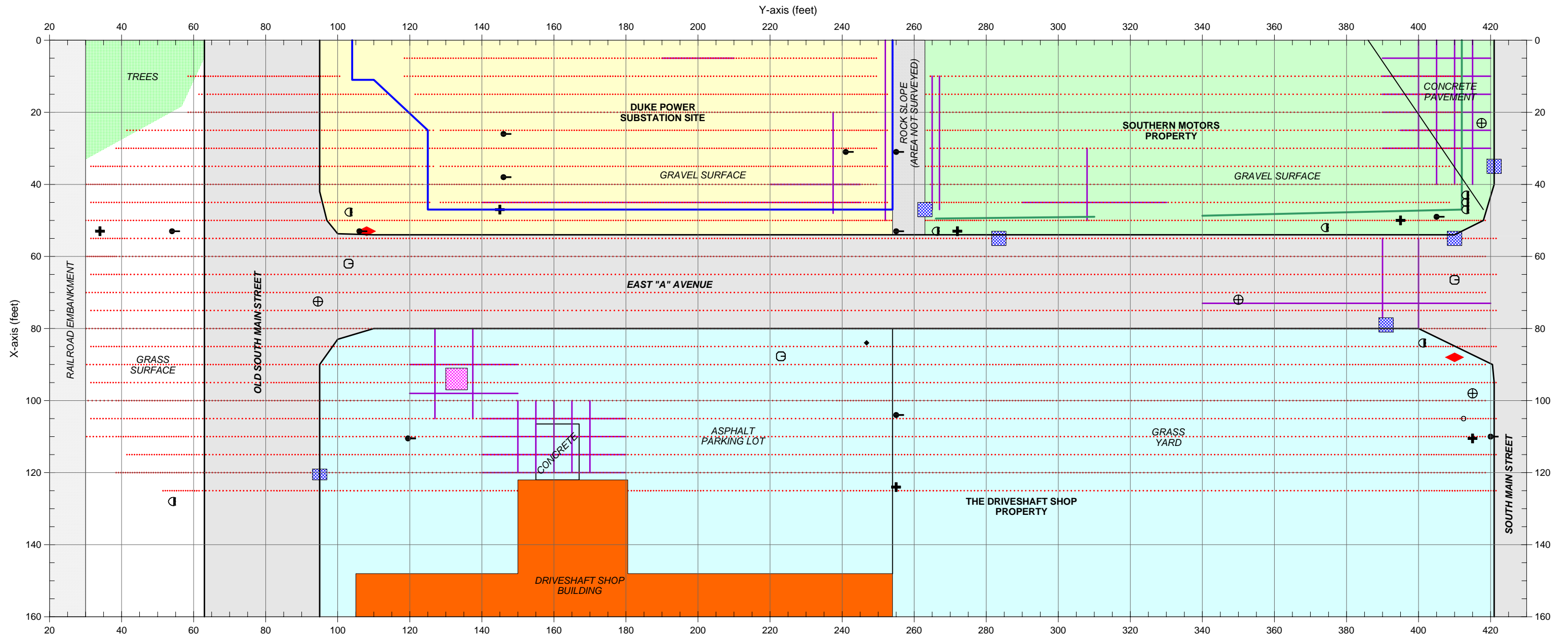
The photos show the SIR-2000 GPR system equipped with a 400 MHz antenna that were used to conduct the ground penetrating radar investigation at the Old South Main Street and East "A" Avenue sites in Salisbury, North Carolina on June 29 & July 7, 2006.



CLIENT	SOLUTIONS INDUSTRIAL & ENVIRONMENTAL		DATE	07/14/06	BY	
PROJECT	KLUMAC ROAD REALIGNMENT PROJECT		DATE		BY	
CITY	SALISBURY	STATE	NORTH CAROLINA		DATE	
TITLE	GEOPHYSICAL RESULTS		NO.	2006-176	REV.	

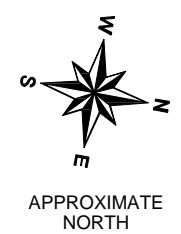
GEOPHYSICAL
EQUIPMENT

FIGURE 2



LEGEND

⊕	MANHOLE COVERS	◆	FIRE HYDRANT
⊗	WATER METER OR VALVE COVER	■	ELECTRICAL TOWER
+	GUY WIRE	—	METAL FENCE LINE
●	UTILITY POLE	—	CHAIN FENCE
Ⓞ	TRAFFIC SIGN	⋯	EM61 METAL DETECTION SURVEY LINE
■	STORM SEWER GRATE	—	GPR SURVEY LINE
◆	VENT/FILL PORT		



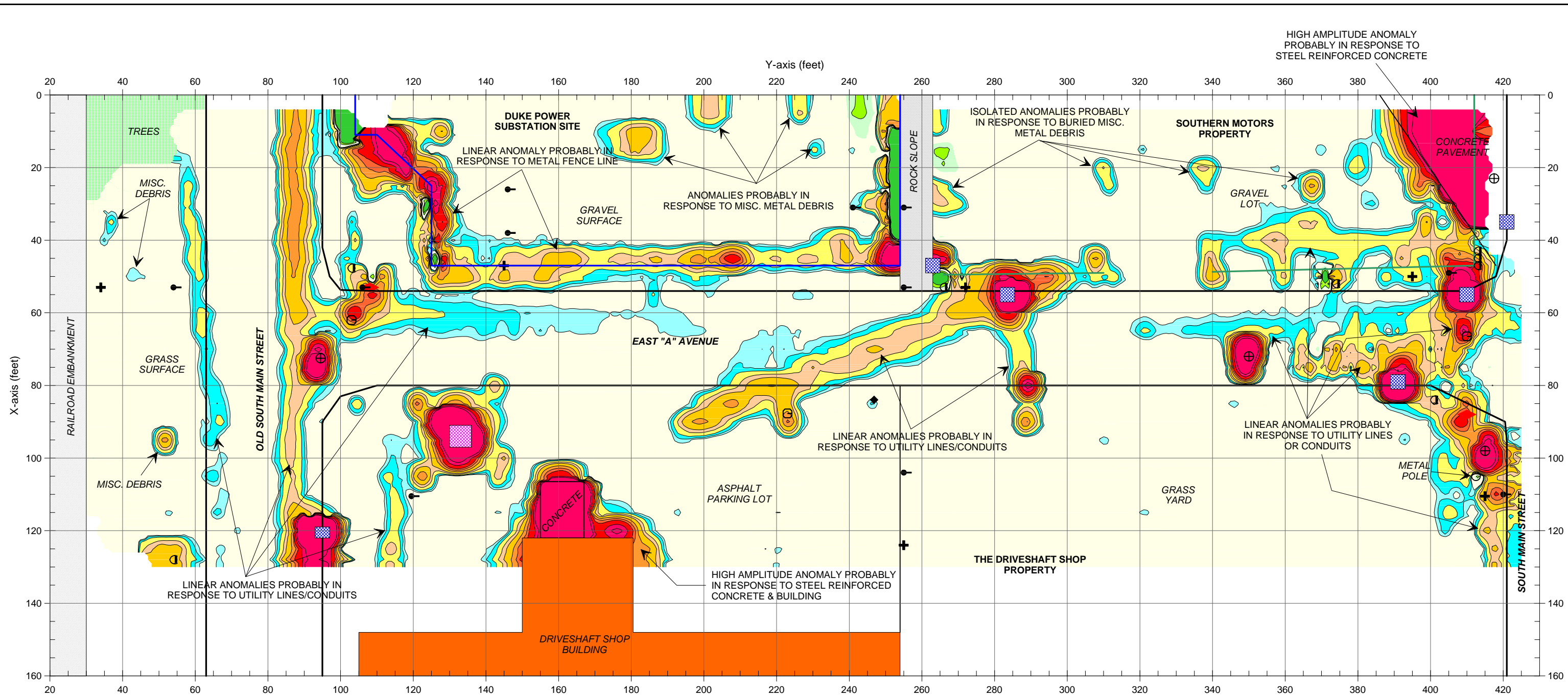
Note: The map shows the geophysical survey area along East "A" Avenue. The red dots represent the EM61 survey lines that were acquired on June 26, 2006 using a Geonics EM61 metal detection instrument. The purple lines represent the ground penetrating radar (GPR) survey lines that were acquired on June 29, 2006 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.



CLIENT	SOLUTIONS INDUSTRIAL & ENVIRONMENTAL	DATE	07/14/06	DRWN	MJD
SITE	EAST "A" AVENUE SITES	LAY		CHKD	
CITY	SALISBURY	STATE	NORTH CAROLINA	DWG	
TITLE	GEOPHYSICAL RESULTS	J-NO.	2006-176	FIGURE	

EM61 & GPR
SURVEY LINE LOCATIONS

FIGURE 3



HIGH AMPLITUDE ANOMALY PROBABLY IN RESPONSE TO STEEL REINFORCED CONCRETE

ISOLATED ANOMALIES PROBABLY IN RESPONSE TO BURIED MISC. METAL DEBRIS

DUKE POWER SUBSTATION SITE

SOUTHERN MOTORS PROPERTY

LINEAR ANOMALY PROBABLY IN RESPONSE TO METAL FENCE LINE

CONCRETE PAVEMENT

ANOMALIES PROBABLY IN RESPONSE TO MISC. METAL DEBRIS

GRAVEL SURFACE

GRAVEL LOT

EAST "A" AVENUE

LINEAR ANOMALIES PROBABLY IN RESPONSE TO UTILITY LINES/CONDUITS

LINEAR ANOMALIES PROBABLY IN RESPONSE TO UTILITY LINES OR CONDUITS

METAL POLE

ASPHALT PARKING LOT

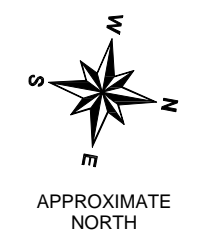
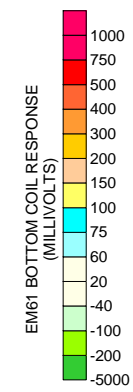
THE DRIVESHAFT SHOP PROPERTY

DRIVESHAFT SHOP BUILDING

LINEAR ANOMALIES PROBABLY IN RESPONSE TO UTILITY LINES/CONDUITS

LEGEND

- EM61 SURVEY AREA: EM DATA ACQUIRED ALONG NORTHERLY-SOUTHERLY TRENDING LINES SPACED 5 FEET APART
- MANHOLE COVERS
- WATER METER OR VALVE COVER
- GUY WIRE
- UTILITY POLE
- TRAFFIC SIGN
- STORM SEWER GRATE
- VENT/FILL PORT
- FIRE HYDRANT
- ELECTRICAL TOWER
- METAL FENCE LINE
- CHAIN FENCE
- GPR SURVEY LINE



Note: The contour plot shows the bottom coil (most sensitive) response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The EM metal detection data were collected on June 26, 2006 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on June 29, 2006 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

The majority of linear EM61 bottom coil anomalies shown above, are probably in response to buried utility lines or conduits. Negative EM anomalies (shaded in green) are probably in response to metallic surface objects. The geophysical investigation suggests that the survey area does not contain metallic USTs.

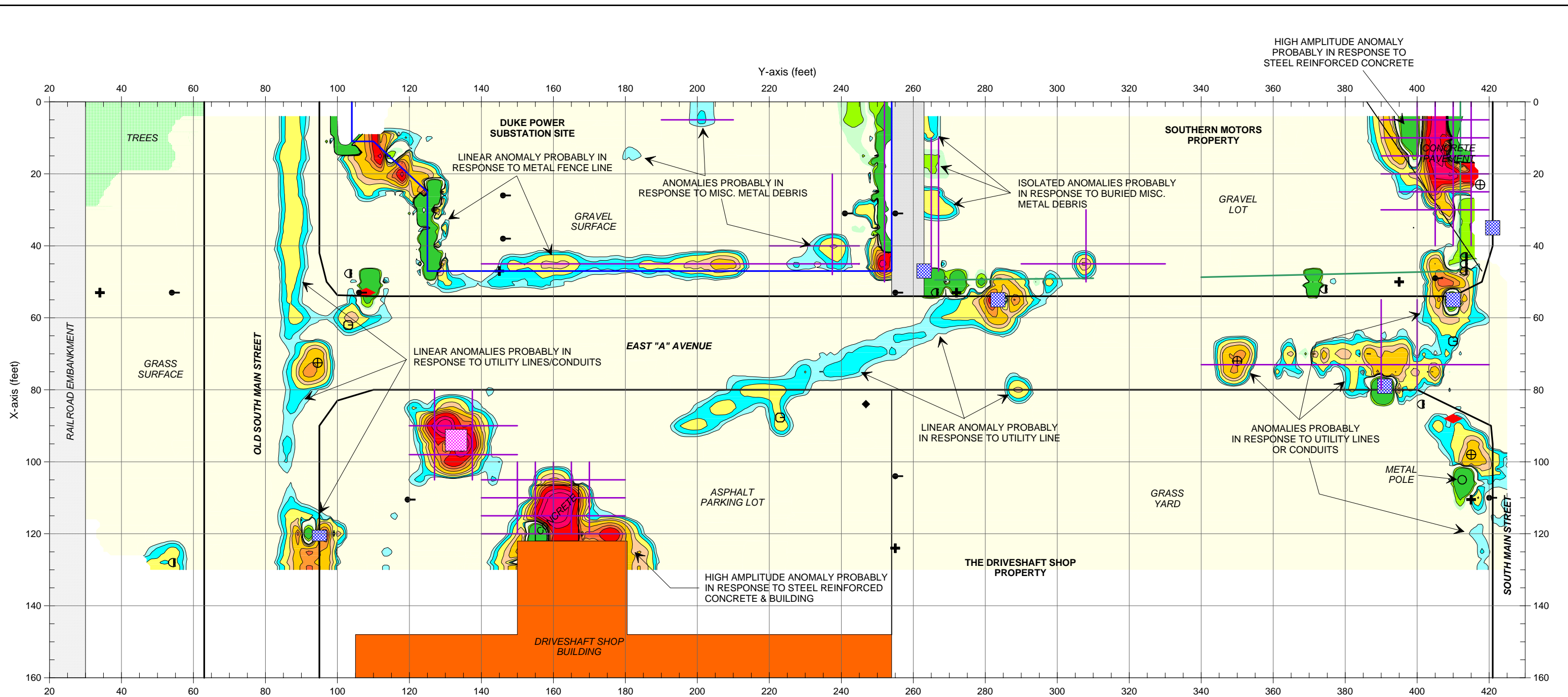


CLIENT	SOLUTIONS INDUSTRIAL & ENVIRONMENTAL		DATE	07/14/06	DRWN	MJD
SITE	EAST "A" AVENUE SITES		LAY		CHKD	
CITY	SALISBURY	STATE	NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		J-NO	2006-176	FIGURE	

GRAPHIC SCALE IN METERS

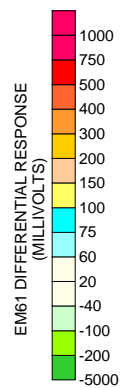
**EM61
BOTTOM COIL
RESULTS**

FIGURE 4



LEGEND

EM61 SURVEY AREA: EM DATA ACQUIRED ALONG NORTHERLY-SOUTHERLY TRENDING LINES SPACED 5 FEET APART	VENT/FILL PORT
MANHOLE COVERS	FIRE HYDRANT
WATER METER OR VALVE COVER	ELECTRICAL TOWER
GUY WIRE	METAL FENCE LINE
UTILITY POLE	CHAIN FENCE
TRAFFIC SIGN	GPR SURVEY LINE
STORM SEWER GRATE	



Note: The contour plot shows the differential results of the EM61 metal detection survey in millivolts (mV). The differential response focuses on larger, buried metallic objects such as drums and USTs and ignores smaller miscellaneous, buried, metal debris. The EM metal detection data were collected on June 26, 2006 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on June 29, 2006 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

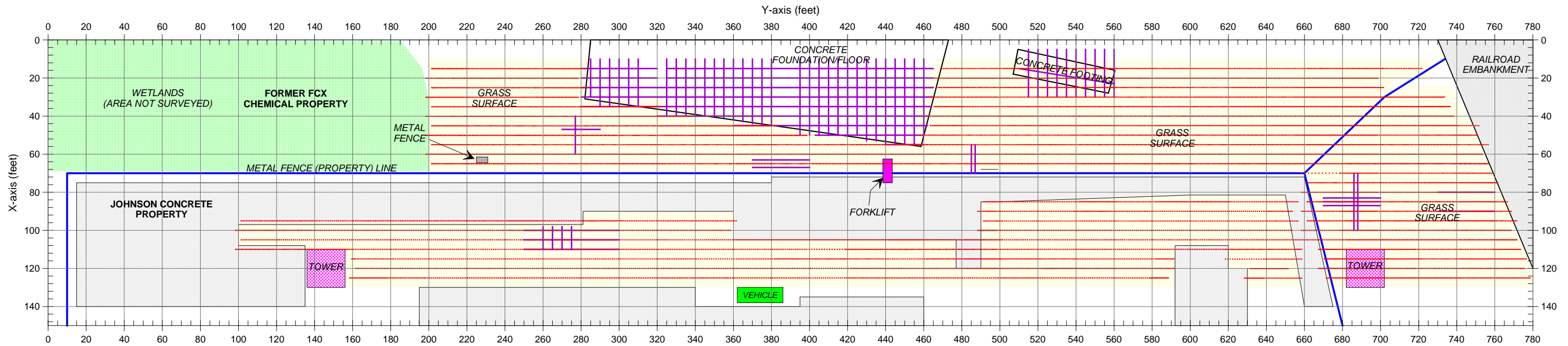
The majority of linear EM61 bottom coil anomalies shown above, are probably in response to buried utility lines or conduits. Negative EM anomalies (shaded in green) are probably in response to metallic surface objects. The geophysical investigation suggests that the survey area does not contain metallic USTs.



CLIENT	SOLUTIONS INDUSTRIAL & ENVIRONMENTAL		DATE	07/14/06	DRAWN	MJD
SITE	EAST "A" AVENUE SITES		LAY		CHKD	
CITY	SALISBURY	STATE	NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		J-NO	2006-176	FIGURE	

**EM61
DIFFERENTIAL
RESULTS**

FIGURE 5



LEGEND	
	EM61 SURVEY AREA: EM DATA ACQUIRED ALONG NORTH-SOUTH TRENDING LINES SPACED 5 FEET APART
	AREA CONTAINING CONCRETE BLOCKS, CULVERTS, SUPPLIES AND EQUIPMENT
	ELECTRICAL TOWER
	METAL FENCE LINE
	EM61 METAL DETECTION SURVEY LINE
	GPR SURVEY LINE



Note: The map shows the geophysical survey area along the western portion of the Johnson Concrete facility and the eastern edge of the former FCX Chemical property. The red dots represent the EM61 survey lines that were acquired on July 7, 2006 using a Geonics EM61 metal detection instrument. The purple lines represent the ground penetrating radar (GPR) survey lines that were also acquired on July 7, 2006 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.

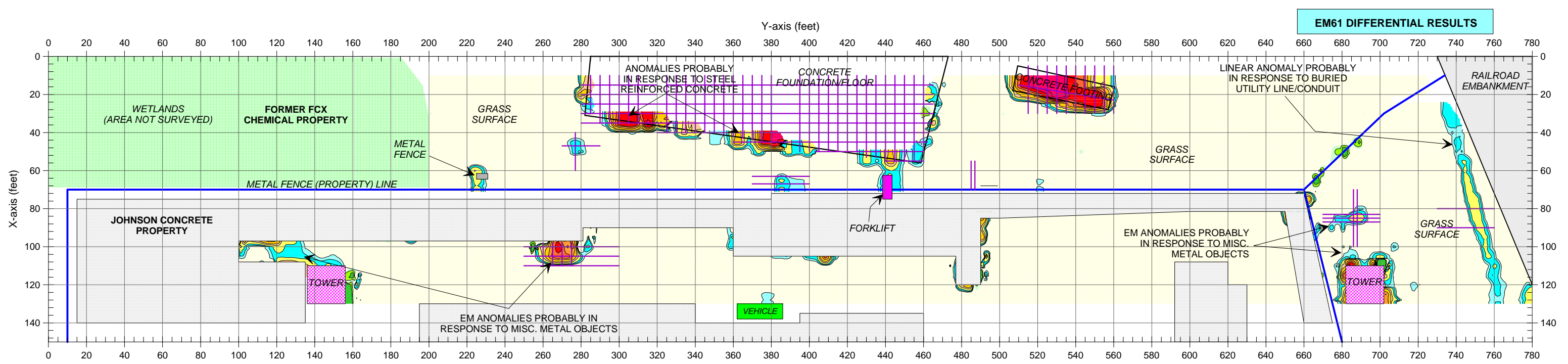
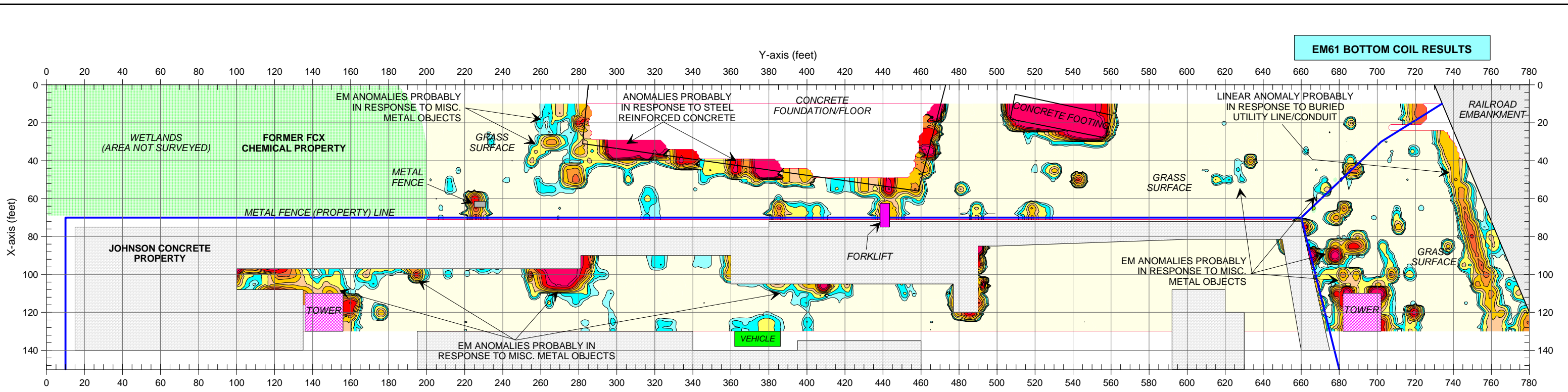


CLIENT	SOLUTIONS INDUSTRIAL & ENVIRONMENTAL		DATE	07/14/06	DRWN	MJD
SITE	JOHNSON CONCRETE & FORMER FCX CHEMICAL SITES		LAY		CHKD	
CITY	SALISBURY	STATE	NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		J-NO.	2006-176	FIGURE	

GRAPHIC SCALE IN METERS

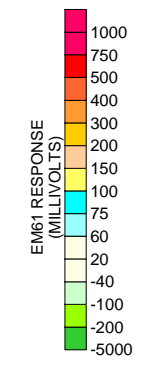
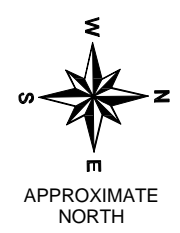
EM61 & GPR SURVEY LINE LOCATIONS

FIGURE 6



LEGEND

- EM61 SURVEY AREA: EM DATA ACQUIRED ALONG NORTH-SOUTH TRENDING LINES SPACED 5 FEET APART
- AREA CONTAINING CONCRETE BLOCKS, CULVERTS, SUPPLIES AND EQUIPMENT
- ELECTRICAL TOWER
- METAL FENCE LINE
- GPR SURVEY LINE



Note: The contour plots show the bottom coil (most sensitive) response and the differential response of the EM61 instrument in millivolts (mV). The bottom coil response shows buried metallic objects regardless of size. The differential response focuses on larger, buried metallic objects such as drums and UST's and ignores smaller miscellaneous, buried, metal debris. The EM metal detection data were collected on June 26 & July 7, 2006 using a Geonics EM61 instrument. Ground penetrating radar (GPR) data were acquired on June 29 & July 7, 2006 using a Geophysical Survey Systems SIR 2000 instrument with a 400 MHz antenna.



CLIENT	SOLUTIONS INDUSTRIAL & ENVIRONMENT		DATE	07/14/06	DRAWN	MJD
SITE	JOHNSON CONCRETE & FORMER FCX CHEMICAL SITES		LAY		CHKD	
CITY	SALISBURY	STATE	NORTH CAROLINA	DWG		
TITLE	GEOPHYSICAL RESULTS		J.N.O.	2006-176	FIGURE	

GRAPHIC SCALE IN METERS

EM61 RESULTS

FIGURE 7

APPENDIX C
BORING LOGS

Log of Soil Boring: JOHN B1

Project: Klumac Rd. Project

Solutions-IES Project No.: 3210.06A3.NDOT

Boring Number: JOHN B1

Client: NCDOT

WBS # 34951.1.1

City: Salisbury

Initial Water Level: NA

State Project # U-3459

County: Rowan

Stabilized Water Level: NA

Drilling Method: Direct Push

Boring Date: 7/17/06

Cave In Depth: NA

Sampler Type: Macro Core

Site: Johnson Concrete

Logged By: KB

Checked By: JM

Total Depth of Boring: 16'

SUBSURFACE PROFILE			SAMPLE		PID Field Screen			Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery	ppm				
					250	500	750		
					FID Field Screen				
					ppm				
					250	500	750		
0		Ground Surface							
0 - 1	SM	Dry, orange and brown, fine silty sand		100	0				
1 - 2	CL	Dry, brown and orange, silty clay		100	0				
2 - 3				100	0				
3 - 4				100	0				
4 - 5	CL	Dry, red and orange, silty clay (mottled)		100	0				
5 - 6				100	0				
6 - 7				100	0				
7 - 8				100	0				
8 - 9	CL	Dry, tan, orange and red, silty clay		100	0				
9 - 10				100	0				
10 - 11		Moist at 10 ft bgs		100	0				
11 - 12				100	0				
12 - 13				100	0				
13 - 14				100	0				
14 - 15	ML	Damp, tan and brown, clayey silt (weathered)		100	0				
15 - 16				100	0				

Solutions-IES, Inc.
 1101 Nowell Road
 Raleigh, NC 27607
 (919) 873-1060



Log of Soil Boring: JOHN B2

Project: Klumac Rd. Project

Solutions-IES Project No.: 3210.06A3.NDOT

Boring Number: JOHN B2

Client: NCDOT

WBS # 34951.1.1

City: Salisbury

Initial Water Level: NA

State Project # U-3459

County: Rowan

Stabilized Water Level: NA

Drilling Method: Direct Push

Boring Date: 7/17/06

Cave In Depth: NA

Sampler Type: Macro Core

Site: Johnson Concrete

Logged By: KB

Checked By: JM

Total Depth of Boring: 8'

SUBSURFACE PROFILE			SAMPLE		PID Field Screen			Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery	ppm				
					FID Field Screen				
					ppm				
					250	500	750		
0		Ground Surface							
0 - 1	SW	Dry, brown and black, coarse sand with coal fragments		100					
1 - 2	CL	Dry, orange and tan, silty clay		100					
2 - 3	CL	Dry, orange and tan, clay		100					
3 - 4									
4 - 5									
5 - 6									
6 - 7									
7 - 8	ML	Moist, tan and orange, clayey silt		100					
8 - 9									
9 - 10									
10 - 11									
11 - 12									
12 - 13									
13 - 14									
14 - 15									
15 - 16									

Solutions-IES, Inc.
 1101 Nowell Road
 Raleigh, NC 27607
 (919) 873-1060



Log of Soil Boring: JOHN B3

Project: Klumac Rd. Project

Solutions-IES Project No.: 3210.06A3.NDOT

Boring Number: JOHN B3

Client: NCDOT

WBS # 34951.1.1

City: Salisbury

Initial Water Level: NA

State Project # U-3459

County: Rowan

Stabilized Water Level: NA

Drilling Method: Direct Push

Boring Date: 7/18/06

Cave In Depth: NA

Sampler Type: Macro Core

Site: Johnson Concrete

Logged By: KB

Checked By: JM

Total Depth of Boring: 8'

SUBSURFACE PROFILE			SAMPLE		PID Field Screen			Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery	250	500	750		
0		Ground Surface							
1	SW	Dry, gray, coarse sand and gravel	0 - 1	100	0				
2		Moist at 2.3 ft bgs							
3	SC	Damp, black and red, coarse sand with some clay	2.3 - 3	100	0				
4									
5	CL	Moist, tan and gray, silty clay	3 - 5	100	3				
6	CL	Moist, tan and orange, silty clay	5 - 6						
7	ML	Moist to damp, tan and orange, weathered silt	6 - 7	100	84				
8									
9									
10									
11									
12									
13									
14									
15									
16									

Solutions-IES, Inc.
 1101 Nowell Road
 Raleigh, NC 27607
 (919) 873-1060



Log of Soil Boring: JOHN B4

Project: Klumac Rd. Project

Solutions-IES Project No.: 3210.06A3.NDOT

Boring Number: JOHN B4

Client: NCDOT

WBS # 34951.1.1

City: Salisbury

Initial Water Level: NA

State Project # U-3459

County: Rowan

Stabilized Water Level: NA

Drilling Method: Direct Push

Boring Date: 7/18/06

Cave In Depth: NA

Sampler Type: Macro Core

Site: Johnson Concrete

Logged By: KB

Checked By: JM

Total Depth of Boring: 8'

SUBSURFACE PROFILE			SAMPLE					Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery	PID Field Screen ppm 250 500 750				
					FID Field Screen ppm 250 500 750				
0		Ground Surface							
1	SW	Dry, gray, coarse sand and gravel	0 - 1	100	0				
2									
3	SC	Moist to damp, black and red, coarse sand with clay	1 - 3	100	0				
4	CL	Moist, tan and gray, silty clay	3 - 4						
5	CL	Moist, tan and orange, silty clay	4 - 5	100	0				
6	ML	Moist to damp, tan and orange, weathered silt	5 - 6						
7			6 - 7	100	0				
8									
9									
10									
11									
12									
13									
14									
15									
16									

Solutions-IES, Inc.
 1101 Nowell Road
 Raleigh, NC 27607
 (919) 873-1060



Log of Soil Boring: JOHN B5

Project: Klumac Rd. Project

Solutions-IES Project No.: 3210.06A3.NDOT

Boring Number: JOHN B5

Client: NCDOT

WBS # 34951.1.1

City: Salisbury

Initial Water Level: NA

State Project # U-3459

County: Rowan

Stabilized Water Level: NA

Drilling Method: Direct Push

Boring Date: 7/18/06

Cave In Depth: NA

Sampler Type: Macro Core

Site: Johnson Concrete

Logged By: KB

Checked By: JM

Total Depth of Boring: 8'

SUBSURFACE PROFILE			SAMPLE		PID Field Screen			Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery	ppm				
					FID Field Screen				
					ppm				
					250	500	750		
0		Ground Surface							
0 - 1	SW	Dry, gray, coarse sand and gravel		100	0				
1 - 2	CL	Dry, red and orange, silty clay		100	0				
2 - 3	CL	Moist, orange and tan, silty clay		100	0				
3 - 4	CL	Moist, tan and orange, silty clay		100	0				
4 - 5	ML	Moist to damp, tan and orange, clayey silt		100	0				
5 - 6				100	0				
6 - 7				100	0				
7 - 8									
8 - 9									
9 - 10									
10 - 11									
11 - 12									
12 - 13									
13 - 14									
14 - 15									
15 - 16									

Solutions-IES, Inc.
 1101 Nowell Road
 Raleigh, NC 27607
 (919) 873-1060



Log of Soil Boring: JOHN B6

Project: Klumac Rd. Project

Solutions-IES Project No.: 3210.06A3.NDOT

Boring Number: JOHN B6

Client: NCDOT

WBS # 34951.1.1

City: Salisbury

Initial Water Level: NA

State Project # U-3459

County: Rowan

Stabilized Water Level: NA

Drilling Method: Direct Push

Boring Date: 7/18/06

Cave In Depth: NA

Sampler Type: Macro Core

Site: Johnson Concrete

Logged By: KB

Checked By: JM

Total Depth of Boring: 8'

SUBSURFACE PROFILE			SAMPLE		PID Field Screen			Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery	ppm				
					FID Field Screen				
					ppm				
					250	500	750		
0		Ground Surface							
0 - 1	SW	Dry, gray, coarse sand and gravel							
1 - 2	CL	Moist, orange, silty clay		100					
2 - 3	CL	Moist, orange, silty clay		100					
3 - 4	CL	Moist, orange, silty clay		100					
4 - 5	ML	Moist, orange and tan, clayey silt		100					
5 - 6	ML	Moist, orange and tan, clayey silt		100					
6		Damp at 6 ft bgs							
6 - 7	ML	Moist, orange and tan, clayey silt		100					
7 - 8	ML	Moist, orange and tan, clayey silt		100					
8 - 9									
9 - 10									
10 - 11									
11 - 12									
12 - 13									
13 - 14									
14 - 15									
15 - 16									

Solutions-IES, Inc.
 1101 Nowell Road
 Raleigh, NC 27607
 (919) 873-1060



Log of Soil Boring: JOHNB7

Project: Klumac Rd. Project

Solutions-IES Project No.: 3210.06A3.NDOT

Boring Number: JOHNB7

Client: NCDOT

WBS # 34951.1.1

City: Salisbury

Initial Water Level: NA

State Project # U-3459

County: Rowan

Stabilized Water Level: NA

Drilling Method: Direct Push

Boring Date: 7/18/06

Cave In Depth: NA

Sampler Type: Macro Core

Site: Johnson Concrete

Logged By: KB

Checked By: JM

Total Depth of Boring: 8'

SUBSURFACE PROFILE			SAMPLE		PID Field Screen			Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery	ppm				
					FID Field Screen				
					ppm				
					250	500	750		
0		Ground Surface							
0-1	SW	Dry, gray, coarse sand and gravel							
1-2		No Recovery		50					
2-3									
3-4	CL	Moist, orange, silty clay		50					
4-5	CL	Moist, orange and red, silty clay							
5-6				100					
6-7	ML	Moist to damp, orange and red, fine sandy silt		100					
7-8									
8-9									
9-10									
10-11									
11-12									
12-13									
13-14									
14-15									
15-16									

Solutions-IES, Inc.
 1101 Nowell Road
 Raleigh, NC 27607
 (919) 873-1060



Log of Soil Boring: JOHN B8

Project: Klumac Rd. Project

Solutions-IES Project No.: 3210.06A3.NDOT

Boring Number: JOHN B8

Client: NCDOT

WBS # 34951.1.1

City: Salisbury

Initial Water Level: NA

State Project # U-3459

County: Rowan

Stabilized Water Level: 7.1'

Drilling Method: Direct Push

Boring Date: 7/18/06

Cave In Depth: NA

Sampler Type: Macro Core

Site: Johnson Concrete

Logged By: KB

Checked By: JM

Total Depth of Boring: 8'

SUBSURFACE PROFILE			SAMPLE		PID Field Screen			Lab Sample Depth	Well Data
Depth ft. bgs	USCS Symbol	Description	Sample Interval	% Recovery	ppm				
					FID Field Screen				
					ppm				
					250	500	750		
0		Ground Surface							
0	●●●●	Ashpalt							
1	▨	CL Dry, orange, silty clay		100	2				
2	▨	ML Dry, orange and tan, clayey silt			2				
3	▨			100	2				
4	▨	Moist at 4 ft bgs			2				
5	▨	Damp and weathered at 6 ft bgs		100	2				
6	▨				2				
7	▨			100	2				▼
8	▨								
9	▨								
10	▨								
11	▨								
12	▨								
13	▨								
14	▨								
15	▨								
16	▨								

Solutions-IES, Inc.
 1101 Nowell Road
 Raleigh, NC 27607
 (919) 873-1060



APPENDIX D
LABORATORY ANALYTICAL REPORTS

Analytical Environmental Services, Inc.

Date: 28-Jul-06

CLIENT: Pace Analytical Services, Inc.
Project: 92123459
Lab ID: 0607A25-001

Client Sample ID: 927208538 JOHN B1
Collection Date: 7/17/2006 11:45:00 AM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
FORMALDEHYDE							Analyst: FN
Formaldehyde	BRL	1.0	H	mg/Kg	73424	1	7/26/2006 4:27 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
BRL Below Reporting Limit
H Holding times for preparation or analysis exceeded
N Analyte not NELAC certified
B Analyte detected in the associated Method Blank

E Estimated (Value above quantitation range)
S Surrogate Recovery outside accepted recovery limits
Narr See Case Narrative
NC Not Confirmed

Analytical Environmental Services, Inc.

Date: 28-Jul-06

CLIENT: Pace Analytical Services, Inc.

Client Sample ID: 927208561 JOHN B2

Project: 92123459

Collection Date: 7/17/2006 4:15:00 PM

Lab ID: 0607A25-002

Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
FORMALDEHYDE							Analyst: FN
Formaldehyde	BRL	1.0	H	mg/Kg	73424	1	7/26/2006 5:00 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- BRL Below Reporting Limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated Method Blank

- E Estimated (Value above quantitation range)
- S Surrogate Recovery outside accepted recovery limits
- Narr See Case Narrative
- NC Not Confirmed

Analytical Environmental Services, Inc.

Date: 28-Jul-06

CLIENT: Pace Analytical Services, Inc.
Project: 92123459
Lab ID: 0607A25-003

Client Sample ID: 927208579 JOHN B3
Collection Date: 7/18/2006 9:00:00 AM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
FORMALDEHYDE							Analyst: FN
Formaldehyde	BRL	1.0	H	mg/Kg	73424	1	7/26/2006 5:11 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
BRL Below Reporting Limit
H Holding times for preparation or analysis exceeded
N Analyte not NELAC certified
B Analyte detected in the associated Method Blank

E Estimated (Value above quantitation range)
S Surrogate Recovery outside accepted recovery limits
Narr See Case Narrative
NC Not Confirmed

Analytical Environmental Services, Inc.

Date: 28-Jul-06

CLIENT: Pace Analytical Services, Inc.
Project: 92123459
Lab ID: 0607A25-004

Client Sample ID: 927208587 JOHN B4
Collection Date: 7/18/2006 9:30:00 AM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
FORMALDEHYDE							Analyst: FN
Formaldehyde	BRL	1.0	H	mg/Kg	73424	1	7/26/2006 5:22 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
BRL Below Reporting Limit
H Holding times for preparation or analysis exceeded
N Analyte not NELAC certified
B Analyte detected in the associated Method Blank

E Estimated (Value above quantitation range)
S Surrogate Recovery outside accepted recovery limits
Narr See Case Narrative
NC Not Confirmed

Analytical Environmental Services, Inc.

Date: 28-Jul-06

CLIENT: Pace Analytical Services, Inc.

Client Sample ID: 927208595 JOHN B5

Project: 92123459

Collection Date: 7/18/2006 9:45:00 AM

Lab ID: 0607A25-005

Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
FORMALDEHYDE							Analyst: FN
Formaldehyde	BRL	1.0	H	mg/Kg	73424	1	7/26/2006 5:33 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
BRL Below Reporting Limit
H Holding times for preparation or analysis exceeded
N Analyte not NELAC certified
B Analyte detected in the associated Method Blank

E Estimated (Value above quantitation range)
S Surrogate Recovery outside accepted recovery limits
Narr See Case Narrative
NC Not Confirmed

Analytical Environmental Services, Inc.

Date: 28-Jul-06

CLIENT: Pace Analytical Services, Inc.
Project: 92123459
Lab ID: 0607A25-006

Client Sample ID: 927208603 JOHN B6
Collection Date: 7/18/2006 10:00:00 AM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
FORMALDEHYDE							Analyst: FN
Formaldehyde	BRL	1.0	H	mg/Kg	73424	1	7/26/2006 5:44 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
BRL Below Reporting Limit
H Holding times for preparation or analysis exceeded
N Analyte not NELAC certified
B Analyte detected in the associated Method Blank

E Estimated (Value above quantitation range)
S Surrogate Recovery outside accepted recovery limits
Narr See Case Narrative
NC Not Confirmed

Analytical Environmental Services, Inc.

Date: 28-Jul-06

CLIENT: Pace Analytical Services, Inc.
Project: 92123459
Lab ID: 0607A25-007

Client Sample ID: 927208611 JOHN B7
Collection Date: 7/18/2006 10:20:00 AM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
FORMALDEHYDE							Analyst: FN
Formaldehyde	BRL	1.0	H	mg/Kg	73424	1	7/26/2006 5:55 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
BRL Below Reporting Limit
H Holding times for preparation or analysis exceeded
N Analyte not NELAC certified
B Analyte detected in the associated Method Blank

E Estimated (Value above quantitation range)
S Surrogate Recovery outside accepted recovery limits
Narr See Case Narrative
NC Not Confirmed

Analytical Environmental Services, Inc.

Date: 28-Jul-06

CLIENT: Pace Analytical Services, Inc.
Project: 92123459
Lab ID: 0607A25-008

Client Sample ID: 927208629 JOHN B8
Collection Date: 7/18/2006 10:30:00 AM
Matrix: SOIL

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed
FORMALDEHYDE							Analyst: FN
Formaldehyde	BRL	1.0	H	mg/Kg	73424	1	7/26/2006 6:06 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
BRL Below Reporting Limit
H Holding times for preparation or analysis exceeded
N Analyte not NELAC certified
B Analyte detected in the associated Method Blank

E Estimated (Value above quantitation range)
S Surrogate Recovery outside accepted recovery limits
Narr See Case Narrative
NC Not Confirmed



Pace Analytical Services, Inc.
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Pace Analytical Services, Inc.
2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

August 02, 2006

Ms. Sheri Knox
Solutions-IES
1101 Nowell Road
Raleigh, NC 27607

RE: Lab Project Number: 92123459
Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Dear Ms. Knox:

Enclosed are the analytical results for sample(s) received by the laboratory on July 18, 2006. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals Analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Charlotte laboratory unless otherwise footnoted.

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

Sincerely,

for

Bonnie McKee
bonnie.mckee@pacelabs.com
(704) 875-9092 ext. 234
Project Manager

Enclosures

Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC Environmental 99030
FL NELAP E87648

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Charlotte Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006
FL NELAP E87627

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Solid results are reported on a dry weight basis

Lab Sample No: 927208538 Project Sample Number: 92123459-001 Date Collected: 07/17/06 11:45
Client Sample ID: JOHNB1 14-16 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
------------	---------	-------	--------------	----------	----	---------	------	--------

Metals

Metals, Trace ICP		Prep/Method: EPA 3050 / EPA 6010						
Arsenic	1.4	mg/kg	0.63	07/25/06 19:55	SHB	7440-38-2		
Barium	110	mg/kg	0.63	07/25/06 19:55	SHB	7440-39-3		
Cadmium	ND	mg/kg	0.13	07/25/06 19:55	SHB	7440-43-9		
Chromium	14.	mg/kg	0.25	07/25/06 19:55	SHB	7440-47-3		
Lead	3.9	mg/kg	0.63	07/25/06 19:55	SHB	7439-92-1		
Selenium	ND	mg/kg	0.63	07/25/06 19:55	SHB	7782-49-2		
Silver	ND	mg/kg	0.25	07/25/06 19:55	SHB	7440-22-4		
Date Digested	07/21/06 14:00			07/21/06 14:00				
Mercury, CVAAS, in Soil		Method: EPA 7471						
Mercury	0.022	mg/kg	0.0072	07/20/06 14:41	ALV	7439-97-6		

Wet Chemistry

Percent Moisture		Method: % Moisture						
Percent Moisture	35.2	%		07/19/06 10:06	TNM			
Nitrogen, Ammonia		Method: EPA 350.1 Modified						
Nitrogen, Ammonia	ND	mg/kg	13.	08/01/06 19:40	BMF	7727-37-9		
Nitrogen, Nitrate		Method: EPA 353.2 Modified						
Nitrate as N	ND	mg/kg	12.	07/26/06 13:33	EWS			
pH		Method: EPA 9045						
pH	4.54	units		07/20/06 11:37	MLS1			

GC/MS Semivolatiles

Semivolatile Organics		Prep/Method: EPA 3545 / EPA 8270						
Acenaphthene	ND	ug/kg	510	07/26/06 21:43	BET	83-32-9		
Acenaphthylene	ND	ug/kg	510	07/26/06 21:43	BET	208-96-8		
Anthracene	ND	ug/kg	510	07/26/06 21:43	BET	120-12-7		
Benzo(k)fluoranthene	ND	ug/kg	510	07/26/06 21:43	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/kg	510	07/26/06 21:43	BET	205-99-2		
Benzo(a)anthracene	ND	ug/kg	510	07/26/06 21:43	BET	56-55-3		
Benzoic acid	ND	ug/kg	2500	07/26/06 21:43	BET	65-85-0		
Benzo(g,h,i)perylene	ND	ug/kg	510	07/26/06 21:43	BET	191-24-2		
Benzyl alcohol	ND	ug/kg	1000	07/26/06 21:43	BET	100-51-6		

Date: 08/02/06

Page: 1 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208538
Client Sample ID: JOHNB1 14-16

Project Sample Number: 92123459-001
Matrix: Soil
Date Collected: 07/17/06 11:45
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Benzo(a)pyrene	ND	ug/kg	510	07/26/06 21:43	BET	50-32-8		
4-Bromophenylphenyl ether	ND	ug/kg	510	07/26/06 21:43	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	510	07/26/06 21:43	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	1000	07/26/06 21:43	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	1000	07/26/06 21:43	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	510	07/26/06 21:43	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	510	07/26/06 21:43	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	510	07/26/06 21:43	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	510	07/26/06 21:43	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	510	07/26/06 21:43	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	510	07/26/06 21:43	BET	7005-72-3		
Chrysene	ND	ug/kg	510	07/26/06 21:43	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	510	07/26/06 21:43	BET	53-70-3		
Dibenzofuran	ND	ug/kg	510	07/26/06 21:43	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	510	07/26/06 21:43	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	510	07/26/06 21:43	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	510	07/26/06 21:43	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	1000	07/26/06 21:43	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	510	07/26/06 21:43	BET	120-83-2		
Diethylphthalate	ND	ug/kg	510	07/26/06 21:43	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	510	07/26/06 21:43	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	510	07/26/06 21:43	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	510	07/26/06 21:43	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	510	07/26/06 21:43	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	2500	07/26/06 21:43	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	510	07/26/06 21:43	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	510	07/26/06 21:43	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	510	07/26/06 21:43	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	510	07/26/06 21:43	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	510	07/26/06 21:43	BET	117-81-7		
Fluoranthene	ND	ug/kg	510	07/26/06 21:43	BET	206-44-0		
Fluorene	ND	ug/kg	510	07/26/06 21:43	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	510	07/26/06 21:43	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	510	07/26/06 21:43	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	510	07/26/06 21:43	BET	77-47-4		
Hexachloroethane	ND	ug/kg	510	07/26/06 21:43	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	510	07/26/06 21:43	BET	193-39-5		
Isophorone	ND	ug/kg	510	07/26/06 21:43	BET	78-59-1		
1-Methylnaphthalene	ND	ug/kg	510	07/26/06 21:43	BET	90-12-0		

Date: 08/02/06

Page: 2 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208538
Client Sample ID: JOHNB1 14-16

Project Sample Number: 92123459-001
Matrix: Soil

Date Collected: 07/17/06 11:45
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
2-Methylnaphthalene	ND	ug/kg	510	07/26/06 21:43	BET	91-57-6		
2-Methylphenol (o-Cresol)	ND	ug/kg	510	07/26/06 21:43	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	510	07/26/06 21:43	BET			
Naphthalene	ND	ug/kg	510	07/26/06 21:43	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	2500	07/26/06 21:43	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	2500	07/26/06 21:43	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	2500	07/26/06 21:43	BET	100-01-6		
Nitrobenzene	ND	ug/kg	510	07/26/06 21:43	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	510	07/26/06 21:43	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	2500	07/26/06 21:43	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	510	07/26/06 21:43	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	510	07/26/06 21:43	BET	86-30-6		
Pentachlorophenol	ND	ug/kg	2500	07/26/06 21:43	BET	87-86-5		
Phenanthrene	ND	ug/kg	510	07/26/06 21:43	BET	85-01-8		
Phenol	ND	ug/kg	510	07/26/06 21:43	BET	108-95-2		
Pyrene	ND	ug/kg	510	07/26/06 21:43	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	510	07/26/06 21:43	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	510	07/26/06 21:43	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	510	07/26/06 21:43	BET	88-06-2		
Nitrobenzene-d5 (S)	33	%		07/26/06 21:43	BET	4165-60-0		
2-Fluorobiphenyl (S)	41	%		07/26/06 21:43	BET	321-60-8		
Terphenyl-d14 (S)	37	%		07/26/06 21:43	BET	1718-51-0		
Phenol-d5 (S)	32	%		07/26/06 21:43	BET	4165-62-2	1	
2-Fluorophenol (S)	31	%		07/26/06 21:43	BET	367-12-4		
2,4,6-Tribromophenol (S)	29	%		07/26/06 21:43	BET	118-79-6		
Date Extracted	07/19/06			07/19/06				

GC Semivolatiles

Organochlorine Pesticides

Prep/Method: EPA 3545 / EPA 8081

Aldrin	ND	ug/kg	1.5	07/24/06 20:45	JEM	309-00-2		
alpha-BHC	ND	ug/kg	3.1	07/24/06 20:45	JEM	319-84-6		
beta-BHC	ND	ug/kg	3.1	07/24/06 20:45	JEM	319-85-7		
delta-BHC	ND	ug/kg	3.1	07/24/06 20:45	JEM	319-86-8		
gamma-BHC (Lindane)	ND	ug/kg	3.1	07/24/06 20:45	JEM	58-89-9		
Chlordane	ND	ug/kg	13.	07/24/06 20:45	JEM	57-74-9		
gamma-Chlordane	ND	ug/kg	3.1	07/24/06 20:45	JEM	5103-74-2		
4,4'-DDD	ND	ug/kg	3.1	07/24/06 20:45	JEM	72-54-8		
4,4'-DDE	ND	ug/kg	3.1	07/24/06 20:45	JEM	72-55-9		
4,4'-DDT	ND	ug/kg	3.1	07/24/06 20:45	JEM	50-29-3		

Date: 08/02/06

Page: 3 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208538
Client Sample ID: JOHNB1 14-16

Project Sample Number: 92123459-001
Matrix: Soil
Date Collected: 07/17/06 11:45
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Dieldrin	ND	ug/kg	1.5	07/24/06 20:45	JEM	60-57-1		
Endosulfan I	ND	ug/kg	3.1	07/24/06 20:45	JEM	959-98-8		
Endosulfan II	ND	ug/kg	3.1	07/24/06 20:45	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/kg	3.1	07/24/06 20:45	JEM	1031-07-8		
Endrin	ND	ug/kg	3.1	07/24/06 20:45	JEM	72-20-8		
Endrin aldehyde	ND	ug/kg	3.1	07/24/06 20:45	JEM	7421-93-4		
Heptachlor	ND	ug/kg	3.1	07/24/06 20:45	JEM	76-44-8		
Heptachlor epoxide	ND	ug/kg	3.1	07/24/06 20:45	JEM	1024-57-3		
Methoxychlor	ND	ug/kg	11.	07/24/06 20:45	JEM	72-43-5		
Mirex	ND	ug/kg	11.	07/24/06 20:45	JEM	2385-85-5		
Toxaphene	ND	ug/kg	13.	07/24/06 20:45	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	18	%		07/24/06 20:45	JEM	877-09-8	2	
Decachlorobiphenyl (S)	38	%		07/24/06 20:45	JEM	2051-24-3		
Date Extracted	07/20/06			07/20/06				

GC/MS Volatiles

GC/MS VOCs 5035/8260 low level Method: EPA 8260

Acetone	ND	ug/kg	130	07/25/06 21:07	DLK	67-64-1		
Benzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	71-43-2		
Bromobenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	108-86-1		
Bromochloromethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	74-97-5		
Bromodichloromethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	75-27-4		
Bromoform	ND	ug/kg	6.5	07/25/06 21:07	DLK	75-25-2		
Bromomethane	ND	ug/kg	13.	07/25/06 21:07	DLK	74-83-9		
2-Butanone (MEK)	ND	ug/kg	130	07/25/06 21:07	DLK	78-93-3		
n-Butylbenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	104-51-8		
sec-Butylbenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	135-98-8		
tert-Butylbenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	98-06-6		
Carbon tetrachloride	ND	ug/kg	6.5	07/25/06 21:07	DLK	56-23-5		
Chlorobenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	108-90-7		
Chloroethane	ND	ug/kg	13.	07/25/06 21:07	DLK	75-00-3		
Chloroform	ND	ug/kg	6.5	07/25/06 21:07	DLK	67-66-3		
Chloromethane	ND	ug/kg	13.	07/25/06 21:07	DLK	74-87-3		
2-Chlorotoluene	ND	ug/kg	6.5	07/25/06 21:07	DLK	95-49-8		
4-Chlorotoluene	ND	ug/kg	6.5	07/25/06 21:07	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.5	07/25/06 21:07	DLK	96-12-8		
Dibromochloromethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	6.5	07/25/06 21:07	DLK	106-93-4		
Dibromomethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	74-95-3		

Date: 08/02/06

Page: 4 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208538
Client Sample ID: JOHNB1 14-16

Project Sample Number: 92123459-001
Matrix: Soil

Date Collected: 07/17/06 11:45
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
1,2-Dichlorobenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	13.	07/25/06 21:07	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/kg	6.5	07/25/06 21:07	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	6.5	07/25/06 21:07	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	6.5	07/25/06 21:07	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/kg	6.5	07/25/06 21:07	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/kg	6.5	07/25/06 21:07	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/kg	6.5	07/25/06 21:07	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/kg	6.5	07/25/06 21:07	DLK	563-58-6		
cis-1,3-Dichloropropene	ND	ug/kg	6.5	07/25/06 21:07	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	6.5	07/25/06 21:07	DLK	10061-02-6		
Diisopropyl ether	ND	ug/kg	6.5	07/25/06 21:07	DLK	108-20-3		
Ethylbenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	6.5	07/25/06 21:07	DLK	87-68-3		
2-Hexanone	ND	ug/kg	65.	07/25/06 21:07	DLK	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/kg	6.5	07/25/06 21:07	DLK	98-82-8		
p-Isopropyltoluene	ND	ug/kg	6.5	07/25/06 21:07	DLK	99-87-6		
Methylene chloride	ND	ug/kg	13.	07/25/06 21:07	DLK	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	65.	07/25/06 21:07	DLK	108-10-1		
Methyl-tert-butyl ether	ND	ug/kg	6.5	07/25/06 21:07	DLK	1634-04-4		
Naphthalene	ND	ug/kg	6.5	07/25/06 21:07	DLK	91-20-3		
n-Propylbenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	103-65-1		
Styrene	ND	ug/kg	6.5	07/25/06 21:07	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	630-20-6		
1,1,1,2,2-Tetrachloroethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	79-34-5		
Tetrachloroethene	ND	ug/kg	6.5	07/25/06 21:07	DLK	127-18-4		
Toluene	ND	ug/kg	6.5	07/25/06 21:07	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	79-00-5		
Trichloroethene	ND	ug/kg	6.5	07/25/06 21:07	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/kg	6.5	07/25/06 21:07	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	6.5	07/25/06 21:07	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	95-63-6		

Date: 08/02/06

Page: 5 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208538
Client Sample ID: JOHNBI 14-16

Project Sample Number: 92123459-001
Matrix: Soil

Date Collected: 07/17/06 11:45
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
1,3,5-Trimethylbenzene	ND	ug/kg	6.5	07/25/06 21:07	DLK	108-67-8		
Vinyl acetate	ND	ug/kg	65.	07/25/06 21:07	DLK	108-05-4		
Vinyl chloride	ND	ug/kg	13.	07/25/06 21:07	DLK	75-01-4		
Xylene (Total)	ND	ug/kg	6.5	07/25/06 21:07	DLK	1330-20-7		
m&p-Xylene	ND	ug/kg	13.	07/25/06 21:07	DLK			
o-Xylene	ND	ug/kg	6.5	07/25/06 21:07	DLK	95-47-6		
Toluene-d8 (S)	96	%		07/25/06 21:07	DLK	2037-26-5		
4-Bromofluorobenzene (S)	88	%		07/25/06 21:07	DLK	460-00-4		
Dibromofluoromethane (S)	88	%		07/25/06 21:07	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	74	%		07/25/06 21:07	DLK	17060-07-0		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208561 Project Sample Number: 92123459-002 Date Collected: 07/17/06 16:15
Client Sample ID: JOHNB2 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
------------	---------	-------	--------------	----------	----	---------	------	--------

Metals

Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	2.9	mg/kg	0.64	07/25/06 19:59	SHB	7440-38-2		
Barium	62.	mg/kg	0.64	07/25/06 19:59	SHB	7440-39-3		
Cadmium	ND	mg/kg	0.13	07/25/06 19:59	SHB	7440-43-9		
Chromium	27.	mg/kg	0.26	07/25/06 19:59	SHB	7440-47-3		
Lead	14.	mg/kg	0.64	07/25/06 19:59	SHB	7439-92-1		
Selenium	ND	mg/kg	0.64	07/25/06 19:59	SHB	7782-49-2		
Silver	ND	mg/kg	0.26	07/25/06 19:59	SHB	7440-22-4		
Date Digested	07/21/06 14:00			07/21/06 14:00				

Mercury, CVAAS, in Soil	Method: EPA 7471							
Mercury	0.032	mg/kg	0.0062	07/20/06 14:41	ALV	7439-97-6		

Wet Chemistry

Percent Moisture	Method: % Moisture							
Percent Moisture	29.2	%		07/19/06 10:06	TNM			

Nitrogen, Ammonia	Method: EPA 350.1 Modified							
Nitrogen, Ammonia	ND	mg/kg	13.	08/01/06 19:50	BMF	7727-37-9		

Nitrogen, Nitrate	Method: EPA 353.2 Modified							
Nitrate as N	ND	mg/kg	8.1	07/26/06 13:33	EWS			

pH	Method: EPA 9045							
pH	4.71	units		07/20/06 11:37	MLS1			

GC/MS Semivolatiles

Semivolatile Organics	Prep/Method: EPA 3545 / EPA 8270							
Acenaphthene	ND	ug/kg	470	07/26/06 22:05	BET	83-32-9		
Acenaphthylene	ND	ug/kg	470	07/26/06 22:05	BET	208-96-8		
Anthracene	ND	ug/kg	470	07/26/06 22:05	BET	120-12-7		
Benzo(k)fluoranthene	ND	ug/kg	470	07/26/06 22:05	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/kg	470	07/26/06 22:05	BET	205-99-2		
Benzo(a)anthracene	ND	ug/kg	470	07/26/06 22:05	BET	56-55-3		
Benzoic acid	ND	ug/kg	2300	07/26/06 22:05	BET	65-85-0		
Benzo(g,h,i)perylene	ND	ug/kg	470	07/26/06 22:05	BET	191-24-2		
Benzyl alcohol	ND	ug/kg	930	07/26/06 22:05	BET	100-51-6		
Benzo(a)pyrene	ND	ug/kg	470	07/26/06 22:05	BET	50-32-8		

Date: 08/02/06

Page: 7 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208561
Client Sample ID: JOHNB2 6-8

Project Sample Number: 92123459-002
Matrix: Soil

Date Collected: 07/17/06 16:15
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
4-Bromophenylphenyl ether	ND	ug/kg	470	07/26/06 22:05	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	470	07/26/06 22:05	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	930	07/26/06 22:05	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	930	07/26/06 22:05	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	470	07/26/06 22:05	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	470	07/26/06 22:05	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	470	07/26/06 22:05	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	470	07/26/06 22:05	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	470	07/26/06 22:05	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	470	07/26/06 22:05	BET	7005-72-3		
Chrysene	ND	ug/kg	470	07/26/06 22:05	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	470	07/26/06 22:05	BET	53-70-3		
Dibenzofuran	ND	ug/kg	470	07/26/06 22:05	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	470	07/26/06 22:05	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	470	07/26/06 22:05	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	470	07/26/06 22:05	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	930	07/26/06 22:05	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	470	07/26/06 22:05	BET	120-83-2		
Diethylphthalate	ND	ug/kg	470	07/26/06 22:05	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	470	07/26/06 22:05	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	470	07/26/06 22:05	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	470	07/26/06 22:05	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	470	07/26/06 22:05	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	2300	07/26/06 22:05	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	470	07/26/06 22:05	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	470	07/26/06 22:05	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	470	07/26/06 22:05	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	470	07/26/06 22:05	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	470	07/26/06 22:05	BET	117-81-7		
Fluoranthene	ND	ug/kg	470	07/26/06 22:05	BET	206-44-0		
Fluorene	ND	ug/kg	470	07/26/06 22:05	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	470	07/26/06 22:05	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	470	07/26/06 22:05	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	470	07/26/06 22:05	BET	77-47-4		
Hexachloroethane	ND	ug/kg	470	07/26/06 22:05	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	470	07/26/06 22:05	BET	193-39-5		
Isophorone	ND	ug/kg	470	07/26/06 22:05	BET	78-59-1		
1-Methylnaphthalene	ND	ug/kg	470	07/26/06 22:05	BET	90-12-0		
2-Methylnaphthalene	ND	ug/kg	470	07/26/06 22:05	BET	91-57-6		

Date: 08/02/06

Page: 8 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208561
Client Sample ID: JOHNB2 6-8

Project Sample Number: 92123459-002
Matrix: Soil

Date Collected: 07/17/06 16:15
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
2-Methylphenol (o-Cresol)	ND	ug/kg	470	07/26/06 22:05	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	470	07/26/06 22:05	BET			
Naphthalene	ND	ug/kg	470	07/26/06 22:05	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	2300	07/26/06 22:05	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	2300	07/26/06 22:05	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	2300	07/26/06 22:05	BET	100-01-6		
Nitrobenzene	ND	ug/kg	470	07/26/06 22:05	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	470	07/26/06 22:05	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	2300	07/26/06 22:05	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	470	07/26/06 22:05	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	470	07/26/06 22:05	BET	86-30-6		
Pentachlorophenol	ND	ug/kg	2300	07/26/06 22:05	BET	87-86-5		
Phenanthrene	ND	ug/kg	470	07/26/06 22:05	BET	85-01-8		
Phenol	ND	ug/kg	470	07/26/06 22:05	BET	108-95-2		
Pyrene	ND	ug/kg	470	07/26/06 22:05	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	470	07/26/06 22:05	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	470	07/26/06 22:05	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	470	07/26/06 22:05	BET	88-06-2		
Nitrobenzene-d5 (S)	30	%		07/26/06 22:05	BET	4165-60-0		
2-Fluorobiphenyl (S)	43	%		07/26/06 22:05	BET	321-60-8		
Terphenyl-d14 (S)	58	%		07/26/06 22:05	BET	1718-51-0		
Phenol-d5 (S)	36	%		07/26/06 22:05	BET	4165-62-2	1	
2-Fluorophenol (S)	38	%		07/26/06 22:05	BET	367-12-4		
2,4,6-Tribromophenol (S)	73	%		07/26/06 22:05	BET	118-79-6		
Date Extracted	07/19/06			07/19/06				

GC Semivolatiles

Organochlorine Pesticides

Prep/Method: EPA 3545 / EPA 8081

Aldrin	ND	ug/kg	1.4	07/25/06 20:05	JEM	309-00-2		
alpha-BHC	ND	ug/kg	2.8	07/25/06 20:05	JEM	319-84-6		
beta-BHC	ND	ug/kg	2.8	07/25/06 20:05	JEM	319-85-7		
delta-BHC	ND	ug/kg	2.8	07/25/06 20:05	JEM	319-86-8		
gamma-BHC (Lindane)	ND	ug/kg	2.8	07/25/06 20:05	JEM	58-89-9		
Chlordane	ND	ug/kg	12.	07/25/06 20:05	JEM	57-74-9		
gamma-Chlordane	ND	ug/kg	2.8	07/25/06 20:05	JEM	5103-74-2		
4,4'-DDD	ND	ug/kg	2.8	07/25/06 20:05	JEM	72-54-8		
4,4'-DDE	ND	ug/kg	2.8	07/25/06 20:05	JEM	72-55-9		
4,4'-DDT	ND	ug/kg	2.8	07/25/06 20:05	JEM	50-29-3		
Dieldrin	ND	ug/kg	1.4	07/25/06 20:05	JEM	60-57-1		

Date: 08/02/06

Page: 9 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208561
Client Sample ID: JOHNB2 6-8

Project Sample Number: 92123459-002
Matrix: Soil

Date Collected: 07/17/06 16:15
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Endosulfan I	ND	ug/kg	2.8	07/25/06 20:05	JEM	959-98-8		
Endosulfan II	ND	ug/kg	2.8	07/25/06 20:05	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/kg	2.8	07/25/06 20:05	JEM	1031-07-8		
Endrin	ND	ug/kg	2.8	07/25/06 20:05	JEM	72-20-8		
Endrin aldehyde	ND	ug/kg	2.8	07/25/06 20:05	JEM	7421-93-4		
Heptachlor	ND	ug/kg	2.8	07/25/06 20:05	JEM	76-44-8		
Heptachlor epoxide	ND	ug/kg	2.8	07/25/06 20:05	JEM	1024-57-3		
Methoxychlor	ND	ug/kg	9.9	07/25/06 20:05	JEM	72-43-5		
Mirex	ND	ug/kg	9.9	07/25/06 20:05	JEM	2385-85-5		
Toxaphene	ND	ug/kg	12.	07/25/06 20:05	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	30	%		07/25/06 20:05	JEM	877-09-8		
Decachlorobiphenyl (S)	63	%		07/25/06 20:05	JEM	2051-24-3		
Date Extracted	07/20/06			07/20/06				

GC/MS Volatiles

GC/MS VOCs 5035/8260 low level Method: EPA 8260

Acetone	ND	ug/kg	130	07/25/06 21:26	DLK	67-64-1		
Benzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	71-43-2		
Bromobenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	108-86-1		
Bromochloromethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	74-97-5		
Bromodichloromethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	75-27-4		
Bromoform	ND	ug/kg	6.5	07/25/06 21:26	DLK	75-25-2		
Bromomethane	ND	ug/kg	13.	07/25/06 21:26	DLK	74-83-9		
2-Butanone (MEK)	ND	ug/kg	130	07/25/06 21:26	DLK	78-93-3		
n-Butylbenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	104-51-8		
sec-Butylbenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	135-98-8		
tert-Butylbenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	98-06-6		
Carbon tetrachloride	ND	ug/kg	6.5	07/25/06 21:26	DLK	56-23-5		
Chlorobenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	108-90-7		
Chloroethane	ND	ug/kg	13.	07/25/06 21:26	DLK	75-00-3		
Chloroform	ND	ug/kg	6.5	07/25/06 21:26	DLK	67-66-3		
Chloromethane	ND	ug/kg	13.	07/25/06 21:26	DLK	74-87-3		
2-Chlorotoluene	ND	ug/kg	6.5	07/25/06 21:26	DLK	95-49-8		
4-Chlorotoluene	ND	ug/kg	6.5	07/25/06 21:26	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.5	07/25/06 21:26	DLK	96-12-8		
Dibromochloromethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	6.5	07/25/06 21:26	DLK	106-93-4		
Dibromomethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	95-50-1		

Date: 08/02/06

Page: 10 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208561
Client Sample ID: JOHNB2 6-8

Project Sample Number: 92123459-002
Matrix: Soil

Date Collected: 07/17/06 16:15
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
1,3-Dichlorobenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	13.	07/25/06 21:26	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/kg	6.5	07/25/06 21:26	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	6.5	07/25/06 21:26	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	6.5	07/25/06 21:26	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/kg	6.5	07/25/06 21:26	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/kg	6.5	07/25/06 21:26	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/kg	6.5	07/25/06 21:26	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/kg	6.5	07/25/06 21:26	DLK	563-58-6		
cis-1,3-Dichloropropene	ND	ug/kg	6.5	07/25/06 21:26	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	6.5	07/25/06 21:26	DLK	10061-02-6		
Diisopropyl ether	ND	ug/kg	6.5	07/25/06 21:26	DLK	108-20-3		
Ethylbenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	6.5	07/25/06 21:26	DLK	87-68-3		
2-Hexanone	ND	ug/kg	65.	07/25/06 21:26	DLK	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/kg	6.5	07/25/06 21:26	DLK	98-82-8		
p-Isopropyltoluene	ND	ug/kg	6.5	07/25/06 21:26	DLK	99-87-6		
Methylene chloride	ND	ug/kg	13.	07/25/06 21:26	DLK	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	65.	07/25/06 21:26	DLK	108-10-1		
Methyl-tert-butyl ether	ND	ug/kg	6.5	07/25/06 21:26	DLK	1634-04-4		
Naphthalene	ND	ug/kg	6.5	07/25/06 21:26	DLK	91-20-3		
n-Propylbenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	103-65-1		
Styrene	ND	ug/kg	6.5	07/25/06 21:26	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	79-34-5		
Tetrachloroethene	ND	ug/kg	6.5	07/25/06 21:26	DLK	127-18-4		
Toluene	ND	ug/kg	6.5	07/25/06 21:26	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	79-00-5		
Trichloroethene	ND	ug/kg	6.5	07/25/06 21:26	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/kg	6.5	07/25/06 21:26	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	6.5	07/25/06 21:26	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/kg	6.5	07/25/06 21:26	DLK	108-67-8		

Date: 08/02/06

Page: 11 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.





Pace Analytical Services, Inc.
 9800 Kinsey Avenue, Suite 100
 Huntersville, NC 28078
 Phone: 704.875.9092
 Fax: 704.875.9091

Pace Analytical Services, Inc.
 2225 Riverside Drive
 Asheville, NC 28804
 Phone: 828.254.7176
 Fax: 828.252.4618

Lab Project Number: 92123459
 Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208561 Project Sample Number: 92123459-002 Date Collected: 07/17/06 16:15
 Client Sample ID: JOHNB2 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Vinyl acetate	ND	ug/kg	65.	07/25/06 21:26	DLK	108-05-4		
Vinyl chloride	ND	ug/kg	13.	07/25/06 21:26	DLK	75-01-4		
Xylene (Total)	ND	ug/kg	6.5	07/25/06 21:26	DLK	1330-20-7		
m&p-Xylene	ND	ug/kg	13.	07/25/06 21:26	DLK			
o-Xylene	ND	ug/kg	6.5	07/25/06 21:26	DLK	95-47-6		
Toluene-d8 (S)	102	%		07/25/06 21:26	DLK	2037-26-5		
4-Bromofluorobenzene (S)	94	%		07/25/06 21:26	DLK	460-00-4		
Dibromofluoromethane (S)	87	%		07/25/06 21:26	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	77	%		07/25/06 21:26	DLK	17060-07-0		

Date: 08/02/06

Page: 12 of 87

Asheville Certification IDs
 NC Wastewater 40
 NC Drinking Water 37712
 SC Environmental 99030
 FL NELAP E87648

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc.



Charlotte Certification IDs
 NC Wastewater 12
 NC Drinking Water 37706
 SC 99006
 FL NELAP E87627

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208579 Project Sample Number: 92123459-003 Date Collected: 07/18/06 09:00
Client Sample ID: JOHNB3 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
------------	---------	-------	--------------	----------	----	---------	------	--------

Metals

Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	1.3	mg/kg	0.54	07/26/06 05:30	SHB	7440-38-2		
Barium	120	mg/kg	0.54	07/26/06 05:30	SHB	7440-39-3		
Cadmium	ND	mg/kg	0.11	07/26/06 05:30	SHB	7440-43-9		
Chromium	8.2	mg/kg	0.21	07/26/06 05:30	SHB	7440-47-3		
Lead	4.3	mg/kg	0.54	07/26/06 05:30	SHB	7439-92-1		
Selenium	ND	mg/kg	0.54	07/26/06 05:30	SHB	7782-49-2		
Silver	ND	mg/kg	0.21	07/26/06 05:30	SHB	7440-22-4		
Date Digested	07/21/06 14:00			07/21/06 14:00				

Mercury, CVAAS, in Soil	Method: EPA 7471							
Mercury	0.0084	mg/kg	0.0062	07/20/06 14:41	ALV	7439-97-6		

Wet Chemistry

Percent Moisture	Method: % Moisture							
Percent Moisture	26.2	%		07/19/06 10:07	TNM			

Nitrogen, Ammonia	Method: EPA 350.1 Modified							
Nitrogen, Ammonia	ND	mg/kg	14.	08/01/06 19:50	BMF	7727-37-9		

Nitrogen, Nitrate	Method: EPA 353.2 Modified							
Nitrate as N	ND	mg/kg	7.9	07/26/06 13:33	EWS			

pH	Method: EPA 9045							
pH	7.21	units		07/20/06 11:37	MLS1			

GC/MS Semivolatiles

Semivolatile Organics	Prep/Method: EPA 3545 / EPA 8270							
Acenaphthene	ND	ug/kg	450	07/26/06 22:27	BET	83-32-9		
Acenaphthylene	ND	ug/kg	450	07/26/06 22:27	BET	208-96-8		
Anthracene	ND	ug/kg	450	07/26/06 22:27	BET	120-12-7		
Benzo(k)fluoranthene	ND	ug/kg	450	07/26/06 22:27	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/kg	450	07/26/06 22:27	BET	205-99-2		
Benzo(a)anthracene	ND	ug/kg	450	07/26/06 22:27	BET	56-55-3		
Benzoic acid	ND	ug/kg	2200	07/26/06 22:27	BET	65-85-0		
Benzo(g,h,i)perylene	ND	ug/kg	450	07/26/06 22:27	BET	191-24-2		
Benzyl alcohol	ND	ug/kg	890	07/26/06 22:27	BET	100-51-6		
Benzo(a)pyrene	ND	ug/kg	450	07/26/06 22:27	BET	50-32-8		

Date: 08/02/06

Page: 13 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208579
Client Sample ID: JOHNB3 6-8

Project Sample Number: 92123459-003
Matrix: Soil

Date Collected: 07/18/06 09:00
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
4-Bromophenylphenyl ether	ND	ug/kg	450	07/26/06 22:27	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	450	07/26/06 22:27	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	890	07/26/06 22:27	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	890	07/26/06 22:27	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	450	07/26/06 22:27	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	450	07/26/06 22:27	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	450	07/26/06 22:27	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	450	07/26/06 22:27	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	450	07/26/06 22:27	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	450	07/26/06 22:27	BET	7005-72-3		
Chrysene	ND	ug/kg	450	07/26/06 22:27	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	450	07/26/06 22:27	BET	53-70-3		
Dibenzofuran	ND	ug/kg	450	07/26/06 22:27	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	450	07/26/06 22:27	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	450	07/26/06 22:27	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	450	07/26/06 22:27	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	890	07/26/06 22:27	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	450	07/26/06 22:27	BET	120-83-2		
Diethylphthalate	ND	ug/kg	450	07/26/06 22:27	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	450	07/26/06 22:27	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	450	07/26/06 22:27	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	450	07/26/06 22:27	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	450	07/26/06 22:27	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	2200	07/26/06 22:27	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	450	07/26/06 22:27	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	450	07/26/06 22:27	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	450	07/26/06 22:27	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	450	07/26/06 22:27	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	450	07/26/06 22:27	BET	117-81-7		
Fluoranthene	ND	ug/kg	450	07/26/06 22:27	BET	206-44-0		
Fluorene	ND	ug/kg	450	07/26/06 22:27	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	450	07/26/06 22:27	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	450	07/26/06 22:27	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	450	07/26/06 22:27	BET	77-47-4		
Hexachloroethane	ND	ug/kg	450	07/26/06 22:27	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	450	07/26/06 22:27	BET	193-39-5		
Isophorone	ND	ug/kg	450	07/26/06 22:27	BET	78-59-1		
1-Methylnaphthalene	ND	ug/kg	450	07/26/06 22:27	BET	90-12-0		
2-Methylnaphthalene	ND	ug/kg	450	07/26/06 22:27	BET	91-57-6		

Date: 08/02/06

Page: 14 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208579
Client Sample ID: JOHNB3 6-8

Project Sample Number: 92123459-003
Matrix: Soil

Date Collected: 07/18/06 09:00
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
2-Methylphenol (o-Cresol)	ND	ug/kg	450	07/26/06 22:27	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	450	07/26/06 22:27	BET			
Naphthalene	ND	ug/kg	450	07/26/06 22:27	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	2200	07/26/06 22:27	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	2200	07/26/06 22:27	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	2200	07/26/06 22:27	BET	100-01-6		
Nitrobenzene	ND	ug/kg	450	07/26/06 22:27	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	450	07/26/06 22:27	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	2200	07/26/06 22:27	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	450	07/26/06 22:27	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	450	07/26/06 22:27	BET	86-30-6		
Pentachlorophenol	ND	ug/kg	2200	07/26/06 22:27	BET	87-86-5		
Phenanthrene	ND	ug/kg	450	07/26/06 22:27	BET	85-01-8		
Phenol	ND	ug/kg	450	07/26/06 22:27	BET	108-95-2		
Pyrene	ND	ug/kg	450	07/26/06 22:27	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	450	07/26/06 22:27	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	450	07/26/06 22:27	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	450	07/26/06 22:27	BET	88-06-2		
Nitrobenzene-d5 (S)	34	%		07/26/06 22:27	BET	4165-60-0		
2-Fluorobiphenyl (S)	39	%		07/26/06 22:27	BET	321-60-8		
Terphenyl-d14 (S)	66	%		07/26/06 22:27	BET	1718-51-0		
Phenol-d5 (S)	40	%		07/26/06 22:27	BET	4165-62-2	1	
2-Fluorophenol (S)	42	%		07/26/06 22:27	BET	367-12-4		
2,4,6-Tribromophenol (S)	75	%		07/26/06 22:27	BET	118-79-6		
Date Extracted	07/19/06			07/19/06				

GC Semivolatiles

Organochlorine Pesticides

Prep/Method: EPA 3545 / EPA 8081

Aldrin	ND	ug/kg	1.4	07/24/06 21:23	JEM	309-00-2		
alpha-BHC	ND	ug/kg	2.7	07/24/06 21:23	JEM	319-84-6		
beta-BHC	ND	ug/kg	2.7	07/24/06 21:23	JEM	319-85-7		
delta-BHC	ND	ug/kg	2.7	07/24/06 21:23	JEM	319-86-8		
gamma-BHC (Lindane)	ND	ug/kg	2.7	07/24/06 21:23	JEM	58-89-9		
Chlordane	ND	ug/kg	11.	07/24/06 21:23	JEM	57-74-9		
gamma-Chlordane	ND	ug/kg	2.7	07/24/06 21:23	JEM	5103-74-2		
4,4'-DDD	ND	ug/kg	2.7	07/24/06 21:23	JEM	72-54-8		
4,4'-DDE	ND	ug/kg	2.7	07/24/06 21:23	JEM	72-55-9		
4,4'-DDT	ND	ug/kg	2.7	07/24/06 21:23	JEM	50-29-3		
Dieldrin	ND	ug/kg	1.4	07/24/06 21:23	JEM	60-57-1		

Date: 08/02/06

Page: 15 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208579
Client Sample ID: JOHNB3 6-8

Project Sample Number: 92123459-003
Matrix: Soil

Date Collected: 07/18/06 09:00
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Endosulfan I	ND	ug/kg	2.7	07/24/06 21:23	JEM	959-98-8		
Endosulfan II	ND	ug/kg	2.7	07/24/06 21:23	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/kg	2.7	07/24/06 21:23	JEM	1031-07-8		
Endrin	ND	ug/kg	2.7	07/24/06 21:23	JEM	72-20-8		
Endrin aldehyde	ND	ug/kg	2.7	07/24/06 21:23	JEM	7421-93-4		
Heptachlor	ND	ug/kg	2.7	07/24/06 21:23	JEM	76-44-8		
Heptachlor epoxide	ND	ug/kg	2.7	07/24/06 21:23	JEM	1024-57-3		
Methoxychlor	ND	ug/kg	9.5	07/24/06 21:23	JEM	72-43-5		
Mirex	ND	ug/kg	9.5	07/24/06 21:23	JEM	2385-85-5		
Toxaphene	ND	ug/kg	11.	07/24/06 21:23	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	25	%		07/24/06 21:23	JEM	877-09-8	2	
Decachlorobiphenyl (S)	44	%		07/24/06 21:23	JEM	2051-24-3		
Date Extracted	07/20/06			07/20/06				

GC/MS Volatiles

GC/MS VOCs 5035/8260 low level Method: EPA 8260

Acetone	ND	ug/kg	120	07/25/06 21:44	DLK	67-64-1		
Benzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	71-43-2		
Bromobenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	108-86-1		
Bromochloromethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	74-97-5		
Bromodichloromethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	75-27-4		
Bromoform	ND	ug/kg	6.1	07/25/06 21:44	DLK	75-25-2		
Bromomethane	ND	ug/kg	12.	07/25/06 21:44	DLK	74-83-9		
2-Butanone (MEK)	ND	ug/kg	120	07/25/06 21:44	DLK	78-93-3		
n-Butylbenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	104-51-8		
sec-Butylbenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	135-98-8		
tert-Butylbenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	98-06-6		
Carbon tetrachloride	ND	ug/kg	6.1	07/25/06 21:44	DLK	56-23-5		
Chlorobenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	108-90-7		
Chloroethane	ND	ug/kg	12.	07/25/06 21:44	DLK	75-00-3		
Chloroform	ND	ug/kg	6.1	07/25/06 21:44	DLK	67-66-3		
Chloromethane	ND	ug/kg	12.	07/25/06 21:44	DLK	74-87-3		
2-Chlorotoluene	ND	ug/kg	6.1	07/25/06 21:44	DLK	95-49-8		
4-Chlorotoluene	ND	ug/kg	6.1	07/25/06 21:44	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	6.1	07/25/06 21:44	DLK	96-12-8		
Dibromochloromethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	6.1	07/25/06 21:44	DLK	106-93-4		
Dibromomethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	95-50-1		

Date: 08/02/06

Page: 16 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459
Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208579 Project Sample Number: 92123459-003 Date Collected: 07/18/06 09:00
Client Sample ID: JOHNB3 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
1,3-Dichlorobenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	12.	07/25/06 21:44	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/kg	6.1	07/25/06 21:44	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	6.1	07/25/06 21:44	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	6.1	07/25/06 21:44	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/kg	6.1	07/25/06 21:44	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/kg	6.1	07/25/06 21:44	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/kg	6.1	07/25/06 21:44	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/kg	6.1	07/25/06 21:44	DLK	563-58-6		
cis-1,3-Dichloropropene	ND	ug/kg	6.1	07/25/06 21:44	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	6.1	07/25/06 21:44	DLK	10061-02-6		
Diisopropyl ether	ND	ug/kg	6.1	07/25/06 21:44	DLK	108-20-3		
Ethylbenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	6.1	07/25/06 21:44	DLK	87-68-3		
2-Hexanone	ND	ug/kg	61.	07/25/06 21:44	DLK	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/kg	6.1	07/25/06 21:44	DLK	98-82-8		
p-Isopropyltoluene	ND	ug/kg	6.1	07/25/06 21:44	DLK	99-87-6		
Methylene chloride	ND	ug/kg	12.	07/25/06 21:44	DLK	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	61.	07/25/06 21:44	DLK	108-10-1		
Methyl-tert-butyl ether	ND	ug/kg	6.1	07/25/06 21:44	DLK	1634-04-4		
Naphthalene	ND	ug/kg	6.1	07/25/06 21:44	DLK	91-20-3		
n-Propylbenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	103-65-1		
Styrene	ND	ug/kg	6.1	07/25/06 21:44	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	79-34-5		
Tetrachloroethene	ND	ug/kg	6.1	07/25/06 21:44	DLK	127-18-4		
Toluene	ND	ug/kg	6.1	07/25/06 21:44	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	79-00-5		
Trichloroethene	ND	ug/kg	6.1	07/25/06 21:44	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/kg	6.1	07/25/06 21:44	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	6.1	07/25/06 21:44	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/kg	6.1	07/25/06 21:44	DLK	108-67-8		

Date: 08/02/06

Page: 17 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.





Pace Analytical Services, Inc.
 9800 Kinsey Avenue, Suite 100
 Huntersville, NC 28078
 Phone: 704.875.9092
 Fax: 704.875.9091

Pace Analytical Services, Inc.
 2225 Riverside Drive
 Asheville, NC 28804
 Phone: 828.254.7176
 Fax: 828.252.4618

Lab Project Number: 92123459
 Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208579 Project Sample Number: 92123459-003 Date Collected: 07/18/06 09:00
 Client Sample ID: JOHNB3 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Vinyl acetate	ND	ug/kg	61.	07/25/06 21:44	DLK	108-05-4		
Vinyl chloride	ND	ug/kg	12.	07/25/06 21:44	DLK	75-01-4		
Xylene (Total)	ND	ug/kg	6.1	07/25/06 21:44	DLK	1330-20-7		
m&p-Xylene	ND	ug/kg	12.	07/25/06 21:44	DLK			
o-Xylene	ND	ug/kg	6.1	07/25/06 21:44	DLK	95-47-6		
Toluene-d8 (S)	98	%		07/25/06 21:44	DLK	2037-26-5		
4-Bromofluorobenzene (S)	90	%		07/25/06 21:44	DLK	460-00-4		
Dibromofluoromethane (S)	79	%		07/25/06 21:44	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	77	%		07/25/06 21:44	DLK	17060-07-0		

Date: 08/02/06

Page: 18 of 87

Asheville Certification IDs
 NC Wastewater 40
 NC Drinking Water 37712
 SC Environmental 99030
 FL NELAP E87648

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc.



Charlotte Certification IDs
 NC Wastewater 12
 NC Drinking Water 37706
 SC 99006
 FL NELAP E87627

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208587 Project Sample Number: 92123459-004 Date Collected: 07/18/06 09:30
Client Sample ID: JOHNB4 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
------------	---------	-------	--------------	----------	----	---------	------	--------

Metals

Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	2.0	mg/kg	0.76	07/26/06 05:34	SHB	7440-38-2		
Barium	35.	mg/kg	0.76	07/26/06 05:34	SHB	7440-39-3		
Cadmium	ND	mg/kg	0.15	07/26/06 05:34	SHB	7440-43-9		
Chromium	74.	mg/kg	0.30	07/26/06 05:34	SHB	7440-47-3		
Lead	8.2	mg/kg	0.76	07/26/06 05:34	SHB	7439-92-1		
Selenium	ND	mg/kg	0.76	07/26/06 05:34	SHB	7782-49-2		
Silver	ND	mg/kg	0.30	07/26/06 05:34	SHB	7440-22-4		
Date Digested	07/21/06 14:00			07/21/06 14:00				

Mercury, CVAAS, in Soil	Method: EPA 7471							
Mercury	0.039	mg/kg	0.0064	07/20/06 14:41	ALV	7439-97-6		

Wet Chemistry

Percent Moisture	Method: % Moisture							
Percent Moisture	26.4	%		07/19/06 10:07	TNM			

Nitrogen, Ammonia	Method: EPA 350.1 Modified							
Nitrogen, Ammonia	ND	mg/kg	12.	08/01/06 19:50	BMF	7727-37-9		

Nitrogen, Nitrate	Method: EPA 353.2 Modified							
Nitrate as N	ND	mg/kg	8.6	07/26/06 13:33	EWS			

pH	Method: EPA 9045							
pH	7.18	units		07/20/06 11:37	MLS1			

GC/MS Semivolatiles

Semivolatile Organics	Prep/Method: EPA 3545 / EPA 8270							
Acenaphthene	ND	ug/kg	450	07/26/06 22:48	BET	83-32-9		
Acenaphthylene	ND	ug/kg	450	07/26/06 22:48	BET	208-96-8		
Anthracene	ND	ug/kg	450	07/26/06 22:48	BET	120-12-7		
Benzo(k)fluoranthene	ND	ug/kg	450	07/26/06 22:48	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/kg	450	07/26/06 22:48	BET	205-99-2		
Benzo(a)anthracene	ND	ug/kg	450	07/26/06 22:48	BET	56-55-3		
Benzoic acid	ND	ug/kg	2200	07/26/06 22:48	BET	65-85-0		
Benzo(g,h,i)perylene	ND	ug/kg	450	07/26/06 22:48	BET	191-24-2		
Benzyl alcohol	ND	ug/kg	900	07/26/06 22:48	BET	100-51-6		
Benzo(a)pyrene	ND	ug/kg	450	07/26/06 22:48	BET	50-32-8		

Date: 08/02/06

Page: 19 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208587 Project Sample Number: 92123459-004 Date Collected: 07/18/06 09:30
Client Sample ID: JOHNB4 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
4-Bromophenylphenyl ether	ND	ug/kg	450	07/26/06 22:48	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	450	07/26/06 22:48	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	900	07/26/06 22:48	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	900	07/26/06 22:48	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	450	07/26/06 22:48	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	450	07/26/06 22:48	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	450	07/26/06 22:48	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	450	07/26/06 22:48	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	450	07/26/06 22:48	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	450	07/26/06 22:48	BET	7005-72-3		
Chrysene	ND	ug/kg	450	07/26/06 22:48	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	450	07/26/06 22:48	BET	53-70-3		
Dibenzofuran	ND	ug/kg	450	07/26/06 22:48	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	450	07/26/06 22:48	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	450	07/26/06 22:48	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	450	07/26/06 22:48	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	900	07/26/06 22:48	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	450	07/26/06 22:48	BET	120-83-2		
Diethylphthalate	ND	ug/kg	450	07/26/06 22:48	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	450	07/26/06 22:48	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	450	07/26/06 22:48	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	450	07/26/06 22:48	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	450	07/26/06 22:48	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	2200	07/26/06 22:48	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	450	07/26/06 22:48	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	450	07/26/06 22:48	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	450	07/26/06 22:48	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	450	07/26/06 22:48	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	450	07/26/06 22:48	BET	117-81-7		
Fluoranthene	ND	ug/kg	450	07/26/06 22:48	BET	206-44-0		
Fluorene	ND	ug/kg	450	07/26/06 22:48	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	450	07/26/06 22:48	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	450	07/26/06 22:48	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	450	07/26/06 22:48	BET	77-47-4		
Hexachloroethane	ND	ug/kg	450	07/26/06 22:48	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	450	07/26/06 22:48	BET	193-39-5		
Isophorone	ND	ug/kg	450	07/26/06 22:48	BET	78-59-1		
1-Methylnaphthalene	ND	ug/kg	450	07/26/06 22:48	BET	90-12-0		
2-Methylnaphthalene	ND	ug/kg	450	07/26/06 22:48	BET	91-57-6		

Date: 08/02/06

Page: 20 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208587 Project Sample Number: 92123459-004 Date Collected: 07/18/06 09:30
Client Sample ID: JOHNB4 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
2-Methylphenol (o-Cresol)	ND	ug/kg	450	07/26/06 22:48	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	450	07/26/06 22:48	BET			
Naphthalene	ND	ug/kg	450	07/26/06 22:48	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	2200	07/26/06 22:48	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	2200	07/26/06 22:48	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	2200	07/26/06 22:48	BET	100-01-6		
Nitrobenzene	ND	ug/kg	450	07/26/06 22:48	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	450	07/26/06 22:48	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	2200	07/26/06 22:48	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	450	07/26/06 22:48	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	450	07/26/06 22:48	BET	86-30-6		
Pentachlorophenol	ND	ug/kg	2200	07/26/06 22:48	BET	87-86-5		
Phenanthrene	ND	ug/kg	450	07/26/06 22:48	BET	85-01-8		
Phenol	ND	ug/kg	450	07/26/06 22:48	BET	108-95-2		
Pyrene	ND	ug/kg	450	07/26/06 22:48	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	450	07/26/06 22:48	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	450	07/26/06 22:48	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	450	07/26/06 22:48	BET	88-06-2		
Nitrobenzene-d5 (S)	36	%		07/26/06 22:48	BET	4165-60-0		
2-Fluorobiphenyl (S)	43	%		07/26/06 22:48	BET	321-60-8		
Terphenyl-d14 (S)	63	%		07/26/06 22:48	BET	1718-51-0		
Phenol-d5 (S)	42	%		07/26/06 22:48	BET	4165-62-2		
2-Fluorophenol (S)	45	%		07/26/06 22:48	BET	367-12-4		
2,4,6-Tribromophenol (S)	68	%		07/26/06 22:48	BET	118-79-6		
Date Extracted	07/19/06			07/19/06				

GC Semivolatiles

Organochlorine Pesticides	Prep/Method: EPA 3545 / EPA 8081	Results	Units	Report Limit	Analyzed	By	CAS No.
Aldrin		ND	ug/kg	1.4	07/24/06 21:42	JEM	309-00-2
alpha-BHC		ND	ug/kg	2.7	07/24/06 21:42	JEM	319-84-6
beta-BHC		ND	ug/kg	2.7	07/24/06 21:42	JEM	319-85-7
delta-BHC		ND	ug/kg	2.7	07/24/06 21:42	JEM	319-86-8
gamma-BHC (Lindane)		ND	ug/kg	2.7	07/24/06 21:42	JEM	58-89-9
Chlordane		ND	ug/kg	11.	07/24/06 21:42	JEM	57-74-9
gamma-Chlordane		ND	ug/kg	2.7	07/24/06 21:42	JEM	5103-74-2
4,4'-DDD		ND	ug/kg	2.7	07/24/06 21:42	JEM	72-54-8
4,4'-DDE		ND	ug/kg	2.7	07/24/06 21:42	JEM	72-55-9
4,4'-DDT		ND	ug/kg	2.7	07/24/06 21:42	JEM	50-29-3
Dieldrin		ND	ug/kg	1.4	07/24/06 21:42	JEM	60-57-1

Date: 08/02/06

Page: 21 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208587 Project Sample Number: 92123459-004 Date Collected: 07/18/06 09:30
Client Sample ID: JOHNB4 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Endosulfan I	ND	ug/kg	2.7	07/24/06 21:42	JEM	959-98-8		
Endosulfan II	ND	ug/kg	2.7	07/24/06 21:42	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/kg	2.7	07/24/06 21:42	JEM	1031-07-8		
Endrin	ND	ug/kg	2.7	07/24/06 21:42	JEM	72-20-8		
Endrin aldehyde	ND	ug/kg	2.7	07/24/06 21:42	JEM	7421-93-4		
Heptachlor	ND	ug/kg	2.7	07/24/06 21:42	JEM	76-44-8		
Heptachlor epoxide	ND	ug/kg	2.7	07/24/06 21:42	JEM	1024-57-3		
Methoxychlor	ND	ug/kg	9.5	07/24/06 21:42	JEM	72-43-5		
Mirex	ND	ug/kg	9.5	07/24/06 21:42	JEM	2385-85-5		
Toxaphene	ND	ug/kg	11.	07/24/06 21:42	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	25	%		07/24/06 21:42	JEM	877-09-8	2	
Decachlorobiphenyl (S)	52	%		07/24/06 21:42	JEM	2051-24-3		
Date Extracted	07/20/06			07/20/06				

GC/MS Volatiles

GC/MS VOCs 5035/8260 low level Method: EPA 8260

Acetone	ND	ug/kg	110	07/25/06 22:21	DLK	67-64-1		
Benzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	71-43-2		
Bromobenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	108-86-1		
Bromochloromethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	74-97-5		
Bromodichloromethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	75-27-4		
Bromoform	ND	ug/kg	5.6	07/25/06 22:21	DLK	75-25-2		
Bromomethane	ND	ug/kg	11.	07/25/06 22:21	DLK	74-83-9		
2-Butanone (MEK)	ND	ug/kg	110	07/25/06 22:21	DLK	78-93-3		
n-Butylbenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	104-51-8		
sec-Butylbenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	98-06-6		
Carbon tetrachloride	ND	ug/kg	5.6	07/25/06 22:21	DLK	56-23-5		
Chlorobenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	108-90-7		
Chloroethane	ND	ug/kg	11.	07/25/06 22:21	DLK	75-00-3		
Chloroform	ND	ug/kg	5.6	07/25/06 22:21	DLK	67-66-3		
Chloromethane	ND	ug/kg	11.	07/25/06 22:21	DLK	74-87-3		
2-Chlorotoluene	ND	ug/kg	5.6	07/25/06 22:21	DLK	95-49-8		
4-Chlorotoluene	ND	ug/kg	5.6	07/25/06 22:21	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.6	07/25/06 22:21	DLK	96-12-8		
Dibromochloromethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.6	07/25/06 22:21	DLK	106-93-4		
Dibromomethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	95-50-1		

Date: 08/02/06

Page: 22 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208587
Client Sample ID: JOHNB4 6-8

Project Sample Number: 92123459-004
Matrix: Soil

Date Collected: 07/18/06 09:30
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
1,3-Dichlorobenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	11.	07/25/06 22:21	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/kg	5.6	07/25/06 22:21	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	5.6	07/25/06 22:21	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	5.6	07/25/06 22:21	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/kg	5.6	07/25/06 22:21	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/kg	5.6	07/25/06 22:21	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/kg	5.6	07/25/06 22:21	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/kg	5.6	07/25/06 22:21	DLK	563-58-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.6	07/25/06 22:21	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	5.6	07/25/06 22:21	DLK	10061-02-6		
Diisopropyl ether	ND	ug/kg	5.6	07/25/06 22:21	DLK	108-20-3		
Ethylbenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	5.6	07/25/06 22:21	DLK	87-68-3		
2-Hexanone	ND	ug/kg	56.	07/25/06 22:21	DLK	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/kg	5.6	07/25/06 22:21	DLK	98-82-8		
p-Isopropyltoluene	ND	ug/kg	5.6	07/25/06 22:21	DLK	99-87-6		
Methylene chloride	ND	ug/kg	11.	07/25/06 22:21	DLK	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	56.	07/25/06 22:21	DLK	108-10-1		
Methyl-tert-butyl ether	ND	ug/kg	5.6	07/25/06 22:21	DLK	1634-04-4		
Naphthalene	ND	ug/kg	5.6	07/25/06 22:21	DLK	91-20-3		
n-Propylbenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	103-65-1		
Styrene	ND	ug/kg	5.6	07/25/06 22:21	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	79-34-5		
Tetrachloroethene	ND	ug/kg	5.6	07/25/06 22:21	DLK	127-18-4		
Toluene	ND	ug/kg	5.6	07/25/06 22:21	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	79-00-5		
Trichloroethene	ND	ug/kg	5.6	07/25/06 22:21	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/kg	5.6	07/25/06 22:21	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	5.6	07/25/06 22:21	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/kg	5.6	07/25/06 22:21	DLK	108-67-8		

Date: 08/02/06

Page: 23 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.





Pace Analytical Services, Inc.
 9800 Kinsey Avenue, Suite 100
 Huntersville, NC 28078
 Phone: 704.875.9092
 Fax: 704.875.9091

Pace Analytical Services, Inc.
 2225 Riverside Drive
 Asheville, NC 28804
 Phone: 828.254.7176
 Fax: 828.252.4618

Lab Project Number: 92123459
 Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208587 Project Sample Number: 92123459-004 Date Collected: 07/18/06 09:30
 Client Sample ID: JOHN4 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Vinyl acetate	ND	ug/kg	56.	07/25/06 22:21	DLK	108-05-4		
Vinyl chloride	ND	ug/kg	11.	07/25/06 22:21	DLK	75-01-4		
Xylene (Total)	ND	ug/kg	5.6	07/25/06 22:21	DLK	1330-20-7		
m&p-Xylene	ND	ug/kg	11.	07/25/06 22:21	DLK			
o-Xylene	ND	ug/kg	5.6	07/25/06 22:21	DLK	95-47-6		
Toluene-d8 (S)	97	%		07/25/06 22:21	DLK	2037-26-5		
4-Bromofluorobenzene (S)	94	%		07/25/06 22:21	DLK	460-00-4		
Dibromofluoromethane (S)	93	%		07/25/06 22:21	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	85	%		07/25/06 22:21	DLK	17060-07-0		

Date: 08/02/06

Page: 24 of 87

Asheville Certification IDs
 NC Wastewater 40
 NC Drinking Water 37712
 SC Environmental 99030
 FL NELAP E87648

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc.



Charlotte Certification IDs
 NC Wastewater 12
 NC Drinking Water 37706
 SC 99006
 FL NELAP E87627

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208595 Project Sample Number: 92123459-005 Date Collected: 07/18/06 09:45
Client Sample ID: JOHNB5 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
------------	---------	-------	--------------	----------	----	---------	------	--------

Metals

Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	1.2	mg/kg	0.69	07/26/06 05:38	SHB	7440-38-2		
Barium	110	mg/kg	0.69	07/26/06 05:38	SHB	7440-39-3		
Cadmium	ND	mg/kg	0.14	07/26/06 05:38	SHB	7440-43-9		
Chromium	13.	mg/kg	0.28	07/26/06 05:38	SHB	7440-47-3		
Lead	6.3	mg/kg	0.69	07/26/06 05:38	SHB	7439-92-1		
Selenium	ND	mg/kg	0.69	07/26/06 05:38	SHB	7782-49-2		
Silver	ND	mg/kg	0.28	07/26/06 05:38	SHB	7440-22-4		
Date Digested	07/21/06 14:00			07/21/06 14:00				

Mercury, CVAAS, in Soil	Method: EPA 7471							
Mercury	0.026	mg/kg	0.0063	07/20/06 14:41	ALV	7439-97-6		

Wet Chemistry

Percent Moisture	Method: % Moisture							
Percent Moisture	26.2	%		07/19/06 10:07	TNM			

Nitrogen, Ammonia	Method: EPA 350.1 Modified							
Nitrogen, Ammonia	ND	mg/kg	12.	08/01/06 19:50	BMF	7727-37-9		

Nitrogen, Nitrate	Method: EPA 353.2 Modified							
Nitrate as N	ND	mg/kg	9.7	07/26/06 13:33	EWS			

pH	Method: EPA 9045							
pH	5.35	units		07/20/06 11:37	MLS1			

GC/MS Semivolatiles

Semivolatile Organics	Prep/Method: EPA 3545 / EPA 8270							
Acenaphthene	ND	ug/kg	450	07/26/06 23:10	BET	83-32-9		
Acenaphthylene	ND	ug/kg	450	07/26/06 23:10	BET	208-96-8		
Anthracene	ND	ug/kg	450	07/26/06 23:10	BET	120-12-7		
Benzo(k)fluoranthene	ND	ug/kg	450	07/26/06 23:10	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/kg	450	07/26/06 23:10	BET	205-99-2		
Benzo(a)anthracene	ND	ug/kg	450	07/26/06 23:10	BET	56-55-3		
Benzoic acid	ND	ug/kg	2200	07/26/06 23:10	BET	65-85-0		
Benzo(g,h,i)perylene	ND	ug/kg	450	07/26/06 23:10	BET	191-24-2		
Benzyl alcohol	ND	ug/kg	890	07/26/06 23:10	BET	100-51-6		
Benzo(a)pyrene	ND	ug/kg	450	07/26/06 23:10	BET	50-32-8		

Date: 08/02/06

Page: 25 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208595
Client Sample ID: JOHNB5 6-8

Project Sample Number: 92123459-005
Matrix: Soil

Date Collected: 07/18/06 09:45
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
4-Bromophenylphenyl ether	ND	ug/kg	450	07/26/06 23:10	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	450	07/26/06 23:10	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	890	07/26/06 23:10	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	890	07/26/06 23:10	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	450	07/26/06 23:10	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	450	07/26/06 23:10	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	450	07/26/06 23:10	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	450	07/26/06 23:10	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	450	07/26/06 23:10	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	450	07/26/06 23:10	BET	7005-72-3		
Chrysene	ND	ug/kg	450	07/26/06 23:10	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	450	07/26/06 23:10	BET	53-70-3		
Dibenzofuran	ND	ug/kg	450	07/26/06 23:10	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	450	07/26/06 23:10	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	450	07/26/06 23:10	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	450	07/26/06 23:10	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	890	07/26/06 23:10	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	450	07/26/06 23:10	BET	120-83-2		
Diethylphthalate	ND	ug/kg	450	07/26/06 23:10	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	450	07/26/06 23:10	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	450	07/26/06 23:10	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	450	07/26/06 23:10	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	450	07/26/06 23:10	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	2200	07/26/06 23:10	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	450	07/26/06 23:10	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	450	07/26/06 23:10	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	450	07/26/06 23:10	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	450	07/26/06 23:10	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	450	07/26/06 23:10	BET	117-81-7		
Fluoranthene	ND	ug/kg	450	07/26/06 23:10	BET	206-44-0		
Fluorene	ND	ug/kg	450	07/26/06 23:10	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	450	07/26/06 23:10	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	450	07/26/06 23:10	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	450	07/26/06 23:10	BET	77-47-4		
Hexachloroethane	ND	ug/kg	450	07/26/06 23:10	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	450	07/26/06 23:10	BET	193-39-5		
Isophorone	ND	ug/kg	450	07/26/06 23:10	BET	78-59-1		
1-Methylnaphthalene	ND	ug/kg	450	07/26/06 23:10	BET	90-12-0		
2-Methylnaphthalene	ND	ug/kg	450	07/26/06 23:10	BET	91-57-6		

Date: 08/02/06

Page: 26 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208595 Project Sample Number: 92123459-005 Date Collected: 07/18/06 09:45
Client Sample ID: JOHNB5 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
2-Methylphenol (o-Cresol)	ND	ug/kg	450	07/26/06 23:10	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	450	07/26/06 23:10	BET			
Naphthalene	ND	ug/kg	450	07/26/06 23:10	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	2200	07/26/06 23:10	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	2200	07/26/06 23:10	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	2200	07/26/06 23:10	BET	100-01-6		
Nitrobenzene	ND	ug/kg	450	07/26/06 23:10	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	450	07/26/06 23:10	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	2200	07/26/06 23:10	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	450	07/26/06 23:10	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	450	07/26/06 23:10	BET	86-30-6		
Pentachlorophenol	ND	ug/kg	2200	07/26/06 23:10	BET	87-86-5		
Phenanthrene	ND	ug/kg	450	07/26/06 23:10	BET	85-01-8		
Phenol	ND	ug/kg	450	07/26/06 23:10	BET	108-95-2		
Pyrene	ND	ug/kg	450	07/26/06 23:10	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	450	07/26/06 23:10	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	450	07/26/06 23:10	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	450	07/26/06 23:10	BET	88-06-2		
Nitrobenzene-d5 (S)	41	%		07/26/06 23:10	BET	4165-60-0		
2-Fluorobiphenyl (S)	46	%		07/26/06 23:10	BET	321-60-8		
Terphenyl-d14 (S)	67	%		07/26/06 23:10	BET	1718-51-0		
Phenol-d5 (S)	45	%		07/26/06 23:10	BET	4165-62-2		
2-Fluorophenol (S)	49	%		07/26/06 23:10	BET	367-12-4		
2,4,6-Tribromophenol (S)	77	%		07/26/06 23:10	BET	118-79-6		
Date Extracted	07/19/06			07/19/06				

GC Semivolatiles

Organochlorine Pesticides

Prep/Method: EPA 3545 / EPA 8081

Aldrin	ND	ug/kg	1.4	07/24/06 22:01	JEM	309-00-2		
alpha-BHC	ND	ug/kg	2.7	07/24/06 22:01	JEM	319-84-6		
beta-BHC	ND	ug/kg	2.7	07/24/06 22:01	JEM	319-85-7		
delta-BHC	ND	ug/kg	2.7	07/24/06 22:01	JEM	319-86-8		
gamma-BHC (Lindane)	ND	ug/kg	2.7	07/24/06 22:01	JEM	58-89-9		
Chlordane	ND	ug/kg	11.	07/24/06 22:01	JEM	57-74-9		
gamma-Chlordane	ND	ug/kg	2.7	07/24/06 22:01	JEM	5103-74-2		
4,4'-DDD	ND	ug/kg	2.7	07/24/06 22:01	JEM	72-54-8		
4,4'-DDE	ND	ug/kg	2.7	07/24/06 22:01	JEM	72-55-9		
4,4'-DDT	ND	ug/kg	2.7	07/24/06 22:01	JEM	50-29-3		
Dieldrin	ND	ug/kg	1.4	07/24/06 22:01	JEM	60-57-1		

Date: 08/02/06

Page: 27 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459
Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208595 Project Sample Number: 92123459-005 Date Collected: 07/18/06 09:45
Client Sample ID: JOHNB5 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Endosulfan I	ND	ug/kg	2.7	07/24/06 22:01	JEM	959-98-8		
Endosulfan II	ND	ug/kg	2.7	07/24/06 22:01	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/kg	2.7	07/24/06 22:01	JEM	1031-07-8		
Endrin	ND	ug/kg	2.7	07/24/06 22:01	JEM	72-20-8		
Endrin aldehyde	ND	ug/kg	2.7	07/24/06 22:01	JEM	7421-93-4		
Heptachlor	ND	ug/kg	2.7	07/24/06 22:01	JEM	76-44-8		
Heptachlor epoxide	ND	ug/kg	2.7	07/24/06 22:01	JEM	1024-57-3		
Methoxychlor	ND	ug/kg	9.5	07/24/06 22:01	JEM	72-43-5		
Mirex	ND	ug/kg	9.5	07/24/06 22:01	JEM	2385-85-5		
Toxaphene	ND	ug/kg	11.	07/24/06 22:01	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	38	%		07/24/06 22:01	JEM	877-09-8	2	
Decachlorobiphenyl (S)	57	%		07/24/06 22:01	JEM	2051-24-3		
Date Extracted	07/20/06			07/20/06				

GC/MS Volatiles

GC/MS VOCs 5035/8260 low level Method: EPA 8260

Acetone	ND	ug/kg	110	07/25/06 22:02	DLK	67-64-1		
Benzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	71-43-2		
Bromobenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	108-86-1		
Bromochloromethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	74-97-5		
Bromodichloromethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	75-27-4		
Bromoform	ND	ug/kg	5.5	07/25/06 22:02	DLK	75-25-2		
Bromomethane	ND	ug/kg	11.	07/25/06 22:02	DLK	74-83-9		
2-Butanone (MEK)	ND	ug/kg	110	07/25/06 22:02	DLK	78-93-3		
n-Butylbenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	104-51-8		
sec-Butylbenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	98-06-6		
Carbon tetrachloride	ND	ug/kg	5.5	07/25/06 22:02	DLK	56-23-5		
Chlorobenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	108-90-7		
Chloroethane	ND	ug/kg	11.	07/25/06 22:02	DLK	75-00-3		
Chloroform	ND	ug/kg	5.5	07/25/06 22:02	DLK	67-66-3		
Chloromethane	ND	ug/kg	11.	07/25/06 22:02	DLK	74-87-3		
2-Chlorotoluene	ND	ug/kg	5.5	07/25/06 22:02	DLK	95-49-8		
4-Chlorotoluene	ND	ug/kg	5.5	07/25/06 22:02	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.5	07/25/06 22:02	DLK	96-12-8		
Dibromochloromethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.5	07/25/06 22:02	DLK	106-93-4		
Dibromomethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	95-50-1		

Date: 08/02/06

Page: 28 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208595
Client Sample ID: JOHNB5 6-8

Project Sample Number: 92123459-005
Matrix: Soil

Date Collected: 07/18/06 09:45
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
1,3-Dichlorobenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	11.	07/25/06 22:02	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/kg	5.5	07/25/06 22:02	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	5.5	07/25/06 22:02	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	5.5	07/25/06 22:02	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/kg	5.5	07/25/06 22:02	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/kg	5.5	07/25/06 22:02	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/kg	5.5	07/25/06 22:02	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/kg	5.5	07/25/06 22:02	DLK	563-58-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.5	07/25/06 22:02	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	5.5	07/25/06 22:02	DLK	10061-02-6		
Diisopropyl ether	ND	ug/kg	5.5	07/25/06 22:02	DLK	108-20-3		
Ethylbenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	5.5	07/25/06 22:02	DLK	87-68-3		
2-Hexanone	ND	ug/kg	55.	07/25/06 22:02	DLK	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/kg	5.5	07/25/06 22:02	DLK	98-82-8		
p-Isopropyltoluene	ND	ug/kg	5.5	07/25/06 22:02	DLK	99-87-6		
Methylene chloride	ND	ug/kg	11.	07/25/06 22:02	DLK	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	55.	07/25/06 22:02	DLK	108-10-1		
Methyl-tert-butyl ether	ND	ug/kg	5.5	07/25/06 22:02	DLK	1634-04-4		
Naphthalene	ND	ug/kg	5.5	07/25/06 22:02	DLK	91-20-3		
n-Propylbenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	103-65-1		
Styrene	ND	ug/kg	5.5	07/25/06 22:02	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	79-34-5		
Tetrachloroethene	ND	ug/kg	5.5	07/25/06 22:02	DLK	127-18-4		
Toluene	ND	ug/kg	5.5	07/25/06 22:02	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	79-00-5		
Trichloroethene	ND	ug/kg	5.5	07/25/06 22:02	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/kg	5.5	07/25/06 22:02	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	5.5	07/25/06 22:02	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/kg	5.5	07/25/06 22:02	DLK	108-67-8		

Date: 08/02/06

Page: 29 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.





Pace Analytical Services, Inc.
 9800 Kinsey Avenue, Suite 100
 Huntersville, NC 28078
 Phone: 704.875.9092
 Fax: 704.875.9091

Pace Analytical Services, Inc.
 2225 Riverside Drive
 Asheville, NC 28804
 Phone: 828.254.7176
 Fax: 828.252.4618

Lab Project Number: 92123459
 Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208595 Project Sample Number: 92123459-005 Date Collected: 07/18/06 09:45
 Client Sample ID: JOHNB5 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Vinyl acetate	ND	ug/kg	55.	07/25/06 22:02	DLK	108-05-4		
Vinyl chloride	ND	ug/kg	11.	07/25/06 22:02	DLK	75-01-4		
Xylene (Total)	ND	ug/kg	5.5	07/25/06 22:02	DLK	1330-20-7		
m&p-Xylene	ND	ug/kg	11.	07/25/06 22:02	DLK			
o-Xylene	ND	ug/kg	5.5	07/25/06 22:02	DLK	95-47-6		
Toluene-d8 (S)	103	%		07/25/06 22:02	DLK	2037-26-5		
4-Bromofluorobenzene (S)	90	%		07/25/06 22:02	DLK	460-00-4		
Dibromofluoromethane (S)	86	%		07/25/06 22:02	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	86	%		07/25/06 22:02	DLK	17060-07-0		

Asheville Certification IDs
 NC Wastewater 40
 NC Drinking Water 37712
 SC Environmental 99030
 FL NELAP E87648

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc.



Charlotte Certification IDs
 NC Wastewater 12
 NC Drinking Water 37706
 SC 99006
 FL NELAP E87627

Lab Project Number: 92123459
Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208603 Project Sample Number: 92123459-006 Date Collected: 07/18/06 10:00
Client Sample ID: JOHNB6 4-6 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
------------	---------	-------	--------------	----------	----	---------	------	--------

Metals

Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	1.3	mg/kg	0.63	07/26/06 05:43	SHB	7440-38-2		
Barium	26.	mg/kg	0.63	07/26/06 05:43	SHB	7440-39-3		
Cadmium	ND	mg/kg	0.13	07/26/06 05:43	SHB	7440-43-9		
Chromium	23.	mg/kg	0.25	07/26/06 05:43	SHB	7440-47-3		
Lead	6.9	mg/kg	0.63	07/26/06 05:43	SHB	7439-92-1		
Selenium	ND	mg/kg	0.63	07/26/06 05:43	SHB	7782-49-2		
Silver	ND	mg/kg	0.25	07/26/06 05:43	SHB	7440-22-4		
Date Digested	07/21/06 14:00			07/21/06 14:00				

Mercury, CVAAS, in Soil	Method: EPA 7471							
Mercury	0.026	mg/kg	0.0060	07/20/06 14:41	ALV	7439-97-6		

Wet Chemistry

Percent Moisture	Method: % Moisture							
Percent Moisture	26.4	%		07/19/06 10:07	TNM			

Nitrogen, Ammonia	Method: EPA 350.1 Modified							
Nitrogen, Ammonia	ND	mg/kg	11.	08/01/06 19:50	BMF	7727-37-9		

Nitrogen, Nitrate	Method: EPA 353.2 Modified							
Nitrate as N	ND	mg/kg	6.5	07/26/06 13:33	EWS			

pH	Method: EPA 9045							
pH	6.66	units		07/20/06 11:37	MLS1			

GC/MS Semivolatiles

Semivolatile Organics	Prep/Method: EPA 3545 / EPA 8270							
Acenaphthene	ND	ug/kg	450	07/25/06 23:46	BET	83-32-9		
Acenaphthylene	ND	ug/kg	450	07/25/06 23:46	BET	208-96-8		
Anthracene	ND	ug/kg	450	07/25/06 23:46	BET	120-12-7		
Benzo(k)fluoranthene	ND	ug/kg	450	07/25/06 23:46	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/kg	450	07/25/06 23:46	BET	205-99-2		
Benzo(a)anthracene	ND	ug/kg	450	07/25/06 23:46	BET	56-55-3		
Benzoic acid	ND	ug/kg	2200	07/25/06 23:46	BET	65-85-0		
Benzo(g,h,i)perylene	ND	ug/kg	450	07/25/06 23:46	BET	191-24-2		
Benzyl alcohol	ND	ug/kg	900	07/25/06 23:46	BET	100-51-6		
Benzo(a)pyrene	ND	ug/kg	450	07/25/06 23:46	BET	50-32-8		

Date: 08/02/06

Page: 31 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208603
Client Sample ID: JOHNB6 4-6

Project Sample Number: 92123459-006
Matrix: Soil

Date Collected: 07/18/06 10:00
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
4-Bromophenylphenyl ether	ND	ug/kg	450	07/25/06 23:46	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	450	07/25/06 23:46	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	900	07/25/06 23:46	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	900	07/25/06 23:46	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	450	07/25/06 23:46	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	450	07/25/06 23:46	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	450	07/25/06 23:46	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	450	07/25/06 23:46	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	450	07/25/06 23:46	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	450	07/25/06 23:46	BET	7005-72-3		
Chrysene	ND	ug/kg	450	07/25/06 23:46	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	450	07/25/06 23:46	BET	53-70-3		
Dibenzofuran	ND	ug/kg	450	07/25/06 23:46	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	450	07/25/06 23:46	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	450	07/25/06 23:46	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	450	07/25/06 23:46	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	900	07/25/06 23:46	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	450	07/25/06 23:46	BET	120-83-2		
Diethylphthalate	ND	ug/kg	450	07/25/06 23:46	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	450	07/25/06 23:46	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	450	07/25/06 23:46	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	450	07/25/06 23:46	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	450	07/25/06 23:46	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	2200	07/25/06 23:46	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	450	07/25/06 23:46	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	450	07/25/06 23:46	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	450	07/25/06 23:46	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	450	07/25/06 23:46	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	450	07/25/06 23:46	BET	117-81-7		
Fluoranthene	ND	ug/kg	450	07/25/06 23:46	BET	206-44-0		
Fluorene	ND	ug/kg	450	07/25/06 23:46	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	450	07/25/06 23:46	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	450	07/25/06 23:46	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	450	07/25/06 23:46	BET	77-47-4		
Hexachloroethane	ND	ug/kg	450	07/25/06 23:46	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	450	07/25/06 23:46	BET	193-39-5		
Isophorone	ND	ug/kg	450	07/25/06 23:46	BET	78-59-1		
1-Methylnaphthalene	ND	ug/kg	450	07/25/06 23:46	BET	90-12-0		
2-Methylnaphthalene	ND	ug/kg	450	07/25/06 23:46	BET	91-57-6		

Date: 08/02/06

Page: 32 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208603
Client Sample ID: JOHNB6 4-6

Project Sample Number: 92123459-006
Matrix: Soil

Date Collected: 07/18/06 10:00
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
2-Methylphenol (o-Cresol)	ND	ug/kg	450	07/25/06 23:46	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	450	07/25/06 23:46	BET			
Naphthalene	ND	ug/kg	450	07/25/06 23:46	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	2200	07/25/06 23:46	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	2200	07/25/06 23:46	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	2200	07/25/06 23:46	BET	100-01-6		
Nitrobenzene	ND	ug/kg	450	07/25/06 23:46	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	450	07/25/06 23:46	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	2200	07/25/06 23:46	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	450	07/25/06 23:46	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	450	07/25/06 23:46	BET	86-30-6		
Pentachlorophenol	ND	ug/kg	2200	07/25/06 23:46	BET	87-86-5		
Phenanthrene	ND	ug/kg	450	07/25/06 23:46	BET	85-01-8		
Phenol	ND	ug/kg	450	07/25/06 23:46	BET	108-95-2		
Pyrene	ND	ug/kg	450	07/25/06 23:46	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	450	07/25/06 23:46	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	450	07/25/06 23:46	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	450	07/25/06 23:46	BET	88-06-2		
Nitrobenzene-d5 (S)	22	%		07/25/06 23:46	BET	4165-60-0		
2-Fluorobiphenyl (S)	27	%		07/25/06 23:46	BET	321-60-8		
Terphenyl-d14 (S)	57	%		07/25/06 23:46	BET	1718-51-0		
Phenol-d5 (S)	24	%		07/25/06 23:46	BET	4165-62-2	1	
2-Fluorophenol (S)	24	%		07/25/06 23:46	BET	367-12-4		
2,4,6-Tribromophenol (S)	72	%		07/25/06 23:46	BET	118-79-6		
Date Extracted	07/24/06			07/24/06				

GC Semivolatiles

Organochlorine Pesticides

Prep/Method: EPA 3545 / EPA 8081

Aldrin	ND	ug/kg	1.4	07/24/06 22:20	JEM	309-00-2		
alpha-BHC	ND	ug/kg	2.7	07/24/06 22:20	JEM	319-84-6		
beta-BHC	ND	ug/kg	2.7	07/24/06 22:20	JEM	319-85-7		
delta-BHC	ND	ug/kg	2.7	07/24/06 22:20	JEM	319-86-8		
gamma-BHC (Lindane)	ND	ug/kg	2.7	07/24/06 22:20	JEM	58-89-9		
Chlordane	ND	ug/kg	11.	07/24/06 22:20	JEM	57-74-9		
gamma-Chlordane	ND	ug/kg	2.7	07/24/06 22:20	JEM	5103-74-2		
4,4'-DDD	ND	ug/kg	2.7	07/24/06 22:20	JEM	72-54-8		
4,4'-DDE	ND	ug/kg	2.7	07/24/06 22:20	JEM	72-55-9		
4,4'-DDT	ND	ug/kg	2.7	07/24/06 22:20	JEM	50-29-3		
Dieldrin	ND	ug/kg	1.4	07/24/06 22:20	JEM	60-57-1		

Date: 08/02/06

Page: 33 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208603 Project Sample Number: 92123459-006 Date Collected: 07/18/06 10:00
Client Sample ID: JOHNB6 4-6 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Endosulfan I	ND	ug/kg	2.7	07/24/06 22:20	JEM	959-98-8		
Endosulfan II	ND	ug/kg	2.7	07/24/06 22:20	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/kg	2.7	07/24/06 22:20	JEM	1031-07-8		
Endrin	ND	ug/kg	2.7	07/24/06 22:20	JEM	72-20-8		
Endrin aldehyde	ND	ug/kg	2.7	07/24/06 22:20	JEM	7421-93-4		
Heptachlor	ND	ug/kg	2.7	07/24/06 22:20	JEM	76-44-8		
Heptachlor epoxide	ND	ug/kg	2.7	07/24/06 22:20	JEM	1024-57-3		
Methoxychlor	ND	ug/kg	9.5	07/24/06 22:20	JEM	72-43-5		
Mirex	ND	ug/kg	9.5	07/24/06 22:20	JEM	2385-85-5		
Toxaphene	ND	ug/kg	11.	07/24/06 22:20	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	16	%		07/24/06 22:20	JEM	877-09-8	2	
Decachlorobiphenyl (S)	43	%		07/24/06 22:20	JEM	2051-24-3		
Date Extracted	07/20/06			07/20/06				

GC/MS Volatiles

GC/MS VOCs 5035/8260 low level Method: EPA 8260

Acetone	ND	ug/kg	120	07/26/06 17:33	DLK	67-64-1		
Benzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	71-43-2		
Bromobenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	108-86-1		
Bromochloromethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	74-97-5		
Bromodichloromethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	75-27-4		
Bromoform	ND	ug/kg	5.9	07/26/06 17:33	DLK	75-25-2		
Bromomethane	ND	ug/kg	12.	07/26/06 17:33	DLK	74-83-9		
2-Butanone (MEK)	ND	ug/kg	120	07/26/06 17:33	DLK	78-93-3		
n-Butylbenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	104-51-8		
sec-Butylbenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	135-98-8		
tert-Butylbenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	98-06-6		
Carbon tetrachloride	ND	ug/kg	5.9	07/26/06 17:33	DLK	56-23-5		
Chlorobenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	108-90-7		
Chloroethane	ND	ug/kg	12.	07/26/06 17:33	DLK	75-00-3		
Chloroform	ND	ug/kg	5.9	07/26/06 17:33	DLK	67-66-3		
Chloromethane	ND	ug/kg	12.	07/26/06 17:33	DLK	74-87-3		
2-Chlorotoluene	ND	ug/kg	5.9	07/26/06 17:33	DLK	95-49-8		
4-Chlorotoluene	ND	ug/kg	5.9	07/26/06 17:33	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	5.9	07/26/06 17:33	DLK	96-12-8		
Dibromochloromethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	5.9	07/26/06 17:33	DLK	106-93-4		
Dibromomethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	95-50-1		

Date: 08/02/06

Page: 34 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208603
Client Sample ID: JOHNB6 4-6

Project Sample Number: 92123459-006
Matrix: Soil

Date Collected: 07/18/06 10:00
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
1,3-Dichlorobenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	12.	07/26/06 17:33	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/kg	5.9	07/26/06 17:33	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	5.9	07/26/06 17:33	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	5.9	07/26/06 17:33	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/kg	5.9	07/26/06 17:33	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/kg	5.9	07/26/06 17:33	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/kg	5.9	07/26/06 17:33	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/kg	5.9	07/26/06 17:33	DLK	563-58-6		
cis-1,3-Dichloropropene	ND	ug/kg	5.9	07/26/06 17:33	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	5.9	07/26/06 17:33	DLK	10061-02-6		
Diisopropyl ether	ND	ug/kg	5.9	07/26/06 17:33	DLK	108-20-3		
Ethylbenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	5.9	07/26/06 17:33	DLK	87-68-3		
2-Hexanone	ND	ug/kg	59.	07/26/06 17:33	DLK	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/kg	5.9	07/26/06 17:33	DLK	98-82-8		
p-Isopropyltoluene	ND	ug/kg	5.9	07/26/06 17:33	DLK	99-87-6		
Methylene chloride	ND	ug/kg	12.	07/26/06 17:33	DLK	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	59.	07/26/06 17:33	DLK	108-10-1		
Methyl-tert-butyl ether	ND	ug/kg	5.9	07/26/06 17:33	DLK	1634-04-4		
Naphthalene	ND	ug/kg	5.9	07/26/06 17:33	DLK	91-20-3		
n-Propylbenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	103-65-1		
Styrene	ND	ug/kg	5.9	07/26/06 17:33	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	79-34-5		
Tetrachloroethene	ND	ug/kg	5.9	07/26/06 17:33	DLK	127-18-4		
Toluene	31.	ug/kg	5.9	07/26/06 17:33	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	79-00-5		
Trichloroethene	ND	ug/kg	5.9	07/26/06 17:33	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/kg	5.9	07/26/06 17:33	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	5.9	07/26/06 17:33	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/kg	5.9	07/26/06 17:33	DLK	108-67-8		

Date: 08/02/06

Page: 35 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.





Pace Analytical Services, Inc.
 9800 Kinsey Avenue, Suite 100
 Huntersville, NC 28078
 Phone: 704.875.9092
 Fax: 704.875.9091

Pace Analytical Services, Inc.
 2225 Riverside Drive
 Asheville, NC 28804
 Phone: 828.254.7176
 Fax: 828.252.4618

Lab Project Number: 92123459
 Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208603 Project Sample Number: 92123459-006 Date Collected: 07/18/06 10:00
 Client Sample ID: JOHNB6 4-6 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Vinyl acetate	ND	ug/kg	59.	07/26/06 17:33	DLK	108-05-4		
Vinyl chloride	ND	ug/kg	12.	07/26/06 17:33	DLK	75-01-4		
Xylene (Total)	ND	ug/kg	5.9	07/26/06 17:33	DLK	1330-20-7		
m&p-Xylene	ND	ug/kg	12.	07/26/06 17:33	DLK			
o-Xylene	ND	ug/kg	5.9	07/26/06 17:33	DLK	95-47-6		
Toluene-d8 (S)	101	%		07/26/06 17:33	DLK	2037-26-5		
4-Bromofluorobenzene (S)	93	%		07/26/06 17:33	DLK	460-00-4		
Dibromofluoromethane (S)	93	%		07/26/06 17:33	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	89	%		07/26/06 17:33	DLK	17060-07-0		

Asheville Certification IDs
 NC Wastewater 40
 NC Drinking Water 37712
 SC Environmental 99030
 FL NELAP E87648

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc.



Charlotte Certification IDs
 NC Wastewater 12
 NC Drinking Water 37706
 SC 99006
 FL NELAP E87627

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208611 Project Sample Number: 92123459-007 Date Collected: 07/18/06 10:20
Client Sample ID: JOHNB7 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
------------	---------	-------	--------------	----------	----	---------	------	--------

Metals

Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	1.9	mg/kg	0.82	07/26/06 05:47	SHB	7440-38-2		
Barium	39.	mg/kg	0.82	07/26/06 05:47	SHB	7440-39-3		
Cadmium	ND	mg/kg	0.16	07/26/06 05:47	SHB	7440-43-9		
Chromium	44.	mg/kg	0.33	07/26/06 05:47	SHB	7440-47-3		
Lead	8.2	mg/kg	0.82	07/26/06 05:47	SHB	7439-92-1		
Selenium	ND	mg/kg	0.82	07/26/06 05:47	SHB	7782-49-2		
Silver	ND	mg/kg	0.33	07/26/06 05:47	SHB	7440-22-4		
Date Digested	07/21/06 14:00			07/21/06 14:00				

Mercury, CVAAS, in Soil	Method: EPA 7471							
Mercury	0.024	mg/kg	0.0071	07/20/06 14:41	ALV	7439-97-6		

Wet Chemistry

Percent Moisture	Method: % Moisture							
Percent Moisture	37.8	%		07/19/06 10:08	TNM			

Nitrogen, Ammonia	Method: EPA 350.1 Modified							
Nitrogen, Ammonia	ND	mg/kg	13.	08/01/06 19:50	BMF	7727-37-9		

Nitrogen, Nitrate	Method: EPA 353.2 Modified							
Nitrate as N	8.4	mg/kg	8.4	07/26/06 13:33	EWS			

pH	Method: EPA 9045							
pH	4.33	units		07/20/06 11:37	MLS1			

GC/MS Semivolatiles

Semivolatile Organics	Prep/Method: EPA 3545 / EPA 8270							
Acenaphthene	ND	ug/kg	530	07/26/06 00:07	BET	83-32-9		
Acenaphthylene	ND	ug/kg	530	07/26/06 00:07	BET	208-96-8		
Anthracene	ND	ug/kg	530	07/26/06 00:07	BET	120-12-7		
Benzo(k)fluoranthene	ND	ug/kg	530	07/26/06 00:07	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/kg	530	07/26/06 00:07	BET	205-99-2		
Benzo(a)anthracene	ND	ug/kg	530	07/26/06 00:07	BET	56-55-3		
Benzoic acid	ND	ug/kg	2700	07/26/06 00:07	BET	65-85-0		
Benzo(g,h,i)perylene	ND	ug/kg	530	07/26/06 00:07	BET	191-24-2		
Benzyl alcohol	ND	ug/kg	1100	07/26/06 00:07	BET	100-51-6		
Benzo(a)pyrene	ND	ug/kg	530	07/26/06 00:07	BET	50-32-8		

Date: 08/02/06

Page: 37 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208611
Client Sample ID: JOHNB7 6-8

Project Sample Number: 92123459-007
Matrix: Soil

Date Collected: 07/18/06 10:20
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
4-Bromophenylphenyl ether	ND	ug/kg	530	07/26/06 00:07	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	530	07/26/06 00:07	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	1100	07/26/06 00:07	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	1100	07/26/06 00:07	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	530	07/26/06 00:07	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	530	07/26/06 00:07	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	530	07/26/06 00:07	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	530	07/26/06 00:07	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	530	07/26/06 00:07	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	530	07/26/06 00:07	BET	7005-72-3		
Chrysene	ND	ug/kg	530	07/26/06 00:07	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	530	07/26/06 00:07	BET	53-70-3		
Dibenzofuran	ND	ug/kg	530	07/26/06 00:07	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	530	07/26/06 00:07	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	530	07/26/06 00:07	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	530	07/26/06 00:07	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	1100	07/26/06 00:07	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	530	07/26/06 00:07	BET	120-83-2		
Diethylphthalate	ND	ug/kg	530	07/26/06 00:07	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	530	07/26/06 00:07	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	530	07/26/06 00:07	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	530	07/26/06 00:07	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	530	07/26/06 00:07	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	2700	07/26/06 00:07	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	530	07/26/06 00:07	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	530	07/26/06 00:07	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	530	07/26/06 00:07	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	530	07/26/06 00:07	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	530	07/26/06 00:07	BET	117-81-7		
Fluoranthene	ND	ug/kg	530	07/26/06 00:07	BET	206-44-0		
Fluorene	ND	ug/kg	530	07/26/06 00:07	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	530	07/26/06 00:07	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	530	07/26/06 00:07	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	530	07/26/06 00:07	BET	77-47-4		
Hexachloroethane	ND	ug/kg	530	07/26/06 00:07	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	530	07/26/06 00:07	BET	193-39-5		
Isophorone	ND	ug/kg	530	07/26/06 00:07	BET	78-59-1		
1-Methylnaphthalene	ND	ug/kg	530	07/26/06 00:07	BET	90-12-0		
2-Methylnaphthalene	ND	ug/kg	530	07/26/06 00:07	BET	91-57-6		

Date: 08/02/06

Page: 38 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208611
Client Sample ID: JOHNB7 6-8

Project Sample Number: 92123459-007
Matrix: Soil

Date Collected: 07/18/06 10:20
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
2-Methylphenol (o-Cresol)	ND	ug/kg	530	07/26/06 00:07	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	530	07/26/06 00:07	BET			
Naphthalene	ND	ug/kg	530	07/26/06 00:07	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	2700	07/26/06 00:07	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	2700	07/26/06 00:07	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	2700	07/26/06 00:07	BET	100-01-6		
Nitrobenzene	ND	ug/kg	530	07/26/06 00:07	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	530	07/26/06 00:07	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	2700	07/26/06 00:07	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	530	07/26/06 00:07	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	530	07/26/06 00:07	BET	86-30-6		
Pentachlorophenol	ND	ug/kg	2700	07/26/06 00:07	BET	87-86-5		
Phenanthrene	ND	ug/kg	530	07/26/06 00:07	BET	85-01-8		
Phenol	ND	ug/kg	530	07/26/06 00:07	BET	108-95-2		
Pyrene	ND	ug/kg	530	07/26/06 00:07	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	530	07/26/06 00:07	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	530	07/26/06 00:07	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	530	07/26/06 00:07	BET	88-06-2		
Nitrobenzene-d5 (S)	36	%		07/26/06 00:07	BET	4165-60-0		
2-Fluorobiphenyl (S)	37	%		07/26/06 00:07	BET	321-60-8		
Terphenyl-d14 (S)	65	%		07/26/06 00:07	BET	1718-51-0		
Phenol-d5 (S)	38	%		07/26/06 00:07	BET	4165-62-2	1	
2-Fluorophenol (S)	44	%		07/26/06 00:07	BET	367-12-4		
2,4,6-Tribromophenol (S)	64	%		07/26/06 00:07	BET	118-79-6		
Date Extracted	07/24/06			07/24/06				

GC Semivolatiles

Organochlorine Pesticides

Prep/Method: EPA 3545 / EPA 8081

Aldrin	ND	ug/kg	1.6	07/24/06 22:39	JEM	309-00-2		
alpha-BHC	ND	ug/kg	3.2	07/24/06 22:39	JEM	319-84-6		
beta-BHC	ND	ug/kg	3.2	07/24/06 22:39	JEM	319-85-7		
delta-BHC	ND	ug/kg	3.2	07/24/06 22:39	JEM	319-86-8		
gamma-BHC (Lindane)	ND	ug/kg	3.2	07/24/06 22:39	JEM	58-89-9		
Chlordane	ND	ug/kg	13.	07/24/06 22:39	JEM	57-74-9		
gamma-Chlordane	ND	ug/kg	3.2	07/24/06 22:39	JEM	5103-74-2		
4,4'-DDD	ND	ug/kg	3.2	07/24/06 22:39	JEM	72-54-8		
4,4'-DDE	ND	ug/kg	3.2	07/24/06 22:39	JEM	72-55-9		
4,4'-DDT	ND	ug/kg	3.2	07/24/06 22:39	JEM	50-29-3		
Dieldrin	ND	ug/kg	1.6	07/24/06 22:39	JEM	60-57-1		

Date: 08/02/06

Page: 39 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208611 Project Sample Number: 92123459-007 Date Collected: 07/18/06 10:20
Client Sample ID: JOHNB7 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Endosulfan I	ND	ug/kg	3.2	07/24/06 22:39	JEM	959-98-8		
Endosulfan II	ND	ug/kg	3.2	07/24/06 22:39	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/kg	3.2	07/24/06 22:39	JEM	1031-07-8		
Endrin	ND	ug/kg	3.2	07/24/06 22:39	JEM	72-20-8		
Endrin aldehyde	ND	ug/kg	3.2	07/24/06 22:39	JEM	7421-93-4		
Heptachlor	ND	ug/kg	3.2	07/24/06 22:39	JEM	76-44-8		
Heptachlor epoxide	ND	ug/kg	3.2	07/24/06 22:39	JEM	1024-57-3		
Methoxychlor	ND	ug/kg	11.	07/24/06 22:39	JEM	72-43-5		
Mirex	ND	ug/kg	11.	07/24/06 22:39	JEM	2385-85-5		
Toxaphene	ND	ug/kg	13.	07/24/06 22:39	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	9	%		07/24/06 22:39	JEM	877-09-8	2	
Decachlorobiphenyl (S)	40	%		07/24/06 22:39	JEM	2051-24-3		
Date Extracted	07/20/06			07/20/06				

GC/MS Volatiles

GC/MS VOCs 5035/8260 low level Method: EPA 8260

Acetone	ND	ug/kg	150	07/26/06 17:51	DLK	67-64-1		
Benzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	71-43-2		
Bromobenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	108-86-1		
Bromochloromethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	74-97-5		
Bromodichloromethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	75-27-4		
Bromoform	ND	ug/kg	7.3	07/26/06 17:51	DLK	75-25-2		
Bromomethane	ND	ug/kg	15.	07/26/06 17:51	DLK	74-83-9		
2-Butanone (MEK)	ND	ug/kg	150	07/26/06 17:51	DLK	78-93-3		
n-Butylbenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	104-51-8		
sec-Butylbenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	135-98-8		
tert-Butylbenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	98-06-6		
Carbon tetrachloride	ND	ug/kg	7.3	07/26/06 17:51	DLK	56-23-5		
Chlorobenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	108-90-7		
Chloroethane	ND	ug/kg	15.	07/26/06 17:51	DLK	75-00-3		
Chloroform	ND	ug/kg	7.3	07/26/06 17:51	DLK	67-66-3		
Chloromethane	ND	ug/kg	15.	07/26/06 17:51	DLK	74-87-3		
2-Chlorotoluene	ND	ug/kg	7.3	07/26/06 17:51	DLK	95-49-8		
4-Chlorotoluene	ND	ug/kg	7.3	07/26/06 17:51	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	7.3	07/26/06 17:51	DLK	96-12-8		
Dibromochloromethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	7.3	07/26/06 17:51	DLK	106-93-4		
Dibromomethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	95-50-1		

Date: 08/02/06

Page: 40 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208611
Client Sample ID: JOHNB7 6-8

Project Sample Number: 92123459-007
Matrix: Soil

Date Collected: 07/18/06 10:20
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
1,3-Dichlorobenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	15.	07/26/06 17:51	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/kg	7.3	07/26/06 17:51	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	7.3	07/26/06 17:51	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	7.3	07/26/06 17:51	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/kg	7.3	07/26/06 17:51	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/kg	7.3	07/26/06 17:51	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/kg	7.3	07/26/06 17:51	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/kg	7.3	07/26/06 17:51	DLK	563-58-6		
cis-1,3-Dichloropropene	ND	ug/kg	7.3	07/26/06 17:51	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	7.3	07/26/06 17:51	DLK	10061-02-6		
Diisopropyl ether	ND	ug/kg	7.3	07/26/06 17:51	DLK	108-20-3		
Ethylbenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	7.3	07/26/06 17:51	DLK	87-68-3		
2-Hexanone	ND	ug/kg	73.	07/26/06 17:51	DLK	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/kg	7.3	07/26/06 17:51	DLK	98-82-8		
p-Isopropyltoluene	ND	ug/kg	7.3	07/26/06 17:51	DLK	99-87-6		
Methylene chloride	ND	ug/kg	15.	07/26/06 17:51	DLK	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	73.	07/26/06 17:51	DLK	108-10-1		
Methyl-tert-butyl ether	ND	ug/kg	7.3	07/26/06 17:51	DLK	1634-04-4		
Naphthalene	ND	ug/kg	7.3	07/26/06 17:51	DLK	91-20-3		
n-Propylbenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	103-65-1		
Styrene	ND	ug/kg	7.3	07/26/06 17:51	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	79-34-5		
Tetrachloroethene	ND	ug/kg	7.3	07/26/06 17:51	DLK	127-18-4		
Toluene	ND	ug/kg	7.3	07/26/06 17:51	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	79-00-5		
Trichloroethene	ND	ug/kg	7.3	07/26/06 17:51	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/kg	7.3	07/26/06 17:51	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	7.3	07/26/06 17:51	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/kg	7.3	07/26/06 17:51	DLK	108-67-8		

Date: 08/02/06

Page: 41 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.





Pace Analytical Services, Inc.
 9800 Kincey Avenue, Suite 100
 Huntersville, NC 28078
 Phone: 704.875.9092
 Fax: 704.875.9091

Pace Analytical Services, Inc.
 2225 Riverside Drive
 Asheville, NC 28804
 Phone: 828.254.7176
 Fax: 828.252.4618

Lab Project Number: 92123459
 Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208611 Project Sample Number: 92123459-007 Date Collected: 07/18/06 10:20
 Client Sample ID: JOHNB7 6-8 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Vinyl acetate	ND	ug/kg	73.	07/26/06 17:51	DLK	108-05-4		
Vinyl chloride	ND	ug/kg	15.	07/26/06 17:51	DLK	75-01-4		
Xylene (Total)	ND	ug/kg	7.3	07/26/06 17:51	DLK	1330-20-7		
m&p-Xylene	ND	ug/kg	15.	07/26/06 17:51	DLK			
o-Xylene	ND	ug/kg	7.3	07/26/06 17:51	DLK	95-47-6		
Toluene-d8 (S)	106	%		07/26/06 17:51	DLK	2037-26-5		
4-Bromofluorobenzene (S)	95	%		07/26/06 17:51	DLK	460-00-4		
Dibromofluoromethane (S)	96	%		07/26/06 17:51	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	92	%		07/26/06 17:51	DLK	17060-07-0		

Date: 08/02/06

Page: 42 of 87

Asheville Certification IDs
 NC Wastewater 40
 NC Drinking Water 37712
 SC Environmental 99030
 FL NELAP E87648

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc.



Charlotte Certification IDs
 NC Wastewater 12
 NC Drinking Water 37706
 SC 99006
 FL NELAP E87627

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208629 Project Sample Number: 92123459-008 Date Collected: 07/18/06 10:30
Client Sample ID: JOHNB8 4-6 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
------------	---------	-------	--------------	----------	----	---------	------	--------

Metals

Metals, Trace ICP	Prep/Method: EPA 3050 / EPA 6010							
Arsenic	2.1	mg/kg	0.59	07/26/06 05:51	SHB	7440-38-2		
Barium	51.	mg/kg	0.59	07/26/06 05:51	SHB	7440-39-3		
Cadmium	ND	mg/kg	0.12	07/26/06 05:51	SHB	7440-43-9		
Chromium	44.	mg/kg	0.24	07/26/06 05:51	SHB	7440-47-3		
Lead	8.5	mg/kg	0.59	07/26/06 05:51	SHB	7439-92-1		
Selenium	ND	mg/kg	0.59	07/26/06 05:51	SHB	7782-49-2		
Silver	ND	mg/kg	0.24	07/26/06 05:51	SHB	7440-22-4		
Date Digested	07/21/06 14:00			07/21/06 14:00				

Mercury, CVAAS, in Soil	Method: EPA 7471							
Mercury	0.023	mg/kg	0.0063	07/20/06 14:41	ALV	7439-97-6		

Wet Chemistry

Percent Moisture	Method: % Moisture							
Percent Moisture	29.9	%		07/19/06 10:08	TNM			

Nitrogen, Ammonia	Method: EPA 350.1 Modified							
Nitrogen, Ammonia	ND	mg/kg	15.	08/01/06 19:50	BMF	7727-37-9		

Nitrogen, Nitrate	Method: EPA 353.2 Modified							
Nitrate as N	46.	mg/kg	9.4	07/26/06 13:33	EWS			

pH	Method: EPA 9045							
pH	4.10	units		07/20/06 11:37	MLS1			

GC/MS Semivolatiles

Semivolatile Organics	Prep/Method: EPA 3545 / EPA 8270							
Acenaphthene	ND	ug/kg	470	07/26/06 00:29	BET	83-32-9		
Acenaphthylene	ND	ug/kg	470	07/26/06 00:29	BET	208-96-8		
Anthracene	ND	ug/kg	470	07/26/06 00:29	BET	120-12-7		
Benzo(k)fluoranthene	ND	ug/kg	470	07/26/06 00:29	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/kg	470	07/26/06 00:29	BET	205-99-2		
Benzo(a)anthracene	ND	ug/kg	470	07/26/06 00:29	BET	56-55-3		
Benzoic acid	ND	ug/kg	2400	07/26/06 00:29	BET	65-85-0		
Benzo(g,h,i)perylene	ND	ug/kg	470	07/26/06 00:29	BET	191-24-2		
Benzyl alcohol	ND	ug/kg	940	07/26/06 00:29	BET	100-51-6		
Benzo(a)pyrene	ND	ug/kg	470	07/26/06 00:29	BET	50-32-8		

Date: 08/02/06

Page: 43 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208629
Client Sample ID: JOHNB8 4-6

Project Sample Number: 92123459-008
Matrix: Soil

Date Collected: 07/18/06 10:30
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
4-Bromophenylphenyl ether	ND	ug/kg	470	07/26/06 00:29	BET	101-55-3		
Butylbenzylphthalate	ND	ug/kg	470	07/26/06 00:29	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/kg	940	07/26/06 00:29	BET	59-50-7		
4-Chloroaniline	ND	ug/kg	940	07/26/06 00:29	BET	106-47-8		
bis(2-Chloroethoxy)methane	ND	ug/kg	470	07/26/06 00:29	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/kg	470	07/26/06 00:29	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/kg	470	07/26/06 00:29	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/kg	470	07/26/06 00:29	BET	91-58-7		
2-Chlorophenol	ND	ug/kg	470	07/26/06 00:29	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/kg	470	07/26/06 00:29	BET	7005-72-3		
Chrysene	ND	ug/kg	470	07/26/06 00:29	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/kg	470	07/26/06 00:29	BET	53-70-3		
Dibenzofuran	ND	ug/kg	470	07/26/06 00:29	BET	132-64-9		
1,2-Dichlorobenzene	ND	ug/kg	470	07/26/06 00:29	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	470	07/26/06 00:29	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	470	07/26/06 00:29	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/kg	940	07/26/06 00:29	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/kg	470	07/26/06 00:29	BET	120-83-2		
Diethylphthalate	ND	ug/kg	470	07/26/06 00:29	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/kg	470	07/26/06 00:29	BET	105-67-9		
Dimethylphthalate	ND	ug/kg	470	07/26/06 00:29	BET	131-11-3		
Di-n-butylphthalate	ND	ug/kg	470	07/26/06 00:29	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/kg	470	07/26/06 00:29	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/kg	2400	07/26/06 00:29	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/kg	470	07/26/06 00:29	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/kg	470	07/26/06 00:29	BET	606-20-2		
Di-n-octylphthalate	ND	ug/kg	470	07/26/06 00:29	BET	117-84-0		
1,2-Diphenylhydrazine	ND	ug/kg	470	07/26/06 00:29	BET	122-66-7		
bis(2-Ethylhexyl)phthalate	ND	ug/kg	470	07/26/06 00:29	BET	117-81-7		
Fluoranthene	ND	ug/kg	470	07/26/06 00:29	BET	206-44-0		
Fluorene	ND	ug/kg	470	07/26/06 00:29	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/kg	470	07/26/06 00:29	BET	87-68-3		
Hexachlorobenzene	ND	ug/kg	470	07/26/06 00:29	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/kg	470	07/26/06 00:29	BET	77-47-4		
Hexachloroethane	ND	ug/kg	470	07/26/06 00:29	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/kg	470	07/26/06 00:29	BET	193-39-5		
Isophorone	ND	ug/kg	470	07/26/06 00:29	BET	78-59-1		
1-Methylnaphthalene	ND	ug/kg	470	07/26/06 00:29	BET	90-12-0		
2-Methylnaphthalene	ND	ug/kg	470	07/26/06 00:29	BET	91-57-6		

Date: 08/02/06

Page: 44 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208629
Client Sample ID: JOHNB8 4-6

Project Sample Number: 92123459-008
Matrix: Soil

Date Collected: 07/18/06 10:30
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
2-Methylphenol (o-Cresol)	ND	ug/kg	470	07/26/06 00:29	BET	95-48-7		
3&4-Methylphenol	ND	ug/kg	470	07/26/06 00:29	BET			
Naphthalene	ND	ug/kg	470	07/26/06 00:29	BET	91-20-3		
2-Nitroaniline	ND	ug/kg	2400	07/26/06 00:29	BET	88-74-4		
3-Nitroaniline	ND	ug/kg	2400	07/26/06 00:29	BET	99-09-2		
4-Nitroaniline	ND	ug/kg	2400	07/26/06 00:29	BET	100-01-6		
Nitrobenzene	ND	ug/kg	470	07/26/06 00:29	BET	98-95-3		
2-Nitrophenol	ND	ug/kg	470	07/26/06 00:29	BET	88-75-5		
4-Nitrophenol	ND	ug/kg	2400	07/26/06 00:29	BET	100-02-7		
N-Nitroso-di-n-propylamine	ND	ug/kg	470	07/26/06 00:29	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/kg	470	07/26/06 00:29	BET	86-30-6		
Pentachlorophenol	ND	ug/kg	2400	07/26/06 00:29	BET	87-86-5		
Phenanthrene	ND	ug/kg	470	07/26/06 00:29	BET	85-01-8		
Phenol	ND	ug/kg	470	07/26/06 00:29	BET	108-95-2		
Pyrene	ND	ug/kg	470	07/26/06 00:29	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/kg	470	07/26/06 00:29	BET	120-82-1		
2,4,5-Trichlorophenol	ND	ug/kg	470	07/26/06 00:29	BET	95-95-4		
2,4,6-Trichlorophenol	ND	ug/kg	470	07/26/06 00:29	BET	88-06-2		
Nitrobenzene-d5 (S)	34	%		07/26/06 00:29	BET	4165-60-0		
2-Fluorobiphenyl (S)	42	%		07/26/06 00:29	BET	321-60-8		
Terphenyl-d14 (S)	65	%		07/26/06 00:29	BET	1718-51-0		
Phenol-d5 (S)	37	%		07/26/06 00:29	BET	4165-62-2	1	
2-Fluorophenol (S)	43	%		07/26/06 00:29	BET	367-12-4		
2,4,6-Tribromophenol (S)	66	%		07/26/06 00:29	BET	118-79-6		
Date Extracted	07/24/06			07/24/06				

GC Semivolatiles

Organochlorine Pesticides

Prep/Method: EPA 3545 / EPA 8081

Aldrin	ND	ug/kg	1.4	07/26/06 19:05	JEM	309-00-2		
alpha-BHC	ND	ug/kg	2.9	07/26/06 19:05	JEM	319-84-6		
beta-BHC	ND	ug/kg	2.9	07/26/06 19:05	JEM	319-85-7		
delta-BHC	ND	ug/kg	2.9	07/26/06 19:05	JEM	319-86-8		
gamma-BHC (Lindane)	ND	ug/kg	2.9	07/26/06 19:05	JEM	58-89-9		
Chlordane	ND	ug/kg	12.	07/26/06 19:05	JEM	57-74-9		
gamma-Chlordane	ND	ug/kg	2.9	07/26/06 19:05	JEM	5103-74-2		
4,4'-DDD	ND	ug/kg	2.9	07/26/06 19:05	JEM	72-54-8		
4,4'-DDE	ND	ug/kg	2.9	07/26/06 19:05	JEM	72-55-9		
4,4'-DDT	ND	ug/kg	2.9	07/26/06 19:05	JEM	50-29-3		
Dieldrin	ND	ug/kg	1.4	07/26/06 19:05	JEM	60-57-1		

Date: 08/02/06

Page: 45 of 87

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208629 Project Sample Number: 92123459-008 Date Collected: 07/18/06 10:30
Client Sample ID: JOHNB8 4-6 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Endosulfan I	ND	ug/kg	2.9	07/26/06 19:05	JEM	959-98-8		
Endosulfan II	ND	ug/kg	2.9	07/26/06 19:05	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/kg	2.9	07/26/06 19:05	JEM	1031-07-8		
Endrin	ND	ug/kg	2.9	07/26/06 19:05	JEM	72-20-8		
Endrin aldehyde	ND	ug/kg	2.9	07/26/06 19:05	JEM	7421-93-4		
Heptachlor	ND	ug/kg	2.9	07/26/06 19:05	JEM	76-44-8		
Heptachlor epoxide	ND	ug/kg	2.9	07/26/06 19:05	JEM	1024-57-3		
Methoxychlor	ND	ug/kg	10.	07/26/06 19:05	JEM	72-43-5		
Mirex	ND	ug/kg	10.	07/26/06 19:05	JEM	2385-85-5		
Toxaphene	ND	ug/kg	12.	07/26/06 19:05	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	62	%		07/26/06 19:05	JEM	877-09-8		
Decachlorobiphenyl (S)	68	%		07/26/06 19:05	JEM	2051-24-3		
Date Extracted	07/24/06			07/24/06				

GC/MS Volatiles

GC/MS VOCs 5035/8260 low level Method: EPA 8260

Acetone	ND	ug/kg	160	07/26/06 18:10	DLK	67-64-1		
Benzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	71-43-2		
Bromobenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	108-86-1		
Bromochloromethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	74-97-5		
Bromodichloromethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	75-27-4		
Bromoform	ND	ug/kg	8.0	07/26/06 18:10	DLK	75-25-2		
Bromomethane	ND	ug/kg	16.	07/26/06 18:10	DLK	74-83-9		
2-Butanone (MEK)	ND	ug/kg	160	07/26/06 18:10	DLK	78-93-3		
n-Butylbenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	104-51-8		
sec-Butylbenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	135-98-8		
tert-Butylbenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	98-06-6		
Carbon tetrachloride	ND	ug/kg	8.0	07/26/06 18:10	DLK	56-23-5		
Chlorobenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	108-90-7		
Chloroethane	ND	ug/kg	16.	07/26/06 18:10	DLK	75-00-3		
Chloroform	ND	ug/kg	8.0	07/26/06 18:10	DLK	67-66-3		
Chloromethane	ND	ug/kg	16.	07/26/06 18:10	DLK	74-87-3		
2-Chlorotoluene	ND	ug/kg	8.0	07/26/06 18:10	DLK	95-49-8		
4-Chlorotoluene	ND	ug/kg	8.0	07/26/06 18:10	DLK	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/kg	8.0	07/26/06 18:10	DLK	96-12-8		
Dibromochloromethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/kg	8.0	07/26/06 18:10	DLK	106-93-4		
Dibromomethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	74-95-3		
1,2-Dichlorobenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	95-50-1		

Date: 08/02/06

Page: 46 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208629
Client Sample ID: JOHNB8 4-6

Project Sample Number: 92123459-008
Matrix: Soil

Date Collected: 07/18/06 10:30
Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
1,3-Dichlorobenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	106-46-7		
Dichlorodifluoromethane	ND	ug/kg	16.	07/26/06 18:10	DLK	75-71-8		
1,1-Dichloroethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/kg	8.0	07/26/06 18:10	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	8.0	07/26/06 18:10	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/kg	8.0	07/26/06 18:10	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/kg	8.0	07/26/06 18:10	DLK	78-87-5		
1,3-Dichloropropane	ND	ug/kg	8.0	07/26/06 18:10	DLK	142-28-9		
2,2-Dichloropropane	ND	ug/kg	8.0	07/26/06 18:10	DLK	594-20-7		
1,1-Dichloropropene	ND	ug/kg	8.0	07/26/06 18:10	DLK	563-58-6		
cis-1,3-Dichloropropene	ND	ug/kg	8.0	07/26/06 18:10	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	8.0	07/26/06 18:10	DLK	10061-02-6		
Diisopropyl ether	ND	ug/kg	8.0	07/26/06 18:10	DLK	108-20-3		
Ethylbenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/kg	8.0	07/26/06 18:10	DLK	87-68-3		
2-Hexanone	ND	ug/kg	80.	07/26/06 18:10	DLK	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/kg	8.0	07/26/06 18:10	DLK	98-82-8		
p-Isopropyltoluene	ND	ug/kg	8.0	07/26/06 18:10	DLK	99-87-6		
Methylene chloride	ND	ug/kg	16.	07/26/06 18:10	DLK	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	80.	07/26/06 18:10	DLK	108-10-1		
Methyl-tert-butyl ether	ND	ug/kg	8.0	07/26/06 18:10	DLK	1634-04-4		
Naphthalene	ND	ug/kg	8.0	07/26/06 18:10	DLK	91-20-3		
n-Propylbenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	103-65-1		
Styrene	ND	ug/kg	8.0	07/26/06 18:10	DLK	100-42-5		
1,1,1,2-Tetrachloroethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	630-20-6		
1,1,2,2-Tetrachloroethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	79-34-5		
Tetrachloroethene	ND	ug/kg	8.0	07/26/06 18:10	DLK	127-18-4		
Toluene	ND	ug/kg	8.0	07/26/06 18:10	DLK	108-88-3		
1,2,3-Trichlorobenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	87-61-6		
1,2,4-Trichlorobenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	120-82-1		
1,1,1-Trichloroethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	79-00-5		
Trichloroethene	ND	ug/kg	8.0	07/26/06 18:10	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/kg	8.0	07/26/06 18:10	DLK	75-69-4		
1,2,3-Trichloropropane	ND	ug/kg	8.0	07/26/06 18:10	DLK	96-18-4		
1,2,4-Trimethylbenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/kg	8.0	07/26/06 18:10	DLK	108-67-8		

Date: 08/02/06

Page: 47 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.





Pace Analytical Services, Inc.
 9800 Kincey Avenue, Suite 100
 Huntersville, NC 28078
 Phone: 704.875.9092
 Fax: 704.875.9091

Pace Analytical Services, Inc.
 2225 Riverside Drive
 Asheville, NC 28804
 Phone: 828.254.7176
 Fax: 828.252.4618

Lab Project Number: 92123459
 Client Project ID: NCDOT 34951.1.1 Johnson Conc.

Lab Sample No: 927208629 Project Sample Number: 92123459-008 Date Collected: 07/18/06 10:30
 Client Sample ID: JOHNB8 4-6 Matrix: Soil Date Received: 07/18/06 17:10

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	ReqLmt
Vinyl acetate	ND	ug/kg	80.	07/26/06 18:10	DLK	108-05-4		
Vinyl chloride	ND	ug/kg	16.	07/26/06 18:10	DLK	75-01-4		
Xylene (Total)	ND	ug/kg	8.0	07/26/06 18:10	DLK	1330-20-7		
m&p-Xylene	ND	ug/kg	16.	07/26/06 18:10	DLK			
o-Xylene	ND	ug/kg	8.0	07/26/06 18:10	DLK	95-47-6		
Toluene-d8 (S)	102	%		07/26/06 18:10	DLK	2037-26-5		
4-Bromofluorobenzene (S)	101	%		07/26/06 18:10	DLK	460-00-4		
Dibromofluoromethane (S)	94	%		07/26/06 18:10	DLK	1868-53-7		
1,2-Dichloroethane-d4 (S)	95	%		07/26/06 18:10	DLK	17060-07-0		

Date: 08/02/06

Page: 48 of 87

Asheville Certification IDs
 NC Wastewater 40
 NC Drinking Water 37712
 SC Environmental 99030
 FL NELAP E87648

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc.



Charlotte Certification IDs
 NC Wastewater 12
 NC Drinking Water 37706
 SC 99006
 FL NELAP E87627

Lab Project Number: 92123459
Client Project ID: NCDOT 34951.1.1 Johnson Conc.

PARAMETER FOOTNOTES

Method 9071B modified to use ASE.

All pH, Free Chlorine, Total Chlorine and Ferrous Iron analyses conducted outside of EPA recommended immediate hold time.

Depending on the moisture content the PRLs can be elevated for all soil samples reported on a dry weight basis.

2-Chloroethyl vinyl ether has been shown to degrade in the presence of acid.

- ND Not detected at or above adjusted reporting limit
- NC Not Calculable
- J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
- MDL Adjusted Method Detection Limit
- (S) Surrogate
- [1] Acid surrogate recovery outside of control limits. The data was accepted based on valid recovery of the two remaining acid surrogates.
- [2] Surrogate recovery outside of control limits. The data was accepted based on valid recovery of remaining surrogate.

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

QC Batch: 162607	Analysis Method: EPA 8081				
QC Batch Method: EPA 3545	Analysis Description: Organochlorine Pesticides				
Associated Lab Samples:	927208538	927208561	927208579	927208587	927208595
	927208603	927208611			

METHOD BLANK: 927216507

Associated Lab Samples: 927208538 927208561 927208579 927208587 927208595 927208603 927208611

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Aldrin	ug/kg	ND	1.0	
alpha-BHC	ug/kg	ND	2.0	
beta-BHC	ug/kg	ND	2.0	
delta-BHC	ug/kg	ND	2.0	
gamma-BHC (Lindane)	ug/kg	ND	2.0	
Chlordane	ug/kg	ND	8.3	
gamma-Chlordane	ug/kg	ND	2.0	
4,4'-DDD	ug/kg	ND	2.0	
4,4'-DDE	ug/kg	ND	2.0	
4,4'-DDT	ug/kg	ND	2.0	
Dieldrin	ug/kg	ND	1.0	
Endosulfan I	ug/kg	ND	2.0	
Endosulfan II	ug/kg	ND	2.0	
Endosulfan sulfate	ug/kg	ND	2.0	
Endrin	ug/kg	ND	2.0	
Endrin aldehyde	ug/kg	ND	2.0	
Heptachlor	ug/kg	ND	2.0	
Heptachlor epoxide	ug/kg	ND	2.0	
Methoxychlor	ug/kg	ND	7.0	
Mirex	ug/kg	ND	7.0	
Toxaphene	ug/kg	ND	8.3	
Tetrachloro-m-xylene (S)	%	58		
Decachlorobiphenyl (S)	%	78		

LABORATORY CONTROL SAMPLE: 927216515

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Aldrin	ug/kg	2.667	2.676	100	

Date: 08/02/06

Page: 50 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927216515

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
alpha-BHC	ug/kg	2.667	2.619	98	
beta-BHC	ug/kg	2.667	3.234	121	
delta-BHC	ug/kg	2.667	2.897	109	
gamma-BHC (Lindane)	ug/kg	2.667	2.636	99	
4,4'-DDD	ug/kg	2.667	3.273	123	
4,4'-DDE	ug/kg	2.667	3.285	123	
4,4'-DDT	ug/kg	2.667	3.539	133	
Dieldrin	ug/kg	2.667	3.162	119	
Endosulfan I	ug/kg	2.667	3.785	142	
Endosulfan II	ug/kg	2.667	3.964	149	
Endosulfan sulfate	ug/kg	2.667	3.156	118	
Endrin	ug/kg	2.667	3.220	121	
Endrin aldehyde	ug/kg	2.667	2.326	87	
Heptachlor	ug/kg	2.667	3.336	125	
Heptachlor epoxide	ug/kg	2.667	3.047	114	
Methoxychlor	ug/kg	6.667	9.248	139	
Mirex	ug/kg	6.667	3.367	50	
Tetrachloro-m-xylene (S)				67	
Decachlorobiphenyl (S)				84	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927216523 927216531

<u>Parameter</u>	<u>Units</u>	<u>927214049 Result</u>	<u>Spike Conc.</u>	<u>MS Result</u>	<u>MSD Result</u>	<u>MS % Rec</u>	<u>MSD % Rec</u>	<u>RPD</u>	<u>Footnotes</u>
Aldrin	ug/kg	0	3.024	2.435	2.518	80	83	3	
gamma-BHC (Lindane)	ug/kg	0	3.024	2.991	2.479	99	82	19	
4,4'-DDT	ug/kg	0	3.024	3.001	3.138	99	104	4	
Dieldrin	ug/kg	17.01	3.024	33.42	27.67	543	353	19	1,1
Endrin	ug/kg	0	3.024	2.703	2.812	89	93	4	
Heptachlor	ug/kg	0	3.024	3.344	3.132	111	104	7	
Tetrachloro-m-xylene (S)						57	54		
Decachlorobiphenyl (S)						71	70		

Date: 08/02/06

Page: 51 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

QC Batch: 162965
QC Batch Method: EPA 3545
Associated Lab Samples: 927208629

Analysis Method: EPA 8081
Analysis Description: Organochlorine Pesticides

METHOD BLANK: 927230136
Associated Lab Samples: 927208629

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Aldrin	ug/kg	ND	1.0	
alpha-BHC	ug/kg	ND	2.0	
beta-BHC	ug/kg	ND	2.0	
delta-BHC	ug/kg	ND	2.0	
gamma-BHC (Lindane)	ug/kg	ND	2.0	
Chlordane	ug/kg	ND	8.3	
gamma-Chlordane	ug/kg	ND	2.0	
4,4'-DDD	ug/kg	ND	2.0	
4,4'-DDE	ug/kg	ND	2.0	
4,4'-DDT	ug/kg	ND	2.0	
Dieldrin	ug/kg	ND	1.0	
Endosulfan I	ug/kg	ND	2.0	
Endosulfan II	ug/kg	ND	2.0	
Endosulfan sulfate	ug/kg	ND	2.0	
Endrin	ug/kg	ND	2.0	
Endrin aldehyde	ug/kg	ND	2.0	
Heptachlor	ug/kg	ND	2.0	
Heptachlor epoxide	ug/kg	ND	2.0	
Methoxychlor	ug/kg	ND	7.0	
Mirex	ug/kg	ND	7.0	
Toxaphene	ug/kg	ND	8.3	
Tetrachloro-m-xylene (S)	%	78		
Decachlorobiphenyl (S)	%	79		

LABORATORY CONTROL SAMPLE: 927230144

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Aldrin	ug/kg	2.667	2.856	107	
alpha-BHC	ug/kg	2.667	2.924	110	

Date: 08/02/06

Page: 52 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927230144

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
beta-BHC	ug/kg	2.667	2.461	92	
delta-BHC	ug/kg	2.667	2.693	101	
gamma-BHC (Lindane)	ug/kg	2.667	2.795	105	
4,4'-DDD	ug/kg	2.667	2.851	107	
4,4'-DDE	ug/kg	2.667	2.903	109	
4,4'-DDT	ug/kg	2.667	2.844	107	
Dieldrin	ug/kg	2.667	2.844	107	
Endosulfan I	ug/kg	2.667	3.892	146	
Endosulfan II	ug/kg	2.667	3.535	133	
Endosulfan sulfate	ug/kg	2.667	2.715	102	
Endrin	ug/kg	2.667	2.988	112	
Endrin aldehyde	ug/kg	2.667	2.760	103	
Heptachlor	ug/kg	2.667	3.240	122	
Heptachlor epoxide	ug/kg	2.667	2.949	111	
Methoxychlor	ug/kg	6.667	7.576	114	
Mirex	ug/kg	6.667	2.577	39	
Tetrachloro-m-xylene (S)				76	
Decachlorobiphenyl (S)				77	

Date: 08/02/06

Page: 53 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

METHOD BLANK: 927214247

Associated Lab Samples: 927208538 927208561 927208579 927208587 927208595

Parameter	Units	Blank	Reporting	Footnotes
		Result	Limit	
Di-n-butylphthalate	ug/kg	ND	330	
4,6-Dinitro-2-methylphenol	ug/kg	ND	330	
2,4-Dinitrophenol	ug/kg	ND	1600	
2,4-Dinitrotoluene	ug/kg	ND	330	
2,6-Dinitrotoluene	ug/kg	ND	330	
Di-n-octylphthalate	ug/kg	ND	330	
1,2-Diphenylhydrazine	ug/kg	ND	330	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	
Fluoranthene	ug/kg	ND	330	
Fluorene	ug/kg	ND	330	
Hexachloro-1,3-butadiene	ug/kg	ND	330	
Hexachlorobenzene	ug/kg	ND	330	
Hexachlorocyclopentadiene	ug/kg	ND	330	
Hexachloroethane	ug/kg	ND	330	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	
Isophorone	ug/kg	ND	330	
1-Methylnaphthalene	ug/kg	ND	330	
2-Methylnaphthalene	ug/kg	ND	330	
2-Methylphenol (o-Cresol)	ug/kg	ND	330	
3&4-Methylphenol	ug/kg	ND	330	
Naphthalene	ug/kg	ND	330	
2-Nitroaniline	ug/kg	ND	1600	
3-Nitroaniline	ug/kg	ND	1600	
4-Nitroaniline	ug/kg	ND	1600	
Nitrobenzene	ug/kg	ND	330	
2-Nitrophenol	ug/kg	ND	330	
4-Nitrophenol	ug/kg	ND	1600	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	
N-Nitrosodiphenylamine	ug/kg	ND	330	
Pentachlorophenol	ug/kg	ND	1600	
Phenanthrene	ug/kg	ND	330	
Phenol	ug/kg	ND	330	
Pyrene	ug/kg	ND	330	
1,2,4-Trichlorobenzene	ug/kg	ND	330	
2,4,5-Trichlorophenol	ug/kg	ND	330	
2,4,6-Trichlorophenol	ug/kg	ND	330	

Date: 08/02/06

Page: 55 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

METHOD BLANK: 927214247

Associated Lab Samples: 927208538 927208561 927208579 927208587 927208595

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Nitrobenzene-d5 (S)	%	48		
2-Fluorobiphenyl (S)	%	55		
Terphenyl-d14 (S)	%	71		
Phenol-d5 (S)	%	56		
2-Fluorophenol (S)	%	62		
2,4,6-Tribromophenol (S)	%	85		

LABORATORY CONTROL SAMPLE: 927214254

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Acenaphthene	ug/kg	1667.00	1092	66	
Acenaphthylene	ug/kg	1667.00	1135	68	
Anthracene	ug/kg	1667.00	1253	75	
Benzo(k)fluoranthene	ug/kg	1667.00	1288	77	
Benzo(b)fluoranthene	ug/kg	1667.00	1619	97	
Benzo(a)anthracene	ug/kg	1667.00	1239	74	
Benzoic acid	ug/kg	1667.00	786.5	47	
Benzo(g,h,i)perylene	ug/kg	1667.00	366.8	22	
Benzyl alcohol	ug/kg	1667.00	1268	76	
Benzo(a)pyrene	ug/kg	1667.00	1419	85	
4-Bromophenylphenyl ether	ug/kg	1667.00	1658	100	
Butylbenzylphthalate	ug/kg	1667.00	1098	66	
4-Chloro-3-methylphenol	ug/kg	1667.00	1080	65	
4-Chloroaniline	ug/kg	1667.00	1476	89	
bis(2-Chloroethoxy)methane	ug/kg	1667.00	887.5	53	
bis(2-Chloroethyl) ether	ug/kg	1667.00	1106	66	
bis(2-Chloroisopropyl) ether	ug/kg	1667.00	2440	146	2
2-Chloronaphthalene	ug/kg	1667.00	1097	66	
2-Chlorophenol	ug/kg	1667.00	1206	72	
4-Chlorophenylphenyl ether	ug/kg	1667.00	1374	82	
Chrysene	ug/kg	1667.00	1240	74	
Dibenz(a,h)anthracene	ug/kg	1667.00	495.7	30	
Dibenzofuran	ug/kg	1667.00	1179	71	
1,2-Dichlorobenzene	ug/kg	1667.00	1119	67	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927214254

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
1,3-Dichlorobenzene	ug/kg	1667.00	1076	65	
1,4-Dichlorobenzene	ug/kg	1667.00	1109	67	
3,3'-Dichlorobenzidine	ug/kg	3333.00	910.7	27	
2,4-Dichlorophenol	ug/kg	1667.00	809.0	48	
Diethylphthalate	ug/kg	1667.00	1286	77	
2,4-Dimethylphenol	ug/kg	1667.00	771.3	46	
Dimethylphthalate	ug/kg	1667.00	1253	75	
Di-n-butylphthalate	ug/kg	1667.00	1253	75	
4,6-Dinitro-2-methylphenol	ug/kg	1667.00	1426	86	
2,4-Dinitrophenol	ug/kg	1667.00	1412	85	
2,4-Dinitrotoluene	ug/kg	1667.00	1441	86	
2,6-Dinitrotoluene	ug/kg	1667.00	1417	85	
Di-n-octylphthalate	ug/kg	1667.00	1028	62	
1,2-Diphenylhydrazine	ug/kg	1667.00	1114	67	
bis(2-Ethylhexyl)phthalate	ug/kg	1667.00	888.5	53	
Fluoranthene	ug/kg	1667.00	1343	81	
Fluorene	ug/kg	1667.00	1159	70	
Hexachloro-1,3-butadiene	ug/kg	1667.00	849.8	51	
Hexachlorobenzene	ug/kg	1667.00	1776	107	
Hexachlorocyclopentadiene	ug/kg	1667.00	871.2	52	
Hexachloroethane	ug/kg	1667.00	1154	69	
Indeno(1,2,3-cd)pyrene	ug/kg	1667.00	481.6	29	
Isophorone	ug/kg	1667.00	1459	88	
1-Methylnaphthalene	ug/kg	1667.00	804.4	48	
2-Methylnaphthalene	ug/kg	1667.00	813.2	49	
2-Methylphenol (o-Cresol)	ug/kg	1667.00	1212	73	
3&4-Methylphenol	ug/kg	1667.00	1186	71	
Naphthalene	ug/kg	1667.00	910.2	55	
2-Nitroaniline	ug/kg	1667.00	1423	85	
3-Nitroaniline	ug/kg	1667.00	1574	94	
4-Nitroaniline	ug/kg	1667.00	1529	92	
Nitrobenzene	ug/kg	1667.00	873.0	52	
2-Nitrophenol	ug/kg	1667.00	903.8	54	
4-Nitrophenol	ug/kg	1667.00	1350	81	
N-Nitroso-di-n-propylamine	ug/kg	1667.00	1188	71	
N-Nitrosodiphenylamine	ug/kg	1667.00	1358	82	
Pentachlorophenol	ug/kg	1667.00	1651	99	

Date: 08/02/06

Page: 57 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927214254

Parameter	Units	Spike	LCS	LCS	Footnotes
		Conc.	Result	% Rec	
Phenanthrene	ug/kg	1667.00	1199	72	
Phenol	ug/kg	1667.00	1122	67	
Pyrene	ug/kg	1667.00	1088	65	
1,2,4-Trichlorobenzene	ug/kg	1667.00	812.9	49	
2,4,5-Trichlorophenol	ug/kg	1667.00	1416	85	
2,4,6-Trichlorophenol	ug/kg	1667.00	1205	72	
Nitrobenzene-d5 (S)				47	
2-Fluorobiphenyl (S)				61	
Terphenyl-d14 (S)				74	
Phenol-d5 (S)				63	
2-Fluorophenol (S)				66	
2,4,6-Tribromophenol (S)				102	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927214262 927214270

Parameter	Units	927205666	Spike	MS	MSD	MS	MSD	RPD	Footnotes
		Result	Conc.	Result	Result	% Rec	% Rec		
Acenaphthene	ug/kg	0	1726.00	1285	1236	74	72	4	
4-Chloro-3-methylphenol	ug/kg	0	1726.00	1244	1270	72	74	2	
2-Chlorophenol	ug/kg	0	1726.00	1226	1248	71	72	2	
1,4-Dichlorobenzene	ug/kg	0	1726.00	1090	1087	63	63	0	
2,4-Dinitrotoluene	ug/kg	0	1726.00	1569	1539	91	89	2	
4-Nitrophenol	ug/kg	0	1726.00	1411	1406	82	82	0	
N-Nitroso-di-n-propylamine	ug/kg	0	1726.00	1320	1338	76	78	1	
Pentachlorophenol	ug/kg	0	1726.00	2096	2116	121	123	1	
Phenol	ug/kg	0	1726.00	1181	1203	68	70	2	
Pyrene	ug/kg	0	1726.00	1188	1117	69	65	6	
1,2,4-Trichlorobenzene	ug/kg	0	1726.00	889.5	868.0	52	50	2	
Nitrobenzene-d5 (S)						49	49		
2-Fluorobiphenyl (S)						72	70		
Terphenyl-d14 (S)						79	74		
Phenol-d5 (S)						66	66		
2-Fluorophenol (S)						67	67		
2,4,6-Tribromophenol (S)						111	107		

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

METHOD BLANK: 927215699

Associated Lab Samples: 927208603 927208611 927208629

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Di-n-butylphthalate	ug/kg	ND	330	
4,6-Dinitro-2-methylphenol	ug/kg	ND	330	
2,4-Dinitrophenol	ug/kg	ND	1600	
2,4-Dinitrotoluene	ug/kg	ND	330	
2,6-Dinitrotoluene	ug/kg	ND	330	
Di-n-octylphthalate	ug/kg	ND	330	
1,2-Diphenylhydrazine	ug/kg	ND	330	
bis(2-Ethylhexyl)phthalate	ug/kg	ND	330	
Fluoranthene	ug/kg	ND	330	
Fluorene	ug/kg	ND	330	
Hexachloro-1,3-butadiene	ug/kg	ND	330	
Hexachlorobenzene	ug/kg	ND	330	
Hexachlorocyclopentadiene	ug/kg	ND	330	
Hexachloroethane	ug/kg	ND	330	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	330	
Isophorone	ug/kg	ND	330	
1-Methylnaphthalene	ug/kg	ND	330	
2-Methylnaphthalene	ug/kg	ND	330	
2-Methylphenol (o-Cresol)	ug/kg	ND	330	
3&4-Methylphenol	ug/kg	ND	330	
Naphthalene	ug/kg	ND	330	
2-Nitroaniline	ug/kg	ND	1600	
3-Nitroaniline	ug/kg	ND	1600	
4-Nitroaniline	ug/kg	ND	1600	
Nitrobenzene	ug/kg	ND	330	
2-Nitrophenol	ug/kg	ND	330	
4-Nitrophenol	ug/kg	ND	1600	
N-Nitroso-di-n-propylamine	ug/kg	ND	330	
N-Nitrosodiphenylamine	ug/kg	ND	330	
Pentachlorophenol	ug/kg	ND	1600	
Phenanthrene	ug/kg	ND	330	
Phenol	ug/kg	ND	330	
Pyrene	ug/kg	ND	330	
1,2,4-Trichlorobenzene	ug/kg	ND	330	
2,4,5-Trichlorophenol	ug/kg	ND	330	
2,4,6-Trichlorophenol	ug/kg	ND	330	

Date: 08/02/06

Page: 60 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

METHOD BLANK: 927215699

Associated Lab Samples: 927208603 927208611 927208629

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Nitrobenzene-d5 (S)	%	52		
2-Fluorobiphenyl (S)	%	60		
Terphenyl-d14 (S)	%	62		
Phenol-d5 (S)	%	58		
2-Fluorophenol (S)	%	64		
2,4,6-Tribromophenol (S)	%	87		

LABORATORY CONTROL SAMPLE: 927215707

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Acenaphthene	ug/kg	1667.00	1104	66	
Acenaphthylene	ug/kg	1667.00	1160	70	
Anthracene	ug/kg	1667.00	1089	65	
Benzo(k)fluoranthene	ug/kg	1667.00	1117	67	
Benzo(b)fluoranthene	ug/kg	1667.00	903.4	54	
Benzo(a)anthracene	ug/kg	1667.00	1059	64	
Benzoic acid	ug/kg	1667.00	403.7	24	
Benzo(g,h,i)perylene	ug/kg	1667.00	828.0	50	
Benzyl alcohol	ug/kg	1667.00	1296	78	
Benzo(a)pyrene	ug/kg	1667.00	1117	67	
4-Bromophenylphenyl ether	ug/kg	1667.00	1430	86	
Butylbenzylphthalate	ug/kg	1667.00	916.6	55	
4-Chloro-3-methylphenol	ug/kg	1667.00	954.7	57	
4-Chloroaniline	ug/kg	1667.00	1394	84	
bis(2-Chloroethoxy)methane	ug/kg	1667.00	948.8	57	
bis(2-Chloroethyl) ether	ug/kg	1667.00	1139	68	
bis(2-Chloroisopropyl) ether	ug/kg	1667.00	2544	153	2
2-Chloronaphthalene	ug/kg	1667.00	1166	70	
2-Chlorophenol	ug/kg	1667.00	1274	76	
4-Chlorophenylphenyl ether	ug/kg	1667.00	1306	78	
Chrysene	ug/kg	1667.00	1095	66	
Dibenz(a,h)anthracene	ug/kg	1667.00	872.5	52	
Dibenzofuran	ug/kg	1667.00	1137	68	
1,2-Dichlorobenzene	ug/kg	1667.00	1179	71	

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927215707

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
1,3-Dichlorobenzene	ug/kg	1667.00	1166	70	
1,4-Dichlorobenzene	ug/kg	1667.00	1166	70	
3,3'-Dichlorobenzidine	ug/kg	3333.00	792.6	24	
2,4-Dichlorophenol	ug/kg	1667.00	816.3	49	
Diethylphthalate	ug/kg	1667.00	1162	70	
2,4-Dimethylphenol	ug/kg	1667.00	517.9	31	
Dimethylphthalate	ug/kg	1667.00	1118	67	
Di-n-butylphthalate	ug/kg	1667.00	1066	64	
4,6-Dinitro-2-methylphenol	ug/kg	1667.00	1209	72	
2,4-Dinitrophenol	ug/kg	1667.00	1139	68	
2,4-Dinitrotoluene	ug/kg	1667.00	1280	77	
2,6-Dinitrotoluene	ug/kg	1667.00	1236	74	
Di-n-octylphthalate	ug/kg	1667.00	874.4	52	
1,2-Diphenylhydrazine	ug/kg	1667.00	1024	61	
bis(2-Ethylhexyl)phthalate	ug/kg	1667.00	782.5	47	
Fluoranthene	ug/kg	1667.00	1170	70	
Fluorene	ug/kg	1667.00	1101	66	
Hexachloro-1,3-butadiene	ug/kg	1667.00	885.2	53	
Hexachlorobenzene	ug/kg	1667.00	1496	90	
Hexachlorocyclopentadiene	ug/kg	1667.00	1179	71	
Hexachloroethane	ug/kg	1667.00	1249	75	
Indeno(1,2,3-cd)pyrene	ug/kg	1667.00	900.4	54	
Isophorone	ug/kg	1667.00	1497	90	
1-Methylnaphthalene	ug/kg	1667.00	858.4	52	
2-Methylnaphthalene	ug/kg	1667.00	855.1	51	
2-Methylphenol (o-Cresol)	ug/kg	1667.00	1206	72	
3&4-Methylphenol	ug/kg	1667.00	1188	71	
Naphthalene	ug/kg	1667.00	950.8	57	
2-Nitroaniline	ug/kg	1667.00	1280	77	
3-Nitroaniline	ug/kg	1667.00	1295	78	
4-Nitroaniline	ug/kg	1667.00	1147	69	
Nitrobenzene	ug/kg	1667.00	895.1	54	
2-Nitrophenol	ug/kg	1667.00	896.1	54	
4-Nitrophenol	ug/kg	1667.00	1041	62	
N-Nitroso-di-n-propylamine	ug/kg	1667.00	1224	74	
N-Nitrosodiphenylamine	ug/kg	1667.00	1145	69	
Pentachlorophenol	ug/kg	1667.00	1745	105	

Date: 08/02/06

Page: 62 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927215707

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Phenanthrene	ug/kg	1667.00	1063	64	
Phenol	ug/kg	1667.00	1141	68	
Pyrene	ug/kg	1667.00	921.4	55	
1,2,4-Trichlorobenzene	ug/kg	1667.00	855.3	51	
2,4,5-Trichlorophenol	ug/kg	1667.00	1281	77	
2,4,6-Trichlorophenol	ug/kg	1667.00	1171	70	
Nitrobenzene-d5 (S)				49	
2-Fluorobiphenyl (S)				70	
Terphenyl-d14 (S)				63	
Phenol-d5 (S)				67	
2-Fluorophenol (S)				72	
2,4,6-Tribromophenol (S)				89	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927215715 927215723

<u>Parameter</u>	<u>Units</u>	<u>927212407 Result</u>	<u>Spike Conc.</u>	<u>MS Result</u>	<u>MSD Result</u>	<u>MS % Rec</u>	<u>MSD % Rec</u>	<u>RPD</u>	<u>Footnotes</u>
Acenaphthene	ug/kg	0	1866.00	1225	1124	66	60	9	
1,4-Dichlorobenzene	ug/kg		1866.00	1181	1121			5	
2,4-Dinitrotoluene	ug/kg		1866.00	1471	1351			9	
N-Nitroso-di-n-propylamine	ug/kg		1866.00	1338	1187			12	
Pyrene	ug/kg	0	1866.00	1016	923.0	54	50	10	
1,2,4-Trichlorobenzene	ug/kg		1866.00	907.8	867.1			5	
Nitrobenzene-d5 (S)						47	44		
2-Fluorobiphenyl (S)						68	63		
Terphenyl-d14 (S)						64	53		

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

METHOD BLANK: 927232231

Associated Lab Samples: 927208538 927208561 927208579 927208587 927208595

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
1,2-Dichloropropane	ug/kg	ND	5.0	
1,3-Dichloropropane	ug/kg	ND	5.0	
2,2-Dichloropropane	ug/kg	ND	5.0	
1,1-Dichloropropene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Diisopropyl ether	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
2-Hexanone	ug/kg	ND	50.	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	50.	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	
1,1,1-Trichloroethane	ug/kg	ND	5.0	
1,1,2-Trichloroethane	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
1,2,3-Trichloropropane	ug/kg	ND	5.0	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	
Vinyl acetate	ug/kg	ND	50.	
Vinyl chloride	ug/kg	ND	10.	
Xylene (Total)	ug/kg	ND	5.0	
m&p-Xylene	ug/kg	ND	10.	
o-Xylene	ug/kg	ND	5.0	

Date: 08/02/06

Page: 65 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

METHOD BLANK: 927232231

Associated Lab Samples: 927208538 927208561 927208579 927208587 927208595

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Toluene-d8 (S)	%	106		
4-Bromofluorobenzene (S)	%	90		
Dibromofluoromethane (S)	%	101		
1,2-Dichloroethane-d4 (S)	%	106		

LABORATORY CONTROL SAMPLE: 927232249

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Acetone	ug/kg	100.00	94.53	94	
Benzene	ug/kg	50.00	55.02	110	
Bromobenzene	ug/kg	50.00	55.17	110	
Bromochloromethane	ug/kg	50.00	56.27	113	
Bromodichloromethane	ug/kg	50.00	56.91	114	
Bromoform	ug/kg	50.00	47.49	95	
Bromomethane	ug/kg	50.00	53.60	107	
2-Butanone (MEK)	ug/kg	100.00	100.8	101	
n-Butylbenzene	ug/kg	50.00	51.99	104	
sec-Butylbenzene	ug/kg	50.00	52.69	105	
tert-Butylbenzene	ug/kg	50.00	54.53	109	
Carbon tetrachloride	ug/kg	50.00	59.29	119	
Chlorobenzene	ug/kg	50.00	54.98	110	
Chloroethane	ug/kg	50.00	54.70	109	
Chloroform	ug/kg	50.00	55.65	111	
Chloromethane	ug/kg	50.00	45.00	90	
2-Chlorotoluene	ug/kg	50.00	53.12	106	
4-Chlorotoluene	ug/kg	50.00	53.29	107	
1,2-Dibromo-3-chloropropane	ug/kg	50.00	49.37	99	
Dibromochloromethane	ug/kg	50.00	55.35	111	
1,2-Dibromoethane (EDB)	ug/kg	50.00	55.91	112	
Dibromomethane	ug/kg	50.00	56.37	113	
1,2-Dichlorobenzene	ug/kg	50.00	53.80	108	
1,3-Dichlorobenzene	ug/kg	50.00	54.02	108	
1,4-Dichlorobenzene	ug/kg	50.00	52.36	105	
Dichlorodifluoromethane	ug/kg	50.00	53.13	106	

Date: 08/02/06

Page: 66 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927232249

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
1,1-Dichloroethane	ug/kg	50.00	56.09	112	
1,2-Dichloroethane	ug/kg	50.00	53.75	107	
1,1-Dichloroethene	ug/kg	50.00	61.64	123	
cis-1,2-Dichloroethene	ug/kg	50.00	53.10	106	
trans-1,2-Dichloroethene	ug/kg	50.00	57.12	114	
1,2-Dichloropropane	ug/kg	50.00	54.23	108	
1,3-Dichloropropane	ug/kg	50.00	52.61	105	
2,2-Dichloropropane	ug/kg	50.00	54.83	110	
1,1-Dichloropropene	ug/kg	50.00	53.11	106	
cis-1,3-Dichloropropene	ug/kg	50.00	49.19	98	
trans-1,3-Dichloropropene	ug/kg	50.00	47.39	95	
Diisopropyl ether	ug/kg	50.00	52.07	104	
Ethylbenzene	ug/kg	50.00	56.97	114	
Hexachloro-1,3-butadiene	ug/kg	50.00	57.92	116	
2-Hexanone	ug/kg	100.00	108.6	109	
Isopropylbenzene (Cumene)	ug/kg	50.00	57.27	115	
p-Isopropyltoluene	ug/kg	50.00	51.26	103	
Methylene chloride	ug/kg	50.00	57.26	115	
4-Methyl-2-pentanone (MIBK)	ug/kg	100.00	99.89	100	
Methyl-tert-butyl ether	ug/kg	50.00	52.66	105	
Naphthalene	ug/kg	50.00	48.89	98	
n-Propylbenzene	ug/kg	50.00	54.98	110	
Styrene	ug/kg	50.00	59.48	119	
1,1,1,2-Tetrachloroethane	ug/kg	50.00	53.53	107	
1,1,2,2-Tetrachloroethane	ug/kg	50.00	52.85	106	
Tetrachloroethene	ug/kg	50.00	54.56	109	
Toluene	ug/kg	50.00	55.94	112	
1,2,3-Trichlorobenzene	ug/kg	50.00	60.04	120	
1,2,4-Trichlorobenzene	ug/kg	50.00	55.67	111	
1,1,1-Trichloroethane	ug/kg	50.00	50.75	101	
1,1,2-Trichloroethane	ug/kg	50.00	56.14	112	
Trichloroethene	ug/kg	50.00	52.35	105	
Trichlorofluoromethane	ug/kg	50.00	54.08	108	
1,2,3-Trichloropropane	ug/kg	50.00	49.97	100	
1,2,4-Trimethylbenzene	ug/kg	50.00	49.85	100	
1,3,5-Trimethylbenzene	ug/kg	50.00	51.45	103	
Vinyl acetate	ug/kg	100.00	73.51	74	

Date: 08/02/06

Page: 67 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927232249

Parameter	Units	Spike	LCS	LCS	Footnotes
		Conc.	Result	% Rec	
Vinyl chloride	ug/kg	50.00	53.36	107	
Xylene (Total)	ug/kg	150.00	172.4	115	
m&p-Xylene	ug/kg	100.00	116.1	116	
o-Xylene	ug/kg	50.00	56.30	113	
Toluene-d8 (S)				101	
4-Bromofluorobenzene (S)				102	
Dibromofluoromethane (S)				101	
1,2-Dichloroethane-d4 (S)				108	

MATRIX SPIKE: 927235697

Parameter	Units	927208314	Spike	MS	MS	Footnotes
		Result	Conc.	Result	% Rec	
Benzene	ug/kg	0	69.51	77.93	112	
Chlorobenzene	ug/kg	0	69.51	80.27	116	
1,1-Dichloroethene	ug/kg	0	69.51	80.35	116	
Toluene	ug/kg	0	69.51	80.64	116	
Trichloroethene	ug/kg	0	69.51	79.61	114	
Toluene-d8 (S)					102	
4-Bromofluorobenzene (S)					98	
Dibromofluoromethane (S)					89	
1,2-Dichloroethane-d4 (S)					89	

SAMPLE DUPLICATE: 927235689

Parameter	Units	927208256	DUP	RPD	Footnotes
		Result	Result		
Acetone	ug/kg	ND	ND	NC	
Benzene	ug/kg	ND	ND	NC	
Bromobenzene	ug/kg	ND	ND	NC	
Bromochloromethane	ug/kg	ND	ND	NC	
Bromodichloromethane	ug/kg	ND	ND	NC	
Bromoform	ug/kg	ND	ND	NC	
Bromomethane	ug/kg	ND	ND	NC	
2-Butanone (MEK)	ug/kg	ND	ND	NC	

Date: 08/02/06

Page: 68 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

SAMPLE DUPLICATE: 927235689

Parameter	Units	927208256	DUP	RPD	Footnotes
		Result	Result		
n-Butylbenzene	ug/kg	ND	ND	NC	
sec-Butylbenzene	ug/kg	ND	ND	NC	
tert-Butylbenzene	ug/kg	ND	ND	NC	
Carbon tetrachloride	ug/kg	ND	ND	NC	
Chlorobenzene	ug/kg	ND	ND	NC	
Chloroethane	ug/kg	ND	ND	NC	
Chloroform	ug/kg	ND	ND	NC	
Chloromethane	ug/kg	ND	ND	NC	
2-Chlorotoluene	ug/kg	ND	ND	NC	
4-Chlorotoluene	ug/kg	ND	ND	NC	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND	NC	
Dibromochloromethane	ug/kg	ND	ND	NC	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND	NC	
Dibromomethane	ug/kg	ND	ND	NC	
1,2-Dichlorobenzene	ug/kg	ND	ND	NC	
1,3-Dichlorobenzene	ug/kg	ND	ND	NC	
1,4-Dichlorobenzene	ug/kg	ND	ND	NC	
Dichlorodifluoromethane	ug/kg	ND	ND	NC	
1,1-Dichloroethane	ug/kg	ND	ND	NC	
1,2-Dichloroethane	ug/kg	ND	ND	NC	
1,1-Dichloroethene	ug/kg	ND	ND	NC	
cis-1,2-Dichloroethene	ug/kg	ND	ND	NC	
trans-1,2-Dichloroethene	ug/kg	ND	ND	NC	
1,2-Dichloropropane	ug/kg	ND	ND	NC	
1,3-Dichloropropane	ug/kg	ND	ND	NC	
2,2-Dichloropropane	ug/kg	ND	ND	NC	
1,1-Dichloropropene	ug/kg	ND	ND	NC	
cis-1,3-Dichloropropene	ug/kg	ND	ND	NC	
trans-1,3-Dichloropropene	ug/kg	ND	ND	NC	
Diisopropyl ether	ug/kg	ND	ND	NC	
Ethylbenzene	ug/kg	ND	ND	NC	
Hexachloro-1,3-butadiene	ug/kg	ND	ND	NC	
2-Hexanone	ug/kg	ND	ND	NC	
Isopropylbenzene (Cumene)	ug/kg	ND	ND	NC	
p-Isopropyltoluene	ug/kg	ND	ND	NC	
Methylene chloride	ug/kg	ND	ND	NC	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	NC	

Date: 08/02/06

Page: 69 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

SAMPLE DUPLICATE: 927235689

Parameter	Units	927208256	DUP	RPD	Footnotes
		Result	Result		
Methyl-tert-butyl ether	ug/kg	ND	ND	NC	
Naphthalene	ug/kg	ND	ND	NC	
n-Propylbenzene	ug/kg	ND	ND	NC	
Styrene	ug/kg	ND	ND	NC	
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND	NC	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	NC	
Tetrachloroethene	ug/kg	ND	ND	NC	
Toluene	ug/kg	ND	ND	NC	
1,2,3-Trichlorobenzene	ug/kg	ND	ND	NC	
1,2,4-Trichlorobenzene	ug/kg	ND	ND	NC	
1,1,1-Trichloroethane	ug/kg	ND	ND	NC	
1,1,2-Trichloroethane	ug/kg	ND	ND	NC	
Trichloroethene	ug/kg	ND	ND	NC	
Trichlorofluoromethane	ug/kg	ND	ND	NC	
1,2,3-Trichloropropane	ug/kg	ND	ND	NC	
1,2,4-Trimethylbenzene	ug/kg	ND	ND	NC	
1,3,5-Trimethylbenzene	ug/kg	ND	ND	NC	
Vinyl acetate	ug/kg	ND	ND	NC	
Vinyl chloride	ug/kg	ND	ND	NC	
Xylene (Total)	ug/kg	ND	ND	NC	
m&p-Xylene	ug/kg	ND	ND	NC	
o-Xylene	ug/kg	ND	ND	NC	
Toluene-d8 (S)	%	104	111		
4-Bromofluorobenzene (S)	%	91	93		
Dibromofluoromethane (S)	%	96	94		
1,2-Dichloroethane-d4 (S)	%	107	95		

Date: 08/02/06

Page: 70 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

METHOD BLANK: 927236125

Associated Lab Samples: 927208603 927208611 927208629

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
1,2-Dichloropropane	ug/kg	ND	5.0	
1,3-Dichloropropane	ug/kg	ND	5.0	
2,2-Dichloropropane	ug/kg	ND	5.0	
1,1-Dichloropropene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Diisopropyl ether	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
2-Hexanone	ug/kg	ND	50.	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	50.	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	
1,1,1-Trichloroethane	ug/kg	ND	5.0	
1,1,2-Trichloroethane	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
1,2,3-Trichloropropane	ug/kg	ND	5.0	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	
Vinyl acetate	ug/kg	ND	50.	
Vinyl chloride	ug/kg	ND	10.	
Xylene (Total)	ug/kg	ND	5.0	
m&p-Xylene	ug/kg	ND	10.	
o-Xylene	ug/kg	ND	5.0	

Date: 08/02/06

Page: 72 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

METHOD BLANK: 927236125

Associated Lab Samples: 927208603 927208611 927208629

<u>Parameter</u>	<u>Units</u>	Blank	Reporting	<u>Footnotes</u>
		<u>Result</u>	<u>Limit</u>	
Toluene-d8 (S)	%	104		
4-Bromofluorobenzene (S)	%	95		
Dibromofluoromethane (S)	%	94		
1,2-Dichloroethane-d4 (S)	%	100		

LABORATORY CONTROL SAMPLE: 927236133

<u>Parameter</u>	<u>Units</u>	Spike	LCS	LCS	<u>Footnotes</u>
		<u>Conc.</u>	<u>Result</u>	<u>% Rec</u>	
Acetone	ug/kg	100.00	79.44	79	
Benzene	ug/kg	50.00	47.14	94	
Bromobenzene	ug/kg	50.00	44.68	89	
Bromochloromethane	ug/kg	50.00	44.84	90	
Bromodichloromethane	ug/kg	50.00	48.30	97	
Bromoform	ug/kg	50.00	42.37	85	
Bromomethane	ug/kg	50.00	54.78	110	
2-Butanone (MEK)	ug/kg	100.00	84.71	85	
n-Butylbenzene	ug/kg	50.00	48.76	98	
sec-Butylbenzene	ug/kg	50.00	49.35	99	
tert-Butylbenzene	ug/kg	50.00	48.24	96	
Carbon tetrachloride	ug/kg	50.00	52.40	105	
Chlorobenzene	ug/kg	50.00	45.82	92	
Chloroethane	ug/kg	50.00	53.50	107	
Chloroform	ug/kg	50.00	47.39	95	
Chloromethane	ug/kg	50.00	43.03	86	
2-Chlorotoluene	ug/kg	50.00	48.09	96	
4-Chlorotoluene	ug/kg	50.00	47.70	95	
1,2-Dibromo-3-chloropropane	ug/kg	50.00	42.43	85	
Dibromochloromethane	ug/kg	50.00	42.11	84	
1,2-Dibromoethane (EDB)	ug/kg	50.00	43.36	87	
Dibromomethane	ug/kg	50.00	47.67	95	
1,2-Dichlorobenzene	ug/kg	50.00	48.88	98	
1,3-Dichlorobenzene	ug/kg	50.00	48.95	98	
1,4-Dichlorobenzene	ug/kg	50.00	47.49	95	
Dichlorodifluoromethane	ug/kg	50.00	57.62	115	

Date: 08/02/06

Page: 73 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927236133

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
1,1-Dichloroethane	ug/kg	50.00	43.61	87	
1,2-Dichloroethane	ug/kg	50.00	42.97	86	
1,1-Dichloroethene	ug/kg	50.00	47.62	95	
cis-1,2-Dichloroethene	ug/kg	50.00	42.95	86	
trans-1,2-Dichloroethene	ug/kg	50.00	46.30	93	
1,2-Dichloropropane	ug/kg	50.00	49.46	99	
1,3-Dichloropropane	ug/kg	50.00	42.76	86	
2,2-Dichloropropane	ug/kg	50.00	47.33	95	
1,1-Dichloropropene	ug/kg	50.00	46.43	93	
cis-1,3-Dichloropropene	ug/kg	50.00	46.12	92	
trans-1,3-Dichloropropene	ug/kg	50.00	44.25	88	
Diisopropyl ether	ug/kg	50.00	41.51	83	
Ethylbenzene	ug/kg	50.00	47.02	94	
Hexachloro-1,3-butadiene	ug/kg	50.00	54.61	109	
2-Hexanone	ug/kg	100.00	82.12	82	
Isopropylbenzene (Cumene)	ug/kg	50.00	46.72	93	
p-Isopropyltoluene	ug/kg	50.00	49.42	99	
Methylene chloride	ug/kg	50.00	42.09	84	
4-Methyl-2-pentanone (MIBK)	ug/kg	100.00	85.42	85	
Methyl-tert-butyl ether	ug/kg	50.00	40.28	81	
Naphthalene	ug/kg	50.00	48.76	98	
n-Propylbenzene	ug/kg	50.00	50.77	102	
Styrene	ug/kg	50.00	47.80	96	
1,1,1,2-Tetrachloroethane	ug/kg	50.00	44.84	90	
1,1,2,2-Tetrachloroethane	ug/kg	50.00	40.84	82	
Tetrachloroethene	ug/kg	50.00	45.28	91	
Toluene	ug/kg	50.00	49.24	98	
1,2,3-Trichlorobenzene	ug/kg	50.00	52.58	105	
1,2,4-Trichlorobenzene	ug/kg	50.00	51.16	102	
1,1,1-Trichloroethane	ug/kg	50.00	43.03	86	
1,1,2-Trichloroethane	ug/kg	50.00	49.21	98	
Trichloroethene	ug/kg	50.00	48.52	97	
Trichlorofluoromethane	ug/kg	50.00	56.11	112	
1,2,3-Trichloropropane	ug/kg	50.00	41.93	84	
1,2,4-Trimethylbenzene	ug/kg	50.00	50.34	101	
1,3,5-Trimethylbenzene	ug/kg	50.00	48.75	98	
Vinyl acetate	ug/kg	100.00	64.94	65	

Date: 08/02/06

Page: 74 of 87

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.



QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

LABORATORY CONTROL SAMPLE: 927236133

Parameter	Units	Spike	LCS	LCS	Footnotes
		Conc.	Result	% Rec	
Vinyl chloride	ug/kg	50.00	50.52	101	
Xylene (Total)	ug/kg	150.00	140.3	94	
m&p-Xylene	ug/kg	100.00	94.51	94	
o-Xylene	ug/kg	50.00	45.77	92	
Toluene-d8 (S)				109	
4-Bromofluorobenzene (S)				98	
Dibromofluoromethane (S)				100	
1,2-Dichloroethane-d4 (S)				94	

MATRIX SPIKE: 927241612

Parameter	Units	927212407	Spike	MS	MS	Footnotes
		Result	Conc.	Result	% Rec	
Benzene	ug/kg	0	49.54	46.01	93	
Chlorobenzene	ug/kg	0	49.54	46.38	94	
1,1-Dichloroethene	ug/kg	0	49.54	40.85	82	
Toluene	ug/kg	0	49.54	46.61	94	
Trichloroethene	ug/kg	0	49.54	47.03	95	
Toluene-d8 (S)					100	
4-Bromofluorobenzene (S)					96	
Dibromofluoromethane (S)					92	
1,2-Dichloroethane-d4 (S)					87	

SAMPLE DUPLICATE: 927241604

Parameter	Units	927208264	DUP	RPD	Footnotes
		Result	Result		
Acetone	ug/kg	ND	ND	NC	
Benzene	ug/kg	ND	ND	NC	
Bromobenzene	ug/kg	ND	ND	NC	
Bromochloromethane	ug/kg	ND	ND	NC	
Bromodichloromethane	ug/kg	ND	ND	NC	
Bromoform	ug/kg	ND	ND	NC	
Bromomethane	ug/kg	ND	ND	NC	
2-Butanone (MEK)	ug/kg	ND	ND	NC	

Date: 08/02/06

Page: 75 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

SAMPLE DUPLICATE: 927241604

Parameter	Units	927208264	DUP	RPD	Footnotes
		Result	Result		
n-Butylbenzene	ug/kg	ND	ND	NC	
sec-Butylbenzene	ug/kg	ND	ND	NC	
tert-Butylbenzene	ug/kg	ND	ND	NC	
Carbon tetrachloride	ug/kg	ND	ND	NC	
Chlorobenzene	ug/kg	ND	ND	NC	
Chloroethane	ug/kg	ND	ND	NC	
Chloroform	ug/kg	ND	ND	NC	
Chloromethane	ug/kg	ND	ND	NC	
2-Chlorotoluene	ug/kg	ND	ND	NC	
4-Chlorotoluene	ug/kg	ND	ND	NC	
1,2-Dibromo-3-chloropropane	ug/kg	ND	ND	NC	
Dibromochloromethane	ug/kg	ND	ND	NC	
1,2-Dibromoethane (EDB)	ug/kg	ND	ND	NC	
Dibromomethane	ug/kg	ND	ND	NC	
1,2-Dichlorobenzene	ug/kg	ND	ND	NC	
1,3-Dichlorobenzene	ug/kg	ND	ND	NC	
1,4-Dichlorobenzene	ug/kg	ND	ND	NC	
Dichlorodifluoromethane	ug/kg	ND	ND	NC	
1,1-Dichloroethane	ug/kg	ND	ND	NC	
1,2-Dichloroethane	ug/kg	ND	ND	NC	
1,1-Dichloroethene	ug/kg	ND	ND	NC	
cis-1,2-Dichloroethene	ug/kg	ND	ND	NC	
trans-1,2-Dichloroethene	ug/kg	ND	ND	NC	
1,2-Dichloropropane	ug/kg	ND	ND	NC	
1,3-Dichloropropane	ug/kg	ND	ND	NC	
2,2-Dichloropropane	ug/kg	ND	ND	NC	
1,1-Dichloropropene	ug/kg	ND	ND	NC	
cis-1,3-Dichloropropene	ug/kg	ND	ND	NC	
trans-1,3-Dichloropropene	ug/kg	ND	ND	NC	
Diisopropyl ether	ug/kg	ND	ND	NC	
Ethylbenzene	ug/kg	ND	ND	NC	
Hexachloro-1,3-butadiene	ug/kg	ND	ND	NC	
2-Hexanone	ug/kg	ND	ND	NC	
Isopropylbenzene (Cumene)	ug/kg	ND	ND	NC	
p-Isopropyltoluene	ug/kg	ND	ND	NC	
Methylene chloride	ug/kg	ND	ND	NC	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	ND	NC	

Date: 08/02/06

Page: 76 of 87

QUALITY CONTROL DATA

Lab Project Number: 92123459
Client Project ID: NCDOT 34951.1.1 Johnson Conc.

SAMPLE DUPLICATE: 927241604

Parameter	Units	927208264	DUP	RPD	Footnotes
		Result	Result		
Methyl-tert-butyl ether	ug/kg	ND	ND	NC	
Naphthalene	ug/kg	ND	ND	NC	
n-Propylbenzene	ug/kg	ND	ND	NC	
Styrene	ug/kg	ND	ND	NC	
1,1,1,2-Tetrachloroethane	ug/kg	ND	ND	NC	
1,1,2,2-Tetrachloroethane	ug/kg	ND	ND	NC	
Tetrachloroethene	ug/kg	ND	ND	NC	
Toluene	ug/kg	ND	ND	NC	
1,2,3-Trichlorobenzene	ug/kg	ND	ND	NC	
1,2,4-Trichlorobenzene	ug/kg	ND	ND	NC	
1,1,1-Trichloroethane	ug/kg	ND	ND	NC	
1,1,2-Trichloroethane	ug/kg	ND	ND	NC	
Trichloroethene	ug/kg	ND	ND	NC	
Trichlorofluoromethane	ug/kg	ND	ND	NC	
1,2,3-Trichloropropane	ug/kg	ND	ND	NC	
1,2,4-Trimethylbenzene	ug/kg	ND	ND	NC	
1,3,5-Trimethylbenzene	ug/kg	ND	ND	NC	
Vinyl acetate	ug/kg	ND	ND	NC	
Vinyl chloride	ug/kg	ND	ND	NC	
Xylene (Total)	ug/kg	ND	ND	NC	
m&p-Xylene	ug/kg	ND	ND	NC	
o-Xylene	ug/kg	ND	ND	NC	
Toluene-d8 (S)	%	103	99		
4-Bromofluorobenzene (S)	%	100	98		
Dibromofluoromethane (S)	%	91	92		
1,2-Dichloroethane-d4 (S)	%	89	90		

QUALITY CONTROL DATA

Lab Project Number: 92123459
Client Project ID: NCDOT 34951.1.1 Johnson Conc.

MATRIX SPIKE: 927215673

<u>Parameter</u>	<u>Units</u>	927213942	Spike	MS	MS	<u>Footnotes</u>
		<u>Result</u>	<u>Conc.</u>	<u>Result</u>	<u>% Rec</u>	
Selenium	mg/kg	0	64.78	58.82	91	
Silver	mg/kg	0	32.39	31.61	98	

SAMPLE DUPLICATE: 927215681

<u>Parameter</u>	<u>Units</u>	927213959	DUP	<u>RPD</u>	<u>Footnotes</u>
		<u>Result</u>	<u>Result</u>		
Arsenic	mg/kg	1.500	1.000	35	
Barium	mg/kg	42.00	28.00	40	3
Cadmium	mg/kg	ND	ND	NC	
Chromium	mg/kg	8.600	7.100	19	
Lead	mg/kg	10.00	7.500	28	3
Selenium	mg/kg	ND	ND	NC	
Silver	mg/kg	ND	ND	NC	

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

MATRIX SPIKE: 927217422

Parameter	Units	927208579	Spike	MS	MS	Footnotes
		Result	Conc.	Result	% Rec	
Lead	mg/kg	4.289	65.12	68.90	99	
Selenium	mg/kg	0	65.12	59.91	92	
Silver	mg/kg	0	32.56	32.95	101	

SAMPLE DUPLICATE: 927217430

Parameter	Units	927208587	DUP	RPD	Footnotes
		Result	Result		
Arsenic	mg/kg	2.000	1.700	18	
Barium	mg/kg	35.00	44.00	22	3
Cadmium	mg/kg	ND	ND	NC	
Chromium	mg/kg	74.00	40.00	60	3
Lead	mg/kg	8.200	6.900	17	
Selenium	mg/kg	ND	ND	NC	
Silver	mg/kg	ND	ND	NC	



Pace Analytical Services, Inc.
 9800 Kincey Avenue, Suite 100
 Huntersville, NC 28078
 Phone: 704.875.9092
 Fax: 704.875.9091

Pace Analytical Services, Inc.
 2225 Riverside Drive
 Asheville, NC 28804
 Phone: 828.254.7176
 Fax: 828.252.4618

QUALITY CONTROL DATA

Lab Project Number: 92123459
 Client Project ID: NCDOT 34951.1.1 Johnson Conc.

QC Batch: 162456	Analysis Method: % Moisture				
QC Batch Method:	Analysis Description: Percent Moisture				
Associated Lab Samples:	927208538	927208561	927208579	927208587	927208595
	927208603	927208611	927208629		

SAMPLE DUPLICATE: 927209551

<u>Parameter</u>	<u>Units</u>	927208231 <u>Result</u>	DUP <u>Result</u>	<u>RPD</u>	<u>Footnotes</u>
Percent Moisture	%	26.30	27.00	3	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
 without the written consent of Pace Analytical Services, Inc.



QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

QC Batch: 162583	Analysis Method: EPA 9045				
QC Batch Method: EPA 9045	Analysis Description: pH				
Associated Lab Samples:	927208538	927208561	927208579	927208587	927208595
	927208603	927208611	927208629		

SAMPLE DUPLICATE: 927215467

<u>Parameter</u>	<u>Units</u>	927208306	DUP	<u>RPD</u>	<u>Footnotes</u>
		<u>Result</u>	<u>Result</u>		
pH	units	3.950	4.000	1	

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

QC Batch: 163164	Analysis Method: EPA 353.2 Modified				
QC Batch Method: EPA 353.2 Modified	Analysis Description: Nitrogen, Nitrate				
Associated Lab Samples:	927208538	927208561	927208579	927208587	927208595
	927208603	927208611	927208629		

METHOD BLANK: 927235408

Associated Lab Samples:	927208538	927208561	927208579	927208587	927208595	927208603	927208611
	927208629						

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Nitrate as N	mg/kg	ND	10.	

LABORATORY CONTROL SAMPLE: 927235416

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Nitrate as N	mg/kg	500.00	498.0	100	

MATRIX SPIKE: 927235424

<u>Parameter</u>	<u>Units</u>	<u>927208306 Result</u>	<u>Spike Conc.</u>	<u>MS Result</u>	<u>MS % Rec</u>	<u>Footnotes</u>
Nitrate as N	mg/kg	28.65	361.70	376.2	96	

SAMPLE DUPLICATE: 927235432

<u>Parameter</u>	<u>Units</u>	<u>927208314 Result</u>	<u>DUP Result</u>	<u>RPD</u>	<u>Footnotes</u>
Nitrate as N	mg/kg	ND	ND	NC	

QUALITY CONTROL DATA

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

QC Batch: 163728	Analysis Method: EPA 350.1 Modified				
QC Batch Method: EPA 350.1 Modified	Analysis Description: Nitrogen, Ammonia				
Associated Lab Samples:	927208538	927208561	927208579	927208587	927208595
	927208603	927208611	927208629		

METHOD BLANK: 927255869

Associated Lab Samples:	927208538	927208561	927208579	927208587	927208595	927208603	927208611
	927208629						

<u>Parameter</u>	<u>Units</u>	<u>Blank Result</u>	<u>Reporting Limit</u>	<u>Footnotes</u>
Nitrogen, Ammonia	mg/kg	ND	10.	

LABORATORY CONTROL SAMPLE: 927255877

<u>Parameter</u>	<u>Units</u>	<u>Spike Conc.</u>	<u>LCS Result</u>	<u>LCS % Rec</u>	<u>Footnotes</u>
Nitrogen, Ammonia	mg/kg	100.00	107.5	107	

MATRIX SPIKE: 927255885

<u>Parameter</u>	<u>Units</u>	<u>927208306 Result</u>	<u>Spike Conc.</u>	<u>MS Result</u>	<u>MS % Rec</u>	<u>Footnotes</u>
Nitrogen, Ammonia	mg/kg	2.008	130.20	152.2	117	

SAMPLE DUPLICATE: 927255893

<u>Parameter</u>	<u>Units</u>	<u>927208314 Result</u>	<u>DUP Result</u>	<u>RPD</u>	<u>Footnotes</u>
Nitrogen, Ammonia	mg/kg	ND	ND	NC	

Lab Project Number: 92123459

Client Project ID: NCDOT 34951.1.1 Johnson Conc.

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

- LCS(D) Laboratory Control Sample (Duplicate)
- MS(D) Matrix Spike (Duplicate)
- DUP Sample Duplicate
- ND Not detected at or above adjusted reporting limit
- NC Not Calculable
- J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
- MDL Adjusted Method Detection Limit
- RPD Relative Percent Difference
- (S) Surrogate
- [1] The spike recovery was outside acceptance limits for the MS and/or MSD due to an analyte concentration in the sample at four times greater than the spike concentration. The QC batch was accepted based upon LCS and/or LCSD recoveries within acceptance limits.
- [2] Recovery falls outside of QC limits, however, this compound is not found in the associated samples.
- [3] The calculated RPD was outside QC acceptance limits.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 1

1004584

Section A Required Client Information:

Company: SOLUTIONS-125
 Address: 1101 NOWELL RD.
 RALLI, GH NC 27607
 Email To: SKNOX@SOLUTIONS-125.COM
 Phone: 9198731060 Fax: 9198731079
 Requested Due Date/TAT:

Section B Required Project Information:

Report To: SHELI KNOX
 Copy To: WBS# 34951.1.1
 WBS# 34951.1.1
 Purchase Order No.: 7800006252 NCDOT
 Project Name: NCDOT - KLUMAC RD.
 Project Number: 3210.06A3.NDOT

Section C Invoice Information:

Attention: Chris Peoples
 Company Name: NC DOT AR# 616023
 Address:
 Pace Quote Reference:
 Pace Project Manager: BLM
 Pace Profile #: 3819-8

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA Other

SITE LOCATION

GA IL IN MI MN NC
 OH SC WI OTHER

Section D Required Client Information

SAMPLE ID

One Character per box.
 (A-Z, 0-9 / -)
 Samples IDs MUST BE UNIQUE

Valid Matrix Codes
 MATRIX CODE
 DRINKING WATER DW
 WATER WT
 WASTE WATER WW
 PRODUCT P
 SOIL/SOLID SL
 OIL OL
 WIPE WP
 AIR AR
 OTHER OT
 TISSUE TS

ITEM #	SAMPLE ID		MATRIX CODE	SAMPLE TYPE	COMPOSITE START DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Filtered (Y/N)	Requested Analysis:	Lab I.D.
1	J	O H N B 1	SL		7/7/06	1145		X		X	FURNACE HIDE	927208538
2	J	O H N B 2	SL		7/7/06	1615		X		X	PH	561
3	J	O H N B 3	SL		7/8/06	0900		V		X	AMMONIA	579
4	J	O H N B 4	SL		7/8/06	0930		X		X	NITRATES	1587
5	J	O H N B 5	SL		7/8/06	0945		X		X	PESTICIDES	595
6	J	O H N B 6	SL		7/8/06	1000		X		X	HERBICIDES	603
7	J	O H N B 7	SL		7/8/06	1020		X		X	Residual Chlorine (Y/N)	611
8	J	O H N B 8	SL		7/8/06	1030		X		X		629
9												
10												
11												
12												

Additional Comments:

JOHNSON CONCRETE SITE

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITION
[Signature]	7/8/06	1610	[Signature]	7/8/06	16:10	Y/N
[Signature]	7/8/06	1740	[Signature]	7/11/06	17:50 (6.0)	Y/N

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: KEVIN BUCHANAN
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YY): 07/17/06

Temp in °C	Received on Ice	Custody Sealed Cooler	Samples Intact
	Y/N	Y/N	Y/N

APPENDIX E

GPS COORDINATES

APPENDIX E
GPS Coordinates of Borings
Johnson Concrete
Salisbury, Rowan County, North Carolina
WBS Element: 34951.1.1, TIP #: U-3459
Solutions-IES Project No. 3210.06A3.NDOT

Boring Number	Northing⁽¹⁾	Easting⁽¹⁾
JOHNB1	35.65496117	-80.48930601
JOHNB2	35.65428609	-80.48938522
JOHNB3	35.65301280	-80.48900125
JOHNB4	35.65305647	-80.48900820
JOHNB5	35.65335008	-80.48909110
JOHNB6	35.65362987	-80.48915916
JOHNB7	35.65391754	-80.48919629
JOHNB8	35.65437544	-80.48927014

NOTES:

(1) NAD84 GPS Coordinates

Borings located using field measurements.