P S A R E P O R T

PRELIMINARY SITE ASSESSMENT
PARCEL #005
ALLEN S & FRANCES H JOHNSON JR PROPERTY
108 OLD DAVIDSON PLACE NW
CONCORD, CABARRUS COUNTY, NC
STATE PROJECT B-5136
WBS ELEMENT 42295.1.1

Prepared for

North Carolina Department of Transportation
Geotechnical Engineering Unit
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March 15, 2013, Revised April 24, 2013

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URS Job No. 3182 7879

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Certification

This Report was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my thorough inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

	2061	4-24-13
Walter Plekan, L.G. Project Manager URS Corporation – North Carolina	NC License No.	Date

1.1 INTRODUCTION

This report documents a Preliminary Site Assessment (PSA) conducted by URS Corporation – North Carolina (URS) on behalf of the North Carolina Department of Transportation (NCDOT). The assessment area includes a site located on the north side of US 29, just west of the Southern Railroad. This PSA was conducted in Concord, Cabarrus County, North Carolina (**Figure 1**) for the Johnson Block (Stone Center) concrete block manufacturing facility, owned by Allen S & Frances H Johnson, Jr., located at 108 Old Davidson Place NW (the Site). The PSA was performed only within the proposed right-of-way and/or easement for this parcel.

This PSA was performed in general accordance with:

- NCDOT's 30 November 2012 Request for Technical and Cost Proposal (RFP) for the Site property. The RFP established the following scope of work (SOW) for the project:
  - Locate USTs and estimate approximate size and contents (if any).
  - Evaluate whether contaminated soils are present with emphasis along planned drainage lines and ditches.
  - If contamination is evident, estimate the quantity of impacted soils and indicate the approximate area of soil contamination on a site map.
  - Prepare a report including field activities, findings, and recommendations for each site and submit to this office in triplicate and one electronic copy.
- URS's 21 December 2012 Technical and Cost Proposal for the Site property.
- NCDOT's 8 January 2013 Notice to Proceed for the Site property.

The scope of work included a geophysical survey, soil sampling using a direct push technology (DPT) rig, and laboratory analyses of selected soil samples from within Site property. The geophysical survey was first conducted by URS in order to identify potential UST and/or anomaly locations within the Site property. Based on the results of the geophysical survey and anecdotal evidence, boring locations were identified and the DPT borings were completed by a drilling subcontractor (Probe Technology of Concord, North Carolina) under the supervision of a URS geologist. Soil borings were located in areas that were cleared of underground utilities by NC One-Call. Analysis of soil samples were performed by Pace Analytical Services under direct contract with NCDOT.

1.2 BACKGROUND

The objective for this PSA is to assess the Site for USTs, impacted soil, and to delineate potential impacts found in soils. The major Site features and the surrounding area are shown on **Figures 1** and **2**. The parcel is bounded by Southern Railroad and Shoppes at Davidson retail stores to the east, by grassy/wooded land and Southern Railroad to the north, and by wooded land and residential properties to the west. Old Davidson Place NW runs south from the Site then west, where it joins into Davidson Highway just northwest of the intersection of Davidson Highway

and Concord Parkway North. The property currently operates as a concrete block manufacturing center (Stone Center).

A review of historical aerials (**Appendix A**) obtained from the Cabarrus County GIS indicates that the property was developed between 1975 and 1986. The portion of the property closest to the proposed right-of-way/easement has primarily been used for aggregate or finished product storage since the property has been developed through present day.

A review of NCDENR's UST on-line Registration Database indicated that one 10,000-gallon UST was removed from the Site in 1998. Incident number 20172 was assigned to the impacts associated with the UST.

On November 4, 1998, one 10,000 gallon diesel UST and ancillary piping were removed. Impacted soils observed/confirmed under the pump island and supply lines were not removed with the UST. Sample results from monitor well sampling in September 1999 and July 2000 confirm the presence of hydrocarbon groundwater impacts. Further groundwater sampling in December 2000 determined that hydrocarbon impacts were below NCDENR groundwater standards; however Tetrachloroethene (PCE) was detected in the on-site water supply well.

In June 2001, approximately 300 tons of impacted soils from the former pump island and supply lines were excavated for off-site disposal. Re-sampling of the on-site water supply well confirmed the presence of PCE. In July 2001, an additional 40-50 tons of hydrocarbon impacted soil was removed from the site, and confirmation samples indicated that the petroleum impacted soil had been removed. Ultimately a "no further action" letter was issued by NCDENR on August 24, 2001 for the release associated with the UST release. It should be noted that the aforementioned (former) petroleum impacts were located several hundred feet from the proposed right-of-way/easement. Information from the UST remediation activities is included as **Appendix A**.

NCDENR assigned Incident Number 86321 to the PCE impacts in the on-site water supply well. Information included in **Appendix A** confirms the presence of PCE in the onsite water supply well, and suggest the PCE impacts are associated with Caldwell Cleaners and further assessment and cleanup activities will be administered through the NCDENR Dry-Cleaning Solvent Cleanup Act Program. The depth to water onsite is between 15 and 20 feet below land surface, and groundwater impacts from this PCE release are unlikely to affect construction activities within the proposed right-of-way/easement.

2.1 GEOPHYSICAL SURVEY

The primary objective of the geophysical survey was to locate potential USTs or anomalies within the property, and a secondary objective was identify general locations of underground utilities in advance of the planned subsurface investigation. The geophysical survey for the property was conducted by URS between January 22 and 24, 2010. Ground surface conditions consisted primarily of grassy and wooded areas.

The geophysical investigation was conducted using the electromagnetic (EM) method augmented by ground-penetrating radar (GPR). The EM survey was completed using the hand-held Schonstedt GA-52Cx Magnetic Locator and the Geonics, Ltd. EM-61 MKII (EM-61). The GPR survey was completed using a Sensors & Software, Inc. Noggin PLUS Smart Cart System with a 250 MHz scanning antenna.

EM-61 data were collected along parallel profiles with a nominal spacing of 5 feet where accessible. EM-61 data were recorded at a rate of 8 readings per second, which equates to an along-profile data point spacing of less than 1 foot. URS utilized the Schonstedt GA-52Cx to conduct a search of the portions of the survey area not accessible due to the size of the EM-61 instrument in order to identify anomalies indicative of USTs (i.e. between trees, man-made obstructions, etc.).

A Trimble ProXRT global positioning system (GPS) was used to record positional data coincident with the EM-61 data. The ProXRT system provided real-time differential corrections via an Omnistar subscription service. The horizontal accuracy of the differential GPS (DGPS) data is generally 3 feet or better. URS also used the GPS system to record the locations of relevant site features within the survey area.

Prior to conducting the GPR investigation, URS performed in-field analysis of the EM-61 data to identify anomalies indicative of potential USTs. Preliminary interpretations were based on an evaluation of the magnitude of the EM response as well as the dimensions of the anomaly in plan view.

The GPR was used to conduct a broad search of the parcel in areas where metal detection methods proved unreliable due to metallic interference, or where further investigation of EM anomalies were determined necessary. GPR surveying consisted of in-field analysis of real-time data. As a result, no post-processing of the GPR data was completed. However, GPR anomalies that appeared to be indicative of USTs were saved to a data file. The objective of augmenting the EM-61 survey with follow-up GPR surveying was to further characterize EM-61 anomalies that could not be readily attributed to existing site features.

The EM-61 data were pre-processed using the program DAT61 MK2 (Geonics Ltd). The program was used to prepare the data for contouring in Surfer (Golden Software, Inc.). Contoured data represent EM-61 Channel 1 and differential responses. The Channel 1 response represents data recorded at the earliest time interval along the EM-61 response decay curve. These data are applicable to detection of subsurface objects including USTs and other underground obstructions (e.g. utility lines).

2.2 SOIL BORING INSTALLATION AND MEDIA SAMPLING

Ten direct-push soil borings, P5-SB1 through P5-SB10, were installed from February 4-5, 2013 to assess the Site for impacted soil as shown in **Figure 2**. Soil samples were collected and logged continuously at each soil boring location. Soil sample aliquots were field screened for organic vapors with a MiniRae® brand photo-ionization detection (PID) instrument calibrated daily with 100 parts per million (ppm) isobutylene.

Soil samples from select intervals were collected from each boring during the soil investigations for laboratory analysis. The samples were analyzed for Total Petroleum Hydrocarbons (TPH) as gasoline range organics (GRO) and diesel range organics (DRO) using USEPA Method 8015B.

2.3 QUALITY CONTROL/QUALITY ASSURANCE PROCEDURES

While in the field, pertinent observations were recorded in a logbook maintained by the URS field representative. This included pertinent field data collection activities and other observations as appropriate. Each sample collected for laboratory analysis was assigned a unique sample identification number and placed in laboratory supplied containers appropriate for the parameters being analyzed. Samples collected for laboratory analyses were stored on ice in insulated coolers immediately following collection. Information on the custody, transfer, handling, and shipping of all samples was recorded on a chain-of-custody form that accompanied the samples to the laboratory.

Soil analytical data were evaluated based on the *Contract Laboratory Program National Functional Guidelines for Organic Data Review* (USEPA, October 1999). Sample results have been qualified based on the results of the data review process and are considered representative and valid for the purpose of this report.

3.1 GEOPHYSICAL SURVEY RESULTS

The results of the geophysical survey are presented in accordance with the NCDOT guidelines, dated May 19, 2009, for identifying and ranking potential USTs on NCDOT projects.

The EM-61 Channel 1 and differential response results are provided as plan view, color-enhanced contour maps in **Figures 3** and **4**, respectively. The results presented in **Figures 3** and **4** are superimposed on the parcel base drawing provided by NCDOT. The interpreted background response is represented by the light blue to light green contours and corresponds to the range of 0 to 100 milliVolts (mV).

The Channel 1 results in **Figure 3** indicate high response anomalies, red in color, where known surface or near-surface features exist. Features of note include utility poles, two monitoring well covers, and a manhole cover. A water line running northeast-southwest along the southernmost portion the parcel is noted by the dark blue to orange contours, and is highlighted with a dashed line on the **Figure 3**. A slight increase in negative response values is noted in the vicinity of a 20"-high, block patio wall located in the western portion of the parcel just north of the proposed easement line. This slight increase in negative response values is indicated in **Figure 3** by the yellow contours, and may be a result of metal reinforcement in the block foundation.

The effects of surface and near-surface conditions appear to be muted in the differential response data, thus facilitating the identification of deeper anomalies characteristic of USTs. Because the differential response data in **Figure 4** depict more well-defined footprints of EM signatures and enable muting of surface effects, these response data were utilized to select the target locations for inclusion in the follow-up GPR survey. In this particular instance, no anomalies indicative of a potential UST were identified in **Figure 4.** However, there appears to be slight increase in response values areas indicated by small dark blue and orange anomalies in **Figure 4.** Because these anomalies are in proximity to near-surface utilities, the localized increase in near-surface conditions may result from fill materials with a relatively higher metallic mineral content.

The results of the sweep search with the Schonstedt in areas inaccessible by the EM-61 and GPR within the wooded area of the northeastern portion of the survey area did not identify anomalies indicative of buried metallic obstructions.

A follow-up GPR survey across the survey area was conducted over anomalous noted in the EM-61 data. The instrument did not indicate reflections consistent with the characteristics of USTs.

3.2 SOIL SAMPLING RESULTS

A total of 10 soil borings were advanced to a depth of 10 ft bgs during the PSA investigation at the Site property. Boring locations are shown in **Figure 2** and analytical results (TPH) are summarized in **Table 1**. The soil was described as reddish-brown sandy clay. The boring logs are included as **Appendix B** and the complete laboratory report is included in **Appendix C**.

As shown in **Appendix B**, soil headspace screening in the field detected organic vapors in soil sample intervals between 0.0 parts per million (ppm) and 46.3 ppm. TPH (GRO) was not detected in any of the soil samples collected for laboratory analysis. TPH (DRO) was detected in

soil samples P5-SB1-2 (51.4 mg/kg), P5-SB2-2 (18.3 mg/kg), and P5-SB4-1 (26.1 mg/kg) at concentrations above the NCDENR Action Level of 10 mg/kg. TPH (DRO) was not detected in any other soil samples collected from the Site.

Due to elevated PID readings in boring P5-SB-2, three step-out borings were installed; P5-SB-2A to the south, P5-SB-2B to the west, and P5-SB-2C to the east, with each being approximately 10 ft away from P5-SB-2. PID screening of these three step-out boring did not detect the presence of organic vapors, therefore soil samples were not submitted for laboratory analysis.

Although the above listed concentrations exceed the NCDENR Non-UST Petroleum Action Level of 10 mg/kg, a constituent analysis of VOCs and SVOCs would likely not exceed action levels for P5-SB2-2, and P5-SB4-1. Potentially, the concentration in P5-SB1-2 (51.4 mg/kg), could exceed action levels, therefore as shown on **Figure 2** the approximate extent of impacted soil is depicted. The approximate extents of potential impacts associated with P5-SB2-2, and P5-SB4-1 are also depicted as a conservative approach. Each of the areas shown is approximately 100 square feet, using a uniform depth of 3-ft; the volume of impacted soil that potentially could be encountered is approximately 33 cubic yards.

3.3 SUMMARY

The following summarizes the findings of NCDOT Parcel 5 - Johnson Block (Stone Center) concrete block manufacturing facility, owned by Allen S & Frances H Johnson, Jr., located at 108 Old Davidson Place NW:

- Historical files reviewed indicate that several USTs were removed from the property in the late 1990s. Incident number 20172 was assigned to the rlease. After several rounds of soil excavation, the site received a “no further action” notification in 2001;
- The on-site water supply well is impacted with PCE from an upgradient dry cleaners facility. Incident 86321 has been assigned to the Caldwell Cleaners release. The depth to water onsite is between 15 and 20 ft bls, and groundwater impacts from this PCE release are unlikely to affect construction activities within the proposed right-of-way/easement;
- The geophysical survey did not indicate the presence of USTs or associated features;
- Field screening detected the presence of organic vapors above background concentrations in soil boring SB1 and SB2;
- Three soil samples SB1-2, SB2-2, and SB4-1 reported concentrations in excess of the regulatory standards for TPH (DRO), however, a constituent analysis of this sample for VOCs and SVOCs would likely not exceed NCDENRs’ more stringent soil-to-groundwater maximums soil contaminant concentration action levels; and
- Due to the shallow depth of these impacts, future site workers have the ability to be in contact with these soils. The estimated aerial extent of impacted soils is depicted Figure 2.

Opinions relating to environmental, geologic, and geotechnical conditions at this parcel are based on limited data, and actual conditions may vary from those encountered at the times and locations where the data was obtained, despite the use of due professional care. The geophysical investigation was conducted in accordance with reasonable and accepted engineering geophysics practices, and the interpretations and conclusions are rendered in a manner consistent with other consultants in our profession. All geophysical techniques have some level of uncertainty and limitations. No other representations of the reported information is expressed or implied, and no warranty or guarantee is included or intended. The results of the geophysical survey are presented in accordance with the NCDOT guidelines, dated May 19, 2009, for identifying and ranking potential USTs on NCDOT projects.

URS Corporation, *Technical and Cost Proposal, Preliminary Site Assessment, Rev*, December 21, 2012.

United States Environmental Protection Agency, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, 1999.

North Carolina Department of Transportation, Request for Technical and Cost Proposal, Preliminary Site Assessment, B-5136(42295.1.1), November 30, 2012.

North Carolina Department of Transportation, Notice to Proceed - Preliminary Site Assessment, B-5136(42295.1.1), January 8, 2013.

Tables

Table 1
Parcel 005 - Allen S Frances H Johnson Jr Property
Summary of Analytical Results - Solid Samples
TIP #B-5136 42295.1.1

Analytical Method			EPA 8015 Modified by EPA 3546	EPA 8015 Modified by EPA 5035A/5030B
Sample ID	**Constituent of Concern**		TPH - Diesel Range Organics (DRO)	TPH - Gasoline Range Organics (GRO)
	Date Collected (mm/dd/yy)	Sample Depth (ft. BGS)	mg/kg	mg/kg
P5-SB1-2	02/04/2013	2	**51.4**	ND
P5-SB2-2	02/04/2013	2	**18.3**	ND
P5-SB3-3	02/04/2013	3	ND	ND
P5-SB4-1	02/04/2013	1	**26.1**	ND
P5-SB5-10	02/05/2013	10	ND	ND
P5-SB6-10	02/05/2013	10	ND	ND
P5-SB7-10	02/05/2013	10	ND	ND
P5-SB8-10	02/05/2013	10	ND	ND
P5-SB9-10	02/05/2013	10	ND	ND
P5-SB10-9	02/05/2013	9	ND	ND
NCDENR UST Section Action Levels			10	10
NCDENR Non-UST Petroleum Action Levels			10	10

NOTES:

ND = Not Detected

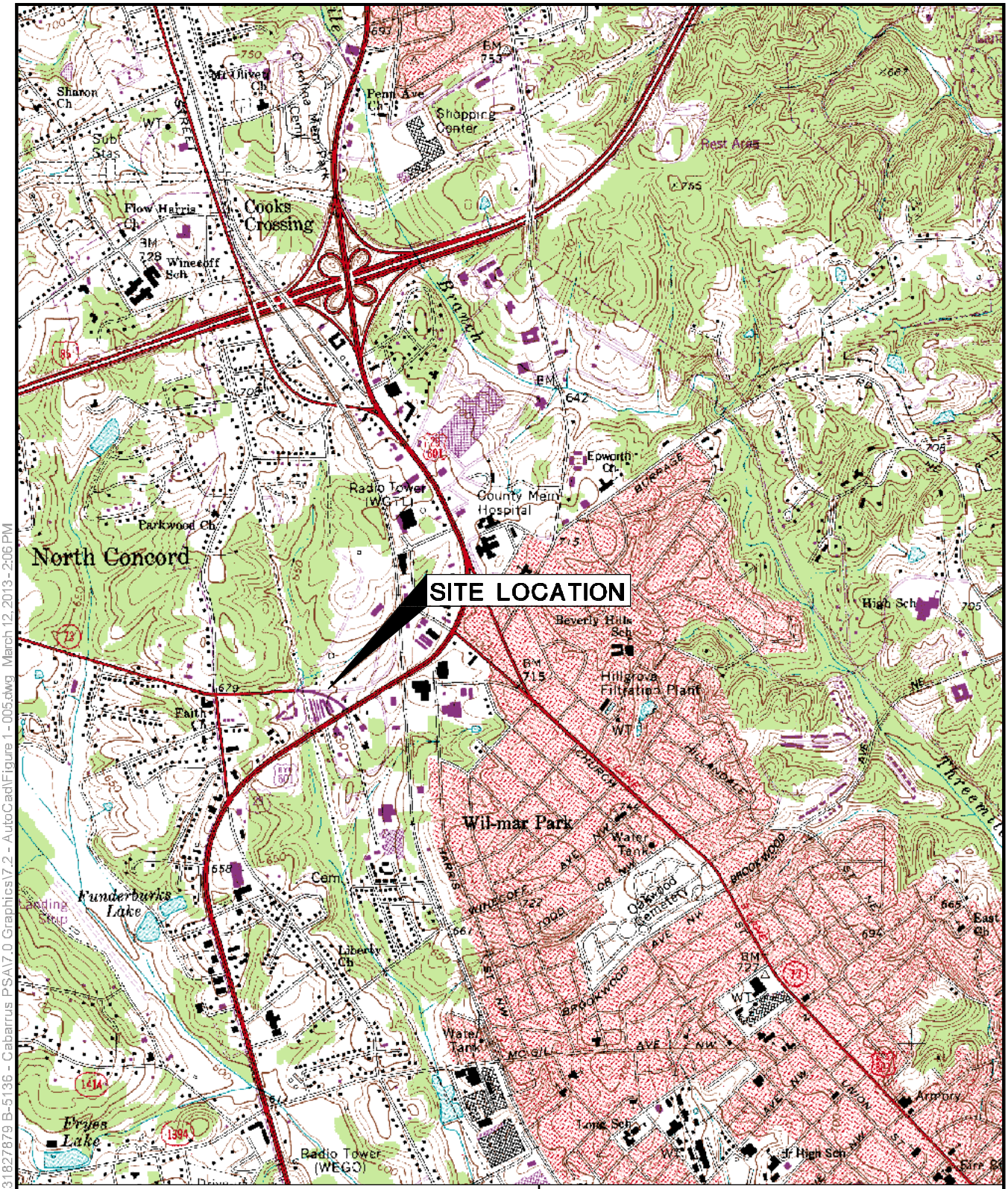
TPH = Total Petroleum Hydrocarbons

ft. BGS = feet below ground surface

mg/kg = milligrams per kilogram

Bold data above the NCDENR Action Levels

Figures



SOURCE: USGS 7.5' TOPOGRAPHIC QUADRANGLE
CONCORD, NC – DATED 1969, PHOTOREVISED 1987

FIGURE 1. LOCATION MAP

PARCEL 005, 108 OLD DAVIDSON PL NW
STATE PROJECT B-5136, CONCORD, NC

Prepared for: NC DOT	URS RDU, NORTH CAROLINA 27560
DRAWN BY: TSH	
DATE: 01/26/13	
PROJECT NO. 31827879	Fig. 1

P:\Jobs4_Projects\NCDOT\31827879 B-5136 - Cabarrus PSA\7.0 Graphics\7.2 - AutoCad\Figure 1 - 005.dwg March 12, 2013 - 2:06 PM

PROJECT REFERENCE NO.	SHEET
B-5136	

GeoEnvironmental

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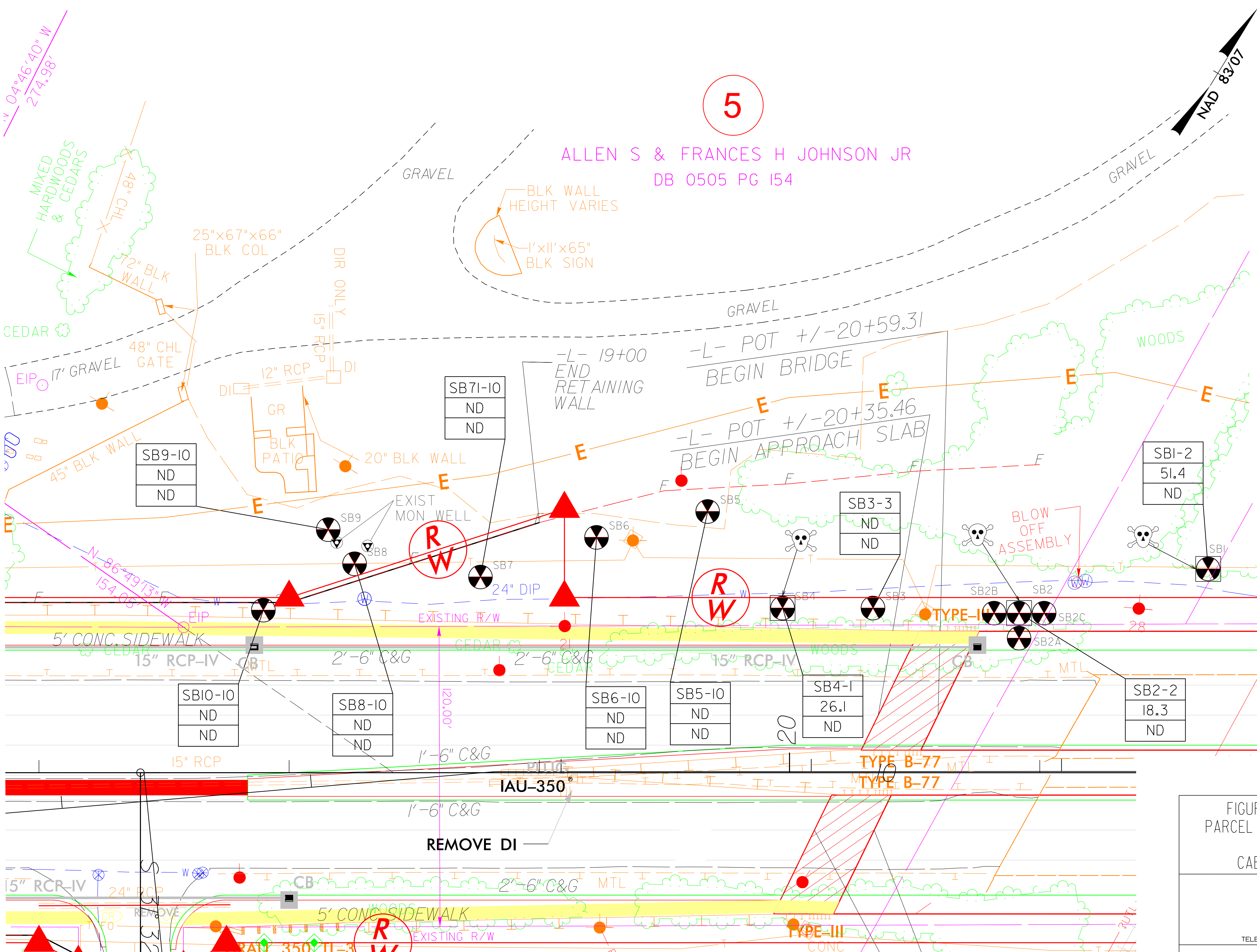
FEET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ALLEN S & FRANCES H JOHNSON JR
DB 0505 PG 154
NAD 83/07
GRAVEL
BLK WALL HEIGHT VARIES
1'x11'x65" BLK SIGN
25"x67"x66" BLK COL
MIXED HARDWOODS & CEDARS
48" CHL
72" BLK WALL
CEDAR
17' GRAVEL
48" CHL GATE
EIP
12" RCP
DI
DIR ONLY
15" RCP
GR
BLK PATIO
20" BLK WALL
45" BLK WALL
-L- 19+00 END RETAINING WALL
-L- POT +/-20+59.31 BEGIN BRIDGE
-L- POT +/-20+35.46 BEGIN APPROACH SLAB
WOODS
SB9-10 | ND | ND
SB71-10 | ND | ND
SB3-3 | ND | ND
SB1-2 | 51.4 | ND
SB10-10 | ND | ND
SB8-10 | ND | ND
SB6-10 | ND | ND
SB5-10 | ND | ND
SB4-1 | 26.1 | ND
SB2-2 | 18.3 | ND
EXIST MON WELL
SB9
SB8
SB7
SB6
SB5
SB4
SB3
SB2B
SB2
SB2C
SB2A
SB1
24" DIP
BLOW OFF ASSEMBLY
TYPE-I
N 86°49'13" W 154.05'
N 04°46'40" W 274.98'
EXISTING R/W
5' CONC. SIDEWALK
15" RCP-IV
CB
2'-6" C&G
BST BRIDGE DECK
120.00'
20
TYPE B-77
1'-6" C&G
IAU-350
REMOVE DI
5' CONC SIDEWALK
24" RCP
REMOVE
GRAU 350 TL-3
TYPE-III
MTL
WOODS

LEGEND

- SOIL BORING LOCATION
- PROPOSED RIGHT-OF-WAY
- PROPOSED EASEMENT
- PROPOSED DRAINAGE STRUCTURE
- KNOWN SOIL CONTAMINATION
- EXISTING MONITORING WELL

SB1-10	ID - DEPTH
ND	TPH / DRO
ND	TPH / GRO

SOIL RESULTS ARE IN mg/kg

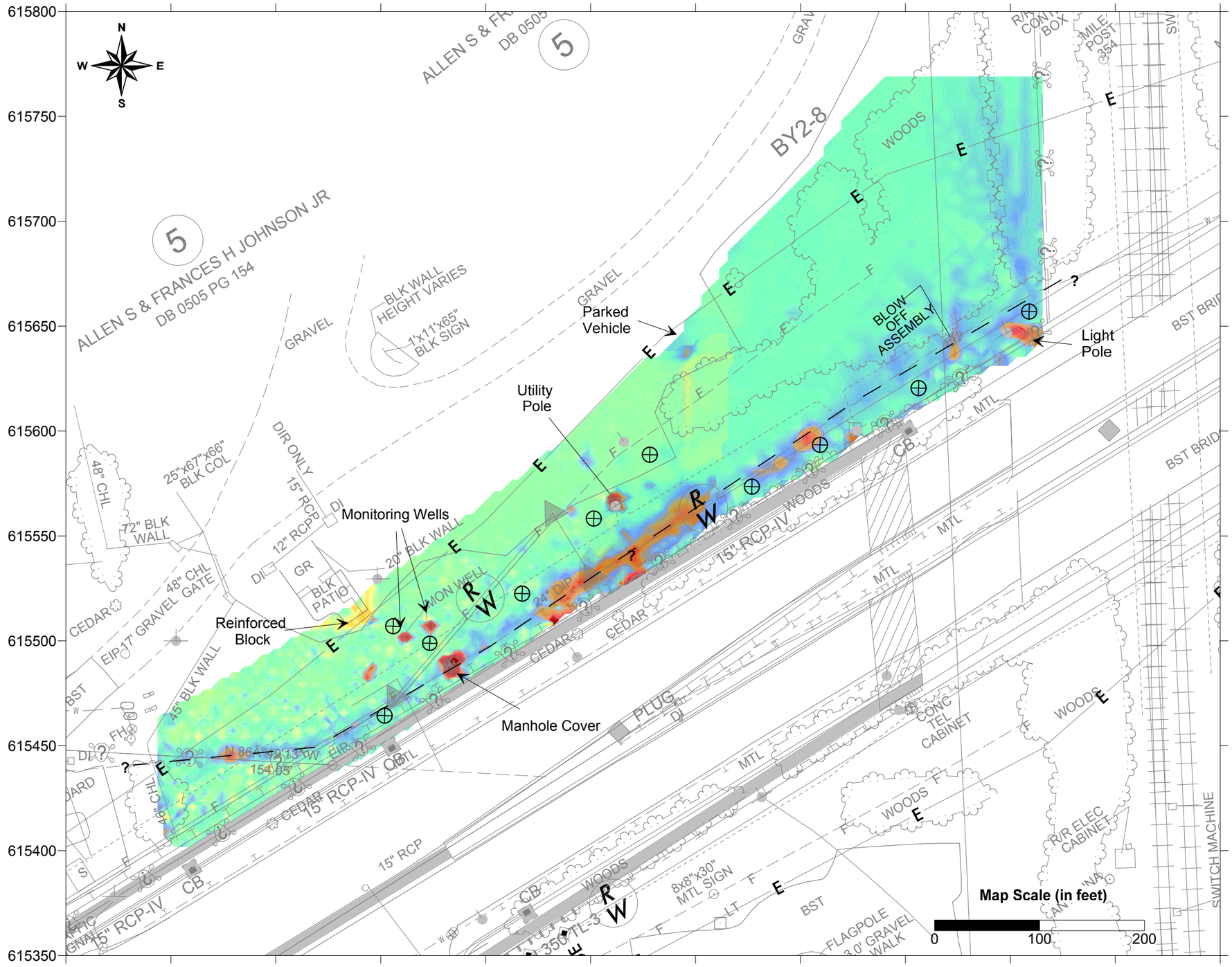
FIGURE 2 SOIL SAMPLING LOCATIONS
PARCEL 005 - AS & FH JOHNSON PARCEL
STATE PROJECT B-5136
CABARRUS COUNTY, CONCORD, NC

URS Corporation - North Carolina
1600 Perimeter Park Drive
Morrisville, North Carolina 27560
NC LIC # C-2243
TELEPHONE (919) 461-1100 FAX (919) 461-1415

DRN BY: LHM	DATE: 3-13-13	STATE PROJECT:
CHECKED BY: VK	DATE: 3-13-13	B-5136

PARCEL LOCATION MAP

FIGURE 2



EM-61 MKII Channel 1 Response (milliVolts)

Interpreted Increasing Response from Subsurface Metal	10000
	1900
	1760
	1620
	1480
	1340
	1200
	1060
	920
	780
	640
	500
	360
	220
Interpreted Background Response	80
	-60
Interpreted Increasing Response from Surface Metal	-200

Legend

– – – – Interpreted Subsurface Utility Center Line

? Utility Termination Point not Known

Notes:

1. Coordinates in NC State Plane NAD 83 grid.
2. Data from Geonics, Ltd. EM-61 MKII instrument.
3. Base drawing after file "i3819a_ls_prlp_l2650-10400.dgn" provided by NCDOT.
4. Location control from DGPS survey by URS.

URS Geophysical Services
6135 Park South Dr., Ste. 300
Charlotte, NC 28210
(704) 522-0330

EM-61 MKII Channel 1 Response Contours
ALLEN S & FRANCES H JOHNSON JR PROPERTY
(Parcel #005)

NCDOT WBS 42295.1.1, Cabarrus County

Concord, North Carolina

DESIGNED BY		DRAWN BY		CHECKED BY		JOB NUMBER	Figure
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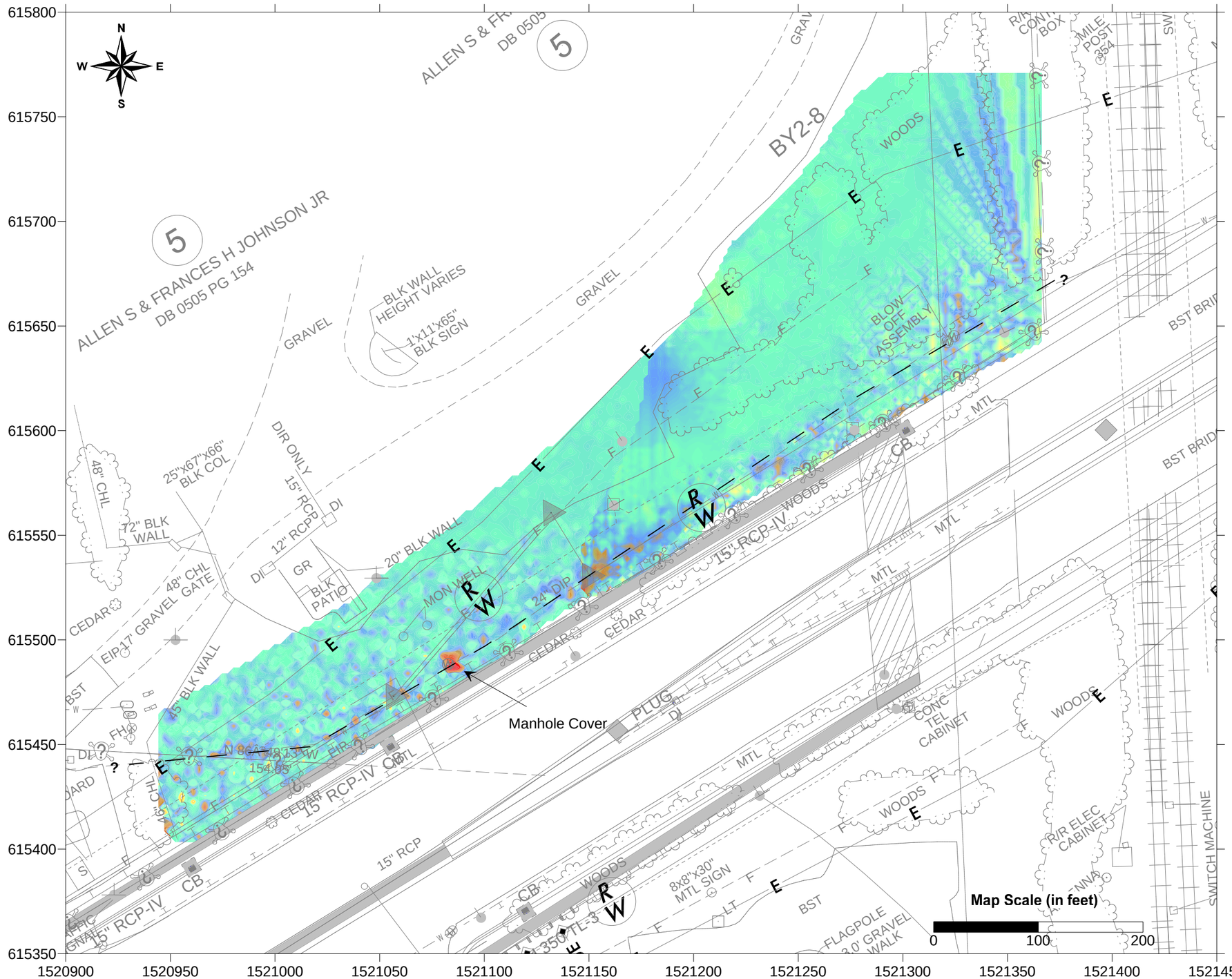


EM-61 MKII Differential Response (milliVolts)

Interpreted Increasing Response from Subsurface Metal

10000
1900
1760
1620
1480
1340
1200
1060
920
780
640
500
360
220
80

Interpreted Background Response

-60
-200

Interpreted Increasing Response from Surface Metal

Legend

– – – – Interpreted Subsurface Utility Center Line

? Utility Termination Point not Known

Notes:

1. Coordinates in NC State Plane NAD 83 grid.
2. Data from Geonics, Ltd. EM-61 MKII instrument.
3. Base drawing after file "i3819a_ls_prlp_l2650-10400.dgn" provided by NCDOT.
4. Location control from DGPS survey by URS.

URS Geophysical Services
6135 Park South Dr., Ste. 300
Charlotte, NC 28210
(704) 522-0330

EM-61 MKII Differential Response Contours
ALLEN S & FRANCES H JOHNSON JR PROPERTY
(Parcel #005)

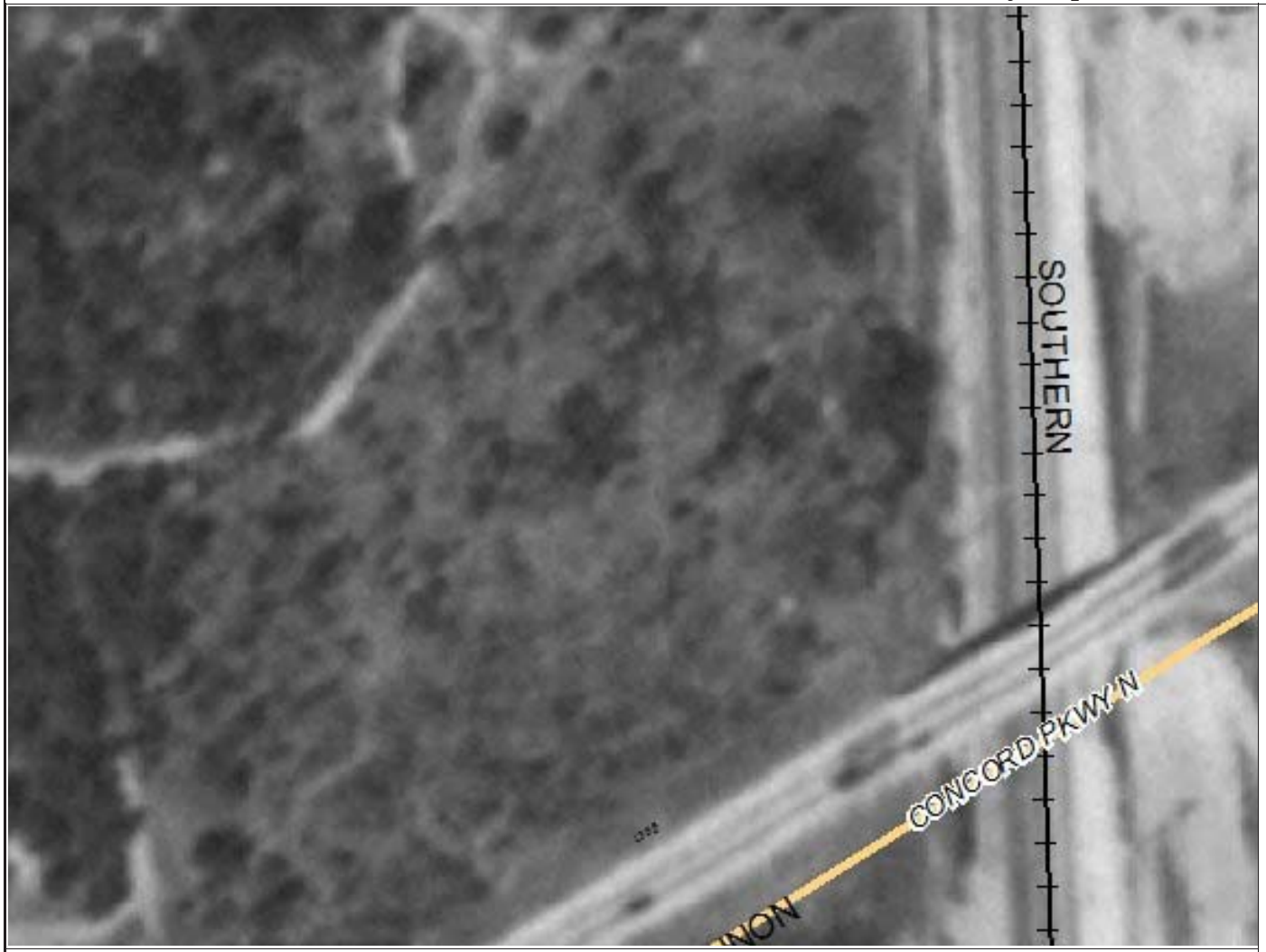
NCDOT WBS 42295.1.1, Cabarrus County

Concord, North Carolina

DESIGNED BY		DRAWN BY		CHECKED BY		JOB NUMBER	Figure
MJM	02/01/13	MJM	02/01/13	VEK	03/01/13	31827879	4

Appendix A
Historical Information

Cabarrus County Map



Legend

BaseMap Service

Railroad

Streets

Counties

Aerial 1950

Value

High : 255

Low : 0

Cabarrus County

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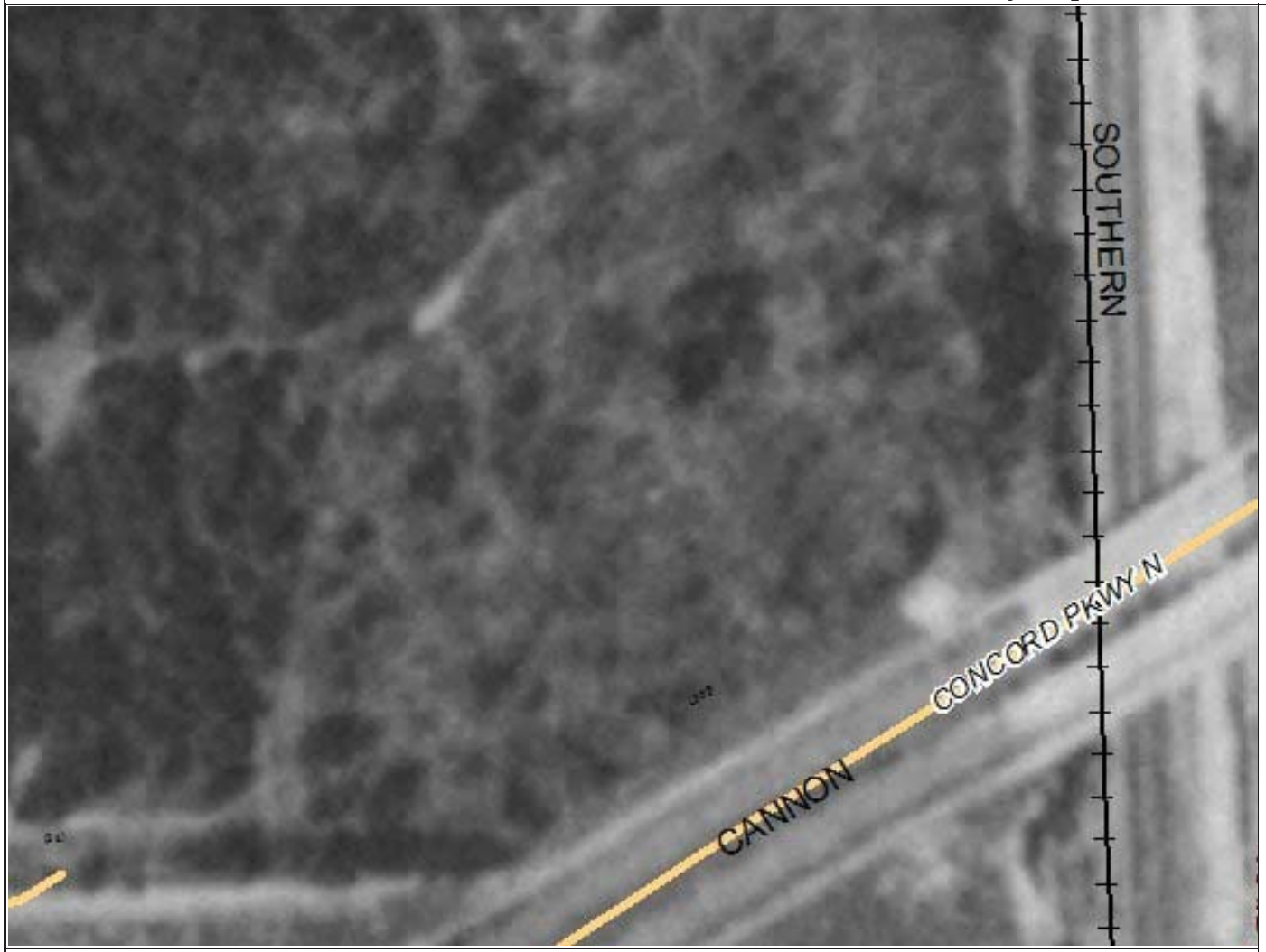
Powered by **ROLTA OnPoint™**

Cabarrus County Map



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BaseMap Service

Railroad

Streets

Counties

Aerial 1956

Value

High : 255

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Cabarrus County

Map Printed On {2012-12-14 09:37}

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Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Counties

Aerial 1964

Value

High : 255

Low : 0

Aerial 1956

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 09:57}

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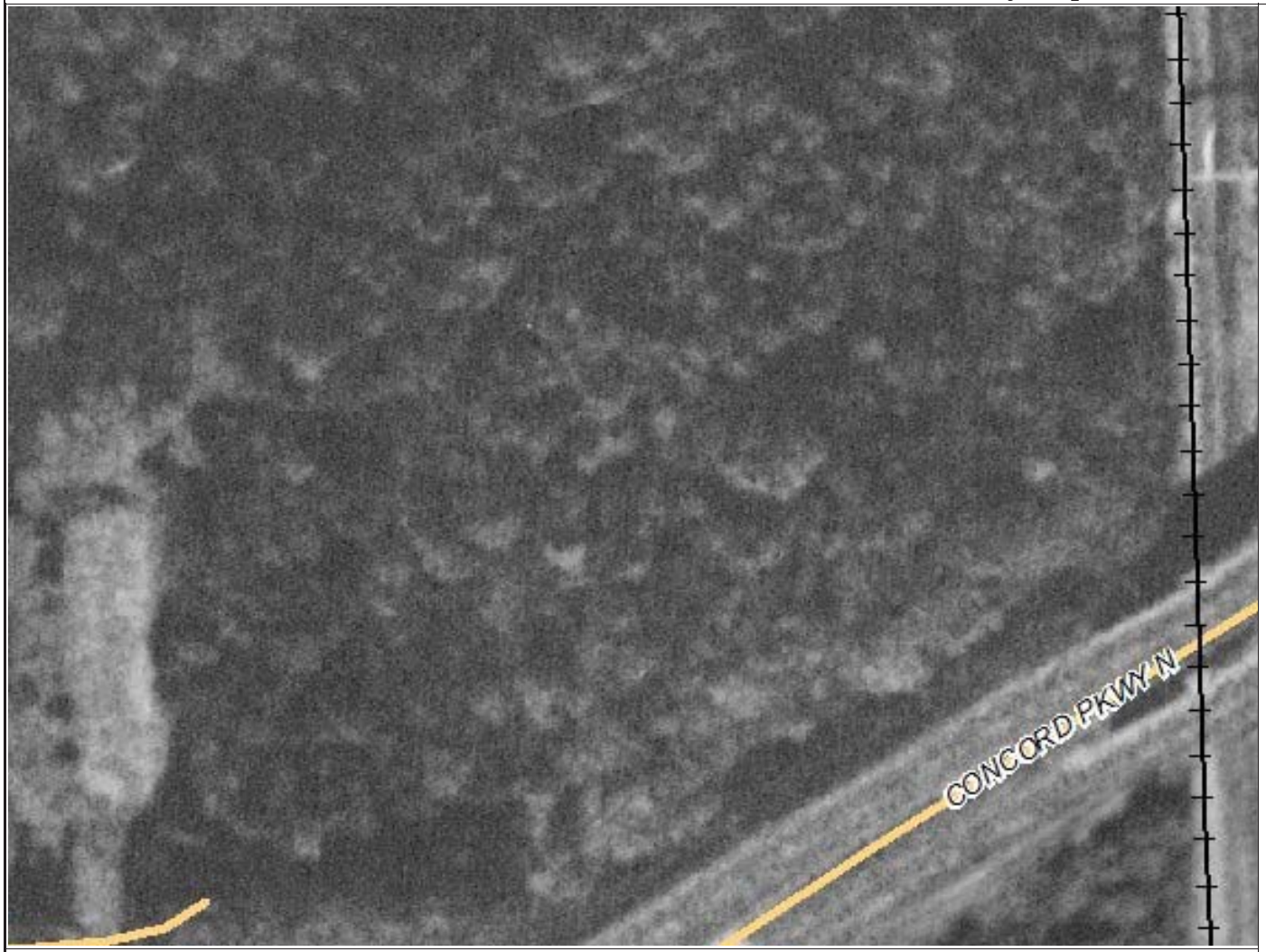
Cabarrus County Map



Legend

BaseMap Service

Railroad

Streets

Counties

Aerial 1975

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 09:59}

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Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Counties

Aerial 1986

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 10:00}

Disclaimer Cabarrus County shall not be held liable for any errors in the data represented on this map. This includes errors of omission, commission, concerning the content of the data, and relative positional accuracy of the data. The data cannot be construed to be a legal document . Primary sources from which this data was compiled must be consulted for verification of information represented on this map document.

Powered by **ROLTA OnPoint™**

Cabarrus County Map

Legend

BaseMap Service

Railroad

Streets

Counties

Aerial 2001

Value

High : 255

Low : 0

Cabarrus County

Map Printed On {2012-12-14 10:02}

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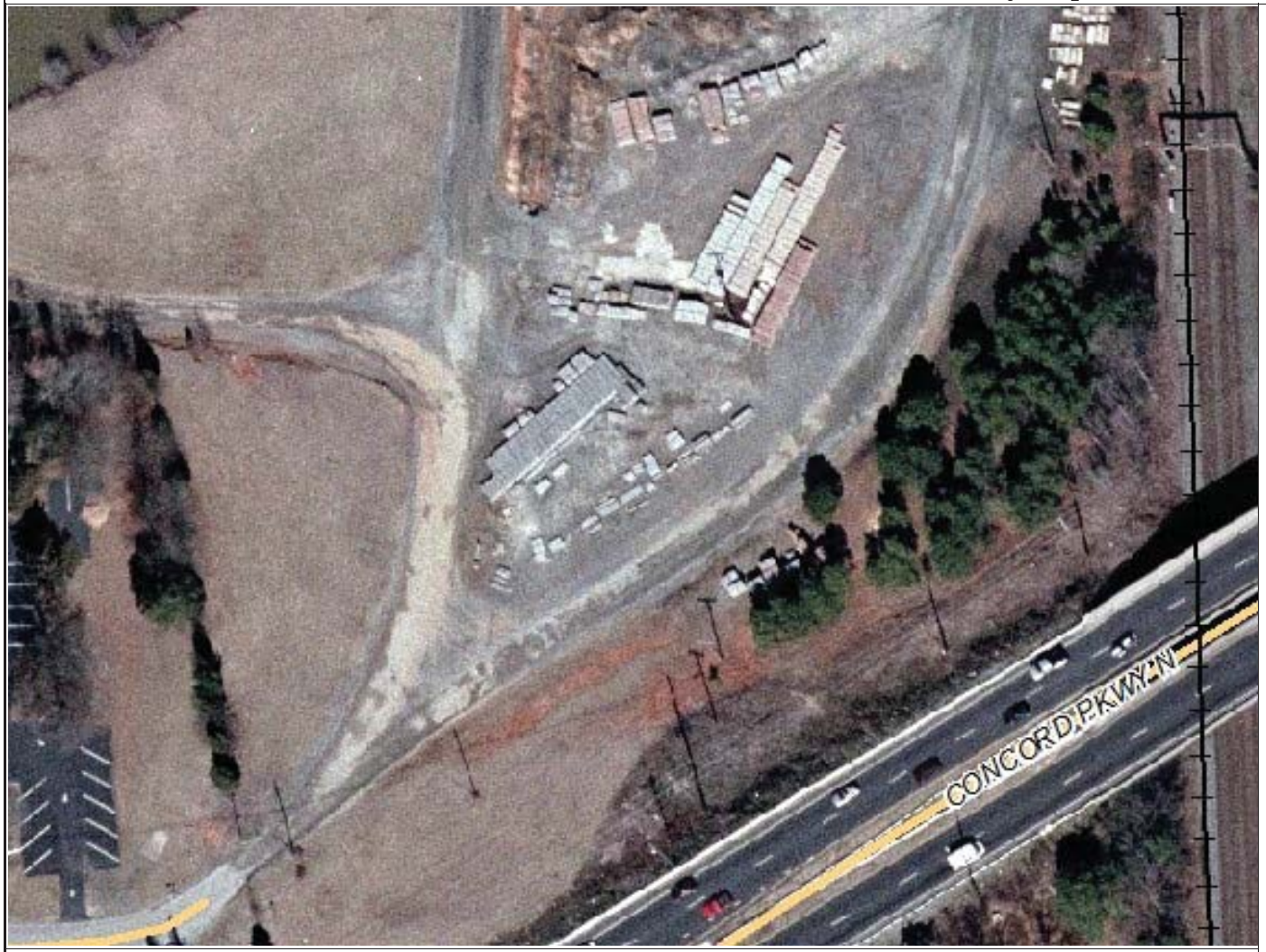
Powered by **ROLTA OnPoint™**

Cabarrus County Map



Legend

BaseMap Service

- Railroad
- Streets
- Counties

Aerial 2005

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3
- Cabarrus County

Map Printed On {2012-12-14 10:03}

Cabarrus County Map

Legend

BaseMap Service

- Railroad
- Streets
- Counties

Aerial 2007

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3
- Cabarrus County

Map Printed On {2012-12-14 10:04}

Disclaimer Cabarrus County shall not be held liable for any errors in the data represented on this map. This includes errors of omission, commission, concerning the content of the data, and relative positional accuracy of the data. The data cannot be construed to be a legal document . Primary sources from which this data was compiled must be consulted for verification of information represented on this map document.

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Cabarrus County Map

Legend

BaseMap Service

- Railroad
- Streets
- Counties

Aerial 2009

RGB

- Red: Band_1
- Green: Band_2
- Blue: Band_3
- Cabarrus County

Map Printed On {2012-12-14 10:06}

Cabarrus County Map

Legend

BaseMap Service

- Railroad
- Streets
- Counties
- Cabarrus County

Map Printed On {2012-12-14 10:07}

Disclaimer Cabarrus County shall not be held liable for any errors in the data represented on this map. This includes errors of omission, commission, concerning the content of the data, and relative positional accuracy of the data. The data cannot be construed to be a legal document . Primary sources from which this data was compiled must be consulted for verification of information represented on this map document.

Powered by ROLTA OnPoint™

PIEDMONT ENVIRONMENTAL PROFESSIONALS, PA

Industrial Hygiene, Safety & Environmental Engineering

January 27, 1999

NCDENR, UST Section
Division of Waste Management
Mooresville Regional Office
919 N. Main Street
Mooresville, NC 28115

RE: UST Closure, Johnson Concrete Company, Inc., Concord, NC

On November 4, 1998 personnel from Piedmont Environmental Professionals, PA visited the captioned site for the purpose of permanent closure by removal of one (1) UST.

The UST was placed into service to supply Diesel fuel to company equipment; dates the UST was installed and was removed from service are not known.

The UST System was determined to have leaked Diesel due to line leaks at the pump; soils below the pump island and pump supply lines were determined to be contaminated by in-field observation and confirmed by laboratory analysis. A Limited Site Assessment with one (1) 2" Type II Monitoring Well to be installed in the UST pump island location is scheduled for early 1999.

Enclosed is the original sealed UST Closure Report. Please call my office if you have need of further information.

Sincerely,

Thomas W. Shepler, PE

2601 N. Cannon Blvd.
Kannapolis, NC 28083
704/938-1604 • FAX 938-4010

PIEDMONT ENVIRONMENTAL PROFESSIONALS, PA

Industrial Hygiene, Safety & Environmental Engineering

UST CLOSURE REPORT

Johnson Concrete Company, Inc.

Piedmont Block

108 Old Davidson Place N.W.

Concord, NC

January 27, 1999

PREPARED BY

GREGORY W. SHEPLER, BSME

REVIEWED BY

THOMAS W. SHEPLER
PE, CSP, DEE

2601 N. Cannon Blvd.
Kannapolis, NC 28083
704/938-1604 • FAX 938-4010

I. GENERAL INFORMATION

A. OWNERSHIP OF UST(S)

Johnson Concrete Company, Inc.
217 Klumac Road
P.O. Box 1037
Salisbury, NC 28144

B. Facility Information

Piedmont Block
108 Old Davidson Place N. W.
Concord, NC 28027

C. Contacts

Ernest Jackson
Safety Director
704/636-5231

Piedmont Environmental, Inc.
2601 N. Cannon Blvd.
Kannapolis, NC 28083

Piedmont Environmental Professionals, PA
2601 N. Cannon Blvd.
Kannapolis, NC 28083

PAR Laboratories
2217 Graham Park Drive
Charlotte, NC 28241
704/588-8333
NC Certification No. 20

D. UST Information

Tank no.	Installation dates	Size in Gallons	Tank Dimensions	Last Contents
1	Unknown	10,000	10'6" x 15'4"	Diesel Fuel

E. Site Characteristics

The captioned site is an active concrete masonry unit production facility and the last date for any UST activity is unknown. The facility used the UST for Diesel fueling of plant equipment.

All properties surrounding the site are currently being utilized as commercial and residential property. City of Concord provides city water and sewer to the captioned site and surrounding properties.

The site geology is characterized as clay (red). Site hydrogeology from past experience; Groundwater is estimated to be 15 to 20 feet, no groundwater was detected during UST removal.

Located on site are a Pond and tributary; based upon topography both are probably down gradient from UST System/Pump Island.

II. CLOSURE PROCEDURES

A. Notification

Notice of Intent GW/UST-3 Submitted 09/30/98

B. Residual material pumped from tank(s)

None

C. Disposal of tank contents

N/A

D. Excavation

UST-1 (10,000-gal tank), top of tank was approximately 2' below grade, tank cavity excavated was approximately 20' in length, 15' in width, and 8' in depth to accommodate removal.

II. CLOSURE PROCEDURES (cont)

D. Excavation (cont)

UST/pump supply and vent lines were excavated and removed. The fuel dispenser/pump was removed prior to Piedmont personnel arriving on site. The pump island (concrete) was removed and used as beneficial fill for the UST Cavity.

UST-1 cavity was backfilled utilizing pump island, tank overburden and clean backfill imported to the site.

E. Contaminated Soil

Contaminated soils were observed below the pump island and pump supply lines. Laboratory analysis of closure samples confirmed observations.

Note: No excavation of contaminated soils under pump island and pump supply lines was performed.

III. SITE INVESTIGATION

A. Field Screening and Observations

Diesel Fuel was the contaminate of concern for UST-1 excavation.

Overburden soils were screened visually and by olfaction during the excavation process. Overburden soils were determined in field to be non-petroleum contaminated.

UST-1 soils were excavated to bottom of tank, soils immediately below the south & north end of UST-1 were determined by infield screening to be non-contaminated and confirmed by laboratory analysis.

Contaminated soils were detected by infield screening immediately under the pump island and pump supply lines. No contaminated soils were excavated from the site.

III. SITE INVESTIGATION (cont)

B. Soil Sampling

A total of four (4) samples were collected for UST-1. Two (2) samples (JC-N/JC-S) were taken below center line of tank (approximately 18 inches), in the undisturbed native soils. One (1) sample (JC-Lines) was taken from the contaminated soil directly below the pump supply lines (approximately 2'6" below grade). One (1) sample (JC-Pump) was taken from the contaminated soil directly below the pump island (approximately 1'6" below grade).

UST-1 soil samples were collected utilizing a hand auger to bore holes to depths indicated from grade, samples were collected from the auger.

C. Groundwater Sampling

Groundwater was not encountered.

D. Quality Control Measures

Soil samples were removed from the hand auger bucket utilizing a clean surgical glove.

The hand auger was cleaned and decontaminated utilizing distilled water and isopropyl alcohol; decontamination procedure completed after each sample was retrieved.

All samples were collected in laboratory provided new 8-ounce glass jars with teflon lined lids, refrigerated to 4 degrees C.. Analysis was performed by Par Laboratories, Charlotte, NC utilizing methods 3550. The laboratory analyses and chain of custody are enclosed in Appendices.

E. Investigation Results

Analytical results (Appendix: F):

For UST-1 (North & South End of tank cavity) analytical results are below the NC 2N Reportable Concentration.

For pump island and pump lines analytical results are *above* the NC 2N Reportable Concentration (soils contaminated by diesel were detected).

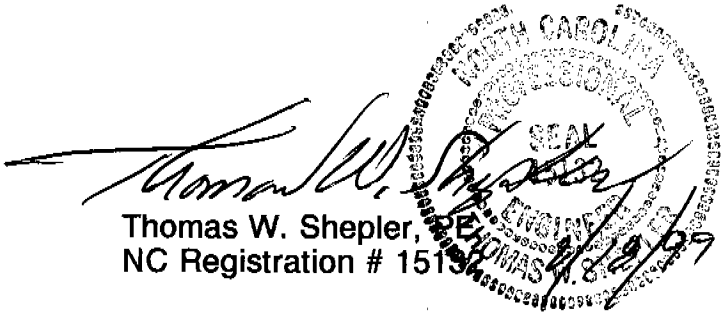
IV. CONCLUSIONS AND RECOMMENDATIONS

UST-1 site/cavity observed and analyzed to be clean (no petroleum contamination).

UST-1's pump island and pump lines observed and analyzed to have petroleum contaminated soils.

A Limited Site Assessment with a 2" Type II Monitoring Well will be required.

V. SIGNATURE OF PROFESSIONAL ENGINEER



Thomas W. Shepler, PE
NC Registration # 15139

V. ENCLOSURES

APPENDIX A.

FIGURES

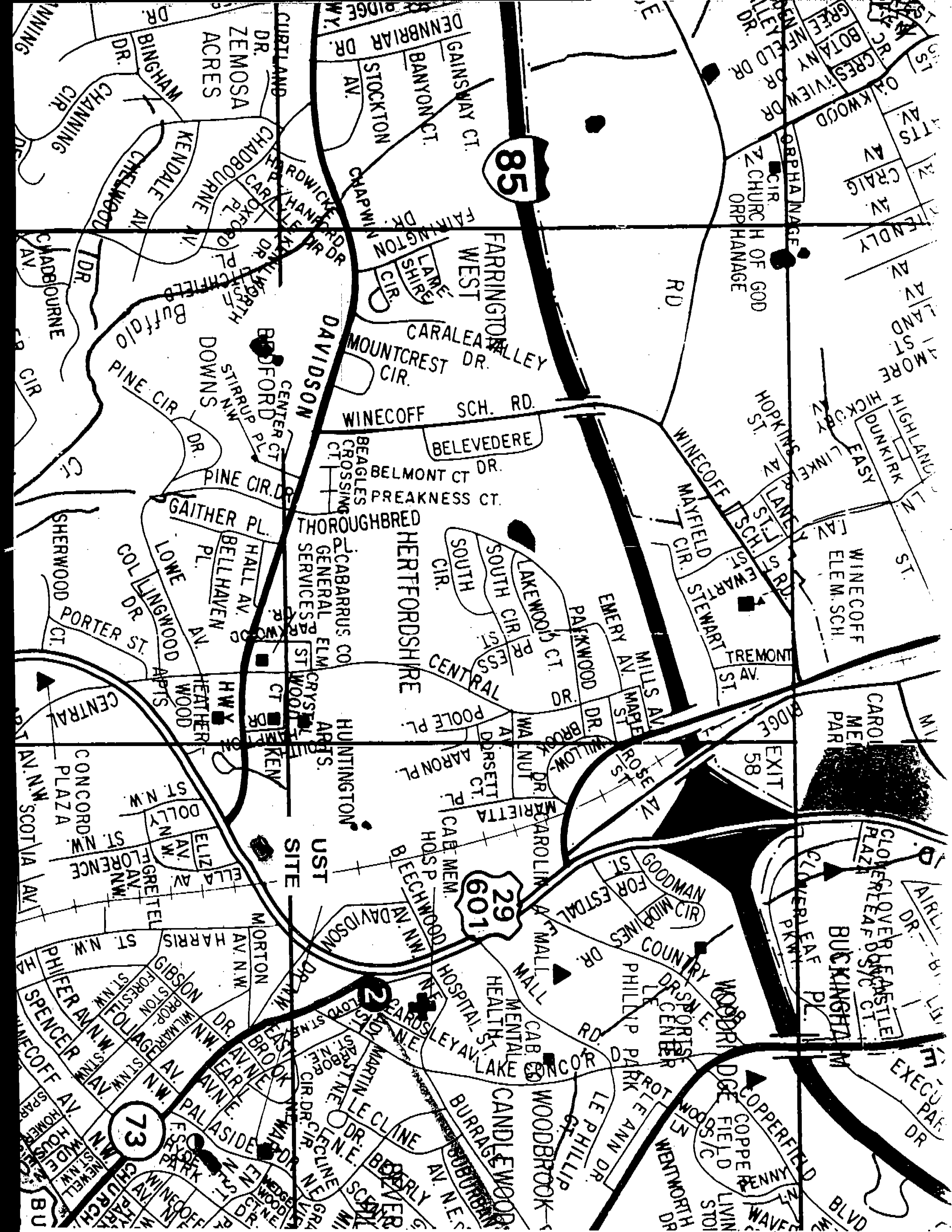
AREA MAP

SITE MAP

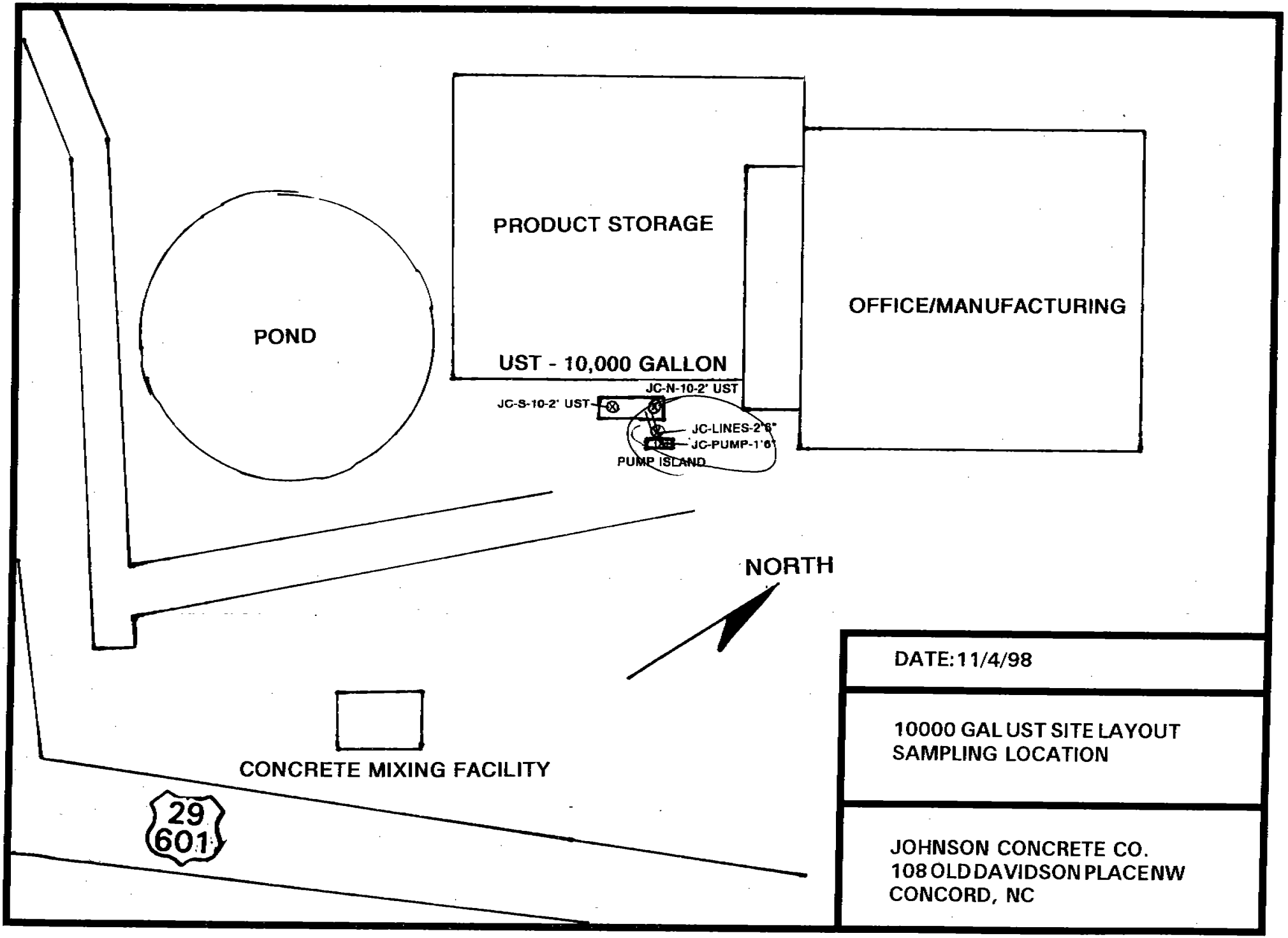
FIGURES

AREA MAP

SITE MAP



85
29
601
73
DAVIDSON
FARRINGTON WEST
HERTFORDSHIRE
ZEMOSA ACRES
BEDFORD DOWNS
WINECOFF SCH. RD.
BELEVEDERE DR.
BELMONT CT
PREAKNESS CT.
THOROUGHBRED PL.
CABARRUS CO GENERAL SERVICES
MOUNTCREST CIR.
CARALEA DR.
CHURCH OF GOD ORPHANAGE
WINECOFF ELEM. SCH.
TREMONT AV.
EXIT 58
CENTRAL DR.
HUNTINGTON APTS.
CONCORD PLAZA
CAB. MEM. HOSP.
HOSPITAL ST.
MENTAL HEALTH
LAKE CONCORD RD.
CANDLEWOOD
WOODBROOK
COPPERFIELD
COUNTRY CLUB DR.
SPORTS CENTER
BUCKINGHAM
CLOVERLEAF PLAZA
EXECUTIVE PARK DR.
CHURCH
SPENCER AV.
PHIFER AV. N.W.
HARRIS ST. N.W.
SCOTIA AV.
FLORENCE AV.
PORTER ST.
SHERWOOD
GAITHER PL.
PINE CIR. DR.
BUFFALO


PRODUCT STORAGE
OFFICE/MANUFACTURING
POND
UST - 10,000 GALLON
JC-N-10-2' UST
JC-S-10-2' UST
JC-LINES-2'6"
JC-PUMP-1'6"
PUMP ISLAND
NORTH
CONCRETE MIXING FACILITY
29
601
DATE: 11/4/98
10000 GAL UST SITE LAYOUT
SAMPLING LOCATION
JOHNSON CONCRETE CO.
108 OLD DAVIDSON PLACE NW
CONCORD, NC

APPENDIX A.

GW/UST-3

GW/UST-3 Notice of Intent: UST Permanent Closure or Change-In-Service

FOR TANKS IN **NC**

Return Completed Form To:
The appropriate DWQ Regional Office according to the county of the facility's location. [SEE REVERSE SIDE OF OWNER'S COPY (PINK) FOR REGIONAL OFFICE ADDRESS].

State Use Only
I. D. Number _____
Date Received _____

INSTRUCTIONS

Complete and return at least five (5) working days prior to closure or change-in-service if a Professional Engineer (P.E.) or a Licensed Geologist (L.G.) provides supervision for closure or change-in-service site assessment activities and signs and seals all closure reports. Otherwise, thirty (30) days notice is required.

I. OWNERSHIP OF TANK(S)

Tank Owner Name: Johnson Concrete Co. INC.
(Corporation, Individual, Public Agency, or Other Entity)
Street Address: 217 Klumac Rd P.O. Box 1037
County: Rowan
City: Salisbury NC State: NC Zip Code: 28144
Tele. No. (Area Code): 704 636 5231

II. LOCATION OF TANK(S)

Facility Name or Company: Johnson Concrete Co. INC
Facility ID # (if available): Piedmont Block
Street Address or State Road: 1668 Old Davidson Pl. NW
County: Cabarrus City: Concord Zip Code: 28027
Tele. No. (Area Code): 704 - 786 - 4204

III. CONTACT PERSON

Name: Ernest Jackson Job Title: Safety Director Telephone Number: (704) 636 5231

IV. TANK REMOVAL, CLOSURE IN PLACE, CHANGE-IN-SERVICE

1. Contact Local Fire Marshall.
2. Plan the entire closure event.
3. Conduct Site Soil Assessments.
4. If Removing Tanks or Closing in Place refer to API Publications 2015 "Cleaning Petroleum Storage Tanks" & 1604 "Removal & Disposal of Used Underground Petroleum Storage Tanks".
5. Provide a sketch locating piping, tanks and soil sampling locations.
6. Submit a closure report in the format of GW/UST-12 and include the form GW/UST-2 within 30 days following the site investigation.
7. If a release from the tank(s) has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing signature and seal of the P.E. or L.G. If a release has not occurred, the supervision, signature, or seal of a P.E. or L.G. is not required.
8. Keep closure records for 3 years.

V. WORK TO BE PERFORMED BY:

(Contractor) Name: Johnson Concrete Co
Address: 217 Klumac Rd Salisbury NC State: NC Zip Code: 28144
Contact: Ernest Jackson Phone: 704 636 5231
Primary Consultant: Piedmont Environmental Phone: 704 - 938 - 1604

VI. TANK(S) SCHEDULED FOR CLOSURE OR CHANGE-IN-SERVICE

TANK ID#	TANK CAPACITY	LAST CONTENTS	PROPOSED ACTIVITY: CLOSURE – Removal	CLOSURE – Abandonment In Place	CHANGE-IN-SERVICE – New Contents Stored
1	10,000 gal	Diesel Fuel	☒	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	
			☐	☐	

VII. OWNER OR OWNER'S AUTHORIZED REPRESENTATIVE

Print name and official title: Ernest Jackson
Signature: [signature]
*Scheduled Removal Date: November 4
Date Submitted: 9-30-98

*If scheduled work date changes, notify your appropriate DWQ Regional Office 48 hours prior to originally scheduled date.

APPENDIX B.

GW/UST-2

GW/UST-2 **Site Investigation Report For Permanent Closure or Change-in-Service of U.S.T.**

FOR TANKS IN **NC**

Return Completed Form To:
The appropriate DWQ Regional Office according to the county of the facility's location. [SEE MAP ON REVERSE SIDE OF OWNER'S COPY (PINK) FOR REGIONAL OFFICE ADDRESS].

State Use Only
I.D. Number _____
Date Received _____

INSTRUCTIONS

Complete and return within (30) days following completion of site investigation.

I. Ownership of Tank(s)

Owner Name: Johnson Concrete Company INC.
(Corporation, Individual, Public Agency, or Other Entity)
Street Address: 217 Klumac Rd P.O. Box 1037
County: Rowan
City: Salisbury State: NC Zip Code: 28144
Telephone Number: (704) 636 5231
(Area Code)

II. Location of Tank(s)

Facility Name: Johnson Concrete Company INC.
(or Company)
Facility ID # (if available): Piedmont Block
Street Address 108 old Davidson Place N.W.
(or State Road)
County: Cabarrus City: Concord Zip Code: 28027
Telephone Number: (704) 786 4204
(Area Code)

III. Contact Person

Name: Ernest Jackson Job Title: Corp. Safety Director Tel. No.: 704-636 5231
Closure Contractor: Address: Tel. No.:
Primary Consultant: Address: Tel. No.:
Lab: Address: Tel. No.:

IV. U.S.T. Information

Tank No.	Size in Gallons	Tank Dimensions	Last Contents
1	10,000	10'6" X 15'6"	Fuel Oil 2

V. Excavation Condition

Water In Excavation		Free Product		Notable Odor or Visible Soil Contamination	
Yes	No	Yes	No	Yes	No

VI. Additional Information Required

See reverse side of pink copy (owner's copy) for additional information required by N.C. - DWQ in the written report and sketch.

NOTE: If a release from the tank(s) has occurred, the site assessment portion of the tank closure must be conducted under the supervision of a P.E. or L.G., with all closure site assessment reports bearing the signature and seal of the P.E. or L.G.

VII. Check List (Check the activities completed)

PERMANENT CLOSURE (For Removing or Abandoning-in-place)

- [x] Contact local fire marshal.
- [x] Notify DWQ Regional Office before abandonment.
- [x] Drain & flush piping into tank.
- [x] Remove all product and residuals from tank.
- [x] Excavate down to tank.
- [ ] Clean and inspect tank.
- [ ] Remove drop tube, fill pipe, gauge pipe, vapor recovery tank connections, submersible pumps and other tank fixtures.
- [ ] Cap or plug all lines except the vent and fill lines.
- [x] Purge tank of all product & flammable vapors.
- [x] Cut one or more large holes in the tanks.
- [x] Backfill the area.

Date Tank(s) Permanently closed: 11-4-99
Date of Change-in-Service: _____

ABANDONMENT IN PLACE

- [ ] Fill tank until material overflows tank opening.
- [ ] Plug or cap all openings.
- [ ] Disconnect and cap or remove vent line.
- [ ] Solid inert material used - specify: _____

REMOVAL

- [x] Create vent hole.
- [x] Label tank.
- [x] Dispose of tank in approved manner.

Final tank destination: SILO for Carolina Stalite Company

VIII. Certification (Read and Sign)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Print name and official title of owner or owner's authorized representative	Signature	Date Signed
Gregory W. Shearer		1/27/99

APPENDIX C.

CERTIFICATE OF UST DISPOSAL

CERTIFICATE OF TANK DISPOSAL

DATE OF REMOVAL: November 4, 1998

CLIENT: Johnson Concrete Co., Inc.
217 Klumac Road
P.O. Box 1037
Salisbury, NC 28144

CONTACT: Ernest Jackson - 704/636-5231

PROJECT: UST Removal - One (1), 2000 Gallon, Diesel.

TANK LOCATION: Piedmont Block
108 Old Davidson Pl. N.W.
Concord, NC 28027

Tank Specifications;

Tank Identification No.:	None found
Tank Diameter:	10 feet 6 inches
Tank Length:	15 feet 4 inches
Tank Volume:	2000 gallons
Tank Material:	Steel - Single Wall
Tank Contents:	Diesel
Tank Condition:	Good

Disposal Facility: Carolina Stalite Company (subsidiary of Johnson Concrete)

Certification Statement:

The above described tank has been transferred to the aforementioned facility as a process material silo.

Gregory W. Shepler

APPENDIX D.

OIL/SLUDGE DISPOSAL MANIFESTS

N/A UST CLEAN

APPENDIX E.

CHAIN
OF
CUSTODY RECORDS

CHAIN OF CUSTODY

PAR Laboratories, Inc
Phone (704) 588-8333
Fax (704) 588-8335

Shipping:
2217 Graham Park Drive
Charlotte, NC 28273

Mailing:
PO Box 411483
Charlotte, NC 28241-1483

It is essential that all information recorded on this Chain of Custody document for acceptance by **PAR** Laboratories, Inc. and the North Carolina Department of Environmental and Natural Resources.

Company Name (billing): PIEDMONT ENVIRONMENTAL, INC
Address: 2601 N. CANNON BLVD.
City, State & Zip Code: KANNAPOLIS, NC 28083
Point of Contact & Telephone Number: TOM SHEPHERD 704/938-1604

Comments/Special Instructions: JOHNSON CONCRETE BLOCK, CONCORD

Sample taken by: TOM SHEPHERD

IS THIS FOR STATE or EPA REPORTING? YES ✓ NO ___

***Sample type:** DW ___ WW ___ GWMW ___ HW ___ Soil ✓ Other ___

Sample Temp upon receipt: 4 °C

**** Preserved:** Yes ___ No ___ **Teflon Liner/ Zero Headspace:** Yes ___ No ___ N/A ___

Client Sample I.D. (Sample Location / Number)	Comp	Grab	Preserv.	Set Up Date/Time	Collection Date/Time	Analyses Requested
SC-N-10-2' UST		✓			11/4/98	5030/3550
SC-S-10-2' UST		✓			11/4/98	" "
SC-Lines-2'6"		✓			11/9/98	" "
SC-Pump-1'6"		✓			11/9/98	" "

Relinquished by: _____ Date/Time 11/9/98 Received by: _____ Date/Time

Relinquished by: _____ Date/Time Received by: _____ 1312 Date/Time 11/05/98

* C = Composite G = Grab DW = Drinking Water WW = Wastewater GWMW = Groundwater Monitoring Well HW = Hazardous Waste

** See Other Side

APPENDIX F.

LABORATORY ANALYTICAL RECORDS

PAR Laboratories, Inc.
2217 Graham Park Drive
PO Box 411483
Charlotte, NC 28241-1483
NC Cert # 20; SC Cert # 99003001

REPORT OF ANALYSES

Attn: GREG SHEPLER
PIEDMONT ENVIRONMENTAL
2601 N. CANNON BOULEVARD
KANNAPOLIS, NC 28083-

PROJECT NAME: NOV 98
DATE: 11/30/98

SAMPLE NUMBER- 9246 SAMPLE ID- JC-N-10-2' UST SAMPLE MATRIX- SO
DATE SAMPLED- 11/04/98
DATE RECEIVED- 11/09/98 SAMPLER- TOM SHEPLER RECEIVED BY- RE
TIME RECEIVED- 1312 DELIVERED BY- TYPE SAMPLE- Grab

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL SOLIDS IN PERCENT	EPA 160.3	11/10/98	0800	TL	72.4	%
TPH 5030, GASOLINE IN SOIL	GC-SW846	11/10/98	0800	TL	< 10	mg/kg
TPH 3550, DIESEL IN SOIL	GC-SW846	11/10/98	0800	TL	< 10	mg/kg

LABORATORY DIRECTOR

PAR Laboratories, Inc.
2217 Graham Park Drive
PO Box 411483
Charlotte, NC 28241-1483
NC Cert # 20; SC Cert # 99003001

REPORT OF ANALYSES

Attn: GREG SHEPLER
PIEDMONT ENVIRONMENTAL
2601 N. CANNON BOULEVARD
KANNAPOLIS, NC 28083-

PROJECT NAME: NOV 98
DATE: 11/30/98

SAMPLE NUMBER- 9247 SAMPLE ID- JC-S-10-2' UST SAMPLE MATRIX- SO
DATE SAMPLED- 11/04/98
DATE RECEIVED- 11/09/98 SAMPLER- TOM SHEPLER RECEIVED BY- RE
TIME RECEIVED- 1312 DELIVERED BY- TYPE SAMPLE- Grab

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL SOLIDS IN PERCENT	EPA 160.3	11/10/98	0800	TL	90.1	%
TPH 5030, GASOLINE IN SOIL	GC-SW846	11/10/98	0800	TL	< 10	mg/kg
TPH 3550, DIESEL IN SOIL	GC-SW846	11/10/98	0800	TL	< 10	mg/kg

LABORATORY DIRECTOR _____

PAR Laboratories, Inc.
2217 Graham Park Drive
PO Box 411483
Charlotte, NC 28241-1483
NC Cert # 20; SC Cert # 99003001

REPORT OF ANALYSES

Attn: GREG SHEPLER
PIEDMONT ENVIRONMENTAL
2601 N. CANNON BOULEVARD
KANNAPOLIS, NC 28083-

PROJECT NAME: NOV 98
DATE: 11/30/98

SAMPLE NUMBER- 9248 SAMPLE ID- JC-LINES-2'6" SAMPLE MATRIX- SO
DATE SAMPLED- 11/09/98
DATE RECEIVED- 11/09/98 SAMPLER- TOM SHEPLER RECEIVED BY- RE
TIME RECEIVED- 1312 DELIVERED BY- TYPE SAMPLE- Grab

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL SOLIDS IN PERCENT	EPA 160.3	11/10/98	0800	TL	80.0	%
TPH 5030, GASOLINE IN SOIL	GC-SW846	11/10/98	0800	TL	< 10	mg/kg
TPH 3550, DIESEL IN SOIL	GC-SW846	11/10/98	0800	TL	1781	mg/kg

LABORATORY DIRECTOR

PAR Laboratories, Inc.
2217 Graham Park Drive
PO Box 411483
Charlotte, NC 28241-1483
NC Cert # 20; SC Cert # 99003001

REPORT OF ANALYSES

Attn: GREG SHEPLER
PIEDMONT ENVIRONMENTAL
2601 N. CANNON BOULEVARD
KANNAPOLIS, NC 28083-

PROJECT NAME: NOV 98
DATE: 11/30/98

SAMPLE NUMBER- 9249 SAMPLE ID- JC-PUMP-1'6" SAMPLE MATRIX- SO
DATE SAMPLED- 11/09/98
DATE RECEIVED- 11/09/98 SAMPLER- TOM SHEPLER RECEIVED BY- RE
TIME RECEIVED- 1312 DELIVERED BY- TYPE SAMPLE- Grab

ANALYSIS	METHOD	ANALYSIS DATE	TIME	BY	RESULT	UNITS
TOTAL SOLIDS IN PERCENT	EPA 160.3	11/10/98	0800	TL	87.4	%
TPH 5030, GASOLINE IN SOIL	GC-SW846	11/10/98	0800	TL	< 10	mg/kg
TPH 3550, DIESEL IN SOIL	GC-SW846	11/10/98	0800	TL	489	mg/kg

LABORATORY DIRECTOR

To: Jaye Thiet

POLLUTION INCIDENT/U.S.T. LEAK REPORTING FORM

Department of Environment, Health, Natural Resources
Division of Environmental Management
GROUNDWATER SECTION

Confirm. GW Contamination (Y/N) ____
Major Soil Contamination (Y/N) ____
Minor Soil Contamination (Y/N) Y

Incident # 20172

Date Incident Occurred or Leak Detected 11/4/98

INCIDENT DESCRIPTION

Incident Location/Name: Piedmont Block

Address: 108 Old Davidson Place NW

City/Town: Concord | County: Cabarrus | Region: MRO

Briefly Describe Incident: TPH hit by 5030/3550. One 10,000 gal tank removed.

POTENTIAL SOURCE OWNER-OPERATOR

Potential Source Owner-Operator: Ernest Jackson | Telephone: 704.636.5231

Company: Johnson Concrete Company, Inc | Street Address: PO Box 1037 / 217 Klumac Rd

City: Salisbury | County: Cabarrus | State: NC | Zip Code: 28144

OWNERSHIP
0. N/A 1. Municipal 2. Military 3. Unknown (4.) Private 5. Federal 6. County 7. State

OPERATION TYPE
0. N/A 1. Public Service 2. Agricultural 3. Residential 4. Educational/Relig. (5.) Industrial 6. Commercial 7. Mining

POLLUTANTS INVOLVED

MATERIALS INVOLVED	AMOUNT LOST	AMOUNT RECOVERED
Diesel	Unknown	Unknown

SOURCE OF POLLUTION

PRIMARY SOURCE OF POLLUTION (Select one)
1. Intentional dump
2. Pit, pond, lagoon
(3.) Leak-underground
4. Spray irrigation
5. Land application
6. Animal feedlot
7. Source unknown
8. Septic tank
9. Sewer line
10. Stockpile
11. Landfill
12. Spill-surface
13. Well
14. Above-ground Storage Tank
15. Nonpoint source

PRIMARY POLLUTANT TYPE (Select one)
1. Pesticide/herbicide
2. Radioactive waste
(3.) Gasoline/diesel
4. Heating oil
5. Other petroleum prod.
6. Sewage/septage
7. Fertilizers
8. Sludge
9. Solid waste leachate
10. Metals
11. Other inorganics
12. Other organics

LOCATION
(1.) Facility
2. Railroad
3. Waterway
4. Pipeline
5. Dumpsite
6. Highway
7. Residence
8. Other

SETTING
1. Residential
(2.) Industrial
3. Urban
4. Rural

Site Priority Ranking

D.E.M. Regional Contact: Brad Murphy | Signature: Brad Murphy | Date: 6/10/99

GW-61 Revised 2/95

IMPACT ON DRINKING WATER SUPPLIES

WELLS AFFECTED 1. YES (2. NO)

NUMBER OF WELLS AFFECTED _____

Well(s) Contaminated: (Users Name)

1.

2.

3.

4.

5.

Circle Appropriate Responses

Lab Samples Taken By: 1. DEM 2. DHS (3. Responsible Party) 4. Other 5. None

Samples Taken Include: 1. Groundwater (2. Soil)

LOCATION OF INCIDENT

7 1/2 Min. Quad Name: Concord

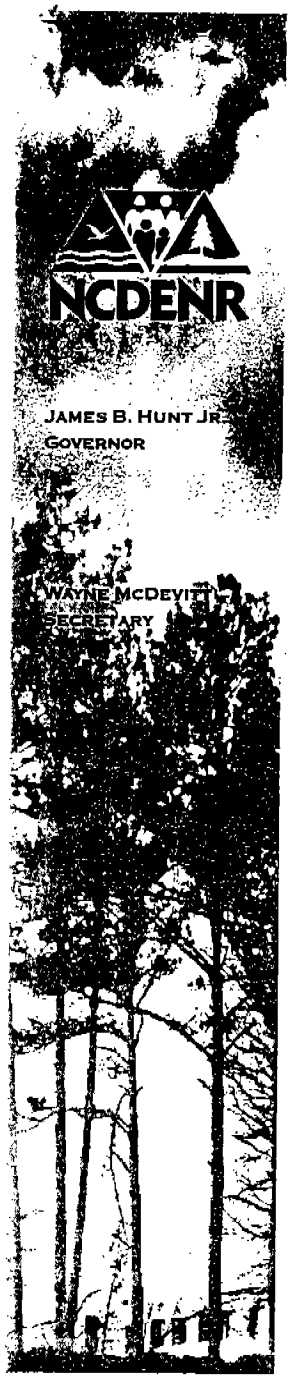
Lat. : Deg : Min : Sec : 35° 25' 50"

5 Min. Quad Number: 063 V

Long. : Deg : Min : Sec : 80° 36' 28"

Draw Sketch of Area or Attach Additional Maps

See attached map



NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES
MOORESVILLE REGIONAL OFFICE

DIVISION OF WASTE MANAGEMENT
June 11, 1999

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Johnson Concrete Company, Inc.
PO Box 1037 / 217 Klumac Road
Salisbury, North Carolina 28144
Attn: Ernest Jackson

RE: Notice of Regulatory Requirements
15A NCAC 2L .0115(c)
RISK-BASED ASSESSMENT AND
CORRECTIVE ACTION FOR
PETROLEUM UNDERGROUND
STORAGE TANKS

Piedmont Block
108 Old Davidson Place NW
Cabarrus County, N.C.
Pollution Incident No. Pending

Dear Mr. Jackson:

Information received by this office on February 24, 1999 confirms a release or discharge from a petroleum underground storage tank (UST) system at the above referenced location. Records indicate that you are the owner of this UST tank system. This letter is a standard notice explaining the actions you must take as a result of the release or discharge in accordance with North Carolina statutes and rules. The UST Section of the Division of Waste Management administers the state's rules for USTs and the required response for petroleum releases. Those rules are located in Title 15A, Subchapter 2L and Title 15A, Subchapter 2N of the North Carolina Administrative Code (NCAC).

919 NORTH MAIN STREET, MOORESVILLE, NORTH CAROLINA 28115
PHONE 704-663-1699 FAX 704-663-6040

As a responsible party, you are required to comply with the release response and corrective action requirements of 15A NCAC 2L .0115(c), which include the requirements established in 15A NCAC 2N. Listed is a general description of actions you must take to comply with State rules. For a detailed description of your requirements please refer to the enclosed rules and the January 1998 Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater, Volume II ("the Guidelines"). The Guidelines are available on the Internet at http://gw.ehnr.state.nc.us or may be purchased from the UST Section for a fee of $7.00. To purchase a copy of the Guidelines, please send a check made payable to DENR to:

DENR/DWM/UST Section
P.O. Box 29616
Raleigh, NC 27626-0616

Required Actions:

1) If you can demonstrate that no soil remains in the unsaturated zone in the sidewalls and at the base of the UST system excavation with contaminant levels exceeding either the "soil-to-groundwater" or the residential maximum soil contaminant concentrations (See Guidelines), whichever are lower, then submit a Soil Contamination Report in accordance with 15A NCAC 2L.0115(c)(3). The Soil Contamination Report, if applicable, is due in this office within 90 days of the date of receipt of this notice. Upon approval of this report, the Department will issue a notice indicating that no further action related to this incident is required; or,

2) If the requirements of 15A NCAC .0115(c)(3) cannot be met as described in Item #3 above, submit a Limited Site Assessment (LSA) Report in accordance with 15A NCAC 2L .0115(c)(4), containing information needed by the Department to classify the level of risk to human health and the environment posed by the discharge or release. The LSA Report is due in this office within 120 days of the date of receipt of this notice. Based on a review of the information submitted in the LSA, the Department will classify the risk of the discharge or release as high, intermediate or low. At that time, the Department will also classify the land use of the site as either residential or industrial/commercial. You will be notified of the risk and land use classifications once review of your LSA Report is completed.

If you believe that any of the information requested above has already been submitted, please notify Brad Murphy of the date, title, and content of the documents that contain the information.

Piedmont Block
June 11, 1999

Your prompt attention to the items described herein is required. Failure to comply with the state's rules in the manner and time specified, may result in the assessment of civil penalties and /or the use of other enforcement mechanisms available to the State. Each day that a violation continues may be considered a separate violation. If you believe you are not the responsible party notify the UST Section within 15 days of receipt of this letter.

Please note that performing assessment and cleanup work that is not required under 15A NCAC 2L.0115 is not reimbursable from the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds.

If you have any questions regarding the actions that must be taken or the rules mentioned in this letter, please contact Brad Murphy of the Mooresville Regional Office at the letterhead address and/or at 704-663-1699 ext. 248. If you have any questions regarding trust fund eligibility or reimbursement, please contact the UST Section at (919) 733-8486.

Sincerely,

Bradley D. Murphy
Hydrogeologic Technician

Enclosures: 15A NCAC 2L .0115

cc: Ruth Strauss - Central Office

Z 523 956 671

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to Johnson Concrete Co., Inc.	
Street & Number P O Box 1037/217 Klumac Rd	
Post Office, State, & ZIP Code Salisbury NC 28144	
Postage Attn Ernest Jackson	
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, April 1995

Piedmont Block
Cab. Co.
Inc II 20172

SOIL Sample Results

Compounds	Soil ID	Conc.	RES. (ppm)	IND/COMM (ppm)	S TO GW (ppm)
BENZENE	5'/10'/14'	5' 10'/14'	22	200	0.0056
TOLUENE			3200	82000	7
ETHYLBENZENE			1560	40000	0.24
M, O & P XYLENES		(50) / ND	32000	200000	(5)
ISOPROPYL BENZENE		(48) / ND	1564	40880	(2)
N-PROPYLBENZENE		(110) / ND	156	4088	2
1,3,5-TRIMETHYLBENZENE		(260) / ND	782	20440	7
1,2,4-TRIMETHYLBENZENE		(950) / ND	782	20440	8
SEC-BUTYLBENZENE		(160) / ND	156	4088	3
P-ISOPROPYLTOLUENE		(160) / ND			
N-BUTYLBENZENE			156	4088	4
NAPHTHALENE		(500) / ND	63	1635	0.58
MTBE			156	4088	0.92
ISOPROPYL ETHER			156	4088	0.37
2-METHYLNAPHTHALENE		(1600) / ND	63	1635	3
Phenanthrene		(660) / ND			
C5-C8 ALIPHATICS (VPH)		ND	939	24528	72
C9-C12 ALIPHATICS (VPH)		48 / ND / 38			
C9-C18 ALIPHATICS (EPH)		150 / ND / ND			
TOTAL		198 / ND / 38	9386	245280	3255
C19-C36 ALIPHATICS (EPH)		27 / ND / ND	93860	NONE	NONE
C9-C10 AROMATICS (VPH)		24 / ND / 19			
C11-C22 AROMATICS (EPH)		160 / ND / 44			
TOTAL		(184) / ND / (63)	469	12264	34

RBK\TEMP\GCLS.XLS 10/15/98

GROUNDWATER Sample Results

Compounds	Well ID	Conc	GCL's (ppb)	2L (ppb)
BENZENE	MW-1		5,000	1
TOLUENE			257,500	1000
ETHYLBENZENE		2.7	29,000	29
M, O & P XYLENES		7.2	87,500	530
NAPHTHALENE			15,500	21
MTBE			200,000	200
ISOPROPYL ETHER			70,000	70

MADEP Methods	WELL ID	CONC		2L Interim GW Standards
C5-C8 ALIPHATICS (VPH)	MW-1	ND		420
C9-C12 ALIPHATICS (VPH)		400		
C9-C18 ALIPHATICS (EPH)		ND		
TOTAL		400		4,200
C19-C36 ALIPHATICS (EPH)		ND		42,000
C9-C10 AROMATICS (VPH)		310		
C11-C22 AROMATICS (EPH)		760		
TOTAL		1070 9/7/00 553 9/7/00		210

RBK\TEMP\GCLS.XLS

PIEDMONT ENVIRONMENTAL PROFESSIONALS, PA

Industrial Hygiene, Safety & Environmental Engineering

September 10, 1999

VIA FACSIMILE (704) 663-6040

Bradley D. Murphy
NCDENR
919 N. Main Street
Mooresville, NC 28115

Re: Johnson Concrete Company, Inc.
Piedmont Block
108 Old Davidson Place NW
Concord, NC

Dear Mr. Murphy:

Piedmont Environmental Professionals, PA has been retained by Johnson concrete to perform the LSA on the diesel fuel UST removed from the Piedmont Block site.

The monitoring well has been installed and groundwater samples have been delivered to Pace Laboratories for analysis. Based upon in-field observation the soil plume appears to intersect the water table and we anticipate some dissolved phase contamination (no free product observed).

By way of this memo we are requesting an extension to October 8, 1999 for receipt of analyticals and final completion of the LSA. If this presents a problem please let me know. Thank you for your consideration.

Sincerely,

Gregory W. Shepler

cc: Ernest Jackson
Johnson Concrete

2601 N. Cannon Blvd.
Kannapolis, NC 28083
704/938-1604 • FAX 938-4010

NCDENR

JAMES B. HUNT JR.
GOVERNOR

BILL HOLMAN
SECRETARY

WILLIAM L. MEYER
DIRECTOR

COPY

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF WASTE MANAGEMENT

December 14, 1999

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Johnson Concrete Company, Inc.
PO Box 1037 / 217 Klumac Road
Salisbury, North Carolina 28144
Attn: Ernest Jackson

RE: Notice of Violation

Piedmont Block
108 Old Davidson Place NW
Cabarrus County, N.C.
Pollution Incident #20172
Undetermined Risk Classification

Dear Mr. Jackson:

A review of the Piedmont Block incident file shows that the Limited Site Assessment (LSA) was due on October 9, 1999 and has not been received. You must submit the LSA within 30 days of receipt of this letter.

Your failure to respond within the time specified and to voluntarily achieve compliance may result in a recommendation from the Mooresville Office to the director of the division for the assessment of civil penalties in accordance with G.S. 143-215.6A or in a request to the Attorney General to institute an action for injunctive relief. Until such time that the above requested information is received in this office, you will remain in violation of North Carolina law. You should note that any enforcement action, including assessment of civil penalties, may begin from the original due date established in the Ocotber 9, 1999 notice.

Your questions should be directed to Brad Murphy or me in the Mooresville Regional Office at (704) 663-1699.

Sincerely,

Shawna W. Caldwell for

Steven E. Bograd, P.G.
UST Section Regional Supervisor

cc: Gregory Shepler - Piedmont Environmental Professionals

NC SCHOOLS FIRST IN AMERICA 2010

919 NORTH MAIN STREET, MOORESVILLE, NORTH CAROLINA 28115
PHONE 704-663-1699 FAX 704-663-6040

NCDENR

JAMES B. HUNT JR.
GOVERNOR

BILL HOLMAN
SECRETARY

WILLIAM L. MEYER
DIRECTOR

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

COPY

DIVISION OF WASTE MANAGEMENT

January 28, 2000

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Johnson Concrete Company, Inc.
PO Box 1037
Salisbury, North Carolina 28144
Attn: Ernest Jackson

RE: Notice of Regulatory Requirements
15A NCAC 2L .0115(d)
RISK-BASED ASSESSMENT AND
CORRECTIVE ACTION FOR PETROLEUM
UNDERGROUND STORAGE TANKS

Piedmont Block
106 Old Davidson Place N.W.
Cabarrus County, N.C.
Incident #: 20172
High Risk Classification

Dear Mr. Jackson:

Information received by this office on February 24, 1999 confirms a release or discharge from a petroleum underground storage tank (UST) system at the above referenced location. Records indicate that you are the owner of this UST system. This letter is a standard notice explaining the actions you must take as a result of the release or discharge in accordance with North Carolina statutes and rules. The Underground Storage Tank Section of the Division of Waste Management administers the state's rules for USTs and the required response for petroleum releases. Those rules are located in Title 15A, Subchapter 2L and Title 15A, Subchapter 2N of the North Carolina Administrative Code (NCAC).

The risk-based rule for petroleum USTs, 15A NCAC 2L .0115(d), states that the Department shall classify the risk of each known discharge or release from the UST system. A review of information you have provided to this office indicates that:

(1) A water supply well not used for drinking water is located within 250 feet of the source area of a confirmed discharge or release;

Based on the conditions above, the discharge or release at the subject site has been classified as **"high risk."** In addition, the land use at the site has been classified as industrial/commercial. Please note that 15A NCAC 2L .0115(e) requires you to notify the Department of any changes that might affect the risk or land use classifications that have been assigned.

UST SECTION
919 NORTH MAIN STREET, MOORESVILLE, NORTH CAROLINA 28115
PHONE 704-663-1699 FAX 704-663-6040

Based on the determination that the risk posed by the discharge or release at the subject site is high, you must comply with assessment and cleanup requirements pursuant to 15A NCAC 2L .0115(f). To achieve compliance with this rule, please submit a Comprehensive Site Assessment (CSA) Report in accordance with 15A NCAC 2L .0106(c), 15A NCAC 2L .0106(g), 15A NCAC 2N .0706 and the January 1998 *Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater, Volume II* ("the Guidelines"). The Guidelines are available on the Internet at http://gw.ehnr.state.nc.us or may be purchased from the Groundwater Section for a fee of $7.00. To purchase a copy of the Guidelines, please send a check made payable to DENR to:

DENR/DWQ/Groundwater Section
Pollution Control Branch
P.O. Box 29578
Raleigh, NC 27626-0578

The CSA Report must be received by this office within **90 days** of the date of receipt of this notice. In addition, you must submit a summary of the CSA Report to the local Health Director and the local Chief Administrative Officer in accordance with 15A NCAC 2L .0114. The summary should be submitted to these persons no later than five working days after submittal of the CSA Report to this office.

Your prompt attention to the items described herein is required. Failure to comply with the state's rules in the manner and time specified, may result in the assessment of civil penalties and /or the use of other enforcement mechanisms available to the State. Each day that a violation continues may be considered a separate violation.

Please note that performing assessment and cleanup work that is not required under 15A NCAC 2L.0115 is not reimbursable from the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds.

If you have any questions regarding the actions that must be taken or the rules mentioned in this letter, please contact Brad Murphy of the Mooreseville Regional Office at the letterhead address and/or at (704) 663-1699, ext.248. If you have any questions regarding trust fund eligibility or reimbursement, please contact the Underground Storage Tank Section at (919) 733-8486.

Sincerely,

Bradley D. Murphy
Hydrogeologic Technician II

cc: Ruth Strauss - Compliance Branch Head
Cabarrus County Health Department
Gregory W. Shepler - Piedmont Environmental Professionals, PA

Z 204 749 622

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Johnson Concrete Co Inc	
Street & Number P O Box 1037	
Post Office, State, & ZIP Code Salisbury NC 28144	
Postage Attn Ernest Jackson	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form **3800**, April 1995

NCDENR

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF WASTE MANAGEMENT

JAMES B. HUNT JR.
GOVERNOR

BILL HOLMAN
SECRETARY

WILLIAM L. MEYER
DIRECTOR

February 10, 2000

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Johnson Concrete Company, Inc.
PO Box 1037
Salisbury, North Carolina 28144
Attention: Ernest Jackson

RE: Notice of Regulatory Requirements
15A NCAC 2L .0115(d)
RISK-BASED ASSESSMENT AND
CORRECTIVE ACTION FOR
PETROLEUM UNDERGROUND
STORAGE TANKS

Piedmont Block
106 Old Davidson Place N.W.
Cabarrus County, N.C.
Incident # 20172
High Risk Classification

Dear Mr. Jackson:

Information received by this office on February 24, 1999 confirms a release or discharge from a petroleum underground storage tank (UST) system at the above referenced location. Records indicate that you are the owner of the UST system. This letter is a standard notice explaining the actions you must take as a result of the release or discharge in accordance with North Carolina statutes and rules. The Underground Storage Tank Section of the Division of Waste Management administers the state's rules for USTs and the required response for petroleum releases. Those rules are located in Title 15A, Subchapter 2L and Title 15A, Subchapter 2N of the North Carolina Administrative Code (NCAC). Please note that this NORR supercedes the Notice of Regulatory Requirements issued to you by this office on January 28, 2000 requesting a Comprehensive Site Assessment.

The risk-based rule for petroleum USTs, 15A NCAC 2L .0115(d), states that the Department shall classify the risk of each known discharge or release from the UST system. A review of information you have provided to this office indicates that:

- A water supply well not used for drinking water is located within 250 feet of the source area of a confirmed discharge or release.

NC SCHOOLS FIRST IN AMERICA 2010

UST SECTION
919 NORTH MAIN STREET, MOORESVILLE, NORTH CAROLINA 28115
PHONE 704-663-1699 FAX 704-663-6040

Based on the conditions above, the discharge or release at the subject site has been classified as **"high risk."** In addition, the land use at the site has been classified as **industrial/commercial.** Please note that 15A NCAC 2L .0115(e) requires you to notify the Department of any changes that might affect the risk or land use classifications that have been assigned.

Prior to performing the assessment and cleanup requirements pursuant to 15A NCAC 2L .0115(f), the Division is requesting that the on-site monitoring wells be sampled on a semi-annual basis. Following the results of the sampling plan, a decision on completing a Comprehensive Site Assessment (CSA) will be made. The monitoring and reporting results are as follows:

1. In addition to sampling monitoring well JCMW1, sample the on-site non-potable well as located in the January 14, 2000 Limited Site Assessment. Groundwater samples should be analyzed for EPA Methods 602 with xylenes, EPA Method 625 plus 10 lagest non-target peaks identified, and MADEP VPH and EPH Alkanes/Aromatics.

2. Sample the monitoring wells in accordance with the sampling requirements schedule below. Groundwater samples must be collected in July and January.

SAMPLING REQUIREMENTS SCHEDULE		
MONITORING WELLS	EPA METHOD 602*, 625**	MADEP VPH and EPH***
JCMW-1	X	X
On-Site Well	X	X

*includes xylenes
**plus 10 largest non-target peaks identified
*** alkanes/aromatics on both VPH and EPH

3. A semi-annual report shall be received by the Mooresville Regional Office by August 15, 2000 and February 15, 2001. The reports shall include the following information:

   a. Laboratory results of all sampling events during the reporting period;
   b. A table displaying sample results from all sampling events to date to aid in evaluating trends at the site;
   c. Water levels will be reported from all available wells;
   d. The February 15, 2001 report must include an updated status of all water supply wells located within 1,000 feet of the source. The update must include the well owner's name, address, and telephone number.
   e. Any additional information required by DWM.

Piedmont Block
February 10, 2000

Your prompt attention to the items described herein is required. Failure to comply with the state's rules in the manner and time specified, may result in the assessment of civil penalties and /or the use of other enforcement mechanisms available to the State. Each day that a violation continues may be considered a separate violation.

Please note that performing assessment and cleanup work that is not required under 15A NCAC 2L.0115 is not reimbursable from the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds.

If you have any questions regarding the actions that must be taken or the rules mentioned in this letter, please contact Mr. Brad Murphy of the Mooresville Regional Office (MRO) at the letterhead address and/or at 704.663.1699, ext. 248 or by e-mail at Brad.Murphy@ncmail.net. If you have any questions regarding trust fund eligibility or reimbursement, please contact the Underground Storage Tank Section at 919.733.8486. In an effort to reduce paper costs and conserve file space, the MRO welcomes double-sided reports.

Sincerely,

Bradley D. Murphy
Hydrogeological Technician II

cc: Ruth Strauss - UST Section Central Office

Z 204 749 439

US Postal Service
Receipt for Certified Mail
No Insurance Coverage Provided.
Do not use for International Mail *(See reverse)*

Sent to	Johnson Concrete Co Inc
Street & Number	P O Box 1037
Post Office, State, & ZIP Code	Salisbury NC 28144
Attn	Ernest Jackson
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

JOHNSON CONCRETE CO INC
P O BOX 1037
SALISBURY NC 28144
ATTENTION ERNEST JACKSON
bdm/nocr

2/10/00

SALISBURY NC 28144 FEB 14 2000 USPS

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)* Melissa Blevins
B. Date of Delivery
C. Signature
x Melissa Blevins ☐ Agent ☐ Addressee
D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Copy from service label)*
Z 204 749 439

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

INTEGRITY ENVIRONMENTAL SERVICES, LLC
404 West Kerr Street
Salisbury, NC 28144
704-630-6671
704-630-6672(fax)

REPORT OF LABORATORY SERVICES

PROJECT

PIEDMONT BLOCK FACILITY
106 OLD DAVIDSON PLACE
CONCORD, NORTH CAROLINA

FOR

JOHNSON CONCRETE COMPANY
POST OFFICE BOX 1037
SALISBURY, NORTH CAROLINA

PREPARED BY

INTEGRITY ENVIRONMENTAL SERVICES, LLC

SALISBURY, NORTH CAROLINA

IES FILE NO. 00-007

JULY 26, 2000

REGISTERED ENVIRONMENTAL MANAGER
DeWITT WHITTEN
REM
2589

DeWitt Whitten, CHMM, REM, RER, CES
Project Manager

NORTH CAROLINA
LICENSED
SEAL
999
GEOLOGIST
WILLIAM R. TINGLE

William R. Tingle, P.G.
Registration No. 999

TABLE OF CONTENTS

PROJECT HISTORY

Based upon information furnished to our office, it is our understanding that a 10,000 gallon diesel underground storage tank (UST) at the site was permanently closed on November 4, 1998. The closure was accomplished by the removal of the UST, pump, pump island, and associated piping. During the closure process, contamination was discovered beneath the pump island and as a result; a limited site assessment (LSA) was performed by Piedmont Environmental Professionals. Their findings were presented in their Limited Site Assessment Report dated January 19, 2000. As a result of the findings of the LSA, the Mooresville Regional Office of the North Carolina Department of Environment and Natural Resources (NCDENR) issued a Notice of Regulatory Requirements dated February 10, 2000. which required the sampling of the monitoring well and supply well located at the facility, laboratory analysis of groundwater samples including EPA Methods 602 with xylenes, 625 plus 10 largest non-target peaks (TICs) identified and MADEP VPH and EPH Alkanes/Aromatics, and the preparation of a semi-annual report to be submitted prior to August 15, 2000 and February 15, 2001.

FIELD SERVICES

On July 7, 2000 personnel of our office visited the Piedmont Block facility to obtain water samples from the monitoring well (JCMW-1) and the supply well (JCSW –1) located at the site. Prior to sampling, the water level was measured at each well location to determine the well volume and the volumes required for purging. A summary of our findings is presented below.

WELL NO.	WELL DEPTH, ft.	WELL DIA., in.	WATER LEVEL, ft.*	WATER VOLUME IN WELL, gallons	PURGE VOL., gallons
JCMW-1	24.0	2	15.1	1.47	4.41
JCSW-1	305.0	6	19.0	419.9	1259.7

* below top of casing

The wells were purged in accordance with the guidelines outlined in NCDENR documents and after purging, the wells were allowed to stabilize based upon water level, ph, and temperature measurements. After stabilization, samples were obtained at each well location and placed into containers supplied by the laboratory. Upon completion of each sampling event, the containers were placed into an ice chest with ice to maintain an approximate temperature of 4° Celius. Upon completion of the field activities, the water samples were transported in person to Test America Laboratory in Charlotte, North Carolina.

REPORT SUMMARY

A summary of the laboratory results as well as a comparison of the results and the state standards are presented below and the laboratory analytical reports and chain-of-custody sheet are presented in Appendix II and III, respectively.

Summary of Lab Analysis

WELL NO.	JCMW-1		JCSW-1
SAMPLING DATE	9/07/99	7/07/00	7/07/00
H_2O TEMP., °C	*	24.8	22.3
H_2O ph	*	5.56	5.96
H_2O LEVEL[1]	15.2	15.1	19.4
Constituent			
VPH (ug/l)			
Aliphatics C5-C8	ND[2]	ND[2]	ND[2]
Aliphatics C9-C12	400	40	ND[2]
Aromatics C9-C10	310	130	ND[2]
EPH (ug/l)			
Aliphatics C9-C18	ND[2]	248	ND[2]
Aliphatics C19-C36	ND[2]	ND[2]	ND[2]
Aromatics C11-C22	760	423 C9-C22 Aro 553	ND[2]
EPA 602 (ug/l)			
Ethlybenzene	2.7	ND[2]	ND[2]
m & p – xylene	4.7	ND[2]	ND[2]
o – xylene	2.5	ND[2]	ND[2]
EPA 625 + tics (ug/l)	ND[3]	ND[3]	ND[3]

* information not presented in Piedmont Environmental Professional's report dated 1/14/2000
1 – feet below top of casing
2 – non-detect above method detection limit
3 – non-detect for all compounds

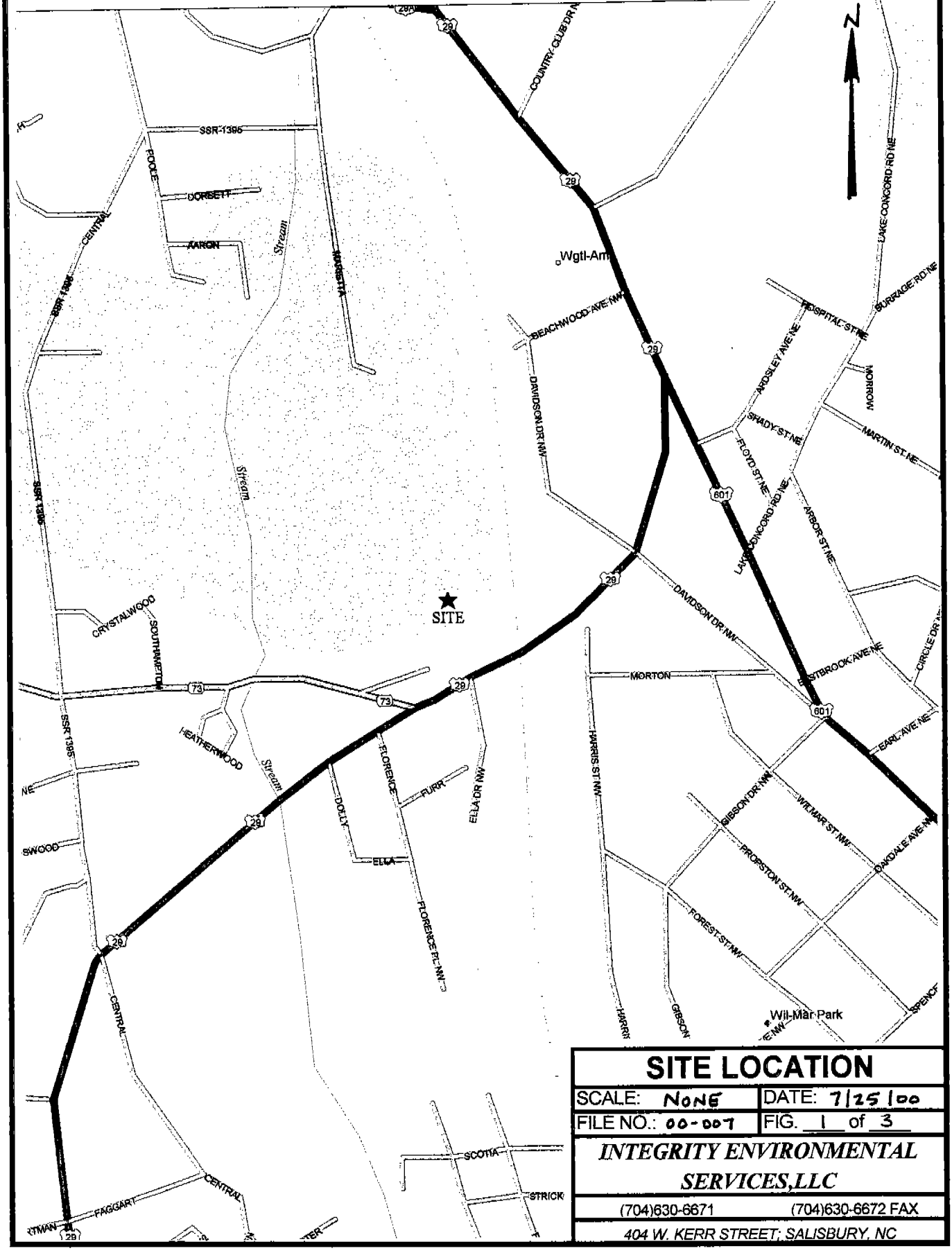
Comparison of Lab Analysis and State Standards[1]

WELL NO.		JCMW-1		JCSW-1
SAMPLING DATE		9/07/99	7/07/00	7/07/00
Constituent	*State Standard*			
Aliphatics C5-C8	420	ND[2]	ND[2]	ND[2]
Aliphatics C9-C18	4200	ND[2]	240	ND[2]
Aliphatics C19-C36	42000	ND[2]	ND[2]	ND[2]
Aromatics C9-C22	210	**1070**	**553**	ND[2]
Ethylbenzene	29	2.7	ND[2]	ND[2]
Xylenes (mixed)	530	7.2	ND[2]	ND[2]

1 – all units in ug/l
2 – non-detect above method detection limit
3 – numbers in bold exceed the state standard

APPENDIX I

PIEDMONT BLOCK FACILITY

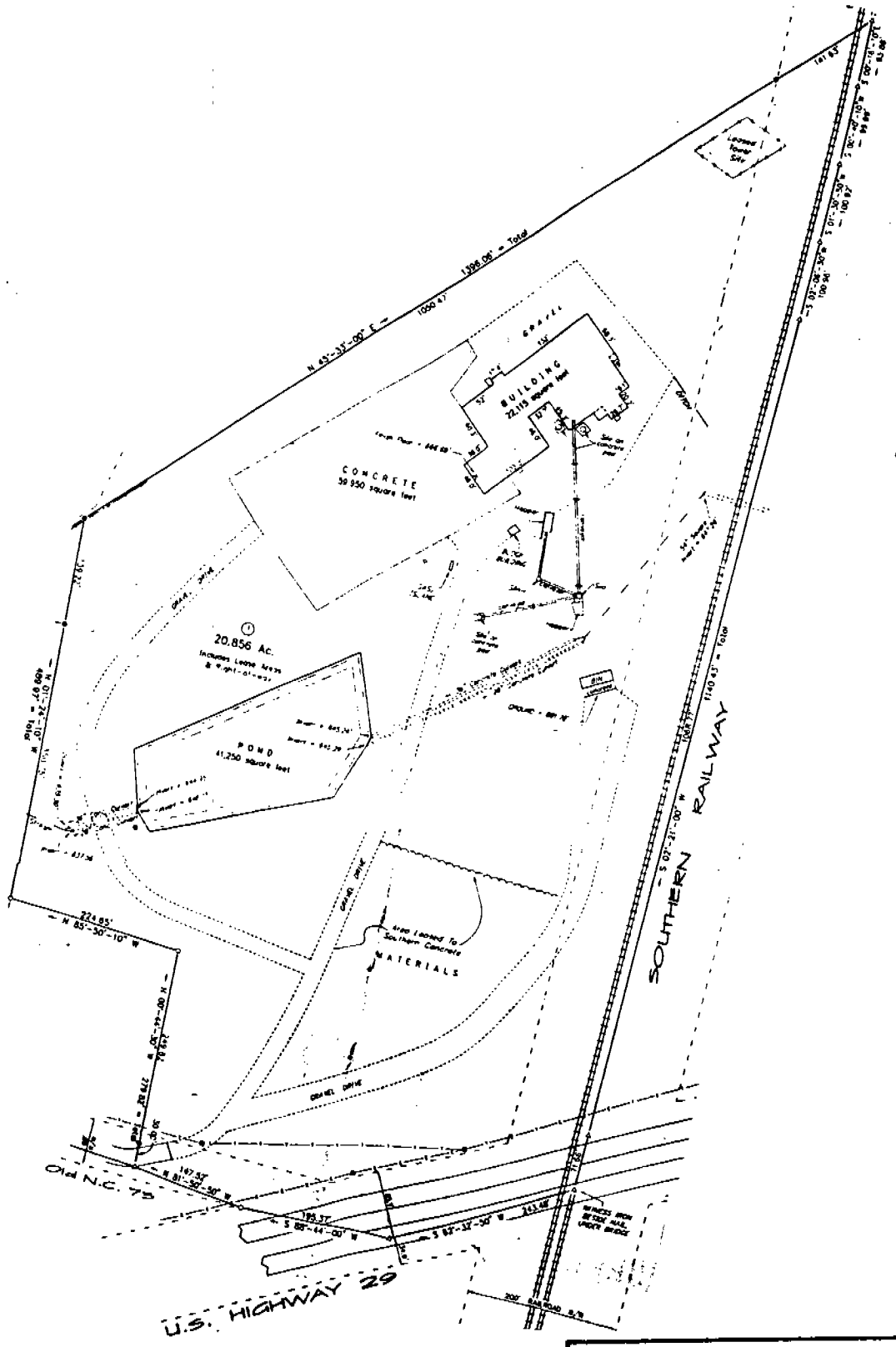


SITE LOCATION	
SCALE: NONE	DATE: 7/25/00
FILE NO.: 00-007	FIG. 1 of 3

INTEGRITY ENVIRONMENTAL SERVICES, LLC

(704)630-6671 (704)630-6672 FAX

404 W. KERR STREET; SALISBURY, NC



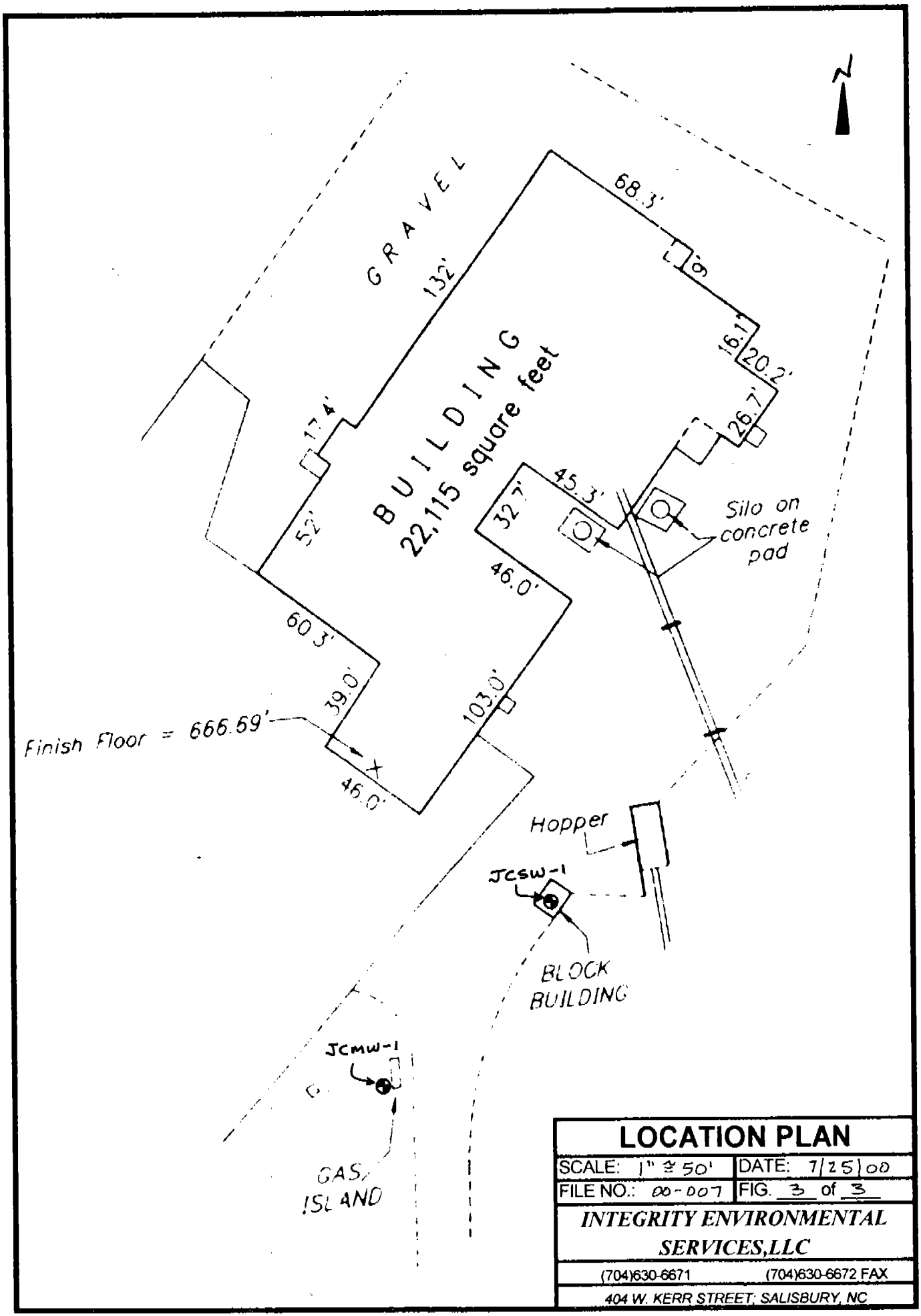
LOCATION PLAN

SCALE: NONE	DATE: 7/25/00
FILE NO.: 00-007	FIG. 2 of 3

INTEGRITY ENVIRONMENTAL SERVICES,LLC

(704)630-6671 (704)630-6672 FAX

404 W. KERR STREET; SALISBURY, NC



LOCATION PLAN

SCALE: 1" = 50'	DATE: 7/25/00
FILE NO.: 00-007	FIG. 3 of 3

INTEGRITY ENVIRONMENTAL SERVICES,LLC

(704)630-6671 (704)630-6672 FAX

404 W. KERR STREET; SALISBURY, NC

APPENDIX II

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INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

INTEGRITY ENVIRONMENTAL 2147

404 W KERR ST.
SALISBURY, NC 28144

Project: 00-007
Project Name:
Matrix: Water
Received condition: Good
Sampler: D. WHITTEN

Lab Number: 00-A95722
Sample ID: JCMW-1
Sample Type: Water
Site ID:

Date Collected: 7/ 7/00
Time Collected: 11:05
Date Received: 7/ 8/00
Preservative: HCl
Temperature: 4.0 degrees C
Time Received: 9:00

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	ND	ug/l	100.	100.	1.0	7/12/00	8:49	Ciesielski	VPH-98-1	1580
VPH C9-C12 Aliphatics	ND	ug/l	100.	100.	1.0	7/12/00	8:49	Ciesielski	VPH-98-1	1580
VPH C9-C10 Aromatics	130.	ug/l	100.	100.	1.0	7/12/00	8:49	Ciesielski	VPH-98-1	1580
C9-C18 Aliphatic Hyd	248.	ug/l	100.	100.	1.0	7/12/00	2:28	J.Salyasak	EPH-98-1	3409
C19-C36 Aliphatic Hyd	ND	ug/l	100.	100.	1.0	7/12/00	2:28	J.Salyasak	EPH-98-1	3409
C11-C22 Aromatic Hyd	423.	ug/l	250.	250.	1.0	7/12/00	2:28	J.Salyasak	EPH-98-1	3409
ORGANIC PARAMETERS										
Benzene	ND	ug/l	1.0	1.0	1	7/20/00	11:27	D.Raney	602	7936
Toluene	ND	ug/l	1.0	1.0	1	7/20/00	11:27	D.Raney	602	7936
Ethylbenzene	ND	ug/l	1.0	1.0	1	7/20/00	11:27	D.Raney	602	7936
Xylenes, total	ND	ug/l	1.0	1.0	1	7/20/00	11:27	D.Raney	602	7936
Chlorobenzene	ND	ug/l	1.0	1.0	1	7/20/00	11:27	D.Raney	602	7936
1,2-Dichlorobenzene	ND	ug/l	1.0	1.0	1	7/20/00	11:27	D.Raney	602	7936
1,3-Dichlorobenzene	ND	ug/l	1.0	1.0	1	7/20/00	11:27	D.Raney	602	7936
1,4-Dichlorobenzene	ND	ug/l	1.0	1.0	1	7/20/00	11:27	D.Raney	602	7936
EXTRACTABLE ORGANICS										
Acenaphthene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Acenaphthylene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Anthracene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Benzidine	ND	ug/l	50.0	50.0	1	7/11/00	12:27	J.Fuqua	625	2237
Benzo(a)anthracene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Benzo(a)pyrene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Benzo(b)fluoranthene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Benzo(g,h,i)perylene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Benzo(k)fluoranthene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
4-Bromophenylphenylether	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Butylbenzylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
4-Chloro-3-methylphenol	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
bis(2-Chloroethoxy)methane	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
bis(2-Chloroethyl)ether	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 00-A95722
Sample ID: JCMW-1

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
bis(2-Chloroisopropyl)ether	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
2-Chloronaphthalene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
2-Chlorophenol	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
4-Chlorophenylphenylether	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Chrysene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Dibenz(a,h)anthracene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
1,2-Dichlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
1,3-Dichlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
1,4-Dichlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
3,3'-Dichlorobenzidine	ND	ug/l	20.0	20.0	1	7/11/00	12:27	J.Fuqua	625	2237
2,4-Dichlorophenol	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Diethylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
2,4-Dimethylphenol	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Dimethylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Di-n-butylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
2,4-Dinitrophenol	ND	ug/l	25.0	25.0	1	7/11/00	12:27	J.Fuqua	625	2237
2,4-dinitrotoluene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
2,6-Dinitrotoluene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Di-n-octylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
1,2-Diphenylhydrazine	ND	ug/l	50.0	50.0	1	7/11/00	12:27	J.Fuqua	625	2237
Fluoranthene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Fluorene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Hexachlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Hexachlorobutadiene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Hexachlorocyclopentadiene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Hexachloroethane	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Indeno(1,2,3-cd)pyrene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Isophorone	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
2-Methyl-4,6-dinitrophenol	ND	ug/l	25.0	25.0	1	7/11/00	12:27	J.Fuqua	625	2237
Naphthalene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Nitrobenzene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
2-Nitrophenol	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
4-Nitrophenol	ND	ug/l	25.0	25.0	1	7/11/00	12:27	J.Fuqua	625	2237
N-nitrosodi-n-propylamine	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
N-nitrosodiphenylamine	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
N-nitrosodimethylamine	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Pentachlorophenol	ND	ug/l	25.0	25.0	1	7/11/00	12:27	J.Fuqua	625	2237
Phenanthrene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Phenol	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Pyrene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
Bis(2-ethylhexyl)phthalate	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237
1,2,4-Trichlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 00-A95722
Sample ID: JCMW-1

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
2,4,6-Trichlorophenol	ND	ug/l	10.0	10.0	1	7/11/00	12:27	J.Fuqua	625	2237

ND = Not detected at the report limit.

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
EPH	1000 ml	1.0 ml	7/10/00	J. Rudden	EPH
PAH's	1000 ml	1. ml	7/10/00	D.Yeager	3510

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	Concentration	Units
2,3-Dihydro-1H-Indene-4-methano	0.012	PPM

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-trifluorotoluene	95.	50. - 150.
DPH surr., FID	126.	70. - 130.
surr-Nitrobenzene-d5	51.	15. - 105.
surr-2-Fluorobiphenyl	49.	17. - 110.
surr-Terphenyl d14	40.	10. - 116.
surr-Phenol d5	19.	10. - 100.
surr-2-Fluorophenol	25.	9. - 100.
surr-2,4,6-Tribromophenol	65.	15. - 134.
surr-C-35	80.	40. - 140.
surr-o-terphenyl	126.	40. - 140.
EPH Fractionation Surr. #1	111.	40. - 140.
EPH Fractionation Surr. #2	104.	40. - 140.

Sample report continued . . .

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ANALYTICAL REPORT

Laboratory Number: 00-A95722
Sample ID: JCMW-1

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: _____

Theodore J. Duello, Ph.D., Lab Mgr.
Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
Johnny A. Mitchell, Technical Serv. Dir.
Gail A Lage, Technical Services

Laboratory Certification Number: 387

End of Sample Report.

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Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

INTEGRITY ENVIRONMENTAL 2147

404 W KERR ST.
SALISBURY, NC 28144

Project: 00-007
Project Name:
Matrix: Water
Received condition: Good
Sampler: D. WHITTEN

Lab Number: 00-A95722
Sample ID: JCMW-1
Sample Type: Water
Site ID:

Date Collected: 7/ 7/00
Time Collected: 11:05
Date Received: 7/ 8/00
Preservative: HCl
Temperature: 4.0 degrees C
Time Received: 9:00

VPH Initial Calibration Date: 5/13/99

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.997
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.999
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.999

Continuing Calibration Check Date: 7/13/99

Range	Level (ug/l)	%D
C5-C8 Aliphatics	300	7.0
C9-C12 Aliphatics	220	10.4
C9-C10 Aromatics	40	8.0

Sample report continued . . .

TestAmerica
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2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

Laboratory Number: 00-A95722
Sample ID: JCMW-1

EPH Initial Calibration Date: 12/29/99

Range	MDL	ML	Report Limit (ug/l)
C9-C18 Aliphatics	11.3	36	100
C19-C36 Aliphatics	5.9	18.6	100
C11-C22 Aromatics	73.0	232	250

Calibrataion Range	Level	CCC
C9-C18 Aliphatics	60	
	120	
	240	
	300	
	600	0.999
C19-C36 Aliphatics	80	
	160	
	320	
	400	
	800	0.999
C11-C22 Aromatics	85	
	170	
	340	
	680	
	850	0.999

Continuing Calibration Check Date: 7/11/00

Range	Level	%D
C9-C18 Aliphatics	300	5.2
C19-C36 Aliphatics	400	9.1
C11-C22 Aromatics	425	17.3

Sample report continued . . .

TestAmerica
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2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

INTEGRITY ENVIRONMENTAL 2147

404 W KERR ST.
SALISBURY, NC 28144

Project: 00-007
Project Name:
Matrix: Water
Received condition: Good
Sampler: D. WHITTEN

Lab Number: 00-A95723
Sample ID: JCSW-1
Sample Type: Water
Site ID:

Date Collected: 7/ 7/00
Time Collected: 12:10
Date Received: 7/ 8/00
Preservative: HCl
Temperature: 4.0 degrees C
Time Received: 9:00

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	ND	ug/l	100.	100.	1.0	7/12/00	9:27	Cieslelski	VPH-98-1	1580
VPH C9-C12 Aliphatics	ND	ug/l	100.	100.	1.0	7/12/00	9:27	Cieslelski	VPH-98-1	1580
VPH C9-C10 Aromatics	ND	ug/l	100.	100.	1.0	7/12/00	9:27	Cieslelski	VPH-98-1	1580
C9-C18 Aliphatic Hyd	ND	ug/l	100.	100.	1.0	7/12/00	5:38	J.Saiyasak	EPH-98-1	3409
C19-C36 Aliphatic Hyd	ND	ug/l	100.	100.	1.0	7/12/00	5:38	J.Saiyasak	EPH-98-1	3409
C11-C22 Aromatic Hyd	ND	ug/l	250.	250.	1.0	7/12/00	5:38	J.Saiyasak	EPH-98-1	3409
ORGANIC PARAMETERS										
Benzene	ND	ug/l	1.0	1.0	1	7/19/00	21:48	D.Raney	602	7936
Toluene	ND	ug/l	1.0	1.0	1	7/19/00	21:48	D.Raney	602	7936
Ethylbenzene	ND	ug/l	1.0	1.0	1	7/19/00	21:48	D.Raney	602	7936
Xylenes, total	ND	ug/l	1.0	1.0	1	7/19/00	21:48	D.Raney	602	7936
Chlorobenzene	ND	ug/l	1.0	1.0	1	7/19/00	21:48	D.Raney	602	7936
1,2-Dichlorobenzene	ND	ug/l	1.0	1.0	1	7/19/00	21:48	D.Raney	602	7936
1,3-Dichlorobenzene	ND	ug/l	1.0	1.0	1	7/19/00	21:48	D.Raney	602	7936
1,4-Dichlorobenzene	ND	ug/l	1.0	1.0	1	7/19/00	21:48	D.Raney	602	7936
EXTRACTABLE ORGANICS										
Acenaphthene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Acenaphthylene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Anthracene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Benzidine	ND	ug/l	50.0	50.0	1	7/11/00	13:08	J.Fuqua	625	2237
Benzo(a)anthracene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Benzo(a)pyrene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Benzo(b)fluoranthene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Benzo(g,h,i)perylene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Benzo(k)fluoranthene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
4-Bromophenylphenylether	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Butylbenzylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
4-Chloro-3-methylphenol	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
bis(2-Chloroethoxy)methane	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
bis(2-Chloroethyl)ether	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237

Sample report continued . . .

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

Laboratory Number: 00-A95723
Sample ID: JCSW-1

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
bis(2-Chloroisopropyl)ether	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
2-Chloronaphthalene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
2-Chlorophenol	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
4-Chlorophenylphenylether	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Chrysene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Dibenz(a,h)anthracene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
1,2-Dichlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
1,3-Dichlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
1,4-Dichlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
3,3'-Dichlorobenzidine	ND	ug/l	20.0	20.0	1	7/11/00	13:08	J.Fuqua	625	2237
2,4-Dichlorophenol	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Diethylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
2,4-Dimethylphenol	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Dimethylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Di-n-butylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
2,4-Dinitrophenol	ND	ug/l	25.0	25.0	1	7/11/00	13:08	J.Fuqua	625	2237
2,4-dinitrotoluene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
2,6-Dinitrotoluene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Di-n-octylphthalate	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
1,2-Diphenylhydrazine	ND	ug/l	50.0	50.0	1	7/11/00	13:08	J.Fuqua	625	2237
Fluoranthene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Fluorene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Hexachlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Hexachlorobutadiene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Hexachlorocyclopentadiene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Hexachloroethane	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Indeno(1,2,3-cd)pyrene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Isophorone	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
2-Methyl-4,6-dinitrophenol	ND	ug/l	25.0	25.0	1	7/11/00	13:08	J.Fuqua	625	2237
Naphthalene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Nitrobenzene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
2-Nitrophenol	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
4-Nitrophenol	ND	ug/l	25.0	25.0	1	7/11/00	13:08	J.Fuqua	625	2237
N-nitrosodi-n-propylamine	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
N-nitrosodiphenylamine	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
N-nitrosodimethylamine	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Pentachlorophenol	ND	ug/l	25.0	25.0	1	7/11/00	13:08	J.Fuqua	625	2237
Phenanthrene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Phenol	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Pyrene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
Bis(2-ethylhexyl)phthalate	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237
1,2,4-Trichlorobenzene	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237

Sample report continued . . .

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

Laboratory Number: 00-A95723
Sample ID: JCSW-1

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
2,4,6-Trichlorophenol	ND	ug/l	10.0	10.0	1	7/11/00	13:08	J.Fuqua	625	2237

No Semivolatile TIC's were detected by GC/MS.

ND = Not detected at the report limit.

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Analyst	Method
EPH	1000 ml	1.0 ml	7/10/00	J. Rudden	EPH
PAH's	1000 ml	1. ml	7/10/00	D.Yeager	3510

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-trifluorotoluene	110.	50. - 150.
VPH Surr., PID	118.	70. - 130.
VPH surr., FID	126.	70. - 130.
surr-Nitrobenzene-d5	40.	15. - 105.
surr-2-Fluorobiphenyl	38.	17. - 110.
surr-Terphenyl d14	32.	10. - 116.
surr-Phenol d5	15.	10. - 100.
surr-2-Fluorophenol	20.	9. - 100.
surr-2,4,6-Tribromophenol	45.	15. - 134.
surr-C-35	77.	40. - 140.
surr-o-terphenyl	126.	40. - 140.
EPH Fractionation Surr. #1	89.	40. - 140.
EPH Fractionation Surr. #2	96.	40. - 140.

Sample report continued . . .

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

Laboratory Number: 00-A95723
Sample ID: JCSW-1

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: _____

Theodore J. Duello, Ph.D., Lab Mgr.
Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
Johnny A. Mitchell, Technical Serv. Dir.
Gail A Lage, Technical Services

Laboratory Certification Number: 387

End of Sample Report.

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

INTEGRITY ENVIRONMENTAL 2147

404 W KERR ST.
SALISBURY, NC 28144

Project: 00-007
Project Name:
Matrix: Water
Received condition: Good
Sampler: D. WHITTEN

Lab Number: 00-A95723
Sample ID: JCSW-1
Sample Type: Water
Site ID:

Date Collected: 7/ 7/00
Time Collected: 12:10
Date Received: 7/ 8/00
Preservative: HCl
Temperature: 4.0 degrees C
Time Received: 9:00

VPH Initial Calibration Date: 5/13/99

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.997
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.999
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.999

Continuing Calibration Check Date: 7/13/99

Range	Level (ug/l)	%D
C5-C8 Aliphatics	300	7.0
C9-C12 Aliphatics	220	10.4
C9-C10 Aromatics	40	8.0

Sample report continued . . .

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

ANALYTICAL REPORT

Laboratory Number: 00-A93723
Sample ID: JCSW-1

EPH Initial Calibration Date: 12/29/99

Range	MDL	ML	Report Limit (ug/l)
C9-C18 Aliphatics	11.3	36	100
C19-C36 Aliphatics	5.9	18.6	100
C11-C22 Aromatics	73.0	232	250

Calibrataion Range	Level	CCC
C9-C18 Aliphatics	60	
	120	
	240	
	300	
	600	0.999
C19-C36 Aliphatics	80	
	160	
	320	
	400	
	800	0.999
C11-C22 Aromatics	85	
	170	
	340	
	680	
	850	0.999

Continuing Calibration Check Date: 7/12/00

Range	Level	%D
C9-C18 Aliphatics	300	5.5
C19-C36 Aliphatics	400	11.5
C11-C22 Aromatics	425	19.8

Sample report continued . . .

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

PROJECT QUALITY CONTROL DATA

Matrix Spike Recovery

Analyte	Units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
VPH C5-C8 Aliphatics	ug/l	< 0.10	0.28	0.30	93	80. - 122.	1580	blank
VPH C5-C8 Aliphatics	ug/l	< 0.10	0.28	0.30	93	80. - 122.	1580	blank
VPH C9-C12 Aliphatics	ug/l	< 0.10	0.23	0.22	105	80. - 122.	1580	blank
VPH C9-C12 Aliphatics	ug/l	< 0.10	0.22	0.22	100	80. - 122.	1580	blank
VPH C9-C10 Aromatics	ug/l	< 0.10	0.42	0.40	105	80. - 122.	1580	blank
VPH C9-C10 Aromatics	ug/l	< 0.10	0.40	0.40	100	80. - 122.	1580	blank
C9-C18 Aliphatic Hyd	ug/l	< 0.100	0.153	0.150	102	14. - 134.	3409	blank
C9-C18 Aliphatic Hyd	ug/l	< 0.100	0.128	0.150	85	14. - 134.	3409	blank
C19-C36 Aliphatic Hyd	ug/l	< 0.100	0.221	0.200	110	24. - 144.	3409	blank
C19-C36 Aliphatic Hyd	ug/l	< 0.100	0.202	0.200	101	24. - 144.	3409	blank
C11-C22 Aromatic Hyd	ug/l	< 0.250	0.505	0.425	119	36. - 135.	3409	blank
C11-C22 Aromatic Hyd	ug/l	< 0.250	0.447	0.425	105	36. - 135.	3409	blank

Matrix Spike Duplicate

Analyte	Units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
VPH C5-C8 Aliphatics	ug/l	0.28	0.28	0.00	30.	1580
VPH C9-C12 Aliphatics	ug/l	0.23	0.22	4.44	30.	1580
VPH C9-C10 Aromatics	ug/l	0.42	0.40	4.88	30.	1580
C9-C18 Aliphatic Hyd	ug/l	0.153	0.128	17.79	49.	3409
C19-C36 Aliphatic Hyd	ug/l	0.221	0.202	8.98	46.	3409
C11-C22 Aromatic Hyd	ug/l	0.505	0.447	12.18	34.	3409

Laboratory Control Data

Analyte	Units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
C9-C18 Aliphatic Hyd	ug/l	0.150	0.115	77	70 - 130	3409
C19-C36 Aliphatic Hyd	ug/l	0.200	0.209	104	70 - 130	3409
C11-C22 Aromatic Hyd	ug/l	0.425	0.474	112	70 - 130	3409

Blank Data

Analyte	Blank Value	Units	Q.C. Batch
VPH C5-C8 Aliphatics	< 0.10	ug/l	1580
VPH C9-C12 Aliphatics	< 0.10	ug/l	1580
VPH C9-C10 Aromatics	< 0.10	ug/l	1580
C9-C18 Aliphatic Hyd	< 0.100	ug/l	3409
C19-C36 Aliphatic Hyd	< 0.100	ug/l	3409
C11-C22 Aromatic Hyd	< 0.250	ug/l	3409

APPENDIX III

TESTAMERICA INC.

Chain of Custody Record 2147 199146 Page 1 of 1

☐ Asheville, NC (A) (828) 254-5169 ☐ Atlanta, GA (B) (770) 368-0636 ☐ Bartlett, IL (C) (630) 289-3100 ☐ Brighton, CO (D) (303) 659-0497 ☐ Cedar Falls, IA (E) (319) 277-2401 ☐ Charleston, SC (F) (843) 849-6550 ☐ Charlotte, NC (G) (704) 392-1164 ☐ Columbia, SC (H) (803) 796-8989 ☐ Dayton, OH (I) (937) 294-6856 ☐ Davenport, IA (J) (319) 323-7944 ☐ Lumberton, NC (K) (910) 738-6190 ☐ Indianapolis, IN (L) (317) 842-4261 ☐ Nashville, TN (M) (615) 726-0177 ☐ Macon, GA (N) (912) 757-0811 ☐ Pontiac, MI (O) (248) 332-1940 ☐ Orlando, FL (P) (407) 851-2560 ☐ Rockford, Il (Q) (815) 874-2171 ☐ Watertown, WI (R) (920) 261-1660

Client: Integrity Env. Services
Report Address: 404 W. Kerr St, Salisbury, NC 28144
Attn: Dewitt Whitten
Phone No.: 704/630-6671
Fax No.: 704/630-6672

Project No.: 00-007
Invoice Address: Same as ←
Attn:
Sampled By: D. Whitten
P.O. No:
Quote No.
State Samples Collected: NC

TURNAROUND TIME
☒ Standard
☐ Rush (surcharges may apply)
Date Needed: 7/21/00

REQUESTED PARAMETERS: 602 + xylenes; 625 + TICs; VPH; EPH

Is this work being conducted for regulatory compliance monitoring? Yes ✓ No___
Is this work being conducted for regulatory enforcement action? Yes___ No___
Which regulations apply: RCRA___ NPDES Wastewater___ UST ✗ Drinking Water___ Other___ None___

Sample ID	Date	Time	Comp (C) Grab (G)	Matrix	Lab Use	602 + xylenes	625 + TICs	VPH	EPH	HCl	NaOH	HNO₃	H₂SO₄	Other	None	REMARKS
JCMW-1	7/7/00	1105	G	WATER	95722	✓	✓	✓	✓							
JCSW-1	7/7/00	1210	G	WATER	95723	✓	✓	✓	✓							Fax COC to Charlotte office

QC Deliverables: ☐ None ☐ Level 2 - Batch QC ☐ Level 3 ☐ Level 4 ☐ Other

Init Lab Temp | Rec Lab Temp: 4°

COMMENTS:

Relinquished By	Date	Time	Received By	Date	Time
[signature]	7/7/00	1420	[signature]	7/7/00	1420
[signature]	7/8/00	0900			
			C. White	7.8.00	0900

LAB USE ONLY:
Custody Seal: ☐ Yes ☐ No ☐ N/A
Bottles Supplied by TA: ☐ Yes ☐ No

COPY

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF WASTE MANAGEMENT

August 10, 2000

JAMES B. HUNT JR.
GOVERNOR

BILL HOLMAN
SECRETARY

WILLIAM L. MEYER
DIRECTOR

Johnson Concrete Company
PO Box 1037
Salisbury, North Carolina 28144
Attn: Ernest Jackson

RE: Acknowledgment of Receipt
August, 2000 Monitoring Report
Piedmont Block
106 Old Davidson Place N.W., Concord
Cabarrus County, NC
Incident # 20172
High Risk Classification

Dear Mr. Jackson:

On July 28, 2000, the Underground Storage Tank Section of the Division of Waste Management received the subject report. I have reviewed the report and have placed it on file in the Mooresville Regional Office. You next monitoring report is due in our office by February 15, 2001.

Thank you for your cooperation and should you have any questions, please contact me at 704.663.1699, ext. 248.

Sincerely,

Bradley D. Murphy
Hydrogeologic Technician II

UST SECTION
919 NORTH MAIN STREET, MOORESVILLE, NORTH CAROLINA 28115
PHONE 704-663-1699 FAX 704-663-6040

INTEGRITY ENVIRONMENTAL SERVICES, LLC
3317 Eva Drive
Concord, N.C. 28027
(704) 652-0657

REPORT OF LABORATORY SERVICES

PROJECT

PIEDMONT BLOCK FACILITY

106 OLD DAVIDSON PLACE

CONCORD, NORTH CAROLINA

FOR

JOHNSON CONCRETE COMPANY

POST OFFICE BOX 1037

SALISBURY, NORTH CAROLINA

PREPARED BY

INTEGRITY ENVIRONMENTAL SERVICES, LLC

SALISBURY, NORTH CAROLINA

IES FILE NO. 00-007

JANUARY 22, 2001

REGISTERED ENVIRONMENTAL MANAGER
DeWITT WHITTEN
REM
2589

DeWitt Whitten, CHMM, REM, REPA, CES
Project Manager

NORTH CAROLINA
LICENSED
SEAL
999
GEOLOGIST

William R. Tingle, P.G.
Registration No. 999

TABLE OF CONTENTS

PROJECT HISTORY

Based upon information furnished to our office, it is our understanding that a 10,000 gallon diesel underground storage tank (UST) at the site was permanently closed on November 4, 1998. The closure was accomplished by the removal of the UST, pump, pump island, and associated piping. During the closure process, contamination was discovered beneath the pump island and as a result; a limited site assessment (LSA) was performed by Piedmont Environmental Professionals. Their findings were presented in their Limited Site Assessment Report dated January 19, 2000. As a result of the findings of the LSA, the Mooresville Regional Office of the North Carolina Department of Environment and Natural Resources (NCDENR) issued a Notice of Regulatory Requirements dated February 10, 2000. which required the sampling of the monitoring well and supply well located at the facility, laboratory analysis of groundwater samples including EPA Methods 602 with xylenes, 625 plus 10 largest non-target peaks (TICs) identified and MADEP VPH and EPH Alkanes/Aromatics, and the preparation of a semi-annual report to be submitted prior to August 15, 2000 and February 15, 2001.

FIELD SERVICES

On December 22, 2000 personnel of our office visited the Piedmont Block facility to obtain water samples from the monitoring well (JCMW-1) and the supply well (JCSW –1) located at the site. Prior to sampling, the water level was measured at each well location to determine the well volume and the volumes required for purging. A summary of our findings is presented below.

WELL NO.	WELL DEPTH, ft.	WELL DIA., in.	WATER LEVEL, ft.*	WATER VOLUME IN WELL, gallons	PURGE VOL., gallons
JCMW-1	24.0	2	16.1	1.27	3.8
JCSW-1	305.0	6	26.9	417.2	1251.5

* below top of casing

The wells were purged in accordance with the guidelines outlined in NCDENR documents and after purging, the wells were allowed to stabilize based upon water level, ph, and temperature measurements. After stabilization, samples were obtained at each well location and placed into containers supplied by the laboratory. Upon completion of each sampling event, the containers were placed into an ice chest with ice to maintain an approximate temperature of 4° Celius. Upon completion of the field activities, the water samples were transported in person to Test America Laboratory in Charlotte, North Carolina.

REPORT SUMMARY

A summary of the laboratory results as well as a comparison of the results and the state standards are presented below and the laboratory analytical reports and chain-of-custody sheet are presented in Appendix II and III, respectively.

Summary of Lab Analysis

WELL NO.	JCMW-1			JCSW-1	
SAMPLING DATE	9/07/99	7/07/00	12/22/00	7/07/00	12/22/00
H_2O TEMP., °C	*	24.8	18.4	22.3	20.1
H_2O ph	*	5.56	5.59	5.96	6.01
H_2O LEVEL[1]	15.2	15.1	16.1	19.4	26.9
Constituent					
VPH (ug/l)					
Aliphatics C5-C8	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
Aliphatics C9-C12	400	40	ND[2]	ND[2]	ND[2]
Aromatics C9-C10	310	130	ND[2]	ND[2]	ND[2]
EPH (ug/l)					
Aliphatics C9-C18	ND[2]	248	ND[2]	ND[2]	ND[2]
Aliphatics C19-C36	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
Aromatics C11-C22	760	423	ND[2]	ND[2]	ND[2]
EPA 602 (ug/l)					
Ethlybenzene	2.7	ND[2]	ND[2]	ND[2]	ND[2]
m & p – xylene	4.7	ND[2]		ND[2]	ND[2]
o – xylene	2.5	ND[2]		ND[2]	ND[2]
Total xylenes			1.30		
EPA 625 (ug/l)	ND[3]	ND[3]	ND[3]	ND[3]	ND[3]
+TICs					
Heptadecane (ppm)			0.012		
Tetrachloroethylene (ppm)					(0.014)

* information not presented in Piedmont Environmental Professional's report dated 1/14/2000
1 – feet below top of casing
2 – non-detect above method detection limit
3 – non-detect for all compounds

Comparison of Lab Analysis and State Standards[1]

	WELL NO.	JCMW-1			JCSW-1	
	SAMPLING DATE	9/07/99	7/07/00	12/22/00	7/07/00	12/22/00
Constituent	*State Standard*					
Aliphatics C5-C8	420	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
Aliphatics C9-C18	4200	ND[2]	240	ND[2]	ND[2]	ND[2]
Aliphatics C19-C36	42000	ND[2]	ND[2]	ND[2]	ND[2]	ND[2]
Aromatics C9-C22	210	**1070**	**553**	ND[2]	ND[2]	ND[2]
Ethylbenzene	29	2.7	ND[2]	ND[2]	ND[2]	ND[2]
Xylenes (mixed)	530	7.2	ND[2]	1.30	ND[2]	ND[2]
Heptadecane	NS[4]			12		
Tetrachloroethylene	0.7					**14**

1 – all units in ug/l
2 – non-detect above method detection limit
3 – numbers in bold exceed the state standard
4 – No state standard

Based upon a review of the latest laboratory analyses, it appears that the level of contamination has decreased significantly. However, two tentatively identified compounds, heptadecane in JCMW-1 and tetrachloroethylene in JCSW-1, were noted though there was no indication of these compounds previously. Based upon discussions with with various plant personnel, there does not appear to be or have been a source of either compound at the project site.

WATER SUPPLY WELL SURVEY

As required in NCDENR's letter dated February 10, 2000 our personnel performed a survey for water supply wells within a 1000 foot radius of the contamination source. Based upon our visual survey, the following well was noted within the 1000 foot radius.

WELL OWNER	ADDRESS	PHONE NO.
Piedmont Block	106 Old Davidson Place, NW	704/786-4204

In addition, our personnel spoke with Mr. Jeff Slough of the City of Concord Utilities Department on January 8, 2001. Mr. Slough indicated that he knew of no other water supply wells within the 1000 foot radius.

APPENDIX I

PIEDMONT BLOCK FACILITY

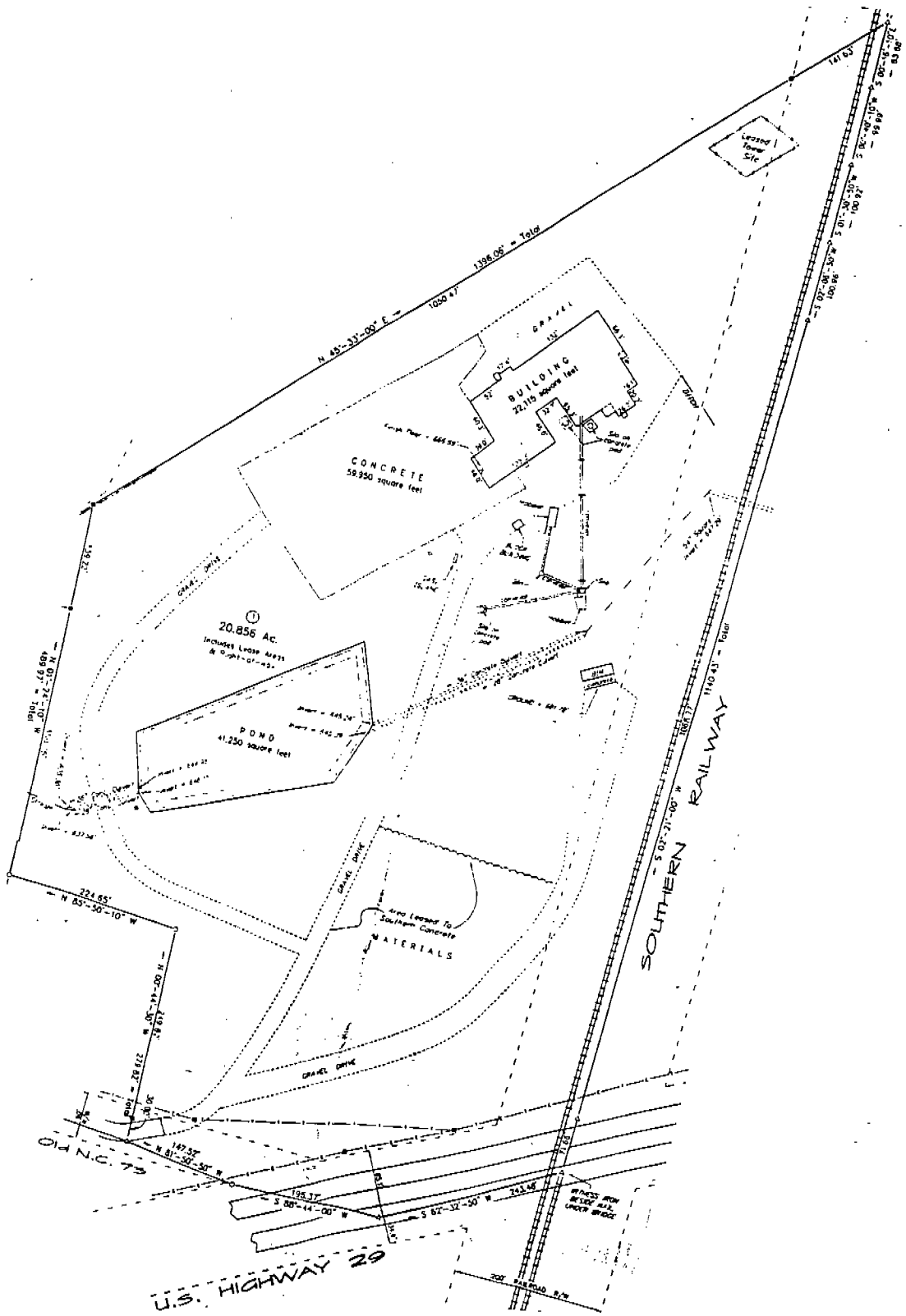
SITE LOCATION

SCALE: NONE	DATE: 7/25/00
FILE NO.: 00-007	FIG. 1 of 4

INTEGRITY ENVIRONMENTAL SERVICES,LLC

(704)630-6671 (704)630-6672 FAX

404 W. KERR STREET; SALISBURY, NC



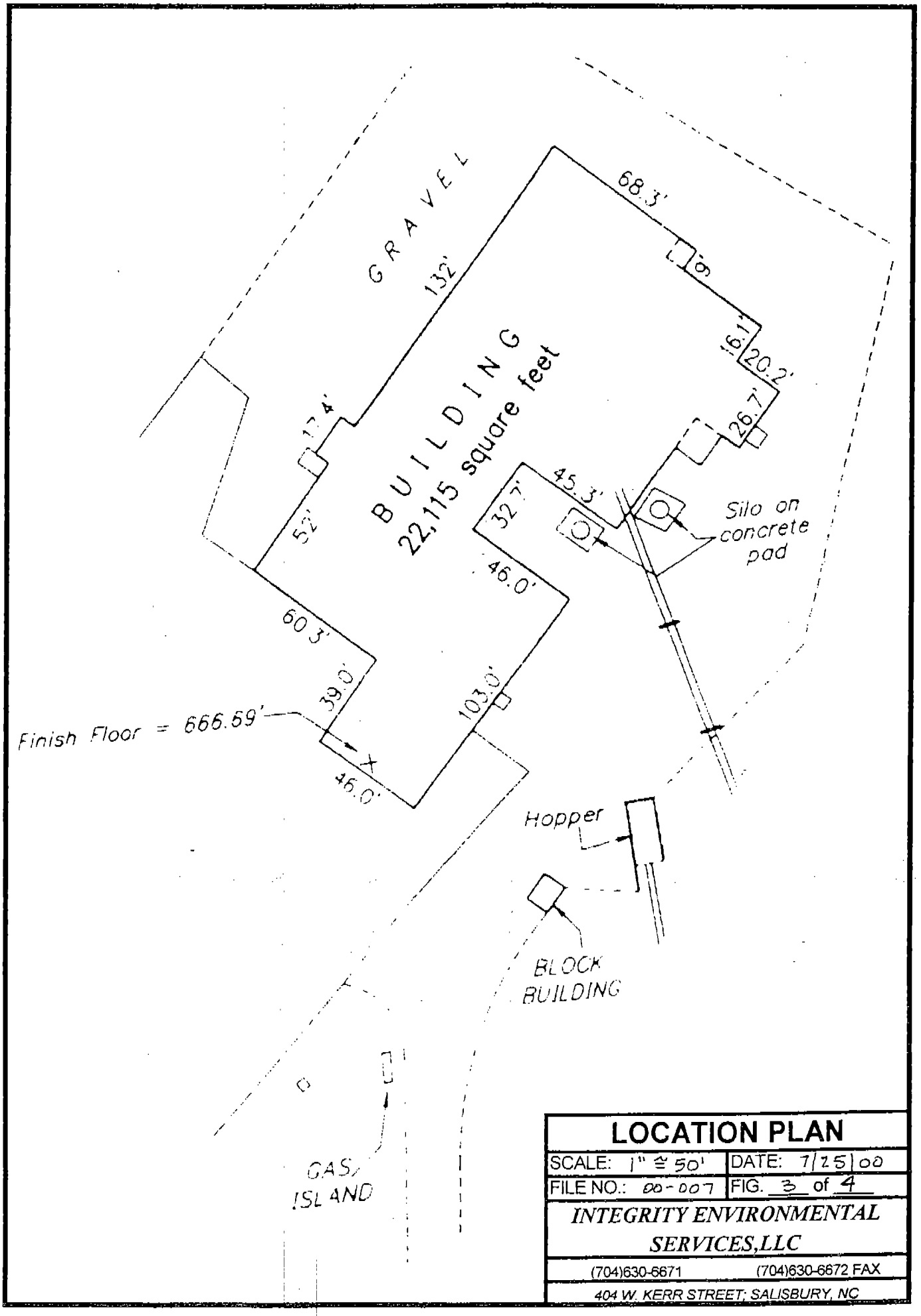
LOCATION PLAN

SCALE: NONE	DATE: 7/25/00
FILE NO.: 00-007	FIG. 2 of 4

INTEGRITY ENVIRONMENTAL SERVICES, LLC

(704)630-6671 (704)630-6672 FAX

404 W. KERR STREET; SALISBURY, NC

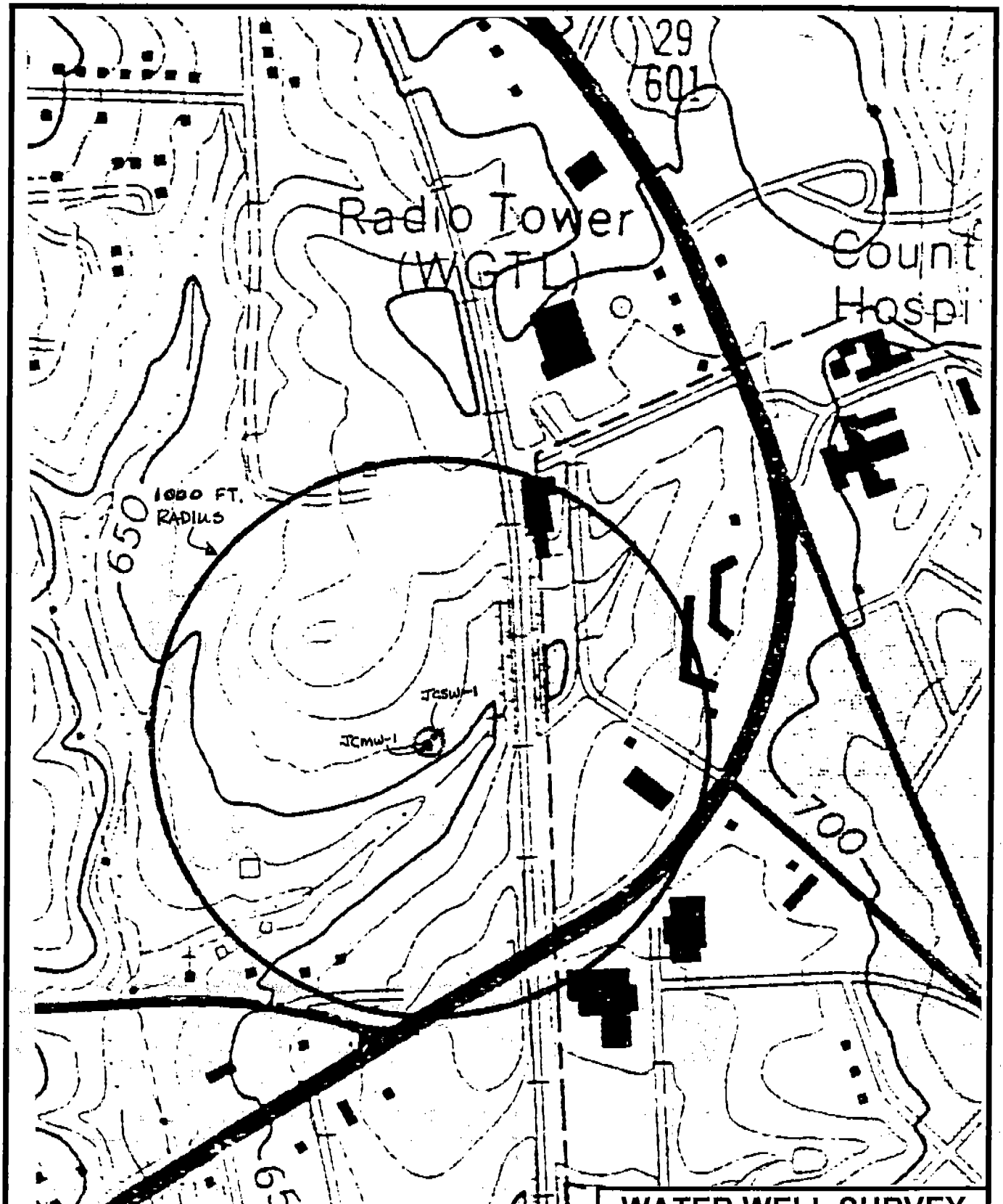


LOCATION PLAN	
SCALE: 1" = 50'	DATE: 7/25/00
FILE NO.: 00-007	FIG. 3 of 4

INTEGRITY ENVIRONMENTAL SERVICES,LLC

(704)630-6671 (704)630-6672 FAX

404 W. KERR STREET; SALISBURY, NC



WATER WELL SURVEY

SCALE: 1"=500'	DATE: 1/10/01
FILE NO.: 00-007	FIG. 4 of 4

INTEGRITY ENVIRONMENTAL SERVICES,LLC

(704)652-0657 (704)652-0657 FAX

3317 EVA DRIVE; CONCORD, NC

APPENDIX II

TestAmerica
INCORPORATED

ANALYTICAL REPORT

INTEGRITY ENVIRONMENTAL 2147

404 W KERR ST.
SALISBURY, NC 28144

Lab Number: 00-A185017
Sample ID: JCMW-1
Sample Type: Water
Site ID:

Project: 00-007
Project Name: JOHNSON CONCRETE/CONCORD
Matrix: Water
Received condition: Good
Sampler: DEWITT WHITTEN

Date Collected: 12/22/00
Time Collected: 13:45
Date Received: 12/27/00
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

VPH Initial Calibration Date: 12/19/00

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.998
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.997
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.991

Continuing Calibration Check Date: 1/ 3/01

Range	Level (ug/l)	%D

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185017
Sample ID: JCMW-1

C5-C8 Aliphatics	300	2.7
C9-C12 Aliphatics	220	0.9
C9-C10 Aromatics	40	4.0

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185017
Sample ID: JCMW-1

EPH Initial Calibration Date: 11/13/00

Range	MDL	ML	Report Limit (ug/l)
C9-C18 Aliphatics	11.3	36	100
C19-C36 Aliphatics	5.9	18.6	100
C11-C22 Aromatics	73.0	232	250

Calibrataion Range	Level	CCC
C9-C18 Aliphatics	60	
	120	
	240	
	300	
	600	1.00
C19-C36 Aliphatics	80	
	160	
	320	
	400	
	800	1.00
C11-C22 Aromatics	85	
	170	
	340	
	680	
	850	0.999

Continuing Calibration Check Date: 12/30/00

Range	Level	%D
C9-C18 Aliphatics	300	14.2
C19-C36 Aliphatics	400	6.5
C11-C22 Aromatics	425	6.8

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

INTEGRITY ENVIRONMENTAL 2147

404 W KERR ST.
SALISBURY, NC 28144

Project: 00-007
Project Name: JOHNSON CONCRETE/CONCORD
Matrix: Water
Received condition: Good
Sampler: DEWITT WHITTEN

Lab Number: 00-A185017
Sample ID: JCMW-1
Sample Type: Water
Site ID:

Date Collected: 12/22/00
Time Collected: 13:45
Date Received: 12/27/00
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	ND	ug/l	100.	100.	1.0	1/ 3/01	3:23	Ciesielski	VPH-98-1	3928
VPH C9-C12 Aliphatics	ND	ug/l	100.	100.	1.0	1/ 3/01	3:23	Ciesielski	VPH-98-1	3928
VPH C9-C10 Aromatics	ND	ug/l	100.	100.	1.0	1/ 3/01	3:23	Ciesielski	VPH-98-1	3928
C9-C18 Aliphatic Hyd	ND	ug/l	100.	100.	1.0	12/30/00	8:08	K.Phelps	EPH-98-1	4702
C19-C36 Aliphatic Hyd	ND	ug/l	100.	100.	1.0	12/30/00	8:08	K.Phelps	EPH-98-1	4702
C11-C22 Aromatic Hyd	ND	ug/l	250.	250.	1.0	12/30/00	8:08	K.Phelps	EPH-98-1	4702
ORGANIC PARAMETERS										
Benzene	ND	ug/l	1.00	1.00	1	12/31/00	0:13	M.Himelick	602	4226
Toluene	ND	ug/l	1.00	1.00	1	12/31/00	0:13	M.Himelick	602	4226
Ethylbenzene	ND	ug/l	1.00	1.00	1	12/31/00	0:13	M.Himelick	602	4226
Xylenes, total	1.30	ug/l	1.00	1.00	1	12/31/00	0:13	M.Himelick	602	4226
Chlorobenzene	ND	ug/l	1.00	1.00	1	12/31/00	0:13	M.Himelick	602	4226
1,2-Dichlorobenzene	ND	ug/l	1.00	1.00	1	12/31/00	0:13	M.Himelick	602	4226
1,3-Dichlorobenzene	ND	ug/l	1.00	1.00	1	12/31/00	0:13	M.Himelick	602	4226
1,4-Dichlorobenzene	ND	ug/l	1.00	1.00	1	12/31/00	0:13	M.Himelick	602	4226
EXTRACTABLE ORGANICS										
Acenaphthene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Acenaphthylene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Anthracene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Benzidine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Benzo(a)anthracene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Benzo(a)pyrene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Benzo(b)fluoranthene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Benzo(g,h,i)perylene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185017
Sample ID: JCMW-1

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Benzo(k)fluoranthene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
4-Bromophenylphenylether	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Butylbenzylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
4-Chloro-3-methylphenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
bis(2-Chloroethoxy)methane	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
bis(2-Chloroethyl)ether	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
bis(2-Chloroisopropyl)ether	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2-Chloronaphthalene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2-Chlorophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
4-Chlorophenylphenylether	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Chrysene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Dibenz(a,h)anthracene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
1,2-Dichlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
1,3-Dichlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
1,4-Dichlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
3,3'-Dichlorobenzidine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2,4-Dichlorophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Diethylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2,4-Dimethylphenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Dimethylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Di-n-butylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2,4-Dinitrophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2,4-dinitrotoluene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2,6-Dinitrotoluene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Di-n-octylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
1,2-Diphenylhydrazine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Fluoranthene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Fluorene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Hexachlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Hexachlorobutadiene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Hexachlorocyclopentadiene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Hexachloroethane	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Indeno(1,2,3-cd)pyrene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Isophorone	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2-Methyl-4,6-dinitrophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Naphthalene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185017
Sample ID: JCMW-1

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Nitrobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2-Nitrophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
4-Nitrophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
N-nitrosodi-n-propylamine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
N-nitrosodiphenylamine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
N-nitrosodimethylamine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Pentachlorophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Phenanthrene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Phenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Pyrene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
Bis(2-ethylhexyl)phthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
1,2,4-Trichlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181
2,4,6-Trichlorophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:39	T McCollum	625	5181

ND = Not detected at the report limit.

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
EPH	1000 ml	1.0 ml	12/28/00		D.Yeager	EPH
PAH's	980. ml	1. ml	12/29/00		D.Yeager	625

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	Concentration	Units
Heptadecane	0.012	PPM

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185017
Sample ID: JCMW-1

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	103.	50. - 150.
VPH Surr., PID	114.	70. - 130.
VPH surr., FID	106.	70. - 130.
surr-Nitrobenzene-d5	74.	16. - 120.
surr-2-Fluorobiphenyl	77.	10. - 136.
surr-Terphenyl d14	45.	10. - 119.
surr-Phenol d5	26.	10. - 69.
surr-2-Fluorophenol	39.	10. - 148.
surr-2,4,6-Tribromophenol	101.	11. - 144.
surr-C-35	81.	40. - 140.
surr-o-terphenyl	91.	40. - 140.
EPH Fractionation Surr. #1	117.	40. - 140.
EPH Fractionation Surr. #2	112.	40. - 140.

= Recovery outside Laboratory historical limits.

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: _____

Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
Johnny A. Mitchell, Technical Serv. Dir.
Gail A Lage, Technical Services

Laboratory Certification Number: 387

End of Sample Report.

TestAmerica
INCORPORATED

ANALYTICAL REPORT

INTEGRITY ENVIRONMENTAL 2147

404 W KERR ST.
SALISBURY, NC 28144

Project: 00-007
Project Name: JOHNSON CONCRETE/CONCORD
Matrix: Water
Received condition: Good
Sampler: DEWITT WHITTEN

Lab Number: 00-A185016
Sample ID: JCSW-1
Sample Type: Water
Site ID:

Date Collected: 12/22/00
Time Collected: 13:25
Date Received: 12/27/00
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

VPH Initial Calibration Date: 12/19/00

Range	MDL	ML	Report Limit (ug/l)
C5-C8 Aliphatics	20	64	100
C9-C12 Aliphatics	8	25	100
C9-C10 Aromatics	8	25	100

Calibrataion Range	Level (ug/l)	CCC
C5-C8 Aliphatics	75	
	150	
	300	
	600	
	1125	0.998
C9-C12 Aliphatics	55	
	110	
	220	
	440	
	825	0.997
C9-C10 Aromatics	10	
	20	
	40	
	80	
	100	0.991

Continuing Calibration Check Date: 1/ 3/01

Range	Level (ug/l)	%D

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185016
Sample ID: JCSW-1

C5-C8 Aliphatics	300	2.7
C9-C12 Aliphatics	220	0.9
C9-C10 Aromatics	40	4.0

Sample report continued . . .

ANALYTICAL REPORT

Laboratory Number: 00-A185016
Sample ID: JCSW-1

EPH Initial Calibration Date: 11/13/00

Range	MDL	ML	Report Limit (ug/l)
C9-C18 Aliphatics	11.3	36	100
C19-C36 Aliphatics	5.9	18.6	100
C11-C22 Aromatics	73.0	232	250

Calibrataion Range	Level	CCC
C9-C18 Aliphatics	60	
	120	
	240	
	300	
	600	1.00
C19-C36 Aliphatics	80	
	160	
	320	
	400	
	800	1.00
C11-C22 Aromatics	85	
	170	
	340	
	680	
	850	0.999

Continuing Calibration Check Date: 12/30/00

Range	Level	%D
C9-C18 Aliphatics	300	14.2
C19-C36 Aliphatics	400	6.5
C11-C22 Aromatics	425	6.8

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

INTEGRITY ENVIRONMENTAL 2147

404 W KERR ST.
SALISBURY, NC 28144

Project: 00-007
Project Name: JOHNSON CONCRETE/CONCORD
Matrix: Water
Received condition: Good
Sampler: DEWITT WHITTEN

Lab Number: 00-A185016
Sample ID: JCSW-1
Sample Type: Water
Site ID:

Date Collected: 12/22/00
Time Collected: 13:25
Date Received: 12/27/00
Preservative: HCl
Temperature: 4 degrees C
Time Received: 9:00

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
VPH C5-C8 Aliphatics	ND	ug/l	100.	100.	1.0	1/ 3/01	2:46	Ciesielski	VPH-98-1	3928
VPH C9-C12 Aliphatics	ND	ug/l	100.	100.	1.0	1/ 3/01	2:46	Ciesielski	VPH-98-1	3928
VPH C9-C10 Aromatics	ND	ug/l	100.	100.	1.0	1/ 3/01	2:46	Ciesielski	VPH-98-1	3928
C9-C18 Aliphatic Hyd	ND	ug/l	100.	100.	1.0	12/30/00	6:33	K.Phelps	EPH-98-1	4702
C19-C36 Aliphatic Hyd	ND	ug/l	100.	100.	1.0	12/30/00	6:33	K.Phelps	EPH-98-1	4702
C11-C22 Aromatic Hyd	ND	ug/l	250.	250.	1.0	12/30/00	6:33	K.Phelps	EPH-98-1	4702
ORGANIC PARAMETERS										
Benzene	ND	ug/l	1.00	1.00	1	12/30/00	23:29	M.Himelick	602	4226
Toluene	ND	ug/l	1.00	1.00	1	12/30/00	23:29	M.Himelick	602	4226
Ethylbenzene	ND	ug/l	1.00	1.00	1	12/30/00	23:29	M.Himelick	602	4226
Xylenes, total	ND	ug/l	1.00	1.00	1	12/30/00	23:29	M.Himelick	602	4226
Chlorobenzene	ND	ug/l	1.00	1.00	1	12/30/00	23:29	M.Himelick	602	4226
1,2-Dichlorobenzene	ND	ug/l	1.00	1.00	1	12/30/00	23:29	M.Himelick	602	4226
1,3-Dichlorobenzene	ND	ug/l	1.00	1.00	1	12/30/00	23:29	M.Himelick	602	4226
1,4-Dichlorobenzene	ND	ug/l	1.00	1.00	1	12/30/00	23:29	M.Himelick	602	4226
EXTRACTABLE ORGANICS										
Acenaphthene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Acenaphthylene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Anthracene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Benzidine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Benzo(a)anthracene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Benzo(a)pyrene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Benzo(b)fluoranthene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Benzo(g,h,i)perylene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185016
Sample ID: JCSW-1

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Benzo(k)fluoranthene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
4-Bromophenylphenylether	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Butylbenzylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
4-Chloro-3-methylphenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
bis(2-Chloroethoxy)methane	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
bis(2-Chloroethyl)ether	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
bis(2-Chloroisopropyl)ether	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2-Chloronaphthalene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2-Chlorophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
4-Chlorophenylphenylether	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Chrysene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Dibenz(a,h)anthracene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
1,2-Dichlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
1,3-Dichlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
1,4-Dichlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
3,3'-Dichlorobenzidine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2,4-Dichlorophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Diethylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2,4-Dimethylphenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Dimethylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Di-n-butylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2,4-Dinitrophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2,4-dinitrotoluene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2,6-Dinitrotoluene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Di-n-octylphthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
1,2-Diphenylhydrazine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Fluoranthene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Fluorene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Hexachlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Hexachlorobutadiene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Hexachlorocyclopentadiene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Hexachloroethane	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Indeno(1,2,3-cd)pyrene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Isophorone	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2-Methyl-4,6-dinitrophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Naphthalene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181

ample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185016
Sample ID: JCSW-1

Analyte	Result	Units	Report Limit	Quan Limit	Dil Factor	Analysis Date	Analysis Time	Analyst	Method	Batch
Nitrobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2-Nitrophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
4-Nitrophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
N-nitrosodi-n-propylamine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
N-nitrosodiphenylamine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
N-nitrosodimethylamine	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Pentachlorophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Phenanthrene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Phenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Pyrene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
Bis(2-ethylhexyl)phthalate	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
1,2,4-Trichlorobenzene	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181
2,4,6-Trichlorophenol	ND	ug/l	10.0	10.0	1	1/ 2/01	18:03	T McCollum	625	5181

ND = Not detected at the report limit.

Sample Extraction Data

Parameter	Wt/Vol Extracted	Extract Vol	Date	Time	Analyst	Method
EPH	1000 ml	1.0 ml	12/28/00		D.Yeager	EPH
PAH's	980. ml	1. ml	12/29/00		D.Yeager	625

TENTATIVELY IDENTIFIED COMPOUNDS

Compound	Concentration	Units
Tetrachloroethylene	0.014	PPM

Sample report continued . . .

TestAmerica
INCORPORATED

ANALYTICAL REPORT

Laboratory Number: 00-A185016
Sample ID: JCSW-1

Surrogate	% Recovery	Target Range
BTEX/GRO Surr., a,a,a-TFT	100.	50. - 150.
VPH Surr., PID	103.	70. - 130.
VPH surr., FID	103.	70. - 130.
surr-Nitrobenzene-d5	70.	16. - 120.
surr-2-Fluorobiphenyl	72.	10. - 136.
surr-Terphenyl d14	48.	10. - 119.
surr-Phenol d5	24.	10. - 69.
surr-2-Fluorophenol	36.	10. - 148.
surr-2,4,6-Tribromophenol	101.	11. - 144.
surr-C-35	94.	40. - 140.
surr-o-terphenyl	82.	40. - 140.
EPH Fractionation Surr. #1	116.	40. - 140.
EPH Fractionation Surr. #2	119.	40. - 140.

= Recovery outside Laboratory historical limits.

Unadjusted hydrocarbon range data exclude concentrations of any surrogate and internal standards eluting in that range.

CERTIFICATION

All QA/QC procedures REQUIRED by the VPH/EPH method(s) were followed.
All performance/acceptance standards for required QA/QC procedures were achieved.

Authorized by: Michael H. Dunn

Michael H. Dunn, M.S., Technical Dir.
Eric Smith, Asst. Technical. Dir.
Johnny A. Mitchell, Technical Serv. Dir.
Gail A Lage, Technical Services

Laboratory Certification Number: 387

End of Sample Report.

TestAmerica
INCORPORATED

PROJECT QUALITY CONTROL DATA

Matrix Spike Recovery

Analyte	units	Orig. Val.	MS Val	Spike Conc	Recovery	Target Range	Q.C. Batch	Spike Sample
UST ANALYSIS								
VPH C5-C8 Aliphatics	mg/l	< 0.100	0.312	0.300	104	70. - 130.	3928	blank
VPH C5-C8 Aliphatics	mg/l	< 0.100	0.303	0.300	101	70. - 130.	3928	blank
VPH C9-C12 Aliphatics	mg/l	< 0.100	0.222	0.220	101	70. - 130.	3928	blank
VPH C9-C12 Aliphatics	mg/l	< 0.100	0.221	0.220	100	70. - 130.	3928	blank
VPH C9-C10 Aromatics	mg/l	< 0.100	0.390	0.400	98	70. - 130.	3928	blank
VPH C9-C10 Aromatics	mg/l	< 0.100	0.390	0.400	98	70. - 130.	3928	blank
C9-C18 Aliphatic Hyd	mg/l	< 0.100	0.144	0.150	96	40. - 140.	4702	blank
C9-C18 Aliphatic Hyd	mg/l	< 0.100	0.157	0.150	105	40. - 140.	4702	blank
C19-C36 Aliphatic Hyd	mg/l	< 0.100	0.196	0.200	98	40. - 140.	4702	blank
C19-C36 Aliphatic Hyd	mg/l	< 0.100	0.205	0.200	102	40. - 140.	4702	blank
C11-C22 Aromatic Hyd	mg/l	< 0.250	0.355	0.425	84	40. - 140.	4702	blank
C11-C22 Aromatic Hyd	mg/l	< 0.250	0.408	0.425	96	40. - 140.	4702	blank

Matrix Spike Duplicate

Analyte	units	Orig. Val.	Duplicate	RPD	Limit	Q.C. Batch
UST PARAMETERS						
VPH C5-C8 Aliphatics	mg/l	0.312	0.303	2.93	50.	3928
VPH C9-C12 Aliphatics	mg/l	0.222	0.221	0.45	50.	3928
VPH C9-C10 Aromatics	mg/l	0.390	0.390	0.00	50.	3928
C9-C18 Aliphatic Hyd	mg/l	0.144	0.157	8.64	25.	4702
C19-C36 Aliphatic Hyd	mg/l	0.196	0.205	4.49	25.	4702
C11-C22 Aromatic Hyd	mg/l	0.355	0.408	13.89	25.	4702

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
UST PARAMETERS						
VPH C5-C8 Aliphatics	mg/l	0.300	0.308	103	70 - 130	3928

Project QC continued . . .

TestAmerica
INCORPORATED

PROJECT QUALITY CONTROL DATA

Laboratory Control Data

Analyte	units	Known Val.	Analyzed Val	% Recovery	Target Range	Q.C. Batch
VPH C9-C12 Aliphatics	mg/l	0.220	0.222	101	70 - 130	3928
VPH C9-C10 Aromatics	mg/l	0.400	0.380	95	70 - 130	3928
C9-C18 Aliphatic Hyd	mg/l	0.150	0.103	69	40 - 140	4702
C19-C36 Aliphatic Hyd	mg/l	0.200	0.162	81	40 - 140	4702
C11-C22 Aromatic Hyd	mg/l	0.425	0.374	88	40 - 140	4702

Blank Data

Analyte	Blank Value	Units	Q.C. Batch	Date Analyzed	Time Analyzed
UST PARAMETERS					
VPH C5-C8 Aliphatics	< 0.100	mg/l	3928	1/ 3/01	2:09
VPH C9-C12 Aliphatics	< 0.100	mg/l	3928	1/ 3/01	2:09
VPH C9-C10 Aromatics	< 0.100	mg/l	3928	1/ 3/01	2:09
C9-C18 Aliphatic Hyd	< 0.100	mg/l	4702	12/29/00	22:36
C19-C36 Aliphatic Hyd	< 0.100	mg/l	4702	12/29/00	22:36
C11-C22 Aromatic Hyd	< 0.250	mg/l	4702	12/29/00	22:36

End of Report for Project 221035

APPENDIX III

3C8055 7392

TestAmerica
INCORPORATED

Division/Laboratory Name: Charlotte

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes? Compliance Monitoring 221035

Client Name: Integrity Environmental Services Client #: 2147
Address: 3317 Eva Drive
City/State/Zip Code: Concord, NC 28027
Project Manager: Dewitt Whitten
Telephone Number: 704/652-0057 Fax:
Sampler Name: (Print Name) William Albert
Sampler Signature: Dewitt Whitten

Project Name: Johnson Concrete - Concord Facility
Project #: 00-007
Site/Location ID: N/A State: NC
Report To: Dewitt Whitten
Invoice To: Same as client
Quote #: PO#:

TAT: X Standard; ___ Rush (surcharges may apply)
Date Needed: ASAP
Fax Results: (Y) N
1/2/01

SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other	HNO_3	HCl	NaOH	H_2SO_4	Methanol	None	Other (Specify)	602 + pb lead	625 + TICS	VPH	EPH							REMARKS
JCSW-1	12/22/00	1325	G										✓	✓	✓	✓							185016
JCMW-1	12/22/00	1345	G										✓	✓	✓	✓							17

QC Deliverables: ___ None; ___ Level 2 (Batch QC); ___ Level 3; ___ Level 4; Other: ___

Special Instructions:

Relinquished By: [signature]	Date: 12/26/00	Time: 0925	Received By: [signature]	Date: 12/26	Time: 925
Relinquished By: [signature]	Date: 12/26	Time: [illegible]	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: M. Rudo	Date: 12/27/00	Time: 9:00

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp: 3.0
Custody Seals: (Y) N N/A
Bottles Supplied by TestAmerica: Y N
Method of Shipment:

NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
MOORESVILLE REGIONAL OFFICE

DIVISION OF WASTE MANAGEMENT

Date: 2/2/2001

MEMORANDUM

To: Peggy Finley
Groundwater Section, DWQ

From: Carrie Szot-Ferguson
UST Section, DWM

Subject: **NON-UST SOURCE**

* Sampling WSW for 6210 D will submit results to me & I will give to Peggy.

UST Site: Piedmont Block Facility
106 Old Davidson Place
Concord, NC

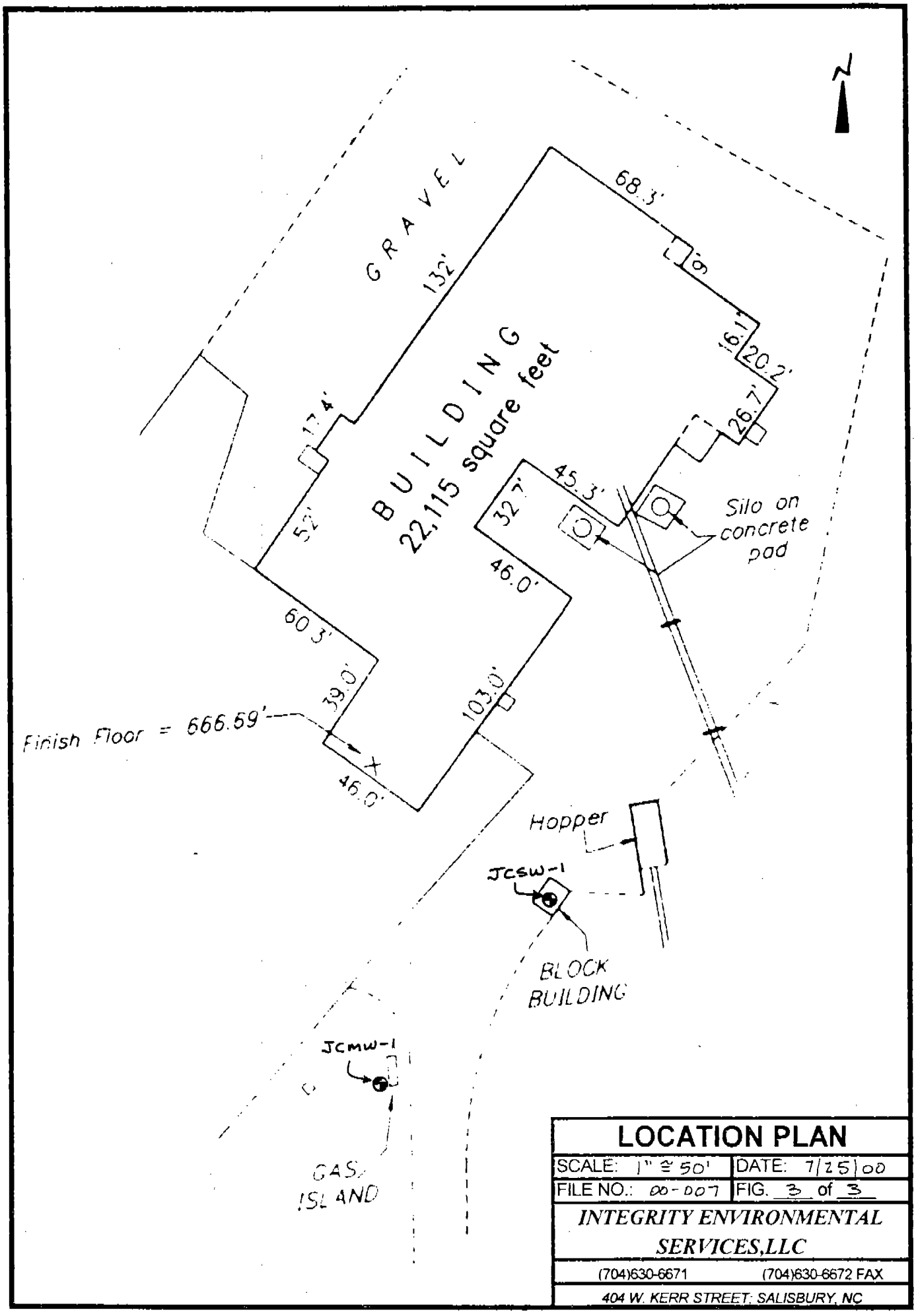
Water Supply Well Information:
Small UST release on-site. We were monitoring the water supply well.

Surface Water Information:
None/NA

NON-UST Contaminants Identified:
Tetrachloroethylene @ 14 µg/l

well owner: Piedmont Block same address (704) 786-4204

For more info see UST File.



LOCATION PLAN	
SCALE: 1" ≅ 50'	DATE: 7/25/00
FILE NO.: 00-007	FIG. 3 of 3

INTEGRITY ENVIRONMENTAL SERVICES,LLC

(704)630-6671 (704)630-6672 FAX

404 W. KERR STREET; SALISBURY, NC

North Carolina
Department of Environment and Natural Resources
Mooresville Regional Office

COPY

Michael F. Easley, Governor
William G. Ross Jr. , Secretary
William L. Meyer, Director

DIVISION OF WASTE MANAGEMENT
March 30, 2001

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Johnson Concrete Company, Inc.
Post Office Box 1037
Salisbury, North Carolina 28144
Attention: Ernest Jackson

Re: Notice of Regulatory Requirements
15A NCAC 2L .0115(f)
Risk-based Assessment and Corrective Action
for Petroleum Underground Storage Tanks
Piedmont Block
Cabarrus County, North Carolina
High Risk Classification
Incident #20172

Dear Mr. Jackson:

Information prepared on January 22, 2001 and received by this office confirms a release or discharge from a petroleum underground storage tank (UST) system at the above-referenced location. This letter is a standard notice explaining the actions you must take as a result of the release or discharge in accordance with North Carolina statutes and rules. The UST Section of the Division of Waste Management administers the state's rules for USTs and the required response for petroleum releases. Those rules are located in Title 15A, Subchapter 2L and Title 15A, Subchapter 2N of the North Carolina Administrative Code (NCAC).

Based on information contained in the Limited Site Assessment the discharge or release at the subject site was classified as **"high risk."** Please note that 15A NCAC 2L .0115(e) requires you to notify the Department of any changes that might affect the risk or land use classifications that have been assigned.

Based on the determination that the risk posed by the discharge or release at the subject site is high, you must comply with assessment and cleanup requirements pursuant to 15A NCAC 2L .0115(f). To achieve compliance with this rule, please submit a Soil Only Comprehensive Site Assessment (CSA) Report in accordance with 15A NCAC 2L .0106(c), 15A NCAC 2L .0106(g), 15A NCAC 2N .0706 and the January 1998 *UST Section Guidelines for the Investigation and Remediation of Soil and Groundwater, Volume II* ("the Guidelines"). The Guidelines are available on the Internet at http://mro.ehnr.state.nc.us/ust or may be purchased from the UST Section for a fee of $7.00. To purchase a copy of the Guidelines, please send a check made payable to DENR to:

DENR/DWM/UST Section
1637 Mail Service Center
Raleigh, NC 27699-1637

The CSA Report must be received by this office **within 90 days** of the date of receipt of this notice. In addition, you must submit a summary of the CSA Report to the local Health Director and the local Chief Administrative Officer in accordance with 15A NCAC 2L .0114. The summary should be submitted to these persons no later than five working days after submittal of the CSA Report to this office.

Your prompt attention to the items described herein is required. Failure to comply with the state's rules in the manner and time specified, may result in the assessment of civil penalties and /or the use of other enforcement mechanisms available to the State. Each day that a violation continues may be considered a separate violation.

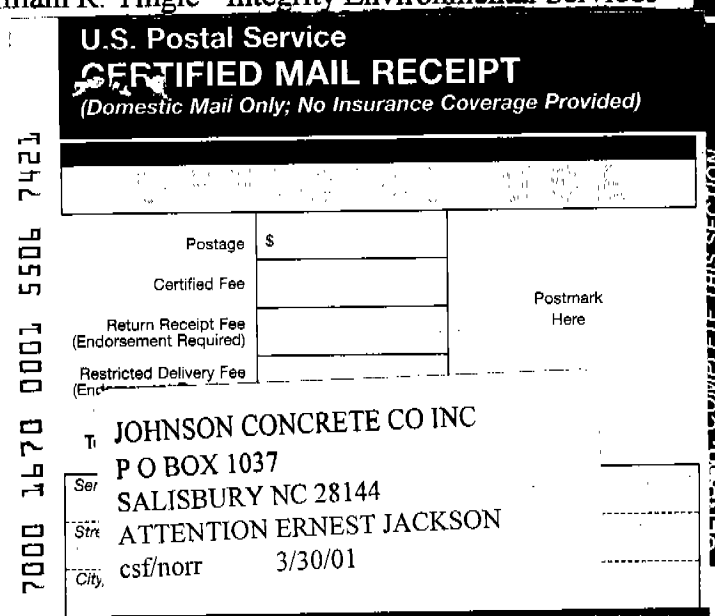
Please note that performing assessment and cleanup work that is not required under 15A NCAC 2L.0115 is not reimbursable from the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds.

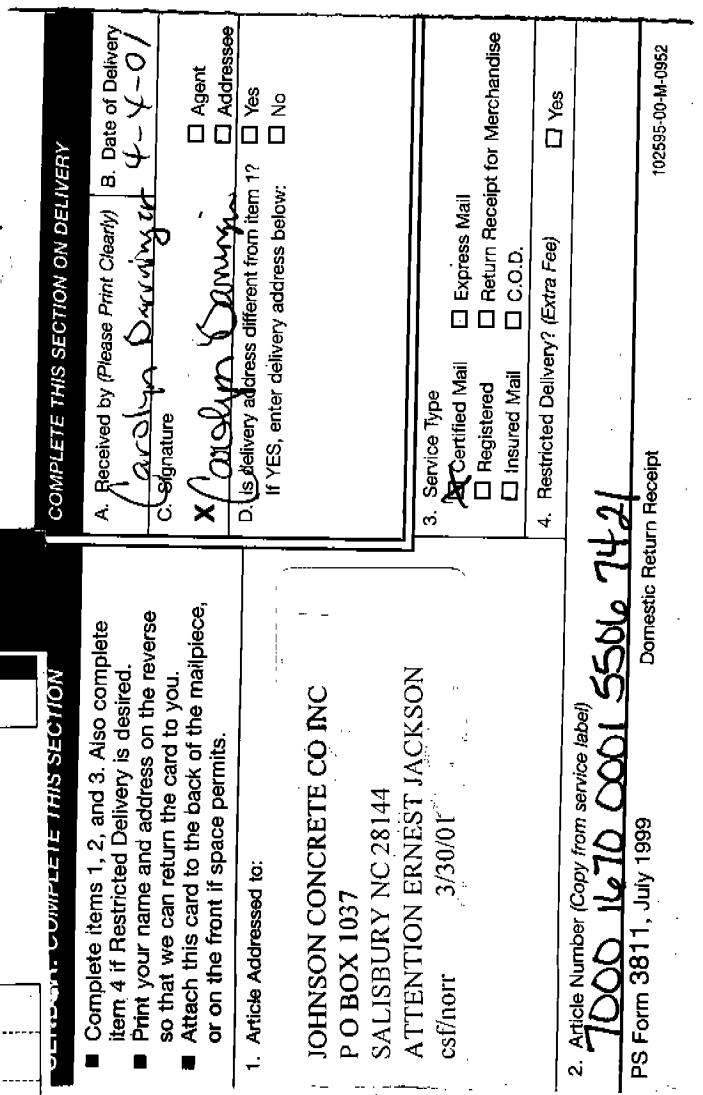
If you have any questions regarding the actions that must be taken or the rules mentioned in this letter, please contact me in the Mooresville Regional Office at the letterhead address and/or at (704) 663-1699 ext. 243. If you have any questions regarding trust fund eligibility or reimbursement, please contact the UST Section at (919) 733-8486.

Sincerely,

Carrie Szot-Ferguson
Hydrogeologist II

cc: Ruth Strauss - Central Office
Cabarrus County Health Department
William R. Tingle - Integrity Environmental Services





SUMMARY REPORT OF ENVIRONMENTAL SERVICES

F&R FILE NO. C63-113E

PIEDMONT BLOCK FACILITY
106 OLD DAVIDSON PLACE
CONCORD, NORTH CAROLINA

PREPARED FOR

JOHNSON CONCRETE COMPANY
CONCORD, NORTH CAROLINA

June 29, 2001

SUMMARY REPORT OF ENVIRONMENTAL SERVICES
PIEDMONT BLOCK FACILITY
106 OLD DAVIDSON PLACE
CONCORD, NORTH CAROLINA
F&R FILE NO. C63-113E

Prepared For:

JOHNSON CONCRETE COMPANY
POST OFFICE BOX 1037
SALISBURY, NORTHCAROLINA 28145

Prepared By:

FROEHLING & ROBERTSON, INC.
2505 HUTCHISON-McDONALD ROAD
CHARLOTTE, NORTH CAROLINA 28269
Telephone: (704) 596-2889
Facsimile: (704) 596-3784

Issue Date: June 29, 2001

Prepared By:

DeWitt Whitten, CHMM, REM, CES
Environmental Group Manager

Sr. Review by Cyrus P. Markle, III

Reviewed By:

Sam E. Phifer, P.G.
Environmental Project Manager

TABLE OF CONTENTS

REPORT OF ENVIRONMENTAL SERVICES
PIEDMONT BLOCK FACILITY
106 OLD DAVIDSON PLACE
CONCORD, NORTH CAROLINA

1.0 EXECUTIVE SUMMARY

Froehling & Robertson, Inc. (F&R) has completed the requested environmental services at the Piedmont Block facility located at 106 Old Davidson Place in Concord, North Carolina. This work was conducted as outlined in our Proposal dated May 1, 2001 and authorized by Mr. Ernest Jackson on June 7, 2001. The following is a summary of our findings and is not intended to replace more detailed information contained elsewhere in this report.

F&R has completed the environmental services which included the monitoring and observation of the removal of contaminated soil by others from the former diesel pump island area at the above referenced location. Based upon the field and laboratory information obtained, it appears that the majority of previously identified contaminated soil has been removed from the project site. Groundwater was not encountered during the field operations. Laboratory analysis of the soil samples indicated that the constituents analyzed for were below the laboratory detection levels and/or the maximum soil contamination levels with the exception of one constituent. 2-Methylnaphthalene (at 3.6 mg/kg) exceeded the Soil to Groundwater allowable concentration of 3 mg/kg but was below the allowable Industrial concentration of 1,635 mg/kg.

In addition to observing the excavation of contaminated soil, F&R personnel also sampled the process water supply well (JCSW-1) located at the above referenced site. Laboratory analysis of the water sample indicated that the constituents analyzed for were below the laboratory detection levels with the exception of one constituent. Tetrachloroethene (also referred to as Tetrachloroethylene) at 0.0583 mg/l exceeded the 2L Groundwater Standard allowable concentration of 0.0007 mg/l. Tetrachloroethylene is a chlorinated compound typically associated with dry cleaning fluids, degreasers, solvents, and paint removers.

2.0 INTRODUCTION

2.1 SCOPE OF SERVICES

F&R proposed to provide the following scope of services for the project site:

- Provide a licensed Professional Geologist to observe and monitor the excavation of diesel fuel impacted soil in the vicinity of the former diesel pump island. The observation and monitoring included evaluating soil samples utilizing a photo-ionization detector (PID) during the soil excavation process to delineate the vertical and horizontal extent of impacted soil.
- Upon the removal of the impacted soil, representative soil samples from the sidewalls and bottom of the excavation were obtained for laboratory analysis by risk-based standards to confirm that a sufficient quantity of soil had been removed.
- Sample the on-site process water supply well as requested by the Mooresville Regional Office (MRO) of the North Carolina Department of Environment and Natural Resources (NCDENR).
- Submit soil and water samples to F&R's NCDENR accredited laboratory for analysis by risk-based standards including methods 8260, 8270, MADEP VPH, MADEP EPH (for soil) and 8210D (for water).
- Prepare a Summary Report for submittal to the North Carolina Department of Environment and Natural Resources.

2.2 LIMITATIONS

This report has been prepared for the exclusive use of Johnson Concrete Company and/or their agents on this specific project. These services have been provided in accordance with generally accepted environmental practices. No other warranty, expressed, or implied, is made. The contents of this report should not be construed in any way to indicate F&R's recommendation to purchase, sell, or further develop the subject site.

Our conclusions and recommendations are based upon information provided to us by others, results of laboratory results, and our site observations and are subject to and limited by the terms and conditions of F&R's Agreement for Environmental Services. We have not verified the completeness or accuracy of the information provided by others, unless noted otherwise. Our observations were based upon conditions readily visible at the site at the time of our visit. If additional information becomes available which may effect our conclusions and recommendations, we request the opportunity to review the information, and reserve the right to modify our report, as warranted.

F&R, by virtue of providing the services described herein, does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies any conditions at the site, which may present a potential concern to public health, safety, or the environment. It is F&R's understanding that the client will notify appropriate regulatory agencies, as required.

3.0 SITE HISTORY

The project site is located at 106 Old Davidson Place and covers approximately 21 acres in Concord, North Carolina (Drawing No. 1 in Appendix I). The site is currently utilized for the manufacture and storage of concrete masonry units. The units are then transported to various locations within the region utilizing trucks. Prior to November 1998, the trucks were refueled from an on-site 10,000 gallon underground storage tank and associated fuel island. It is our understanding that the 10,000 gallon UST was permanently closed on November 4, 1998 by excavation and removal. During the closure process which included the removal of the UST, pump island, and associated piping, it was determined that a release had occurred beneath the pump island. A limited Phase I Site Assessment was performed in September 1999 which included the completion of a 2" Type II groundwater monitoring well at the approximate location shown on Drawing No. 2. Results of the limited Phase I Site Assessment were presented in a report dated January 19, 2000 prepared by Piedmont Environmental Professionals, PA. Analytical results of the soil samples from the monitoring well location indicated the soil in a zone from approximately one foot below land surface (bls) to a depth between ten and thirteen feet bls had been impacted by diesel fuel. Analytical results of the water sample from the monitoring well indicated the water had also been impacted by diesel fuel with the aromatic carbon fraction class C9-C32 (1.07 mg/l) exceeding the 2L Standard (0.21 mg/l) by approximately five times. Correspondingly, the MRO requested the monitoring well (JCSW-1) and the process water supply (JCSW-1) well be sampled on a semi-annual basis with results to be provided to MRO by August 15, 2000 and February 15, 2001. A summary of the analytical results presented in a report dated January 22, 2001 prepared by Integrity Environmental Services, LLC is presented in Table 1.

TABLE 1

	WELL NO.	JCMW - 1			JCSW-1	
	SAMPLE DATE	9/07/99	7/07/00	12/22/00	7/07/00	12/22/00
CONSTITUENT	*2l Standard*					
Aliphatics C5-C8	0.42	ND	ND	ND	ND	ND
Aliphatics C9-C18	4.2	ND	0.24	ND	ND	ND
Aliphatics C19-C36	42.0	ND	ND	ND	ND	ND
Aromatics C9-C22	0.21	**1.07**	**0.553**	ND	ND	ND
Ethylbenzene	0.029	0.0027	ND	ND	ND	ND
Xylenes (mixed)	0.53	0.0072	ND	0.0013	ND	ND
Heptadecane	NS	NA	ND	0.012	ND	ND
Tetrachloroethylene	0.0007	NA	ND	ND	ND	**0.014**

Notes: All units in mg/l
ND – nondetect above method detection limits
Numbers in **bold** exceed the 2L Standard
NS – no 2L Standard
NA – not analyzed for

4.0 FIELD SERVICES

On June 7, 2001, a professional geologist from F&R observed and monitored the excavation and removal of 300 tons of impacted soil at the project site. Initially, the gravel and soils to a depth of approximately two feet below land surface (bls) were excavated and stockpiled for re-use. After reaching a depth of approximately two feet bls, the soils were excavated and stockpiled onsite in accordance with the NCDENR *Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater*. During the removal of the soil, soil samples were obtained at various depths for headspace analysis utilizing a H-Nu PID. The purpose of the headspace analysis was to evaluate when a sufficient quantity of impacted soil had been removed. A summary of the headspace readings is presented in Tables 2 and 3.

TABLE 2

	FLOOR AREA	SOUTH CORNER	MIDDLE	NORTH CORNER
SAMPLE NUMBER	DEPTH, FT (bls)	PID READINGS, ppm		
1	5 to 6	80	110	110
2	6 to 8	80	80	110
3	8 to 10	80	80	110

4	9 to 11	60	< 20	100
5	11 to 12	40		80
6	11 to 12	30		60
7	12 to 13	<20		60
8	14			< 20

TABLE 3

	WALL	SOUTH	EAST	NORTH	WEST
SAMPLE NUMBER	DEPTH, FT bls	PID READINGS, ppm			
1	5 to 7	120	80	120	80
2	6 to 8	120	120	130	80
3	8 to 10	80	60	110	40
4	8 to 10	80	60	80	< 20
5	8 to 10	40	40	80	
6	10 to 12	< 20	40	60	
7	10 to 12		< 20	60	
8	12 to 14			55	
9	12 to 14			40	
10	12 to 14			< 20	

After determining that a sufficient quantity of soil had been removed, soil samples were collected from the sidewalls and bottom of the excavation as shown on Drawing No. 3. A total of six soil samples were collected from the sidewalls and bottom of the excavation. Soil samples were collected in sample containers provided by the laboratory. Upon completion of the soil excavation, the resulting excavation was backfilled with clean fill materials.

In addition to the observation and monitoring of the soil excavation, personnel from F&R obtained a water sample from the process water supply well. The approximate location of the process water well is shown on Drawing No. 2. Prior to sampling the process water supply well, approximately three well volumes were purged from the well. The sample was collected in sample containers supplied by the laboratory.

5.0 LABORATORY SERVICES

Six soil samples and one water sample were submitted to F&R's accredited laboratory in Richmond, Va. via overnight courier (UPS). Chain of custody documentation accompanied the

soil and water samples and is presented in Appendix II. F&R requested the laboratory analyze each soil sample by methods 8260, 8270, MADEP-EPH, and MADEP-VPH. F&R requested the laboratory analyze the water sample by method 6210D. A summary of the laboratory results for the soil samples is presented in Table 4 and a summary of the laboratory results for the water sample (JCSW-1) is presented in Table 5. The laboratory reports are presented in Appendix III.

TABLE 4

	MAX. SOIL CONTAMINANT CONC.		SAMPLE NUMBER/DEPTH, ft bls		
	INDUSTRIAL	SOIL to GW	WS – 1/11'	WS – 4/13'	BS – 2/14'
EPH					
C9-C18 Aliphatics	245280	424799	12	244	14
C19-C36 Aliphatics			BQL	81	BQL
C11-C22 Aromatics	12264	206	BQL	173	BQL
8260					
n-Butylbenzene	4088	4	BQL	0.0251	BQL
Sec-Butylbenzene	4088	3	BQL	0.0245	BQL
Isopropylbenzene	40880	2	BQL	0.0065	BQL
p-Isopropylbenzene	NL	NL	BQL	0.0175	BQL
Naphthalene	1635	0.58	0.0206	0.111	0.0097
n-Propylbenzene	4088	2	BQL	0.0128	BQL
1,2,4-Trimethylbenzene	20440	8	0.0078	0.0891	BQL
1,3,5-Trimethylbenzene	20440	7	BQL	0.0252	BQL
Xylenes	200000	5	BQL	0.0226	BQL
8270					
2-Methylnaphthalene	1635	3	BQL	**3.6**	BQL
Phenanthrene	12264	60	BQL	1.12	BQL

NOTES: All units in mg/kg
BQL – below quantitation limit
Numbers in **bold** exceeds standard

TABLE 5

CONSTITUENT	2L STANDARD	LABORATORY RESULT
Tetrachloroethene	0.0007	**0.0583**

NOTES: All units in mg/kg
BQL – below quantitation limit
Numbers in **bold** exceeds standard

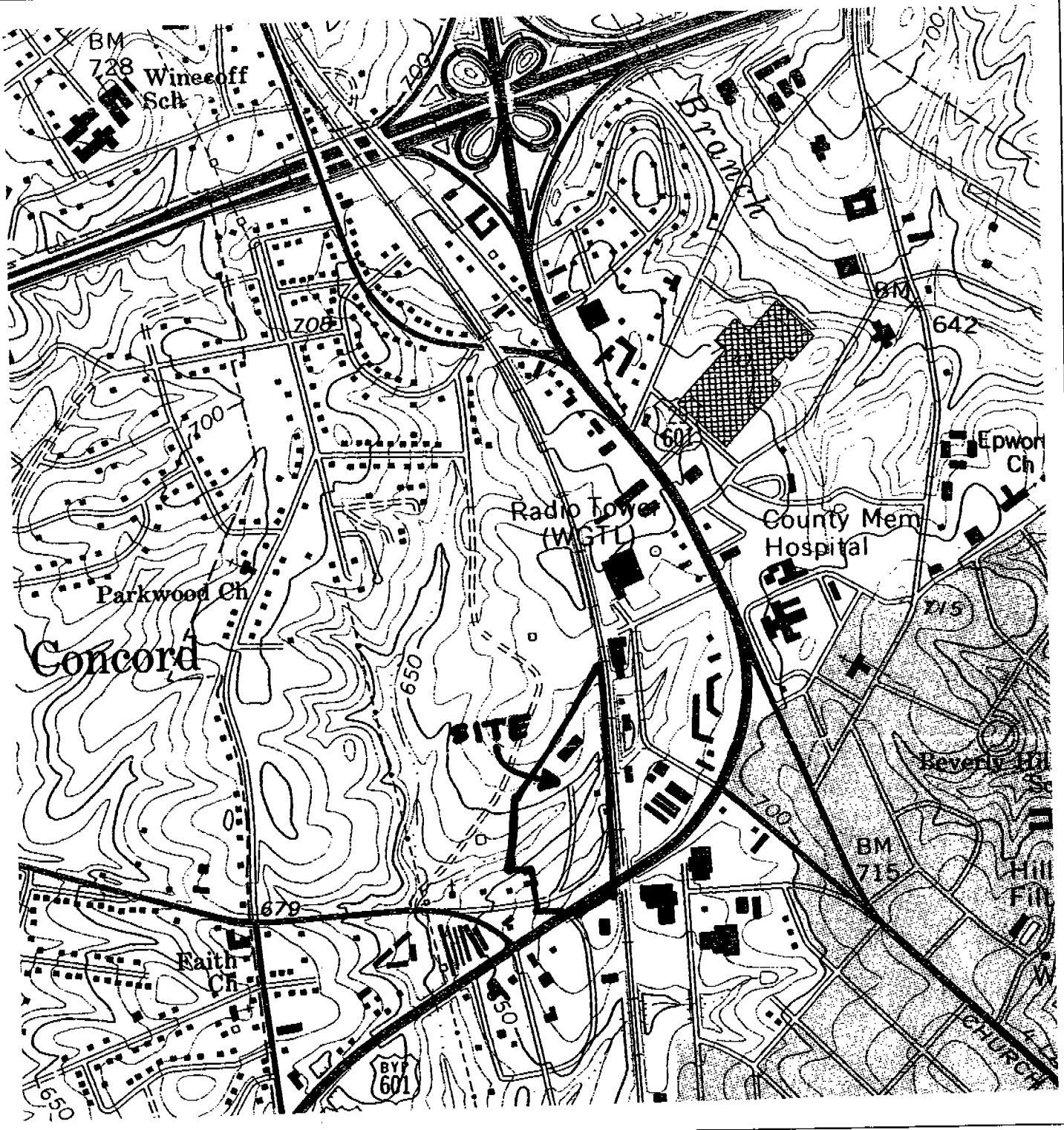
6.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of the field and laboratory data obtained, approximately 300 tons of petroleum impacted soil that was located beneath the former pump island were removed in the area of the pump island. The soil was temporarily stockpiled on site for disposal at a later date.

Results of the laboratory analysis performed on the soil samples obtained during our recent field work did not indicate constituent levels above the laboratory quantitation limits with one exception. Laboratory analysis of the soil samples indicated that the constituents analyzed for were below the laboratory detection levels and/or the maximum soil contamination levels with the exception of one constituent. 2-Methylnaphthalene (at 3.6 mg/kg) exceeded the Soil to Groundwater allowable concentration of 3 mg/kg but was below the allowable Industrial concentration of 1,635 mg/kg. Groundwater was not encountered during the field work on June 7, 2001.

Laboratory analysis of the water sample from the process water well indicated that the constituents analyzed for were below the laboratory detection levels with the exception of one constituent. Tetrachloroethene (also referred to as Tetrachloroethylene) at 0.0583 mg/l exceeded the 2L Groundwater Standard allowable concentration of 0.0007 mg/l. Tetrachloroethylene is a chlorinated compound typically associated with dry cleaning fluids, degreasers, solvents, and paint removers. However, based upon discussions with Johnson Concrete/Piedmont Block personnel, it is our understanding that these types of materials have not been utilized at the facility. It may be possible that the presence of the tetrachloroethene is a from an off-site source.

Based upon this information, F&R recommends that this report be submitted to the NCDENR - MRO along with a letter requesting site closure or no further action required for the project site with regard to the former diesel UST system.



From USGS Quad: Concord, NC dated 1969, p.r. 1987

PIEDMONT BLOCK

106 OLD DAVIDSON PLACE; CONCORD, NC

SITE LOCATION PLAN

SCALE: 1" = 1000' (APPROX.)	DR DW	CHK	REV

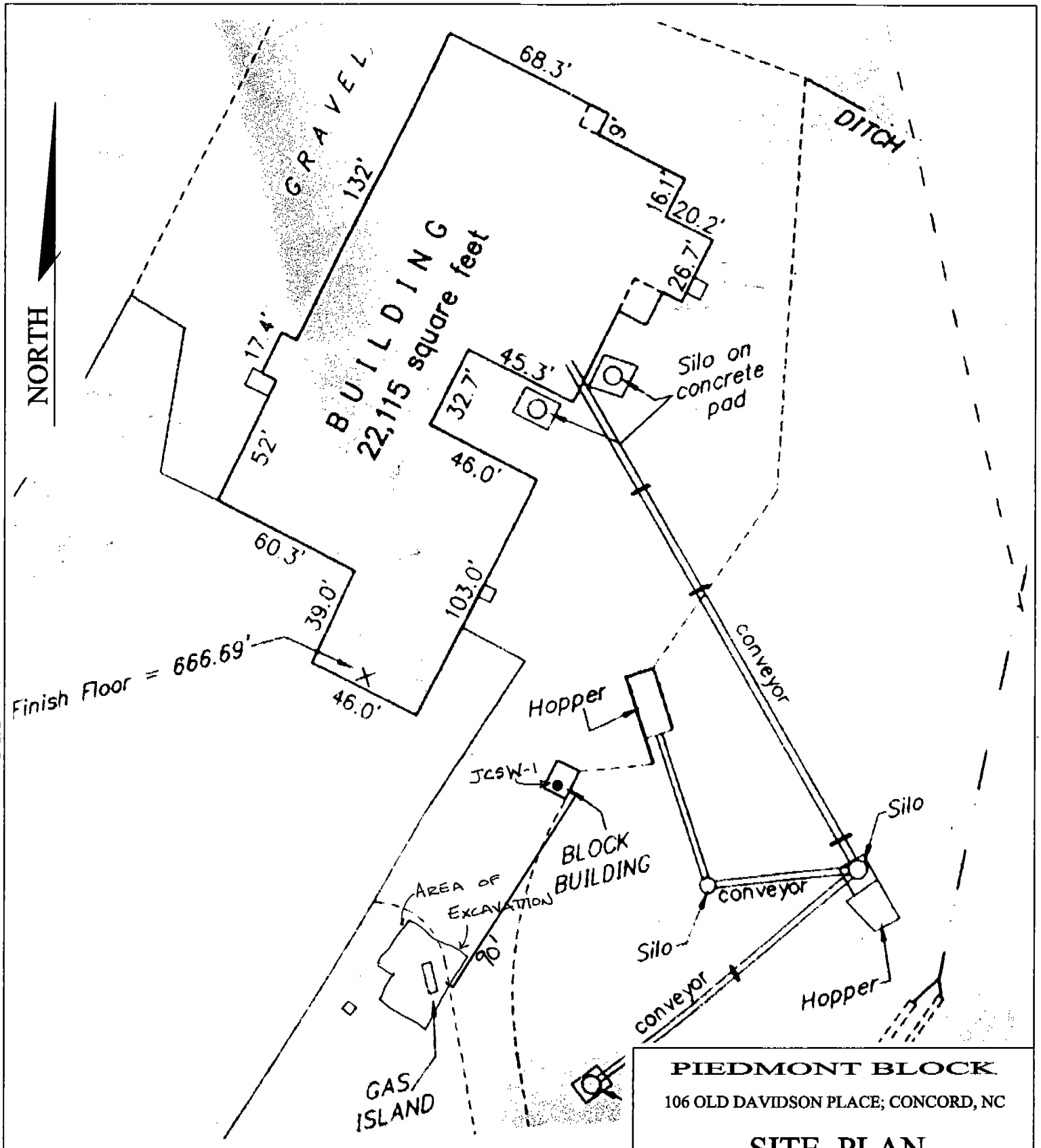
PREPARED FOR:

JOHNSON CONCRETE COMPANY

SINCE 1881

FROEHLING & ROBERTSON, INC.
2806 NORTH GRAHAM STREET
CHARLOTTE, NORTH CAROLINA

PROJ. C63-113E	DATE: 6/28/01	DWG 1 OF 3



PIEDMONT BLOCK

106 OLD DAVIDSON PLACE; CONCORD, NC

SITE PLAN

SCALE: 1" = 50' (APPROX.)	DR DW	CHK	REV

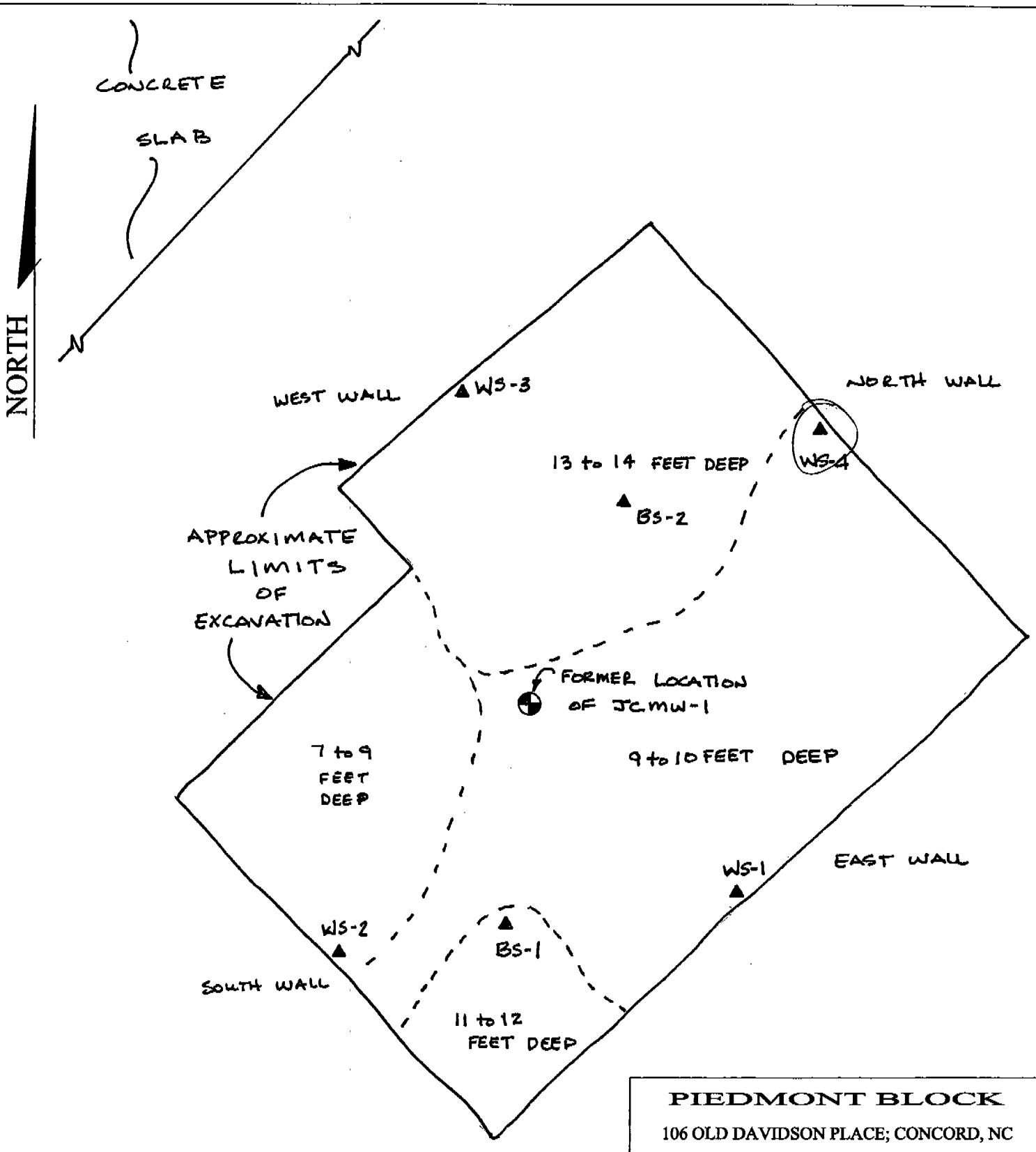
PREPARED FOR:

JOHNSON CONCRETE COMPANY

SINCE 1881

FROEHLING & ROBERTSON, INC.
2806 NORTH GRAHAM STREET
CHARLOTTE, NORTH CAROLINA

PROJ. C63-113E	DATE: 6/28/01	DWG 2 OF 3



▲ APPROXIMATE SAMPLING LOCATION

PIEDMONT BLOCK

106 OLD DAVIDSON PLACE; CONCORD, NC

SAMPLING PLAN

SCALE: 1" = 6' (APPROX.)	DR DW	CHK	REV

PREPARED FOR:

JOHNSON CONCRETE COMPANY

SINCE 1881

FROEHLING & ROBERTSON, INC.
2806 NORTH GRAHAM STREET
CHARLOTTE, NORTH CAROLINA

PROJ. C63-113E	DATE: 6/28/01	DWG 3 OF 3

CHAIN OF CUSTODY RECORD

PIEDMONT BLOCK /

Please Print CLIENT
ADDRESS 2505 HUTCHISON-McDONALD RD
CHARLOTTE, NC 28269
ATTN DeWITT WHITTEN
PHONE/FAX 704-596-2889 / 596-3784

FROEHLING & ROBERTSON, INC.
P.O. BOX 27524
RICHMOND, VIRGINIA 23261
TEL:(804) 264-2701
FAX: (804) 264-1202

LAB PROJECT # 0106074 | PROJECT NAME/NUMBER - Please Print: JOHNSON CONCRETE Co C63-113E

SAMPLED BY — Please Print: SAM PHIFER

LAB I.D.	DATE	TIME	GRAB	COMP	SAMPLE IDENTIFICATION - Please Print	# OF CONTAINERS	SAMPLE (MATRIX)	REQUESTED TEST PARAMETERS - Please Print: 8260	8270	EPH	VPH	6210D
01	6/7/01	11:10	✓		WALL SAMPLE 1	5	SOIL	✓	✓	✓	✓	
02		11:30	✓		WALL SAMPLE 2	5		✓	✓	✓	✓	
03		11:45	✓		WALL SAMPLE 3	5		✓	✓	✓	✓	
04		12:30	✓		WALL SAMPLE 4	5		✓	✓	✓	✓	
05		1:00	✓		BOTTOM SAMPLE 1	5		✓	✓	✓	✓	
06		1:30	✓		BOTTOM SAMPLE 2	5		✓	✓	✓	✓	
* 07		11:00	✓		BLANK	1	LIQUID	✓				
08		16:10	✓		WELL WATER	3	H_2O					✓

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	6/8/01	2:00			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[signature]	6/8/01	1215

SHIPPED VIA VPS OVERNIGHT DATE 6/8/01

FIELD COMMENTS: Please Print
07 VPH Blank - Soil Rec'd
NO VOA H_2O Blank Rec'd

pH _____ TEMP. 1 °C

FORM NO. 1029

SINCE
1881

FROEHLING & ROBERTSON, INC.
GEOTECHNICAL • ENVIRONMENTAL • MATERIALS
ENGINEERS • LABORATORIES
"OVER ONE HUNDRED YEARS OF SERVICE"

CERTIFICATE OF ANALYSIS

June 21, 2001

LAB #: 0106074
CLIENT: F & R Charlotte
Attn: DeWhitt Whitten

PROJECT NAME: Johnson Concrete Co.
PROJECT NO./P.O. #: C63-113E
SAMPLED BY: Sam Phifer
LAB RECEIPT: 6/11/01

PARAMETER	ANALYSIS DATE/TIME	METHOD	ANALYST
Volatile Organic Compounds	06/19/01, 1530	SW846/8260 B	SPF
Volatile Organic Compounds	06/19/01, 1900	SM18/6210 D	SPF
Semivolatile Extraction	06/19/01, 1743	SW846/3550	DO
Semivolatile Organic Compounds	06/20/01, 0906	SW846/8270 C	DB
EPH Extraction	06/15/01, 0940	MADEP EPH	DO
EPH	06/19/01, 2010 & 06/20/01, 1017	MADEP EPH	DG
VPH	06/15/01, 1518	MDEP VPH	VFL

Results on the following pages

Audrey N. Brubeck
Laboratory Manager
ANB/ldm

0106074
Johnson
Concrete Co.

RESULTS:

F&R# :	0106074-01	0106074-02	0106074-03	0106074-04	
SAMPLE ID :	Wall Sample 1	Wall Sample 2	Wall Sample 3	Wall Sample 4	
DATE/TIME :	06/07/01, 1100	06/07/01, 1130	06/07/01, 1145	06/07/01, 1230	
MATRIX :	Soil grab	Soil grab	Soil grab	Soil grab	
Volatile Organics 8260 (µg/kg)					**Quant. Limit:**
Benzene	BQL	BQL	BQL	BQL	5.0
Bromobenzene	BQL	BQL	BQL	BQL	5.0
Bromochloromethane	BQL	BQL	BQL	BQL	5.0
Bromodichloromethane	BQL	BQL	BQL	BQL	5.0
Bromoform	BQL	BQL	BQL	BQL	5.0
Bromomethane	BQL	BQL	BQL	BQL	5.0
n-Butylbenzene	BQL	BQL	BQL	25.1	5.0
sec-Butylbenzene	BQL	BQL	BQL	24.5	5.0
tert-Butylbenzene	BQL	BQL	BQL	BQL	5.0
Carbon tetrachloride	BQL	BQL	BQL	BQL	5.0
Chlorobenzene	BQL	BQL	BQL	BQL	5.0
Chloroethane	BQL	BQL	BQL	BQL	5.0
Chloroform	BQL	BQL	BQL	BQL	5.0
Chloromethane	BQL	BQL	BQL	BQL	5.0
2-Chlorotoluene	BQL	BQL	BQL	BQL	5.0
4-Chlorotoluene	BQL	BQL	BQL	BQL	5.0
Dibromochloromethane	BQL	BQL	BQL	BQL	5.0
1,2-Dibromo-3-chloropropane	BQL	BQL	BQL	BQL	10.0
1,2-Dibromoethane (EDB)	BQL	BQL	BQL	BQL	5.0
Dibromomethane	BQL	BQL	BQL	BQL	5.0
1,2-Dichlorobenzene	BQL	BQL	BQL	BQL	5.0
1,3-Dichlorobenzene	BQL	BQL	BQL	BQL	5.0
1,4-Dichlorobenzene	BQL	BQL	BQL	BQL	5.0
Dichlorodifluoromethane	BQL	BQL	BQL	BQL	5.0
1,1-Dichloroethane	BQL	BQL	BQL	BQL	5.0
1,2-Dichloroethane	BQL	BQL	BQL	BQL	5.0
1,1-Dichloroethene	BQL	BQL	BQL	BQL	5.0
cis-1,2-Dichloroethene	BQL	BQL	BQL	BQL	5.0
trans-1,2-Dichloroethene	BQL	BQL	BQL	BQL	5.0
1,2-Dichloropropane	BQL	BQL	BQL	BQL	5.0
1,3-Dichloropropane	BQL	BQL	BQL	BQL	5.0
2,2-Dichloropropane	BQL	BQL	BQL	BQL	5.0
1,1-Dichloropropene	BQL	BQL	BQL	BQL	5.0
Ethylbenzene	BQL	BQL	BQL	BQL	5.0
Hexachlorobutadiene	BQL	BQL	BQL	BQL	5.0
Isopropylbenzene	BQL	BQL	BQL	6.5	5.0
p-Isopropyltoluene	BQL	BQL	BQL	17.5	5.0
Methylene chloride	BQL	BQL	BQL	BQL	10.0
Naphthalene	20.6	BQL	BQL	111	5.0

RESULTS:

F&R# :	0106074-01	0106074-02	0106074-03	0106074-04	
SAMPLE ID :	Wall Sample 1	Wall Sample 2	Wall Sample 3	Wall Sample 4	
DATE/TIME :	06/07/01, 1100	06/07/01, 1130	06/07/01, 1145	06/07/01, 1230	
MATRIX :	Soil grab	Soil grab	Soil grab	Soil grab	
Volatile Organics 8260 (µg/kg)					**Quant. Limit:**
n-Propylbenzene	BQL	BQL	BQL	12.8	5.0
Styrene	BQL	BQL	BQL	BQL	5.0
1,1,1,2-Tetrachloroethane	BQL	BQL	BQL	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	BQL	BQL	BQL	5.0
Tetrachloroethene	BQL	BQL	BQL	BQL	5.0
Toluene	BQL	BQL	BQL	BQL	5.0
1,2,3-Trichlorobenzene	BQL	BQL	BQL	BQL	5.0
1,2,4-Trichlorobenzene	BQL	BQL	BQL	BQL	5.0
1,1,1-Trichloroethane	BQL	BQL	BQL	BQL	5.0
1,1,2-Trichloroethane	BQL	BQL	BQL	BQL	5.0
Trichloroethene	BQL	BQL	BQL	BQL	5.0
Trichlorofluoromethane	BQL	BQL	BQL	BQL	5.0
1,2,3-Trichloropropane	BQL	BQL	BQL	BQL	5.0
1,2,4-Trimethylbenzene	7.8	BQL	BQL	89.1	5.0
1,3,5-Trimethylbenzene	BQL	BQL	BQL	25.2	5.0
Vinyl Chloride	BQL	BQL	BQL	BQL	5.0
m,p-Xylene	BQL	BQL	BQL	14.5	10.0
o-Xylene	BQL	BQL	BQL	8.1	5.0

µg/kg=micrograms per kilograms

BQL=Below Quantitation Limit

0106074
Johnson
Concrete Co.

RESULTS:

F&R# :	0106074-05	0106074-06
SAMPLE ID :	Bottom Sample 1	Bottom Sample 2
DATE/TIME :	06/07/01, 1300	06/07/01, 1330
MATRIX :	Soil grab	Soil grab

Volatile Organics 8260 (µg/kg)			**Quant. Limit:**
Benzene	BQL	BQL	5.0
Bromobenzene	BQL	BQL	5.0
Bromochloromethane	BQL	BQL	5.0
Bromodichloromethane	BQL	BQL	5.0
Bromoform	BQL	BQL	5.0
Bromomethane	BQL	BQL	5.0
n-Butylbenzene	BQL	BQL	5.0
sec-Butylbenzene	BQL	BQL	5.0
tert-Butylbenzene	BQL	BQL	5.0
Carbon tetrachloride	BQL	BQL	5.0
Chlorobenzene	BQL	BQL	5.0
Chloroethane	BQL	BQL	5.0
Chloroform	BQL	BQL	5.0
Chloromethane	BQL	BQL	5.0
2-Chlorotoluene	BQL	BQL	5.0
4-Chlorotoluene	BQL	BQL	5.0
Dibromochloromethane	BQL	BQL	5.0
1,2-Dibromo-3-chloropropane	BQL	BQL	10.0
1,2-Dibromoethane (EDB)	BQL	BQL	5.0
Dibromomethane	BQL	BQL	5.0
1,2-Dichlorobenzene	BQL	BQL	5.0
1,3-Dichlorobenzene	BQL	BQL	5.0
1,4-Dichlorobenzene	BQL	BQL	5.0
Dichlorodifluoromethane	BQL	BQL	5.0
1,1-Dichloroethane	BQL	BQL	5.0
1,2-Dichloroethane	BQL	BQL	5.0
1,1-Dichloroethene	BQL	BQL	5.0
cis-1,2-Dichloroethene	BQL	BQL	5.0
trans-1,2-Dichloroethene	BQL	BQL	5.0
1,2-Dichloropropane	BQL	BQL	5.0
1,3-Dichloropropane	BQL	BQL	5.0
2,2-Dichloropropane	BQL	BQL	5.0
1,1-Dichloropropene	BQL	BQL	5.0
Ethylbenzene	BQL	BQL	5.0
Hexachlorobutadiene	BQL	BQL	5.0
Isopropylbenzene	BQL	BQL	5.0
p-Isopropyltoluene	BQL	BQL	5.0
Methylene chloride	BQL	BQL	10.0
Naphthalene	BQL	9.7	5.0

RESULTS:

F&R# :	0106074-05	0106074-06
SAMPLE ID :	Bottom Sample 1	Bottom Sample 2
DATE/TIME :	06/07/01, 1300	06/07/01, 1330
MATRIX :	Soil grab	Soil grab

Volatile Organics 8260 (µg/kg)			**Quant. Limit:**
n-Propylbenzene	BQL	BQL	5.0
Styrene	BQL	BQL	5.0
1,1,1,2-Tetrachloroethane	BQL	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	BQL	5.0
Tetrachloroethene	BQL	BQL	5.0
Toluene	BQL	BQL	5.0
1,2,3-Trichlorobenzene	BQL	BQL	5.0
1,2,4-Trichlorobenzene	BQL	BQL	5.0
1,1,1-Trichloroethane	BQL	BQL	5.0
1,1,2-Trichloroethane	BQL	BQL	5.0
Trichloroethene	BQL	BQL	5.0
Trichlorofluoromethane	BQL	BQL	5.0
1,2,3-Trichloropropane	BQL	BQL	5.0
1,2,4-Trimethylbenzene	BQL	BQL	5.0
1,3,5-Trimethylbenzene	BQL	BQL	5.0
Vinyl Chloride	BQL	BQL	5.0
m,p-Xylene	BQL	BQL	10.0
o-Xylene	BQL	BQL	5.0

µg/kg=micrograms per kilograms

BQL=Below Quantitation Limit

0106074
Johnson
Concrete Co.

RESULTS:

F&R# :	0106074-08
SAMPLE ID :	Well Water
DATE/TIME :	06/07/01, 1600
MATRIX :	Water grab

Volatile Organics 6210D (µg/L)		**Quant. Limit:**
Benzene	BQL	5.0
Bromobenzene	BQL	5.0
Bromochloromethane	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	5.0
n-Butylbenzene	BQL	5.0
sec-Butylbenzene	BQL	5.0
tert-Butylbenzene	BQL	5.0
Carbon tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	5.0
Chloroform	BQL	5.0
Chloromethane	BQL	5.0
2-Chlorotoluene	BQL	5.0
4-Chlorotoluene	BQL	5.0
Dibromochloromethane	BQL	5.0
1,2-Dibromo-3-chloropropane	BQL	10.0
1,2-Dibromoethane (EDB)	BQL	5.0
Dibromomethane	BQL	5.0
1,2-Dichlorobenzene	BQL	5.0
1,3-Dichlorobenzene	BQL	5.0
1,4-Dichlorobenzene	BQL	5.0
Dichlorodifluoromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
cis-1,2-Dichloroethene	BQL	5.0
trans-1,2-Dichloroethene	BQL	5.0
1,2-Dichloropropane	BQL	5.0
1,3-Dichloropropane	BQL	5.0
2,2-Dichloropropane	BQL	5.0
1,1-Dichloropropene	BQL	5.0
Ethylbenzene	BQL	5.0
Hexachlorobutadiene	BQL	5.0
Isopropylbenzene	BQL	5.0
p-Isopropyltoluene	BQL	5.0
Methylene chloride	BQL	10.0
Naphthalene	BQL	5.0

RESULTS:

F&R# :	0106074-08
SAMPLE ID :	Well Water
DATE/TIME :	06/07/01, 1600
MATRIX :	Water grab

Volatile Organics 6210D (µg/L)		**Quant. Limit:**
n-Propylbenzene	BQL	5.0
Styrene	BQL	5.0
1,1,1,2-Tetrachloroethane	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	58.3	5.0
Toluene	BQL	5.0
1,2,3-Trichlorobenzene	BQL	5.0
1,2,4-Trichlorobenzene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Trichlorofluoromethane	BQL	5.0
1,2,3-Trichloropropane	BQL	5.0
1,2,4-Trimethylbenzene	BQL	5.0
1,3,5-Trimethylbenzene	BQL	5.0
Vinyl Chloride	BQL	5.0
m,p-Xylene	BQL	10.0
o-Xylene	BQL	5.0

µg/L=micrograms per Liter

BQL=Below Quantitation Limit

RESULTS:

F&R# :	0106074-01	0106074-02	0106074-03	0106074-04
SAMPLE ID :	Wall Sample 1	Wall Sample 2	Wall Sample 3	Wall Sample 4
DATE/TIME :	06/07/01, 1100	06/07/01, 1130	06/07/01, 1145	06/07/01, 1230
MATRIX :	Soil grab	Soil grab	Soil grab	Soil grab

Semivolatile Organics 8270 (µg/kg)					**Quant. Limit:**
Acenaphthene	BQL	BQL	BQL	BQL	400
Acenaphthylene	BQL	BQL	BQL	BQL	400
Aniline	BQL	BQL	BQL	BQL	400
Anthracene	BQL	BQL	BQL	BQL	400
Benzo(a)anthracene	BQL	BQL	BQL	BQL	400
Benzo(b)fluoranthene	BQL	BQL	BQL	BQL	400
Benzo(k)fluoranthene	BQL	BQL	BQL	BQL	400
Benzo(g,h,i)perylene	BQL	BQL	BQL	BQL	400
Benzo(a)pyrene	BQL	BQL	BQL	BQL	400
bis(2-Chloroethoxy)methane	BQL	BQL	BQL	BQL	400
bis(2-Chloroethyl)ether	BQL	BQL	BQL	BQL	400
bis(2-Chloroisopropyl)ether	BQL	BQL	BQL	BQL	400
bis(2-Ethylhexyl)phthalate	BQL	BQL	BQL	BQL	400
4-Bromophenyl-phenylether	BQL	BQL	BQL	BQL	400
Butylbenzylphthalate	BQL	BQL	BQL	BQL	400
4-Chloroaniline	BQL	BQL	BQL	BQL	400
4-Chloro-3-methylphenol	BQL	BQL	BQL	BQL	400
2-Chloronaphthalene	BQL	BQL	BQL	BQL	400
2-Chlorophenol	BQL	BQL	BQL	BQL	400
4-Chlorophenylphenylether	BQL	BQL	BQL	BQL	400
Chrysene	BQL	BQL	BQL	BQL	400
Dibenz[a,h]anthracene	BQL	BQL	BQL	BQL	400
Dibenzofuran	BQL	BQL	BQL	BQL	400
Di-n-butylphthalate	BQL	BQL	BQL	BQL	400
1,2-Dichlorobenzene	BQL	BQL	BQL	BQL	400
1,3-Dichlorobenzene	BQL	BQL	BQL	BQL	400
1,4-Dichlorobenzene	BQL	BQL	BQL	BQL	400
3,3-Dichlorobenzidine	BQL	BQL	BQL	BQL	400
2,4-Dichlorophenol	BQL	BQL	BQL	BQL	400
Diethylphthalate	BQL	BQL	BQL	BQL	400
2,4-Dimethylphenol	BQL	BQL	BQL	BQL	400
Dimethylphthalate	BQL	BQL	BQL	BQL	400
4,6-Dinitro-2-methylphenol	BQL	BQL	BQL	BQL	1600
2,4-Dinitrophenol	BQL	BQL	BQL	BQL	1600
2,4-Dinitrotoluene	BQL	BQL	BQL	BQL	400
2,6-Dinitrotoluene	BQL	BQL	BQL	BQL	400
Di-n-octylphthalate	BQL	BQL	BQL	BQL	400
Fluoranthene	BQL	BQL	BQL	BQL	400

RESULTS:

F&R# :	0106074-01	0106074-02	0106074-03	0106074-04	
SAMPLE ID :	Wall Sample 1	Wall Sample 2	Wall Sample 3	Wall Sample 4	
DATE/TIME :	06/07/01, 1100	06/07/01, 1130	06/07/01, 1145	06/07/01, 1230	
MATRIX :	Soil grab	Soil grab	Soil grab	Soil grab	
Semivolatile Organics 8270 (µg/kg)					**Quant. Limit:**
Fluorene	BQL	BQL	BQL	BQL	400
Hexachlorobenzene	BQL	BQL	BQL	BQL	400
Hexachlorobutadiene	BQL	BQL	BQL	BQL	400
Hexachlorocyclopentadiene	BQL	BQL	BQL	BQL	400
Hexachloroethane	BQL	BQL	BQL	BQL	400
Indeno[1,2,3-c,d]pyrene	BQL	BQL	BQL	BQL	400
2-Methylnaphthalene	BQL	BQL	BQL	3600	400
2-Methylphenol	BQL	BQL	BQL	BQL	400
m-,p-Methylphenol	BQL	BQL	BQL	BQL	400
Naphthalene	BQL	BQL	BQL	BQL	400
2-Nitroaniline	BQL	BQL	BQL	BQL	400
3-Nitroaniline	BQL	BQL	BQL	BQL	400
4-Nitroaniline	BQL	BQL	BQL	BQL	400
Nitrobenzene	BQL	BQL	BQL	BQL	400
2-Nitrophenol	BQL	BQL	BQL	BQL	400
4-Nitrophenol	BQL	BQL	BQL	BQL	1600
n-Nitrosodimethylamine	BQL	BQL	BQL	BQL	400
n-Nitroso-diphenylamine	BQL	BQL	BQL	BQL	400
n-Nitroso-di-n-propylamine	BQL	BQL	BQL	BQL	400
Pentachlorophenol	BQL	BQL	BQL	BQL	1600
Phenanthrene	BQL	BQL	BQL	1120	400
Phenol	BQL	BQL	BQL	BQL	400
Pyrene	BQL	BQL	BQL	BQL	400
1,2,4-Trichlorobenzene	BQL	BQL	BQL	BQL	400
2,4,5-Trichlorophenol	BQL	BQL	BQL	BQL	400
2,4,6-Trichlorophenol	BQL	BQL	BQL	BQL	400

µg/kg=micrograms per kilogram

BQL=Below Quantitation Limit

RESULTS:

F&R# :	0106074-05	0106074-06
SAMPLE ID :	Bottom Sample 1	Bottom Sample 2
DATE/TIME :	06/07/01, 1300	06/07/01, 1330
MATRIX :	Soil grab	Soil grab

Semivolatile Organics 8270 (µg/kg)			**Quant. Limit:**
Acenaphthene	BQL	BQL	400
Acenaphthylene	BQL	BQL	400
Aniline	BQL	BQL	400
Anthracene	BQL	BQL	400
Benzo(a)anthracene	BQL	BQL	400
Benzo(b)fluoranthene	BQL	BQL	400
Benzo(k)fluoranthene	BQL	BQL	400
Benzo(g,h,i)perylene	BQL	BQL	400
Benzo(a)pyrene	BQL	BQL	400
bis(2-Chloroethoxy)methane	BQL	BQL	400
bis(2-Chloroethyl)ether	BQL	BQL	400
bis(2-Chloroisopropyl)ether	BQL	BQL	400
bis(2-Ethylhexyl)phthalate	BQL	BQL	400
4-Bromophenyl-phenylether	BQL	BQL	400
Butylbenzylphthalate	BQL	BQL	400
4-Chloroaniline	BQL	BQL	400
4-Chloro-3-methylphenol	BQL	BQL	400
2-Chloronaphthalene	BQL	BQL	400
2-Chlorophenol	BQL	BQL	400
4-Chlorophenylphenylether	BQL	BQL	400
Chrysene	BQL	BQL	400
Dibenz[a,h]anthracene	BQL	BQL	400
Dibenzofuran	BQL	BQL	400
Di-n-butylphthalate	BQL	BQL	400
1,2-Dichlorobenzene	BQL	BQL	400
1,3-Dichlorobenzene	BQL	BQL	400
1,4-Dichlorobenzene	BQL	BQL	400
3,3-Dichlorobenzidine	BQL	BQL	400
2,4-Dichlorophenol	BQL	BQL	400
Diethylphthalate	BQL	BQL	400
2,4-Dimethylphenol	BQL	BQL	400
Dimethylphthalate	BQL	BQL	400
4,6-Dinitro-2-methylphenol	BQL	BQL	1600
2,4-Dinitrophenol	BQL	BQL	1600
2,4-Dinitrotoluene	BQL	BQL	400
2,6-Dinitrotoluene	BQL	BQL	400
Di-n-octylphthalate	BQL	BQL	400
Fluoranthene	BQL	BQL	400

RESULTS:

F&R# :	0106074-05	0106074-06
SAMPLE ID :	Bottom Sample 1	Bottom Sample 2
DATE/TIME :	06/07/01, 1300	06/07/01, 1330
MATRIX :	Soil grab	Soil grab

Semivolatile Organics 8270 (µg/kg)			**Quant. Limit:**
Fluorene	BQL	BQL	400
Hexachlorobenzene	BQL	BQL	400
Hexachlorobutadiene	BQL	BQL	400
Hexachlorocyclopentadiene	BQL	BQL	400
Hexachloroethane	BQL	BQL	400
Indeno[1,2,3-c,d]pyrene	BQL	BQL	400
2-Methylnaphthalene	BQL	BQL	400
2-Methylphenol	BQL	BQL	400
m-,p-Methylphenol	BQL	BQL	400
Naphthalene	BQL	BQL	400
2-Nitroaniline	BQL	BQL	400
3-Nitroaniline	BQL	BQL	400
4-Nitroaniline	BQL	BQL	400
Nitrobenzene	BQL	BQL	400
2-Nitrophenol	BQL	BQL	400
4-Nitrophenol	BQL	BQL	1600
n-Nitrosodimethylamine	BQL	BQL	400
n-Nitroso-diphenylamine	BQL	BQL	400
n-Nitroso-di-n-propylamine	BQL	BQL	400
Pentachlorophenol	BQL	BQL	1600
Phenanthrene	BQL	BQL	400
Phenol	BQL	BQL	400
Pyrene	BQL	BQL	400
1,2,4-Trichlorobenzene	BQL	BQL	400
2,4,5-Trichlorophenol	BQL	BQL	400
2,4,6-Trichlorophenol	BQL	BQL	400

µg/kg=micrograms per kilogram

BQL=Below Quantitation Limit

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: F&R Charlotte
Project Name: Johnson Concrete Co.
Site Location: Johnson Concrete Co.

Laboratory Name: Froehling & Robertson, Inc.
NC Certification # (Lab): 432
Sample Matrix: soil

Sample Information and Analytical Results

		F&R Sample #			0106074-01	0106074-02	0106074-03	
Method for Ranges: MADEP EPH		**Sample Identification**			Wall Sample1	Wall Sample2	Wall Sample3	
EPH Surrogate Standards		**Date Collected**			6/7/01	6/7/01	6/7/01	
Aliphatic: 1-chlorooctadecane		**Date Received**			6/9/01	6/9/01	6/9/01	
Aromatic: ortho-terphenyl		**Date Extracted**			6/15/01	6/15/01	6/15/01	
EPH Fractionation Surrogates		**Date Analyzed**			6/19/01	6/19/01	6/19/01	
#1: 2-fluorobiphenyl		**% Dry Solids**			82	78	86	
#2: 2-bromonaphthalene		**Dilution Factor**			1	1	1	
Hydrocarbon Ranges	**Units of Measure**	**MDL**	**RL**	**Blank**				
C9 - C18 Aliphatics*	**mg/kg**	1	10	<10	12	<10	<10	
C19 - C36 Aliphatics*	**mg/kg**	2	10	14	<10	<10	<10	
C11 - C22 Aromatics*	**mg/kg**	2	10	13	<10	<10	<10	
Sample Surrogate Acceptance Range				**40-140%**	**40-140%**	**40-140%**	**40-140%**	**40-140%**
Aliphatic Surrogate % Recovery				52	48	65	59	
Aromatic Surrogate % Recovery				69	70	61	67	
Fractionation Surrogate Acceptance Range				**40-140%**	**40-140%**	**40-140%**	**40-140%**	**40-140%**
Fractionation Surrogate #1 % Recovery				84	83	80	83	
Fractionation Surrogate #2 % Recovery				66	67	51	60	

* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.
MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? **Yes**

Was blank correction applied as a significant modification of the method ? **Yes**

Were any significant modifications to the EPH method made? **Yes - blank correction**

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: F&R Charlotte
Project Name: Johnson Concrete Co.
Site Location: Johnson Concrete Co.

Laboratory Name: Froehling & Robertson, Inc.
NC Certification # (Lab): 432
Sample Matrix: soil

Sample Information and Analytical Results

		F&R Sample #			0106074-04	0106074-04 dup	0106074-05	0106074-06
Method for Ranges: MADEP EPH		**Sample Identification**			Wall Sample4	Wall Sample4	Bottom Sample1	Bottom Sample2
EPH Surrogate Standards		**Date Collected**			6/7/01	6/7/01	6/7/01	6/7/01
Aliphatic: 1-chlorooctadecane		**Date Received**			6/9/01	6/9/01	6/9/01	6/9/01
Aromatic: ortho-terphenyl		**Date Extracted**			6/15/01	6/15/01	6/15/01	6/15/01
EPH Fractionation Surrogates		**Date Analyzed**			6/19,20/01	6/19,20/01	6/19/01	6/19/01
#1: 2-fluorobiphenyl		**% Dry Solids**			88	88	81	82
#2: 2-bromonaphthalene		**Dilution Factor**			**	**	1	1
Hydrocarbon Ranges	**Units of Measure**	**MDL**	**RL**	**Blank**				
C9 - C18 Aliphatics*	**mg/kg**	1	10	<10	244	253	<10	14
C19 - C36 Aliphatics*	**mg/kg**	2	10	14	81	71	<10	<10
C11 - C22 Aromatics*	**mg/kg**	2	10	13	173	158	<10	<10
Sample Surrogate Acceptance Range				**40-140%**	**40-140%**	**40-140%**	**40-140%**	**40-140%**
Aliphatic Surrogate % Recovery				52	45	50	44	66
Aromatic Surrogate % Recovery				69	62	74	65	68
Fractionation Surrogate Acceptance Range				**40-140%**	**40-140%**	**40-140%**	**40-140%**	**40-140%**
Fractionation Surrogate #1 % Recovery				84	82	90	85	76
Fractionation Surrogate #2 % Recovery				66	79	81	72	50

* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.
MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank

EPH rev. 11/00 **C9-C18=5, C19-C36=1, C11-C22=1

Were all performance/acceptance standards for required QA/QC procedures achieved? Yes

Was blank correction applied as a significant modification of the method ? Yes

Were any significant modifications to the EPH method made? Yes - blank correction

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name **F&R Charlotte**
Project Name **Johnson Concrete Co.**
Site Location **Johnson Concrete Co.**

Laboratory Name **FROEHLING & ROBERTSON, INC**
NC Certification # (Lab) **432**
Sample Matrix **soil**

Sample Information and Analytical Results

Method for Ranges: MADEP VPH

VPH Surrogate Standards
Aliphatic: 2,5-Dibromotoluene
Aromatic: 2,5-Dibromotoluene

		F&R Sample ID			0106074-01	0106074-02	0106074-03	0106074-04
		Sample Identification			WS #1	WS #2	WS #3	WS #4
		Collection Option (for soil)*			3	3	3	3
		Date Collected			6/7/01	6/7/01	6/7/01	6/7/01
		Date Received			6/9/01	6/9/01	6/9/01	6/9/01
		Date Extracted						
		Date Analyzed			06/15/01	06/15/01	06/15/01	06/15/01
		% Dry Solids			82	78	86	88
		Dry Weight			18.0	12.6	13.4	13.2
		Dilution Factor			50	50	50	50
Hydrocarbon Ranges	**Units of Measure**	**MDL**	**RL**	**Blank**				
C5 - C8 Aliphatics**	**mg/kg**	0.22 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg
C9 - C12 Aliphatics**	**mg/kg**	0.06 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	10 mg/kg
C9 - C10 Aromatics**	**mg/kg**	0.08 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg
Sample Surrogate Acceptance Range				**70-130%**	**70-130%**	**70-130%**	**70-130%**	**70-130%**
Aliphatic Surrogate % Recovery - FID				96%	104%	101%	72%	116%
Aromatic Surrogate % Recovery - PID				91%	102%	100%	71%	104%

* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil

** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.

MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank or Trip Blank whichever is higher (indicate type)

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? **Yes**

Were any significant modifications to the VPH method made? **No**

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name **F&R Charlotte**
Project Name **Johnson Concrete Co.**
Site Location **Johnson Concrete Co.**

Laboratory Name **FROEHLING & ROBERTSON, INC**
NC Certification # (Lab) **432**
Sample Matrix **soil**

Sample Information and Analytical Results

Method for Ranges: MADEP VPH

VPH Surrogate Standards
Aliphatic: 2,5-Dibromotoluene
Aromatic: 2,5-Dibromotoluene

				F&R Sample ID	0106074-04Dup	0106074-05	0106074-06	0106074-07
				Sample Identification	WS #4	Bottle # 1	Bottle # 2	VPH Blank
				Collection Option (for soil)*	3	3	3	
				Date Collected	6/7/01	6/7/01	6/7/01	
				Date Received	6/9/01	6/9/01	6/9/01	6/9/01
				Date Extracted				
				Date Analyzed	06/15/01	06/15/01	06/15/01	06/15/01
				% Dry Solids	88	81	82	
				Dry Weight	13.2	13.7	12.1	15.0
				Dilution Factor	50	50	50	50
Hydrocarbon Ranges	**Units of Measure**	**MDL**	**RL**	**Blank**				
C5 - C8 Aliphatics**	**mg/kg**	0.22 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg
C9 - C12 Aliphatics**	**mg/kg**	0.06 mg/kg	10 mg/kg	<10 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg
C9 - C10 Aromatics**	**mg/kg**	0.08 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg
Sample Surrogate Acceptance Range				**70-130%**	**70-130%**	**70-130%**	**70-130%**	**70-130%**
Aliphatic Surrogate % Recovery - FID				96%	104%	122%	106%	122%
Aromatic Surrogate % Recovery - PID				91%	103%	116%	100%	117%

* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil

** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.

MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank or Trip Blank whichever is higher (indicate type)

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? **Yes**

Were any significant modifications to the VPH method made? **No**

North Carolina
Department of Environment and Natural Resources
Mooresville Regional Office

Michael F. Easley, Governor
William G. Ross Jr. , Secretary
William L. Meyer, Director

Division of Waste Management
July 2, 2001

CERTIFIED MAIL 7000 1670 0001 5512 8689
RETURN RECEIPT REQUESTED
Johnson Concrete Company
PO Box 1037
Salisbury, North Carolina 28145

RE: Notice of Regulatory Requirements
15A NCAC 2L .0115 (c)
RISK-BASED ASSESSMENT AND CORRECTIVE ACTION FOR PETROLEUM UNDERGROUND STORAGE TANKS
Piedmont Block Facility
106 Old Davidson Place
Concord, North Carolina
Cabarrus County
Incident # 20172

Dear Sirs:

Information received by this office on June 29, 2001 confirms a release or discharge from a diesel underground storage tank (UST) system at the above referenced location. Records indicate that you are the owner and/or operator of this UST tank system. This letter is a standard notice explaining the actions you must take as a result of the release or discharge in accordance with North Carolina statutes and rules. The UST Section of the Division of Waste Management administers the state's rules for UST's and the required response for petroleum releases. Those rules are located in Title 15A, Subchapter 2L and Title 15A, Subchapter 2N of the North Carolina Administrative Code (NCAC).

As a responsible party, you are required to comply with the release response and corrective action requirements of 15A NCAC 2L .0115(c), which include the requirements established in 15A NCAC 2N. Listed is a general description of action you must take to comply with State rules. For a detailed description of your requirements please refer to the enclosed rules and the January 1998 *Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater, Volume II* ("the Guidelines"). The Guidelines are available on the Internet at http://mro.enr.state.nc.us/ust or may be purchased from the UST Section for a fee of $7.00. To purchase a copy of the Guidelines, please send a check made payable to DENR to:

DENR/DWM/UST Section
1637 Mail Service Center
Raleigh, NC 27699-1637

Required Actions:

1) Incorporate the requirements of 15A NCAC 2N .0704 into the report to be submitted in accordance with 15A NCAC 2L .0115 (c)(3) or (c)(4), whichever is applicable. This shall constitute compliance with the reporting requirements of 15A NCAC 2N .0704(b);

2) Submit a Limited Site Assessment (LSA) Report in accordance with 15A NCAC 2L .0115(c)(4), containing information needed by the Department to classify the level of risk to human health and the environment posed by the discharge or release. The LSA Report is due in this office **within 30 days** of the date of receipt of this notice. Based on a review of the information submitted in the LSA, the Department will classify the risk of the discharge or release as high, intermediate or low. At that time, the Department will also classify the land use of the site as either residential or industrial/commercial. You will be notified of the risk and land use classifications once review of your LSA Report is completed.

If you believe that any of the information requested above has already been submitted, please notify me of the date, title, and content of the documents that contain the information.

Your prompt attention to the items described herein is required. Failure to comply with the state's rules in the manner and time specified, may result in the assessment of civil penalties and /or the use of other enforcement mechanisms available to the State. Each day that a violation continues may be considered a separate violation. If you believe you are not the responsible party notify the UST Section **within 15 days** of receipt of this letter.

Please note that performing assessment and cleanup work that is not required under 15A NCAC 2L.0115 is not reimbursable from the Commercial or Noncommercial Leaking Petroleum Underground Storage Tank Cleanup Funds.

If you have any questions regarding the actions that must be taken or the rules mentioned in this letter, please contact me at the Mooresville Regional Office at the letterhead address and/or at 704/663-1699, ext. 235. If you have any questions regarding trust fund eligibility or reimbursement, please contact the UST Section at (919) 733-8486.

Sincerely,

Mark Burnette
Hydrogeological Technician II

cc: Ruth A. Strauss- Central Office
cc: Froehling & Robertson, Inc.
2505 Hutchinson-McDonald Rd.
Charlotte, NC 28269

U.S. Postal Service
CERTIFIED MAIL RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

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394

JOHNSON CONCRETE
PO BOX 1037
SALISBURY NC 28145
mab 7/2/01
UST

Postmark Here
MOORESVILLE NC JUL 2 2001

7000 1670 0001 5512 8689

SENDER: COMPLETE THIS SECTION

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- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

JOHNSON CONCRETE
PO BOX 1037
SALISBURY NC 28145

mab 7/2/01 UST

7/2/01

2. Article Number (Copy from service label)
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A. Received by (Please Print Clearly) B.

C. Signature
X Carolyn Barringer

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☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

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PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

Subject: **Johnson Concrete contaminated site**
Date: Wed, 11 Jul 2001 12:59:26 -0400
From: Ernest Jackson <ejackson@stalite.com>
Organization: Carolina Stalite Company
To: Carrie.Ferguson@ncmail.net

It is my understanding at this point in time that we have 3 choices to chose from regarding our contaminated site: start over, close the water well, or dig the remaining contaminated soil out and send you a new report. The latter will be our choice of action. I have contacted F&R to set up the time. Is there a deadline? We intend to do it as soon as possible, but will it take coordinating. Is there anything else that we will need to do before digging?
thanks,
Ernest

Subject: Jackson Concrete
Date: Wed, 11 Jul 2001 14:11:49 -0400
From: Carrie Ferguson <Carrie.Ferguson@ncmail.net>
Organization: NC DENR - Mooresville Regional Office
To: ejackson@stalite.com
CC: Mark Burnette <Mark.burnette@ncmail.net>

1)You can close the water supply well which would lower the risk of the incident to "low" and we could close the incident.

2)You can excavate and show that no soil exists within the unsaturated zone over the standards (lowest of soil-to-groundwater or residential standards) and the incident could be closed. You can do this only because you have already shown that no petroleum constituents in the groundwater, in the source area, are over 2L standards. Remember to collect the appropriate number of floor and wall samples.

3)You can conduct a Phase I LSA, followed by a Comprehensive Site Assessment (CSA), followed by a Corrective Action Plan (CAP) to clean up the soil.

Please note that, per our meeting, soil excavation is not reimbursable by the state trust fund because you are not following the guidelines. You have every right to excavate the soil but it would only be reimbursable if proven to be an effective measure to remediate the soil in a CAP. A CAP has not been completed so it is a personal choice made by you and your company. However, closing the water supply well would be considered a reasonable expense to the state trust fund because you would be lowering the risk from "high" to "low". Of course you would have to apply to the state trust fund etc.. and in recent conversations, you were not interested in reimbursement so excavating the contaminated soil was a viable option.

As far as a deadline, you may have 60 days from this record of communication to perform one of the three options above. Within 5 days, please give us a short letter stating which option you will be performing and the estimated completion date so we can have that documentation for our files.

If you have any questions feel free to give Mark Burnette or myself a call at (704) 663-1699.

Carrie Ferguson

Carrie Szot-Ferguson <Carrie.Ferguson@ncmail.net>
Hydrogeologist II
NC DENR - Mooresville
Div. of Waste Management - Underground Storage Tanks

JOHNSON CONCRETE COMPANY
STALITE BLOCK
CENTRAL DIVISION
Manufacturer of Lightweight Block and Concrete Pipe

August 23, 2001

DENR
Mooresville Regional Office
919 North Main Street
Mooresville NC 28115
Incident # 20172

Dear Mark or Carrie:

On July 25th 2001, Johnson Concrete, under the supervision of F&R lab, continued to dig at the Piedmont Block site, # 20172. We removed approximately 40-50 more tons of soil. Samples were taken by F&R until everyone was satisfied that we had removed all the contaminated soil. The results of the samples indicate that enough soil was removed. Based on this information, Johnson Concrete request that this site be considered closed by your office. Let me know if this is not the case. We sincerely appreciate your help and patience with this endeavor.

Sincerely,
JOHNSON CONCRETE COMPANY, INC.

Ernest Jackson
Safety & Human Resource Director

SUMMARY REPORT OF ENVIRONMENTAL SERVICES
PIEDMONT BLOCK FACILITY
106 OLD DAVIDSON PLACE
CONCORD, NORTH CAROLINA
F&R FILE NO. C63-113E

Prepared For:

JOHNSON CONCRETE COMPANY
POST OFFICE BOX 1037
SALISBURY, NORTHCAROLINA 28145

Prepared By:

FROEHLING & ROBERTSON, INC.
2505 HUTCHISON-McDONALD ROAD
CHARLOTTE, NORTH CAROLINA 28269
Telephone: (704) 596-2889
Facsimile: (704) 596-3784

Issue Date: August 14, 2001

Prepared By:

REGISTERED ENVIRONMENTAL MANAGER
DeWITT WHITTEN
REM
2589

DeWitt Whitten, CHMM, REM, CES
Environmental Group Manager

Reviewed By:

NORTH CAROLINA LICENSED
SEAL
491
GEOLOGIST
SAM E. PHIFER

Sam E. Phifer, P.G.
Environmental Project Manager

Sr. Review by Cyrus P. Markle, III

SINCE
F&R
1881

TABLE OF CONTENTS

REPORT OF ENVIRONMENTAL SERVICES
PIEDMONT BLOCK FACILITY
106 OLD DAVIDSON PLACE
CONCORD, NORTH CAROLINA

1.0 EXECUTIVE SUMMARY

Froehling & Robertson, Inc. (F&R) has completed the additional environmental services at the Piedmont Block facility located at 106 Old Davidson Place in Concord, North Carolina. This work was authorized by Mr. Ernest Jackson of Johnson Concrete on July 18, 2001. The following is a summary of our findings and is not intended to replace more detailed information contained elsewhere in this report.

F&R has completed the additional environmental services which included the monitoring and observation of the removal of contaminated soil by others on the north side of the previous excavation in the former diesel pump island area at the above referenced site. Based upon the field and laboratory information obtained, it appears that the remaining portion of the previously identified contaminated soil has been removed from the project site. Groundwater was not encountered during the field operations. Laboratory analysis of the soil samples indicated that the constituents analyzed for were below the laboratory detection levels.

2.0 INTRODUCTION

2.1 SCOPE OF SERVICES

F&R proposed to provide the following scope of services for the project site:

- Provide qualified personnel working under the supervision of a licensed Professional Geologist to observe and monitor the excavation of additional diesel fuel impacted soil in the vicinity of the former diesel pump island. The observation and monitoring included evaluating soil samples utilizing a photo-ionization detector (PID) during the soil excavation process to delineate the vertical and horizontal extent of impacted soil.
- Upon the removal of the impacted soil, representative soil samples from the sidewalls of the excavation were obtained for laboratory analysis by risk-based standards to confirm that a sufficient quantity of soil had been removed.
- Submit soil samples to F&R's NCDENR accredited laboratory for analysis by risk-based standards including methods 8260, 8270, MADEP VPH, and MADEP EPH.

- Prepare a Summary Report for submittal to the North Carolina Department of Environment and Natural Resources.

2.2 LIMITATIONS

This report has been prepared for the exclusive use of Johnson Concrete Company and/or their agents on this specific project. These services have been provided in accordance with generally accepted environmental practices. No other warranty, expressed, or implied, is made. The contents of this report should not be construed in any way to indicate F&R's recommendation to purchase, sell, or further develop the subject site.

Our conclusions and recommendations are based upon information provided to us by others, results of laboratory results, and our site observations and are subject to and limited by the terms and conditions of F&R's Agreement for Environmental Services. We have not verified the completeness or accuracy of the information provided by others, unless noted otherwise. Our observations were based upon conditions readily visible at the site at the time of our visit. If additional information becomes available which may effect our conclusions and recommendations, we request the opportunity to review the information, and reserve the right to modify our report, as warranted.

F&R, by virtue of providing the services described herein, does not assume the responsibility of the person(s) in charge of the site, or otherwise undertake responsibility for reporting to any local, state, or federal public agencies any conditions at the site, which may present a potential concern to public health, safety, or the environment. It is F&R's understanding that the client will notify appropriate regulatory agencies, as required.

3.0 SITE HISTORY

The project site is located at 106 Old Davidson Place and covers approximately 21 acres in Concord, North Carolina (Drawing No. 1 in Appendix I). The site is currently utilized for the manufacture and storage of concrete masonry units. The units are then transported to various locations within the region utilizing trucks. Prior to November 1998, the trucks were refueled from an on-site 10,000 gallon underground storage tank and associated fuel island. It is our understanding that the 10,000 gallon UST was permanently closed on November 4, 1998 by excavation and removal. During the closure process which included the removal of the UST,

pump island, and associated piping, it was determined that a release had occurred beneath the pump island. A limited Phase I Site Assessment was performed in September 1999 which included the completion of a 2" Type II groundwater monitoring well at the approximate location shown on Drawing No. 2. Results of the limited Phase I Site Assessment were presented in a report dated January 19, 2000 prepared by Piedmont Environmental Professionals, PA. Analytical results of the soil samples from the monitoring well location indicated the soil in a zone from approximately one foot below land surface (bls) to a depth between ten and thirteen feet bls had been impacted by diesel fuel. Analytical results of the water sample from the monitoring well indicated the water had also been impacted by diesel fuel with the aromatic carbon fraction class C9-C32 (1.07 mg/l) exceeding the 2L Standard (0.21 mg/l) by approximately five times. Correspondingly, the MRO requested the monitoring well (JCSW-1) and the process water supply (JCSW-1) well be sampled on a semi-annual basis with results to be provided to MRO by August 15, 2000 and February 15, 2001. A summary of the analytical results presented in a report dated January 22, 2001 prepared by Integrity Environmental Services, LLC is presented in Table 1.

TABLE 1

	WELL NO.	JCMW - 1			JCSW-1	
	SAMPLE DATE	9/07/99	7/07/00	12/22/00	7/07/00	12/22/00
CONSTITUENT	*2l Standard*					
Aliphatics C5-C8	0.42	ND	ND	ND	ND	ND
Aliphatics C9-C18	4.2	ND	0.24	ND	ND	ND
Aliphatics C19-C36	42.0	ND	ND	ND	ND	ND
Aromatics C9-C22	0.21	**1.07**	**0.553**	ND	ND	ND
Ethylbenzene	0.029	0.0027	ND	ND	ND	ND
Xylenes (mixed)	0.53	0.0072	ND	0.0013	ND	ND
Heptadecane	NS	NA	ND	0.012	ND	ND
Tetrachloroethylene	0.0007	NA	ND	ND	ND	**0.014**

Notes: All units in mg/l
ND – nondetect above method detection limits
Numbers in **bold** exceed the 2L Standard
NS – no 2L Standard
NA – not analyzed for

On June 7, 2001, a professional geologist from F&R observed and monitored the excavation and removal of 300 tons of impacted soil at the project site. Initially, the gravel and soils to a depth of approximately two feet below land surface (bls) were excavated and stockpiled for re-use. After reaching a depth of approximately two feet bls, the soils were excavated and stockpiled onsite in accordance with the NCDENR *Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater*. During the removal of the soil, soil samples were obtained at various depths for headspace analysis utilizing a H-Nu PID. The purpose of the headspace analysis was to evaluate when a sufficient quantity of impacted soil had been removed. A summary of the headspace readings is presented in Tables 2 and 3.

TABLE 2

	FLOOR AREA	SOUTH CORNER	MIDDLE	NORTH CORNER
SAMPLE NUMBER	DEPTH, FT (bls)	PID READINGS, ppm		
1	5 to 6	80	110	110
2	6 to 8	80	80	110
3	8 to 10	80	80	110
4	9 to 11	60	< 20	100
5	11 to 12	40		80
6	11 to 12	30		60
7	12 to 13	<20		60
8	14			< 20

TABLE 3

	WALL	SOUTH	EAST	NORTH	WEST
SAMPLE NUMBER	DEPTH, FT bls	PID READINGS, ppm			
1	5 to 7	120	80	120	80
2	6 to 8	120	120	130	80
3	8 to 10	80	60	110	40
4	8 to 10	80	60	80	< 20
5	8 to 10	40	40	80	
6	10 to 12	< 20	40	60	
7	10 to 12		< 20	60	
8	12 to 14			55	
9	12 to 14			40	
10	12 to 14			< 20	

After the removal of the soil, soil samples were collected from the sidewalls and bottom of the excavation as shown on Drawing No. 3. A total of six soil samples were collected from the sidewalls and bottom of the excavation. Soil samples were collected in sample containers provided by the laboratory. Upon completion of the soil excavation, the resulting excavation was backfilled with clean fill materials. Six soil samples sample were submitted to F&R's accredited laboratory in Richmond, Va. via overnight courier (UPS). Chain of custody documentation accompanied the soil and F&R requested the laboratory analyze each soil sample by methods 8260, 8270, MADEP-EPH, and MADEP-VPH. A summary of the laboratory results for the soil samples is presented in Table 4.

TABLE 4

	MAX. SOIL CONTAMINANT CONC.		SAMPLE NUMBER/DEPTH, ft bls		
	INDUSTRIAL	SOIL to GW	WS – 1/11'	WS – 4/13'	BS – 2/14'
EPH					
C9-C18 Aliphatics	245280	424799	12	244	14
C19-C36 Aliphatics			BQL	81	BQL
C11-C22 Aromatics	12264	206	BQL	173	BQL
8260					
n-Butylbenzene	4088	4	BQL	0.0251	BQL
Sec-Butylbenzene	4088	3	BQL	0.0245	BQL
Isopropylbenzene	40880	2	BQL	0.0065	BQL
p-Isopropylbenzene	NL	NL	BQL	0.0175	BQL
Naphthalene	1635	0.58	0.0206	0.111	0.0097
n-Propylbenzene	4088	2	BQL	0.0128	BQL
1,2,4-Trimethylbenzene	20440	8	0.0078	0.0891	BQL
1,3,5-Trimethylbenzene	20440	7	BQL	0.0252	BQL
Xylenes	200000	5	BQL	0.0226	BQL
8270					
2-Methylnaphthalene	1635	3	BQL	**3.6**	BQL
Phenanthrene	12264	60	BQL	1.12	BQL

NOTES: All units in mg/kg
BQL – below quantitation limit
Numbers in **bold** exceeds standard

Information in greater detail with regard to the initial over-excavation activities was presented in F&R's report entitled "Summary Report of Environmental Services" dated June 29, 2001.

After a review of the report dated June 29, 2001 by the Mooresville Regional Office (MRO) of the NCDENR, Johnson concrete was provided with three options with regard to closure of the project site by the MRO. The three options included 1) close the existing water supply well; 2) over-excavate additional soil; or 3) conduct a Phase I LSA, followed by a CSA (Comprehensive Site Assessment), followed by a CAP (Corrective Action Plan).

4.0 FIELD SERVICES

Based upon the above information, it was our understanding that Johnson Concrete chose to over-excavate additional soil in the area where the previous soil sample indicated levels which exceeded the State standards.

On July 25, 2001, environmental personnel working under the supervision of a professional geologist from F&R observed and monitored the excavation and removal of approximately 40 tons of impacted soil adjacent to the north wall of the previous excavation at the project site. Initially, the gravel and soils to a depth of approximately two feet below land surface (bls) were excavated and stockpiled for re-use. After reaching a depth of approximately two feet bls, the soils were excavated and placed into trucks for transport to a permitted remediation facility (Cunningham Brick). During the removal of the soil, soil samples were obtained at various depths for headspace analysis utilizing a H-Nu PID. The purpose of the headspace analysis was to evaluate when a sufficient quantity of impacted soil had been removed. A summary of the headspace readings is presented in Table 5.

TABLE 5

SAMPLE NUMBER	DEPTH, FT (bls)	PID READING, ppm
5	8 to 9	1.2
6	10 to 11	< 1

After the removal of the soil, soil samples were collected from the sidewalls of the excavation as shown on Drawing No. 4. A total of two soil samples were collected from the sidewalls of the excavation. Soil samples were collected in sample containers provided by the laboratory. Upon completion of the soil excavation, the resulting excavation was backfilled with clean fill materials.

5.0 LABORATORY SERVICES

The two soil samples sample were submitted to F&R's accredited laboratory in Richmond, Va. via overnight courier (UPS). Chain of custody documentation accompanied the soil and F&R requested the laboratory analyze each soil sample by methods 8260, 8270, MADEP-EPH, and MADEP-VPH. All of constitutents analyzed for were below the laboratory quantitation levels (BQL). The chain of custody sheet and the results of the laboratory analysis are presented in Appendix II and Appendix III, respectively.

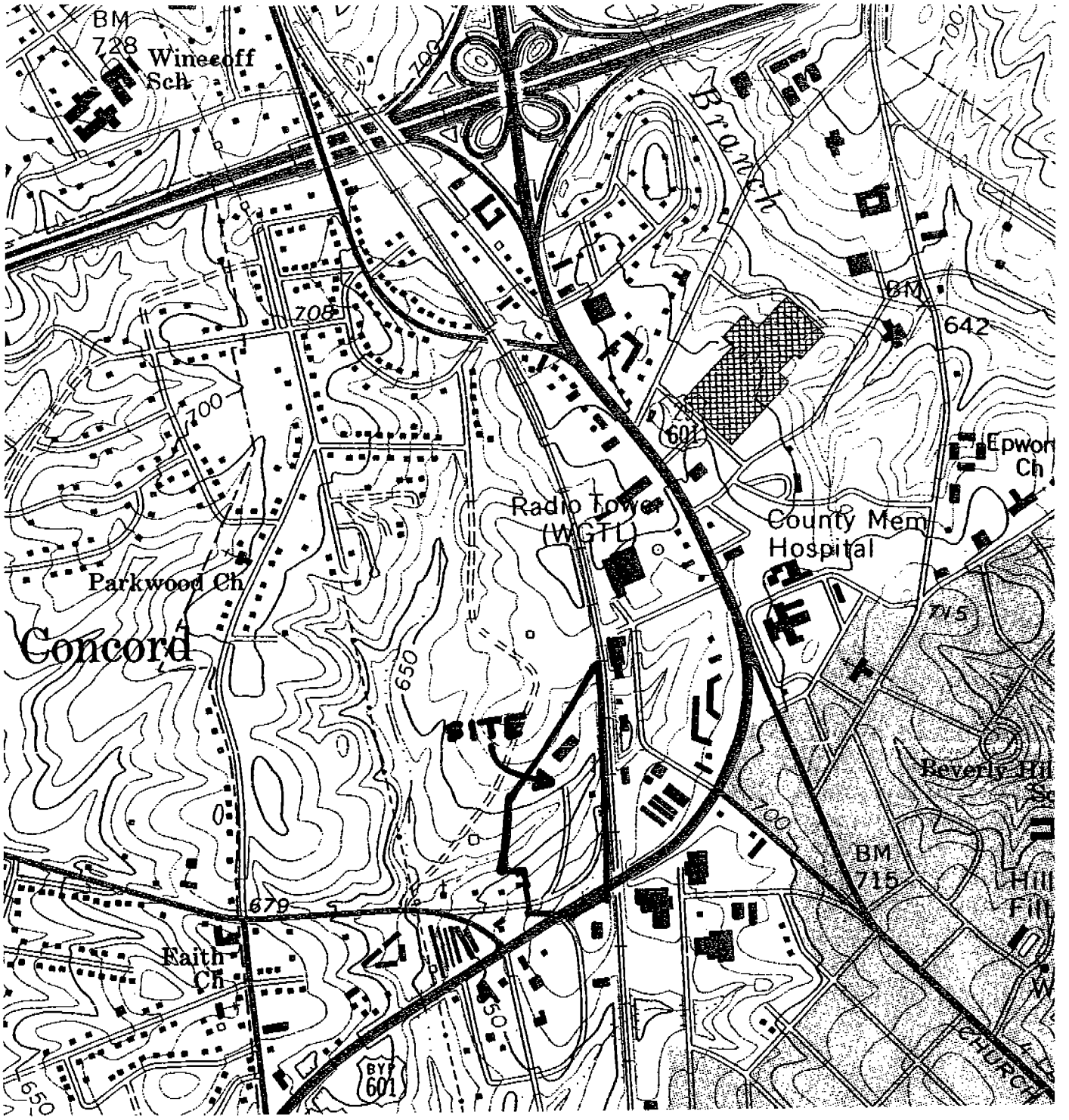
6.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon a review of the field and laboratory data obtained during the most recent site work (July 25, 2001), it appears that the petroleum impacted soil that was located beneath the former pump island has been removed in the area of the former pump island. The excavated soil was transported to an approved facility for remediation.

Results of the laboratory analysis performed on the soil samples obtained during our recent field work did not indicate constituent levels above the laboratory quantitation limits. Groundwater was not encountered during the field work on July 25, 2001.

Based upon this information, F&R recommends that this report be submitted to the NCDENR - MRO along with a letter requesting site closure or no further action required for the project site with regard to the former diesel UST system.

APPENDIX I



PIEDMONT BLOCK

106 OLD DAVIDSON PLACE; CONCORD, NC

SITE LOCATION PLAN

SCALE: 1" = 1000' (APPROX.)	DR DW	CHK	REV

PREPARED FOR:

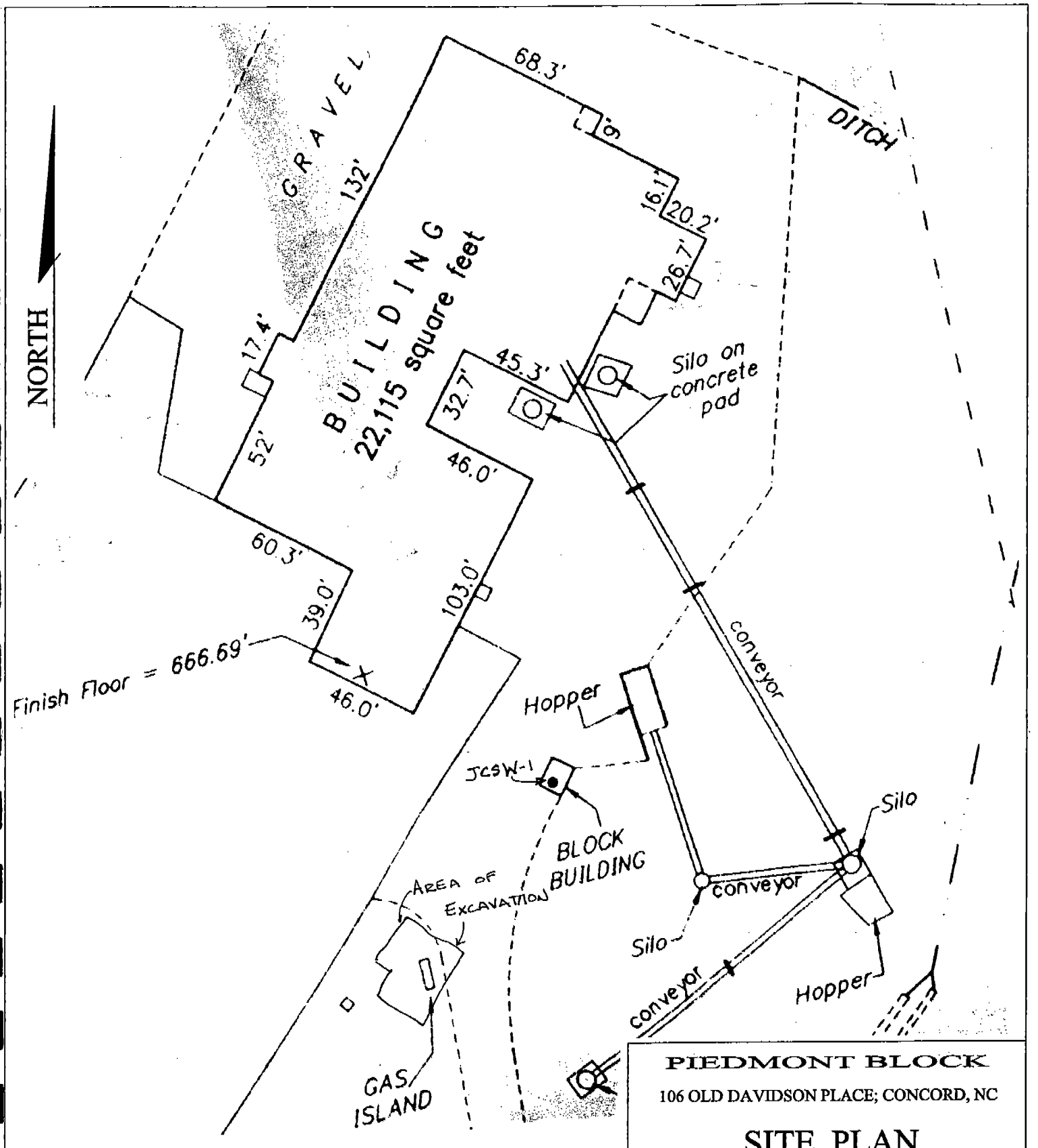
JOHNSON CONCRETE COMPANY

SINCE 1881

FROEHLING & ROBERTSON, INC.
2806 NORTH GRAHAM STREET
CHARLOTTE, NORTH CAROLINA

PROJ. C63-113E	DATE: 6/28/01	DWG 1 OF 4

From USGS Quad: Concord, NC dated 1969, p.r. 1987



PIEDMONT BLOCK

106 OLD DAVIDSON PLACE; CONCORD, NC

SITE PLAN

SCALE: 1" = 50' (APPROX.)	DR. DW	CHK.	REV

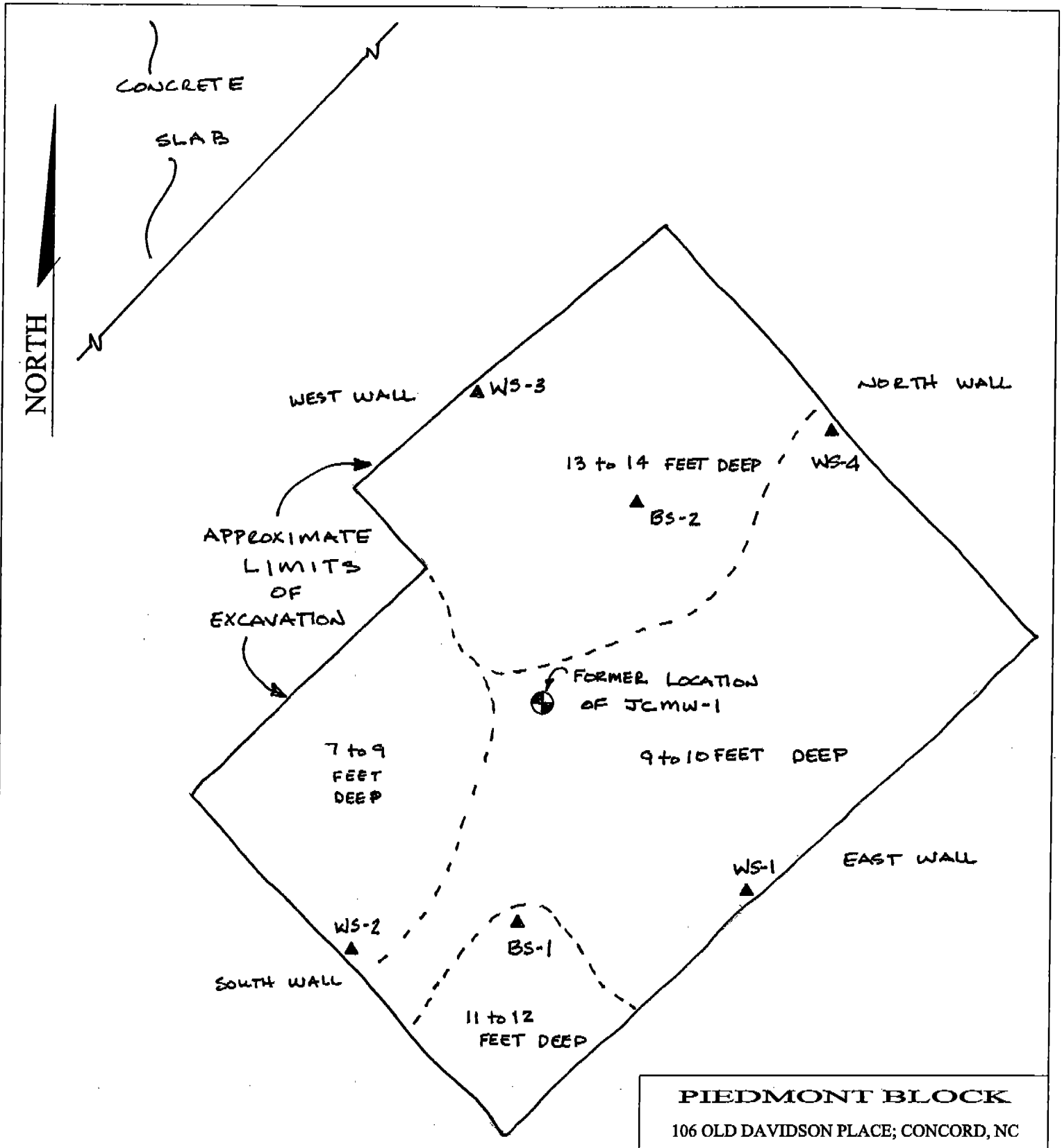
PREPARED FOR:

JOHNSON CONCRETE COMPANY

SINCE 1881

FROEHLING & ROBERTSON, INC.
2806 NORTH GRAHAM STREET
CHARLOTTE, NORTH CAROLINA

PROJ. C63-113E	DATE: 6/28/01	DWG 2 OF 4



▲ APPROXIMATE SAMPLING LOCATION

PIEDMONT BLOCK

106 OLD DAVIDSON PLACE; CONCORD, NC

SAMPLING PLAN

SCALE: 1" = 6' (APPROX.)	DR DW	CHK	REV

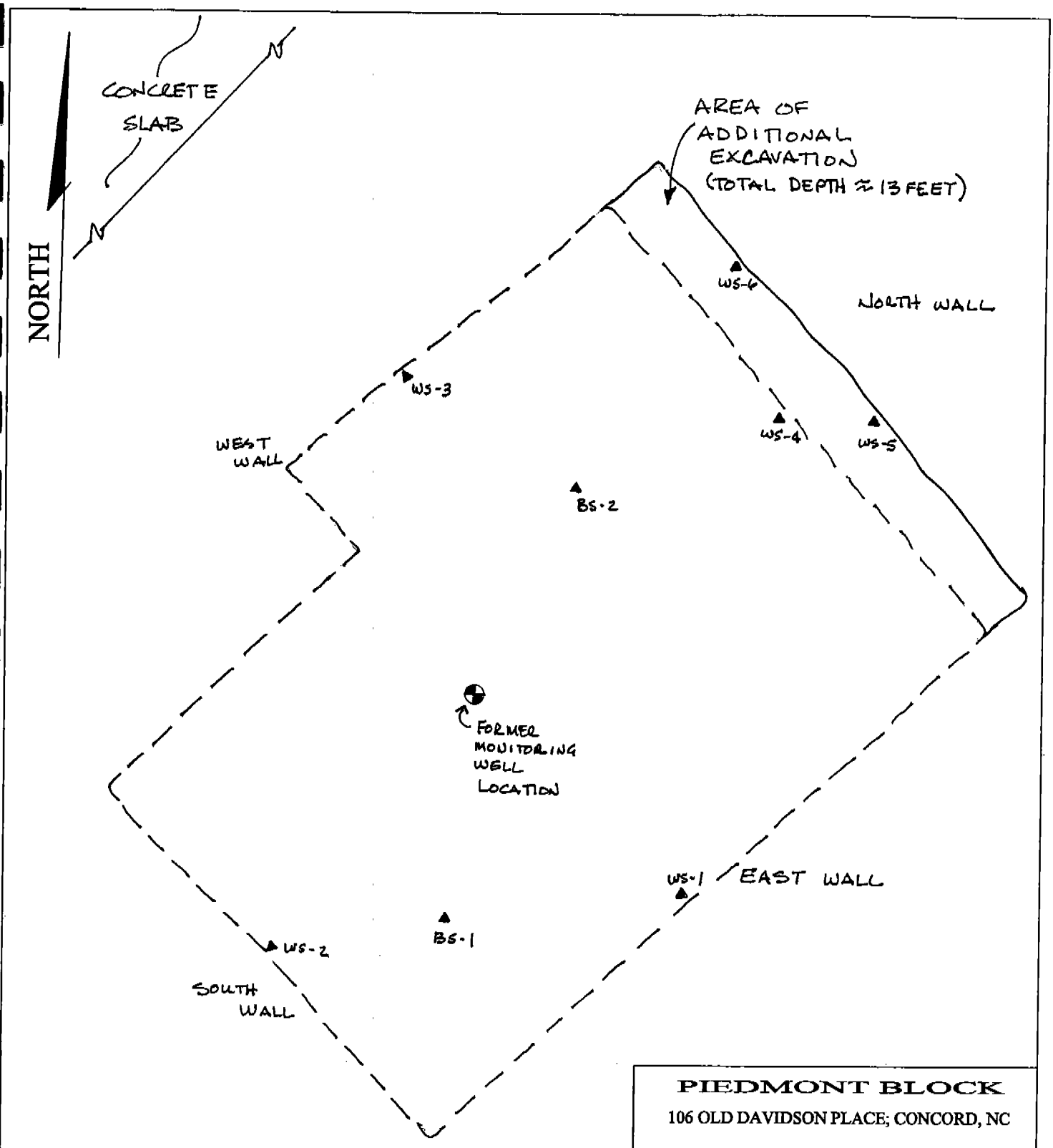
PREPARED FOR:

JOHNSON CONCRETE COMPANY

SINCE 1881

FROEHLING & ROBERTSON, INC.
2806 NORTH GRAHAM STREET
CHARLOTTE, NORTH CAROLINA

PROJ. C63-113E	DATE: 6/28/01	DWG 3 OF 4



▲ APPROXIMATE SAMPLING LOCATION

PIEDMONT BLOCK

106 OLD DAVIDSON PLACE; CONCORD, NC

SAMPLING PLAN

SCALE: 1" = 6' (APPROX.)	DR DW	CH	REV

PREPARED FOR:

JOHNSON CONCRETE COMPANY

SINCE 1881

FROEHLING & ROBERTSON, INC.
2806 NORTH GRAHAM STREET
CHARLOTTE, NORTH CAROLINA

PROJ. C63-113E	DATE: 8-14-2001	DWG 4 OF 4

APPENDIX II

CHAIN OF CUSTODY RECORD

Please Print CLIENT F&R
ADDRESS Charlotte
ATTN D. Whitten
PHONE/FAX 704/536-7809

FROEHLING & ROBERTSON, INC.
P.O. BOX 27524
RICHMOND, VIRGINIA 23261
TEL:(804) 264-2701
FAX: (804) 264-1202

LAB PROJECT # 0102179
PROJECT NAME/NUMBER - Please Print: Johnson Concrete / Piedmont Block C63-113E
SAMPLED BY — Please Print: Dewitt Whitten

LAB I.D.	DATE	TIME	GRAB	COMP	SAMPLE IDENTIFICATION - Please Print	# OF CONTAINERS	SAMPLE (MATRIX)	REQUESTED TEST PARAMETERS - Please Print: 8260	8270	EPH	VPH
01	7/25/01	0910	X		WALL SAMPLE 5	5	Soil	✓	✓	✓	✓
02	7/25/01	0925	X		WALL SAMPLE 6		Soil	✓	✓	✓	✓

RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
[signature]	7/25/01	1600			
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED BY	DATE	TIME
RELINQUISHED BY (SIGNATURE)	DATE	TIME	RECEIVED FOR LAB BY	DATE	TIME
			[signature]	7/26/01	1030

SHIPPED VIA UPS OVERNIGHT DATE 7/25/01

FIELD COMMENTS: Please Print
Rec'd 03 - VPH Blank
on ice
Rec'd @ 2°C

pH _____ TEMP. _____

FORM NO. 1029

APPENDIX III

SINCE
1881

FROEHLING & ROBERTSON, INC.
GEOTECHNICAL • ENVIRONMENTAL • MATERIALS
ENGINEERS • LABORATORIES
"OVER ONE HUNDRED YEARS OF SERVICE"

CERTIFICATE OF ANALYSIS

August 3, 2001

LAB #: 0107179
CLIENT: F&R Charlotte
Attn: DeWitt Whitten

PROJECT ID: Johnson Concrete/Piedmont Block
PROJECT #: C63-113 E
SAMPLED BY: D. Whitten
LAB RECEIPT: 07/26/01, 1030

PARAMETER	ANALYSIS DATE/TIME	METHOD	ANALYST
Volatile Organic Compounds	07/27/01, 2012	SW846/8260 B	SPF
Semivolatile Organic Cmps	07/31/01, 1319	SW846/8270 C	DB
Semivolatile Extraction	07/30/01, 1325	SW846/8270 C	DO
EPH Extraction	07/30/01, 0955	MADEP EPH	DO
EPH	08/01/01, 1507	MADEP EPH	DG
VPH	08/01/01, 1848	MADEP VPH	VFL

Audrey N. Brubeck
Laboratory Manager

RESULTS:

F&R# :	0107179-01	0107179-02
SAMPLE ID :	Wall sample 5	Wall sample 6
DATE/TIME :	07/25/01, 0910	07/25/01, 0925
MATRIX :	Soil/grab	Soil/grab

Volatile Organics 8260 (µg/kg)			**Quant. Limit:**
Benzene	BQL	BQL	5.0
Bromobenzene	BQL	BQL	5.0
Bromochloromethane	BQL	BQL	5.0
Bromodichloromethane	BQL	BQL	5.0
Bromoform	BQL	BQL	5.0
Bromomethane	BQL	BQL	5.0
n-Butylbenzene	BQL	BQL	5.0
sec-Butylbenzene	BQL	BQL	5.0
tert-Butylbenzene	BQL	BQL	5.0
Carbon tetrachloride	BQL	BQL	5.0
Chlorobenzene	BQL	BQL	5.0
Chloroethane	BQL	BQL	5.0
Chloroform	BQL	BQL	5.0
Chloromethane	BQL	BQL	5.0
2-Chlorotoluene	BQL	BQL	5.0
4-Chlorotoluene	BQL	BQL	5.0
Dibromochloromethane	BQL	BQL	5.0
1,2-Dibromo-3-chloropropane	BQL	BQL	5.0
1,2-Dibromoethane (EDB)	BQL	BQL	5.0
Dibromomethane	BQL	BQL	5.0
1,2-Dichlorobenzene	BQL	BQL	5.0
1,3-Dichlorobenzene	BQL	BQL	5.0
1,4-Dichlorobenzene	BQL	BQL	5.0
Dichlorodifluoromethane	BQL	BQL	5.0
1,1-Dichloroethane	BQL	BQL	5.0
1,2-Dichloroethane	BQL	BQL	5.0
1,1-Dichloroethene	BQL	BQL	5.0
cis-1,2-Dichloroethene	BQL	BQL	5.0
trans-1,2-Dichloroethene	BQL	BQL	5.0
1,2-Dichloropropane	BQL	BQL	5.0
1,3-Dichloropropane	BQL	BQL	5.0
2,2-Dichloropropane	BQL	BQL	5.0
1,1-Dichloropropene	BQL	BQL	5.0
Ethylbenzene	BQL	BQL	5.0
Hexachlorobutadiene	BQL	BQL	5.0
Isopropylbenzene	BQL	BQL	5.0
p-Isopropyltoluene	BQL	BQL	5.0
Methylene chloride	BQL	BQL	5.0
Naphthalene	BQL	BQL	5.0

RESULTS:

F&R# :	0107179-01	0107179-02
SAMPLE ID :	Wall sample 5	Wall sample 6
DATE/TIME :	07/25/01, 0910	07/25/01, 0925
MATRIX :	Soil/grab	Soil/grab

Volatile Organics 8260 (µg/kg)			**Quant. Limit:**
n-Propylbenzene	BQL	BQL	5.0
Styrene	BQL	BQL	5.0
1,1,1,2-Tetrachloroethane	BQL	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	BQL	5.0
Tetrachloroethene	BQL	BQL	5.0
Toluene	BQL	BQL	5.0
1,2,3-Trichlorobenzene	BQL	BQL	5.0
1,2,4-Trichlorobenzene	BQL	BQL	5.0
1,1,1-Trichloroethane	BQL	BQL	5.0
1,1,2-Trichloroethane	BQL	BQL	5.0
Trichloroethene	BQL	BQL	5.0
Trichlorofluoromethane	BQL	BQL	5.0
1,2,3-Trichloropropane	BQL	BQL	5.0
1,2,4-Trimethylbenzene	BQL	BQL	5.0
1,3,5-Trimethylbenzene	BQL	BQL	5.0
Vinyl Chloride	BQL	BQL	5.0
m,p-Xylene	BQL	BQL	10.0
o-Xylene	BQL	BQL	5.0

µg/kg=micrograms per kilogram

BQL=Below Quantitation Limit

RESULTS:

F&R# :	0107179-01	0107179-02
SAMPLE ID :	Wall sample 5	Wall sample 6
DATE/TIME :	07/25/01, 0910	07/25/01, 0925
MATRIX :	Soil/grab	Soil/grab

Semivolatile Organics 8270 (µg/kg)			**Quant. Limit:**
Acenaphthene	BQL	BQL	400
Acenaphthylene	BQL	BQL	400
Aniline	BQL	BQL	400
Anthracene	BQL	BQL	400
Benzo(a)anthracene	BQL	BQL	400
Benzo(b)fluoranthene	BQL	BQL	400
Benzo(k)fluoranthene	BQL	BQL	400
Benzo(g,h,i)perylene	BQL	BQL	400
Benzo(a)pyrene	BQL	BQL	400
bis(2-Chloroethoxy)methane	BQL	BQL	400
bis(2-Chloroethyl)ether	BQL	BQL	400
bis(2-Chloroisopropyl)ether	BQL	BQL	400
bis(2-Ethylhexyl)phthalate	BQL	BQL	400
4-Bromophenyl-phenylether	BQL	BQL	400
Butylbenzylphthalate	BQL	BQL	400
4-Chloroaniline	BQL	BQL	400
4-Chloro-3-methylphenol	BQL	BQL	400
2-Chloronaphthalene	BQL	BQL	400
2-Chlorophenol	BQL	BQL	400
4-Chlorophenylphenylether	BQL	BQL	400
Chrysene	BQL	BQL	400
Dibenz[a,h]anthracene	BQL	BQL	400
Dibenzofuran	BQL	BQL	400
Di-n-butylphthalate	BQL	BQL	400
1,2-Dichlorobenzene	BQL	BQL	400
1,3-Dichlorobenzene	BQL	BQL	400
1,4-Dichlorobenzene	BQL	BQL	400
3,3-Dichlorobenzidine	BQL	BQL	400
2,4-Dichlorophenol	BQL	BQL	400
Diethylphthalate	BQL	BQL	400
2,4-Dimethylphenol	BQL	BQL	400
Dimethylphthalate	BQL	BQL	400
4,6-Dinitro-2-methylphenol	BQL	BQL	1600
2,4-Dinitrophenol	BQL	BQL	1600
2,4-Dinitrotoluene	BQL	BQL	400
2,6-Dinitrotoluene	BQL	BQL	400
Di-n-octylphthalate	BQL	BQL	400
Fluoranthene	BQL	BQL	400

RESULTS:

F&R# :	0107179-01	0107179-02
SAMPLE ID :	Wall sample 5	Wall sample 6
DATE/TIME :	07/25/01, 0910	07/25/01, 0925
MATRIX :	Soil/grab	Soil/grab

Semivolatile Organics 8270 (µg/kg)			**Quant. Limit:**
Fluorene	BQL	BQL	400
Hexachlorobenzene	BQL	BQL	400
Hexachlorobutadiene	BQL	BQL	400
Hexachlorocyclopentadiene	BQL	BQL	400
Hexachloroethane	BQL	BQL	400
Indeno[1,2,3-c,d]pyrene	BQL	BQL	400
2-Methylnaphthalene	BQL	BQL	400
2-Methylphenol	BQL	BQL	400
m-,p-Methylphenol	BQL	BQL	400
Naphthalene	BQL	BQL	400
2-Nitroaniline	BQL	BQL	400
3-Nitroaniline	BQL	BQL	400
4-Nitroaniline	BQL	BQL	400
Nitrobenzene	BQL	BQL	400
2-Nitrophenol	BQL	BQL	400
4-Nitrophenol	BQL	BQL	1600
n-Nitrosodimethylamine	BQL	BQL	400
n-Nitroso-diphenylamine	BQL	BQL	400
n-Nitroso-di-n-propylamine	BQL	BQL	400
Pentachlorophenol	BQL	BQL	1600
Phenanthrene	BQL	BQL	400
Phenol	BQL	BQL	400
Pyrene	BQL	BQL	400
1,2,4-Trichlorobenzene	BQL	BQL	400
2,4,5-Trichlorophenol	BQL	BQL	400
2,4,6-Trichlorophenol	BQL	BQL	400

µg/L=micrograms per Liter

BQL=Below Quantitation Limit

VPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name **F&R Charlotte**
Project Name **Johnson Concrete/Piedmont Block**
Site Location **Johnson Concrete/Piedmont Block**

Laboratory Name **FROEHLING & ROBERTSON, INC**
NC Certification # (Lab) **432**
Sample Matrix **soil**

Sample Information and Analytical Results

Method for Ranges: MADEP VPH

VPH Surrogate Standards
Aliphatic: 2,5-Dibromotoluene
Aromatic: 2,5-Dibromotoluene

		F&R Sample ID			0107179-01	0107179-02	0107179-02Dup	0107179-03
		Sample Identification			Wall Sample 5	Wall Sample 6	Wall Sample 6	VPH Blank
		Collection Option (for soil)*			3	3	3	
		Date Collected			7/25/01	7/25/01	7/25/01	
		Date Received			7/26/01	7/26/01	7/26/01	7/26/01
		Date Extracted						
		Date Analyzed			08/01/01	8/1/2001	8/1/2001	8/1/2001
		% Dry Solids			77	77	77	
		Dry Weight			11.7	11.3	11.3	15.0
		Dilution Factor			50	50	50	50
Hydrocarbon Ranges	**Units of Measure**	**MDL**	**RL**	**Blank**				
C5 - C8 Aliphatics**	**mg/kg**	0.22 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg
C9 - C12 Aliphatics**	**mg/kg**	0.06 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg
C9 - C10 Aromatics**	**mg/kg**	0.08 mg/kg	10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg	<10 mg/kg
Sample Surrogate Acceptance Range				**70-130%**	**70-130%**	**70-130%**	**70-130%**	**70-130%**
Aliphatic Surrogate % Recovery - FID				97%	105%	104%	117%	106%
Aromatic Surrogate % Recovery - PID				98%	103%	100%	115%	105%

* Option 1 = Established fill line on vial Option 2 = Sampling Device (indicate brand, e.g. EnCore™) Option 3 = Field weight of soil

** Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.

MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank or Trip Blank whichever is higher (indicate type)

VPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? **Yes**

Were any significant modifications to the VPH method made? **No**

EPH (Aliphatics/Aromatics) Laboratory Reporting Form

Client Name: F&R Charlotte
Project Name: Johnson Concrete/Piedmont Block
Site Location: Johnson Concrete/Piedmont Block

Laboratory Name: Froehling & Robertson, Inc.
NC Certification # (Lab): 432
Sample Matrix: soil

Sample Information and Analytical Results

		F&R Sample #			0107179-01	0107179-01 dup	0107179-02	
Method for Ranges: MADEP EPH		Sample Identification			Wall Sample 5	Wall Sample 5	Wall Sample 6	
EPH Surrogate Standards		Date Collected			7/25/01	7/25/01	7/25/01	
Aliphatic: 1-chlorooctadecane		Date Received			7/26/01	7/26/01	7/26/01	
Aromatic: ortho-terphenyl		Date Extracted			7/30/01	7/30/01	7/30/01	
EPH Fractionation Surrogates		Date Analyzed			8/1/01	8/1/01	8/1/01	
#1: 2-fluorobiphenyl		% Dry Solids			77	77	77	
#2: 2-bromonaphthalene		Dilution Factor			1	1	1	
Hydrocarbon Ranges	**Units of Measure**	**MDL**	**RL**	**Blank**				
C9 - C18 Aliphatics*	mg/kg	1	10	<10	<10	<10	<10	
C19 - C36 Aliphatics*	mg/kg	2	10	<10	<10	<10	<10	
C11 - C22 Aromatics*	mg/kg	2	10	<10	<10	<10	<10	
Sample Surrogate Acceptance Range				40-140%	40-140%	40-140%	40-140%	
Aliphatic Surrogate % Recovery				50	50	49	47	
Aromatic Surrogate % Recovery				76	76	72	74	
Fractionation Surrogate Acceptance Range				40-140%	40-140%	40-140%	40-140%	
Fractionation Surrogate #1 % Recovery				80	80	75	78	
Fractionation Surrogate #2 % Recovery				73	73	69	74	

* Unadjusted value. Should exclude the concentration of any surrogate(s), internal standards, and/or concentrations of other ranges that elute within the specified range.
MDL = Method Detection Limit RL = Reporting Limit Blank = Laboratory Method Blank

EPH rev. 11/00

Were all performance/acceptance standards for required QA/QC procedures achieved? **Yes**

Was blank correction applied as a significant modification of the method ? **No**

Were any significant modifications to the EPH method made? **No**

North Carolina Department of Environment
and Natural Resources

Division of Waste Management

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Dexter R. Matthews, Interim Director

NCDENR

August 24, 2001

Johnson Concrete
PO Box 1037
Salisbury, North Carolina 28145
Attn: Ernest Jackson

Re: Notice of No Further Action
15A NCAC 2L .0115(h)
Risk-based Assessment and Corrective Action
for Petroleum Underground Storage Tanks

Piedmont Block Facility
106 Old Davidson Place
Cabarrus County, North Carolina
Incident # 20172
UST Closure Report

Dear Sirs:

On August 24, 2001, the Underground Storage Tank (UST) Section, Division of Waste Management Mooresville Regional office received an Underground Storage Tank (UST) Closure Report for the above-referenced site. A review of the report shows that soil contamination does not exceed the residential or soil-to-groundwater maximum soil contaminant concentrations established in 15A NCAC 2L .0115(m), whichever are lower. Based on information provided to date, the UST Section classifies the risk posed by the discharge or release as low risk and determines that no further action is required for this incident. This determination shall apply unless the UST Section later determines that the discharge or release poses an unacceptable risk or a potentially unacceptable risk to human health or the environment.

Pursuant to 15A NCAC 2L .0115(e), you have a continuing obligation to notify the UST Section of any changes that you know of or should know of, that might affect the level of risk assigned to the discharge or release.

Should you have any questions, please contact me at 704-663-1699 ext. 235.

Sincerely,

Mark A. Burnette
Hydrogeological Technician II

cc: Ruth Strauss - Central Office
Fay Sweat – Central Office

piedmontblk.close.nfa.doc

NCDENR
North Carolina Department of Environment and Natural Resources
Dexter R. Matthews, Director
Division of Waste Management
Michael F. Easley, Governor
William G. Ross Jr., Secretary

July 22, 2008

Mike Steele
Johnson Concrete Company
Piedmont Block Division
106 Old Davidson Place North West
Concord, North Carolina 28027

Re: Well Sampling Results
Johnson Concrete/Piedmont Block
106 Old Davison Place North West
Concord North Carolina 28027
IHSB # NONCD0001933 Former APS # 86321

Dear Mr. Steele:

On June 20, 2008, the North Carolina Dry-Cleaning Solvent Act (DCSA) Program collected a groundwater sample from a process water supply well located at the above referenced site. The sample was submitted for laboratory analyses for chemicals listed on the attached sheets. Volatile organic compounds detected in the groundwater sample are listed below for your review.

Compound	Concentration (µg/L)	NC 2L Groundwater Standard (µg/L)	EPA MCL (µg/L)
1,1-Dichloroethane	3.3 (J)	70	No Standard
Chloroform	4.9 (J)	70	80 (as Total THMs)
Di-isopropyl Ether	1.6 (J)	70	No Standard
Methyl tert-butyl ether	2 (J)	200	No Standard
Tetrachloroethene	110	0.7	5
Trichloroethene	3.5 (J)	2.8	5
cis-1,2-Dichloroethene	3.6 (J)	70	70

(J) = estimated concentration THMs = Trihalomethanes
µg/L = micrograms per liter (~parts per billion)

Several compounds were measured at concentrations above North Carolina Groundwater Standards (2L). In addition, the concentration of tetrachloroethene in the groundwater sample exceeds the Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) for drinking water.

Per our conversation on July 18, 2008, I understand that groundwater from the onsite process

water supply well is used only for the manufacturing of products and to make stream for curing of materials. The condensed water from the stream operation is discharged at the property. Water for human consumption at the facility is obtained from a municipal water source.

I will forward a copy of the enclosed information to Hanna Assefa, an industrial hygienist in the Division of Waste Management, and request a written Health Risk Evaluation (HRE). Upon receipt of the HRE report, I will forward a copy to you.

I appreciate your help with this matter. If you have questions or need additional information, please contact me at (704) 663-1699, extension 2187.

Sincerely,

George D. Adams, PG & EI
Environmental Engineer II
Department of Environment and Natural Resources
Division of Waste Management
Superfund Section - Inactive Hazardous Sites Branch

JUL 2 3 2008

Enclosure

cc: Hanna Assefa
Department of Environment and Natural Resources
Division of Waste Management – Superfund Section

Scott Stupak
Department of Environment and Natural Resources
Division of Waste Management – DSCA

Samar Bou-Ghazale
Department of Environment and Natural Resources
Division of Water Quality – Surface Water Protection

Cabarrus County Health Department

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Case Narrative for:

ATC ASSOCIATES, INC.

Certificate of Analysis Number:

08061072

Report To:		Project Name:	45.34341.1302
ATC ASSOCIATES, INC.		Site:	CALDWELL CLEANERS
STEVEN ALDIS		Site Address:	
3417-A TRADE PARK CT.			CONCORD NC
CHARLOTTE		PO Number:	
NC		State:	North Carolina
28217-		State Cert. No.:	487
ph: (704) 529-3200	fax:	Date Reported:	7/3/2008

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data for those samples spiked by the laboratory and may be applicable to other samples of similar matrix from the site. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group.

The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process. If insufficient sample is supplied for MS/MSD, a Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) are reported with the analytical batch and serve as the batch quality control (QC).

Results are reported on a Wet Weight Basis unless otherwise noted in the sample unit field as -dry.

The collection of samples using encores, terracores or other field collection devices may result in inconsistent initial sample weights for the parent sample and MS/MSD samples.

The MS/MSD recovery and precision data are calculated based on detected spike concentrations that are adjusted for initial sample weights. As a result of the variability between initial sample weights, the calculated RPD may have increased bias.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

TOTAL NUMBER OF PAGES IN THIS REPORT: _____ PAGES

Amy K. Jackson
Project Manager

Date

Test results meet all requirements of NELAC, unless specified in the narrative.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

ATC ASSOCIATES, INC.

Certificate of Analysis Number:

08061072

Report To: ATC ASSOCIATES, INC.
STEVEN ALDIS
3417-A TRADE PARK CT.

CHARLOTTE
NC
28217-
ph: (704) 529-3200 fax: (704) 529-3272

Fax To:

Project Name: 45.34341.1302
Site: CALDWELL CLEANERS
Site Address:
CONCORD NC
PO Number:
State: North Carolina
State Cert. No.: 487
Date Reported: 7/3/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
TCSW-1	08061072-01	Water	6/20/2008 8:20:00 AM	6/21/2008 9:30:00 AM	310677	☐

Amy K. Jackson
Project Manager

7/3/2008
Date

Ron Benjamin
Laboratory Director

Tristan Davis
Quality Assurance Officer

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: TCSW-1 **Collected:** 06/20/2008 8:20 **SPL Sample ID:** 08061072-01

Site: CALDWELL CLEANERS

Analyses/Method	Result	QUAL	MDL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
VOLATILE ORGANICS METHOD 8260B				**MCL**	**SW8260B Units: ug/L**			
1,1,1-Trichloroethane	ND		0.27	5	1	07/02/08 5:14	RPJ	2701840
1,1,2,2-Tetrachloroethane	ND		0.17	5	1	07/02/08 5:14	RPJ	2701840
1,1,2-Trichloroethane	ND		0.19	5	1	07/02/08 5:14	RPJ	2701840
1,1-Dichloroethane	3.3	J	0.28	5	1	07/02/08 5:14	RPJ	2701840
1,1-Dichloroethene	ND		0.33	5	1	07/02/08 5:14	RPJ	2701840
1,2-Dibromoethane	ND		0.21	5	1	07/02/08 5:14	RPJ	2701840
1,2-Dichloroethane	ND		0.32	5	1	07/02/08 5:14	RPJ	2701840
2-Butanone	ND		0.93	10	1	07/02/08 5:14	RPJ	2701840
2-Hexanone	ND		0.32	10	1	07/02/08 5:14	RPJ	2701840
4-Methyl-2-pentanone	ND		0.24	10	1	07/02/08 5:14	RPJ	2701840
Acetone	ND		4.6	50	1	07/02/08 5:14	RPJ	2701840
Benzene	ND		0.2	5	1	07/02/08 5:14	RPJ	2701840
Bromodichloromethane	ND		0.12	5	1	07/02/08 5:14	RPJ	2701840
Bromoform	ND		0.32	5	1	07/02/08 5:14	RPJ	2701840
Bromomethane	ND		0.61	10	1	07/02/08 5:14	RPJ	2701840
Carbon disulfide	ND		0.41	5	1	07/02/08 5:14	RPJ	2701840
Carbon tetrachloride	ND		0.27	5	1	07/02/08 5:14	RPJ	2701840
Chlorobenzene	ND		0.13	5	1	07/02/08 5:14	RPJ	2701840
Chloroethane	ND		0.45	10	1	07/02/08 5:14	RPJ	2701840
Chloroform	4.9	J	0.24	5	1	07/02/08 5:14	RPJ	2701840
Chloromethane	ND		0.31	5	1	07/02/08 5:14	RPJ	2701840
cis-1,3-Dichloropropene	ND		0.17	5	1	07/02/08 5:14	RPJ	2701840
Dibromochloromethane	ND		0.27	5	1	07/02/08 5:14	RPJ	2701840
Diisopropyl ether	1.6	J	0.16	5	1	07/02/08 5:14	RPJ	2701840
Ethylbenzene	ND		0.16	5	1	07/02/08 5:14	RPJ	2701840
Methyl tert-butyl ether	2	J	0.21	5	1	07/02/08 5:14	RPJ	2701840
Methylene chloride	ND		0.49	5	1	07/02/08 5:14	RPJ	2701840
Naphthalene	ND		0.25	5	1	07/02/08 5:14	RPJ	2701840
Styrene	ND		0.11	5	1	07/02/08 5:14	RPJ	2701840
Tetrachloroethene	110		0.28	0.7	1	07/02/08 5:14	RPJ	2701840
Toluene	ND		0.19	5	1	07/02/08 5:14	RPJ	2701840
trans-1,3-Dichloropropene	ND		0.17	5	1	07/02/08 5:14	RPJ	2701840
Trichloroethene	3.5	J	0.49	5	1	07/02/08 5:14	RPJ	2701840
Trichlorofluoromethane	ND		0.24	5	1	07/02/08 5:14	RPJ	2701840
Vinyl acetate	ND		0.87	10	1	07/02/08 5:14	RPJ	2701840
Vinyl chloride	ND		0.34	10	1	07/02/08 5:14	RPJ	2701840
cis-1,2-Dichloroethene	3.6	J	0.44	5	1	07/02/08 5:14	RPJ	2701840
m,p-Xylene	ND		0.29	5	1	07/02/08 5:14	RPJ	2701840
o-Xylene	ND		0.24	5	1	07/02/08 5:14	RPJ	2701840

Amy K. Jackson
Project Manager

Qualifiers:
ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Client Sample ID: TCSW-1 **Collected:** 06/20/2008 8:20 **SPL Sample ID:** 08061072-01

Site: CALDWELL CLEANERS

Analyses/Method	Result	QUAL	MDL		Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
trans-1,2-Dichloroethene	ND		0.21		5	1	07/02/08 5:14	RPJ	2701840
Xylenes,Total	ND		0.24		5	1	07/02/08 5:14	RPJ	2701840
Surr: 1,2-Dichloroethane-d4	104		0	%	74-133	1	07/02/08 5:14	RPJ	2701840
Surr: 4-Bromofluorobenzene	93.9		0	%	74-116	1	07/02/08 5:14	RPJ	2701840
Surr: Toluene-d8	100		0	%	84-112	1	07/02/08 5:14	RPJ	2701840

Amy K. Jackson
Project Manager

Qualifiers:

ND/U - Not Detected at the Method Detection Limit
J - Estimated Value between MDL and PQL
* - Surrogate Recovery Outside Advisable QC Limits
E - Concentrations exceeding Calibration range of Instrument
B/V - Analyte detected in the associated Method Blank above Rep.Limit
>MCL - Result Over Maximum Contamination Limit(MCL)
D - Surrogate Recovery Unreportable due to Dilution
MI - Matrix Interference
TNTC - Too numerous to count

Quality Control Documentation

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

ATC ASSOCIATES, INC.

45.34341.1302

Analysis: Volatile Organics Method 8260B
Method: SW8260B

WorkOrder: 08061072
Lab Batch ID: R182910

Method Blank

RunID: QA_080701B-2701831 Units: ug/L
Analysis Date: 07/02/2008 0:41 Analyst: RPJ
Preparation Date: 07/02/2008 0:41 Prep By: Method: SW5035

Samples in Analytical Batch:

Lab Sample ID	Client Sample ID
08061072-01A	TCSW-1

Analyte	Result	Qual	Rep Limit	MDL
1,1,1-Trichloroethane	ND		5.0	0.27
1,1,2,2-Tetrachloroethane	ND		5.0	0.17
1,1,2-Trichloroethane	ND		5.0	0.19
1,1-Dichloroethane	ND		5.0	0.28
1,1-Dichloroethene	ND		5.0	0.33
1,2-Dibromoethane	ND		5.0	0.21
1,2-Dichloroethane	ND		5.0	0.32
2-Butanone	ND		10	0.93
2-Hexanone	ND		10	0.32
4-Methyl-2-pentanone	ND		10	0.24
Acetone	ND		50	4.6
Benzene	ND		5.0	0.2
Bromodichloromethane	ND		5.0	0.12
Bromoform	ND		5.0	0.32
Bromomethane	ND		10	0.61
Carbon disulfide	ND		5.0	0.41
Carbon tetrachloride	ND		5.0	0.27
Chlorobenzene	ND		5.0	0.13
Chloroethane	ND		10	0.45
Chloroform	ND		5.0	0.24
Chloromethane	ND		5.0	0.31
cis-1,3-Dichloropropene	ND		5.0	0.17
Dibromochloromethane	ND		5.0	0.27
Diisopropyl ether	ND		5.0	0.16
Ethylbenzene	ND		5.0	0.16
Methyl tert-butyl ether	ND		5.0	0.21
Methylene chloride	ND		5.0	0.49
Naphthalene	0.61	J	5.0	0.25
Styrene	ND		5.0	0.11
Tetrachloroethene	ND		0.70	0.28
Toluene	ND		5.0	0.19
trans-1,3-Dichloropropene	ND		5.0	0.17
Trichloroethene	ND		5.0	0.49
Trichlorofluoromethane	ND		5.0	0.24
Vinyl acetate	ND		10	0.87
Vinyl chloride	ND		10	0.34
cis-1,2-Dichloroethene	ND		5.0	0.44
m,p-Xylene	ND		5.0	0.29
o-Xylene	ND		5.0	0.24
trans-1,2-Dichloroethene	ND		5.0	0.21
Xylenes,Total	ND		5.0	0.24
Surr: 1,2-Dichloroethane-d4	99.2		74-133	0
Surr: 4-Bromofluorobenzene	97.7		74-116	0
Surr: Toluene-d8	97.6		84-112	0

Qualifiers:
ND/U - Not Detected at the Method Detection Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B/V - Analyte detected in the associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.
TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

ATC ASSOCIATES, INC.

45.34341.1302

Analysis: Volatile Organics Method 8260B
Method: SW8260B
WorkOrder: 08061072
Lab Batch ID: R182910

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: QA_080701B-2701829 Units: ug/L
Analysis Date: 07/01/2008 23:10 Analyst: RPJ

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
1,1,1-Trichloroethane	50.0	50.4	101	50.0	48.6	97.1	3.8	26	67	132
1,1,2,2-Tetrachloroethane	50.0	46.0	92.1	50.0	44.9	89.7	2.6	26	73	127
1,1,2-Trichloroethane	50.0	50.5	101	50.0	49.0	97.9	3.2	20	81	121
1,1-Dichloroethane	50.0	53.9	108	50.0	53.6	107	0.5	23	80	124
1,1-Dichloroethene	50.0	53.2	106	50.0	52.8	106	0.7	23	74	124
1,2-Dibromoethane	50.0	51.7	103	50.0	49.6	99.2	4.2	20	79	123
1,2-Dichloroethane	50.0	50.8	102	50.0	50.4	101	0.7	21	73	134
2-Butanone	125	102	81.4	125	115	92.0	12.3	50	51	149
2-Hexanone	125	115	91.7	125	124	98.9	7.5	55	59	139
4-Methyl-2-pentanone	125	133	107	125	134	107	0.7	30	74	126
Acetone	125	85.5	68.4	125	118	94.3	31.8	58	22	192
Benzene	50.0	56.2	112	50.0	54.2	108	3.6	23	79	124
Bromodichloromethane	50.0	49.3	98.6	50.0	46.5	93.1	5.8	21	70	133
Bromoform	50.0	49.1	98.2	50.0	47.4	94.9	3.4	27	57	114
Bromomethane	50.0	48.1	96.2	50.0	51.2	102	6.2	28	51	139
Carbon disulfide	50.0	52.5	105	50.0	51.3	103	2.4	23	64	138
Carbon tetrachloride	50.0	48.0	96.0	50.0	45.8	91.5	4.7	35	65	136
Chlorobenzene	50.0	52.5	105	50.0	50.6	101	3.7	19	80	122
Chloroethane	50.0	50.6	101	50.0	50.0	100	1.2	26	52	148
Chloroform	50.0	53.8	108	50.0	53.0	106	1.4	42	76	122
Chloromethane	50.0	56.0	112	50.0	57.4	115	2.4	28	67	129
cis-1,3-Dichloropropene	50.0	50.1	100	50.0	48.3	96.6	3.7	20	70	130
Dibromochloromethane	50.0	50.1	100	50.0	47.2	94.4	6.0	20	71	118
Diisopropyl ether	50.0	53.6	107	50.0	53.6	107	0.1	21	79	127
Ethylbenzene	50.0	55.0	110	50.0	52.5	105	4.7	16	79	125
Methyl tert-butyl ether	50.0	52.9	106	50.0	53.8	108	1.6	23	77	125
Methylene chloride	50.0	55.7	111	50.0	50.1	100	10.6	22	76	139
Naphthalene	50.0	56.8	114	50.0	55.8	112	1.7	27	72	132
Styrene	50.0	53.1	106	50.0	51.5	103	3.1	19	76	128
Tetrachloroethene	50.0	52.1	104	50.0	47.2	94.4	9.8	20	76	123
Toluene	50.0	53.2	106	50.0	48.9	97.8	8.5	21	79	124
trans-1,3-Dichloropropene	50.0	49.5	98.9	50.0	46.9	93.8	5.3	20	65	126

Qualifiers:
ND/U - Not Detected at the Method Detection Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B/V - Analyte detected in the associated Method Blank
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
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QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Quality Control Report

ATC ASSOCIATES, INC.

45.34341.1302

Analysis: Volatile Organics Method 8260B **WorkOrder:** 08061072
Method: SW8260B **Lab Batch ID:** R182910

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

RunID: QA_080701B-2701829 Units: ug/L
Analysis Date: 07/01/2008 23:10 Analyst: RPJ

Analyte	LCS Spike Added	LCS Result	LCS Percent Recovery	LCSD Spike Added	LCSD Result	LCSD Percent Recovery	RPD	RPD Limit	Lower Limit	Upper Limit
Trichloroethene	50.0	55.6	111	50.0	54.8	110	1.4	20	77	121
Trichlorofluoromethane	50.0	48.0	96.0	50.0	48.4	96.7	0.8	25	61	148
Vinyl acetate	50.0	39.2	78.3	50.0	36.7	73.4	6.4	59	18	180
Vinyl chloride	50.0	51.4	103	50.0	54.5	109	5.9	20	63	137
cis-1,2-Dichloroethene	50.0	54.9	110	50.0	54.3	109	1.0	28	80	121
m,p-Xylene	100	114	114	100	108	108	5.2	20	77	132
o-Xylene	50.0	55.4	111	50.0	53.5	107	3.5	17	76	127
trans-1,2-Dichloroethene	50.0	55.6	111	50.0	54.7	109	1.5	22	75	128
Xylenes,Total	150.0	169.4	112.8	150.0	161.5	107.7	4.7	20	76	130
Surr: 1,2-Dichloroethane-d4	50.0	45.9	91.8	50.0	48.1	96.2	4.7	30	74	133
Surr: 4-Bromofluorobenzene	50.0	48.6	97.2	50.0	50.0	99.9	2.8	30	74	116
Surr: Toluene-d8	50.0	49.5	99.0	50.0	51.3	103	3.5	30	84	112

Qualifiers:
ND/U - Not Detected at the Method Detection Limit
E - Estimated Value exceeds calibration curve
J - Estimated value between MDL and PQL
B/V - Analyte detected in the associated Method Blank
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MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

Sample Receipt Checklist

And

Chain of Custody

LAFAYETTE LABORATORY
500 AMBASSADOR CAFFERY PARKWAY
SCOTT, LA 70583
(337) 237-4775

Sample Receipt Checklist

Workorder:	**08061072**	Received By:	**GAS**
Date and Time Received:	**6/21/2008 9:30:00 AM**	Carrier name:	**FedEx-Pri Saturday Del**
Temperature:	**3.5°C**	Chilled by:	**Water Ice**

1. **Shipping container/cooler in good condition?**	Yes ☑	No ☐	Not Present ☐	
2. **Custody seals intact on shippping container/cooler?**	Yes ☐	No ☐	Not Present ☑	
3. **Custody seals intact on sample bottles?**	Yes ☐	No ☐	Not Present ☑	
4. **Chain of custody present?**	Yes ☑	No ☐		
5. **Chain of custody signed when relinquished and received?**	Yes ☑	No ☐		
6. **Chain of custody agrees with sample labels?**	Yes ☑	No ☐		
7. **Samples in proper container/bottle?**	Yes ☑	No ☐		
8. **Sample containers intact?**	Yes ☑	No ☐		
9. **Sufficient sample volume for indicated test?**	Yes ☑	No ☐		
10. **All samples received within holding time?**	Yes ☑	No ☐		
11. **Container/Temp Blank temperature in compliance?**	Yes ☑	No ☐		
12. **Water - VOA vials have zero headspace?**	Yes ☑	No ☐	VOA Vials Not Present ☐	
13. **Water - Preservation checked upon receipt (except VOA*)?**	Yes ☐	No ☐	Not Applicable ☑	

***VOA Preservation Checked After Sample Analysis**

SPL Representative: _____ **Contact Date & Time:** _____

Client Name Contacted: _____

Non Conformance Issues: _____

Client Instructions: _____

SPL, Inc.

Analysis Request & Chain of Custody Record

SPL Workorder No. 0806 1072 — 310677 — page 1 of 1

Client Name: ATC
Address: 3417-A Trade Park Court
Phone/Fax: 704-529-3200 / 704-529-3272
Client Contact: Steven Aldis Email: steven.aldis@atcassociates.com
Project Name/No.: 45,34341.1302
Site Name: Caldwell's Cleaners
Site Location: Concord, NC
Invoice To: Steven Aldis Ph: 704-529-3200

matrix: W=water S=soil O=oil SL=sludge X=other
bottle: P=plastic A=amber glass G=glass V=vial X=other
size: 1=1 liter 4=4oz 40=vial 8=8oz 16=16oz X=other
pres.: 1=HCl 2=HNO3 3=H2SO4 X=other

SAMPLE ID	DATE	TIME	comp	grab	matrix	bottle	size	pres.	Number of Containers	Requested Analysis: 8260								
JCSW-1	6/20/08	9:20		X	W	V	40	1	3	X								

Client/Consultant Remarks: Please Call with any Questions.

Laboratory remarks: RS-708 (8)

Intact? Y N
Ice? Y N
Temp: 3.5

Requested TAT

Contract ☒ 72hr ☐ 24hr ☐ Standard ☐ 48hr ☐ Other ☐ _____

Special Reporting Requirements Results: Fax ☐ Email ☐ PDF ☒
Standard QC ☐ Level 3 QC ☐ Level 4 QC ☐ TX TRRP ☐ LA RECAP ☐

Special Detection Limits (specify):

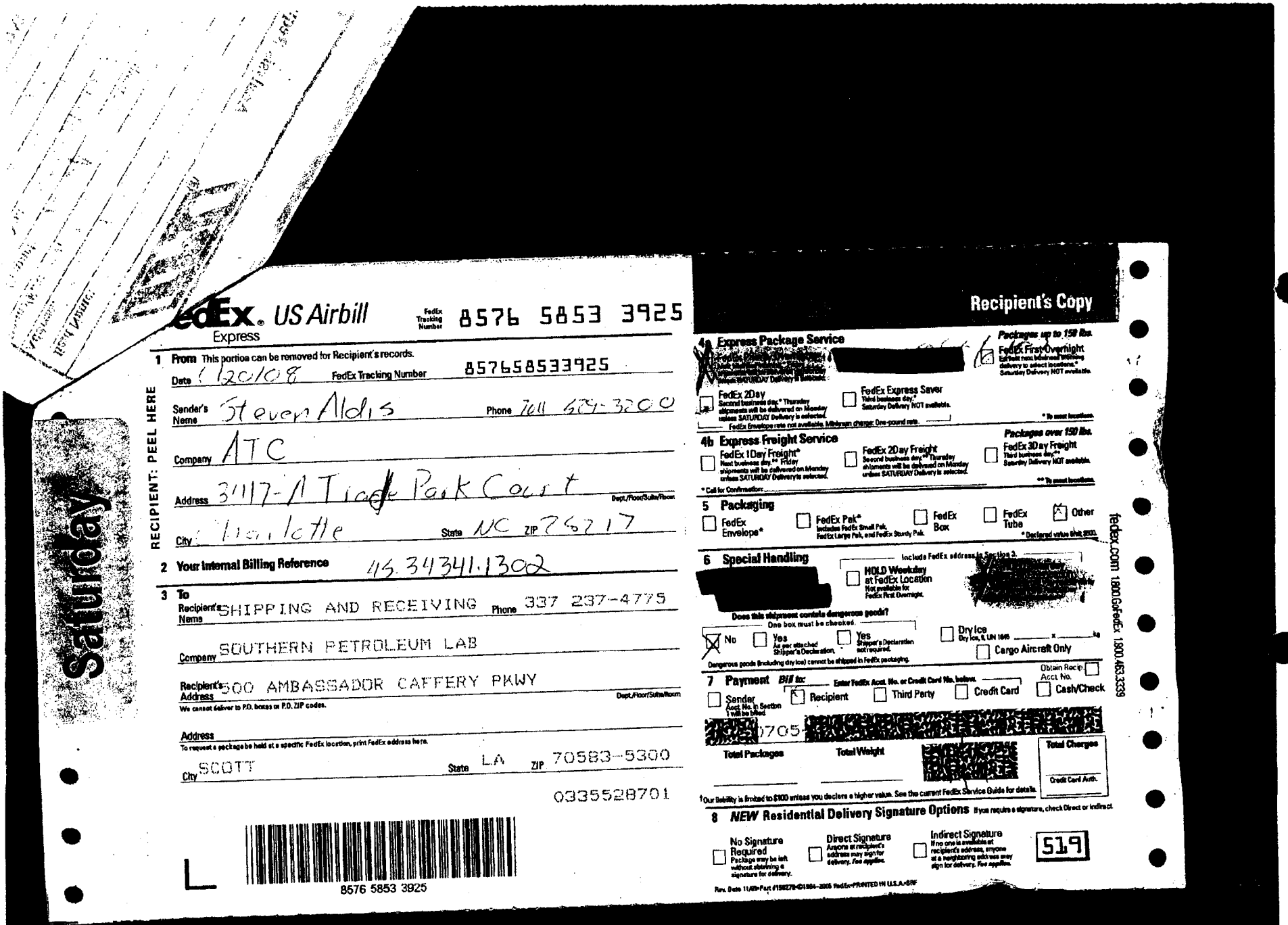
PM review (initial):

	date	time	
1. Relinquished by Sampler:			2. Received by: Fed Ex
3. Relinquished by: Fed Ex			4. Received by:
5. Relinquished by:	6/21/08	9:00 9:30	6. Received by Laboratory:

☐ 8880 Interchange Drive
Houston, TX 77054 (713) 660-0901

☒ 500 Ambassador Caffery Parkway
Scott, LA 70583 (337) 237-4775

☐ 459 Hughes Drive
Traverse City, MI 49686 (231) 947-5777



FedEx. US Airbill
Express

FedEx Tracking Number 8576 5853 3925

1 From This portion can be removed for Recipient's records.

Date 1/20/08 FedEx Tracking Number 857658533925

Sender's Name Steven Aldis Phone 701 69-3200

Company ATC

Address 3117-A Trade Park Court Dept/Floor/Suite/Room

City Charlotte State NC ZIP 28217

RECIPIENT: PEEL HERE

2 Your Internal Billing Reference 45.34341.1302

3 To

Recipient's Name SHIPPING AND RECEIVING Phone 337 237-4775

Company SOUTHERN PETROLEUM LAB

Recipient's Address 500 AMBASSADOR CAFFERY PKWY Dept./Floor/Suite/Room

We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

To request a package be held at a specific FedEx location, print FedEx address here.

City SCOTT State LA ZIP 70583-5300

0335528701

8576 5853 3925

Recipient's Copy

4a Express Package Service — Packages up to 150 lbs.

FedEx First Overnight — Earliest next business morning delivery to select locations.* Saturday Delivery NOT available.

FedEx 2Day — Second business day.* Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx Express Saver — Third business day.* Saturday Delivery NOT available.

FedEx Envelope rate not available. Minimum charge: One-pound rate.

* To most locations.

4b Express Freight Service — Packages over 150 lbs.

FedEx 1Day Freight* — Next business day.** Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 2Day Freight — Second business day.** Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.

FedEx 3Day Freight — Third business day.** Saturday Delivery NOT available.

* Call for Confirmation.

** To most locations.

5 Packaging

FedEx Envelope* | FedEx Pak* (includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak) | FedEx Box | FedEx Tube | Other *Declared value limit $500.

6 Special Handling — Include FedEx address in Section 3.

HOLD Weekday at FedEx Location — Not available for FedEx First Overnight.

Does this shipment contain dangerous goods? One box must be checked.

No | Yes — As per attached Shipper's Declaration. | Yes — Shipper's Declaration not required. | Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg | Cargo Aircraft Only

Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

7 Payment Bill to: — Enter FedEx Acct. No. or Credit Card No. below. — Obtain Recip. Acct. No.

Sender — Acct. No. in Section 1 will be billed | Recipient | Third Party | Credit Card | Cash/Check

Total Packages | Total Weight | Total Charges | Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See the current FedEx Service Guide for details.

8 NEW Residential Delivery Signature Options If you require a signature, check Direct or Indirect.

No Signature Required — Package may be left without obtaining a signature for delivery.

Direct Signature — Anyone at recipient's address may sign for delivery. Fee applies.

Indirect Signature — If no one is available at recipient's address, anyone at a neighboring address may sign for delivery. Fee applies.

519

Rev. Date 11/07 Part #156278 ©1994-2005 FedEx PRINTED IN U.S.A. GRF

fedex.com 1.800.GoFedEx 1.800.463.3339

Saturday

NCDENR

North Carolina Department of Environment and Natural Resources
DIVISION OF WASTE MANAGEMENT

Dexter R. Matthews, Director

Michael F. Easley, Governor
William G Ross, Jr., Secretary

October 24, 2007

SCOTT STUPAK
NCDSCA 013-0002 (CALDWELL CLEANERS)
401 OBERLIN RD
SUITE 150
RALEIGH NC 27605

Re: Subsequent Notification
NCDSCA 013-0002 (Caldwell Cleaners)
NC0991302925

Dear Facility Contact:

The North Carolina Hazardous Waste Section has received a Subsequent Notification from your facility. Our office has accepted and processed the changes as noted. Attached is a RCRA Site Detail Report for your review to ensure that the information is accurate. Please notify our office if additional changes need to be made. If you have any questions or need additional assistance, please call Larry Wilson at (919) 508-8573.

Sincerely,

Elizabeth W. Cannon

Elizabeth W. Cannon, Chief
Hazardous Waste Section

cc: Central Files

2725 E. Millbrook Road, Suite 121
Raleigh, North Carolina 27604
Phone 919-871-0999
Fax 919-871-0335
www.atcassociates.com

August 16, 2007

Mr. Scott Stupak
State of North Carolina
Department of Environment and Natural Resources
Division of Waste Management, Superfund Section
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605

RE: Waste Disposal
Caldwell Cleaners
800 Church Street North
Concord, Cabarrus County, North Carolina
DSCA Site Identification #13-0002

Dear Mr. Stupak:

ATC Associates of North Carolina, P.C. (ATC) is submitting this letter to document waste disposal activities for the above referenced site. A total of 21 55-gallon drums of liquid waste and 32 55-gallon drums of solid waste were picked up from the site on August 10, 2007. A copy of the waste characterization report is included in ***Attachment 1*** and a copy of the waste manifest is included in ***Attachment 2***. Following are additional details, per the requirements specified in DSCA Contractor Bulletin #18:

- DSCA project manager name: Scott Stupak
- DSCA site name and number: Caldwell Cleaners, DSCA Site #13-0002.
- Description of the waste activities used to generate the waste on the manifest: Waste generated during installation of monitoring wells MW-21BR, MW-22BR, MW-23BR, and MW-23 through MW-25, and the groundwater sampling of MW-1 through MW-25.
- Corresponding DSCA SLAW number the waste was generated under: SLAW003.
- Date(s) that the waste was generated: August 6, 2007 through August 10, 2007.
- Date that the waste was picked up by the waste transporter: August 10, 2007.
- Destination of the waste: Environmental Quality, Belleville, Michigan.
- Volume of waste generated: 16,800 pounds liquid and 12,800 pounds solid.

If you have questions or require additional information, please do not hesitate to contact Genna Olson at (919) 871-0999.

Sincerely,
ATC Associates of North Carolina, P.C.

Genna K. Olson, P.G.
Program Manager

ATTACHMENT 1

WASTE CHARACTERIZATION REPORT

2725 E. Millbrook Road, Suite 121
Raleigh, North Carolina 27604
Phone 919-871-0999
Fax 919-871-0335
www.atcassociates.com

August 5, 2007

Mr. Scott Stupak
State of North Carolina
Department of Environment and Natural Resources
Division of Waste Management, Superfund Section
401 Oberlin Road, Suite 150
Raleigh, North Carolina 27605

RE: Waste Disposal
Caldwell Cleaners
800 Church Street N.
Concord, Cabarrus County, North Carolina
DSCA Site Identification #13-0002

Dear Mr. Stupak:

ATC Associates of North Carolina, P.C. (ATC) is submitting this letter to document waste disposal activities for the above referenced site. One 55-gallon drum of liquid waste and 27 55-gallon drums of solid waste were picked up from the site on August 3, 2007. A copy of the waste characterization report is included in ***Attachment 1*** and a copy of the waste manifest is included in ***Attachment 2***. Following are additional details, per the requirements specified in DSCA Contractor Bulletin #18:

- DSCA project manager name: Scott Stupak
- DSCA site name and number: Caldwell Cleaners, DSCA Site #13-0002.
- Description of the waste activities used to generate the waste on the manifest: Waste generated during installation of monitoring wells MW-17 through MW-22.
- Corresponding DSCA SLAW number the waste was generated under: SLAW003.
- Date(s) that the waste was generated: July 30, 2007 through August 3, 2007. Date that the waste was picked up by the waste transporter: August 3, 2007.
- Destination of the waste: Environmental Quality, Belleville, Michigan.
- Volume of waste generated: 15,250 pounds (400 pounds liquid and 14,850 pounds solid).

If you have questions or require additional information, please do not hesitate to contact Genna Olson at (919) 871-0999.

Sincerely,
ATC Associates of North Carolina, P.C.

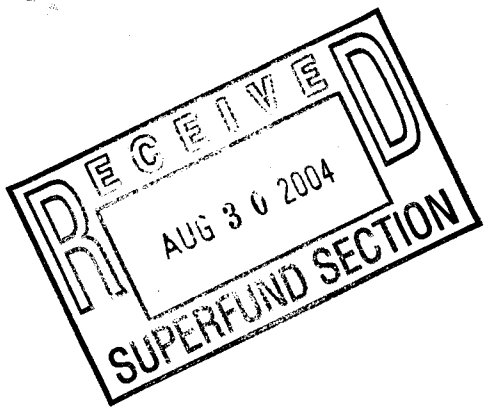
Genna K. Olson, P.G.
Program Manager

ATTACHMENT 1

WASTE CHARACTERIZATION REPORT

13-0002

SHIELD ENGINEERING, INC.



August 26, 2004

Mr. John Powers, Special Remediation Branch Head
North Carolina Department of Environment
and Natural Resources – Division of Waste Management
Dry-Cleaning Solvent Cleanup Act Program
1646 Mail Service Center
Raleigh, NC 27699-4611

Subject: **Submission of DSCA Petition for Certification**
Caldwell Cleaners
800 Church Street North, Concord, Cabarrus County, NC
Shield Project No. 1040091

Dear John:

Shield submits for approval the enclosed petition for Caldwell Cleaners. As is usually the case, Mr. Mehta, the dry cleaning business owner, has negotiated with the property owner for sale of the property.

As a condition of a pre-arranged loan package, Mr. Mehta must have the site certified into the DSCA Program prior to receiving the loan for the purchase of the property. Any consideration you can give him would be deeply appreciated.

Please contact me directly at 1-800-395-5220 should you have questions concerning the submittal.

With best regards,

SHIELD ENGINEERING, INC.

Greg D. Icenhour, P.G., MBA, CED
National Director, Dry Cleaning Services

Enclosure: DSCA Petition for Certification

H:\Projects\2004\1040091-01 Caldwell Cleaners\Correspondence\Petition Cover Letter.doc

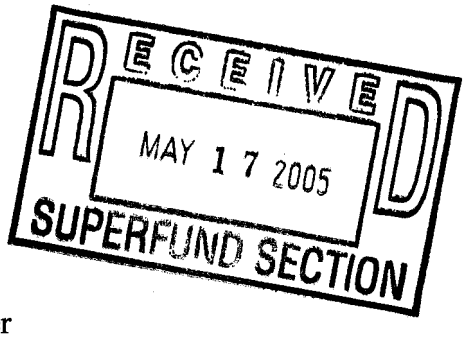
4301 Taggart Creek Road
Charlotte, NC 28208
www.shieldengineering.com
Telephone 704.394.6913
Fax 704.394.6968

13-0002

PSNC ENERGY®
A SCANA COMPANY

May 12, 2005

Scott Steepak
NC Department of Environment and Natural Resources
Division of Waste Management
Dry Cleaners Program
401 Oberlin Road
Suite 150
Raleigh, NC 27605



RE: Comprehensive SAR for Former PSNC Operations Center
809 Church Street North, Concord, NC 28025

Dear Scott:

Per our previous telephone conversations, PSNC has completed its investigations at our former operations center located at 809 Church Street North in Concord, NC. Enclosed you will find a copy of the Comprehensive Site Assessment Report (SAR) prepared by TBE Group (our consultant).

As you will see from the SAR, the constituents detected in the groundwater are primarily DCE, TCE and PCE, which are normally associated with dry cleaning operations or other types of solvent users. The source of these impacts was determined to likely be located off-site to the east of North Church Street, towards the dry cleaning operations.

PSNC has no further intentions to investigate this site. Should you have any questions, please contact me at (704) 810-3115 or you can reach me by e-mail at kenjohnson@scana.com.

Sincerely,

Ken Johnson
Manager-Environmental Compliance

cc. Bill Norris
Bill Rayner

NCDENR
North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director | Division of Waste Management | Michael F. Easley, Governor
William G. Ross Jr., Secretary

September 29, 2004

First Charter Bank
attn: Linda Gibson
845 Church Street N STE 305
Concorde, North Carolina 28025-4375

Re: Caldwell Cleaners Agreement
North Carolina Dry-Cleaning Solvent Cleanup Act Program Site 13-0002

Dear Ms. Gibson:
Shree Dutt, Incorporated has entered into an administrative agreement with the division for the certified site Caldwell Cleaners. The parties outlined in the agreement are privileged the following liability coverage as long as the division and the parties remain within the agreement:

N.C.G.S. § 143-215.104K. Liability protection.
A potentially responsible party who enters into an assessment agreement or remediation agreement with the Commission and who is complying with the agreement shall not be held liable for assessment or remediation of areas of contamination identified in the agreement except as specified in the assessment agreement or remediation agreement. The liability protection provided under this Part applies to all of the following persons to the same extent as the petitioner:

(1) Any person under the direction or control of the petitioner who directs or contracts for assessment, remediation, or redevelopment of the contamination site.
(2) Any future owner of the contamination site.
(3) A person who develops or occupies the contamination site.
(4) A successor or assign of any person to whom the liability protection provided under this Part applies.
(5) Any lender or fiduciary that provides financing for assessment, remediation, or redevelopment of the contamination site.

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone 919-733-4996 \ FAX 919-715-3605 \ Internet http://wastenotnc.org

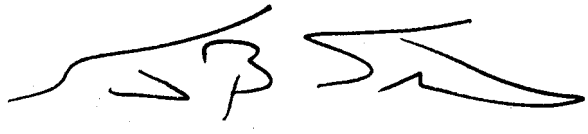
All petitioners of the certified site will be responsible for the following financial obligations of an abandoned dry-cleaning facility site:

> **N.C.G.S. § 143-215.104F(f)(4) Financial Responsibility Requirements**
> For dry-cleaning facilities owned by persons who employ fewer than five full-time employees, or the equivalent, in activities related to dry-cleaning operations during the calendar year preceding the date of the petition, the first five thousand dollars ($5,000) of the costs of assessment or remediation and one percent (1%) of the costs of assessment or remediation in excess of two hundred thousand dollars ($200,000) but not exceeding one million dollars ($1,000,000).

At worst case when the total costs of assessment and remediation of the site exceed one million dollars, the petitioner(s) will be responsible for a maximum of $13,000 of the costs of assessment and remediation. The Program's contractors will conduct the assessment and remediation activities at the site to risk based standards.

If you have any questions you may visit our web site at www.ncdsca.org or please call me at (919) 733-2801, extension 241 or email me Scott.Stupak@ncmail.net.

Sincerely,



Scott Stupak
Project Manager

cc: DSCA Site 13-0002 File
Shree Dutt Inc.

NCDENR
North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director | Division of Waste Management | Michael F. Easley, Governor
William G. Ross Jr., Secretary

September 14, 2004

Shree Dutt, Incorporated
attn: Jay Mehta, President
800 North Church Street
Concord, North Carolina 28025-4338

Re: Notification of Certification into the Dry-cleaning Solvent Cleanup Act Program
DSCA Site ID 13-0002
Caldwell Cleaners
800 North Church Street
Cabarrus County

Dear Mr. Mehta:

The Dry-Cleaning Solvent Cleanup Act (DSCA) Program hereby notifies you that it has accepted the above-referenced facility site (Site) into the DSCA Program. The DSCA Program will send to you in the next several weeks an Assessment and Remediation Agreement (ARA) for you to execute and return. The ARA is an agreement that allows the State and its contractors to perform a Prioritization Assessment (PA) on the Site to gather the data necessary for the DSCA Program to prioritize the Site for potential further action. This agreement will also allow for additional assessment and any necessary remediation. You must execute the ARA in order to obtain the liability protection afforded by G.S. 143-215.104K.

The DSCA Program requires that petitioners pay deductibles and co-pays for the assessment and remediation of facility sites as specified at G.S. 143-215.104F(f). The amount of the deductible depends on whether the facility site is a currently operating dry-cleaning facility, an abandoned dry-cleaning facility or a wholesale distribution facility. If the facility site is a currently operating dry-cleaning facility, the petitioner's deductible depends on the number of the full-time employees. The DSCA Program calculates full-time employees in accordance with 15A NCAC 02S.0103. The co-pay obligation is from one to three percent (1% to 3%) of assessment and remediation costs in excess of the dollar amounts set out at G.S. 143-215.104F(f). Based on the information provided by you in your Petition for Certification and attachments, the DSCA Program has determined that the Site is a small dry-cleaning facility with a deductible for assessment and remediation costs of $5,000. In addition to the site deductible, the DSCA Program calculates your co-pay obligation for assessment and remediation of the Site as one percent (1%) of the costs of assessment or remediation in excess of two hundred thousand dollars ($200,000) but not exceeding one million dollars ($1,000,000). The financial requirements stated above represent the total financial responsibility to be shared equally by all co-petitioners unless the Program is notified of other arrangements.

If you have any questions, please contact Scott Stupak at 919-733-2801, extension 241.

Sincerely,

Jack Butler, P.E.
Superfund Section Chief

cc: DSCA Site 13-0002 File

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone 919-733-4996 \ FAX 919-715-3605 \ Internet http://wastenotnc.org

North Carolina Department of Environment and Natural Resources
Division of Waste Management
Dexter R. Matthews, Director | Beverly Eaves Purdue, Governor | Dee Freeman, Secretary

MEMORANDUM

Date: 8/1/12

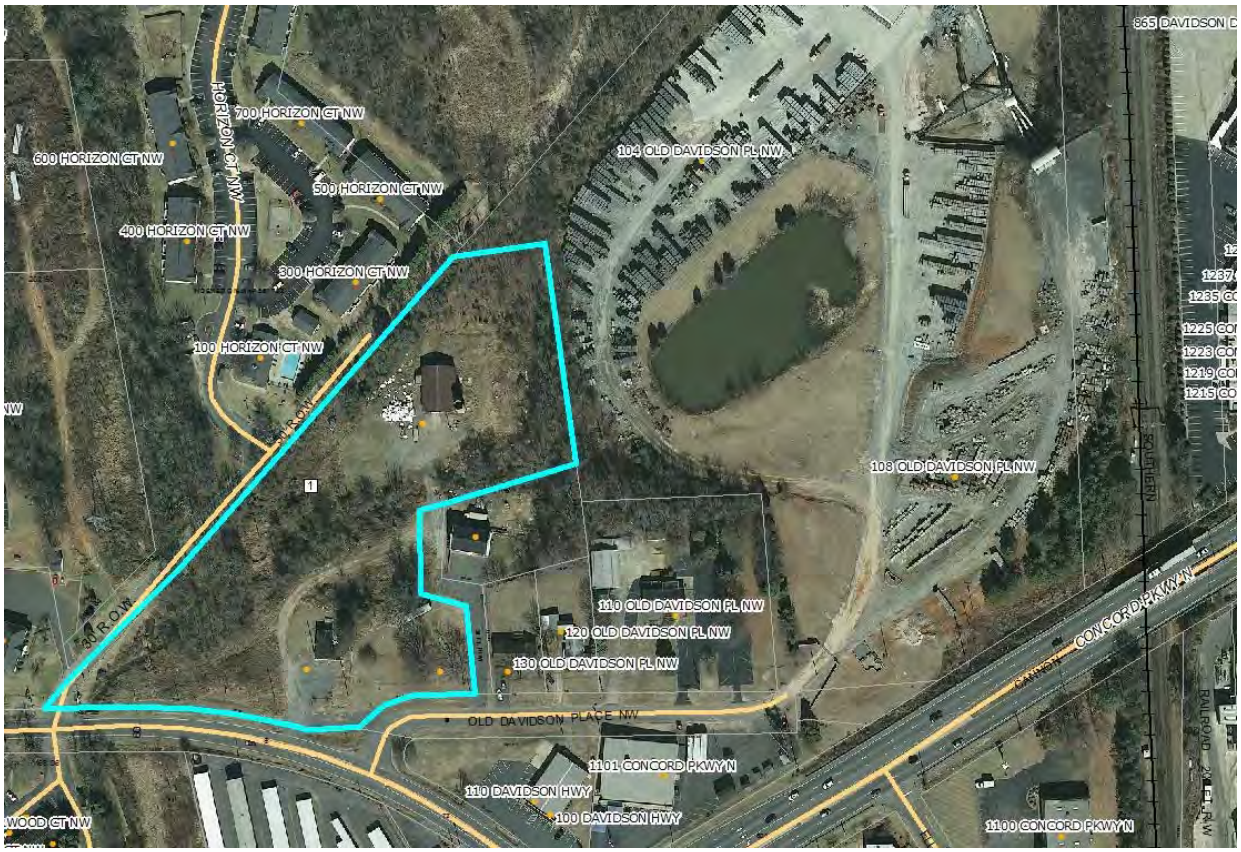
To: File

From: Vince Antrilli
Raleigh Regional Office
Inactive Hazardous Sites Branch

Re: Johnson Concrete/Piedmont Block – File Summary
NONCD0001933

- From A/B Spreadsheet: PCE IN A PROCESS WELL. SOURCE: possibily upgradient dry cleaner site? DRINKING WATER IS FROM MUNICIPLE LINES. PCE (58 µg/L, 7/01) discovered in process well during LUST corrective action (Piedmont Block #20172). DSCA Site (Caldwell Cleaners) located upgradient/west approximately 1750 feet. Additional possible upgradient drycleaning site in upgradient/west adjacent shopping center. 2000' receptor survey in 2000 located onsite process water supply well. [NC DOT ATS No 17-4 receptor survey reported 4 inoperable water supply wells approx 900' to the southeast 106-140 Davidson Hwy]. Jana Churchwell (Utility) verified municipal water at site address and remaining water supply well addresses in DOT receptor survey, except for 143 Dorsett Court. Adjusted Gross Income above and poverty level below state average (28027). Affidavit from Ernest Jackson September 2002. Review for possible connection to existing DSCA site. BP: Evaluate for Bernard Allen candidacy or additional funding for alternate water. BRP 2/4/09, CJ reports that DSCA will investigate file to determine if they will seek out source. DSCA stating that if shallow groundwater or soils impacted at site, they're going to assume another source than a drycleaner at the actual incident site. May be closely related to NCDOT Asphalt Site #4 (M&M Minerals) APS# 10831 - NONCD0002167. DP: Contaminated well is production well for Johnson Concrete. DSCA contractor spoke with owner of 140 Old Davidson Place. Structures have been torn down and lot cleared at this time. No need for sampling. That was only Residence down gradient that was still on well. GA sent HRE based on recent DSCA sampling.
- VA 8/1/12: Having reviewed the above information and historic aerials of the site from the Cabarrus Co GIS, it does appear that the structure at 140 Old Davidson Pl has been removed from the site. Follow up on water service connections of surrounding properties should be made.

1646 Mail Service Center, Raleigh, North Carolina 27699-1646
Phone/Fax: 919-707-8200 \ Internet: http://portal.ncdenr.org/web/wm



2010 Aerial from Cabarrus Co GIS (above)

2001 Aerial from Cabarrus Co GIS

Johnson Concrete/Piedmont Block

Well # / Name / Location	Sample Date	Sample By or #	PCE 2L=0.7 MCL=5	TCE 2L=2.8 MCL=5	1,4-Dioxin 2L=2.2E-7 MCL=3E-5	MTBE 2L=200	11-DCA 2L=70 MCL=700	cis-12-DCE 2L=70 MCL=70	DIPE 2L=70	Chloroform 2L=70 MCL=80	HRE sent	Comments
Joihnson Concrete/Piedmont Block	12/13/1993	Unknown	**18**									
Allen & Frances Johnson	11/10/2000	Unknown	**61**									
106 Old Davidson Pl NW	6/20/2008	DSCA	**110**	**3.5E**		2E	3.3E	3.6E	1.6E	4.9E	Y	

Notes:
All units in ug/l (ppb)
Above 2L Limit = **BOLD**
Above MCL Limit = **BOLD**
A=Average Value
E=Estimated Value
P=Elevated PQL
T=Tentatively Identified, not confirmed
NT=Not Tested
GCEH=Gaston County Enviromental Health
GMA=Groundwater Management Associates
*=Sample collected after filter system

1,2,4-Trimetylbenzene
11-DCA=1,1-Dichloroethane
cis-1,2-Dichloroethene
DIPE=Di-isopropyl Ehter

Johnson Concrete, Cabarrus County Addresses

Sample Addresses / Well ID#	County PIN#	Owner / Mailing Address	Phone Number	Sample Permission
140 Old Davidson Place JC-01 (1 business & 2 houses)	56210536690000	Harold & Reba McEachern 3125 Heglar Rd. Concord, NC 28025	(704) 782-5986	

Appendix B
Boring Logs

BORING LOG: P5-SB1

Permit #		Drill Date	***02/04/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description	Typical Diagram
0	P5-SB-1-2	2'		0.8 ppm		
2				12.6 ppm		
				0.5 ppm		
4				0.3 ppm		
				0.0 ppm	Brown-orange fine-to medium-grained sandy silty clay, slightly moist, micaceous	
6				0.0 ppm		
8				0.0 ppm		
				0.2 ppm		
10					Boring terminated at 10 ft bgs	
12						

backfilled with bentonite

Not to Scale

Notes:

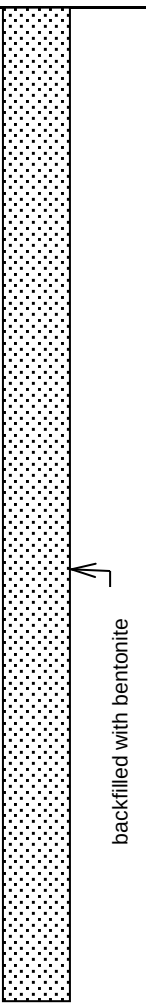
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P5-SB2

Permit #		Drill Date	***02/04/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0	P5-SB-1-2	2'		3.2 ppm	Red fine-to medium-grained sandy silty clay, slightly moist, micaceous
2				46.3 ppm	Red-brown, fine- to medium-grained sandy clay, slightly moist, micaceous
				2.0 ppm	
4				1.5 ppm	
				1.3 ppm	
6				0.0 ppm	Red-orange, fine sandy clay, micaceous, saprolite
				0.0 ppm	
8				0.0 ppm	Orange to beige fine- to medium-grained, sandy silt, saprolite
				3.2 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

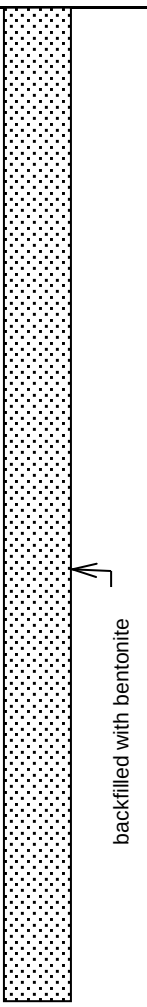
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P5-SB2A

Permit #		Drill Date	***02/04/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				1.4 ppm	Red clay, slightly moist, micaceous
2				5.4 ppm	Red-orange, fine- to medium-grained sandy clay, slightly moist, micaceous
				1.3 ppm	
				0.5 ppm	
4				0.0 ppm	
				0.0 ppm	Red to red-orange, clay, moist, micaceous
6				0.0 ppm	
				0.5 ppm	
8				0.9 ppm	
				1.4 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Brandy Costner***

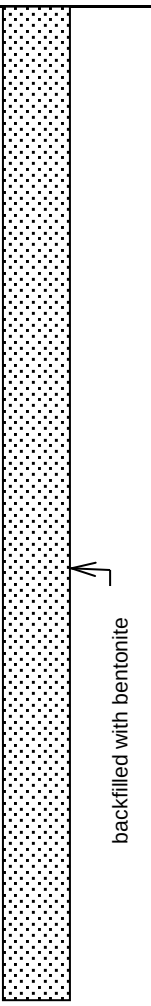
Driller: ***Probe Tech***

BORING LOG: P5-SB2B

Permit #		Drill Date	***02/04/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.4 ppm	Red clay, slightly moist, micaceous
				0.0 ppm	Red to orange-red, fine- to medium-grained sandy clay, slightly moist, micaceous
2				1.6 ppm	
				2.1 ppm	
4				0.4 ppm	
				1.0 ppm	Orange-red, fine- to medium-grained sandy silt, dry
6				1.1 ppm	
				1.4 ppm	
8				2.0 ppm	
				1.0 ppm	Orange-beige, silty fine- to medium-grained sand, dry
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Brandy Costner***

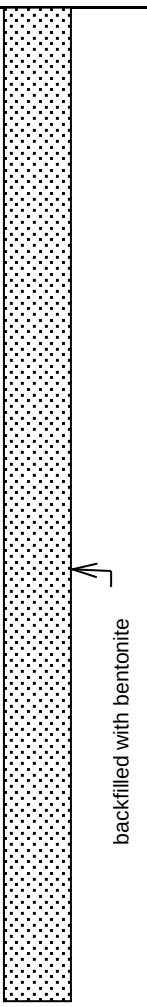
Driller: ***Probe Tech***

BORING LOG: P5-SB2C

Permit #		Drill Date	***02/04/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.7 ppm	Brown, fine- to medium-grained sandy clay, moist
				1.3 ppm	Red-brown, clay, slightly moist
2				1.1 ppm	
				1.0 ppm	
4				1.1 ppm	Red-orange, fine sandy clay, moist
				0.7 ppm	
6				0.8 ppm	
				0.6 ppm	
8				0.6 ppm	
				1.0 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

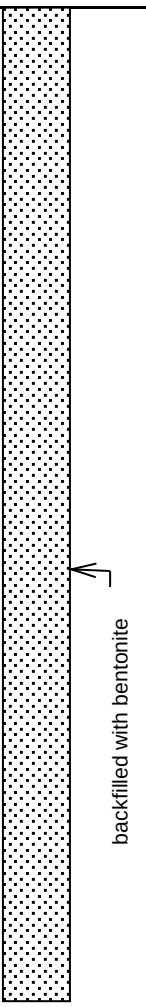
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P5-SB2

Permit #		Drill Date	***02/04/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered in boring***	TOC Elevation		Sample Method	***Acetate liner***

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0	P5-SB-1-2	2'		3.2 ppm	Red fine-to medium-grained sandy silty clay, slightly moist, micaceous
2				46.3 ppm	Red-brown, fine- to medium-grained sandy clay, slightly moist, micaceous
				2.0 ppm	
4				1.5 ppm	
				1.3 ppm	
6				0.0 ppm	Red-orange, fine sandy clay, micaceous, saprolite
				0.0 ppm	
8				0.0 ppm	Orange to beige fine- to medium-grained, sandy silt, saprolite
				3.2 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

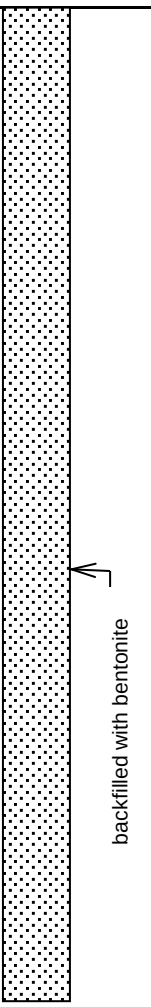
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P5-SB4

Permit #		Drill Date	***02/04/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0	P5-4-1	1'		0.7 ppm	Brown, fine- to medium-grained silty clay, moist
				1.3 ppm	Red, fine- to medium-grained sandy clay, moist to slightly moist
2				1.1 ppm	
				1.0 ppm	
4				1.1 ppm	
				0.7 ppm	
6				0.8 ppm	
				0.6 ppm	Red, fine- to medium-grained sandy clayey silt, dry
8				0.6 ppm	
				1.0 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

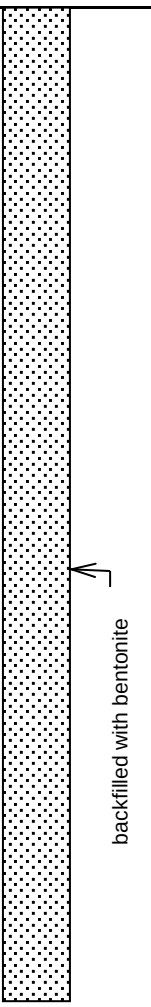
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P5-SB5

Permit #		Drill Date	***02/05/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.7 ppm	Red-orange, fine- to medium-grained sandy clay with trace silt, dry, micaceous
				1.3 ppm	
2				1.1 ppm	
				1.0 ppm	Red-orange, fine- to medium-grained sandy silt, dry, micaceous
4				1.1 ppm	
				0.7 ppm	Light brown, fine- to medium-grained sandy silt, saprolite, dry, micaceous
6				0.8 ppm	
				0.6 ppm	
8				0.6 ppm	
	P5-SB5-10	10'		1.0 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

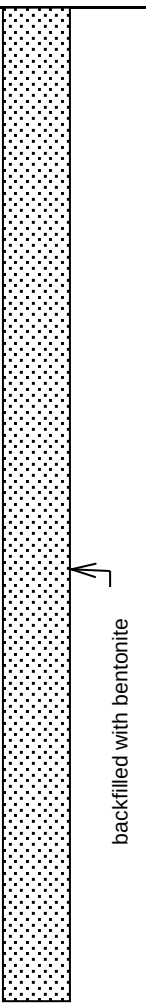
Geologist: ***Brandy Costner*** Driller: ***Probe Technology***

BORING LOG: P5-SB6

Permit #	Drill Date ***02/05/13***		Site ***Parcel 005***
Client ***NCDOT***	Use		URS Corporation
Address ***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft) ***10***
Drilling Method ***Geoprobe direct push***	Boring Depth (ft) ***10***		Boring Diam. (in) ***2.25***
Backfill Material ***bentonite***	***NA***		Static Water Level ***unknown***
Rmrks ***Groundwater not encountered***	TOC Elevation		Sample Method ***Acetate liner***
in boring			

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Red, clay, micaceous, dry
				0.0 ppm	Red, fine- to medium-grained sandy clay to sandy silt, slightly moist, micaceous
2				0.0 ppm	
				0.0 ppm	
4				0.0 ppm	Red-orange, silty fine- to medium-grained sand, slightly moist
				0.0 ppm	
6				0.0 ppm	Light orange to light brown, silty fine- to medium-grained sand, dry
				0.0 ppm	
8				0.0 ppm	
				0.0 ppm	
	P5-SB6-10	10'			
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Brandy Costner***

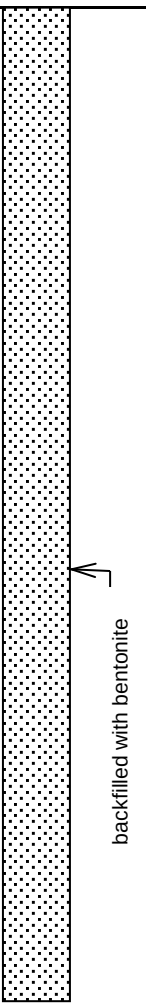
Driller: ***Probe Technology***

BORING LOG: P5-SB7

Permit #		Drill Date	***02/05/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered in boring***	TOC Elevation		Sample Method	***Acetate liner***

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Red-brown, silty clay, slightly moist
				0.0 ppm	Red, clay to silty clay, slightly moist, micaceous
2				0.0 ppm	
				0.0 ppm	
4				0.0 ppm	
				0.0 ppm	Red, fine- to medium-grained sandy clayey silt, slightly moist, micaceous, saprolite
6				0.0 ppm	
				0.0 ppm	Reddish-brown, fine- to medium-grained sandy silt, dry, micaceous, saprolite
8				0.0 ppm	
	P5-SB7-10	10'		0.0 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Brandy Costner***

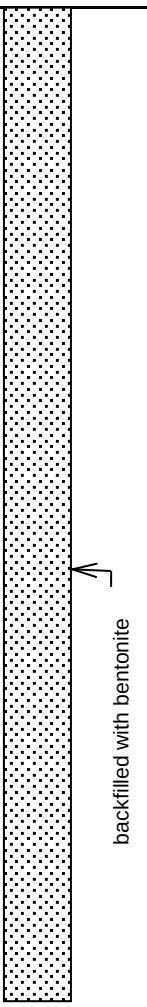
Driller: ***Probe Technology***

BORING LOG: P5-SB8

Permit #	Drill Date ***02/05/13***		Site ***Parcel 005***
Client ***NCDOT***	Use		URS Corporation
Address ***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft) ***10***
Drilling Method ***Geoprobe direct push***	Boring Depth (ft) ***10***		Boring Diam. (in) ***2.25***
Backfill Material ***bentonite***	***NA***		Static Water Level ***unknown***
Rmrks ***Groundwater not encountered***	TOC Elevation		Sample Method ***Acetate liner***
in boring			

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	
				0.0 ppm	
2				0.0 ppm	Brown to brown-red, silty clay, slightly moist
				0.0 ppm	
4				0.0 ppm	
				0.0 ppm	Brown-red to red-orange, silty clay, slightly moist
6				0.0 ppm	
				0.0 ppm	
8				0.0 ppm	Orange, clayey silt, micaceous
	P5-SB8-10	10'		0.0 ppm	
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

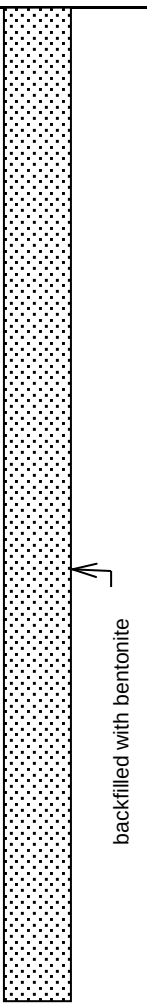
Geologist: ***Brandy Costner*** Driller: ***Probe Technology***

BORING LOG: P5-SB9

Permit #		Drill Date	***02/05/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	Light brown to brown, silty clay, slightly moist
				0.0 ppm	Red, clayey silt, slightly moist, micaceous
2				0.0 ppm	
				0.0 ppm	Red, fine- to medium-grained sandy silt with trace clay, slightly moist, micaceous
4				0.0 ppm	
				0.0 ppm	Brown-red to red-orange, silty clay, slightly moist
6				0.0 ppm	
				0.0 ppm	
8				0.4 ppm	
	P5-SB9-10	10'		0.4 ppm	Light orange, silty, fine- to medium-grained sand
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

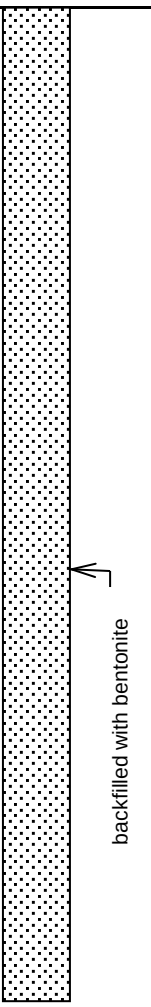
Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

BORING LOG: P5-SB10

Permit #		Drill Date	***02/05/13***	Site	***Parcel 005***
Client	***NCDOT***	Use		URS Corporation	
Address	***108 Old Davidson Place NW, Concord, NC***			Total Depth (ft)	***10***
Drilling Method	***Geoprobe direct push***	Boring Depth (ft)	***10***	Boring Diam. (in)	***2.25***
Backfill Material	***bentonite***		***NA***	Static Water Level	***unknown***
Rmrks	***Groundwater not encountered***	TOC Elevation		Sample Method	***Acetate liner***
in boring					

Depth (ft.)	Sample ID	Sample Depth (ft)	Blows/ 6"	OVA (ppm)	Geologic Description
0				0.0 ppm	
				0.0 ppm	
2				0.0 ppm	Red, silty clay, slightly moist, micaceous
				0.0 ppm	
4				0.0 ppm	
				0.5 ppm	
6				0.6 ppm	
				0.7 ppm	Red-orange, fine sandy silty clay to sandy silt, micaceous
8				0.7 ppm	
	P5-SB10-9	9'		0.6 ppm	Orange, fine- to medium-grained sandy silt, micaceous
10					Boring terminated at 10 ft bgs
12					

Typical Diagram



Not to Scale

Notes:

Geologist: ***Brandy Costner*** Driller: ***Probe Tech***

Appendix C
Laboratory Report

Pace Analytical Services, Inc.
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February 11, 2013

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on February 04, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Jon D Bradley for
Kevin Herring
kevin.herring@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE SUMMARY

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92146790001	**P5-SB1-2**	Solid	02/04/13 15:20	02/04/13 16:45
92146790002	**P5-SB2-2**	Solid	02/04/13 15:25	02/04/13 16:45
92146790003	**P5-SB3-3**	Solid	02/04/13 15:30	02/04/13 16:45
92146790004	**P5-SB4-1**	Solid	02/04/13 15:35	02/04/13 16:45

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SAMPLE ANALYTE COUNT

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92146790001	**P5-SB1-2**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92146790002	**P5-SB2-2**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92146790003	**P5-SB3-3**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92146790004	**P5-SB4-1**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C

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HITS ONLY

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92146790001	**P5-SB1-2**					
EPA 8015 Modified	Diesel Components	51.4	mg/kg	6.3	02/08/13 00:40	
ASTM D2974-87	Percent Moisture	20.8	%	0.10	02/06/13 07:56	
92146790002	**P5-SB2-2**					
EPA 8015 Modified	Diesel Components	18.3	mg/kg	6.3	02/08/13 00:40	
ASTM D2974-87	Percent Moisture	20.6	%	0.10	02/06/13 07:56	
92146790003	**P5-SB3-3**					
ASTM D2974-87	Percent Moisture	21.2	%	0.10	02/06/13 07:56	
92146790004	**P5-SB4-1**					
EPA 8015 Modified	Diesel Components	26.1	mg/kg	5.8	02/08/13 01:03	
ASTM D2974-87	Percent Moisture	13.6	%	0.10	02/06/13 07:56	

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PROJECT NARRATIVE

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Method: **EPA 8015 Modified**
Description: 8015 GCS THC-Diesel
Client: NCDOT West Central
Date: February 11, 2013

General Information:
4 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Method: **EPA 8015 Modified**
Description: Gasoline Range Organics
Client: NCDOT West Central
Date: February 11, 2013

General Information:
4 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5035A/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Sample: P5-SB1-2 **Lab ID: 92146790001** Collected: 02/04/13 15:20 Received: 02/04/13 16:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	**51.4**	mg/kg	6.3	5.7	1	02/05/13 09:00	02/08/13 00:40	68334-30-5	
Surrogates									
n-Pentacosane (S)	59	%	41-119		1	02/05/13 09:00	02/08/13 00:40	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.1	6.1	1	02/07/13 09:38	02/07/13 21:01	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-167		1	02/07/13 09:38	02/07/13 21:01	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.8**	%	0.10	0.10	1		02/06/13 07:56		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Sample: P5-SB2-2 **Lab ID: 92146790002** Collected: 02/04/13 15:25 Received: 02/04/13 16:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	**18.3**	mg/kg	6.3	5.7	1	02/05/13 09:00	02/08/13 00:40	68334-30-5	
Surrogates									
n-Pentacosane (S)	71	%	41-119		1	02/05/13 09:00	02/08/13 00:40	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.1	6.1	1	02/07/13 09:38	02/07/13 21:24	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	91	%	70-167		1	02/07/13 09:38	02/07/13 21:24	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.6**	%	0.10	0.10	1		02/06/13 07:56		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Sample: P5-SB3-3 **Lab ID: 92146790003** Collected: 02/04/13 15:30 Received: 02/04/13 16:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.3	5.7	1	02/05/13 09:00	02/08/13 01:03	68334-30-5	
Surrogates									
n-Pentacosane (S)	64	%	41-119		1	02/05/13 09:00	02/08/13 01:03	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.3	6.3	1	02/07/13 09:38	02/07/13 21:47	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-167		1	02/07/13 09:38	02/07/13 21:47	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.2**	%	0.10	0.10	1		02/06/13 07:56		

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ANALYTICAL RESULTS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Sample: P5-SB4-1 **Lab ID: 92146790004** Collected: 02/04/13 15:35 Received: 02/04/13 16:45 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	**26.1**	mg/kg	5.8	5.2	1	02/05/13 09:00	02/08/13 01:03	68334-30-5	
Surrogates									
n-Pentacosane (S)	77	%	41-119		1	02/05/13 09:00	02/08/13 01:03	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	5.1	5.1	1	02/07/13 09:38	02/07/13 22:09	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-167		1	02/07/13 09:38	02/07/13 22:09	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**13.6**	%	0.10	0.10	1		02/06/13 07:56		

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QUALITY CONTROL DATA

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

QC Batch: GCV/6618 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92146790001, 92146790002, 92146790003, 92146790004

METHOD BLANK: 917713 Matrix: Solid
Associated Lab Samples: 92146790001, 92146790002, 92146790003, 92146790004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.9	02/07/13 14:55	
4-Bromofluorobenzene (S)	%	93	70-167	02/07/13 14:55	

LABORATORY CONTROL SAMPLE: 917714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	24.7	22.8	93	70-165	
4-Bromofluorobenzene (S)	%			94	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 917735 917736

Parameter	Units	92146649001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	mg/kg	ND	26.6	26.6	25.7	24.2	96	91	47-187	6	30	
4-Bromofluorobenzene (S)	%						91	91	70-167			

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QUALITY CONTROL DATA

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

QC Batch: OEXT/20669 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92146790001, 92146790002, 92146790003, 92146790004

METHOD BLANK: 916002 Matrix: Solid
Associated Lab Samples: 92146790001, 92146790002, 92146790003, 92146790004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Components	mg/kg	ND	5.0	02/07/13 23:53	
n-Pentacosane (S)	%	64	41-119	02/07/13 23:53	

LABORATORY CONTROL SAMPLE: 916003

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Components	mg/kg	66.7	44.0	66	49-113	
n-Pentacosane (S)	%			68	41-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 916004 916005

Parameter	Units	92146791001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diesel Components	mg/kg	ND	72.9	72.9	41.4	32.2	55	43	10-146	25	30	
n-Pentacosane (S)	%						59	47	41-119			

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QUALITY CONTROL DATA

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

QC Batch: PMST/5290 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92146790001, 92146790002, 92146790003, 92146790004

SAMPLE DUPLICATE: 916221

Parameter	Units	92146793001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	14.9	14.9	0	25	

SAMPLE DUPLICATE: 916222

Parameter	Units	92146809005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.2	14.6	4	25	

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QUALIFIERS

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C Pace Analytical Services - Charlotte

Pace Analytical Services, Inc.
205 East Meadow Road - Suite A
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(336)623-8921

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(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TIP# B-5136 42295.1.1
Pace Project No.: 92146790

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92146790001	**P5-SB1-2**	EPA 3546	OEXT/20669	EPA 8015 Modified	GCSV/13888
92146790002	**P5-SB2-2**	EPA 3546	OEXT/20669	EPA 8015 Modified	GCSV/13888
92146790003	**P5-SB3-3**	EPA 3546	OEXT/20669	EPA 8015 Modified	GCSV/13888
92146790004	**P5-SB4-1**	EPA 3546	OEXT/20669	EPA 8015 Modified	GCSV/13888
92146790001	**P5-SB1-2**	EPA 5035A/5030B	GCV/6618	EPA 8015 Modified	GCV/6619
92146790002	**P5-SB2-2**	EPA 5035A/5030B	GCV/6618	EPA 8015 Modified	GCV/6619
92146790003	**P5-SB3-3**	EPA 5035A/5030B	GCV/6618	EPA 8015 Modified	GCV/6619
92146790004	**P5-SB4-1**	EPA 5035A/5030B	GCV/6618	EPA 8015 Modified	GCV/6619
92146790001	**P5-SB1-2**	ASTM D2974-87	PMST/5290		
92146790002	**P5-SB2-2**	ASTM D2974-87	PMST/5290		
92146790003	**P5-SB3-3**	ASTM D2974-87	PMST/5290		
92146790004	**P5-SB4-1**	ASTM D2974-87	PMST/5290		

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www.pacelabs.com

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

1682221

Section A Required Client Information:
- Company: URS Corp
- Address: 6000 Fairview Rd, Charlotte, NC 28210
- Email To: walt.plekan@urs.com
- Phone: 704-716-0751 Fax:
- Requested Due Date/TAT: Standard

Section B Required Project Information:
- Report To: Walt Plekan
- Copy To: Vernon.keys@urs.com
- Purchase Order No.:
- Project Name: TP#5136 WBS# 42295.1.1
- Project Number: 31827879

Section C Invoice Information:
- Attention:
- Company Name:
- Address:
- Pace Quote Reference:
- Pace Project Manager:
- Pace Profile #: 5697-1

REGULATORY AGENCY: NPDES ☐ GROUND WATER ☐ DRINKING WATER ☐ UST ☐ RCRA ☐ OTHER ☒

Site Location STATE: NC

Section D Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Composite Start DATE	Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	TPH GRO	TPH DRO	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 92146790
1	P5-SB1-2	SL	G			2/4/13	1520		4	2						2			X	X		001
2	P5-SB2-2	↓	↓				1525		4	2						2			X	X		002
3	P5-SB3-3	↓	↓				1530		4	2						2			X	X		003
4	P5-SB4-1	↓	↓				1535		4	2						2			X	X		004
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Brandy Costner / URS	2/4/13	1550	J Bredy / PACE	2/4/13	15:50				
	J Bredy / PACE	2/4/13	1645	D Moore / Pace	2.4.13	1645	8.5	Y	N	Y

SAMPLER NAME AND SIGNATURE
- PRINT Name of SAMPLER: Brandy Costner
- SIGNATURE of SAMPLER: [signature]
- DATE Signed (MM/DD/YY): 2/4/13

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: October 31, 2012 Page 1 of 2
	Document Number: **F-CHR-CS-03-rev.08**	Issuing Authority: Pace Huntersville Quality Office

Client Name: UES Project # 92146790

Where Received: ☑ Huntersville ☐ Asheville ☐ Eden ☐ Raleigh

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☑ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

Optional
Proj. Due Date:
Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☑ None ☐ Other_____

Thermometer Used: IR Gun T1101 (T1102) **Type of Ice:** (Wet) Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor T1101: No Correction T1102: No Correction

Corrected Cooler Temp.: 8.5 C **Biological Tissue is Frozen:** Yes No N/A

Date and Initials of person examining contents: 1/29

Temp should be above freezing to 6°C

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☑Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix:_____		
All containers needing preservation have been checked.	☐Yes ☐No ☑N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes ☐No	Initial when completed
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	15.
Trip Blank Present:	☐Yes ☐No ☑N/A	16.
Trip Blank Custody Seals Present	☐Yes ☐No ☐N/A	
Pace Trip Blank Lot # (if purchased):_____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

SCURF Review: [signature] Date: 2/4/13 **SRF Review:** [signature] Date: 2/5/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

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February 13, 2013

Chemical Testing Engineer
NCDOT
Materials & Tests Unit
1801 Blue Ridge Road
Raleigh, NC 27607

RE: Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Dear Chemical Engineer:
Enclosed are the analytical results for sample(s) received by the laboratory on February 06, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

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

Sincerely,

Jon D Bradley for
Kevin Herring
kevin.herring@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Charlotte Certification IDs
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

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SAMPLE SUMMARY

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92147228001	**P5-SB5-10**	Solid	02/05/13 10:55	02/06/13 17:35
92147228002	**P5-SB6-10**	Solid	02/05/13 11:00	02/06/13 17:35
92147228003	**P5-SB7-10**	Solid	02/05/13 11:05	02/06/13 17:35
92147228004	**P5-SB8-10**	Solid	02/05/13 11:10	02/06/13 17:35
92147228005	**P5-SB9-10**	Solid	02/05/13 11:15	02/06/13 17:35
92147228006	**P5-SB10-9**	Solid	02/05/13 11:20	02/06/13 17:35

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SAMPLE ANALYTE COUNT

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92147228001	**P5-SB5-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92147228002	**P5-SB6-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92147228003	**P5-SB7-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92147228004	**P5-SB8-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92147228005	**P5-SB9-10**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C
92147228006	**P5-SB10-9**	EPA 8015 Modified	MEJ	2	PASI-C
		EPA 8015 Modified	RGF	2	PASI-C
		ASTM D2974-87	TNM	1	PASI-C

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HITS ONLY

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92147228001	**P5-SB5-10**					
ASTM D2974-87	Percent Moisture	20.5	%	0.10	02/07/13 12:39	
92147228002	**P5-SB6-10**					
ASTM D2974-87	Percent Moisture	12.9	%	0.10	02/07/13 12:39	
92147228003	**P5-SB7-10**					
ASTM D2974-87	Percent Moisture	19.7	%	0.10	02/07/13 12:39	
92147228004	**P5-SB8-10**					
ASTM D2974-87	Percent Moisture	26.9	%	0.10	02/07/13 12:39	
92147228005	**P5-SB9-10**					
ASTM D2974-87	Percent Moisture	11.3	%	0.10	02/07/13 13:00	
92147228006	**P5-SB10-9**					
ASTM D2974-87	Percent Moisture	19.4	%	0.10	02/07/13 13:00	

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PROJECT NARRATIVE

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Method: **EPA 8015 Modified**
Description: 8015 GCS THC-Diesel
Client: NCDOT West Central
Date: February 13, 2013

General Information:
6 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Method: **EPA 8015 Modified**
Description: Gasoline Range Organics
Client: NCDOT West Central
Date: February 13, 2013

General Information:
6 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5035A/5030B with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: GCV/6627

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- MS (Lab ID: 919701)
  - 4-Bromofluorobenzene (S)
- MSD (Lab ID: 919702)
  - 4-Bromofluorobenzene (S)

Method Blank:
All analytes were below the report limit in the method blank with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Sample: P5-SB5-10 **Lab ID: 92147228001** Collected: 02/05/13 10:55 Received: 02/06/13 17:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.3	5.7	1	02/07/13 07:58	02/08/13 22:59	68334-30-5	
Surrogates									
n-Pentacosane (S)	62	%	41-119		1	02/07/13 07:58	02/08/13 22:59	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.2	6.2	1	02/11/13 09:48	02/11/13 15:07	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-167		1	02/11/13 09:48	02/11/13 15:07	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.5**	%	0.10	0.10	1		02/07/13 12:39		

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ANALYTICAL RESULTS

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Sample: P5-SB6-10 **Lab ID: 92147228002** Collected: 02/05/13 11:00 Received: 02/06/13 17:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	5.7	5.2	1	02/07/13 07:58	02/08/13 23:22	68334-30-5	
Surrogates									
n-Pentacosane (S)	65	%	41-119		1	02/07/13 07:58	02/08/13 23:22	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.9	6.9	1	02/11/13 09:48	02/11/13 15:30	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	90	%	70-167		1	02/11/13 09:48	02/11/13 15:30	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.9**	%	0.10	0.10	1		02/07/13 12:39		

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ANALYTICAL RESULTS

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Sample: P5-SB7-10 **Lab ID: 92147228003** Collected: 02/05/13 11:05 Received: 02/06/13 17:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.2	5.6	1	02/07/13 07:58	02/08/13 23:22	68334-30-5	
Surrogates									
n-Pentacosane (S)	75	%	41-119		1	02/07/13 07:58	02/08/13 23:22	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.1	6.1	1	02/11/13 09:48	02/11/13 15:53	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-167		1	02/11/13 09:48	02/11/13 15:53	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.7**	%	0.10	0.10	1		02/07/13 12:39		

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ANALYTICAL RESULTS

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Sample: P5-SB8-10 **Lab ID: 92147228004** Collected: 02/05/13 11:10 Received: 02/06/13 17:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.8	6.2	1	02/07/13 07:58	02/09/13 00:09	68334-30-5	
Surrogates									
n-Pentacosane (S)	70	%	41-119		1	02/07/13 07:58	02/09/13 00:09	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.9	6.9	1	02/11/13 09:48	02/11/13 16:16	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	110	%	70-167		1	02/11/13 09:48	02/11/13 16:16	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**26.9**	%	0.10	0.10	1		02/07/13 12:39		

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(828)254-7176

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Sample: P5-SB9-10 **Lab ID: 92147228005** Collected: 02/05/13 11:15 Received: 02/06/13 17:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	5.6	5.1	1	02/07/13 07:58	02/09/13 00:09	68334-30-5	
Surrogates									
n-Pentacosane (S)	65	%	41-119		1	02/07/13 07:58	02/09/13 00:09	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	6.0	6.0	1	02/11/13 09:48	02/11/13 16:39	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-167		1	02/11/13 09:48	02/11/13 16:39	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**11.3**	%	0.10	0.10	1		02/07/13 13:00		

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ANALYTICAL RESULTS

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Sample: P5-SB10-9 **Lab ID: 92147228006** Collected: 02/05/13 11:20 Received: 02/06/13 17:35 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3546								
Diesel Components	ND	mg/kg	6.2	5.6	1	02/07/13 07:58	02/09/13 00:32	68334-30-5	
Surrogates									
n-Pentacosane (S)	77	%	41-119		1	02/07/13 07:58	02/09/13 00:32	629-99-2	
Gasoline Range Organics	Analytical Method: EPA 8015 Modified Preparation Method: EPA 5035A/5030B								
Gasoline Range Organics	ND	mg/kg	5.9	5.9	1	02/11/13 09:48	02/11/13 17:02	8006-61-9	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-167		1	02/11/13 09:48	02/11/13 17:02	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.4**	%	0.10	0.10	1		02/07/13 13:00		

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QUALITY CONTROL DATA

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

QC Batch: GCV/6627 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 5035A/5030B Analysis Description: Gasoline Range Organics
Associated Lab Samples: 92147228001, 92147228002, 92147228003, 92147228004, 92147228005, 92147228006

METHOD BLANK: 919699 Matrix: Solid
Associated Lab Samples: 92147228001, 92147228002, 92147228003, 92147228004, 92147228005, 92147228006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	ND	5.7	02/11/13 09:23	
4-Bromofluorobenzene (S)	%	110	70-167	02/11/13 09:23	

LABORATORY CONTROL SAMPLE: 919700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	mg/kg	23.9	20.9	87	70-165	
4-Bromofluorobenzene (S)	%			88	70-167	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 919701 919702

Parameter	Units	92146952001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	mg/kg	124	26.5	26.5	139	150	56	97	47-187	7	30	
4-Bromofluorobenzene (S)	%						165	168	70-167			S5

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QUALITY CONTROL DATA

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

QC Batch: OEXT/20694 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3546 Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 92147228001, 92147228002, 92147228003, 92147228004, 92147228005, 92147228006

METHOD BLANK: 917703 Matrix: Solid
Associated Lab Samples: 92147228001, 92147228002, 92147228003, 92147228004, 92147228005, 92147228006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Components	mg/kg	ND	5.0	02/08/13 12:47	
n-Pentacosane (S)	%	76	41-119	02/08/13 12:47	

LABORATORY CONTROL SAMPLE: 917704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Components	mg/kg	66.7	54.0	81	49-113	
n-Pentacosane (S)	%			88	41-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 917705 917706

Parameter	Units	92147228003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diesel Components	mg/kg	ND	83.1	83.1	57.0	58.2	63	65	10-146	2	30	
n-Pentacosane (S)	%						72	72	41-119			

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QUALITY CONTROL DATA

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

QC Batch: PMST/5293 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92147228001, 92147228002, 92147228003, 92147228004

SAMPLE DUPLICATE: 917652

Parameter	Units	92147144001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	17.2	18.4	7	25	

SAMPLE DUPLICATE: 917653

Parameter	Units	92147228004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	26.9	26.3	2	25	

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QUALITY CONTROL DATA

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

QC Batch: PMST/5294
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 92147228005, 92147228006

SAMPLE DUPLICATE: 917654

Parameter	Units	92146952004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	25.0	25.6	3	25	

SAMPLE DUPLICATE: 917655

Parameter	Units	92147221022 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	30.0	23.4	25	25	

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QUALIFIERS

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Acid preservation may not be appropriate for 2-Chloroethylvinyl ether, Styrene, and Vinyl chloride.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-C	Pace Analytical Services - Charlotte

ANALYTE QUALIFIERS

S5	Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: TIP #B-5136 42295.1.1
Pace Project No.: 92147228

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92147228001	**P5-SB5-10**	EPA 3546	OEXT/20694	EPA 8015 Modified	GCSV/13907
92147228002	**P5-SB6-10**	EPA 3546	OEXT/20694	EPA 8015 Modified	GCSV/13907
92147228003	**P5-SB7-10**	EPA 3546	OEXT/20694	EPA 8015 Modified	GCSV/13907
92147228004	**P5-SB8-10**	EPA 3546	OEXT/20694	EPA 8015 Modified	GCSV/13907
92147228005	**P5-SB9-10**	EPA 3546	OEXT/20694	EPA 8015 Modified	GCSV/13907
92147228006	**P5-SB10-9**	EPA 3546	OEXT/20694	EPA 8015 Modified	GCSV/13907
92147228001	**P5-SB5-10**	EPA 5035A/5030B	GCV/6627	EPA 8015 Modified	GCV/6628
92147228002	**P5-SB6-10**	EPA 5035A/5030B	GCV/6627	EPA 8015 Modified	GCV/6628
92147228003	**P5-SB7-10**	EPA 5035A/5030B	GCV/6627	EPA 8015 Modified	GCV/6628
92147228004	**P5-SB8-10**	EPA 5035A/5030B	GCV/6627	EPA 8015 Modified	GCV/6628
92147228005	**P5-SB9-10**	EPA 5035A/5030B	GCV/6627	EPA 8015 Modified	GCV/6628
92147228006	**P5-SB10-9**	EPA 5035A/5030B	GCV/6627	EPA 8015 Modified	GCV/6628
92147228001	**P5-SB5-10**	ASTM D2974-87	PMST/5293		
92147228002	**P5-SB6-10**	ASTM D2974-87	PMST/5293		
92147228003	**P5-SB7-10**	ASTM D2974-87	PMST/5293		
92147228004	**P5-SB8-10**	ASTM D2974-87	PMST/5293		
92147228005	**P5-SB9-10**	ASTM D2974-87	PMST/5294		
92147228006	**P5-SB10-9**	ASTM D2974-87	PMST/5294		

CHAIN-OF-CUSTODY / Analytical Request Document

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

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Page: 1 of 1

1682233

Section A Required Client Information:

Company:	URS Corp
Address:	1600 Fairview Rd Charlotte, NC 28210
Email To:	walt.plekan@urs.com
Phone: 704-522-0330	Fax:
Requested Due Date/TAT:	Standard

Section B Required Project Information:

Report To:	Walt Plekan
Copy To:	Vernon.Keys@urs.com
Purchase Order No.:	
Project Name:	TH # B-5134 URS # 42295.1.1
Project Number:	31827879

Section C Invoice Information:

Attention:	
Company Name:	
Address:	
Pace Quote Reference:	
Pace Project Manager:	
Pace Profile #:	5697-1

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☒ OTHER _____

Site Location STATE: NC

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: TPH DRO	TPH GRO	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	PS-SB5-10	SL	G			2/5/13	1055		4	2						2		X	X		92147228 DD1
2	PS-SB6-10						1100			2						2		X	X		DD2
3	PS-SB7-10						1105			2						2		X	X		DD3
4	PS-SB8-10						1110			2						2		X	X		DD4
5	PS-SB9-10						1115			2						2		X	X		DD5
6	PS-SB10-9						1120			2						2		X	X		DD6
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Brandy Costner / URS	2/6/13	1700	J Brandy - PACE	2/6/13	1700	4 2 4 W Y
	J Brandy - PACE	2/6/13	17:35		2/6/13	1735	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brandy Costner

SIGNATURE of SAMPLER: Brandy Costner DATE Signed (MM/DD/YY): 2/6/13

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
4 2 4	W		Y

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Client Name: UPS **Project #** 92147228

Where Received: ☒ Huntersville ☐ Asheville ☐ Eden ☐ Raleigh

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace Other________

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other________

Thermometer Used: IR Gun T1101 (T1102) **Type of Ice:** (Wet) Blue None ☒ Samples on ice, cooling process has begun

Temp Correction Factor **T1101**: No Correction **T1102**: No Correction

Corrected Cooler Temp.: 4.2 **C** **Biological Tissue is Frozen:** Yes No (N/A)

Temp should be above freezing to 6°C

Date and Initials of person examining contents: [signature] 2/6/13

Comments:

Chain of Custody Present:	☒Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☒Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☒Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☒Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☒Yes	☐No	☐N/A	5.
Short Hold Time Analysis (<72hr):	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☒No	☐N/A	7.
Sufficient Volume:	☒Yes	☐No	☐N/A	8.
Correct Containers Used:	☒Yes	☐No	☐N/A	9.
-Pace Containers Used:	☒Yes	☐No	☐N/A	
Containers Intact:	☒Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11.
Sample Labels match COC:	☒Yes	☐No	☐N/A	12.
-Includes date/time/ID/Analysis Matrix: SL				
All containers needing preservation have been checked.	☐Yes	☐No	☒N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☒N/A	
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☐No		Initial when completed
Samples checked for dechlorination:	☐Yes	☐No	☒N/A	14.
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☒N/A	15.
Trip Blank Present:	☐Yes	☐No	☒N/A	16.
Trip Blank Custody Seals Present	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot # (if purchased):________				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: ________________ Date/Time: ________

Comments/ Resolution: ________________

SCURF Review: KLH **Date:** 2/6/13 **SRF Review:** KLH **Date:** 2/7/13

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)