Soil Investigation Report **Proposed NC DOT Right of Way Parcel #8 to Parcel #11** Winston-Salem, Forsyth County, NC

> H&H Job No. ROW-204 State Project U-2826A WBS Element # 34871.1.1 June 12, 2009



2923 South Tryon Street Suite 100 Charlotte, NC 28203 704-586-0007

3334 Hillsborough Street Raleigh, NC 27607 919-847-4241

### Soil Investigation Report Parcel #8 to Parcel #11 Winston-Salem, Forsyth County, North Carolina H&H Project ROW-204

#### **Table of Contents**

### **Section**

## Page No.

1.0 Introduction and Background	1
2.0 Soil Assessment - VCC and non-VCC Areas	4
2.1 Arsenic, Lead, and pH Data	4
2.2 TCLP RCRA Metals	9
2.3 Evaluation of Results and DOT Road Plans	
2.4 Other Considerations	
3.0 Petroleum Impacted Soil Assessment - Parcel 11	
4.0 Conclusions	17
5.0 Signature Page	

### List of Tables

- Table 1Soil Analytical Detections Parcel 8
- Table 2
   Soil Analytical Detections Bridge Foundation Wall
- Table 3
   Soil Analytical Detections Parcel 8 and 9 Proposed Piping Area
- Table 4Soil Analytical Detections Parcel 10
- Table 5
   Soil Analytical Detections Background Metals
- Table 6
   Soil TCLP Analytical Detections
- Table 7Soil Analytical Detections Parcel 11

### **List of Figures**

- Figure 1 Site Location Map
- Figure 2 Site Map Project Area
- Figure 3 Arsenic Detection Map Parcel 8, Parcel 9 and Bridge Foundation Wall
- Figure 4 Arsenic Detection Map Parcel 10
- Figure 5 Background Arsenic Detection Map Parcel 11
- Figure 6 Lead Detection Map Parcel 8, Parcel 9 and Bridge Foundation Wall
- Figure 7 Lead Detection Map Parcel 10
- Figure 8 Background Lead Detection Map Parcel 11
- Figure 9 pH Detection Map Parcel 8, Parcel 9 and Bridge Foundation Wall
- Figure 10 pH Detection Map Parcel 10
- Figure 11 Background pH Detection Map Parcel 11
- Figure 12 Cut Areas and Fill Placement Areas
- Figure 13 DRO and GRO Detection Map Parcel 11

#### **List of Appendices**

- Appendix A Soil Boring Logs
- Appendix B Laboratory Analytical Reports Soil
- Appendix C ARCADIS Summary of Arsenic and Lead Detections in Soil Samples

### Soil Investigation Report Parcel #8 to Parcel #11 Winston-Salem, Forsyth County, North Carolina H&H Project ROW-204

#### 1.0 Introduction and Background

Hart & Hickman, PC (H&H) has prepared this Soil Investigation Report documenting assessment activities in the proposed North Carolina Department of Transportation (NC DOT) right of way along US Highway 52 on Parcels 8, 9, 10 and 11 in Winston-Salem, Forsyth County, North Carolina. Parcels 8, 10, and 11 are located to the west of Highway 52 between North Liberty Street and North Glenn Avenue. Parcel 9 is located northwest of North Liberty Street to the east of Highway 52. A site location map is included as Figure 1. This assessment was conducted on behalf of NC DOT in general accordance with the scope of work outlined in our February 9, 2009 Technical and Cost Proposal, March 2, 2009 Soil Investigation Work Plan, and April 28, 2009 Supplemental Soil Investigation Work Plan and Project Update.

NC DOT is planning road improvements along US Highway 52 near the above-referenced parcels. Environmental Investigations, Inc. (EI) completed Preliminary Site Assessments (PSAs) dated October 19, 2005 on Parcels 8, 9, 10 and 11. Copies of the PSAs were previously provided to the North Carolina Department of Environment and Natural Resources (DENR) by NC DOT.

Impacted soils from historical site uses were identified in proposed NC DOT work areas on these properties during prior PSA activities. Proposed NC DOT work areas include portions of the two former fertilizer manufacturers (Virginia Carolina Chemical and Royster Clark) and a former metal ore processing facility (Carolina Ore). Such sites can cause contamination, particularly heavy metal contamination. The DOT work area also includes the active Waste Management property. The approximate locations of the former Virginia Carolina Chemical (VCC), Royster Clark, Carolina Ore and Waste Management properties are shown on Figure 2.

During previous PSA work, samples were analyzed for a number of constituents. Based on these results, the primary contaminants of concern in proposed NC DOT work areas are arsenic and

lead. During prior PSA activities, arsenic was detected in soil samples collected from the NC DOT target area in Parcels 8 through 11 above the default DENR - Inactive Hazardous Sites Branch (IHSB) residential health-based Soil Remedial Goal (SRG) of 4.4 mg/kg. Lead was detected in excess of the SRG in soil samples collected from Parcel 9. Petroleum impacted soils in excess of DENR action levels were also identified on Parcel 11; however, these petroleum impacts are outside of proposed NC DOT work areas.

Although some prior assessment data existed, there was little shallow soil metals data, and metals tend to impact shallow soils (typically between 0 and 5 ft or less). Therefore, H&H completed additional assessment of shallow soils on Parcels 8, 9, 10 and 11 in March and May 2009. H&H also collected samples from proposed NC DOT work areas on Parcel 11 that are at a suspected petroleum surface spill that was identified by H&H and where a petroleum surface release occurred in August 2006 that is near proposed drainage piping.

The NC DOT project will require soil (including metal impacted soil) to be removed from certain areas in the right of way and placed in others (cut and fill areas, respectively). Therefore, impacted soil that will be cut can potentially be beneficially used in fill areas. The proposed cut areas are located near the proposed Waste Management driveway and the proposed Southbound Detour Lane located near the former Royster Clark site on Parcel 10. In addition, soil will be cut from the location of a proposed bridge foundation wall. NC DOT is proposing to place soil (including impacted soil) in the road bed and road banks (fill areas) of the proposed Southbound Detour Lane, and the proposed northbound and southbound travel lanes.

Because the former VCC area is under the United States Environmental Protection Agency (EPA) jurisdiction, NC DOT is seeking EPA approval allowing metal impacted soil from surface grubbing and cut areas from the VCC area and non-VCC areas to be utilized as beneficial fill soil in proposed Southbound Detour Lane and the proposed northbound and southbound travel lanes within the former VCC property boundary. Additionally, NC DOT is also seeking DENR approval allowing metal impacted cut soil from non-VCC areas to be utilized as beneficial fill soil for the proposed Southbound Detour Lane and the proposed northbound and southbound travel areas to be utilized as beneficial fill soil approval allowing metal impacted cut soil from non-VCC areas to be utilized as beneficial fill soil for the proposed Southbound Detour Lane and the proposed northbound and southbound travel lanes within both the VCC and non-VCC areas. Based on DENR's IHSB letter dated June

9, 2009, the VCC site will ultimately fall under DENR - IHSB jurisdiction; therefore, analytical data herein has been compared to both the EPA and DENR IHSB screening levels to satisfy both EPA and DENR IHSB guidelines. DENR's June 9, 2009 letter indicates that the health-based SRG for arsenic at this site is 22 mg/kg because arsenic is the only suspected carcinogenic compound present. NC DOT is requesting that EPA and DENR approve these actions based on the results of assessment activities described below. DENR's recent IHSB letter approves NC DOT's plans if certain conditions are met.

#### 2.0 Soil Assessment - VCC and non-VCC Areas

#### 2.1 Arsenic, Lead, and pH Data

#### Sample Collection

H&H mobilized to the subject site on March 23, March 24 and May 5, 2009 to collect soil samples at various locations in the VCC area and non-VCC areas within the proposed NC DOT right of way work areas. Soil samples were collected using a stainless steel hand auger or by direct push technology (DPT). H&H contracted Subsurface Environmental Investigations (SEI) to advance soil borings using DPT. No samples were collected by H&H outside of proposed NC DOT work areas.

Soil sample locations are depicted on Figures 3 through 11. Data summary tables are provided as Tables 1 though 6. Soil boring logs are included in Appendix A. Additional soil sampling was conducted by Arcadis in the VCC area in May 2009 as noted on select figures. The draft Arcadis data summary tables and figure are provided in Appendix C.

Soil samples were collected from VCC area and non-VCC areas within the proposed NC DOT right of way as follows:

#### Parcel 8

Soil borings 8-1 through 8-8, and 8-10 through 8-13 spaced approximately 100 ft apart were advanced in the proposed NC DOT work areas. Soil borings 8-1 through 8-7 were collected on the VCC area. Because the NC DOT work area on Parcel 8 is a proposed fill area, soil samples were collected from a depth of 0 ft to 0.5 ft due to the likelihood for surface grubbing prior to the filling work.

#### Bridge Foundation Wall

Soil borings BFW-1 through BFW-6 were advanced along the proposed bridge foundation wall within the VCC boundary located beneath the existing bridge along Highway 52 between the southern portions of Parcel 8 and Parcel 9. Because soils will be disturbed at a depth of

approximately 2 ft to 3 ft below existing grade during installation of the wall, soil samples were collected at 0.5 ft and 2 ft in borings BFW-1 through BFW-6.

#### Parcel 8 and Parcel 9 Proposed Piping Area

Soil borings 8-9 and 8-14 through 8-16 were advanced on Parcel 8 along the proposed drainage pipe and existing drainage pipe located on the west side of Highway 52 on Parcel 8. Soils will be disturbed near the surface at the inlet of the proposed piping; therefore, a soil sample was collected from 0 ft to 0.5 ft in boring 8-9. Because proposed piping will be installed just below existing grade, soil samples were collected from 1 ft and 3 ft in borings 8-14 and 8-15. Additionally, because soils will be disturbed up to a depth of approximately 7 ft below existing grade during removal of the existing piping closer to Highway 52, soil samples were collected at 2 ft and 7 ft in boring 8-16.

Soil borings 9-1 and 9-2 were advanced on Parcel 9 along the proposed drainage area that is located on the east side of Highway 52 in the vicinity of the former locations of VCC and Carolina Ore. Because proposed piping will be installed near and just below existing grade, soil samples were collected from 1 ft and 5 ft in borings 9-1 and 9-2.

#### Parcel 10

Soil borings 10-1 through 10-17 were advanced in the NC DOT target area on and near Parcel 10 located east of the former Royster Clark facility. Soil borings were spaced approximately 50 ft apart and staggered along the property line in the NC DOT target area. Borings 10-1 through 10-9 were advanced to the west of the Parcel 10 property line and borings 10-10 through 10-17 were advanced on the Waste Management property to the east of the Parcel 10 property line, all within the proposed DOT work area. Because this is a proposed cut area, soil samples were collected from 1 ft and 5 ft below ground surface from each boring. Boring 10-18 was advanced adjacent to the former Royster Clark industrial ponds. Soil samples were collected from a depth of 1ft and 8 ft in this boring.

### Background Metals (Parcel 11)

To compare with other soil metal concentration data, five background soil borings, BGM-1 through BGM-5 were collected from Parcel 11 to evaluate the presence of naturally occurring arsenic and lead in the area. Soil samples were collected from 2 ft and 5 ft below ground surface from each boring.

## <u>Soil pH</u>

Because low soil pH values (between 3 and 4) have been detected by others near the former VCC site, select soil samples from the proposed DOT work areas were analyzed for pH.

The soil pH was tested at the following locations:

- four of the soil samples from background locations,
- four soil samples on Parcel 8 near the proposed location of the metal drainage pipe,
- four soil samples on Parcel 9 near the proposed location of the metal drainage pipe,
- four shallow samples from Parcel 8 in the potential fill area,
- four shallow samples from the location of the proposed bridge foundation wall, and
- four shallow samples from Parcel 10.

## Arcadis Soil Sampling

On behalf of Exxon Mobil, Arcadis completed additional soil sampling in the VCC area in May 2009. Arcadis collected soil samples at depths ranging from 0 ft to 0.5 ft, 0.5 ft to 2 ft and 2 ft to 4 ft from soil borings WS-SB-1 through WS-SB-24. Because the proposed NC DOT work area is located near the northern portion of the VCC boundary, only data from soil samples WS-SB-1, WS-SB-2, WS-SB-10, WS-SB-11, WS-SB-12, WS-SB-20, and WS-SB-21 collected in this area are discussed in this report. Additionally, because the VCC boundary is a proposed fill area and only surface soils will be disturbed during NC DOT work, only analytical data from the 0 ft to 0.5 ft interval from Arcadis soil borings are discussed in this report.

### Soil Sample Handling Procedures

H&H soil samples were placed into laboratory supplied bottles upon collection, properly labeled, placed in a cooler with ice, and sent to Prism Laboratories (Prism), a North Carolina certified

laboratory located in Charlotte, North Carolina under standard chain-of-custody protocol for laboratory analysis. Soil samples from each parcel, including background samples, were analyzed for total arsenic and lead by EPA Method 6010B. Laboratory analytical data sheets for soil and ground water samples and chain-of-custody documentation for this site are provided in Appendix B.

#### H&H Analytical Results - VCC Area

Low concentrations of arsenic were detected in the VCC area ranging from 4.5 mg/kg to 9.5 mg/kg on Parcel 8 and from 5.6 mg/kg to 29 mg/kg at the proposed Bridge Foundation Wall. Site-specific background arsenic levels ranged from 0.92 mg/kg to 3.3 mg/kg in the 10 background samples collected. The detected target area arsenic concentrations are above the health-based SRG and background levels. The concentration of arsenic detected in soil sample BFW-5-2 (27 mg/kg) is slightly above the DENR IHSB POGSRG (26.2 mg/kg) and the IHSB health-based SRG of 22 mg/kg. The concentration of arsenic detected in soil sample BFW-5-0.5 (29 mg/kg) is slightly above the POGSRG, health-based SRG, and the EPA screening level for industrial site use (27 mg/kg). No other concentrations of arsenic were detected above screening levels in the VCC area.

Low concentrations of lead were detected in the VCC area ranging from 16 mg/kg to 310 mg/kg on Parcel 8 and from 40 mg/kg to 250 mg/kg at the proposed Bridge Foundation Wall. Site-specific background lead levels ranged from 9.3 mg/kg to 30 mg/kg in the 10 background samples. Although certain lead concentrations exceed background levels, no concentrations of lead are above the SRG (400 mg/kg) in the VCC area. Only the concentration of lead detected sample 8-3-0.5 (310 mg/kg) is above the default IHSB POGSRG (270 mg/kg). No other concentrations of lead were detected above the POGSRG. In addition, no concentrations of lead were detected above the EPA screening level for industrial site use (895 mg/kg).

The pH values in the VCC area ranged from 4.72 to 5.53 on Parcel 8 and from 7.13 to 7.85 at the proposed Bridge Foundation Wall. These pH values are similar to or higher than site-specific background levels and do not appear to be of significant environmental concern.

#### Arcadis Analytical Results - VCC Area

In recent Arcadis soil samples, concentrations of arsenic were detected in the VCC area ranging from 6.5 mg/kg to 9.22 mg/kg on Parcel 8 and a concentration of arsenic (6.18 mg/kg) was detected on Parcel 9. These concentrations are above site-specific background levels. No concentrations of arsenic were detected above the POGSRG, health-based SRG, or the EPA screening levels in surface soil samples collected within the NC DOT right of way in the VCC area.

Within proposed NC DOT right of way work areas, lead was not detected in Arcadis surface soil samples above the health-based SRG, POGSRG, or EPA screening level.

The pH values detected in Arcadis surface soil samples collected in the VCC area ranged from 4.4 to 7.0. These pH values are similar to those detected in soil samples collected by H&H as described above.

#### Analytical Results non-VCC Area

Low level concentrations of arsenic were detected in the non-VCC areas as follows:

- 4.7 mg/kg to 5 mg/kg Parcel 8,
- 4.5 mg/kg to 47 mg/kg Parcel 8 Proposed Drainage Piping Area,
- 4.5 mg/kg to 67 mg/kg Parcel 9 Proposed Drainage Piping Area, and
- 4.7 mg/kg to 27 mg/kg Parcel 10.

A few of these concentrations are above the health-based SRG. Concentrations of arsenic above the health-based SRG and published POGSRG were detected in soil samples 8-15-3 (47 mg/kg), 9-1-5 (67 mg/kg), and 10-15-5 (27 mg/kg), which were collected from Parcel 8 piping area, Parcel 9 piping area, and Parcel 10, respectively. The concentrations of arsenic detected in samples 8-15-3 and 9-1-5 are also above the EPA screening level. As mentioned above, background arsenic concentrations ranged from 0.92 mg/kg to 3.3 mg/kg.

Concentrations of lead were detected above the health-based SRG and the POGSRG in non-VCC area soil samples 8-15-3 (970 mg/kg), 8-16-2 (1,500 mg/kg), 8-16-7 (1,100 mg/kg) and 9-1-5

(860 mg/kg), which were collected from the Parcel 8 and Parcel 9 proposed drainage piping area. The concentrations of lead detected in soil samples 8-15-3, 8-16-2, and 8-16-7 are also above the EPA screening level. Otherwise, lead concentrations (up to 140 mg/kg) did not exceed target levels in the non-VCC areas, although certain concentrations were elevated above background levels. As mentioned above, site-specific background lead concentrations ranged from 9.3 mg/kg to 30 mg/kg.

The pH values ranged from 4.03 to 7.43 in non-VCC areas, with most pH levels between 4 and 6. These pH values are similar to or higher than the pH values detected in the background samples and do not appear to be of significant environmental concern.

#### Arsenic and Lead Summary

Based on soil analytical results, there are scattered low level arsenic impacts above screening levels in both the VCC and the non-VCC areas. Lead impacted areas above screening levels are limited to the proposed drainage piping areas on Parcels 8 and 9 (which is the southside of the former Carolina Ore site) and a single location to the west of the proposed Southbound Detour Lane on Parcel 8. Ten site-specific background samples were collected on Parcel 11 at a location away from the former fertilizer plants and Carolina Ore. When the target data are compared to background metals concentrations, the arsenic and lead concentrations detected above screening levels (and other lead and arsenic concentrations below screening levels) exceed background levels. Based on these data, the arsenic and lead detections do not appear to be naturally occurring.

#### 2.2 TCLP RCRA Metals

Although certain arsenic impacted soil concentrations are above the health-based SRG, the soils will not be hazardous waste if generated by applying the 20:1 rule, using total arsenic concentrations and the Toxicity Characteristic Leaching Procedure (TCLP) regulatory level for arsenic. H&H compared the highest detection of arsenic (67 mg/kg) to the TCLP regulatory level (5.0 mg/L). Based on the 20:1 rule, the detected total concentration of arsenic is less than 100 mg/kg (20\*5.0), and the soil is non-hazardous. To confirm that arsenic impacted soils are

non-hazardous, eight of H&H collected soil samples with highest arsenic detections were analyzed for TCLP RCRA metals.

Because concentrations of lead detected in soil samples from the non-VCC area samples 8-15-3 (970 mg/kg), 8-16-2 (1,500 mg/kg), 8-16-7 (1,100 mg/kg), and 9-1-5 (860 mg/kg) are above DENR and/or EPA screening levels for lead and exceed the 20:1 rule concentration for lead of 100 mg/kg (20\*5.0), H&H collected soil samples to confirm that lead impacted soils are not hazardous using TCLP analysis based on composite samples. H&H collected one composite soil sample on the west side of Highway 52 near soil borings 8-15 and 8-16 and one composite soil sample on the east side of Highway 52 near soil boring 9-1. The composite sample on the west side of aliquots collected from the three soil borings at depths 1 ft and 3 ft near boring 8-15, 2 ft and 7 ft near boring 8-16, and 2 ft and 7 ft from a soil boring advanced closer to Highway 52. Composite sample on the east side of 1 ft and 5 ft near boring 9-1 and 1 ft and 5 ft from a soil boring advanced closer to Highway 52. Composite sample locations are shown on Figures 3 and 6.

At each of the composite sample locations, aliquots of soil were collected utilizing a stainless steel hand auger. The hand auger was decontaminated between each sampling point. Equal amounts of each of the aliquots were placed in a Pyrex bowl and mixed with a nitrile gloved hand until homogenized. The Pyrex bowl was decontaminated between each composite sample.

After the samples were homogenized at each composite sample location, a composite sample was placed in laboratory supplied containers and transferred to Prism using standard chain-ofcustody procedures. The two composite soil samples were analyzed for TCLP RCRA metals.

No Arcadis soil samples collected within the NC DOT right of way in the VCC area were analyzed for TCLP RCRA metals.

#### **TCLP Analytical Results**

TCLP RCRA metals were not detected above RCRA characteristic levels in VCC and non-VCC areas based on the eight grab sample and two composite samples (Table 6). Arsenic was not

detected in the leachate of any of the samples with a reporting limit of  $50 \mu g/l$ . Lead was detected at low levels in five of the samples analyzed for TCLP metals as described below.

Concentrations of TCLP lead were detected in soil samples 8-3-0.5 (0.11 mg/L), 8-15-3 (0.26 mg/L), 9-1-5 (0.16 mg/L) which were collected from Parcel 8, Parcel 8 piping area, and Parcel 9 piping area, respectively. Concentrations of TCLP lead were also detected in composite sample Comp-1 (0.027J mg/L) collected near the proposed piping area on Parcel 8 and composite sample Comp-2 (0.0071J mg/L) collected near the proposed piping on Parcel 9.

#### **POGSRG Discussion**

As noted above, arsenic was not detected in TCLP leachate in the ten samples analyzed. These ten samples contained the highest total arsenic concentrations. Therefore, arsenic in proposed DOT work areas does not appear to be a threat to ground water.

Lead concentrations were detected above the POGSRG in five samples, and there are low level TCLP lead detections. H&H evaluated the potential for the detected lead leachate concentrations to impact ground water. The highest detected TCLP lead concentration (0.26 mg/l) exceeds the 2L ground water standard of 0.015 mg/l. If the low lead leachate concentrations were to reach the water table, it would be further diluted in ground water. This effect is described in EPA's 1996 Soil Screening Guidance and is the basis for using the dilution-attenuation factor. After applying a default ground water dilution-attenuation factor of 20, the resulting potential lead concentrations, the lead impacts in proposed DOT work areas do not appear to be a threat to ground water. In addition, with the exception of the soil detected at 8-3-0.5 which only contained 310 mg/kg lead and for which lead was not detected in the TCLP leachate, DOT is planning to remove excavated soil where lead is present above the POGSRG and dispose of these soils off-site at a permitted facility. The impacted soils to be disposed off-site are located along proposed drainage piping on the south side of the former Carolina Ore site.

#### 2.3 Evaluation of Results and DOT Road Plans

DOT is planning cut and fill operations and drainage piping work for proposed road improvements on Highway 52. Based on soil analytical results, there are scattered concentrations of arsenic above the health-based SRG present in proposed DOT work areas. Data indicate that the soils to be disturbed in proposed NC DOT work areas are not characteristically hazardous waste and do not pose a significant threat to ground water. Concentrations of arsenic above the health-based SRG and EPA industrial screening level are limited to a small area near the bridge foundation wall, a sample on Parcel 10, and along the proposed drainage piping on the south side of the former Carolina Ore site. Lead impacts above the IHSB health-based SRG and EPA's industrial screening level are limited to the area along the proposed drainage piping on the south side of the former Carolina Ore site. As mentioned above, soils excavated by DOT work for this proposed drainage piping will be disposed off-site at a permitted facility.

With the exception of the above-mentioned soil along the proposed drainage piping which will be disposed off-site, NC DOT is seeking approval from both EPA and DENR IHSB to allow impacted soil that is disturbed for road work to be utilized as beneficial fill soil in the nearby proposed Southbound Detour Lane and the proposed northbound and southbound travel lanes, which are within the proposed NC DOT right of way. NC DOT would like to place impacted soil under the Southbound Detour Lane and the proposed northbound and southbound travel lanes road beds and road banks. Although these soils will not be placed under asphalt in perpetuity because the detour lane is temporary, NC DOT is proposing to place at least 2 ft of clean fill on the impacted soil road fill areas. In the event that DOT removes the asphalt from the detour lane, the road bed will still be left in place. In addition, the proposed soil placement areas will be located in a controlled access area (fenced area), which will prevent public access to the impacted soils.

If impacted soils above the IHSB health-based SRG or EPA industrial screening levels will be reused as fill for this project, NC DOT will place a land use restriction on the DOT right of way in this area to allow the beneficial reuse of the impacted soil. Alternatively, DOT reserves the right to remove soil impacted above the health-based SRG or EPA industrial screening levels from the site for disposal at an off-site permitted facility to avoid the land use restriction.

Most of the impacted soil to be cut during proposed DOT road work will be removed from the area of Parcel 10 (former Royster Clark), although surface grubbing may also generate impacted soil. A sketch showing the overall cut and fill placement areas is provided as Figure 12.

NC DOT understands that deeper soils that may be impacted by arsenic and/or lead may be close to the surface following soil cuts near Parcel 10. DOT will sample the soil surface near Parcel 10 after the cut is made to determine if arsenic or lead impacts remain above IHSB health-based SRGs. If soil impacts are found on the new soil surface above these SRGs, DOT will cut an additional 2 ft of impacted soil for placement under at least 2 ft of clean fill in road beds or road banks.

#### 2.4 Other Considerations

#### Health and Safety

NC DOT is aware of arsenic and lead impacted soils in the proposed work areas which could pose a health and safety concern to construction workers. NC DOT will require that their contractors prepare a site-specific health and safety plan to use during road improvement activities in this area.

#### Slag and Magenta Colored Soil

NC DOT will make their contractors aware of the potential presence of metal slag and magenta colored soil. If suspected metal slag or magenta colored soils are encountered during grading or other construction activities, NC DOT will notified by the contractor and these materials will be properly managed and disposed at a permitted off-site facility, as approriate.

#### Monitoring Wells

Seven monitoring wells were identified within the DOT work areas during H&H field activities. Because cut and fill activities will be conducted in these areas, the wells should be properly abandoned prior to DOT road improvements. These wells will be abandoned by NCDOT and any well that was present in newly acquired right of way will be reinstalled by NCDOT at a later

date. Monitoring well locations are shown on Figure 2. H&H also located the monitoring wells using GPS. The GPS coordinates are as follows:

	Latitude	Longitude
MW-23	36.12878083330	80.23508361110
MW-31	36.12870083330	80.23502277780
MW-4	36.13070683330	80.23720383330
MW-5	36.13028933330	80.23661283330
MW-9	36.12993733330	80.23624466670
MW-8	36.13167333330	80.23754383330
MW-A	36.12965766670	80.23469566670

#### Carolina Ore Ruins

H&H observed metal slag near the Carolina Ore ruins. The metal slag was observed near concrete foundations. In addition, it was reported that magenta-colored impacted may be present near the ruins. NC DOT plans include a right of way fence line which crosses these ruins. DOT may remove portions of the concrete foundations to install the fence. However, DOT will direct its contractors to avoid disturbing surface soil and slag in this area.

Hart & Hickman, PC

#### 3.0 Petroleum Impacted Soil Assessment - Parcel 11

#### Parcel 11

Soil borings 11-1 through 11-3 and 11-9 were advanced in the DOT target area on Parcel 11 near a suspected surface release area from diesel above-ground tanks that was identified by H&H during our site visit. Soil borings 11-4 through 11-7 (advanced on Parcel 11) and 11-8 (advanced on Parcel 9) were advanced near the DOT proposed piping area where a surface release of diesel fuel occurred in August 2006. Because soil samples were collected to investigate surface releases and the DOT work area on Parcel 11 is a proposed cut area near the suspected surface release identified by H&H transitioning to a fill area near the proposed piping area, soil samples were collected from a depth of 0 ft to 4 ft. Soil sample locations are shown on Figure 13. Soil boring logs are included in Appendix A.

To facilitate the selection of soil samples for laboratory analysis from these borings, soil was screened continuously for the presence of volatile organic compounds (VOCs) with a photo ionization detector (PID). Additionally, H&H observed the soil for visual and olfactory indications of petroleum impacts. In general, a soil sample from each boring that exhibited the highest reading on the PID was selected for laboratory analysis.

Soil samples were placed into laboratory supplied bottles upon collection, properly labeled, placed in a cooler with ice, and sent to Prism under standard chain-of-custody protocol for laboratory analysis. Soil samples were analyzed for total petroleum hydrocarbons (TPH) using EPA Method 8015B for gasoline range organics (GRO) and diesel range organics (DRO). Laboratory analytical data sheets for soil samples and chain-of-custody documentation for this site are provided in Appendix B.

#### Analytical Results

A concentration of TPH GRO (11 mg/kg) detected in soil sample 11-3-3 exceeds the NC DENR Action Level of 10 mg/kg. No other concentrations TPH DRO of TPH GRO were detected in soil samples collected from Parcel 11 above the NC DENR Action Level of 10 mg/kg. TPH DRO and GRO analytical results are presented in Table 7.

Based on laboratory analytical results, TPH-GRO concentrations are present on Parcel 11 near the suspected surface release identified by H&H (near boring 11-3-3). Based on PID readings and analytical results, H&H estimates that there are up to a total of 150 cubic yards (225 tons) of petroleum impacted soil between the surface and 4 ft near boring 11-3-3. DOT plans indicate a proposed cut transitioning to fill in the area of impacted soil; therefore, it is likely the impacted soils will be disturbed. Petroleum impacted soil that is removed will be properly managed and disposed at a permitted facility, unless written permission is obtained from the DENR UST Section to re-use this soil on-site.

#### 4.0 Conclusions

H&H has completed additional assessment activities in proposed NC DOT right of ways on Parcel 8 to Parcel 11. Soil analytical results indicate there are scattered concentrations of arsenic above EPA and DENR screening levels and concentrations of lead above screening levels along proposed drainage piping on the south side of the former Carolina Ore site within proposed DOT work areas. TCLP analytical results confirm that these soils are not characteristically hazardous wastes and are not a significant threat to ground water. Impacted soil generated by excavation activities for the proposed drainage piping on the south side of the former Carolina Ore site will be removed and disposed off-site at a permitted facility.

With the exception of the above-mentioned soil along the proposed drainage piping which will be disposed off-site, NC DOT is seeking approval from both EPA and DENR to allow impacted soil that is disturbed for road work to be utilized as beneficial fill soil in the nearby proposed Southbound Detour Lane and the proposed northbound and southbound travel lanes, which are within the proposed NC DOT right of way. DENR's recent IHSB letter approves NC DOT's plans if certain conditions are met. NC DOT would like to place impacted soil under the Southbound Detour Lane and the proposed northbound and southbound travel lanes road beds and road banks. Although these soils will not be placed under asphalt in perpetuity because the detour lane is temporary, NC DOT is proposing to place at least 2 ft of clean fill on the impacted soil road fill areas. In the event that DOT removes the asphalt from the detour lane, the road bed will still be left in place. In addition, the proposed fill areas will be located in a controlled access area (fenced area), which will prevent public access to the impacted soils.

If impacted soils above the IHSB health-based SRG or EPA industrial screening levels will be reused as fill for this project, NC DOT will place a land use restriction on the DOT right of way in this area to allow the beneficial reuse of the impacted soil. Alternatively, DOT reserves the right to remove soil impacted above the health-based SRG or EPA industrial screening levels from the site for disposal at an off-site permitted facility to avoid the land use restriction.

Analytical results of soil samples collected by H&H indicate TPH-GRO concentrations are present on Parcel 11 near the suspected surface release identified by H&H. H&H estimates that there are up

to a total of 150 cubic yards (225 tons) of petroleum impacted soil between the surface and 4 ft near boring 11-3-3. DOT plans indicate a proposed cut transitioning to fill in the area of impacted soil; therefore, it is likely the impacted soils will be disturbed. Petroleum impacted soil that is removed will be properly managed and disposed at a permitted facility, unless written permission is obtained from the DENR UST Section to re-use this soil on-site.

## 5.0 Signature Page

SEAI 25069

This report was prepared by:

UB)

David Graham Senior Project Geologist for Hart and Hickman, PC

This report was reviewed by:

ALLININ,

Matt Bramblett, PE Principal and Project Manager for Hart and Hickman, PC

## Table 1Soil Analytical DetectionsWBS Element 34871.1.1 (Parcel # 8)Winston-Salem, North CarolinaH&H Job No.ROW-204

				VCC Area					Ν	Ion-VCC Are	а				
Sample ID	8-1-0.5	8-2-0.5	8-3-0.5	8-4-0.5	8-5-0.5	8-6-0.5	8-7-0.5	8-8-0.5	8-10-0.5	8-11-0.5	8-12-0.5	8-13-0.5	Inactive	Inactive	EPA
Depth (feet)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		Hazardous	
Date	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	Sites SRG '	Sites POG <sup>2</sup>	Level <sup>3</sup>
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)									
Metals (6010B)															
Arsenic	4.5	9.5	8.8	8.3	4.8	5.2	4.3	4.7	5.0	3.0	1.2	<0.69	22	26.2	27
Lead	23	120	310	52	16	20	37	33	61	53	29	20	400	270	895
<b>рН Value (9045С)</b> рН	NA	NA	5.53	NA	4.72	NA	4.81	NA	NA	6.57	NA	NA	NS	NS	NS
/*															

Notes:

1. NC DENR Inactive Hazardous Sites Branch Soil Remediation Goals (SRGs) - October 2008; except higher arsenic level provided by DENR toxicologist because only one carcinogenic compound suspected at this site.

2. NC DENR Inactive Hazardous Sites Branch Protection of Groundwater (POG) Soil Remediation Goals - October 2008

3. EPA Screening Level for Industrial Site Use Developed for VCC Program

EPA Method number follows parameter in parenthesis

Bold indicates concentration exceeds SRG

NA = Not Analyzed; NS = Not Specified

## Table 2Soil Analytical DetectionsWBS Element 34871.1.1 (Bridge Foundation Wall)Winston-Salem, North CarolinaH&H Job No.ROW-204

						VCC	Area								
Sample ID	BFW-1-0.5	BFW-1-2	BFW-2-0.5	BFW-2-2	BFW-3-0.5	BFW-3-2	BFW-4-0.5	BFW-4-2	BFW-5-0.5	BFW-5-2	BFW-6-0.5	BFW-6-2	Inactive	Inactive	EPA
Depth (feet)	0.5	2	0.5	2	0.5	2	0.5	2	0.5	2	0.5	2			Screening
Date	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	Sites SRG <sup>1</sup>	Sites POG <sup>2</sup>	Level <sup>3</sup>
Units	(mg/kg)	(mg/kg)	(mg/kg)												
Metals (6010B)															
Arsenic	7.4	6.6	11	6.2	6.1	7.9	5.6	12	29	27	8.1	6.8	22	26.2	27
Lead	87	170	70	45	74	40	120	76	250	170	89	160	400	270	895
pH Value (9045C)															
рH	7.60	NA	NA	NA	7.13	NA	7.78	NA	NA	NA	7.85	NA	NS	NS	NS

Notes:

1. NC DENR Inactive Hazardous Sites Branch Soil Remediation Goals (SRGs) - October 2008; except higher arsenic level provided by DENR toxicologist because only one carcinogenic compound suspected at this site. 2. NC DENR Inactive Hazardous Sites Branch Protection of Groundwater (POG) Soil Remediation Goals - October 2008

3. EPA Screening Level for Industrial Site Use Developed for VCC Program

EPA Method number follows parameter in parenthesis

Bold indicates concentration exceeds SRG

NS = Not Specified; NA = Not Analyzed

## Table 3Soil Analytical DetectionsWBS Element 34871.1.1 (Parcel # 8 and 9 - Proposed Piping Area)Winston-Salem, North CarolinaH&H Job No.ROW-204

					١	Non-VCC Are	а							
Sample ID	8-9-0.5	8-14-1	8-14-3	8-15-1	8-15-3	8-16-2	8-16-7	9-1-1	9-1-5	9-2-1	9-2-5	Inactive	Inactive	EPA
Depth (feet)	0.5	1	3	1	3	2	7	1	5	1	5	Hazardous	Hazardous	Screening
Date	3/23/2009	3/23/2009	3/23/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	Sites SRG <sup>1</sup>	Sites POG <sup>2</sup>	Level <sup>3</sup>
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Metals (6010B)														
Arsenic	1.5	1.2	4.5	<0.61	47	7.6	8.6	6.5	67	4.6	4.5	22	26.2	27
Lead	50	23	62	13	970	1,500	1,100	100	860	30	86	400	270	895
<b>рН Value (9045С)</b> рН	NA	5.27	4.82	5.67	6.82	NA	NA	4.77	7.43	4.92	4.58	NS	NS	NS

Notes:

1. NC DENR Inactive Hazardous Sites Branch Soil Remediation Goals (SRGs) - October 2008; except higher arsenic level provided by DENR toxicologist because only one carcinogenic compound suspected at this site.

2. NC DENR Inactive Hazardous Sites Branch Protection of Groundwater (POG) Soil Remediation Goals - October 2008

3. EPA Screening Level for Industrial Site Use Developed for VCC Program

EPA Method number follows parameter in parenthesis

Bold indicates concentration exceeds SRG

NS = Not Specified; NA = Not Analyzed;

#### Table 4 (Page 1 of 2) Soil Analytical Detections WBS Element 34871.1.1 (Parcel #10) Winston-Salem, North Carolina H&H Job No.ROW-204

									Non-VC	C Area											
Sample ID	10-1-1	10-1-5	10-2-1	10-2-5	10-3-1	10-3-5	10-4-1	10-4-5	10-5-1	10-5-5	10-6-1	10-6-5	10-7-1	10-7-5	10-8-1	10-8-5	10-9-1	10-9-5	Inactive	Inactive	EPA
Depth (feet)	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5		Hazardous	U U
Date	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	Sites SRG <sup>1</sup>	Sites POG <sup>2</sup>	Level <sup>3</sup>
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
<i>Metals (6010B)</i> Arsenic Lead	5.4 53	4.9 23	7.7	5.6 17	12 140	9.6 9.2	16 33	4.9 26	11 78	5.9 35	11 63	18 26	<0.57 7.5	<0.56 6.7	0.70 8.1	<0.60 12	12	9.2	22 400	26.2 270	27 895
р <b>Н Value (9045C)</b> рН	NA	NA	4.39	NA	NA	NA	NA	NA	NA	NA	4.81	NA	NA	NA	NA	NA	NA	NA	NS	NS	NS

Notes: 1. NC DENR Inactive Hazardous Sites Branch Soil Remediation Goals (SRGs) - October 2008; except higher arsenic level provided by DENR toxicologist because only one carcinogenic compound suspected at this site. 2. NC DENR Inactive Hazardous Sites Branch Protection of Groundwater (POG) Soil Remediation Goals - October 2008 3. EPA Screening Level for Industrial Site Use Developed for VCC Program

EPA Method number follows parameter in parenthesis

Bold indicates concentration exceeds SRG NS = Not Specified; NA = Not Analyzed;

## Table 4 (Page 2 of 2) Soil Analytical Detections WBS Element 34871.1.1 (Parcel #10) Winston-Salem, North Carolina H&H Job No.ROW-204

									Non V	CC Area											
Sample ID	10-10-1	10-10-5	10-11-1	10-11-5	10-12-1	10-12-5	10-13-1	10-13-5	10-14-1	10-14-5	10-15-1	10-15-5	10-16-1	10-16-5	10-17-1	10-17-5	10-18-1	10-18-8	Inactive	Inactive	EPA
Depth (feet)	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	5	1	8		Hazardous	
Date	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/24/2009	3/24/2009	Sites SRG <sup>1</sup>	Sites POG -	Level <sup>°</sup>
Units	(mg/kg)	(mg/kg)	(mg/kg)																		
Metals (6010B)																					1 1
Arsenic	4.7	6.5	11	13	9.7	1.0	5.4	9.8	13	19	16	27	4.7	6.5	2.1	5.0	2.4	<0.55	22	26.2	27
Lead	57	19	24	62	46	27	18	15	66	67	26	57	22	28	9.3	15	17	6.7	400	270	895
<b>рН Value (9045С)</b> рН	NA	NA	NA	NA	NA	NA	4.59	NA	NA	NA	NA	NA	4.03	NA	NA	NA	NA	NA	NS	NS	NS

Notes: 1. NC DENR Inactive Hazardous Sites Branch Soil Remediation Goals (SRGs) - October 2008; except higher arsenic level provided by DENR toxicologist because only one carcinogenic compound suspected at this site. 2. NC DENR Inactive Hazardous Sites Branch Protection of Groundwater (POG) Soil Remediation Goals - October 2008 3. EPA Screening Level for Industrial Site Use Developed for VCC Program EPA Method number follows parameter in parenthesis Development of the state of

Bold indicates concentration exceeds SRG NS = Not Specified; NA = Not Analyzed; VCC = Former Virginia Carolina Chemical Boundary

## Table 5Soil Analytical DetectionsWBS Element 34871.1.1 (Background Metals)Winston-Salem, North CarolinaH&H Job No.ROW-204

					Non-VC	CC Area					
Sample ID	BGM-1-2	BGM-1-5	BGM-2-2	BGM-2-5	BGM-3-2	BGM-3-5	BGM-4-2	BGM-4-5	BGM-5-2	BGM-5-5	
Depth (feet)	2	5	2	5	2	5	2	5	2	5	Range
Date	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	
Units	(mg/kg)										
Metals (6010B)											
Arsenic	1.8	0.92	1.8	1.6	3.3	1.7	1.8	1.7	2.2	1.5	0.92 to 3.3
Lead	9.3	18	15	27	21	25	16	18	19	30	9.3 to 30
pH Value (9045C)	1.00		4.40								
рН	4.30	NA	4.48	NA	NA	NA	4.57	NA	4.51	NA	4.3 to 4.57

Notes:

EPA Method number follows parameter in parenthesis

NA = Not Analyzed

# Table 6Soil TCLP Analytical DetectionsWBS Element 34871.1.1Winston-Salem, North CarolinaH&H Job No.ROW-204

			VCC Area				Ν	Ion-VCC Are	а		
Sample ID	BFW-5-0.5	BFW-5-2	8-2-0.5	8-3-0.5	8-4-0.5	8-15-3	9-1-5	10-15-5	Comp-1	Comp-2	RCRA
Depth (feet)	0.5	2	0.5	0.5	0.5	3	5	5	(1)	(2)	Characteristic
Date	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/24/2009	3/23/2009	5/5/2009	5/5/2009	Level
Units	(mg/L)	(mg/L)	(mg/L)	(mg/L)							
TCLP Metals (6010B)											
Arsenic	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	5
Barium	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0.51 J	0.83 J	100
Cadmium	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	0.002 J	0.0035 J	1
Chromium	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.0008 J	0.0046 J	5
Lead	<0.05	<0.05	<0.05	0.11	<0.05	0.26	0.16	<0.05	0.027 J	0.0071 J	5
TCLP Mercury (7470A)											
Mercury	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00003 J	0.00002 J	0.2

Notes:

(1) Comp-1 - includes aliquot soil samples collected near sample locations 8-15 and 8-16.

(2) Comp-2 - includes aliquot soil samples collected near sample locations 9-1 and 9-2.

EPA Method number follows parameter in parenthesis

NA = Not Analyzed

VCC = Former Virginia Carolina Chemical Company Boundary

J = estimated value

# Table 7Soil Analytical DetectionsWBS Element 34871.1.1 (Parcel #11)Winston-Salem, North CarolinaH&H Job No.ROW-204

				١	Non-VCC Are	а				
Sample ID	11-1-3	11-2-3	11-3-3	11-4-3	11-5-3	11-6-1	11-7-1	11-8-1	11-9-1	NCDENR
Depth (feet)	3	3	3	3	3	1	1	1	1	Action Level
Date	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/23/2009	3/24/2009	3/24/2009	3/24/2009	3/23/2009	
Units	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
TPH (G8015B)										
DRO	<8.5	<8.5	<8.8	<8.8	<8.5	<8.7	<8.2	<9.0	<8.3	40
GRO	<6.1	<6.1	11	<6.3	<6.1	<6.2	<5.8	<6.5	<5.9	10

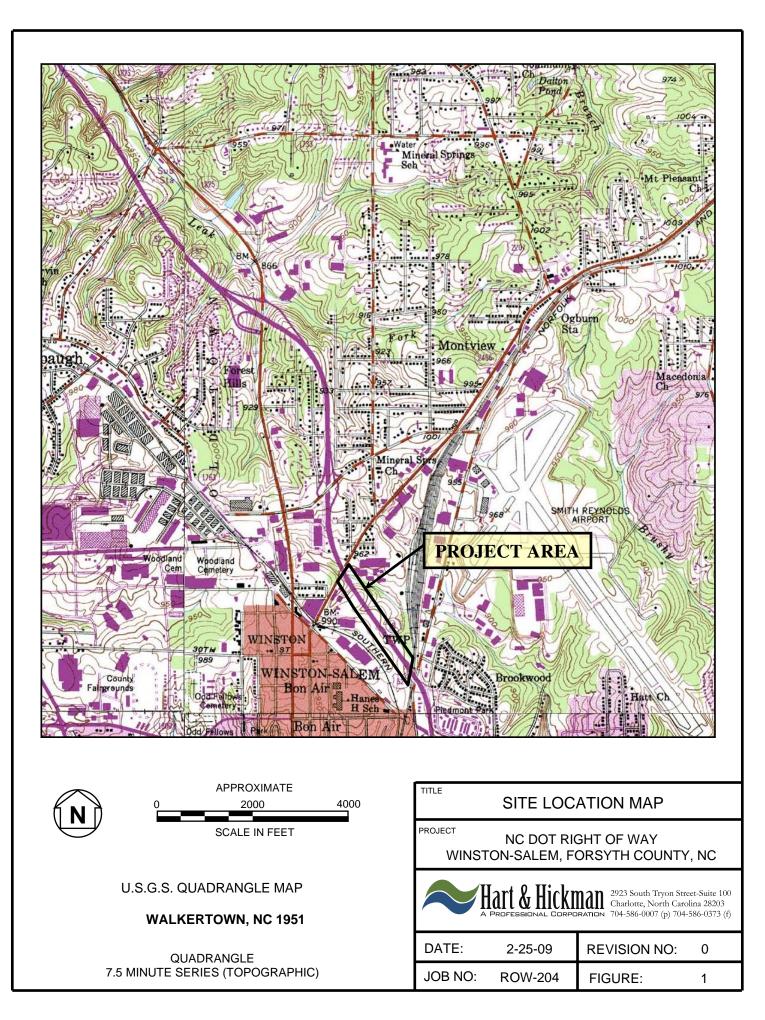
Notes:

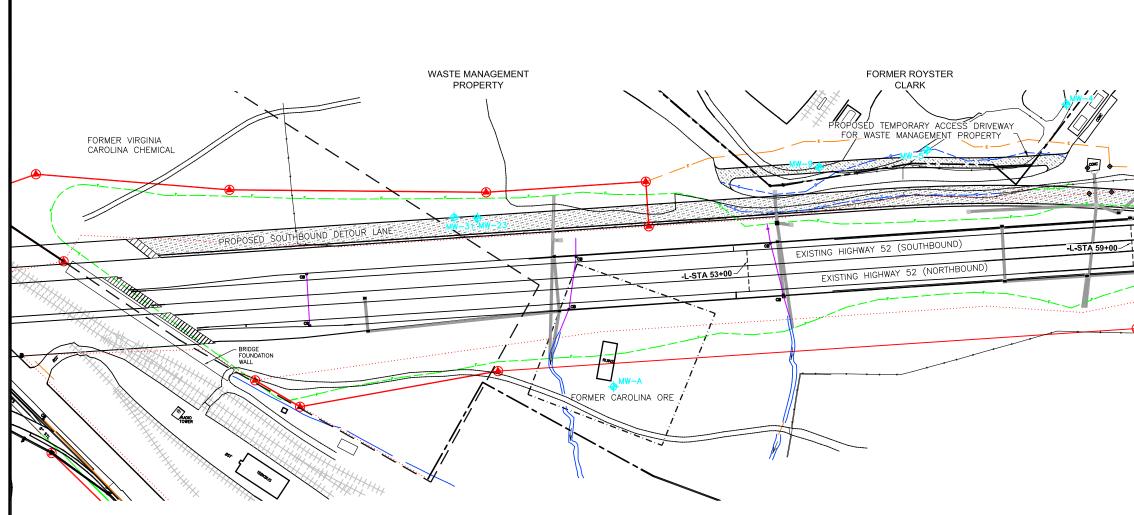
EPA Method number follows parameter in parenthesis

Bold indicates concentration exceeds NCDENR Action Level

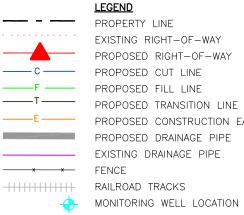
TPH = Total Petroleum Hydrocarbons; DRO = Diesel Range Organics; GRO = Gasoline Range Organics

GRO was prepared using EPA Method 5035





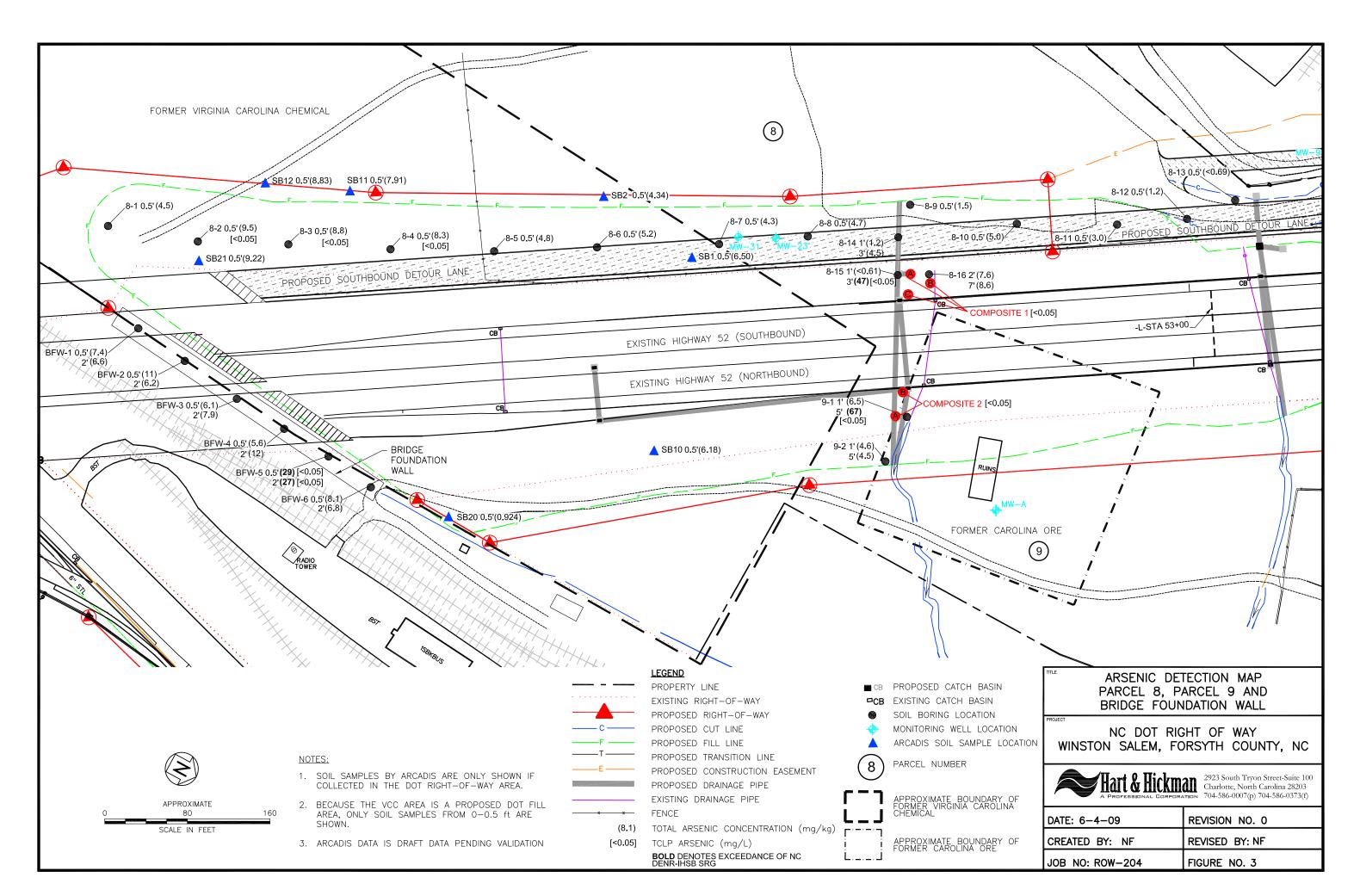


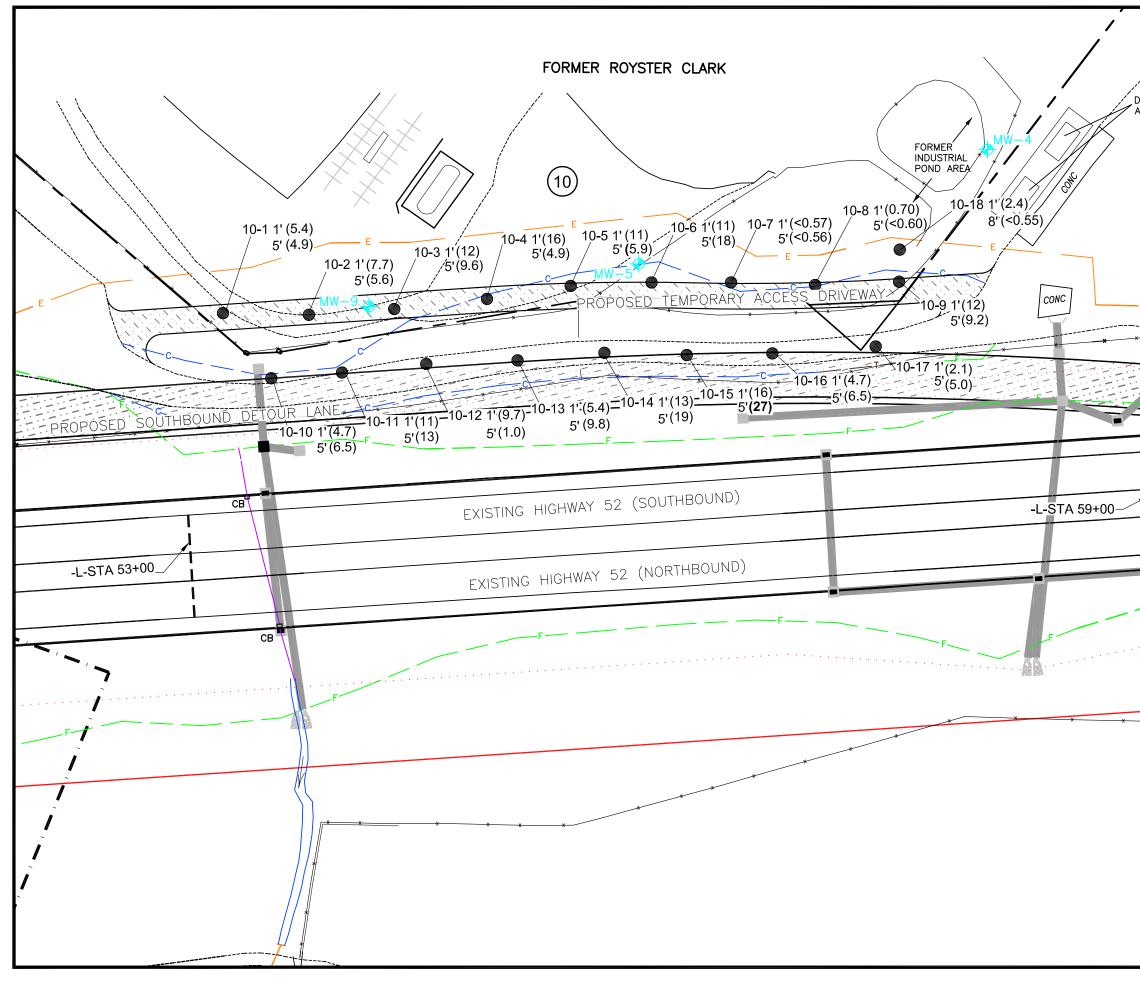


PROPERTY LINE EXISTING RIGHT-OF-WAY PROPOSED RIGHT-OF-WAY PROPOSED CUT LINE PROPOSED FILL LINE PROPOSED TRANSITION LINE PROPOSED CONSTRUCTION EASEMENT PROPOSED DRAINAGE PIPE EXISTING DRAINAGE PIPE RAILROAD TRACKS

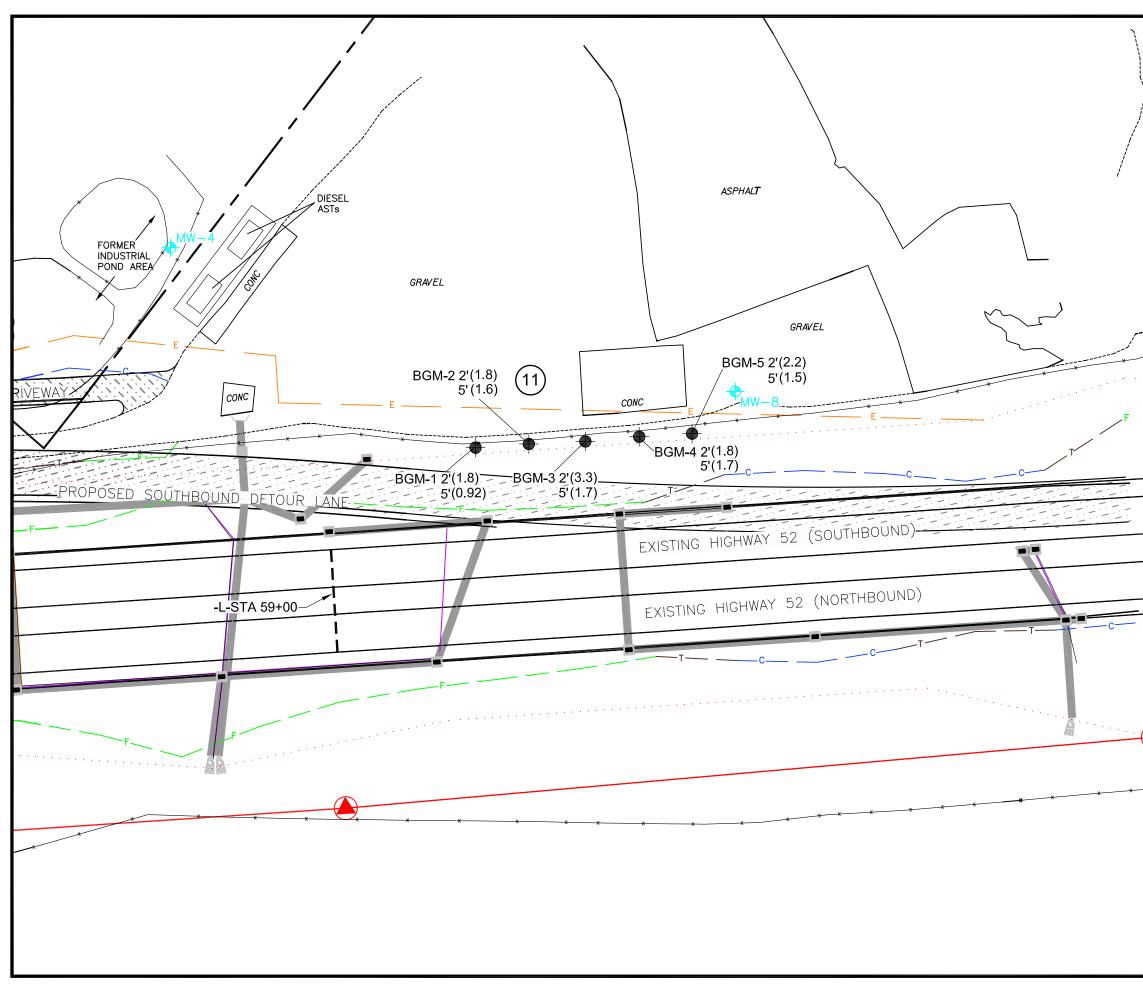
## ■ CB PROPOSED CATCH BASIN □CB EXISTING CATCH BASIN SOIL BORING LOCATION 8 PARCEL NUMBER APPROXIMATE BOUNDARY OF FORMER VIRGINIA CAROLINA CHEMICAL APPROXIMATE BOUNDARY OF FORMER CAROLINA ORE

	WASTE MANAGEME PROPERTY	NT
	SITE (PROJEC	MAP T AREA)
	NC DOT RIG WINSTON SALEM, FC	
-	Hart & Hickman	
-	DATE: 6-4-09	REVISION NO. 0
	CREATED BY: NF	REVISED BY: NF
	JOB NO: ROW-204	FIGURE NO. 2



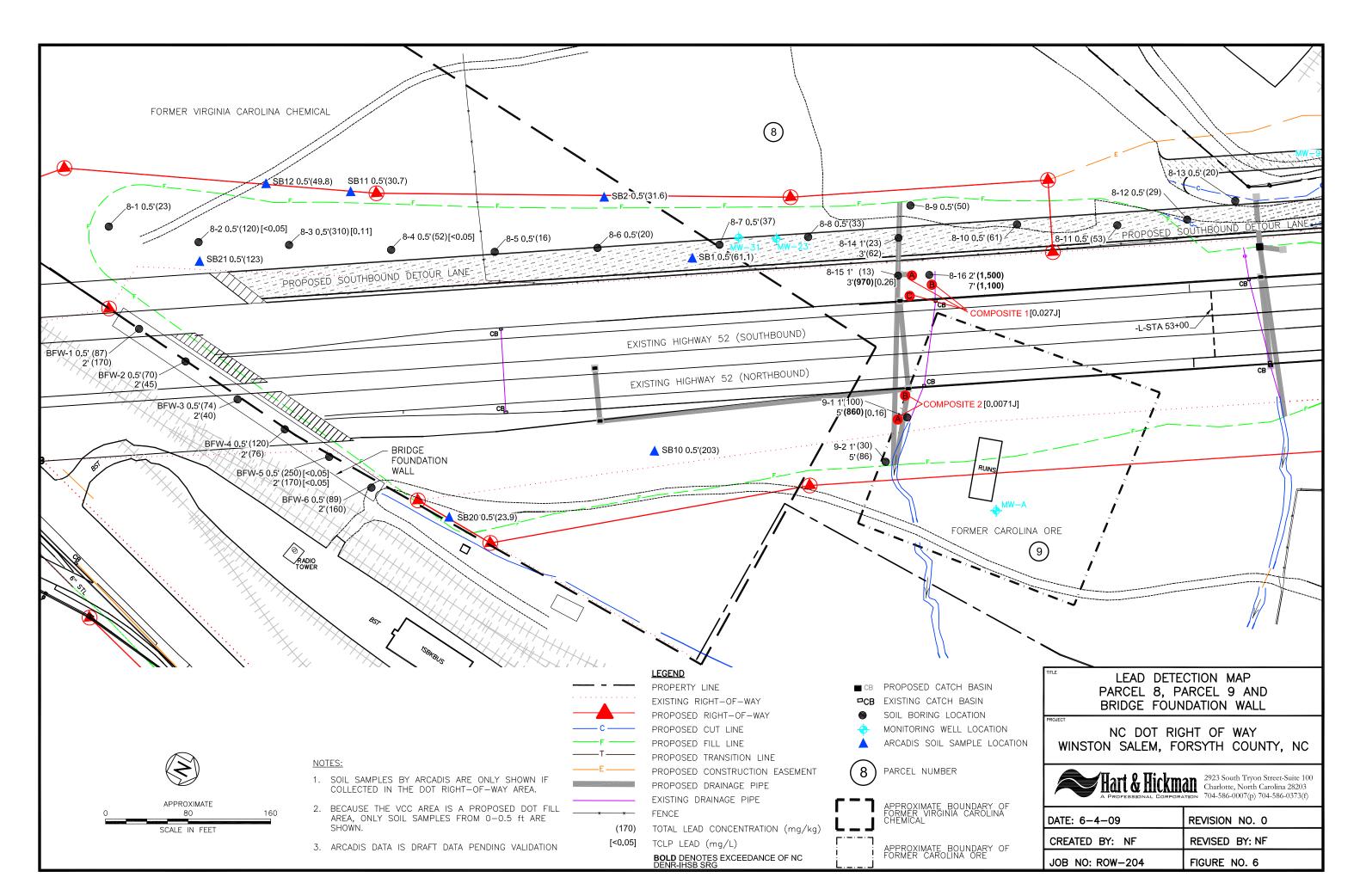


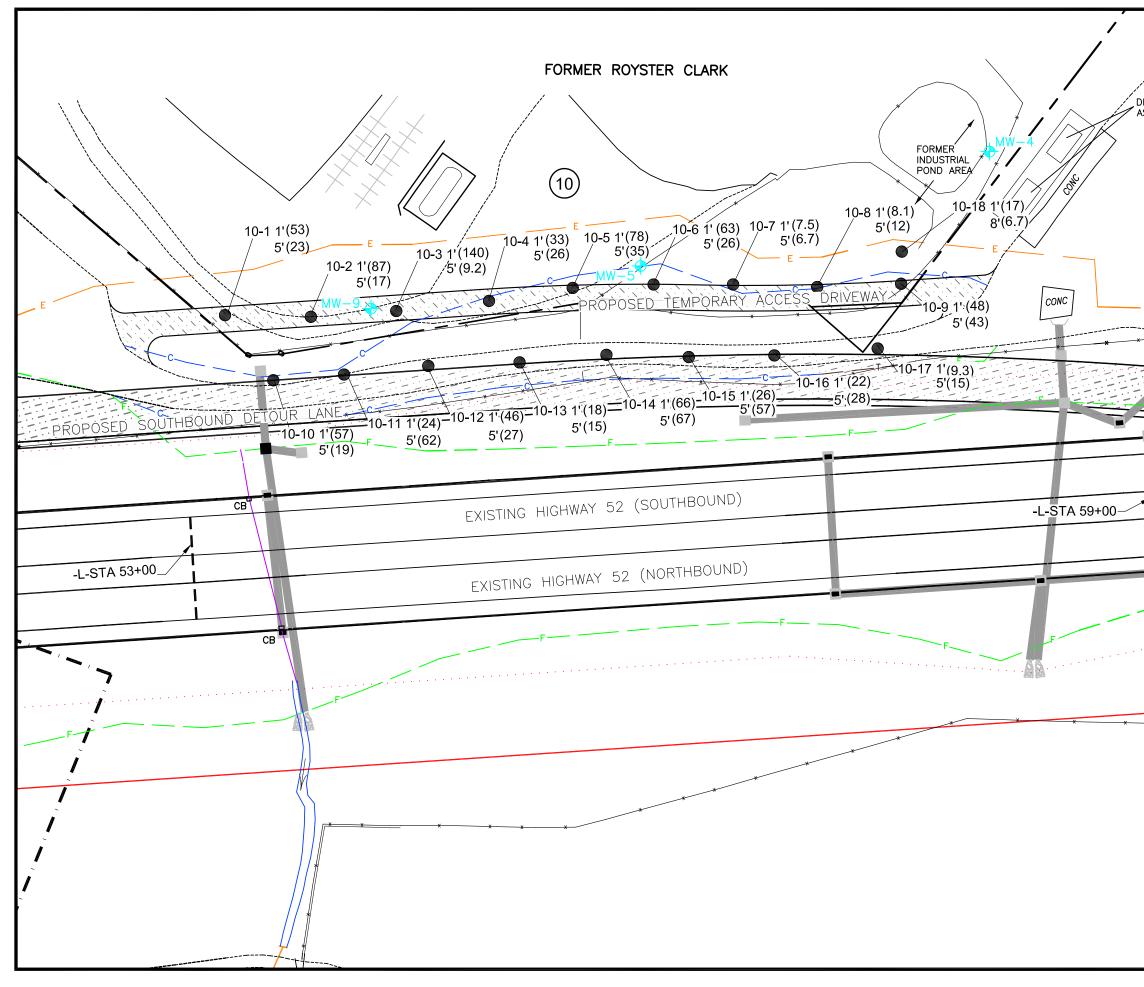
C PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE PROPOSE EXISTING CB PROPOSE CB PROPOSE CB PROPOSE CB PROPOSE CB PROPOSE CB PROPOSE CB PROPOSE PROPO	RIGHT-OF-WAY D RIGHT-OF-WAY D CUT LINE D FILL LINE D TRANSITION LINE D CONSTRUCTION EASEMENT D DRAINAGE PIPE DRAINAGE PIPE 2SENIC DETECTION (mg/kg) SENIC (mg/L) D CATCH BASIN CATCH BASIN CATCH BASIN RING LOCATION NG WELL LOCATION
0	ROXIMATE 60 120 E IN FEET
PARC PROJECT NC DOT RIC	TECTION MAP EL 10 GHT OF WAY DRSYTH COUNTY, NC
DATE: 6-4-09 CREATED BY: NF	<ul> <li>2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)</li> <li>REVISION NO. 0</li> <li>REVISED BY: NF</li> </ul>
JOB NO: ROW-204	FIGURE NO. 4



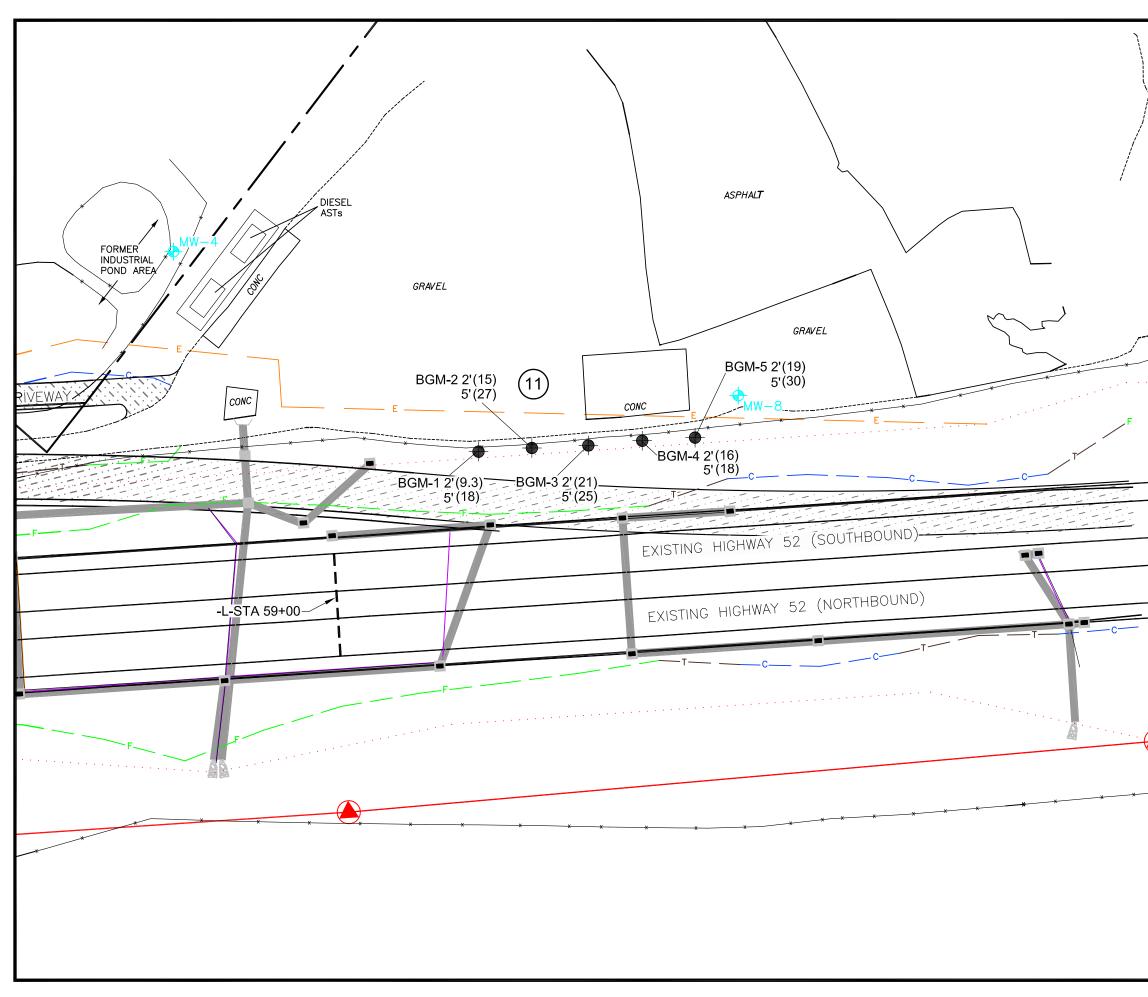
A

	C PROPOSED PRO	RIGHT-OF-WAY O RIGHT-OF-WAY O CUT LINE O FILL LINE O TRANSITION LINE O CONSTRUCTION EASEMENT O DRAINAGE PIPE DRAINAGE PIPE O CATCH BASIN CATCH BASIN ING LOCATION UND SAMPLES) IG WELL LOCATION SENIC CONCENTRATION
	0	ROXIMATE 60 120 E IN FEET
•	BACKGROUND ARSENIC DETECTION MAP PARCEL 11	
	NC DOT RIGHT OF WAY WINSTON-SALEM, FORSYTH COUNTY, NC	
	A PROFESSIONAL DORPORATION 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)	
	DATE: 6-4-09	REVISION NO. 0
	CREATED BY: NF	REVISED BY: NF
	JOB NO: ROW-204	FIGURE NO. 5



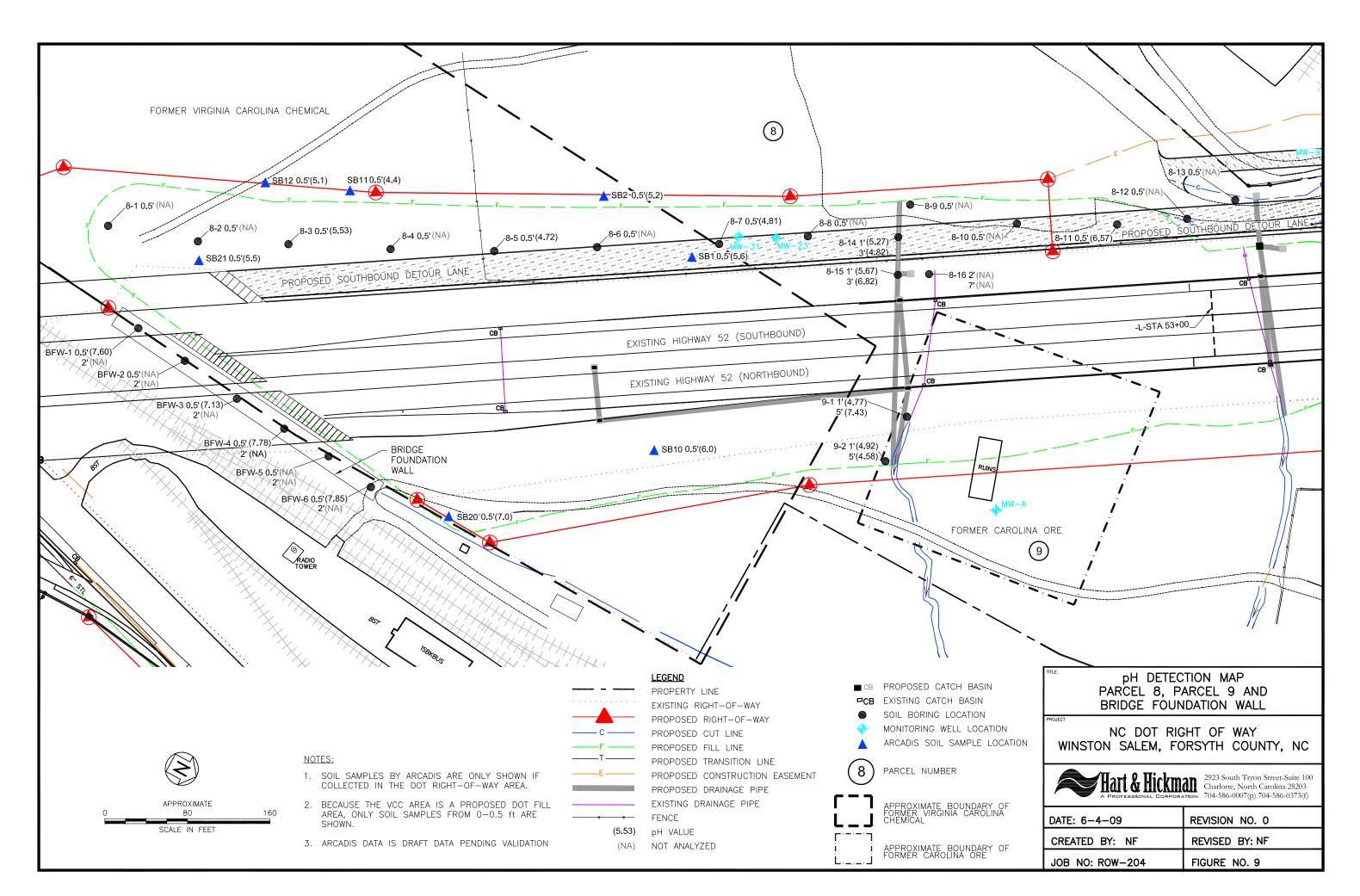


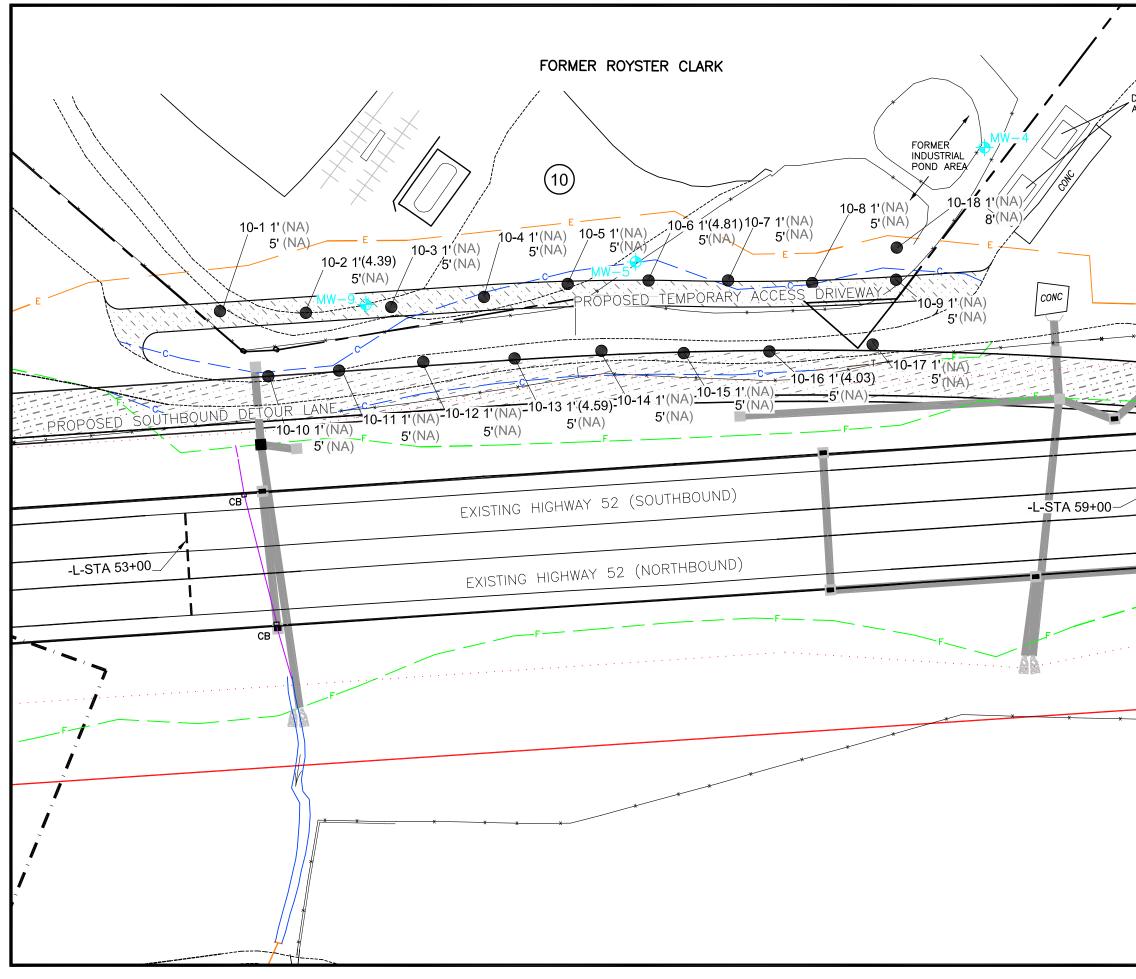
	C PROPOSED PROPOSED F PROPOSED F PROPOSED F PROPOSED PROPOSE	RIGHT-OF-WAY O RIGHT-OF-WAY O CUT LINE O FILL LINE O TRANSITION LINE O CONSTRUCTION EASEMENT O DRAINAGE PIPE DRAINAGE PIPE O CATCH BASIN CATCH BASIN ING LOCATION IG WELL LOCATION AD CONCENTRATION D (mg/L)								
	0	ROXIMATE 60 120 E IN FEET								
×	PARCE	CTION MAP EL 10								
	NC DOT RIG	NC DOT RIGHT OF WAY WINSTON-SALEM, FORSYTH COUNTY, NC								
	Hart & Hickm	2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)								
	DATE: 6-4-09	REVISION NO. 0								
	CREATED BY: NF	REVISED BY: NF								
	JOB NO: ROW-204	FIGURE NO. 7								



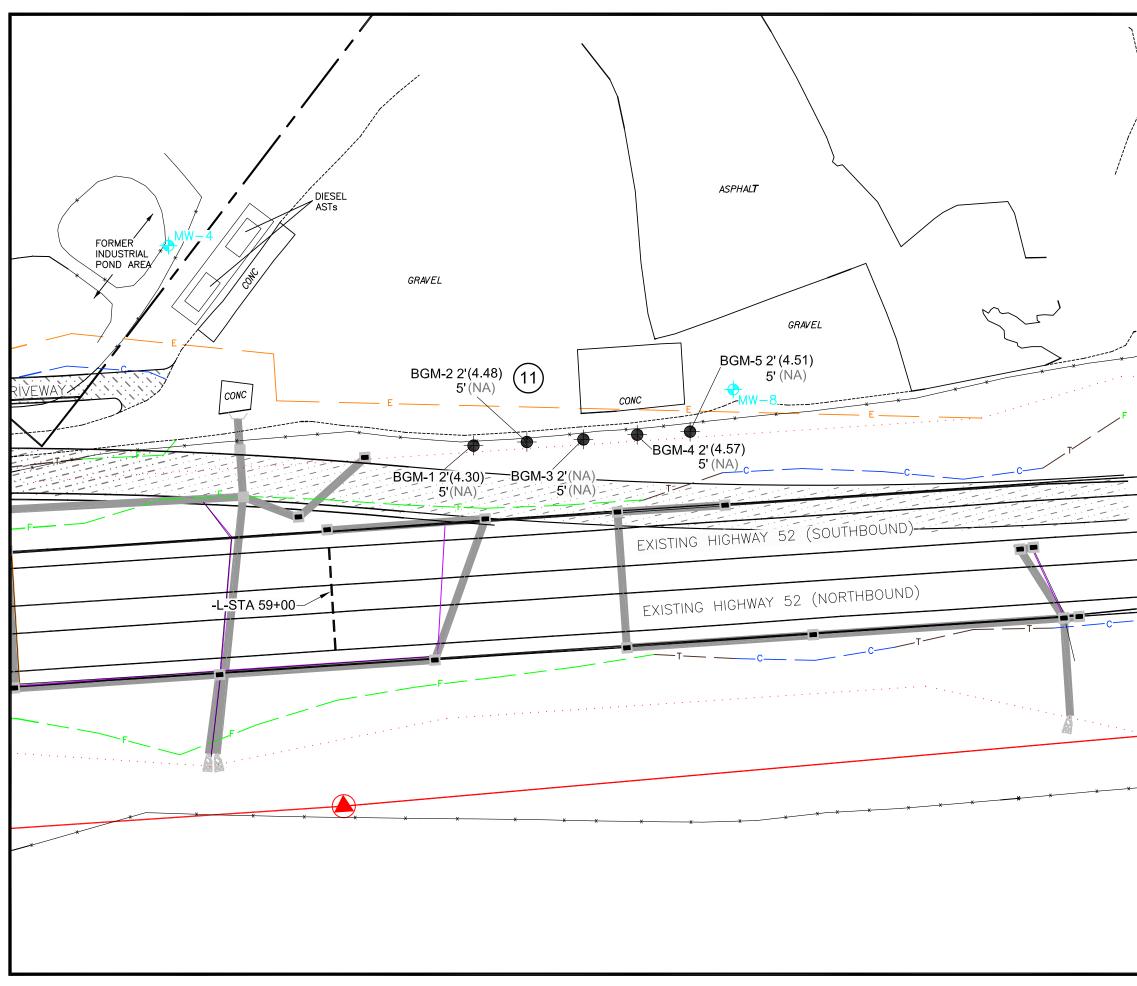
AM

	LEGEND PROPERTY EXISTING PROPOSED PROPOSED F PROPOSED F PROPOSED P	RIGHT-OF-WAY ) RIGHT-OF-WAY ) CUT LINE ) FILL LINE ) TRANSITION LINE ) CONSTRUCTION EASEMENT ) DRAINAGE PIPE DRAINAGE PIPE ) CATCH BASIN CATCH BASIN NG LOCATION UND SAMPLES ) IG WELL LOCATION AD CONCENTRATION
	0 SCALE	ROXIMATE 60 120 E IN FEET
*	BACKGROUND LEA PARCI	D DETECTION MAP EL 11
	NC DOT RIG WINSTON-SALEM, FC	
	Hart & Hickman	2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)
	DATE: 6-4-09	REVISION NO. 0
	CREATED BY: NF	REVISED BY: NF
	JOB NO: ROW-204	FIGURE NO. 8



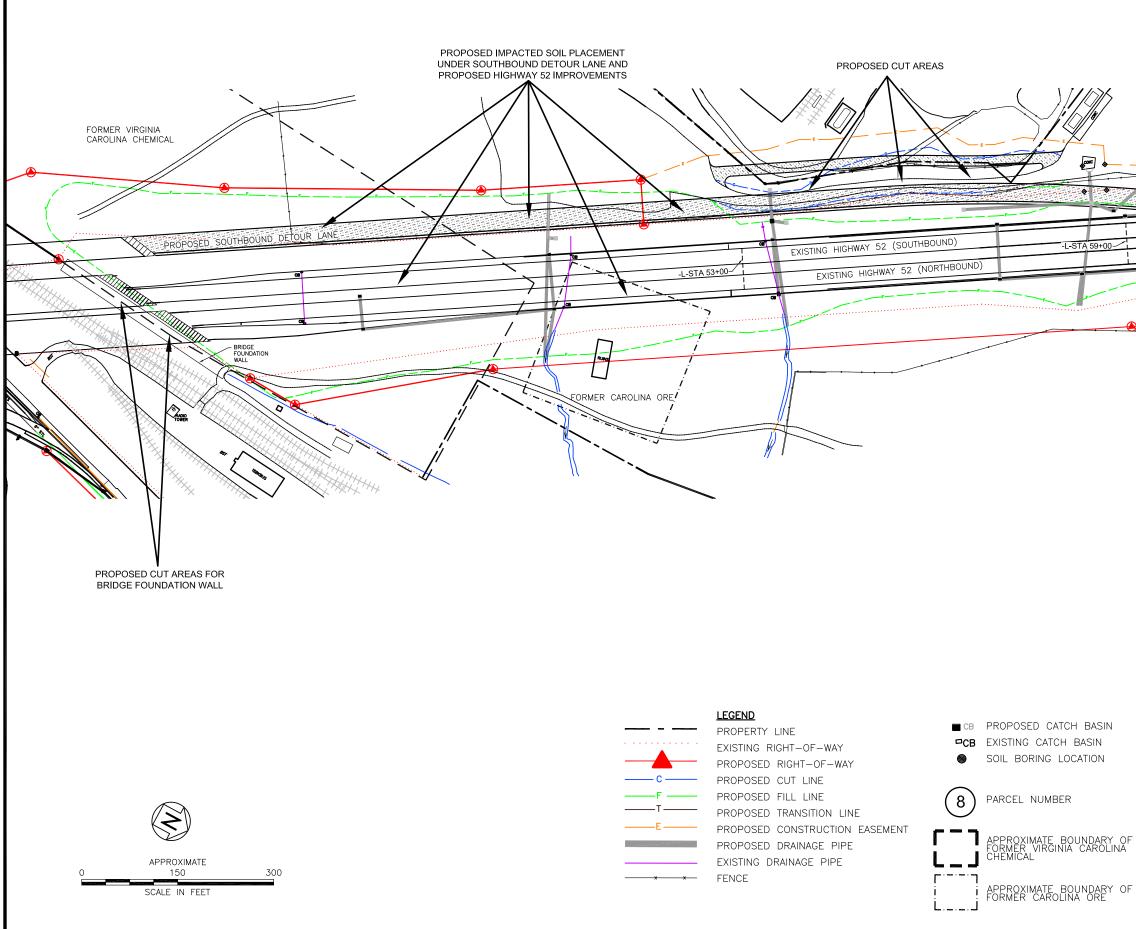


C F F F F F F F F F F F F F F F F F F F	PROPOSED PROPOSED PROPOSED PROPOSED PROPOSED EXISTING ( SOIL BORI	RIGHT-OF-WAY PRIGHT-OF-WAY CUT LINE FILL LINE TRANSITION LINE CONSTRUCTION EASEMENT DRAINAGE PIPE CATCH BASIN CATCH BASIN NG LOCATION G WELL LOCATION YZED
0		COXIMATE 60 120 IN FEET
	PARCE	TION MAP EL 10 HT OF WAY PRSYTH COUNTY, NC
DATE: 6-4-09	Hickma Nal Gorpora	2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) REVISION NO. 0
CREATED BY: NF JOB NO: ROW-204	ŀ	REVISED BY: NF FIGURE NO. 10

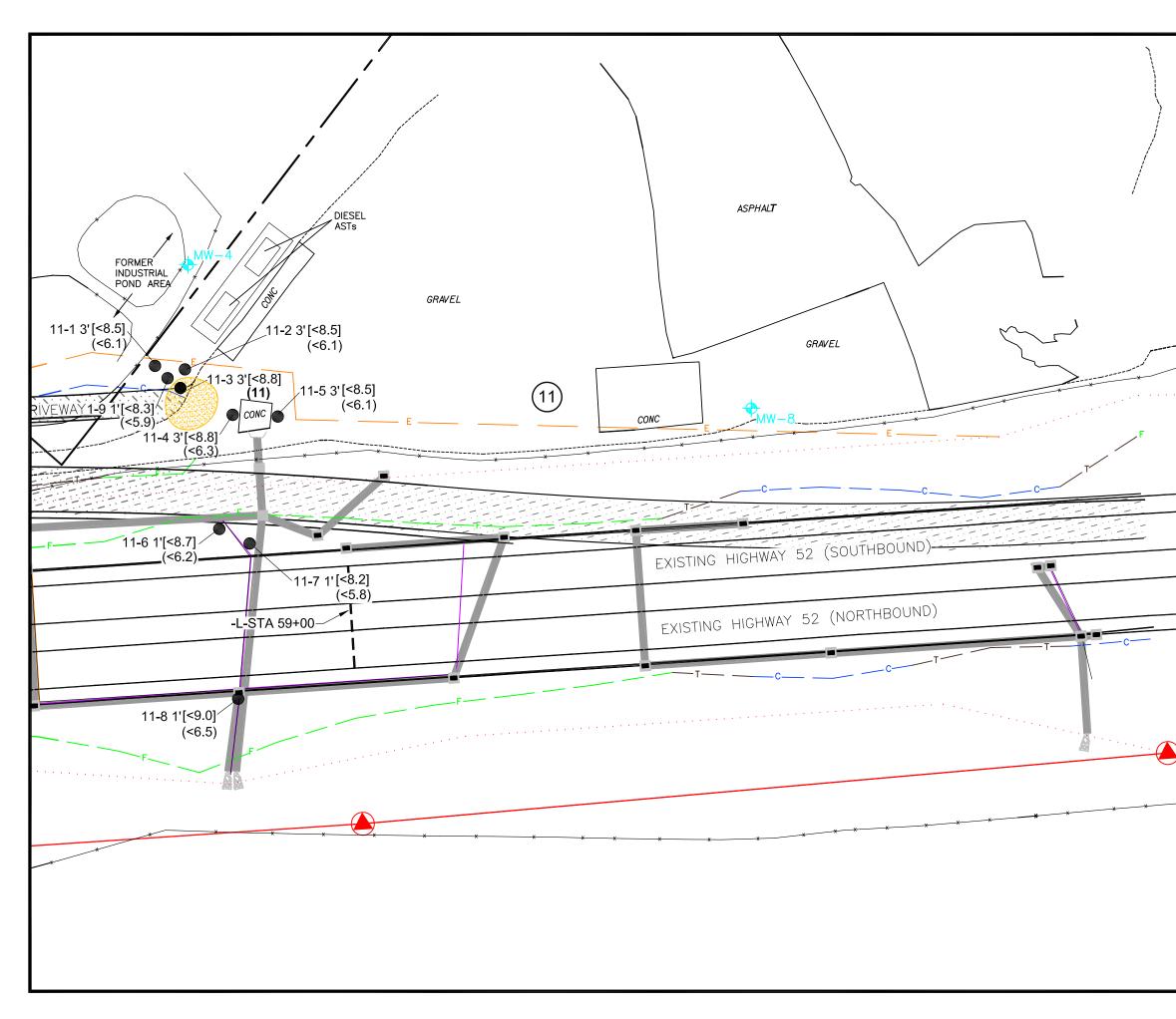


AM

	C     PROPOSED       F     PROPOSED       T     PROPOSED       E     PROPOSED       PROPOSED     PROPOSED       E     PROPOSED       E     PROPOSED       E     PROPOSED       E     PROPOSED       C     FENCE       CB     PROPOSED	LINE RIGHT-OF-WAY ORIGHT-OF-WAY OCUT LINE OFILL LINE OTRANSITION LINE OCONSTRUCTION EASEMENT ODRAINAGE PIPE DRAINAGE PIPE OCATCH BASIN CATCH BASIN
*	(BACKGRO	YZED
		R
- <u>(</u> )	0	ROXIMATE 60 120 E IN FEET
<del>x</del>	BACKGROUND pH PARCI	DETECTION MAP EL 11
	NC DOT RIG	SHT OF WAY DRSYTH COUNTY, NC
	Hart & Hickm	2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)
	DATE: 6-4-09	REVISION NO. 0
	CREATED BY: NF	REVISED BY: NF
	JOB NO: ROW-204	FIGURE NO. 11



A PROFESSIONAL CORPORATION 704-586-0007(p) 704-586-0373(f)			
THE CUT AREAS AND FILL PLACEMENT AREAS THOSE THE THE CUT AREAS AND FILL PLACEMENT AREAS THOSE THE THE THE THE THE THE THE TH	GAWEL	SAVEL 2000	V L }
THE CUT AREAS AND FILL PLACEMENT AREAS THOSE THE THE CUT AREAS AND FILL PLACEMENT AREAS THOSE THE THE THE THE THE THE THE TH			
F       CUT AREAS AND FILL PLACEMENT AREAS         PROJECT       NC DOT RIGHT OF WAY WINSTON SALEM, FORSYTH COUNTY, NC         F       Image: Comparison of the second secon			RETAIL
F       CUT AREAS AND FILL PLACEMENT AREAS         PROJECT       NC DOT RIGHT OF WAY WINSTON SALEM, FORSYTH COUNTY, NC         F       Image: Comparison of the second secon			
F       CUT AREAS AND FILL PLACEMENT AREAS         PROJECT       NC DOT RIGHT OF WAY WINSTON SALEM, FORSYTH COUNTY, NC         F       Image: Comparison of the second secon			
F       CUT AREAS AND FILL PLACEMENT AREAS         PROJECT       NC DOT RIGHT OF WAY WINSTON SALEM, FORSYTH COUNTY, NC         F       Image: Comparison of the second secon			
F       CUT AREAS AND FILL PLACEMENT AREAS         PROJECT       NC DOT RIGHT OF WAY WINSTON SALEM, FORSYTH COUNTY, NC         F       Image: Comparison of the second secon			·······
F       CUT AREAS AND FILL PLACEMENT AREAS         PROJECT       NC DOT RIGHT OF WAY WINSTON SALEM, FORSYTH COUNTY, NC         F       Image: Comparison of the second secon			
F       CUT AREAS AND FILL PLACEMENT AREAS         PROJECT       NC DOT RIGHT OF WAY WINSTON SALEM, FORSYTH COUNTY, NC         F       Image: Comparison of the second secon			
F       CUT AREAS AND FILL PLACEMENT AREAS         PROJECT       NC DOT RIGHT OF WAY WINSTON SALEM, FORSYTH COUNTY, NC         F       Image: Comparison of the second secon			
F       Image: Market Barbonal Corporation       2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)         F       Image: Date: 6-4-09       REVISION NO. 0         F       Image: Created By: NF       REVISED By: NF		CUT AREAS AND FIL	L PLACEMENT AREAS
A PROFESSIONAL CORPORATION 704-586-0007(p) 704-586-0373(t)       DATE: 6-4-09     REVISION NO. 0       CREATED BY: NF     REVISED BY: NF		NC DOT RIG	
CREATED BY: NF REVISED BY: NF	F	Hart & Hickm	2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)
CREATED BY: NF REVISED BY: NF	F	DATE: 6-4-09	REVISION NO. 0
JOB NO: ROW-204 FIGURE NO. 12		CREATED BY: NF	REVISED BY: NF
		JOB NO: ROW-204	FIGURE NO. 12



	LEGEND
	PROPERTY LINE
	EXISTING RIGHT-OF-WAY
C	PROPOSED RIGHT-OF-WAY
—— C ——	PROPOSED CUT LINE PROPOSED FILL LINE
T	PROPOSED TRANSITION LINE
——Е——	PROPOSED CONSTRUCTION EASEMENT
	PROPOSED DRAINAGE PIPE
	EXISTING DRAINAGE PIPE
——————————————————————————————————————	FENCE
CB	PROPOSED CATCH BASIN
□CB	EXISTING CATCH BASIN
•	SOIL BORING LOCATION (BACKGROUND SAMPLES)
<b>*</b>	MONITORING WELL LOCATION
(11)	PARCEL NUMBER
* [<8.5]	TPH DRO (mg/kg)
(<6.1)	TPH GRO (mg/kg)
	BOLD DENOTES EXCEEDANCE OF NC DENR ACTION LEVEL
	IMPACTED SOIL AREA
 	APPROXIMATE 60 120
0	
 	60 120
	60 120 SCALE IN FEET
	60 120 SCALE IN FEET : GRO DETECTION MAP
DRO &	60 120 SCALE IN FEET
TITLE DRO &	60 120 SCALE IN FEET CRO DETECTION MAP PARCEL 11
TITLE DRO &	60 120 SCALE IN FEET CRO DETECTION MAP PARCEL 11 DOT RIGHT OF WAY
TITLE DRO &	60 120 SCALE IN FEET CRO DETECTION MAP PARCEL 11
PROJECT NC WINSTON-SA	60 120 SCALE IN FEET CRO DETECTION MAP PARCEL 11 DOT RIGHT OF WAY LEM, FORSYTH COUNTY, NC 2923 South Tryon Street-Suite 100
PROJECT NC WINSTON-SA	60 120 SCALE IN FEET CRO DETECTION MAP PARCEL 11 DOT RIGHT OF WAY LEM, FORSYTH COUNTY, NC
PROJECT NC WINSTON-SA	60 120 SCALE IN FEET CRO DETECTION MAP PARCEL 11 DOT RIGHT OF WAY ALEM, FORSYTH COUNTY, NC 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203
PROJECT NC WINSTON-SA	60 120 SCALE IN FEET CORPORATION MAP PARCEL 11 DOT RIGHT OF WAY ALEM, FORSYTH COUNTY, NC SECONDAL CORPORATION 2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) REVISION NO. 0

Appendix A Soil Boring Logs

.

.



BORING

DG OF

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

#### **BORING NUMBER 8-1**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

Sheet 1 of 1

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY WELL DIAGRAM DEPTH (#) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Slightly moist, brown-orange, clayey SAND HART HICKMAN.GDT - 6/4/09 10:32 - S:/AAA-MASTER GINT PROJECTS/ROW-204/PARCEL 8.GPJ Bottom of borehole at 0.5 feet. 1 - 1 DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/24/09 Soil sample collected between 0 ft and SAMPLING METHOD: TOTAL DEPTH: 0.5 0.5 ft for laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



3334 Hilisborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 8-2**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 Sheet 1 of 1

	DEPTH (ft)	RECOVERY (%) BLOW COUNT (G. OVA (ppm) MP. LITHOLOGY		WELL DIAGRAM	DEPTH (ft)				
	0	ВЯ	B	BKG.	SAMP.				
							Slightly moist, brown-orange, clayey SAND		-
	_	-							_
RCEL 8.GPJ	-						Bottom of borehole at 0.5 feet.		
S\ROW-204\P/	_								
GINT PROJECT									
S:\AAA-MASTER									
- 6/4/09 10:32 - :									
RT HICKMAN.GDT	1								1
OF BORING	Image: Sel state       Image: Sel state         DRILL RIG/ METHOD: Hand Auger         SAMPLING METHOD:         Sampling METHOD:         LOGGED BY BMB         DRAWN BY:					er	BORING STARTED 3/24/09RemBORING COMPLETED: 3/24/09Soil sTOTAL DEPTH: 0.50.5 ftSURFACE ELEV:DEPTH TO WATER:	arks: sample collected between 0 ft and for laboratory analysis.	<u> </u>



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 8-3**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT **LITHOLOGY** DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. ۰O Slightly moist, brown-orange, clayey SAND BORING - HART HICKMAN.GDT - 6/4/09 10:32 - S!AAA-MASTER GINT PROJECTSIROW-204/PARCEL 8.GPJ Bottom of borehole at 0.5 feet. 1 - 1 DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/24/09 Soil sample collected between 0 ft and SAMPLING METHOD: TOTAL DEPTH: 0.5 0.5 ft for laboratory analysis. Ë LOGGED BY BMB SURFACE ELEV: ő DRAWN BY: DEPTH TO WATER:



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 8-4**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 Sheet 1 of 1

								LUCATION: Winston-Sale			
DEPTH	(#)	RECOVERY (%) BLOW COUNT (G. OVA (ppm) MP. LITHOLOGY LITHOLOGY		MA	MATERIAL DESCRIPTION		WELL DIAGRAM	DEPTH (ft)			
		REC	BLO	BKG.	SAMP.						
	-0						Slightly moist, brown-or	range, clayey SAND			-
SCEL 8.							Pott	om of borehole at 0.5 feet.			
F PROJECTS/ROW-204/PAF	_			-			BOU	on of burehole at 0.5 reet.			_
2 - S:VAAA-MASTER GIN	-										
HART HICKMAN.GDT - 6/4/09 10:32 - S:JAAA-MASTER GINT PROJECTS/ROW-204/DARCEL 8.GPJ	-										
OF BORING-	RILL AMF OGC	L RIG/ PLING	Contrac Method Method Method Y BMB	: Han		er	BORIN TOTAI SURF	IG STARTED 3/24/09 IG COMPLETED: 3/24/09 L DEPTH: 0.5 ACE ELEV: H TO WATER:	Remai Soil sa 0.5 ft f	rks: ample collected between 0 ft and or laboratory analysis.	1



3334 Hilisborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 8-5**

PROJECT: NC DOT State Project U-2826A - Parcel #8

JOB NUMBER: ROW-204

ļ		-								
-	DEPTH (ft) (ft) (ft) (ft) (ft) (ft) BLOW COUNT (ft) (ft) (ft) (ft) (ft) (ft) (ft) (ft)				WELL DIAGRAM	DEPTH (ft)				
		REC	BLG	BKG.	SAMP.					
							Slightly moist, orange-brown, clayey SAND			 
IL 8.GPJ	_									
NPARCE							Bottom of borehole at 0.5 feet.			
CTS/ROW-204	_									
ER GINT PROJE	_									-
- S:\AAA-MASTI										
LOG OF BORING - HART HICKMAN.GDT - 6/4/09 10:32 - S:JAAA-MASTER GINT PROJECTS/ROW-204/PARCEL 8.GPJ										_
HART HICKMA	1 –									- 1
LOG OF BORING - H	DRILI SAMI LOG(	L RIG/ PLING	Contrac Method Method By BMB f:	: Han		er	BORING STARTED 3/23/09 BORING COMPLETED: 3/23/09 TOTAL DEPTH: 0.5 SURFACE ELEV: DEPTH TO WATER:	Rema Soil sa 0.5 ft	rks: ample collected between 0 ft and for laboratory analysis.	



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 8-6**

PROJECT: NC DOT State Project U-2826A - Parcel #8

JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

Hand     Well       Hand     Slightly molet, brown-orange, clayey SAND       Borno of borohole at 0.5 feet.       Borno of borohole at 0.5 feet.       Support of the sector of borohole at 0.5 feet.       Borno of borohole at 0.5 feet.       Borno of borohole at 0.5 feet.       Support of the sector of borohole at 0.5 feet.       Borno of borohole at 0.5 feet.	
0     m     m     m     m     m       -     -     -     -     -     -       -     -     -     -     -       -     -     -     -       -     -     -     -       -     -     -     -	DIAGRAM
Slightly moist, brown-orange, clayey SAND	
Per	0
Teo Toologie 	
Page 100 Pag	
action     Bottom of borehole at 0.5 feet.	
Peor Bottom of borehole at 0.5 feet.	
Bottom of borehole at 0.5 feet.	F
Bottom of borehole at 0.5 feet.	
Bottom of borehole at 0.5 feet.	-
Bottom of borehole at 0.5 feet.	
	-
-WASTER	
	_
	Ļ
	- 1
ORILLING CONTRACTOR: SEIBORING STARTED 3/23/09Remarks:DRILL RIG/ METHOD: Hand AugerBORING COMPLETED: 3/23/09Soil sample collectedSAMPLING METHOD:TOTAL DEPTH: 0.50.5 ft for laboratory andLOGGED BY BMBSURFACE ELEV:DEPTH TO WATER:	between 0 ft and alysis.



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 8-7**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Slightly moist, orange-brown, sandy CLAY Bottom of borehole at 0.5 feet. 1 · 1 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/23/09 Soil sample collected between 0 ft and SAMPLING METHOD: TOTAL DEPTH: 0.5 0.5 ft for laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 8-8**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT **LITHOLOGY** DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. ۰O Slightly moist, brown-orange, clayey SAND BORING - HART HICKMAN.GDT - 6/4/09 10:32 - S: AAA-MASTER GINT PROJECTS/ROW-204/PARCEL 8.GPJ Bottom of borehole at 0.5 feet. - 1 1 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 **Remarks:** DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/23/09 Soil sample collected between 0 ft and SAMPLING METHOD: TOTAL DEPTH: 0.5 0.5 ft for laboratory analysis. 0G OF I LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 8-9**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

							LOCATION: Winston-Salem	I, NC		_
DEPTH (ft)	RECOVERY (%)	BLOW COUNT		OVA (ppm)	ПТНОГОСУ	MA	MATERIAL DESCRIPTION		WELL DIAGRAM	DEPTH
	REC	BLG	BKG.	SAMP.						
-0						Slightly moist, brown-or	ange, clayey SAND			
						Bott	om of borehole at 0.5 feet.		·	
- 1 -										
Product     Product								<b>ks:</b> mple collected between 0 ft and or laboratory analysis.		



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

#### **BORING NUMBER 8-10**

PROJECT: NC DOT State Project U-2826A - Parcel #8

JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

Hand Orgin Biology Bi									, NO		
0	DEPTH (ft)	(ft) OVERY (%) W COUNT OVA (ppm) HOLOGY		MA	TERIAL DESCRIPTION		WELL DIAGRAM	DEPTH (ft)			
Slightly molet, brown-orange, dayey SAND  Slightly molet, brown-orange,		REC	BLG	SKG.	AMP.						
Image: state of the state	-0			ш	Ś	/////	Slightly moist, brown-or	ange, clayey SAND			-0
Image: state of the state											
Image: state of the state	_										
Image: state of the state											
Image: state of the state											
Image: state of the state											
Image: state of the state											
Image: state of the state						11D					_
Image: state of the state						IIA					
Image: state of the state			-								
Image: state of the state											
Image: state of the state											
Image: state of the state						<u>HH</u>	Botte	om of borehole at 0.5 feet.		-	
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:											
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.											
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.											_
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.											
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.	_										
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.											
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.	_										
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.						-					
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.											
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.			2								
DRILLING CONTRACTOR: SEI     BORING STARTED 3/23/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/23/09     Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface analysis.											
DRILL RIG/ METHOD: Hand AugerBORING COMPLETED: 3/23/09Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.SAMPLING METHOD:TOTAL DEPTH: 0.5Soil sample collected between 0 ft and 0.5 ft for laboratory analysis.LOGGED BY BMBSURFACE ELEV:	1-								<del></del> ,		- 1
SAMPLING METHOD:     TOTAL DEPTH: 0.5     0.5 ft for laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:						er					
	SAMF	PLING	METHOD:				TOTAL	. DEPTH: 0.5	Soil s 0.5 ft	ample collected between 0 ft and for laboratory analysis.	



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 8-11**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT ПТНОLOGY DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. n Slighly moist, gray-brown, sandy SILT BORING - HART HICKMAN.GDT - 6/4/09 10:32 - S:\AAA-MASTER GINT PROJECTS\ROW-204\PARCEL 8.GPJ Bottom of borehole at 0.5 feet. 1 1 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 **Remarks:** DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/23/09 Soil sample collected between 0 ft and SAMPLING METHOD: TOTAL DEPTH: 0.5 0.5 ft for laboratory analysis. .0G OF I LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 



LOG OF BORING - HART HICKWAN GDT - 6/4/09 10:32 - S:JAAA-MASTER GINT PROJECTS/ROW-204/PARCEL 8.GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(o) 919-847-4261(f)

### **BORING NUMBER 8-12**

PROJECT: NC DOT State Project U-2826A - Parcel #8

Sheet 1 of 1

JOB NUMBER: ROW-204

LOCATION. MR. .....

704-300-0007(b) 704-300-0373(i)			919-0	47-426(()	LOCATION: Winston-Salem, NC					
DEPTH (ft)	RECOVERY (%)	BLOW COUNT		- OVA (ppm)	ГІТНОГОӨҮ	MA	TERIAL DESCRIPTION		WELL DIAGRAM	DEPTH (ft)
	RĒ	В	BKG.	SAMP.						
-0				<u></u>		Slightly moist, brown-gr	ay, SAND			<u> _0</u> _
_										
										F
		:								
_										_
_										-
							_			
						Botto	om of borehole at 0.5 feet.			
_										╞
-										-
_										
		:								
1 –						ur	·•	<u>_</u>		- 1
DRILI SAMI LOGO	L RIG/ PLING	Contrac Method Method Y BMB (;	: Hand		ər	BORIN TOTAL SURFA	IG STARTED 3/23/09 IG COMPLETED: 3/23/09 L DEPTH: 0.5 ACE ELEV: 1 TO WATER:	Remark Soil sam 0.5 ft for	<b>s:</b> pple collected between 0 ft and · laboratory analysis.	



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 8-13**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

								LOCATION: Winston-Salem, NC				
	DEPTH (ft)	RECOVERY (%)	BLOW COUNT		UVA (ppm)	ПТНОГОСУ	MA	TERIAL DESCRIPTION		WELL DIAGRAM	DEPTH (ft)	
		REC	BLG	BKG.	SAMP.							
LOG OF BORING - HART HICKMAN.GDT - 6/4/09 10:32 - S:\AAA-MASTER GINT PROJECTSIROW-204IPARCEL 8.GPJ							Slightly moist, brown-gr	om of borehole at 0.5 feet.				
<b>IRT HICK</b>	1 –										- 1	
LOG OF BORING - HA	DRIL DRIL SAMI	l Rig, Pling Ged e	Contrac / Method Method By BMB f:	: Hand		er	BORIN TOTAI SURF/	IG STARTED 3/23/09 IG COMPLETED: 3/23/09 _ DEPTH: 0.5 ACE ELEV: H TO WATER:	Soil	arks: sample collected between 0 ft and t for laboratory analysis.		



BORING -

OG OF

3334 Hillshorough St. Rateigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

#### **BORING NUMBER 8-14**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT **LITHOLOGY** WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Slightly moist, orange-brown, clayey SAND 1 1 HART HICKMAN.GDT - 6/4/09 10:32 - S:\AAA-MASTER GINT PROJECTS\ROW-204\PARCEL 8.GP 2 2 Bottom of borehole at 3.0 feet. 4 4 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/23/09 Soil samples collected at 1 ft and 3 ft for SAMPLING METHOD: TOTAL DEPTH: 3 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



LOG OF BORING - HART HICKMAN.GDT - 6/4/09 10:32 - S: AAA-MASTER GINT PROJECTSIROW-204/PARCEL 8.GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 8-15**

PROJECT: NC DOT State Project U-2826A - Parcel #8

JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

Hard Bar Hard				_	· · · · ·				
0       a       3       Red-brown, sity CLAY         1       a       a       a       a         1       a       b       a       a         1       b       b       a       a         1       b       b       a       a         1       b       b       b       a         1       b       b       b       a         1       b       b       b       b       a         1       b       b       b       b       b       a         1       b       b       b       b       b       a       a         1       b       b       b       b       b       a       a       a         1       b       b       b       b       b       b       a<	DEPTH (ft)	OVERY (%)	BLOW COUNT			тногосу	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
Red-brown, sity CLAY   Red-brown, sity CLAY   Red-brown, sity CLAY		REC	BL(	BKG.	SAMP.				
2 Dark brown, silty CLAY 2 Dark brown, silty CLAY 3 Dark brown, silty CLAY 4 Dark brown, silty CLAY 4 Dark brown, silty CLAY 5 Dark brown, silty CLAY 6 Dark brown, silty C							Red-brown, slity CLAY		-0-
2 Dark brown, silty CLAY 2 Dark brown, silty CLAY 3 Dark brown, silty CLAY 4 Dark brown, silty CLAY 4 Dark brown, silty CLAY 5 Dark brown, silty CLAY 6 Dark brown, silty C	-								F
2 Dark brown, silty CLAY 2 Dark brown, silty CLAY 3 Dark brown, silty CLAY 4 Dark brown, silty CLAY 4 Dark brown, silty CLAY 5 Dark brown, silty CLAY 6 Dark brown, silty C	_								-
2 Dark brown, silty CLAY 2 Dark brown, silty CLAY 3 Dark brown, silty CLAY 4 Dark brown, silty CLAY 4 Dark brown, silty CLAY 5 Dark brown, silty CLAY 6 Dark brown, silty C									
2 Dark brown, silty CLAY 2 Dark brown, silty CLAY 3 Dark brown, silty CLAY 4 Dark brown, silty CLAY 4 Dark brown, silty CLAY 5 Dark brown, silty CLAY 6 Dark brown, silty C	_								-
2 Dark brown, silty CLAY 2 Dark brown, silty CLAY 3 Dark brown, silty CLAY 4 Dark brown, silty CLAY 4 Dark brown, silty CLAY 5 Dark brown, silty CLAY 6 Dark brown, silty C									
2 Dark brown, silty CLAY 2 Dark brown, silty CLAY 3 Dark brown, silty CLAY 4 Dark brown, silty CLAY 4 Dark brown, silty CLAY 5 Dark brown, silty CLAY 6 Dark brown, silty C	_								_
Jahr brown, sinty CLAY         Jahr brown, sinty CL	1 -								- 1
Jahr brown, sinty CLAY         Jahr brown, sinty CL									[
Jahr brown, sinty CLAY         Jahr brown, sinty CL	-								_
Jahr brown, sinty CLAY         Jahr brown, sinty CL									
Jahr brown, sinty CLAY         Jahr brown, sinty CL	_								
Jahr brown, sinty CLAY         Jahr brown, sinty CL									
Jahr brown, sinty CLAY         Jahr brown, sinty CL	_								_
-       -	2 –						Dark brown, silty CLAY		- 2
-       -	_								
-       -	_								-
-       -									_
-       -									
-       -									
-       -	-								-
DRILLING CONTRACTOR: SEI     BORING STARTED 3/24/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/24/09     Soil samples collected at 1 ft and 3 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 3     Iaboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface and the second secon	_3 						Bottom of borehole at 3.0 feet.		—3— _
DRILLING CONTRACTOR: SEI     BORING STARTED 3/24/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/24/09     Soil samples collected at 1 ft and 3 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 3     Iaboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface and the second secon	-								-
DRILLING CONTRACTOR: SEI     BORING STARTED 3/24/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/24/09     Soil samples collected at 1 ft and 3 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 3     Iaboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface and the second secon									
DRILLING CONTRACTOR: SEI     BORING STARTED 3/24/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/24/09     Soil samples collected at 1 ft and 3 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 3     Iaboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface and the second secon	4								-
DRILLING CONTRACTOR: SEI     BORING STARTED 3/24/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/24/09     Soil samples collected at 1 ft and 3 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 3     Iaboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface and the second secon	_				ĺ				-
DRILLING CONTRACTOR: SEI     BORING STARTED 3/24/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/24/09     Soil samples collected at 1 ft and 3 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 3     Iaboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface and the second secon	_								
DRILLING CONTRACTOR: SEI     BORING STARTED 3/24/09     Remarks:       DRILL RIG/ METHOD: Hand Auger     BORING COMPLETED: 3/24/09     Soil samples collected at 1 ft and 3 ft for laboratory analysis.       SAMPLING METHOD:     TOTAL DEPTH: 3     Iaboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Surface and the second secon									-
DRILL RIG/ METHOD: Hand AugerBORING COMPLETED: 3/24/09Soil samples collected at 1 ft and 3 ft for laboratory analysis.SAMPLING METHOD:TOTAL DEPTH: 3Isolaratory analysis.LOGGED BY BMBSURFACE ELEV:Isolaratory analysis.	1	ING (		TOR:	SE1		BORING STARTED 3/24/09	marks:	- 4
SAMPLING METHOD:     TOTAL DEPTH: 3     laboratory analysis.       LOGGED BY BMB     SURFACE ELEV:     Image: Control of the second secon	DRILL	. RIG/	METHOD	: Hand		÷r	BORING COMPLETED: 3/24/09 So	I samples collected at 1 ft and 3 ft for	
				:			TOTAL DEPTH: 3	oratory analysis.	

ł

i

$\sim$	Hart	& Hi	<u>ckman</u>
· •	ENVIRONM	ENTAL CO	NSULTANTS

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 8-16**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT ПТНОLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. 0.0 0.0 Dry, red, silty CLAY 2.5 -2.5 .06 OF BORING - HART HICKMAN.GDT - 6/4/09 11:49 - S:VAAA-MASTER GINT PROJECTS/ROW-204/PARCEL 8.GPJ Dry, light red, sandy, silty CLAY 5.0--5.0 Bottom of borehole at 7.0 feet. -7.5 7.5-DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/24/09 Soil samples collected at 2 ft and 7 ft for SAMPLING METHOD: TOTAL DEPTH: 7 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:

$\sim$		lickman
		CONSULTANTS

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 9-1**

PROJECT: NC DOT State Project U-2826A - Parcel 9 JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

//4-366-00/(p) //4-366-03/3(f)					LOCATION: Winston-Salem, NC					
DEPTH (ft) RECOVERY (%)	BLOW COUNT		- 0VA (ppm)	ГІТНОГОСҮ	MA	ATERIAL DESCRIPTION		WELL DIAGRAM	DEPTH	
REC	BL	BKG.	SAMP.							
					Moist, red, silty CLAY Brown-black, clayey Sl	LT				
DRILLING C DRILL RIG/ SAMPLING LOGGED B' DRAWN BY	Method Method Y BMB	: Han		er	BORI TOTA SURF	NG STARTED 3/24/09 NG COMPLETED: 3/24/09 L DEPTH: 5 ACE ELEV: H TO WATER:	Remarks Soil sam laborator	s: ples collected at 1 ft and 5 ft y analysis.	for	

Hart & Hickman

2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f)

HART HICKMAN.GDT - 6/4/09 10:33 - S:\AAA-MASTER GINT PROJECTS\ROW-204\PARCEL 9.GP.

BORING -

-00 OF

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 9-2**

PROJECT: NC DOT State Project U-2826A - Parcel 9 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT гітногосу DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Moist, brown-black, sandy SILT \_ 1 - 1 - 2 2 - 3 3 -Moist, red-brown, sandy, silty CLAY with PWR 4 --- 4 Bottom of borehole at 5.0 feet. 6 - 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/24/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 

$\sim$	Hart	& H	ickman
	ENVIRONM	ENTAL C	ONSULTANTS

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER BFW-1**

PROJECT: NC DOT State Project U-2826A - Bridge Foundation Wall JOB NUMBER: ROW-204

DEPTH (ft)	RECOVERY (%)	BLOW COUNT		UVA (ppm)	гітногосу	MATERIAL DESCRIPTION	WELL DIAGRAM
	REC	BL(	BKG.	SAMP.			
						Grass and topsoil Dry, black, sandy SILT Bottom of borehole at 2.0 feet.	
DRILL DRILL SAMP	_ RIG/ PLING SED B	Contrac Method Method Y BMB	: Hand		er	BORING STARTED 3/24/09 Rema BORING COMPLETED: 3/24/09 Soil s TOTAL DEPTH: 2 labora SURFACE ELEV: DEPTH TO WATER:	1



LOG OF BORING - HART HICKMAN.GDT - 6/4/09 10:32 - S'YAAA-MASTER GINT PROJECTSIROW-204/BRIDGE FOUNDATION WALL.GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER BFW-2**

PROJECT: NC DOT State Project U-2826A - Bridge Foundation Wall JOB NUMBER: ROW-204

DEPTH (ft)	RECOVERY (%)	BLOW COUNT G. OVA (ppm)		ПТНОГОСУ	MATERIAL DESCRIPTION			WELL DIAGRAM	DEPTH (ft)	
	RE	В	BKG.	SAMP.						
0						Gravel Dry, firm, red, silty CLA Dry, firm, black, silty CL				
DRIL SAM LOG	.L RIG/ PLING	CONTRAC METHOD METHOD Y BMB	: Hand		er	BORIN TOTAL SURFA	IG STARTED 3/24/09 IG COMPLETED: 3/24/09 . DEPTH: 2 ACE ELEV: I TO WATER:	Remark Soil sar laborate	<b>ks:</b> mples collected at 0.5 and 2 ft f ory analysis.	- - - - - - - - - - - - - - - - - - -

LOG OF BORING - HART HICKWAN.GDT - 6/4/09 10:32 - S'AAA-MASTER GINT PROJECTSIROW-204/BRIDGE FOUNDATION WALL.GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER BFW-3**

PROJECT: NC DOT State Project U-2826A - Bridge Foundation Wall JOB NUMBER: ROW-204

Sheet 1 of 1

		ECCATION: Winston-Salem, NC	
DEPTH (ft) (ft) BLOW COUNT 8LOW COUNT (G. OVA (ppm)	ГІТНОГОБҮ	MATERIAL DESCRIPTION	WELL DIAGRAM
BLC BKG.			
		ry, firm, black, sandy SILT Bottom of borehole at 2.0 feet.	
Ampling Contractor: SEI DRILLING CONTRACTOR: SEI DRILL RIG/ METHOD: Hand Aug SAMPLING METHOD: LOGGED BY BMB DRAWN BY:	er	BORING COMPLETED: 3/24/09 Soil	ha <b>rks:</b> samples collected at 0.5 and 2 ft for ratory analysis.

$\sim$	Hart	& H	lickn	1811
	ENVIRONM			

LOG OF BORING - HART HICKMAN. BDT - 6/4/09 10:32 - S:'AAA-MASTER GINT PROJECTSIROW-204/BRIDGE FOUNDATION WALL GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER BFW-4**

PROJECT: NC DOT State Project U-2826A - Bridge Foundation Wall JOB NUMBER: ROW-204

Sheet 1 of 1

					<u>.</u>		ECCRICAL MINISTON-CALENT	, 110		
DEPTH (ft)	RECOVERY (%)	BLOW COUNT	(mon) ///		ГІТНОГОĞY	MA	TERIAL DESCRIPTION	WELL DIAGRAM		DEPTH (ft)
	REC	BLG	BKG.	SAMP.						
				SA		Gravel Moist, firm, red-black, s	ilty CLAY			
		CONTRAC	TOR:	SEI		BORIN	IG STARTED 3/24/09	Remar	ks:	- 3
DRILI SAMF	_ RIG/ PLING SED B	( Method: 6 Method: 84 BMB	: Hand		er	BORIN TOTAL SURFA	IG COMPLETED: 3/24/09 . DEPTH: 2 ACE ELEV: I TO WATER:	Soil sa	imples collected at 0.5 and 2 ft fo tory analysis.	r



3334 Hilisborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER BFW-5**

PROJECT: NC DOT State Project U-2826A - Bridge Foundation Wall JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

	•							
DEPTH (ft)	RECOVERY (%)	BLOW COUNT		UVA (ppm)	ПТНОГОGY	MATERIAL DESCRIPTION	WELL DIAGRAM	(#)
	REC	BL(	BKG.	SAMP.				_
LOG OF BORING - HART HICKMAN GDT - 6/4/09 10:32 - S'IAAA-MASTER GINT PROJECTSIROW-204/BRIDGE FOUNDATION WALL GPJ PAD 7 PAD 7						Dry, firm, black, sandy CLAY Bottom of borehole at 2.0 feet.		1
06 OF BORING - HART HICKMAN GDT - 6/4/09 10:32 - 5 BOYS DIVS DIVS DIVS DIVS DIVS DIVS DIVS DIV	l Rig/ Pling	CONTRAC METHOD METHOD Y BMB	: Hand		ər	BORING COMPLETED: 3/24/09 So	emarks: bil samples collected at 0.5 and 2 ft for boratory analysis.	3



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER BFW-6**

PROJECT: NC DOT State Project U-2826A - Bridge Foundation Wall JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

					,		LOCATION: Winston-Salem	, NC					
DEPTH (ft)	RECOVERY (%)	W COUNT	W COUNT	BLOW COUNT	W COUNT		OVA (ppm)	ПТНОLOGY	MA	ATERIAL DESCRIPTION		WELL DIAGRAM	DEPTH
	REC	BLO	BKG.	SAMP.									
						Dry, firm, black, silty, s	andy CLAY						
1 													
3 - DRIL DRIL SAMI LOGO DRAV	l Rig/ Pling	Contrac Method Method Y BMB	: Han		er	BORIN TOTA SURF.	NG STARTED 3/24/09 NG COMPLETED: 3/24/09 L DEPTH: 2 ACE ELEV: H TO WATER:	Remarks Soil sam laborator	: bles collected at 0.5 and 2 fi y analysis.	t for			



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 10-1**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

				• • • • • • • • • • • • • • • • • • • •			LOCATION: Winston-Salem, NC	
	DEPTH (ft)	RECOVERY (%)	BLOW COUNT		OVA (ppm)	ПТНОГОСУ	MATERIAL DESCRIPTION	WELL DIAGRAM
		REC	BLO	BKG.	SAMP.	] 5		
3 - HART HICK0MAN.GDT - 5/4/09 10:33 - S:AAA-MASTER GINT PROJECTS/ROW-204/PARCEL 10.GPJ	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	LING	CONTRAC	TOR:	SEI		Grass and topsoil Moist, firm, brown, silty CLAY Moist, light brown, sandy SILT Dry, firm, red, silty CLAY Bottom of borehole at 5.0 feet.	
Britte and 5 ft for         Britte and 5 ft for         Borning METHOD: Geoprobe 6620DT / DPT         BORING COMPLETED: 3/24/09         SAMPLING METHOD: DPT Sleeves         TOTAL DEPTH: 5         LOGGED BY BMB         BORING COMPLETED: 2000         BORING COMPLETED: 3/24/09         Soil samples collected at 1 ft and 5 ft for         Iaboratory analysis.         BORING BY BMB         BORING COMPLETED: 3/24/09         BORING METHOD: DPT Sleeves         DEPTH TO WATER:							Soil samples collected at 1 ft and 5 ft for	



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 10-2**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem NC

	-				_	LOCATION: Winston-Salem, NC	
DEPTH (ft)	RECOVERY (%)	BLOW COUNT	ļ	P. OVA (ppm)	гітногосу	MATERIAL DESCRIPTION	WELL DIAGRAM
	۲ ۲		BKG.	SAMP.			
LOG OF BORING - HART HICKMAN GDT - 6/4/09 10:33 - S:VAA-MASTER GINT PROJECTSIROW-204IPARCEL 10.GPJ BOD STAT 10 STAT 10						Grass and topsoil Moist, firm, dark to light brown, silty CLAY Dry, firm, red silty CLAY Bottom of borehole at 5.0 feet.	
6							il samples collected at 1 ft and 5 ft for



3334 Hillsborough St.

Raleigh, North Carolina 27607

919-847-4241(p) 919-847-4261(f)

2923 South Tryon Street-Suite 100

Charlotte, North Carolina 28203

BORING .

Ь

80

704-586-0007(p) 704-586-0373(f)

**BORING NUMBER 10-3** 

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT **LITHOLOGY** WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Grass and topsoil Dry, firm, red to brown, silty CLAY - 1 1 \_ 2 -- 2 - HART HICKMAN.GDT - 6/4/09 10:33 - SYAAA-MASTER GINT PROJECTSI, ROW-204/PARCEL 10.GP. - 3 4 -- 4 Dry, firm, light red, silty CLAY with PWR -5 Bottom of borehole at 5.0 feet. 6 - 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/24/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 

$\sim$	Hart	& H	ckmar
			ONSULTANTS
-	CAVINOAN	CH FAL CO	NOULIANIS

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 10-4**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT **LITHOLOGY** WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. ۰n The Sec Grass and topsoil 11. 14 1 <u>. . . . .</u> Dry, firm, brown to red, silty CLAY 1 2 .0G OF BORING - HART HICKMAN.GDT - 6/4/09 10:33 - SNAA-MASTER GINT PROJECTS/ROW-204/PARCEL 10.GP. 3 -4 --5 Bottom of borehole at 5.0 feet. - 6 6 -DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/24/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 



HART HICKMAN.GDT - 6/4/09 10:33 - SNAAA-MASTER GINT PROJECTS/ROW-204/PARCEL 10.GP.

OG OF BORING

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-5**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC Sheet 1 of 1

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. <u>7 16 17 17</u> Grass and topsoil 4 34 3 <u>. 6. 56</u> Dry, firm, brown to red, silty CLAY 1 2 2 - 3 3 -4 -5 Bottom of borehole at 5.0 feet. \_ 6 -- 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/24/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 

$\sim$	Hart	& H	lick	mar
	ENVIRONM	ENTAL	CONSUL	TANTS

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-6**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

							· · · · · · · · · · · · · · · · · · ·
DEPTH	(#) RECOVERY (%)	BLOW COUNT	BKG	SAMP. OVA (ppm)	ЛЛОНОВА	MATERIAL DESCRIPTION	WELL DIAGRAM
<b>_</b>	_	<u> </u>		SA	1316 34	Grass and topsoil	0_
						Dry, firm, light brown, sandy, silty CLAY	
1						Dry, firm, light brown, sandy, silty CLAY with PWR	- - - - - - - - - - - - - - - - - - -
ŞI 🛛						Dry, firm, red, sandy, silty CLAY	- 2 - 1 - 1 - 1 - 1 - 3 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
4							
						Bottom of borehole at 5.0 feet.	
DR SA LO	ILL RIG	G CONTRAC G METHOD G METHOD BY BMB BY BMB	): Geo	probe			

$\sim$	Hart	&	Tick	mar
	ENVIRONN			

LOG OF BORING - HART HICKMAN, GDT - 6/4/09 10:33 - S'YAAA-MASTER GINT PROJECTSIROW-204/PARCEL 10. GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-7**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	() (v () ()		<b>LITHOLOGY</b>	MA	TERIAL DESCRIPTION		WELL DIAGRAM	DEPTH (ft)
	REC	) B	BKG.	SAMP.						
		CONTRAC	TOR:	SEI			Dom of borehole at 5.0 feet.	Remar		
drill Samp	. RIG/ PLING SED B	Method: Method: Y BMB	: Geop	orobe		/ DPT BORIN TOTAL SURFA	IG COMPLETED: 3/24/09 L DEPTH: 5 ACE ELEV: H TO WATER:	Soil sa	mples collected at 1 ft and 5 ft for ory analysis.	

$\sim$	Hart	&I	Fick	nar
	ENVIRONN	IENTAL	CONSUL	TANTS

OG OF BORING

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-8**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

Sheet 1 of 1

OVA (ppm) RECOVERY (%) BLOW COUNT **ПТНОLOGY** WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. <u> 12 N 1</u> Grass and topsoil 4.54. <u>N 17 N 16</u> XXXX Dry, firm, brown, silty CLAY 1 - 2 2 HART HICKMAN.GDT - 6/4/09 10:33 - S'YAAA-MASTER GINT PROJECTS'ROW-204/PARCEL 10.GP - 3 3 -- 4 4 -\_\_\_\_ -5 Bottom of borehole at 5.0 feet. \_ - 6 6 -DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/24/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



E D D

HART HICKMAN

Ë

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-9**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) **BLOW COUNT** ГІТНОГОGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Dry, firm, light brown, silty CLAY with PWR - 1 1 2 - 2 - 6/4/09 10:33 - S:\AAA-MASTER GINT PROJECTS\ROW-204\PARCEL 10.GP. - 3 \_ - 4 -5 Bottom of borehole at 5.0 feet. 6 - 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/24/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:

00 OF I

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 10-10**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) (%) BLOW COUNT **LITHOLOGY** WELL DIAGRAM RECOVERY DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Gravel ------Dry, firm, red, silty CLAY 1 - 2 2 \_ BORING - HART HICKMAN.GDT - 6/4/09 10:33 - S: AAA-MASTER GINT PROJECTSIROW-204/PARCEL 10.GP. .... 3 -- 3 \_\_\_\_ 4 -- 4 Dry, firm, light brown, silty CLAY Bottom of borehole at 5.0 feet. \_\_\_\_ 6 -- 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/23/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 



LOG OF BORING - HART HICKMAN.GDT - 6/4/09 10:33 - S:YAAA-MASTER GINT PROJECTS/ROW-204/PARCEL 10.GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-11**

PROJECT: NC DOT State Project U-2826A - Parcel 10

Sheet 1 of 1

JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

DEPTH (ft)	RECOVERY (%)	BLOW COUNT	(maa) ()/0		<b>LITHOLOGY</b>	MATERIAL DESCRIPTION	WELL DIAGRAM
	R	ā	BKG.	SAMP.	_		
-0-				0 0	<u>bộ</u> C	Gravel	
_							-
							F
_						Dry, firm, red, silty CLAY	
-							
1 -							- 1
_							
_							E E
2 -							- 2
_							
1							
_							E
_							E E
3 -							- 3
_							E E
1							-
-							
4 -							4
-							
_							E
_							
-							E
-5-						Della sectore la 1506 a	
-						Bottom of borehole at 5.0 feet.	
_							-
-							È
-			[				
6 -							- 6
	_ING (	CONTRAC	TOR:	SEI	1	BORING STARTED 3/23/09 Remai	
DRILL RIG/ METHOD: Geoprobe 6620DT / DPT			orobe		DPT BORING COMPLETED: 3/23/09 Soil sa	amples collected at 1 ft and 5 ft for	
		method: Y BMB	UP F	Sleev	es	TOTAL DEPTH: 5 labora	tory analysis.
DRAV						DEPTH TO WATER:	
_	-						

	lart	& ]	Hick	man
- E	<b>WIRONN</b>	IENIAL	. CONSI	ULIANIS

OG OF 1

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-12**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

Sheet 1 of 1

OVA (ppm) (%) BLOW COUNT **ПТНОLOGY** WELL DIAGRAM DEPTH (ft) RECOVERY DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Dry, firm, red, silty CLAY 1 -2 \_ BORING - HART HICKMAN.GDT - 6/4/09 10:33 - S:JAAA-MASTER GINT PROJECTSIROW-204(PARCEL 10.GP. 3 -- 3 4 -- 4 Dry, firm, red, sandy, silty CLAY \_\_\_ .... Bottom of borehole at 5.0 feet. .... -6 -- 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/23/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sieeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



ő

ő

3334 Hillsborough St. Rateigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-13**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. 0000 Gravel Dry, light brown, silty SAND with PWR - 1 1 \_ 2 - 2 BORING - HART HICKMAN.GDT - 6/4/09 10:33 - S:MAA-MASTER GINT PROJECTSIROW-204/PARCEL 10.GP. 3 - 3 - 4 -5 Bottom of borehole at 5.0 feet. 6 - 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/23/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:

$\sim$	Hart	&ł	licki	nar
	ENVIRONA			

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-14**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

DEPTH (#)	RECOVERY (%)	BLOW COUNT	BKG.	SAMP. OVA (ppm)	ЛЭОТОНЦІ	MATERIAL DESCRIPTION		WELL DIAGRAM	DEPTH (ft)
LOG OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN.GDT - 6/4/100 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-Z04/PARCEL 10.GPJ PO OF BORING-HART HICKMAN - 700 10:33 - 700 10						Dry, light brown, sandy SILT with PWR			
- HART HICKMAN.GDT - 6/4/09 10		CONTRAC	TOR	SEI		Bottom of borehole at 5.0 feet. BORING STARTED 3/23/09	Rema		
DRII SAN LOG DRA	.L RIG	( Method 6 Method 84 BMB	: Geo	probe			Soil sa	amples collected at 1 ft and 5 ft for tory analysis.	



LOG OF BORING - HART HICKMAN GDT - 6/4/09 10:33 - S:\AAA-MASTER GINT PROJECTSIROW-204/PARCEL 10.GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-15**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

DEPTH (ft) RECOVERY (%) BLOW COUNT (G. OVA (ppm)	ПТНОГОGY	MATERIAL DESCRIPTION	WELL DIAGRAM H () () ()
BLC BKG.			
2			
DRILL RIG/ METHOD: Geoprobe SAMPLING METHOD: DPT Slee			bil samples collected at 1 ft and 5 ft for boratory analysis.
LOGGED BY BMB DRAWN BY:		SURFACE ELEV: DEPTH TO WATER:	

Sheet 1 of 1

.

$\approx$	Hart	& Hi	ckman
-	ENVIRONM	ENTAL CO	NSULTANTS

00 OF

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER 10-16**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

Sheet 1 of 1

OVA (ppm) RECOVERY (%) BLOW COUNT **LITHOLOGY** DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Gravel Dry, firm, red, sandy, silty CLAY 1 2 BORING - HART HICKMAN.GDT - 6/4/09 10:33 - S:/AAA-MASTER GINT PROJECTS/ROW-204/DARCEL 10.GP. 3 -- 3 Dry, firm, red, silty CLAY - 4 4 -\_ Bottom of borehole at 5.0 feet. \_ 6 - 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/23/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 

·HART HICKMAN.GDT - 6/4/09 10:33 - S'AAA-MASTER GINT PROJECTS'ROW-204/PARCEL 10.GP.

OG OF BORING -

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-17**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Gravel Dry, firm, red, silty CLAY 2 3 4 Bottom of borehole at 5.0 feet. 6 -6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/23/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 

$\sim$	Hart	& H	ickm	ar
	ENVIRONM			

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 10-18**

PROJECT: NC DOT State Project U-2826A - Parcel 10 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. -0.0 0.0 <u>~ \* \* r</u> Grass and topsoil <u>4 44 1</u> Dry, firm brown, silty CLAY with gravel 2.5--2.5 BORING - HART HICKMAN.GDT - 6/4/09 10:33 - S:\AAA-MASTER GINT PROJECTSIROW-204/PARCEL 10.GP. 5.0--5.0 Dry, firm, light brown, silty CLAY 7.5 -7.5 Bottom of borehole at 8.0 feet. DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT / DPT BORING COMPLETED: 3/24/09 Soil samples collected at 1 ft and 8 ft for SAMPLING METHOD: DPT Sleeves TOTAL DEPTH: 8 laboratory analysis. -00 OF LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:

$\sim$	Hart	& H	ickn	1211
	ENVIRONM			

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER BGM-1**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

DEPTH (ff)	RECOVERY (%)	BLOW COUNT	BKG.	OVA (ppm) SAMP.	ГІТНОГОСУ	MATERIAL DESCRIPTION	WELL DIAGRAM
-0-			8	ŝ		Gravel	
OG OF BORING-HART HICKMAN.GDT - 6/4/09 10:34 - S:VAA-MASTER GINT PROJECTS/ROW-204/PARCEL 11.GPJ						Dry, firm, red, silty CLAY Bottom of borehole at 5.0 feet.	
) - 1 - 1 -							
6 - DRIL DRIL DRIL DRIL SAM LOG DRA	.L. RIG/ IPLING	Contrac Method Method Y BMB	: Geo		6620DT	BORING COMPLETED: 3/23/09	☐ 6 marks: il samples collected at 2 ft and 5 ft for oratory analysis.



DEPTH (ft)

1

2

3

4

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER BGM-2**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC OVA (ppm) (%) BLOW COUNT **ГІТНОLOGY** WELL DIAGRAM RECOVERY DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. Dry, firm, brown to red, silty CLAY Bottom of borehole at 5.0 feet. ....

HART HICKMAN.GDT - 5/4/09 10:34 - S'AAA-MASTER GINT PROJECTS/ROW-204/PARCEL 11.GP. 6 - 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: OG OF BORING -DRILL RIG/ METHOD: Geoprobe 6620DT BORING COMPLETED: 3/23/09 Soil samples collected at 2 ft and 5 ft for SAMPLING METHOD: TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:

۰

5

$\approx$	Hart		ickman
-	ENVIRONA	JEN   AL U	UNDULIANIS

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER BGM-3**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT **LITHOLOGY** DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. 0000 c Gravel Dry, firm, red, silty CLAY 1 - 2 2 BORING - HART HICKMAN, GDT - 6/4/09 10:34 - S:/AAA-MASTER GINT PROJECTS/ROW-204/PARCEL 11, GP. 3 3 - 4 Bottom of borehole at 5.0 feet. 6 - 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT BORING COMPLETED: 3/23/09 Soil samples collected at 2 ft and 5 ft for SAMPLING METHOD: TOTAL DEPTH: 5 laboratory analysis. -0G OF LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 

$\approx$	Hart	& Hickm	an
-	ENVIRONME	NIAL CONSULIA	N 15

BORING - HART HICKMAN.GDT - 6/4/09 10:34 - S:\AAA-MASTER GINT PROJECTS\ROW-204\PARCEL 11.GPJ

OG OF

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER BGM-4**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC Sheet 1 of 1

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. Gravel O Dry, firm, red, silty CLAY 2 3 - 3 - 4 4 -5 Bottom of borehole at 5.0 feet, 6 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT BORING COMPLETED: 3/23/09 Soil samples collected at 2 ft and 5 ft for SAMPLING METHOD: TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:

$\sim$	Hart	&I	licki	nar
	ENVIRON	IENTAL	CONSUL	TANTS.

-00 OF I

3334 Hilisborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER BGM-5**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. Gravel - 1 Dry, firm, red, silty CLAY 1 - 2 2 -\_\_\_\_ ..... BORING - HART HICKMAN.GDT - 6/4/09 10:34 - S:\AAA-MASTER GINT PROJECTS\ROW-204\PARCEL 11.GPJ \_ 3 -- 3 4 -- 4 \_\_\_ Bottom of borehole at 5.0 feet. 6 -- 6 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT BORING COMPLETED: 3/23/09 Soil samples collected at 2 ft and 5 ft for SAMPLING METHOD: TOTAL DEPTH: 5 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



00.0F

3334 Hillsborough St. Rateigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER Comp-1 (A)**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT ΓΙΤΗΟLOGY DEPTH (ft) WELL DIAGRAM DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. -0 Red-brown, silty CLAY 1 1 BORING - HART HICKMAN.GDT - 6/4/09 11:37 - S:AAA-MASTER GINT PROJECTS/ROW-204/PARCEL 8.GPJ 2 - 2 Dark brown, silty CLAY 3 Bottom of borehole at 3.0 feet. 4 4 DRILLING CONTRACTOR: BORING STARTED 5/5/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 5/5/09 Soil sample collected from 1 ft and 3 ft for composite sample Comp-1. SAMPLING METHOD: TOTAL DEPTH: 3 LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 

Hart & Hickman	$\approx$			
----------------	-----------	--	--	--

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER Comp-1 (B)**

Sheet 1 of 1

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT ГІТНОLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. 0.0 -0.0-Dry, red, silty CLAY 2.5 -2.5 BORING - HART HICKMAN.GDT - 6/4/09 11:49 - S:VAAA-MASTER GINT PROJECTS/ROW-204/PARCEL 8.GPJ Dry, light red, sandy, silty CLAY 5.0--5.0 Bottom of borehole at 7.0 feet. 7.5--7.5 **DRILLING CONTRACTOR:** BORING STARTED 5/5/09 **Remarks:** DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 5/5/09 Soil sample collected from 2 ft and 7 ft SAMPLING METHOD: TOTAL DEPTH: 7 for composite sample Comp-1. OG OF I LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:

$\sim$	Hart	& H	ickn	ian
	ENVIRONM	ENTAL C	ONSULT	ANTS

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER Comp-1 (C)**

PROJECT: NC DOT State Project U-2826A - Parcel #8 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. 0.0 0.0-Dry, red, silty CLAY 2.5 -2.5 BORING - HART HICKMAN.GDT - 6/4/09 11:37 - S:\AAA-MASTER GINT PROJECTS\ROW-204\PARCEL 8,GPJ Dry, red, sandy, silty CLAY 5.0--5.0 Bottom of borehole at 7.0 feet. 7.5--7.5 DRILLING CONTRACTOR: BORING STARTED 5/5/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 5/5/09 Soil sample collected from 2 ft and 7 ft SAMPLING METHOD: TOTAL DEPTH: 7 for composite sample Comp-1. LOG OF LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:

$\sim$	Hart	&]	Hick	mar
	ENVIRONN	IENTAI	CONS	<b>JLTANTS</b>

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER Comp-2 (A)**

Sheet 1 of 1

PROJECT: NC DOT State Project U-2826A - Parcel 9 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

				_		-				
	DEPTH (ft)	RECOVERY (%)	BLOW COUNT		- OVA (ppm)	ПТНОГОСУ	MA	TERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
		RĒ	В	BKG.	SAMP.					
LOG OF BORING - HART HICKMAN.GDT - 6/4/08 11:42 - S:VAA-MASTER GINT PROJECTS/ROW-204/PARCEL 9.GPJ							Moist, red, silty CLAY Brown-black, clayey SIL Botto	T om of borehole at 5.0 feet.		
LOG OF BORING - HART I	drili Samp	- RIG/ PLING GED B	Contrac Method Method Y BMB ':	: Han	d Aug	er	BORIN TOTAL SURFA	IG STARTED 5/5/09 IG COMPLETED: 5/5/09 - DEPTH: 5 ACE ELEV: I TO WATER:	Remarks: Soil samples collected at 1 ft and composite sample Comp-2.	5 ft for



DG OF

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

# **BORING NUMBER Comp-2 (B)**

PROJECT: NC DOT State Project U-2826A - Parcel 9 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION SAMP. BKG. -0-Slightly moist, red, silty CLAY 1 2 BORING - HART HICKMAN.GDT - 6/4/09 11:42 - S:/AAA-MASTER GINT PROJECTS/ROW-204/PARCEL 9.GP. **-**3 3 Bottom of borehole at 5.0 feet. ... 6 - 6 **DRILLING CONTRACTOR:** BORING STARTED 5/5/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 5/5/09 Soil samples collected at 1 ft and 5 ft for SAMPLING METHOD: TOTAL DEPTH: 5 composite sample Comp-2. LOGGED BY BMB SURFACE ELEV: DRAWN BY: **DEPTH TO WATER:** 



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 11-1**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

DEPTH	(II) RECOVERY (%)	BLOW COUNT	BKG.	SAMP. OVA (ppm)	ГІТНОГОСУ	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
LOG OF BORING- HART HICKMAN.GDT - 6/4/09 10:34 - S:YAAA-MASTER GINT PROJECTS/ROW-204/PARCEL 11.GPJ			0	3.2		Grass and topsoil Dry, firm, light red, sandy, silty CLAY Dry, firm, red, silty CLAY Dry, firm, red, silty CLAY		
3 - HART HICKWAN.GDT - 6/4/09 10:34 -		CONTRAC					narks:	+ - - - - - - - 5
DRI SAI SAI LO DR	ILL RI MPLIN	g/ Methoi Ig Methoi By BMB	): Geo		6620DT	BORING COMPLETED: 3/23/09 Soi	I sample collected at 3 ft for pratory analysis.	

!

-

Hart & Hickman

2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) 3334 Hillsborough St. Rateigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 11-2**

PROJECT: NC DOT State Project U-2826A - Parcel 11

JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

	DEPTH (ft)	RECOVERY (%)	BLOW COUNT	BKG.	VIP. OVA (ppm)	ГІТНОГОGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
╞	-0			붪	SAMP.	<b>0</b> 11	Grass and gravel		_0
LOG OF BORING - HART HICKMAN.GDT - 6/4/09 10:34 - SYAAAMASTER GINT PROJECTS/ROW-204/PARCEL 11.GPJ				0	0.6		Grass and gravel Dry, firm, light red, silty CLAY Bottom of borehole at 4.0 feet.		
ART HI	- 5 -								 - 5
LOG OF BORING - F	drili Samf Logo	. RIG/ PLING	Contrac Method Method Y BMB ':	: Geo		6620DT	BORING COMPLETED: 3/23/09 Soil	<b>arks:</b> sample collected at 3 ft for ratory analysis.	

Sheet 1 of 1

ţ

1

ļ



3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 11-3**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204

704-586-0007(p) 704-586-0373(f)						919-847-4241(p) 919-847-4261(f) LOCATION: Winston-Salem, NC				
DEPTH (ft)	RECOVERY (%)	BLOW COUNT		- OVA (ppm)	гітногобу	MA	ATERIAL DESCRIPTION	WELL DIAGRAM	114010	
	REC	BLC	BKG.	SAMP.						
					<u>11</u> · <u>11 · 11</u>	Grass and topsoil			-	
1 1					<u>1.6</u> . <u>1.</u> <u>1. 1. 1.</u>					
1						Dry, firm, red, silty CLA	Ŷ		-	
1										
-									F	
			0	0.5						
_									F	
2 -										
_									F	
			0	16					Ē	
_									F	
_ 3 —									E	
_									-	
_			0	2.3					E	
-4						Bott	om of borehole at 4.0 feet.		-	
-						Dott				
_ 5 -										
RILI	L RIG/	CONTRAC METHOD	: Geo		6620DT		NG STARTED 3/23/09 NG COMPLETED: 3/23/09	Remarks: Soil sample collected at 3 ft for		
Samf _og(	PLING	METHOD				TOTAI SURF/	L DEPTH: 4 ACE ELEV: H TO WATER:	laboratory analysis.		

Sheet 1 of 1

i

i

ENVIRONMENTAL CONSULTANTS
---------------------------

)

3334 Hillsborough St. Rateigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 11-4**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204

LOCATION: Winston-Salem, NC

	DEPTH (ft)	RECOVERY (%)	BLOW COUNT		OVA (ppm)	LITHOLOGY	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
		REC	BL	BKG.	SAMP.				
LOG OF BORING - HART HICKMAN.GDT - 6/5/09 11:02 - S:MAA-MASTER GINT PROJECTSIROW-204/PARCEL 11.GPJ				0	0.2		Moist, firm, red, silty CLAY Bottom of borehole at 4.0 feet.		
LOG OF BORING - HA	DRILI SAMF	L RIG/ PLING GED B	Contrac Method Method Y BMB	: Geo		, 6620DT	BORING STARTED 3/23/09 Remain BORING COMPLETED: 3/23/09 Soil sa TOTAL DEPTH: 4 labora SURFACE ELEV: DEPTH TO WATER:		

$\sim$	Hart	& Hickn	1an
	ENVIRONM	ENTAL CONSULT	ANTS

BORING - HART HICKMAN.GDT - 6/5/09 11:02 - S:/AAA-MASTER GINT PROJECTS/ROW-204/PARCEL 11.GDJ

LOG OF

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 11-5**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC Sheet 1 of 1

OVA (ppm) RECOVERY (%) BLOW COUNT LITHOLOGY WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. ,00° 00° 00° Gravel Moist, firm, red, silty CLAY 1 - 1 0 1.4 2 -- 2 0 3.8 3 -- 3 Bottom of borehole at 4.0 feet. 5 - 5 DRILLING CONTRACTOR: SEI BORING STARTED 3/23/09 Remarks: DRILL RIG/ METHOD: Geoprobe 6620DT BORING COMPLETED: 3/23/09 Soil sample collected at 3 ft for SAMPLING METHOD: TOTAL DEPTH: 4 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



.06 0F BORING - HART HICKMAN.GDT - 6/4/09 10:34 - S:VAA-MASTER GINT PROJECTS/ROW-204/PARCEL 11.GPJ

3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 11-6**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT ПТНОСОСУ WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. Slightly moist, brown-orange, clayey SAND 0 1.6 - 1 1 0 0.9 2 - 2 0 0.9 3 -- 3 Slightly moist, brown-orange, clayey SAND with gravel 0 1.3 Bottom of borehole at 4.0 feet. \_\_\_\_ 5 -- 5 DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/24/09 Soil sample collected at 1 ft for SAMPLING METHOD: TOTAL DEPTH: 4 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



3334 Hillsborough St. Rateigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

### **BORING NUMBER 11-7**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204 Sheet 1 of 1

		)07(p) 704-58(	-0373(1)		919-0	47-4241(ρ) 919-847-4261(f)	LOCATION: Winston-Salem	, NC						
DEPTH (ft)	OVERY (%)	OVERY (%)	DVERY (%)	DVERY (%)	OVERY (%)	RECOVERY (%)	BLOW COUNT		UVA (ppm)	гітногосу	MA	ATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH
	REC	BLQ	BKG.	SAMP.										
-0						Slightly moist, brown-o	range, clayey SAND		E°					
			0	2.5										
			0	1.3										
- - - 2 - -									2					
			0	1										
3			0	1.1					<u>, , , , , , , , , , , , , , , , , , , </u>					
-4	$\rightarrow$					Bott	om of borehole at 4.0 feet.		-4					
									E					
									F					
		ONTRAC	TOR:	SEI		BORIN	NG STARTED 3/24/09	Remarks:	+ :					
DRILL I	rig/ .ing : Ed bì	Method Method Y BMB	: Han		er	BORIN TOTA SURF	NG COMPLETED: 3/24/09 L DEPTH: 4 ACE ELEV: H TO WATER:	Soil sample collected at 1 ft for laboratory analysis.						



HART HICKMAN.GDT - 6/4/09 10:34 - S: AAA-MASTER GINT PROJECTS ROW-204/PARCEL 11.GPJ

OG OF BORING

3334 Hillsborough SL Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

## **BORING NUMBER 11-8**

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

OVA (ppm) RECOVERY (%) BLOW COUNT **LITHOLOGY** WELL DIAGRAM DEPTH (ft) DEPTH (ft) MATERIAL DESCRIPTION BKG. SAMP. -0 Moist, brown-orange, sandy CLAY 0 1.5 - 1 1 0 0.8 2 2 0 0.5 3 -- 3 Moist, brown-gray, sandy CLAY 0 0.9 Bottom of borehole at 4.0 feet. 5 - 5 DRILLING CONTRACTOR: SEI BORING STARTED 3/24/09 Remarks: DRILL RIG/ METHOD: Hand Auger BORING COMPLETED: 3/24/09 Soil sample collected at 1 ft for SAMPLING METHOD: TOTAL DEPTH: 4 laboratory analysis. LOGGED BY BMB SURFACE ELEV: DRAWN BY: DEPTH TO WATER:



**BORING NUMBER 11-9** 

PROJECT: NC DOT State Project U-2826A - Parcel 11 JOB NUMBER: ROW-204 LOCATION: Winston-Salem, NC

2923 South Tryon Street-Suite 100 Charlotte, North Carolina 28203 704-586-0007(p) 704-586-0373(f) 3334 Hillsborough St. Raleigh, North Carolina 27607 919-847-4241(p) 919-847-4261(f)

DEPTH	(#)	RECOVERY (%)	BLOW COUNT		OVA (ppm)	ПТНОГОСУ	MATERIAL DESCRIPTION	WELL DIAGRAM	DEPTH (ft)
		RE	В	BKG.	SAMP.				
	0  - - - - - - -			0	1.7		Gravel Dry, firm, red to light red, silty CLAY		
	2			0	0.8				
ROW-204/PARCEL 11.GPJ				0	1.5				
ART HICKMAN.GDT - 6/5/09 11:02 - S.	4 						Bottom of borehole at 4.0 feet.		-4 
LOG OF BORING - F	rili Amf Dgg	. RIG/ PLING	Contrac Method Method Y BMB	: Geo		6620DT	BORING COMPLETED: 3/23/09 So	marks: il sample collected at 1 ft for oratory analysis.	

Appendix B Laboratory Analytical Reports - Soil

## **Case Narrative (Revised)**



Date:	05/26/09	Client Project ID:	ROW-204
Company:	North Carolina Department of Transportation	Prism COC Group No:	G0309633
Contact:	David Graham	Collection Date(s):	03/23/09
Address:	c/o Hart and Hickman	Lab Submittal Date(s);	03/23/09
	2923 South Tryon St. Ste 100		
	Charlotte, NC 28203	Client Project Name Or No:	Winston Salem WBS# 34871.1.1

This is a revised report and supersedes our original laboratory report dated 4/2/09. Client added TCLP Metals to Sample ID 10-15-5.

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 50 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

#### Semi Volatile Analysis

N/A

#### Volatile Analysis

N/A

#### Metals Analysis

Analysis Note for Q40186 MS Arsenic: MS recovery outside of the control limits. Matrix interference is suspected. Post-digestion spike recovery (77%) is outside the acceptance limits (80-120%).

Analysis Note for Q40186 MS Lead: MS recovery outside of the control limits. Matrix interference is suspected. Post-digestion spike recovery (64%) is outside the acceptance limits (80-120%).

Analysis Note for Q40186 MSD Arsenic: MSD recovery outside the control limits.

Analysis Note for Q40186 MSD Lead: MSD recovery outside the control limits.

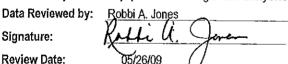
Analysis Note for Q40216 MS Lead: MS recovery outside of the control limits. Matrix interference is suspected. Post-digestion spike recovery (75%) is outside the acceptance limits (80-120%).

Analysis Note for Q40216 MSD Lead: MSD recovery outside the control limits.

#### Wet Lab and Micro Analysis

No Anomalies Reported

Please call if you have any questions relating to this analytical report.



#### Data Qualifiers Key Reference:

B; Compound also detected in the method blank.

- #: Result outside of the QC limits.
- DO: Compound diluted out.
- E: Estimated concentration, calibration range exceeded.
- J: The analyte was positively identified but the value is estimated below the reporting limit.
- H: Estimated concentration with a high bias.
- L: Estimated concentration with a low bias.
- M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the writtten consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.

Project Manager:

Approval Date:

Signature:

449 Springbrook Road, P.O. Box 240543, Charlotte NC 28224-0403 Phone: 704/529-6364 Toll Free: 800/529-6364 Fax: 704/525-0409

Angel 05/26/09



Charlotte, NC 28203

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert, No. 37735

# Laboratory Report

05/26/09

North Carolina Department of Client Sample ID: BGM-1-2 Project Name: Winston Salem Transportation Project ID: ROW-204 Prism Sample ID: 241338 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 10:06 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	82.9	%			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	1.8	mg/kg	0.59	0.058	1	6010B	03/25/09 22:24	heasler	Q40185
Lead	9.3	mg/kg	0.29	0.023	1	6010B	03/25/09 22:24	heasler	Q40185
Sample Preparation:			2	2.05g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088
pH Value, Electrometric Method pH	4.30	pH units			1	9045C	03/24/09 15:25	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BGM-1-5 Transportation Project ID: ROW-204 Prism Sample ID: 241339 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 10:07 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	80.2	%			1	SM2540 G	03/26/09 10:00	dsullívan	
<u>Metals by ICP</u> Arseníc	0.92	mg/kg	0.62	0.061	1	6010B	03/25/09 22:44	heasler	Q40185
Lead	18	mg/kg	0.31	0.024	1	6010B	03/25/09 22:44	heasler	Q40185
Sample Preparation:			2	.01g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088

### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	BGM-2-2	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241340	
Attn: David Graham	,	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	1		9:45
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20
Charlotte, NC 28203					

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	81.5	%			1	SM2540 G	03/26/09 10:00	) dsullivan	
<u>Metals by ICP</u> Arsenic Lead	1.8 15	mg/kg mg/kg	0.62 0.31	0.061 0.024	1 1	6010B 6010B	03/25/09 22:50 03/25/09 22:50		Q40185 Q40185
Sample Preparation:			1	.99g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088
<u>pH Value, Electrometric Method</u> pH	4.48	pH units			1	9045C	03/24/09 15:26	i kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert, No. 37735

## Laboratory Report

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BGM-2-5 Transportation Project ID: ROW-204 Prism Sample ID: 241341 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 9:50 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
					ny ny amin'ny solatana amin'ny solatana dia 1990.			
79.7	%			1	SM2540 G	03/26/09 10:00	dsullivan	
1.6	mg/kg	0.62	0.061	1	6010B	03/25/09 22:56	heasler	Q40185
27	mg/kg	0.31	0.024	1	6010B	03/25/09 22:56	heasler	Q40185
		2	.02 g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088
	79.7	79.7 % 1.6 mg/kg	Limit 79.7 % 1.6 mg/kg 0.62 27 mg/kg 0.31	Limit 79.7 % 1.6 mg/kg 0.62 0.061	The second se	Timit     Factor       79.7     %       1     SM2540 G       1.6     mg/kg       0.62     0.061       1     6010B       27     mg/kg       0.31     0.024       1     6010B	The instruction         The instruction         The instruction           Limit         Factor         Date/Time           79.7         %         1         SM2540 G         03/26/09         10:00           1.6         mg/kg         0.62         0.061         1         6010B         03/25/09         22:56           27         mg/kg         0.31         0.024         1         6010B         03/25/09         22:56	The second sec

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 4 of 43



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	BGM-3-2	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241342	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	L .
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	9:55
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	76.0	%	111 A., 20 (111) - 4 (101)		1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	3.3	mg/kg	0.65	0.064	1	6010B	03/25/09 23:02	heasler	Q40185
Lead	21	mg/kg	0.33	0.025	1	6010B	03/25/09 23:02	heasler	Q40185
Sample Preparation:			2	.02 g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	BGM-3-5		
Transportation	Project ID:	ROW-204	Prism Sample ID:	241343		
Attn: David Graham	Project No .:	WBS# 34871.1.1	COC Group:	G0309633	3	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	10:00	
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20	

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	77.4	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Metals by ICP									
Arsenic	1.7	mg/kg	0.63	0.062	1	6010B	03/25/09 23:09	heasler	Q40185
Lead	25	mg/kg	0.32	0.024	1	6010B	03/25/09 23:09	heaster	Q40185
Sample Preparation:			2	.05g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088
						•			

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert, No. 37735

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	BGM-4-2	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241344	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	1
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	10:02
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination						01/05/10 0	00/00/00 10.00	4112	
Percent Solids	78.5	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Metals by ICP									
Arsenic	1.8	mg/kg	0.64	0.063	1	6010B	03/25/09 23:26	heasler	Q40185
Lead	16	mg/kg	0.32	0.025	1	6010B	03/25/09 23:26	i heasler	Q40185
Sample Preparation:		·		2g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088
pH Value, Electrometric Method						00.170		•	0.404-00
рН	4.57	pH units			1	9045C	03/24/09 15:27	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID	: BGM-4-5	
Transportation	Project ID:	ROW-204	Prism Sample ID	241345	
Attn: David Graham	Project No :	WBS# 34871.1.1	COC Group:	G0309633	2
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	10:03
2923 South Tryon St. Ste 100	o stripto trictana	o o n	Time Submitted:		16:20
Charlotte, NC 28203			Time Submitted.	03/23/09	10:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	81.8	%		— — — — — , wo— ,	1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	1.7	mg/kg	0,60	0.059	1	6010B	03/25/09 23:32	heasler	Q40185
Lead	18	mg/kg	0.30	0.023	1	6010B	03/25/09 23:32	heasler	Q40185
Sample Preparation:			2	.04g /	50 mL	30508	03/25/09 9:15	mbarber	P24088

### Sample Comment(s):

#### BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	BGM-5-5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241346	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	10:05
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	81.6	%	ar - ar Polynni falo an ia	Neurona (1997), failefaile fai	1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	1.5	mg/kg	0.61	0.060	1	6010B	03/25/09 23:39	heasler	Q40185
Lead	30	mg/kg	0.30	0.024	1	6010B	03/25/09 23:39	heasler	Q40185
Sample Preparation:			2	.01g /	50 mL	3050B	03/25/09 9:15	mb <b>arb</b> er	P24088

### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BGM-5-2 Transportation Project ID: **ROW-204** Prism Sample ID: 241347 Attn: David Graham WBS# 34871.1.1 Project No .: COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 10:04 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	79.3	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Metals by ICP		_	0.00						
Arsenic	2.2	mg/kg	0.62	0.062	1	6010B	03/25/09 23:46	heasler	Q40185
Lead	19	mg/kg	0.31	0.024	1	6010B	03/25/09 23:46	heasler	Q40185
Sample Preparation:			2	.02 g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088
pH Value, Electrometric Method pH	4.51	pH units			1	9045C	03/24/09 15:28	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	11-1-3	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241348	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil			10:45
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analys	Batch ID
Percent Solids Determination Percent Solids	82.4	%			1	SM2540 G	03/26/09 10:00	l dsullivan	
Diesel Range Organics (DRO) by G			05	1 4	4	00465	02/05/00 45.40	iverel	040490
Diesel Range Organics (DRO)	BRL	mg/kg	8.5	1.4	1	8015B	03/25/09 15:49	lvogei	Q40188
Sample Preparation:			25	.02 g	/ 1 mL	3545	03/25/09 10:00	) pbarr	P24094
					Surrogate	•	% Recovery	y Cor	ntrol Limits
					o-Terphen	yl	99		49 - 124
Sample Weight Determination									
Weight 1	6.52	g			1	GRO	03/24/09 0:00	lbrown	
Weight 2	6.53	g			1	GRO	03/24/09 0:00	İbrown	
Gasoline Range Organics (GRO) by	GC-FID								
Gasoline Range Organics (GRO)	BRL	mg/kg	6.1,	3.8	50	80158	03/25/09 20:48	dliamm	Q40178
					Surrogate		% Recovery	v Con	trol Limits
					aaa-TFT		65		55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



## Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	11-2-3	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241349	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
ala Llant and Ellaluman	Sample Matrix:		P.		10:55
2923 South Tryon St. Ste 100	campio matrix.	001	Time Submitted:		
Charlotte, NC 28203			nine Suomitteu:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analys	t Batch ID
Percent Solids Determination									
Percent Solids	82.1	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Diesel Range Organics (DRO) by G	C-FID								
Diesel Range Organics (DRO)	BRL	mg/kg	8,5	1.4	1	8015B	03/25/09 16:24	jvogel	Q40188
Sample Preparation:			25	.03g/	1 mL	3545	03/25/09 10:00	pbarr	P24094
					Surrogate	•	% Recovery	, Co	ntrol Limits
					o-Terphen	yl	87		49 - 124
Sample Weight Determination									
Weight 1	4.47	g			1	GRO	03/24/09 0:00	lbrown	
Weight 2	5.70	g			1	GRO	03/24/09 0:00	lbrown	
Gasoline Range Organics (GRO) b	y GC-FID								
Gasoline Range Organics (GRO)	BRL	mg/kg	6.1	3.8	50	8015B	03/25/09 21:20	dliamm	Q40178
					Surrogate	I	% Recovery	Со	ntrol Limits
					aaa-TFT		126		

FT 126 55 - 129

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied,

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 12 of 43

\$

171 - 7 - 4 - 04 -



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	11-3-3		
Transportation	Project ID:	ROW-204	Prism Sample ID:	241350		
Attn: David Graham	· <b>,</b> · · · · · ·	WBS# 34871.1.1	COC Group:	G0309633	<b>)</b>	
c/o Hart and Hickman			•			
	Sample Matrix:	Solt	Time Collected:	03/23/09	10:35	
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20	
Charlotte, NC 28203						

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analys	t Batch ID
Percent Solids Determination Percent Solids	79.0	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Diesel Range Organics (DRO) by G	C-FID								
Diesel Range Organics (DRO)	BRL	mg/kg	8.8	1.4	1	8015B	03/25/09 16:59	jvogel	Q40188
Sample Preparation:			25	.04 g /	'1mL	3545	03/25/09 10:00	pbarr	P24094
					Surrogate		% Recovery	r Coi	ntrol Limits
					o-Terphen	yl	79		49 - 124
Sample Weight Determination									
Weight 1	5.95	9			1	GRO	03/24/09 0:00	lbrown	
Weight 2	6.47	g			1	GRO	03/24/09 0:00	ibrown	
Gasoline Range Organics (GRO) by	GC-FID								
Gasoline Range Organics (GRO)	11	mg/kg	6.3	4.0	50	8015B	03/26/09 9:45	dliamm	Q40178

Surrogate	% Recovery	Control Limits
aaa-TFT	100	55 - 129
		· ·

### Sample Comment(s):

BRL = Below Reporting Limit

....

Values are reported down to the reporting limit only. No J-Flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

-----

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



# Laboratory Report

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 11-4-3 Transportation Project ID: ROW-204 Prism Sample ID: 241351 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 10:30 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analys	t Batch ID
Percent Solids Determination									
Percent Solids	79.5	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Diesel Range Organics (DRO) by G	<u>C-FID</u>								
Diesel Range Organics (DRO)	BRL	mg/kg	8.8	1.4	1	8015B	03/25/09 18:10 )	ivogel	Q40188
Sample Preparation:				25g /	1 mL	3545	03/25/09 10:00	pbarr	P24094
					Surrogate		% Recovery	Cor	ntrol Limits
					o-Terphen	yl	53		49 - 124
Sample Weight Determination									
Weight 1	6.33	g			1	GRO	03/24/09 0:00 1	brown	
Weight 2	6.35	g			1	GRO	03/24/09 0:00 1	brown	
Gasoline Range Organics (GRO) by	GC-FID			•					
Gasoline Range Organics (GRO)	BRL	mg/kg	6.3	3.9	50	8015B	03/26/09 10:17	lliamm	Q40178

Surrogate	% Recovery	Control Limits
aaa-TFT	75	55 - 129
	······	

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Chartotte, NC 28224-0543



05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soil

Client Sample ID:	11-5-3	
Prism Sample ID:	241352	
COC Group:	G0309633	
Time Collected:	03/23/09	10:20
Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analys	t Batch ID
Percent Solids Determination Percent Solids	82.1	%			4	SM2540 G	03/26/09 10:00	) dsullivan	
Diesel Range Organics (DRO) by GO Diesel Range Organics (DRO)	<u>C-FID</u> BRL	mg/kg	8.5	1.4	1	8015B	03/25/09 17:3	5 jvogel	Q40188
Sample Preparation:			25	.09g /	1 mL	3545	03/25/09 10:0	) opan	P24094
					Surrogate	1	% Recover	y Co	ntrol Limits
					o-Terphen	yl	50		49 - 124
Sample Weight Determination Weight 1	6.12	9			1	GRO	03/24/09 0:00	lbrown	
Weight 2	6.10	g			1	GRO	03/24/09 0:00	Ibrown	
Gasoline Range Organics (GRO) by Gasoline Range Organics (GRO)	<u>GC-FID</u> BRL	mg/kg	6.1	3.8	50	8015B	03/25/09 22:54	dliamm	Q40178

Surrogate	% Recovery	Control Limits
aaa-TFT	55	55 - 129
		··

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 15 of 43



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-10-1 Transportation Project ID: ROW-204 Prism Sample ID: 241353 Attn: David Graham Project No .: WBS#34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 11:48 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	82.1	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Metals by ICP Arsenic	4.7	mg/kg	0.61	0.061	1	6010B	03/25/09 23:53		Q40185
Lead Sample Preparation:	57	mg/kg	0.31	0.024 .99 g /	1 50 mL	6010B 3050B	03/25/09 23:53 03/25/09 9:15	heasler mbarber	Q40185 P24088

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-10-5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241354	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	11:50
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	80.2	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Metals by ICP Arsenic	6.5	mg/kg	0.62	0.061	1	6010B	03/26/09 0:00	heasler	Q40185
Lead	19	mg/kg	0.31	0.024	1	6010B	03/26/09 0:00	heasler	Q40185
Sample Preparation:			2	.01g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-11-1		
Transportation	Project ID:	ROW-204	Prism Sample ID:	241355		
Attn: David Graham	Project No.:	WBS# 34871.1.1	•			
c/o Hart and Hickman	,		COC Group:	G0309633	3	
	Sample Matrix:	Soil	Time Collected:	03/23/09	11:44	
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20	

Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
78.9	%			1	SM2540 G	03/26/09 10:00	dsullivan	
11	mg/kg	0.63	0.062	1	6010B	03/26/09 0:05	heasler	Q40185
24	mg/kg	0.31	0.024	1	6010B	03/26/09 0:05	heasler	Q40185
		2	.02 g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088
	78.9	78.9 % 11 mg/kg	Limit 78.9 % 11 mg/kg 0.63 24 mg/kg 0.31	Limit 78.9 % 11 mg/kg 0.63 0.062 24 mg/kg 0.31 0.024	Limit         Factor           78.9         %         1           11         mg/kg         0.63         0.062         1           24         mg/kg         0.31         0.024         1	Limit         Factor           78.9         %         1         SM2540 G           11         mg/kg         0.63         0.062         1         6010B           24         mg/kg         0.31         0.024         1         6010B	Limit         Factor         Date/Time           78.9         %         1         SM2540 G         03/26/09         10:00           11         mg/kg         0.63         0.062         1         6010B         03/26/09         0:05           24         mig/kg         0.31         0.024         1         6010B         03/26/09         0:05	The second sec

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert, No. 37735

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-11-5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241356	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	11:45
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	77.7	%			1	SM2540 G	03/26/09 10:00		
<u>Metals by ICP</u> Arsenic	13	mg/kg	0.64	0.063	1	6010B	03/26/09 0:11	heasler	Q40185
Lead	62	mg/kg	0.32	0.025	1	6010B	03/26/09 0:11	heasler	Q40185
Sample Preparation:			2	.01g /	50 mL	3050B	03/25/09 9:15	mbarber	P24088

Sample Comment(s):

#### BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-12-1		
Transportation	Project ID:	ROW-204	Prism Sample ID:	241357		
Attn: David Graham	Project No.:	WBS# 34871.1.1	•			
c/o Hart and Hickman	,		COC Group:	G0309633		
	Sample Matrix:	Soli	Time Collected:	03/23/09	11:38	
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20	

Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
						· · · <u>-</u>	а тал <b>а ст</b> ания в анила	
87.6	%			1	SM2540 G	03/26/09 10:00	dsullivan	
9.7	mg/kg	0.57	0.057	1	6010B	03/26/09 0:49	heasler	Q40186
46	mg/kg	0.29	0.022	1	6010B	03/26/09 0:49	heasler	Q40186
			2g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087
	87.6 9.7	87.6 % 9.7 mg/kg	Limit 87.6 % 9.7 mg/kg 0.57	Limit 87.6 % 9.7 mg/kg 0.57 0.057 46 mg/kg 0.29 0.022	Limit Factor 87.6 % 1 9.7 mg/kg 0.57 0.057 1 46 mg/kg 0.29 0.022 1	Limit         Factor           87.6         %         1         SM2540 G           9.7         mg/kg         0.57         0.057         1         6010B           46         mg/kg         0.29         0.022         1         6010B	Limit         Factor         Date/Time           87.6         %         1         SM2540 G         03/26/09         10:00           9.7         mg/kg         0.57         0.057         1         6010B         03/26/09         0:49           46         mg/kg         0.29         0.022         1         6010B         03/26/09         0:49	Limit       Factor       Date/Time         87.6       %       1       SM2540 G       03/26/09       10:00 dsullivan         9.7       mg/kg       0.57       0.057       1       6010B       03/26/09       0:49       heasler         46       mg/kg       0.29       0.022       1       6010B       03/26/09       0:49       heasler

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments, All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-12-5 Transportation Project ID: ROW-204 Prism Sample ID: 241358 Attn: David Graham Project No.: WBS#34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 11:39 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	86.8	%		Amerika oli V Marris Alandi Kan	1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	1.0	mg/kg	0.58	0.057	1	6010B	03/26/09 1:08	heasler	Q40186
Lead	27	mg/kg	0.29	0.022	1	6010B	03/26/09 1:08	heasler	Q40186
Sample Preparation:				2g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087

#### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-13-1		
Transportation	Project ID:	ROW-204	Prism Sample ID:	2/1350		
Attn: David Graham	Project No.:	WBS# 34871.1.1				
c/o Hart and Hickman	•		COC Group:	G0309633		
	Sample Matrix:	Sol	Time Collected:	03/23/09	11:32	
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20	

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination						••••		*	··
Percent Solids	88.6	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Metals by ICP									
Arsenic	5.4	mg/kg	0.55	0.055	1	6010B	03/26/09 1:14	heasler	Q40186
Lead	18	mg/kg	0.28	0.021	1	6010B	03/26/09 1:14	heasler	Q40186
Sample Preparation:			2	05g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087
<u>pH Value, Electrometric Method</u> pH	4.59	pH units			1	9045C	03/24/09 15:29	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-13-5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241360	
Attn: David Graham	Project No :	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	11:34
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	88.9	%	and de l'Andre - Andre Andre - Andre		1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	9.8	mg/kg	0.55	0.054	1	6010B	03/26/09 1:21	heasler	Q40186
Lead	15	mg/kg	0.27	0.021	1	6010B	03/26/09 1:21	heasler	Q40186
Sample Preparation:			2	.05g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087

## Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-14-1	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241361	
Attn: David Graham	Project No.:	WBS#34871.1.1	COC Group:	G0309633	,
c/o Hart and Hickman	Sample Matrix:				-
2923 South Tryon St. Ste <sup>-</sup> 100	Sample Matrix.	3011	Time Collected:	03/23/09	11:28
Charlotte, NC 28203			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	83.9	%			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	13	mg/kg	0.58	0.058	1	6010B	03/26/09 1:28	heasler	Q40186
Lead	66	mg/kg	0.29	0.023	1	6010B	03/26/09 1:28	heasler	Q40186
Sample Preparation:			2	.04g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-14-5-	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241362	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	11:30
2923 South Tryon St. Ste 100	-		Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	90.6	%	44 44 - 4 4 4 a y 4 4		1	SM2540 G	03/26/09 10:00	dsullivan	
Metals by ICP Arsenic	19	mg/kg	0.54	0.054	1	6010B	03/26/09 1:44	heasler	Q40186
Lead	67	mg/kg	0.27	0.021	1	6010B	03/26/09 1:44	heasler	Q40186
Sample Preparation:			2	.04g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-15-1		
Transportation	Project ID:	ROW-204	Prism Sample ID:			
Attn: David Graham	,		•			
	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	3	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/00	11:26	
2923 South Tryon St. Ste 100				***		
			Time Submitted:	03/23/09	16:20	

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	88.2	%			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	16	mg/kg	0.56	0.056	1	60108	03/26/09 1:51	heasler	Q40186
Lead	26	mg/kg	0.28	0.022	1	6010B	03/26/09 1:51	heasler	Q40186
Sample Preparation:			2	.02g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087

Sample Comment(s):

#### BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

## Laboratory Report

05/26/09

Client Sample ID: 10-15-5 North Carolina Department of Project Name: Winston Salem Transportation Project ID: ROW-204 Prism Sample ID: 241364 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil 03/23/09 11:27 Time Collected: 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	86.0	%			1	SM2540 G	03/26/09 10:00	dsullivan	
Metals by ICP									
Arsenic	27	mg/kg	0.58	0.058	1	6010B	03/26/09 1:57	heasler	Q40186
Lead	57	mg/kg	0.29	0.023	1	6010B	03/26/09 1:57	heasler	Q40186
Sample Preparation:			1	.99 g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/14/09 14:40	mbarber	
TCLP Leachable Mercury by CVAP Mercury	BRL	mg/L	0.010	0.000014	1	7470A	05/19/09 15:27	dsullivan	Q41592
Sample Preparation:				20 mL /	- 30 mL	7470A	05/19/09 10:00	dsullivan	- P24594
TCLP Leachable Metals by ICP								( <u>)</u>	0.14007
Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/22/09 4:16	heasler	Q41637
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/22/09 4:16	heasler	Q41637
Cadmium	BRI.	mg/L	0.025	0.00034	1	6010B	05/22/09 4:16	heasler	Q41637
Chromium	BRL	mg/L	0.25	0.0006	1	6010B	05/22/09 4:16	heasler	Q41637
Lead	BRL	mg/L	0.050	0.0021	1	6010B	05/22/09 4:16	heaster	Q41637
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/22/09 4:16	heasler	Q41637
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/22/09 4:16	heaster	Q41637
Sample Preparation:				50 mL /	50 mL	3010A	05/15/09 9:50	mbarber	P24568

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-15-5 Transportation Project ID: **ROW-204** Prism Sample ID: 241364 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 11:27 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
· · · · · · · · · · · · · · · · ·									

Sample Comment(s):

#### BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-16-1	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241365	
Attn: David Graham	Project No .:	WBS# 34871.1.1	COC Group:	G0309633	3
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	11:20
2923 South Tryon St. Ste 100	•		Time Submitted:	03/23/09	16:20
Charlotte, NC 28203					

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	87.2	%			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	4.7	mg/kg	0.57	0.057	1	6010B	03/26/09 2:03	heasler	Q40186
Lead Sample Preparation:	22	mg/kg	0.29	0.022 2 g /	1 50 mL	6010B 3050B	03/26/09 2:03 03/25/09 10:25	heasler mbarber	Q40186 P24087
<u>pH Value, Electrometric Method</u> pH	4.03	pH units			1	9045C	03/24/09 15:30	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

.



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-16-5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241366	
Attn: David Graham	Project No.:	WBS#34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	11:25
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	.Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	87.2	%			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic Lead	. 6.5	mg/kg mg/kg	0.57	0.056	1	6010B 6010B	03/26/09 2:10 03/26/09 2:10	heasler heasler	Q40186 Q40186
Sample Preparation:	20	шулу		.02 g /	50 mL	3050B	03/25/09 10:25		P24087

#### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543 Phone: 704/529-6364 · Toll Free Number: 1-800/529-6364 · Fax: 704/525-0409



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-17-1	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241367	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	11:05
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	83.8	%			1	SM2540 G	03/26/09 10:00	) dsullivan	
<u>Metais by ICP</u> Arsenic	2.1	mg/kg	0.59	0.058	1	6010B	03/26/09 2:16	heasler	Q40186
Lead	9,3	mg/kg	0.29	0.023	1	6010B	03/26/09 2:16	heasler	Q40186
Sample Preparation:			2	.03g /	50 ml.	3050B	03/25/09 10:25	5 mbarber	P24087

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

## Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-17-5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241368	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	3
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	11:10
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	79.7	%		an ( , , , , , , , , , , , , , , , , , ,	1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	5.0	mg/kg	0.62 0.31	0.062 0.024	1	6010B 6010B	03/26/09 2:22 03/26/09 2:22	heasler heasler	Q40186 Q40186
Lead Sample Preparation:	15	mg/kg		.01g /	י 50 mL	3050B	03/25/09 10:25		P24087

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert, No. 37735

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-5-0.5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241369	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	13:20
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	80.0	%			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	4.8	mg/kg	0.61	0.061	1	6010B	03/26/09 2:28	heasler	Q40186
Lead	16	mg/kg	0.31	0.024	1	6010B	03/26/09 2:28	heasler	Q40186
Sample Preparation:			2	.04g /	50 mL	3050B	03/25/09 10:25	mbarber	P24087
pH Value, Electrometric Method pH	4.72	pH units			1	9045C	03/24/09 15:31	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 8-6-0.5 Transportation Project ID: ROW-204 Prism Sample ID: 241370 Attn: David Graham WBS#34871.1.1 Project No.: G0309633 COC Group: c/o Hart and Hickman Sample Matrix: Soil 03/23/09 Time Collected: 13:40 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	81.1	%			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	5,2	mg/kg	0.62	0.061 0.024	1	6010B 6010B	03/27/09 0:08 03/27/09 0:08	heasler heasler	Q40216 Q40216
Lead Sample Preparation:	20	mg/kg	0.31	0.024 2g/	50 mL	3050B	03/26/09 9:15	mbarber	P24102

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-7-0.5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241371	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soíl	Time Collected:	03/23/09	13:10
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	78.3	%			1	SM2540 G	03/26/09 10:00	dsullivan ,	
<u>Metals by ICP</u> Arsenic	4.3	mg/kg	0.63	0.062	1	6010B	03/27/09 0:26	heasler	Q40216
Lead	37	mg/kg	0.31	0.024	1	6010B	03/27/09 0:26	heasler	Q40216
Sample Preparation:			2	2.04g /	50 mL	3050B	03/26/09 9:15	mbarber	P24102
pH Value, Electromet <u>ric Method</u> pH	4.81	pH units			1	9045C	03/24/09 15:32	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 8-8-0.5 Transportation Project ID: **ROW-204** Prism Sample ID: 241372 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 13:41 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	80.3	%	n araan		1	SM2540 G	03/26/09 10:00	dsutlivan	,,
<u>Metals by ICP</u> Arsenic	4.7	mg/kg	0.62	0.061	1	6010B	03/27/09 0:33	heasler	Q40216
Lead	33	mg/kg	0.31	0.024	1	6010B	03/27/09 0:33	heasler	Q40216
Sample Preparation:			2	.01g /	50 mL	3050B	03/26/09 9:15	mbarber	P24102

Sample Comment(s):

1

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-9-0.5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241373	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	3
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	13:37
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	88.0	Ŵ			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	1.5	mg/kg	0.57	0.057	1	6010B	03/27/09 0:40	heasler	Q40216
Lead	50	mg/kg	0.29	0.022	1	6010B	03/27/09 0:40	heasler	Q40216
Sample Preparation:			1	.99g /	50 mL	3050B	03/26/09 9:15	mbarber	P24102

### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-10-0.5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241374	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	2
c/o Hart and Hickman	Sample Matrix:		Time Collected:		-
2923 South Tryon St. Ste 100	oampie matrix.	501		03/23/09	13:44
Charlotte, NC 28203			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	82.3	%			1	SM2540 G	03/26/09 10:00	dsullivan	
<u>Metals by ICP</u> Arsenic	5.0	mg/kg	0,60	0.059	1	6010B	03/27/09 0:46	heasler	Q40216
Lead	61	mg/kg	0.30	0.023	1	6010B	03/27/09 0:46	heasler	Q40216
Sample Preparation:			2.	.03 g /	50 mL	3050B	03/26/09 9:15	mbarber	P24102

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735 Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-11-0.5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241375	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	;
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	12:55
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	81.8	%			1	SM2540 G	03/26/09 10:00	) dsullivan	
<u>Metals by ICP</u> Arsenic	3.0	mg/kg	0.60	0.060	1	6010B	03/27/09 0:53	heasler	Q40216
Lead	53	mg/kg	0.30	0.023	1	6010B	03/27/09 0:53	heasler	Q40216
Sample Preparation:			2	.03g /	50 mL	3050B	03/26/09 9:15	mbarber	P24102
<u>pH Value, Electrometric Method</u> pH	6.57	pH units			1	9045C	03/24/09 15:33	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 39 of 43



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

## Laboratory Report

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 8-12-0.5 Transportation Project ID: ROW-204 Prism Sample ID: 241376 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309633 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 14:01 2923 South Tryon St. Ste 100 Time Submitted: 03/23/09 16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	85.1	%			1	SM2540 G	03/26/09 10:00	dsullivan	v *****
<u>Metals by ICP</u> Arsenic	1.2	mg/kg	0.58	0.058	1	<del>6</del> 010B	03/27/09 1:09	heasler	Q40216
Lead	29	mg/kg	0.29	0.022	1	6010B	03/27/09 1:09	heasler	Q40216
Sample Preparation:			2	.02g /	50 mL	3050B	03/26/09 9;15	mbarber	P24102

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 40 of 43



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

1

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-13-0.5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241377	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	3
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	14:03
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	71.4	%			1	SM2540 G	03/26/09 10:00	) dsullivan .	
<u>Metals by ICP</u> Arsenic	BRL	mg/kg	0.69	0.068	1	6010B	03/27/09 1:14	heasler	Q40216
Lead	20	mg/kg	0.34	0.027	1	6010B	03/27/09 1:14	heasler	Q40216
Sample Preparation:			2	.04g /	50 mL	3050B	03/26/09 9:15	mbarber	P24102

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-14-1	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241378	
Attn: David Graham	Project No .:	WBS# 34871.1.1	COC Group:	G0309633	3
c/o Hart and Hickman	Sample Matrix:	Soil		03/23/09	13:30
2923 South Tryon St. Ste 100	,		Time Submitted:		16:20
Charlotte, NC 28203			nino odonintou.	00/20/00	10.20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	88.4	%			1	SM2540 G	03/26/09 10:00	) dsullivan	
<u>Metais by ICP</u> Arsenic Lead	1.2 23	mg/kg mg/kg	0.56 0.28	0.055 0.022	1 1	60108 60108	03/27/09 1:20 03/27/09 1:20	heasler heasler	Q40216 Q40216
Sample Preparation:			2	.03g /	50 mi.	3050B	03/26/09 9:15	mbarber	P24102
<del>рН Value, Electrometric Method</del> pH	5.27	pH units			1	9045C	03/24/09 15:34	kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-14-3	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241379	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309633	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/23/09	13:33
2923 South Tryon St. Ste 100			Time Submitted:	03/23/09	16:20

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	83.5	%			1	SM2540 G	03/26/09 10:00	) dsullivan	
<u>Metals by ICP</u> Arsenic	4.5	mg/kg	0.58	0.058	1	6010B	03/27/09 1:27	heaster	Q40216
Lead	62	mg/kg	0.29	0.023	1	6010B	03/27/09 1:27	heasler	Q40216
Sample Preparation:			2	.05g /	50 mL	3050B	03/26/09 9:15	mbarber	P24102
<mark>pH Value, Electrometric Method</mark> pH	4.82	pH units			1	9045C	03/24/09 15:36	j kpowers	Q40150

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limit only. No J-Flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



# Level II QC Report

05/26/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309633
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/23/09 16:20
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

#### pH Value, Electrometric Method, method 9045C

Laboratory Control Sample	Result	Spike Amount	Units	Recovery %	Recovery Ranges %		871. C Es (	QC Batch ID
рH	6.90	6.86	pH units	101	99.21-100.7			Q40150
Duplicate	Sample	Duplicate				RPD	RPD	QC Balch
Sample ID:	Result	Result	Units			%	Range %	ID
241379 pH	4.82	4.89	pH units			1	0 - 20	Q40150
Gasoline Range Organics (GRO)			pri uniis			1	0 - 20	Q40

Method Blank									QC Batch
	Result	RL.	Control Limit	Units					iD
Gasoline Range Organics (GRO)	ND	5	<2.5	mg/kg					Q40178
Laboratory Control Sample	Result	Spike Amour	st	Units	Recovery %	Recovery Ranges %			QC Batch ID
Gasoline Range Organics (GRO)	43.25	50		mg/kg	87	67-116			Q40178
Matrix Spike Sample ID:	Result	Spike Amour		Unils	Recovery %	Recovery Ranges %		·	QC Batch ID
241443 Gasoline Range Organics (GRO)	36.2	50		mg/kg	72	57-113			Q40178
Matrix Spike Duplicate Sample ID:	Result	Spike Amoun		Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241443 Gasoline Range Organics (GRO)	36.75	50		mg/kg	74	57-113	2	0 - 23	Q40178

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543 Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



# Level II QC Report

05/26/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number: G0309633	
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted: 03/23/09 16	:20
c/o Hart and Hickman	Project No .:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

#### Metals by ICP, method 6010B

Method Blank	Result	RL	Control Limit	Units						QC Batch ID
Arsenic	0.0086	0.5	<0.25	mg/kg				<u>_</u>		Q40185
Lead	-0.0012	0.25	<0.125	mg/kg						Q40185
Laboratory Control Sample	Result	Spike Amoun	t	Units	Recover %	у	Recovery Ranges %			QC Batch ID
Arsenic	23.4914	25		mg/kg	94		80-120			Q40185
Lead	23.3415	25		mg/kg	93		80-120			Q40185
Matrix Spike Sample ID:	Result	Spike Amount	t	Units	Recover %	y	Recovery Ranges %			QC Batch ID
241338 Arsenic	22.045	25.125		mg/kg	82		75-125			Q40185
Lead	27.8649	25.125		mg/kg	80		75-125			Q40185
Matrix Spike Duplicate Semple ID:	Result	Spike Amoun	t	Units	Recover %	у	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241338 Arsenic	22.0315	25	·	mg/kg	82		75-125	0	0 - 20	Q40185
Lead	27.5252	25		mg/kg	79		75-125	1	0 - 20	Q40185
Metals by ICP, method 6010B										
Method Blank										QC Batch
	Result	RL	Control Limit	Unils						ID
Arsenic	0.0083	0.5	<0.25	mg/kg						Q40186
Lead	0.0199	0.25	<0.125	mg/kg						Q40186
Laboratory Control Sample	Result	Spike Amount		Units	Recovery %	y Y	Recovery Ranges %			QC Batch ID
Arsenic	22.9675	25		mg/kg	92		80-120			Q40186
Lead	23.1747	25		mg/kg	93		80-120			Q40186
Matrix Spike Sample ID:	Result	Spike Amount	•	Units	Recovery %	y	Recovery Ranges %			QC Batch ID
241357 Arsenic	25.1459	24.875		mg/kg	67	#	75-125			Q40186
Lead	50.9651	24.875		mg/kg	44	" #	75-125			Q40186
Matrix Spike Duplicate Sample ID:	Result	Spike Amount		Units	Recovery %		Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241357 Arsenic	25.3476	24.630		mg/kg	68	#	75-125	1	0 - 20	Q40186

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543 Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



# Level II QC Report

05/26/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309633
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/23/09 16:20
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

### Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank	Result	Rí.	Contro! Limit	Units					QC Batch ID
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg				<ol> <li>Held M. and A. off Mitta &amp; Press Street Sciences and Address</li> </ol>	Q40188
Laboratory Control Sample	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %			QC Satch ID
Diesel Range Organics (DRO)	64.6	80		mg/kg	81	55-109			Q40188
Matrix Spike Sample ID:	Result	Spike Amou	nl	Unils	Recovery %	Recovery Ranges %			QC Batch ID
241105 Diesel Range Organics (DRO)	56.6	80		mg/kg	71	50-117			Q40188
Matrix Spike Duplicate Sample ID:	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241105 Diesel Range Organics (DRO)	60.2	80		mg/kg	75	50-117	6	0 - 24	Q40188

#### Metals by ICP, method 6010B

Method Blank	Result	8L	Control Limit	Units					QC Batch ID
Arsenic	-0.0247	0.5	<0.25	mg/kg					Q40216
Lead	0.0049	0.25	<0.125	mg/kg					Q40216
Laboratory Control Sample	Result	Spike Amou		Units	Recovery %	Recovery Ranges %		•	QC Batch ID
Arsenic	23.2868	25		mg/kg	93	80-120			Q40216
Lead	23.4551	25		mg/kg	94	80-120			Q40216
Matrix Spike Sample ID:	Result	Spike Arnou	nl	Units	Recovery %	Recovery Ranges %			QC Batch ID
241370 Arsenic	23.8931	24.875	5	mg/kg	79	75-125			Q40216
Lead	32.8978	24.875	ī	mg/kg	68 #	75-125			Q40216
Matrix Spike Duplicate Sample ID:	Result	Spike Amou	nt	Unils	- Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241370 Arsenic	23.4546	24.630	)	mg/kg	78	75-125	2	0 - 20	Q40216
Lead	33.1293	24.630	)	mg/kg	69 #	75-125	1	0 - 20	Q40216

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543 Phone: 704/529-6364 - Toil Free Number: 1-800/529-6364 - Fax: 704/525-0409



# Level II QC Report

05/26/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309633
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/23/09 16:20
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

### TCLP Leachable Mercury by CVAA, method 7470A

Method Blank				*,					QC Batch
	Result	RL	Control Limit	Units		<b>.</b>	<u>.</u> .		١D
Mercury	-0.00004	0.01	<0.005	mg/L					Q41592
Laboratory Control Sample	Result	Spike Amoun	bt	Units	Recovery %	Recovery Ranges %			QC Batch JD
Mercury	0.00811	0.0093		mg/L	87	80-120			Q41592
Matrix Spike Sample IO:	Result	Spike Amoun	It	Units	Recovery %	Recovery Ranges %			QC Batch ID
246271 Mercury	0.00822	0.0093		mg/L	88	80-120			Q41592
Matrix Spike Duplicate Sample ID:	Result	Spike Amoun	st	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
246271 Mercury	0.00790	0.0093		mg/L	85	80-120	4	0 - 20	Q41592



# Level II QC Report

05/26/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309633
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/23/09 16:20
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

#### TCLP Leachable Metals by ICP, method 6010B

Method Blank							- 11 and - 1		QC Batch
	Result	RL	Control Limit	Units					ID
Arsenic	0.0003	0.05	<0.025	mg/L					Q41637
Barium	0.0013	5	<2.5	mg/L					Q41637
Cadmium	-0.0001	0.025	<0.0125	mg/L					Q41637
Chromium	0.0003	0.25	<0.125	mg/L					Q41637
Lead	0.0001	0.05	<0.025	mg/L					Q41637
Selenium	0.0006	0.05	<0.025	mg/L					Q41637
Silver	-0.0001	0.25	<0.125	mg/L					Q41637
Laboratory Control Sample	Result	Spike Amour	nt	Units	Recovery %	Recovery Ranges %			QC Batch ID
Arsenic	0.2472	0.25		mg/L	99	80-120			Q41637
Barium	0.2217	0.25		mg/L	89	80-120			Q41637
Cadmium	0.229	0.25		mg/L	92	80-120			Q41637
Chromium	0.2161	0.25		mg/L	86	80-120			Q41637
Lead	0.2148	0.25		mg/L	86	80-120			Q41637
Selenium	0.2479	0.25		mg/L	99	80-120			Q41637
Silver	0.2368	0.25		mg/L	95	80-120			Q41637
Matrix Spike					Recovery	Recovery Ranges			QC Batch
Sample ID:	Result	Spike Amour	n	Units	%	%			ID
241364 Arsenic	0.2269	0.25		mg/L	91	75-125			Q41637
Barium	0.4344	0.25		mg/L	80	75-125			Q41637
Cadmium	0.2126	0.25		mg/L	85	75-125			Q41637
Chromium	0.1907	0.25		mg/L	76	75-125			Q41637
Lead	0.2061	0.25		mg/L	79	75-125			Q41637
Selenium	0.2268	0.25		mg/L	91	75-125			Q41637
Silver	0.2276	0.25		mg/L	91	75-125			Q41637
Matrix Spike Duplicate Sample ID:	Result	Spike Amoun		Umis	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241364 Arsenic	0.2385	0.25		mg/L	95	75-125	5	0 - 20	Q41637
Barium	0.4552	0.25		mg/L	88	75-125	5	0 - 20	Q41637
Cadmium	0.2219	0.25		mg/L	89	75-125	4	0 - 20	Q41637
Chromium	0.2079	0.25		mg/L	83	75-125	9	0 - 20	Q41637
Lead	0.2147	0.25		mg/L	83	75-125	4	0 - 20	Q41637
Selenium	0.238	0.25		mg/L	95	75-125	5	0 - 20	Q41637
Silver	0.2326	0.25		mg/L	93	75-125	2	0 - 20	Q41637

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



## Level II QC Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Project Name: Project ID: Project No.: Winston Salem

ROW-204 WBS# 34871.1.1 COC Group Number: G0309633

Date/Time Submitted: 03/23/09 16:20

#-See Case Narrative

This Page is Blank - MaglPAISM

Page 6 of 6

		HSM orielisting						STODY		CO	RD				LAB USE (		NOT NA
Full Service	Analytical & Envi	ronmental Solution	8		••			URE PROPER BILI		-218			15 ALL 18	124 10 14 19	Son arrival?	And the second	NØ: NØ: NA.
449 Springbrook Road • Phone: 704/529-6364 •	P.O. Box 240543	3 • Charlotte, NC :			roject Nar hort Hold		(Yes) (N	WBSEL		<u>) (Yes)</u>		5.3	S. Line Con	15 Sec. 24	ICE?/Temp	ALC	
lient Company Name	+ax: 104/025-04	Hickman	n	*!	Please AT	FACH any	project spe	cific reporting	QC LEV	/EL HI II		Re	Sec. 210.2		IOLDING TIMES?	South March 19 March 19	
eport To/Contact Na	me: DOVE	Grahan	<u>n'</u>		rovisions : woice To:	and/or QC WBS	Requireme	nts 14 34871	1.1			125 ST 1226 S	and the second second	ALL	INTACT? WOUT HEADSPAC	and the second	M. Contractor & Contractor &
eporting Address: 2 Mariotte, N	$\frac{923}{287}$	Trymot.	<u>512.11</u>		ddress:			<u> </u>					191	21.01	IERS used?	And the second	<u> Alexandre</u> s
one: <u>704-580-</u>				—			•				<del></del>				· · · · · · · · · · · · · · · · · · ·		系。1999年1月1日) 
nail (Yes) (No) Email	Address	rahan@V	arth	lick	urchase C	rder No./I	Billing Refer	ys 03 Days 04	Dave C						Y CLIENT/SA		
DD Type: PDFE	ccel <u>Othe</u>	r		- 4	<b>Vorking Da</b>	ys" 🖸 🖯	8-9 Days 🗅 St	andard 10 days 🖾	Rush We	ork Must f	Зө	Certific	ation:			ÆFL_	
te Location Name: _ te Location Physical	Address 1	linston-S	abm	N/C T	amples rece							Water	Chlorin		OTHER YES NO _		<u> </u>
te Location Physical					(SEE RE RENDES	ERSE FOR T	ERMS & COND	ITIONS REGARDING	SERVICE	is S					Collection: YE		
		TIME	MAT	RIX	•	PLE CONT/				5.1	ΔΝΔΙ	YSES RE	QUESTE	Ð	, ,		PRISM
CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	COLLECTED MILITARY	(SO) WATE	пол [	TYPE	NO.	SIZE	PRESERVA- TIVES	A A		$\gg$				REN	IARKS	LAB
	. <u></u>	HOURS	SLUD		SEE BELO	W <sup>2</sup> NO.	5126		R.X	<u>Ý</u>	<u>X</u>				<u> </u>		ID NO.
5GM-1-2	32309	1006	Sou	L	CG	<u> </u>	·····	NONE	*	1							241338
GM-1-5		1007	- 1				ļ		×								241339
3GM-2-2		0945			<u> </u>			<b> </b>	$\star$	X	 						241340
3GM-2-5	·	0950							$\left  \star \right $		ļ						241341
<u>36M-3-2</u>		0955		·					*								241342
<u>36M-3-5'</u>		1000						· .	X								241343
3GM-4-2		1003		•					X	×							<b>ે</b> માં ઉપય
GM-4-5		1003							X								241345
6M-5-5		1005							*								241346
3GM-5-2	V	1004		,				$\downarrow$	メ	X							241347
Sampler's Signature	Mar R.				· · · ·	11.11	Buru	14/10		11	nd.	F 1 1 4 1	·		PRESS DO	WŅ FIRML	Y - 3 COPIE
ampler's Signature	Chain N Cust	tody is your auth	Samp	led By	(Print Nam Prism to pro	e)-110/	the analyse	s as requested a	Affilia		ues mi		Kma	<u>n</u>			
pon relinquishing, this ubmitted in writing to eliquished By: (Slopeure)	the Prism Pro	ect Manager. Th	ere will	be cha Receiv	rges for a	ny changes	after analys	ses have been ir	itialized	/ Deto		Military/H	ours	Additio	al Comments:	23.032.200.20	I USE ONLY
olly Br	mut	-2-	•	L	and I	Morin				3-2	309	141	0	Aduitio	nai Comments.	1996 Sec. Bort (1997)	d Time:
eliposished by (Signature)	222	39 16:20		Receiv	ed By: (Signati	1te)				Date					د		rture Time:
ielinguished By: (Signature)	<u> </u>	1 -0 -0		Receiv	ed For Prism L	aboratories By	r:			Date	0	11				Field Tech	i Fee:
lethod of Shipment: NOTE: A	LL SAMPLE COOL	ERS SHOULD BE TAI	PED SHUT	WITH C	USTODY SEAL	S FOR TRAN	SPORTATION T	D THE LABORATORY		3-23	,	1612	0			Mileage	ber (Spijlagengen)
SAMPLE	S ARE NOT ACCEP	PTED AND VERIFIED	AGAINST	COC UN	TIL RECEIVED	AT THE LAB	ORATORY.				3097	רבו					
I Fed Ex OUPS O Hand- IPDES: UST:			Other	WAT	ER: SOI	ID WAST	E: RCRA	: CERCL				<u>5つう</u> OTHER:	]			SEE	REVERSE FOR & CONDITIONS
	sc onć o					c psc			⊐ sc∣ ¤		sc					1,:5015	a comprission
ONTAINER TYPE CO			G = Gk	ee P		Ti - Teflor						D	Snace)				ORIGINAL

.

	N Pro						TODY		CORI				LAB USE	ONLY	
- Michael - Control - Cont			•				RE PROPER BILLI			Sa	mples INT	ACT OD	on arrival?	YES	NO NA
	Analytical & Enviro			Project Nan	ie: Rov	204 V	N8SElen	evet	3487		ceived O	<b>WVET</b> I	CE? Temp		
449 Springbrook Road • 1 Phone: 704/529-6364 • F	ax: 104/525-0409	). i 👘 👘		Short Hold	Analysis:	(Yes) (No)	UST P	roject:	(Yes) (No	o)	11-21-52 E 11-1	100 11 12 S.C.	ATIVES Indicate	Contract of the second s Second second se	
ient Company Name	: Hart	IT CKMG	w	*Please ATT	ACH any p	roject speci	ific reporting ((	C LEV	el i II III IV)				OLDING TIMES		$\overline{\mathbf{v}}$
eport To/Contact Na	me: Lave	brahan	$\gamma$	Invoice To:	WBST	Element	-34871.	1.1		2VC	UATILES	rec'd W	OUT HEADSP	VCE?	and the second second
porting Address:	·········	,		Address:							IOPER CI	ONTAIN	ERS used?	14 A 🗹	
ione:	Fax (Ves)	(No):	· · · · · ·	· · ·	•	· · · ·	<u>,                                     </u>		·····	- 1	UNIT HER HER A	. 382 A L. 494 2967	an of the multiple series ( ) the		
nail (Yes) (No) Email			,			illing Refere								AMPLING PI	
D Type: PDFEx	celOther_	•	· · · ·	"Working Da	e Date , ⊔ 1 ⊮š‴D 6-	Day Li 2 Days 9 Days D Star	s Col3 Days Col4 ndard 10 days Col	Days 😡 Rush Wo	5 Days rk Must Be	Certific	ation:			CE FL _	
e Location Name:	*****			Samples recei	ved after 15:0	00 will be proce	eased next busine	ss day.						N/A	
e Location Physical	Address:		<u>·                                    </u>				ys, excluding wee IONS REGARDING						YES NO		
· · · · · · · · · · · · · · · · · · ·							S, INC. TO CLIENT)	1				_	ollection: Y	S VNO	
CLIENT	DATE	TIME COLLECTED	MATRIX (SOIL,	SAM	PLE CONTA	NER	PRESERVA-		, and	ALYSES RE	QUESTEI	D /	/		PRISM
AMPLE DESCRIPTION	COLLECTED	MILITARY	WATER OF SLUDGE)		NO.	SIZE	TIVES	A.	JE ES	<u>~</u>			RE	MARKS	LAB ID NO.
1-1-3	3/23/09	1045	SOIL	CG	4	:		X							241348
1-2-3		1055	1					X							241349
11-3-3		1035						×.							241350
1-4-3		1030						イ							241351
11-5-3		1020			V			×							241352-
10-10-1		1148			1		NONE		X						241353
10-10-5		1150		, , , , , , , , , , , , , , , , , , ,					X						241354
10-11-1		1144						<u> </u>	¥						241355
10-11-5		1145						<u></u>	×	-					241356
10-12-1	V · ·	1138,	$ \Psi $	$   \cdot    \Psi^{+} $			J.		$ \chi $						241357
ampler's Signature		minte		By (Print Nam				Affilla			hick	mar	PRESS D	OWN FIRMI	Y - 3 COPIES
pon relinguishing, this abmitted in writing to	Chair(of Custo the Prism Proje	dy is your auti ct Manager. Th	here will be-	charges for a	ny changes	the analyses after analyse	as requested a es have been in	itlalized		must be					USE ONLY
	mui	Jer	Re	palyad By (Sloper	In				723	el 14		Additio	nal Comments	Part Branch	Mail 10 to 10 to 1 to 1 to 1 to 1 to 1 to 1
elingdiesed By: (Signature)	1/2 ( 2-5:	209 16	20	celved By: (Signat	ure)				Date					他们的基本的现在。 1997年1月1日日	itture Time:
plingulahed By; (Signature)	apon > c-	one hiller		ceived For Priam I				<del></del>	Date	n 1				Field Tec	n Fee:
ethod of Shipment: NOTE: A SAMPLE	LL BAMPLE COOLE		PED SHUT WIT	H CUSTODY SEA	S FOR THANS	PORTATION TO	THE LABORATORY	•	S-Z3-2	9 16:Z	0			Mleage	
SAMPLE			D AGAINST COC D Other	UNTIL RECEIVE	AT THE LABO	HATORY.			G034	596-22					
PDES: UST:	GROUND		RINKING W	ATER: SO		:   RCRA:	CERCL	<b>A</b>			 :			SEE	REVERSE FOR
	sc and a	sc a	NC Q SC	QN	c asc		oscio.Nci i	⊐ sc   ¤	INC DSC					T T T T T T T T T T T T T T T T T T T	ale completions
	IQ DDES: A = Am	iber C = Clear		P = Plastic:	TL = Teflon	🖸	VOA = Volatile		s Analvsis (	_   🖸 Zero Head	Space)				
	////								· · · · · · · · · · · · · · · · · · ·		v/				ÖRIGINAL

Ö	RI	GI	Ν	AΙ	

449 Springbrook Road • I Phone: 704/529-6364 • F Client Company Name Report To/Contact Nar Reporting Address:	P.O. Box 24 Fex: 704/52 me: Day	40543 5-0408 H	Grahan	28224-(		Shori *Plea provi Invoi	Hold Ar	nalysis	y project C Require	(No)		roject;	(Yes)	(No)	GL CL CL	Celved W ISTODY LATILE:	VIEHINI. SEALS Sirec'd (	HOLDING	IMES? DSPACE		think out the second
Phone: Email (Yes) (No) Email EDD Type: PDF Ex Site Location Name: Site Location Physical	Address ceiC	Other_		· · · ·	; ;	Reque "Worł Sampi Turna	ested Due ting Days' les receive round time	Date C d after is base	1 6-9 Days ( 15:00 will be d on busine ( TEBMS & C	2 Days D Stan proce ss day	nce4 dard 10 days4 essed next busine rs, excluding weel ons REGARDING 5, INC. TO CLIENT	Rush Wo Pre-Appro ss day.	rk Must I oved	∃e ∕s.	Certific Water	ation: Chlorir	NEL SC nated:	AC OTH YES	USACE IER NO	IPLING PEF FL N/A NO	NC
CLIENT SAMPLE DESCRIPTION	DATE		TIME COLLECTED MILITARY	(5)	TRIX DIL, ER OR	- <b>-</b>	SAMPL		TAINER		PRESERVA- TIVES	, Contraction of the second se	1.05 5.37		YSES REG	QUESTE	D	/ /	REMA	RKS	PRISM LAB
	<u></u>	<u> </u>	HOURS		DGE).		BELOW	NO.	SIZE			12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	<u>9</u>	<u>×</u>	-		$\leftarrow$	<u> </u>	<u></u>		ID NO.
10-12-5	5 23	<u> </u>	1139 1132	50	<u>.</u>	C	6				NONE	×	<u>}</u> √	<u> </u>			<u>.                                    </u>			;	241353
10-13-5			1134		•				_		<u>_</u>	r X	<u> </u>	<u> </u>							241359
10-14-1			1128				· · ·					X									<u>241360</u> 241361
10-14-5			1130						<u>·</u>			~ ~			_					· ·	241362
10-15-1			11210						_			V									241363
10-15-5			1127									X		A	Ided	TL	LP1	Mohals	. per	Matt	241364
10-110-1			1120		:							X	X	10				101-12	Bi	Matt	241365
10-10-5			1125									X	-1		~						241366
10-17-1	$\overline{\mathbf{v}}$		1105				$\checkmark$	J				X									241367
Sampler's Signature	Jolly	15	minic	Sam	pled By	/ (Prir	nt Name)	461			white.	Affiliat			÷Hk	km	an	PRESS	s dow	'N FIRMLY	- 3 COPIE
Upon relinquishing, this submitted in writing to t									h the anal es after an	yses a alyse:	as requested al s have been ini									PRISM	USE ONL
Rellinguister B: (Signature)	mu	ر بس	Es .		Pece L	ived By		Val	·		·		Date	204	Military/He		Additic	onal Comm	ients:	Site Arrival	ime: 👋
Relificuistied BY (Signature)	2.7	23-	09 /62	20	Feed	ved By	(Signature						Date					-		Site Departi	k (s). (s), (d))27 sector
Relinquished By: (Signature)	<u> </u>		1 1 9 2	<u> </u>	Rece	ived Fo	Prism Labo	oratories	By:				Date		11.5					Field Tech F	nationale, State E
Method of Shipment: NOTE: AL SAMPLES	S ARE NOT A	CCEPT	ED AND VERIFIED	PED SHU AGAINS		CUSTO NTIL R	Y 04 DY SEALS I ECEIVED AT	FOR TRA	NSPORTATIC BORATORY.		THE LABORATORY.		COC Gr	<u>&gt;~07 </u> >up No. >34296	16:2					Mileage	
	GRØ	UNDY	VATER: DF	NC C		TER:									OTHER:					SEE RE TERMS &	VERSE FOR CONDITIONS

	Prin	SM		PA	3E _ OF.	5 auo	F CU	URE PROI	PER BILL	ING:			- Sar	nplesul	UACT UP	LAB USE O	YES	NO: N/A
449 Springbrook Road • F Phone: 704/529-6364 • F Client Company Name Report To/Contact Nar Reporting Address:	ax: 1704/525-0406 : Hort : H me: Dave	Charlotte, NC	28224-054 \ \	- Sh - *Pi - pro - Inv - Ad	ort Hold A ease ATT/ ovisions ar	nalysis: ACH any nd/or QC NBS	W-20 (Ves) (Ne project spe Requireme Eleme	o) cific rep ents	UST P orting ((	roject: QC LEV	(Yes)	(No)	L Rec PRI Rec CU CU	eived C DPER P Sived V STODY LATILES	DN WETH RESERV VITHINH SEALS I S rec d W	CECTEMD 1.2 ATIVES indicated OLDING TIMES? NTACT? /OUT HEADSPAC ERS USBG?	1944 - 19	
Phone: Email (Yes) (No) Email EDD Type: PDF Ex Site Location Name: Site Location Physical	Address celOther	·····		— Re — "W — Sa	quested Due orking Days nples receiv naround tim (SEE REVE	Date Q 1 s" Q 6 ed after 15 e is based iffse FOR T	Billing Refer Day 2 2 Da -9 Days 2 St :00 will be pro on business of ERMS & COND A LABORATOR	tandard 10 bcessed ne lays, exclu NTIONS RE	ays 04 days 0 ext busine ding wee GARDING	Rush Wo Pre-Appr ss day. kends an SERVICES	rk Must E oved d holiday	e s.	Certific Water ( Sample	ation: Chlorii Iced	NELA SC_ nated: Upon C	Y CLIENT/SAN ACUSAC OTHER YESNO collection; YES	EFL N/A	NC
CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME C <u>OLLECTED</u> MILITARY HOURS	MATR (SOII WATER SLUD(	L,	SAMP *TYPE EE BELOW	LE CONTA	SIZE		ERVA- VES	A.T.		ANALY	SES REC	QUESTE		REM	ARKS	PRISM LAB ID NO.
10-17-5	3/23/09	1110	501	L	Cla_	١		No	NE	X				'				241363
8-5-0.5		1320				1				X	X			•				241369
8-10-0.5		1340								X		<b>e</b>				<u>к</u>		241370
8-7-0.5		1310					<u> </u>			X	*		ţş.					241371
8-8-0.5		1341		<u></u>						X								241372-
8-9-0.5		1337								X			ļ					241373
8-10-0.5		1344								X		ļ						241374
8-11-0.5		1255								X	×				ф		•	241375
8-12-0.5	·	1401		,						×								241376
8-13-0.5		1403			$\checkmark$	$\mathbf{V}$			V	X								241377
Sampler's Signature	Chain of Custr	Smult Smult	horizatio	n for Pr	ism to pro	ceed with		s as req	uested a	Affilia	ny chan		st be	<u>km</u>	an	PRESS DO		• 3 COPIES
submitted in writing to f Relinquisted By: (Signature)	the Prism Proje	ct Manager. T	here will		ges for an By: (Signatur		s after analy	ses have	been in	itialized		209	Military/H	ours	Additio	] nal Comments:	Site Alrival	Same wante of the case of a last second second
Helir(quished Ey: (Signature)	mun	ll.	•	Fleceive	By: (Signatur	land	•				Date	seg	144	2			Site Departu	ire Time.
Job Mon	5-23-	09 162	<u>&gt;</u>			5											Field Tech F	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
Relincershed By: (Signature)				Heceive	For Prism La		y:				Date 3-23	3-09	16:20	)			Mileage:	
Method of Shipment: NOTE: A SAMPLE	LL SAMPLE COOLE	RS SHOULD BE TA	APED SHUT	COC UNT	STODY SEALS	S FOR TRAN AT THE LAB	SPORTATION 1 ORATORY.	TO THE LAE	ORATORY	<i>.</i>	COC Gr	oup No.						
G Fed Ex G UPS G Hand-			Other		D. 1 001				07001			<u> 30396</u>	-				SET B	VERSE FOR
	SC INC INC INC INC INC INC INC INC INC IN	,			1	D WAST C D SC				u sc   i	LANDFI	⊐ sc∣ i					TERMS (	EVERSE FOR CONDITIONS
*CONTAINER TYPE CO				iss P:		L = Teflo								Space)			0	RIGINAI

lient Company Name eport To/Contact Na eporting Address:	ume: <u>Davk</u>	ckman Gialam	28224-0543	Short Hold Ar *Please ATTA provisions an	nalysis: CH any d/or QC	(Yes) (No project spece Requirements	cific reporting (l	roject: QC LEV	(Yes)	Nor	PF Be GU	IOPER I Icelved V JSTODY DLATILE	PRESER VITHIN H SEALS S rec'd W	on arrival? CE? Temp /ATIVES in OLDING T NTACT? //OUT HEA ERS Used	Idicated?- IMES? IDSPACE	~	
hone: mail (Yes) (No) Emai DD Type: PDF E ite Location Name: _ ite Location Physica	Address ccelOther	•	· · · · · · · · · · · · · · · · · · ·	"Working Days" Samples receive Turnaround time	Date D 1 "D 6 d aftér 15 is based	I Day □ 2 Day 3-9 Days □ Sta 3:00 will be prov 5 Dusiness da	ence	Rush Wo Pre-Appr ss day. kends ar	ork Must I roved		Certific Water	cation: Chlori	NEL/ SC_ nated:	4C	USACE_  ER NO	FL N/A _	RSONNEL
CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)		E CONTA		PRESERVA- Tives	A A	P.U. D W. S. D Y. S. D	ANAL	YSES RE			/	REMA		PRISM LAB · ID NO,
8-14-1	3123	1330	SOIL	<u>(</u> G	1		NONIE	X	×		Í	<u> </u>		<u> </u>			24137
8-14-3	V	1383	レ	V	7		NONTE	X	X								24137
·····									ļ								
							~ <u>~</u>										
,												<u> </u> ,		 			
		1						·			-						
							· · · · · · · · · · · · · · · · · · ·										
				• •	· · · · · · · · · · · · · · · · · · ·					1	_						
					·····												_
Sampler's Signature	Brut			y (Print Name)		ett E	$s_{m}$	Affilia		ł	-37			PRESS	s Dowi	N FIRML	Y • 3 COPI
Jpon relinquishing, this submitted in writing to	s Chain of Custo the Prism Proje	dý is your auti cyManager. Th	norization for here will be cl	Prism to proce arges for any	ed with chaлges	the analyses after analys	as requested al es have been ini	bove. A	ny chan	ges mu	ist be					PRISM	USE ONL
	M	in			n	low			Bate	324	Military/H	ours	Additio	al Comm	ients:	the state of the state Arel and and	Time:
lelinguished Bd. (Signature)	) Sty	23230	9/620	ved By: (Signature)	)				Date	- t						武王的齐小的第三次的第三	lure Time:
tellinguished By: (Signature)		SCHOKED BE TA	Rece R PED SHUT WITH	ived For Prism Labo Ama John CUSTODY SEALS I	FOR TRANS	SPORTATION TO	THE LABORATORY.		Date 3-2 COC Gro	3-09 DUP No.	16:2	20				Field Tech	
Fed Ex CLUPS CHand-	S ARE NOT ACCEPT	ED AND VERIFIED	AGAINST COC U	NTIL RECEIVED AT	THE LABO	DRATORY.				30396	37						
IPDES: UST:		WATER:   DF		TER:   SOLID	WASTE				ANDFI	LL ] (	OTHER:					SEE R	EVERSE FOR & CONDITIO

· · ·

ан 1

## **Case Narrative (Revised)**



Date:05/15/09Company:North Carolina Department of TransportationContact:David GrahamAddress:c/o Hart and Hickman2923 South Tryon St. Ste 100Charlotte, NC 28203

Client Project ID: Prism COC Group No: Collection Date(s): Lab Submittal Date(s): ROW-204 Winston-Salem G0509103 05/05/09 05/06/09

Client Project Name Or No: Winston-Salem, NC WBS# 34871.1.1

This is a revised report and supersedes our original laboratory report dated 5/14/09. Revised report to include J values.

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 7 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis N/A Volatile Analysis N/A Metals Analysis No Anomalies Reported

Wet Lab and Micro Analysis

N/A

Please call if you have any questions relating to this analytical report.

Data Reviewed by:Robbi A. JonesProject Manager:Angela D. OvercashSignature:Review Date:05/15/09Signature:Note: 05/15/09

### Data Qualifiers Key Reference:

B: Compound also detected in the method blank.

#: Result outside of the QC limits.

DO: Compound diluted out.

E: Estimated concentration, calibration range exceeded.

J: The analyte was positively identified but the value is estimated below the reporting limit.

H: Estimated concentration with a high bias.

L: Estimated concentration with a low bias.

M: A matrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the writtlen consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



## Laboratory Report

05/15/09

Client Sample ID: Comp-1 Project Name: Winston-Salem, NC North Carolina Department of Transportation Project ID: ROW-204 Winston-Salem Prism Sample ID: 245420 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0509103 c/o Hart and Hickman 05/05/09 11:40 Time Collected: Sample Matrix: Solid Time Submitted: 05/06/09 8:35 2923 South Tryon St. Ste 100 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/07/09 14:00	mbarber	
TCLP Leachable Mercury by CVAA Mercury	0.00003 J	mg/L	0.010	0.000014	1	7470A	05/12/09 16:50	dsullivan	Q41407
Sample Preparat	ion:			20 mL /	30 mL	7470A	05/12/09 11:45	dsullivan	P24530
<u>TCLP Leachable Metals by ICP</u> Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/08/09 22:34	heasler	Q41318
Barium	0.51 J	mg/L	5.0	0.0019	1	6010B	05/08/09 22:34	heasler	Q41318
Cadmium	0.0020 J	mg/L	0.025	0.00034	1	6010B	05/08/09 22:34	heasler	Q41318
Chromium	0.0008 J	mg/L	0.25	0.0006	1	60108	05/08/09 22:34	heasler	Q41318
Lead	0.027 J	mg/L	0.050	0.0021	1	6010B	05/08/09 22:34	heasler	Q41318
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/08/09 22:34	heasler	Q41318
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/08/09 22:34	heasler	Q41318
Sample Preparat	ion:			50 mL /	/ 50 mL	3010A	05/08/09 8:30	mbarber	P24504

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



## Laboratory Report

05/15/09

15:30

8:35

North Carolina Department of Project Name: Winston-Salem, NC Client Sample ID: Comp-2 Transportation Project ID: ROW-204 Winston-SalemPrism Sample ID: 245421 Attn: David Graham WBS#34871.1.1 Project No.: COC Group: G0509103 c/o Hart and Hickman Sample Matrix: Solid Time Collected: 05/05/09 2923 South Tryon St. Ste 100 Time Submitted: 05/06/09 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/11/09 14:30	mbarber	
TCLP Leachable Mercury by CVAA Mercury	0.00002 J	mg/L	0.010	0.000014	1	7470A	05/12/09 17:08	dsullivan	Q41407
Sample Preparat	ion:			20 mL /	30 mL	7470A	05/12/09 11:45	dsullivan	P24530
TCLP Leachable Metals by ICP Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/12/09 21:50	heasler	Q41387
Barium	0.83 J	mg/L	5.0	0.0019	1	6010B	05/12/09 21:50	heasler	Q41387
Cadmium	0.0035 J	mg/L	0.025	0.00034	1	6010B	05/12/09 21:50	heasler	Q41387
Chromium	0.0046 J	mg/L	0.25	0.0006	1	6010B	05/12/09 21:50	heasler	Q41387
Lead	0.0071 J	mg/L	0.050	0.0021	1	6010B	05/12/09 21:50	heasler	Q41387
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/12/09 21:50	heasler	Q41387
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/12/09 21:50	heasler	Q41387
Sample Preparat	tion:			50 mL /	50 mL	3010A	05/12/09 8:40	mbarber	P24532

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



## Laboratory Report

05/15/09

Client Sample ID: Drum Project Name: Winston-Salem, NC North Carolina Department of Transportation Project ID: ROW-204 Winston-SalemPrism Sample ID: 245422 Attn: David Graham Project No.: WBS#34871.1.1 COC Group: G0509103 c/o Hart and Hickman 05/05/09 16:00 Time Collected: Sample Matrix: Solid 2923 South Tryon St. Ste 100 Time Submitted: 05/06/09 8:35 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/11/09 14:30	mbarber	
TCLP Leachable Mercury by CVAA Mercury	0.00002 J	mg/∟	0.010	0.000014	1	7470A	05/12/09 17:12	dsullivan	Q41407
Sample Preparat	lion:			20 ml. /	30 mL	7470A	05/12/09 11:45	dsullivan	P24530
<u>TCLP Leachable Metals by ICP</u> Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/12/09 22:09	heasler	Q41387
Barium	0.95 J	mg/L	5.0	0.0019	1	6010B	05/12/09 22:09	heasler	Q41387
Cadmium	0.0029 J	mg/L	0.025	0.00034	1	6010B	05/12/09 22:09	heasler	Q41387
Chromium	0.0022 J	mg/L	0.25	0.0006	1	6010B	05/12/09 22:09	heasler	Q41387
Lead	0.0094 J	mg/L	0.050	0.0021	1	6010B	05/12/09 22:09	heasler	Q41387
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/12/09 22:09	heasler	Q41387
Silver	BRL	mg/L	0.25	0,00025	1	6010B	05/12/09 22:09	heasler	Q41387
Sample Prepara	tion:			50 mL /	′ 50 mL	3010A	05/12/09 8:40	mbarber	P24532

Sample Comment(s):

BRL = Below Reporting Limit

J- Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a wet-weight basis

All results are reported on a wel-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



# Level II QC Report

-5/15/09

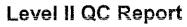
North Carolina Department of	Project	Winston-Salem, NC	COC Group Number:	G050910	3	
Transportation	Name:					
Attn: David Graham	Project ID:	ROW-204 Winston-Salem	Date/Time Submitted:	5/6/09	8:35	
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1				
2923 South Tryon St. Ste 100						

### TCLP Leachable Metals by ICP, method 6010B

Method Blank									QC Batch
	Result	RL	Control Limit	Units					. ID
Arsenic	-0.001	0.05	<0.025	mg/L					Q41318
Barium	0.0017	5	<2.5	mg/L					Q41318
Cadmium	-0.0002	0,025	<0.0125	mg/L					Q41318
Chromium	0.0001	0.25	<0.125	mg/L					Q41318
Lead	0.0001	0.05	<0.025	mg/L					Q41318
Selenium	0.0012	0.05	<0.025	mg/L					Q41318
Silver	ND	0.25	<0.125	mg/L					Q41318
Laboratory Control Sample	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %			QC Batch ID
Arsenic	0.2516	0.25		mg/L	101	80-120			Q41318
Barium	0.2243	0.25		mg/L	90	80-120			Q41318
Cadmium	0.233	0.25		mg/L	93	80-120			Q41318
Chromium	0.2158	0,25		mg/L	86	80-120			Q41318
Lead	0,2197	0.25		mg/L	88	80-120			Q41318
Selenium	0.2548	0.25		mg/L	102	80-120			Q41318
Silver	0,2338	0.25		mg/L	94	80-120			Q41318
Matrix Spike	Result	Spike Amou	vat	Units	Recovery %	Recovery Ranges			QC Batch
Sample ID:						%			
243989 Arsenic	0.2724	0.25		mg/L	101	75-125			Q41318
Barium	0.683	0.25		mg/L	101	75-125			Q41318
Cadmium	0.2354	0.25		mg/L	94	75-125			Q41318
Chromium	0.2178	0.25		mg/L	87	75-125			Q41318
Lead	0.2402	0,25		mg/L	89	75-125			Q41318
Selenium	0.2459	0.25		mg/L	99	75-125			Q41318
Silver	0.2321	0.25		mg/L	92	75-125			Q41318
Matrix Spike Duplicate Sample ID:	Result	Spike Amou	unt	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
243989 Arsenic	0.2702	0.25		mg/L	100	75 <b>-</b> 125	1	0 - 20	Q41318
Barium	0.6854	0.25		mg/L	102	75-125	0	0 - 20	Q41318
Cadmium	0.2346	0.25		mg/L	93	75-125	0	0 - 20	Q41318
Chromium	0.2156	0.25		mg/L	86	75-125	1	0 - 20	Q41318
Lead	0.2384	0.25		mg/L	88	75-125	1	0 - 20	Q41318
Selenium	0.2466	0.25		mg/L	100	75-125	0	0 - 20	Q41318
Silver	0.2308	0.25		mg/L	92	75-125	1	0 - 20	Q41318

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543





5/15/09

North Carolina Department of	Project	Winston-Salem, NC	COC Group Number:	G050910	3
Transportation	Name:				
Attn: David Graham	Project ID:	ROW-204 Winston-Salem	Date/Time Submitted:	5/6/09	8:35
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1			
2923 South Tryon St. Ste 100					

### TCLP Leachable Metals by ICP, method 6010B

Method Blank	Result	RL	Control Limit	Units					QC Batch ID
Arsenic	0.0001	0.05	<0.025	mg/L					Q41387
Barium	0.0006	5	<2.5	mg/L					Q41387
Cadmium	-0.0002	0.025	<0.0125	mg/L					Q41387
Chromium	0.0003	0.25	<0.125	mg/L					Q41387
Lead	-0.0004	0.05	<0.025	mg/L					Q41387
Selenium	-0.0013	0.05	<0.025	mg/L					Q41387
Silver	ND	0.25	<0.125	mg/L					Q41387
Laboratory Control Sample	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %			QC Balch ID
Arsenic	0.2467	0.25		mg/L	99	80-120			Q41387
Barium	0.2162	0.25		mg/L	86	80-120			Q41387
Cadmium	0.2308	0.25		mg/L	92	80-120			Q41387
Chromium	0.2137	0.25		mg/L	85	80-120			Q41387
Lead	0.2194	0,25		mg/L	88	80-120			Q41387
Selenium	0.2484	0.25		mg/L	99	80-120			Q41387
Silver	0.2316	0.25		mg/L	93	80-120			Q41387
Matrix Spike Sample ID:	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %			QC Batch ID
245421 Arsenic	0.2451	0.25		mg/L	97	75-125			Q41387
Barium	1.0664	0.25		mg/L	93	75-125			Q41387
Cadmium	0.2287	0.25		mg/L	90	75-125			Q41387
Chromium	0.2191	0.25		mg/L	86	75-125			Q41387
Lead	0.2242	0.25		mg/L	87	75-125			Q41387
Selenium	0.2383	0.25		mg/L	98	75-125			Q41387
Silver	0.2389	0.25		mg/L	96	75-125			Q41387
Matrix Spike Duplicate Sample ID:	Result	Spike Amou	nl	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
245421 Arsenic	0.2492	0.25		mg/L	99	75-125	2	0 - 20	Q41387
	4.0074	0.25		mg/L	94	75-125	0	0 - 20	Q41387
Barium	1.0674	0.20							
Barium Cadmium	1.0674 0.2326	0.25		mg/L	92	75-125	2	0 - 20	Q41387
				mg/L mg/L	92 87	75-125 75-125	2 1	0 - 20 0 - 20	Q41387 Q41387
Cadmium	0.2326	0.25		-					
Cadmium Chromium	0.2326 0.2221	0.25 0.25		mg/L	87	75-125	1	0 - 20	Q41387

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



# Level II QC Report

5/15/09

North Carolina Department of	Project	Winston-Salem, NC	COC Group Number:	G0509103	3
Transportation	Name:				
Attn: David Graham	Project ID:	ROW-204 Winston-Salem	Date/Time Submitted:	5/6/09	8:35
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1			
2923 South Tryon St. Ste 100					

### TCLP Leachable Mercury by CVAA, method 7470A

Method Blank	Result	RL	Control Limit	Units					QC Balch ID
Mercury	0.00002	0.01	<0.005	mg/L					Q41407
Laboratory Control Sample	Result	Spike Amou	int	Units	Recovery %	Recovery Ranges %			QC Batch ID
Mercury	0.00794	0.0093	3	mg/L	85	80-120			Q41407
Matrix Spike Sample ID:	Result	Spike Amou	int	Units	Recovery %	Recovery Ranges %			QC Batch ID
245420 Mercury	0.00839	0,0093	3	mg/L	89	80-120			Q41407
Matrix Spike Duplicate Sample ID:	Result	Spike Amou	int	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
245420 Mercury	0.00868	0.0093	3	mg/L	92	80-120	3	0 - 20	Q41407

#-See Case Narrative



ť

Full Service Analytical & Environmental Solutions         449 Springbrook Read * P.O. Eox 24063 * Charlotte, NC 28224-034         Main Springbrook Read * P.O. Eox 24063 * Charlotte, NC 28224-034         Main Springbrook Read * P.O. Eox 24063 * Charlotte, NC 28224-034         Client Company Name:       Image: Company Name:         Image: Company Name:       Image: Company Name:         Project To/Contact Name:       Company Commental Solutions         Reporting Address:       John Takes         Phone:       John Takes <td< th=""><th></th><th></th><th>PRI</th><th>SM.</th><th></th><th></th><th><b>i</b></th><th></th><th>STODY</th><th></th><th>COR</th><th>1.1</th><th>amples II</th><th></th><th>LAB USE Of</th><th></th><th>NO N/A</th></td<>			PRI	SM.			<b>i</b>		STODY		COR	1.1	amples II		LAB USE Of		NO N/A
448 Service Read = 0.00 x2646 = Controls NO 32224685       Service Read = 0.00 x2646 = Controls NO 3224685       Service Read = 0.00 x2646 = Controls NO 3224685       Service Read = 0.00 x2646 = Controls NO 3224685       Service Read = 0.00 x2646 = Controls NO 3224685       Service Read = 0.00 x2646 = Controls NO 3224685       Service Read = 0.00 x2646 = Controls NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 3224685       Service Read = 0.00 x2646 = Control NO 32466  = Control NO 32466  = Control NO 324666 = Control NO 32466 = Control NO 32466 = Contr	Full Service	Analyt	ical & Enviro	onmental Solution	\$	•	~					17 - Ci				1	
Client Company Name:       Heart 52       Heart 53       Heart 54       Heart 56       Heart 56 <td></td> <td></td> <td></td> <td></td> <td>28224-0543</td> <td></td> <td></td> <td></td> <td></td> <td>Projects</td> <td>(Voc) (N</td> <td> i</td> <td></td> <td></td> <td></td> <td><u>.</u>.</td> <td><math>\equiv \mathbf{Z}</math></td>					28224-0543					Projects	(Voc) (N	i				<u>.</u> .	$\equiv \mathbf{Z}$
Report Po/Contact Name:       Dec.       Contact       Provide address:       Dec.       D					~	*Please ATTA	CH any p	roject spe	cific reporting (			) Ri	生态 计标准计算	graner i reg		<u> </u>	
Reporting Address       Jacks 2       Jack	Report To/Contact Na	me: S	Joure	Graham		provisions an	d/or QC F	lequireme よってい	nts Z Tii i li				とこ わざいと			2	
Phone:       T2:4: C2/C2/Fax (Hea) MAX:         Email (f(ii)) (No) Epail Address Subsche (Hendiktore DType: PLP)       Excel       Other         Email (f(ii)) (No) Epail Address Subsche (Hendiktore DType: PLP)       Excel       Other       Excel       Currentsche (Hendiktore Die Unit Statutore)         Site Location Physical Address SUB-Statutore Site Site Location Physical Address SuB-Statutore Site Site Site Site Physical Address Statutore Site Site Site Site Site Physical Address Statutore Site Site Site Site Site Site Site Site	Reporting Address:	3013	3 5	fryon and	F		00001						ROPER	CONTAIN	ERS used?	Ĭ.	······································
Email (\$\$) (No) Email Address Schedung & (Hers Hilder)       Profiles Order (NO/Billing Metericle)       I/O EE Plant (South Content (South Content))       I/O EE Plant (South Content)       I/O EE Plant (South Conten)       I/O EE Plant (South Content)<																	
EDD Type: PDF_XExcel_Other       Image: Control 20 days 10 day					mailtichen.	Purchase Ord	ler No./Bi	lling Refer	ence		5 D-110						
Site Docation Physical Address: ULLASSE Settern The Location Physical Address: ULLASSE Settern Site Location Physical Address: ULLASSE Settern The Description Collection Physical Address: ULLASSE Settern State Description Collection Physical Address: ULLASSE Settern The Settern Physical Address: ULLASSE Settern State Description Collection: YES NO Settern Physical Address: ULLASSE Settern The Settern Physical Address: ULLASSE Settern The Settern Physical Address: ULLASSE Settern Settern Physical Address: ULLASSE Settern The Settern Physical Address: ULLASSE Settern Settern Physical Address: ULLASSE Settern Settern Physical Address: ULLASSE Settern Settern Physical Address Settern Physical	EDD Type: PDF KE	cel_	Other				ບate ບາເ " Drau	Day Liz Da Days DiSt	andard 10 days II 4	Rush Wo	5 Days rk Must Be	Certifi	cation:				· · · · · · · · · · · · · · · · · · ·
Best Prices control to Restance and the status a control to a restatus a restatus a control to a restatus a restatus a restatus a control to a restatus a re	Site Location Name: _	Ī	200-	sou			d after 15:0	0 will be pro	cessed next busine	Pre-Appro ess day.	oved			_		N/A	
SAMPLE DESCRIPTION     DATE     CULLETED     MILTARY     STAR OR     PRESERVA- TYPES     STAR     REMARKS     PRESERVA- TYPES       Comp - 1     5/5/0     1/40     Soil     24/547     24/547       Comp - 1     5/5/0     1/530     24/547     24/547       Comp - 1     5/5/0     1/530     24/547     24/547       Comp - 2     1/530     24/547     24/547       Drum     1/600     24/547     24/547       Drum     1/600     24/547       Drum     24/547     20/647       Drum     24/547     20/647       Drum     24/647 <td>Site Location Physical</td> <td>Add</td> <td>ress: _U)</td> <td>motor So</td> <td>bem_</td> <td>Turnaround time (SEE REVE</td> <td>is based of RSE FOR TE</td> <td>n business d RMS &amp; COND</td> <td>ays, excluding wee ITIONS REGARDING</td> <td>kends an SERVICES</td> <td>d holidays.</td> <td>1</td> <td></td> <td></td> <td></td> <td>Хио</td> <td>_</td>	Site Location Physical	Add	ress: _U)	motor So	bem_	Turnaround time (SEE REVE	is based of RSE FOR TE	n business d RMS & COND	ays, excluding wee ITIONS REGARDING	kends an SERVICES	d holidays.	1				Хио	_
SAMPLE DESCRIPTION     COLLECTED     MILITARY     WATER OR     TYPE     TYPE     TYPE     SA     DA       (mmp-1     5/5/09     1/40     Soil     Sa     Data     Data     Data       (mmp-1     5/5/09     1/40     Soil     Data     Data     Data       (mmp-1     5/5/09     1/40     Soil     Data     Data     Data       (mmp-1     5/5/09     1/40     Soil     Data     Data     Data       (mmp-1)     5/5/09     1/600     Data     Data     Data     Data       (mmp-1)     Sampled By (Print Name)     Data     Data     Data     Data       (mmp-1)     Sampled By (Print Name)     Data     Data     Data     Data       (mmp-1)     Sampled By (Print Name)     Data     Data     Data     Data       (mmp-1)     Sampled By (Print Name)     Data<			)ATE			SAMPI	E CONTAI	NER	DECERVA		AN AN	ALYSES RE	QUEST	ED	/ /		PRISM
Sampler's Signature       1/600       2454a         Sampler's Signature       1/600       2454a         Sampler's Signature       1/600       2454a         Sampler's Signature       Sampled By (Print Name)       Browned By: (Signature)         Physelect By: (Signature)       Releved By: (Signature)       Date         Physelect By: (Signature)       Baserved By: (Signature)       Date         Physelect By: (Signature)	2			MILITARY	WATER OR		NO.	SIZE		Pro	Ş <sup>a¥</sup> ∕				REMA	RKS	LAB ID NO.
Drum       1600       04543         Sampler's Signature       PRESS DOWN FIRMLY - 3 COF         Sampler's Signature       Break         Bampler's Signature       Sampled By (Print Name)         Buttom Filmule High (Signature)       Becelved By: (Signature)         Press DOWN Filmule Y - 3 COF         Press Down Filmule High (Signature)       Becelved By: (Signature)         Performed Her By: (Signature)       Press Down Filmule High (Signature)         Press Down Filmule High (Signature)       Becelved By: (Signature)         Press Down Filmule Advisor Dy Construction of the Construction of the Laboration:       Date         Prince Her By: (Signature)       Becelved By: (Signature)         Date       Date         Prince Her By: (Signature)       Becelved By: (Signature)         Date       Site Arrival Time:         Site Arrival Time:       Site Construction of the Construction of the Construction of the Laboration:         Code Cons No.       Code Cons No.         Mature Of Structure To Advisor Code Construction of the Code Construction of	Comp-1	5/	5/09	1140	Soil			· · ·		X							245420
Sempler's Signature       Custom       Sampled By (Print Name)       Affiliation       HithayHours         Sampler's Signature       Sampled By (Print Name)       Both By (Print Name)       Affiliation       HithayHours         Upon relinquishing this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be changes after analyses have been initialized.       PRESS DOWNI FIRMLY, - 3 COF         Reinquished By: (Signature)       Reserved By: (Signature)       Date       MittayHours         Reinquished By: (Signature)       Reserved By: (Signature)       Date       Site Arrival Time:         Site Arrival Time:       Budget By: (Signature)       Date       Site Arrival Time:         Site Arrival Time:       Budget By: (Signature)       Date       Site Arrival Time:         Site Departure Time:       Date       Date       Site Arrival Time:         Site Departure Time:       Date       Date       Site Departure Time:         Site Departure Time:       Date       Date       Site Arrival Time:         Site Departure Time:       Date       Date       Site Arrival Time:         Site Departure Time:       Date       Date       Site Departure Time:         Site Departure Time:       Date       Date       Site Arrival	Comp-2		ĺ	1530						X							245421
Sampler's Signature       Custor       Sampled By (Print Name)       Custor       Affiliation       H 2 H       PRISM USE ON         Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.       Date       Military/Hours       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Military/Hours       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Beceived By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematical By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematical By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematere	Driem		$\blacktriangleright$	1600	*					$\left[ \times \right]$							245422
Sampler's Signature       Custor       Sampled By (Print Name)       Custor       Affiliation       H 2 H       PRISM USE ON         Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.       Date       Military/Hours       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Military/Hours       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Beceived By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematical By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematical By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematere							· · · · · · · · · · · · · · · · · · ·			-							
Sampler's Signature       Custor       Sampled By (Print Name)       Custor       Affiliation       H 2 H       PRISM USE ON         Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.       Date       Military/Hours       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Military/Hours       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Beceived By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematical By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematical By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematere		<ul> <li>Invitionalitation</li> <li>Invitionalitation</li> <li>Invitionalitation</li> <li>Invitionalitation</li> </ul>		· · · · · · · · · · · · · · · · · · ·		····			· · · · · · · · · · · · · · · · · · ·								
Sampler's Signature       Custor       Sampled By (Print Name)       Oted Sym       Affiliation       H 2 H       Image: Custor       PRISM USE on Submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.       PRISM USE on Site Arrival Time:	, en en a réan déminération de la contra de la												-				
Sampler's Signature       Custor       Sampled By (Print Name)       Custor       Affiliation       H 2 H       PRISM USE ON         Upon relinquishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any changes must be submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.       Date       Military/Hours       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Military/Hours       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Received By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Beceived By: (Signature)       Date       Date       Site Arrival Time:         Relinquished By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematical By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematical By: (Signature)       Beceived For Print Laboratories By:       Date       Site Arrival Time:       Site Arrival Time:         Mathematere													-				
submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized.       Image: Comments:         Relinquished By: (Signature)       Date       Military/Hours       Additional Comments:         Relinquished By: (Signature)       Date       Military/Hours       Additional Comments:         Relinquished By: (Signature)       Date       Date       Site Arrival Time:         Watter Comment:       Note: Act: Samples Should Bit Taped Should B				Zym	Sampled E	By (Print Name)	Br					+ 1 H			PRESS DOW	N FIRML	Y - 3 COPIES
Relinquished By: (Signature)       Date       Military/Hours       Additional Comments:         Relinquished By: (Signature)       Date       Date       Additional Comments:       Site Arrival Time:         Relinquished By: (Signature)       Date       Date       Date       Site Departure Time:         Relinquished By: (Signature)       Date       Date       Site Departure Time:         Wallbod Of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH OUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY.       CGC Group No.         Samples ARE/NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY.       CGC Group No.	Upon relinquishing, this submitted in writing to	s Chai the Pi	n of Custo rism Proie	ody is your aut	horization fo	or Prism to proc charges for any	eed with t changes	he analyse after analy	s as requested a ses have been in	bove. An itialized.	ny changes	must be				PRISM	USE ONLY
Refineurshed By: (Signature)     Date       With M. (     Date       With M. (     Samples angles of Shipment:       Note: ALC SAMPLE COOLERS SHOULD BE TAPED SHUT WITH OUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY.     Date       Mailboor of Shipment:     NOTE: ALC SAMPLE COOLERS SHOULD BE TAPED SHUT WITH OUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY.     CCC Group No.												Milita <i>ry/</i>	Hours	Additic	nal Comments:	Site Arrival	Time:
Mailore of Shipmani: NOTE: ALC SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY.	Relinquished By: (Signature)				Red	ceived By: (Signature	ə)				Date					Site Depart	ture Time:
Mileage:	Religenshed By: (Signature)	Ą	7		Bex	ceived For Priem	oratories By:				Daje					Field Tech	Fee:
				RS SHOULD BE TA	PED SHUT WITH	H CUSTODY SEALS	FOR TRANS	PORTATION T	O THE LABORATOR	<i>ſ</i> .	56/0	g 08:3	35			Mileage:	
		•				UNTIL RECEIVED	AT THE LABO	RATORY.			G-\$\$5	Ø91Ø3					
NPDES:       UST:       GROUNDWATER:       DRINKING WATER:       SOLID WASTE:       RCRA:       CERCLA       LANDFILL       OTHER:       SEE REVERSE FOR TERMS & CONDITION         DNC       DSC       DNC		sc		WATER: D	RINKING W. NC SC					u sc   (	NC OS		a sc			SEE F TERMS	EVERSE FOR & CONDITIONS

.

ORIGINAL

## **Case Narrative (Revised)**



Date: 05/26/09 Company: North Carolina Department of Transportation Contact: David Graham Address: c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203

**Client Project ID:** Prism COC Group No: Collection Date(s): Lab Submittal Date(s): ROW-204 G0309661 3/23/09 thru 3/24/09 03/25/09

Client Project Name Or No: Winston Salem WBS# 34871.1.1

This is a revised report and supersedes our original laboratory report dated 4/7/09. Client revised client sample IDs on the COC from BFW-5-5 to BFW-5-2 and BFW-6-5 to BFW-6-2 and added TCLP Metals analyses to BFW-5-0.5, BFW-5-2,8-2-0.5, 8-3-0.5, 8-4-0.5, 9-1-5 and 8-15-3,

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 58 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample, A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

Semi Volatile Analysis

N/A

#### Volatile Analysis

N/A

#### Metals Analysis

Analysis Note for Q40320 MS Arsenic: MS recovery outside of the control limits.

Analysis Note for Q40320 MS Lead: MS recovery outside of the control limits.

Analysis Note for Q40320 MSD Arsenic: MSD recovery outside the control limits.

Analysis Note for Q40320 MSD Lead: MSD recovery outside the control limits.

Analysis Note for Q40406 MS Lead: MS recovery outside of the control limits. Matrix interference is suspected. Post-digestion spike recovery (71%) is outside the acceptance limits (80-120%).

Analysis Note for Q40406 MSD Lead; MSD recovery outside the control limits.

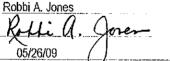
### Wet Lab and Micro Analysis

No Anomalies Reported

Please call if you have any questions relating to this analytical report.

Data Reviewed by:

Signature: **Review Date:** 



Project Manager:

Approval Date:

Signature:

O<sub>1</sub> Angela

05/26/09

**Data Qualifiers Key Reference:** 

B: Compound also detected in the method blank.

#; Result outside of the QC limits.

DO: Compound diluted out.

E: Estimated concentration, calibration range exceeded.

J: The analyte was positively identified but the value is estimated below the reporting limit.

H: Estimated concentration with a high bias.

L: Estimated concentration with a low bias.

M: A malrix effect is present.

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-1-0.5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241470	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309661	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/24/09	8:41
2923 South Tryon St. Ste 100	-		Time Submitted:	03/25/09	8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	87.4	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic	4.5	mg/kg	0.56	0.056	1	6010B	03/31/09 1:52	heasler	Q40290
Lead	23	mg/kg	0.28	0.022	1	6010B	03/31/09 1:52	heasler	Q40290
Sample Preparation	:		2.	04g/	50 mL	3050B	03/30/09 8:20	mbarber	P24131

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



## Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soil

 Client Sample ID:
 8-2-0.5

 Prism Sample ID:
 241471

 COC Group:
 G0309661

 Time Collected:
 03/24/09
 9:23

 Time Submitted:
 03/25/09
 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	80.2	%		<u>_</u>	1	SM2540 G	03/27/09 14:30	) dsullivan	
- Ercent Oonda	00.2	70			•	01120100	COLLING THE		
Metals by ICP									
Arsenic	9.5	mg/kg	0.61	0.060	. 1	6010B	03/31/09 2:13	heasler	Q40290
Lead	120	mg/kg	0.30	0.023	1	6010B	03/31/09 2:13	heasler	Q40290
Sample Preparat	tion:		2	.05g/	50 mL	3050B	03/30/09 8:20	mbarber	P24131
TCLP Extraction for Metals TCLP Extraction	Complete		-		1	1311	05/14/09 14:40	mbarber	
TCLP Leachable Mercury by CVA Mercury	AA BRL	mg/L	0.010	0.000014	1	7470A	05/21/09 17:24	dsullivan	Q41662
Sample Prepar	ration:			20 mL /	30 mL	7470A	05/21/09 12:15	dsullivan	P24623
TCLP Leachable Metals by ICP	5.51	. 0	0.050	0.0029		6010B	05/22/09 4:34	heasler	Q41637
Arsenic	BRL	mg/L			1				
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/22/09 4:34	heasler	Q41637
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	05/22/09 4:34	heasler	Q41637
Chromium	BRL	mg/L	0.25	0.0006	1	6010B	05/22/09 4:34	heasler	Q41637
Lead	BRL	mg/L	0,050	0.0021	1	6010B	05/22/09 4:34	heasler	Q41637
Selenium	BRL	mg/L	0,050	0.0035	1	6010B	05/22/09 4:34	heasler	Q41637
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/22/09 4:34	heasler	Q41637
Sample Prepar	ation:			50 mL /	50 mL	3010A	05/15/09 9:50	mbarber	P24568

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203		Projec Projec	et Name: et ID: et No.: le Matrix:	ROW-2 WBS#	n Salem 204 34871.1.1	Pris CO Tim	ent Sample ID: sm Sample ID: C Group: le Collected: le Submitted:		1 9:2: 8:1!	-
Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analy	/st	Batch ID

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St, Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS#34871.1.1Sample Matrix:Soil

 Client Sample ID:
 8-3-0.5

 Prism Sample ID:
 241472

 COC Group:
 60309661

 Time Collected:
 03/24/09
 9:24

 Time Submitted:
 03/25/09
 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	79.0	%			1	SM2540 G	03/30/09 15:10	kpowers	
Metals by ICP									
Arsenic	8.8	mg/kg	0.63	0.062	1	6010B	03/31/09 2:20	heasler	Q40290
Lead	310	mg/kg	1.6	0.12	5	6010B	03/31/09 17:02	heasler	Q40290
Sample Preparation	n:		2	2.02g/	50 mL	30508	03/30/09 8:20	mbarber	P24131
<u>pH Value, Electrometric Method</u> pH	5.53	pH units			1	9045C	03/25/09 12:51	kpowers	Q40174
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/14/09 14:40	mbarber	
TCLP Leachable Mercury by CVAA Mercury	BRI.	mg/L	0.010	0.000014	1	7470A	05/21/09 17:28	dsullivan	Q41662
Sample Preparati	on:			20 mL /	30 mL	7470A	05/21/09 12:15	dsullävan	P24623
TCLP Leachable Metals by ICP Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/22/09 4:41	heasler	Q41637
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/22/09 4:41	heaster	Q41637
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	05/22/09 4:41	heasier	Q41637
Chromium	BRL	mg/L	0.25	0,0006	1	6010B	05/22/09 4:41	heasler	Q41637
_ead	0.11	mg/L	0.050	0.0021	1	6010B	05/22/09 4:41	heasler	Q41637
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/22/09 4:41	heasler	Q41637
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/22/09 4:41	heasler	Q41637
Sample Preparatio	on:			50 mL /	50 mL	3010A	05/15/09 9:50	mbarber	P24568

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203		Projec Projec		ROW-2 WBS#	n Salem 204 34871.1.1	Pri: CO Tim	ent Sample ID: sm Sample ID: C Group: ne Collected: ne Submitted:		9:24 8:15	
Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analy	01 -	atch ID

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D, Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



## Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203

Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soil

 Client Sample ID:
 8-4-0.5

 Prism Sample ID:
 241473

 COC Group:
 60309661

 Time Collected:
 03/24/09
 9:25

 Time Submitted:
 03/25/09
 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	79.5	%	·		1	SM2540 G	03/27/09 14:30	dsuilivan	
Metals by ICP Arsenic	8.3	mg/kg	0.62	0.061	1	6010B	03/31/09 2:25	heasler	Q40290
Lead .	52	mg/kg	0.31	0.024	1	6010B	03/31/09 2:25	heasler	Q40290
Sample Prepara	ition:		2	2.03 g /	50 mL	3050B	03/30/09 8:20	mbarber	P24131
TCLP Extraction for Metals TCLP Extraction	Complete			-	1	1311	05/14/09 14:40	mbarber	
TCLP Leachable Mercury by CV Mercury	AA BRL	mg/L	0.010	0.000014	1	7470A	05/21/09 17:39	dsullivan	Q41662
Sample Prepa	ration:			20 mL /	30 mL	7470A	05/21/09 12:15	dsullivan	P24623
TCLP Leachable Metals by ICP									
Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/22/09 4:48	heasler	Q41637
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/22/09 4:48	heasler	Q41637
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	05/22/09 4:48	heasler	Q41637
Chromium	BRL	mg/L	0.25	0.0006	1	6010B	05/22/09 4:48	heasler	Q41637
Lead	BRL	mg/L	0.050	0.0021	1	6010B	05/22/09 4:48	heaster	Q41637
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/22/09 4:48	heasler	Q41637
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/22/09 4:48	heasler	Q41637
Sample Prepa	ration:			50 mL /	50 mL	3010A	05/15/09 9:50	mbarber	P24568

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203	Project ID:	Winston Salem ROW-204 WBS# 34871.1.1 Soil	Client Sample ID: Prism Sample ID: COC Group: Time Collected: Time Submitted:	241473 G0309663 03/24/09	9:25 8:15	
---	-------------	--	---	--------------------------------	--------------	--

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	9-1-1	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241474	
Attn: David Graham	Project No.:	WBS# 34871.1.1	•		
c/o Hart and Hickman	,		COC Group:	G0309661	
	Sample Matrix:	Soll	Time Collected:	03/24/09	13:46
2923 South Tryon St. Ste 100			Time Submitted:	03/25/09	8;15
Charlotte, NC 28203					

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	83.4	%			1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by ICP</u> Arsenic	6.5	mg/kg	0.60	0.059	1	6010B	03/31/09 2:32	heasler	Q40290
Lead	100	mg/kg	0.30	0.023	1	6010B	03/31/09 2:32	heasler	Q40290
Sample Preparati	on:			2g /	50 mL	3050B	03/30/09 8:20	mbarber	P24131
<u>pH Value, Electrometric Method</u> pH	4.77	pH units	- i		1	9045C	03/25/09 12:52	kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied,

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



## Laboratory Report

05/26/09

Client Sample ID: 9-1-5 North Carolina Department of Project Name: Winston Salem Transportation Project ID: ROW-204 Prism Sample ID: 241475 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 13:50 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	84.7	%			1	SM2540 G	03/30/09 15:10	kpowers	
Metals by ICP			0.50	0,058	4	6010B	03/31/09 2:38	handlas	Q40290
Arsenic	67	mg/kg	0.58		1				
Lead	860	mg/kg	3.0	0.23	10	6010B	03/31/09 17:11	neasier	Q40290
Sample Preparatio	in:		2	2,02g /	50 mL	3050B	03/30/09 8:20	mbarber	P24131
<u>pH Value, Electrometric Method</u> pH	7.43	pH units			1	9045C	03/25/09 12:53	kpowers	Q40174
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/14/09 14:40	mbarber	
<u>TCLP Leachable Mercury by CVAA</u> Mercury	BRL	mg/L	0.010	0.000014	1	7470A	05/19/09 15:31	dsullivan	Q41592
Sample Preparat	ion:			20 mL /	30 mL	7470A	05/19/09 10:00	dsullivan	P24594
TCLP Leachable Metals by ICP Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/22/09 4:54	heasler	Q41637
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/22/09 4:54	heasler	Q41637
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	05/22/09 4:54	heasler	Q41637
Chromium	BRL	mg/L	0.25	0.0006	1	6010B	05/22/09 4:54	heasler	Q41637
Lead	0.16	mg/L	0.050	0.0021	1	6010B	05/22/09 4:54	heasler	Q41637
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/22/09 4:54	heaster	Q41637
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/22/09 4:54	heasler	Q41637
Sample Preparat	ion:			50 mL /	50 mL	3010A	05/15/09 9:50	mbarber	P24568

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

13:50

8:15

North Carolina Department of Project Name: Winston Salem Client Sample ID: 9-1-5 Transportation Project ID: **ROW-204** Prism Sample ID: 241475 Attn: David Graham Project No .: WBS# 34871,1,1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID

#### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soil

Laboratory Report

05/26/09

Client Sample ID:	9-2-1	
Prism Sample ID:	241476	
COC Group:	G0309661	
Time Collected:	03/24/09	13:29
Time Submitted:	03/25/09	8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	86.5	%			1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by ICP</u> Arsenic	4.6	mg/kg	0.56	0,056	1	6010B	03/31/09 2:54	heasler	Q40290
Lead	30	mg/kg	0.28	0.022	1	6010B	03/31/09 2:54	heasler	Q40290
Sample Preparation:			2.	.05g /	50 mL	3050B	03/30/09 8;20	mbarber	P24131
pH Value, Electrometric Method pH	4.92	pH units	1		1	9045C	03/25/09 12:55	kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 9-2-5 Transportation Project ID: **ROW-204** Prism Sample ID: 241477 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 13:36 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	88.2	%			1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by ICP</u> Arsenic	4.5	mg/kg	0.56	0.056	1	6010B	03/31/09 3:01	heasler	Q40290
Lead	86	mg/kg	0.28	0.022	1	6010B	03/31/09 3:01	heasler	Q40290
Sample Preparation:			2.	02g /	50 mL	3050B	03/30/09 8:20	mbarber	P24131
<mark>pH Value, Electrometric Method</mark> pH	4.58	pH units			1	9045C	03/25/09 12:56	kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



## Laboratory Report

05/26/09

12:35

North Carolina Department of Project Name: Winston Salem Client Sample ID: BFW-1-0.5 Transportation Project ID: **ROW-204** Prism Sample ID: 241478 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	87.2	%			1	SM2540 G	03/30/09 15:10	) kpowers	
<u>Metals by ICP</u> Arsenic	7.4	mg/kg	0.56	0.055	1	6010B	03/31/09 3:07	heasler	Q40290
Lead	87	mg/kg	0,28	0.022	1	6010B	03/31/09 3:07	heasler	Q40290
Sample Preparation:			2.	05g /	50 mL	3050B	03/30/09 8:20	mbarber	P24131
<u>pH Value, Electrometric Method</u> pH	7.60	pH units			1	9045C	03/25/09 12:57	/ kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Charlotte, NC 28203

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BFW-1-2 Transportation Project ID: **ROW-204** Prism Sample ID: 241479 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 12:32 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	80.8	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic Lead	6.6 170	mg/kg mg/kg	0.61 0.30	0.060 0.023	1 1	6010B 6010B	03/31/09 3:13 03/31/09 3:13	heasler heasler	Q40290 Q40290
Sample Preparation:			2.	04g /	50 mL	3050B	03/30/09 8;20	mbarber	P24131

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 14 of 52



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BFW-2-0.5 Transportation Project ID: ROW-204 Prism Sample ID: 241480 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil 03/24/09 Time Collected: 12:39 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	85.9	%			1	SM2540 G	03/27/09 14:30	) dsułlivan	
<u>Metals by ICP</u> Arsenic Lead	11 70	mg/kg mg/kg		0.057 0.022	1	6010B 6010B	03/31/09 3:19 03/31/09 3:19	heasler heasler	Q40290 Q40290
Sample Preparation:			2.	.03g /	50 տև	3050B	03/30/09 8:20	mbarber	P24131

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 15 of 52



**Laboratory Report** 

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BFW-2-2 Transportation Project ID: ROW-204 Prism Sample ID: 241481 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 12:42 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	76.4	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic	6.2	mg/kg	0.66	0.065	1	6010B	03/31/09 3:26	heasler	Q40290
Lead	45	mg/kg	0.33	0.025	1	6010B	03/31/09 3:26	heasler	Q40290
Sample Preparation	:		1.	.99g /	50 mL	3050B	03/30/09 8:20	mbarber	P24131

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied,

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

Client Sample ID: BFW-3-0.5 North Carolina Department of Project Name: Winston Salem Transportation Project ID: **ROW-204** Prism Sample ID: 241482 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 12:48 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	90.0	%			1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by ICP</u> Arsenic Lead	<del>6</del> .1 74	mg/kg mg/kg	0.56 0.28	0.055 0.021	1	6010B 6010B	03/31/09 3:32 03/31/09 3:32	heasler heas <b>le</b> r	Q40290 Q40290
Sample Preparati	on:			2g /	50 mL	3050B	03/30/09 8:20	mbarber	P24131
<u>pH Value, Electrometric Method</u> pH	7.13	pH units	;		1	9045C	03/25/09 12:59	kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

12:52

8:15

North Carolina Department of Project Name: Winston Salem Client Sample ID: BFW-3-2 Transportation Project ID: **ROW-204** Prism Sample ID: 241483 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	78.6	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic Lead	7.9 40	mg/kg mg/kg	0.63 0.31	0.062 0.024	1	60108 60108	03/31/09 3:38 03/31/09 3:38	heasler heasler	Q40290 Q40290
Sample Preparation:				.03g /	50 mL	3050B	03/30/09 8:20	mbarber	P24131

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soil

Client Sample ID: BFW-4-0.5 Prism Sample ID: 241484 COC Group: G0309661 Time Collected: 03/24/09 12:59 Time Submitted: 03/25/09 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	75.1	%			1	SM2540 G	03/30/09 15:10	) kpowers	
<u>Metals by ICP</u> Arsenic	5.6	mg/kg	0.65	0.065	1	6010B	04/01/09 19:3	3 heasler	Q40320
Lead	120	mg/kg	0.33	0.025	1	6010B	04/01/09 19:3	3 heasler	Q40320
Sample Preparation:			2.	.04g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132
pH Value, Electrometric Method pH	7.78	pH units			1	9045C	03/25/09 13:00	) kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applled.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BFW-4-2 Transportation Project ID: ROW-204 Prism Sample ID: 241485 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 13:02 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	75.1	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic	12	mg/kg	0,66	0.065	1	6010B	04/01/09 19:54	heasler	Q40320
Lead	76	mg/kg	0.33	0.025	1	6010B	04/01/09 19:54	heasler	Q40320
Sample Preparation:			2.	02g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS#34871.1.1Sample Matrix:Soil

 Client Sample ID:
 BFW-5-0.5

 Prism Sample ID:
 241486

 COC Group:
 G0309661

 Time Collected:
 03/24/09
 13:07

 Time Submitted:
 03/25/09
 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	81.5	%			1	SM2540 G	03/27/09 14:30	) dsullivan	
Metals by ICP		<u>,</u>	0.60	0.061	4	6010B	04/01/09 20:01	heasler	Q40320
Arsenic	29 250	mg/kg mg/kg	0,62 7.6	0.061	1 5	6010B	04/02/09 18:39		Q40320
Lead Sample Preparat		mg/kg		.99 g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/14/09 14:40	) mbarber	
TCLP Leachable Mercury by CV/ Mercury	AA BRL	mg/L	0.010	0.000014	· 1	7470A	05/19/09 16:12	dsullivan	Q41592
Sample Prepar	ation:			20 mL /	30 mL	7470A	05/19/09 10:00	) dsullivan	P24594
TCLP Leachable Metals by ICP Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/22/09 5:00	heasler	Q41637
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/22/09 5:00	heasler	Q41637
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	05/22/09 5:00	heasler	Q41637
Chromium	BRL	mg/L	0.25	0,0006	1	6010B	05/22/09 5:00	heasler	Q41637
Lead	BRL	mg/L	0.050	0,0021	1	6010B	- 05/22/09 5:00	heasler	Q41637
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/22/09 5:00	heasler	Q41637
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/22/09 5:00	heasler	Q41637
Sample Prepar	ration:			50 mL /	50 mL	3010A	05/15/09 9:50	mbarber	P24568

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BFW-5-0.5 Transportation Project ID: **ROW-204** Prism Sample ID: 241486 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 13:07 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
	· · · · · · · · · · ·								

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



### Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soil

 Client Sample ID:
 BFW-5-2

 Prism Sample ID:
 241487

 COC Group:
 G0309661

 Time Collected:
 03/24/09
 13:15

 Time Submitted:
 03/25/09
 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination		¢/			4	SM2540 G	03/27/09 14:30	deulliana	
Percent Solids	80.0	%			1	302340 0	03/27/09 14.30	USUNVALI	
Metals by ICP									
Arsenic	27	mg/kg	0.63	0.062	1	6010B	04/01/09 20:06	heasler	Q40320
Lead	170	mg/kg	0.31	0.024	1	6010B	04/01/09 20:06	heasler	Q40320
Sample Pr	eparation:			2g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/14/09 14:40	mbarber	
TCLP Leachable Mercury by C Mercury	<u>VAA</u> BRL	mg/L	0.010	0.000014	1	7470A	05/19/09 16:16	i dsuilivan	Q41592
Sample Pre	paration:			20 mL /	30 mL	7470A	05/19/09 10:00	) dsullivan	P24594
TCLP Leachable Metals by ICF			0.050	0.0000		60405	05/00/00 5.07	h a a atau	044697
Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/22/09 5:07	heasler	Q41637
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/22/09 5:07	heasler	Q41637
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	05/22/09 5:07	heasler	Q41637
Chromium	BRL	mg/L	0.25	0.0006	1	6010B	05/22/09 5:07	heasler	Q41637
Lead	BRL	mg/L	0.050	0.0021	1	6010B	05/22/09 5:07	heasier	Q41637
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/22/09 5:07	heasler	Q41637
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/22/09 5:07	heasler	Q41637
Sample Prep	paration:			50 mL /	50 mL	3010A	05/15/09 9:50	mbarber	P24568

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 23 of 52



Laboratory Report

Date/Time

05/26/09

ID

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203		Project Name Project ID: Project No.: Sample Matrix	ROW-204 WBS# 34871.1.1	Client Sample II Prism Sample II COC Group: Time Collected: Time Submitted:	0: 241487 G0309661 03/24/09 13:15
Parameter	Result	Units Repo	rt MDL Dilution	Method Analysis	a Analyst Batch

Factor

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Limit

Angela D. Overcash, V.P. Laboratory Services



# Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	BFW-6-0.5	)
Transportation	Project ID:	ROW-204	Prism Sample ID:	241488	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309661	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/24/09	13:16
2923 South Tryon St. Ste 100	·		Time Submitted:	03/25/09	8:15
Charlotte, NC 28203					

Parameter	Result	Units	Report Límit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	87.0	%			1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by ICP</u> Arsenic	8.1	mg/kg	0.56	0,056	1	6010B	04/01/09 20:12		Q40320
Lead	89	mg/kg	0.28	0.022	1	6010B	04/01/09 20:12	heasler	Q40320
Sample Preparation:			2	.05g/	50 mL	3050B	03/30/09 9:50	mbarber	P24132
<u>pH Value, Electrometric Method</u> pH	7.85	pH units	3		1	9045C	03/25/09 13:01	kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



#### Laboratory Report

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: BFW-6-2 Transportation Project ID: ROW-204 Prism Sample ID: 241489 Attn: David Graham WBS# 34871.1.1 Project No.: COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 13:18 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	85.1	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic	6.8	mg/kg		0.058	1	6010B	04/01/09 20:18		Q40320
Lead Sample Preparation:	160	mg/kg		0.022 .02 g /	1 50 mL	6010B 3050B	04/01/09 20:18 03/30/09 9:50	heasler mbarber	Q40320 P24132

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

Client Sample ID: 10-1-1 North Carolina Department of Project Name: Winston Salem Transportation Project ID: ROW-204 Prism Sample ID: 241490 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Time Collected: 03/24/09 11:07 Sample Matrix: Soil 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	85.9	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic	5.4	mg/kg		0.058	1	6010B	04/01/09 20:34		Q40320
Lead	53	mg/kg	0.29	0.022	1	6010B	04/01/09 20:34	heasler	Q40320
Sample Prepar	ation:			2g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-1-5 Transportation Project ID: ROW-204 Prism Sample ID: 241491 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 11:08 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determinatio Percent Solids	<u>n</u> 83.6	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic	4.9	mg/kg	0,60	0.060	1	6010B	04/01/09 20:40	heasler	Q40320
Lead	23	mg/kg	0.30	0.023	1	6010B	04/01/09 20:40	heasler	Q40320
Sample Prep	paration:		1.	99 g /	50 mL.	3050B	03/30/09 9:50	mbarber	P24132

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203

Project Name: Winston Salem Project ID: ROW-204 Project No .: WBS# 34871.1.1 Sample Matrix: Soil

Client Sample ID: 10-2-1 Prism Sample ID: 241492 COC Group: G0309661 Time Collected: 03/24/09 11:04 Time Submitted: 03/25/09 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	83.6	%			1	SM2540 G	03/30/09 15:10	) kpowers	
<u>Metals by ICP</u> Arsenic	7.7	mg/kg	0.59	0.058	1	6010B	04/01/09 20:4	) heasler	Q40320
Lead	87	mg/kg	0.29	0.023	1	6010B	04/01/09 20:4	3 heasler	Q40320
Sample Preparation:			2.	03g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132
<u>pH Value, Electrometric Method</u> pH	4.39	pH units	i		1	9045C	03/25/09 13:0/	2 kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203

Project Name:Winston SalemProject ID:ROW-204Project No.:WBS#34871.1.1Sample Matrix:Soil

 Client Sample ID:
 10-2-5

 Prism Sample ID:
 241493

 COC Group:
 60309661

 Time Collected:
 03/24/09
 11:05

 Time Submitted:
 03/25/09
 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	79.7	%			1	SM2540 G	03/27/09 14:30	dsullivan	<u> </u>
<u>Metals by ICP</u> Arsenic	5.6	mg/kg	0.62	0.062	1	60108	04/01/09 20:54	heasler	Q40320
Lead	17	mg/kg	0.31	0.024	1	6010B	04/01/09 20:54	heasler	Q40320
Sample Preparation:			2.	01g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied,

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Charlotte, NC 28203

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-3-1 Transportation ROW-204 Project ID: Prism Sample ID: 241494 Attn: David Graham Project No.: WBS#34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 10:58 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15

Parameter	-	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids D Percent Solids	Determination	85.1	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic		12	mg/kg	0.57	0.057	1	6010B	04/01 <b>/09</b> 20:59	heasler	Q40320
Lead		140	mg/kg	0.29	0.022	1	6010B	04/01/09 20:59	heasler	Q40320
	Sample Preparation:			2.	05g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Charlotte, NC 28203

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-3-5 Transportation Project ID: **ROW-204** Prism Sample ID: 241495 Attn: David Graham Project No.: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 10;59 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	83.6	%			1	SM2540 G	03/27/09 14:30	dsuilivan	
<u>Metals by ICP</u> Arsenic	9,6	mg/kg	0.59	0.059	1	6010B	04/01/09 21:06	heasler	Q40320
Lead	9,2	mg/kg	0.30	0.023	1	6010B	04/01/09 21:06	heasler	Q40320
Sample Preparation	ז:		2.	.02g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soil

Client Sample ID:10-4-1Prism Sample ID:241496COC Group:G0309661Time Collected:03/24/0910:51Time Submitted:03/25/098:15

Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
86.1	%			1	SM2540 G	03/27/09 14:30	dsullivan	
16	mg/kg	0.58	0.057	1	6010B			Q40320
33 Ition:	mg/kg	0,29	0.022 2 g /	1 50 mL	6010B 3050B	04/01/09 21:12	mbarber	Q40320 P24132
	86.1 16 33	86.1 % 16 mg/kg 33 mg/kg	Limit 86.1 % 16 mg/kg 0.58 33 mg/kg 0.29	Limit 86.1 % 16 mg/kg 0.58 0.057 33 mg/kg 0.29 0.022	Limit Factor 86.1 % 1 16 mg/kg 0.58 0.057 1 33 mg/kg 0.29 0.022 1	Limit         Factor           86.1         %         1         SM2540 G           16         mg/kg         0.58         0.057         1         6010B           33         mg/kg         0.29         0.022         1         6010B	Indext         Indext         Date/Time           B6.1         %         1         SM2540 G         03/27/09         14:30           16         mg/kg         0.58         0.057         1         6010B         04/01/09         21:12           33         mg/kg         0.29         0.022         1         6010B         04/01/09         21:12	Init         Factor         Date/Time           86.1         %         1         SM2540 G         03/27/09         14:30 dsullivan           16         mg/kg         0.58         0.057         1         6010B         04/01/09         21:12 heaster           33         mg/kg         0.29         0.022         1         6010B         04/01/09         21:12 heaster

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only, No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Laboratory Report

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-4-5 Transportation Project ID: **ROW-204** Prism Sample ID: 241497 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 10:52 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL.	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination			<u></u>	· · · · · ·					
Percent Solids	80.0	%			1	SM2540 G	03/27/09 14:30	dsullivan	
Metals by ICP									
Arsenic	4.9	mg/kg	0.62	0.061	1	6010B	04/01/09 21:19	heasler	Q40320
Lead	26	mg/kg	0.31	0.024	1	6010B	04/01/09 21:19	heasler	Q40320
Sample Preparation:			2.	02g /	50 mL	3050B	03/30/09 9:50	mbarber	P24132

Sample Comment(s):

BRL ≈ Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied,

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments, All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

Client Sample ID: 10-5-1 North Carolina Department of Project Name: Winston Salem Transportation Project ID: **ROW-204** Prism Sample ID: 241498 Attn: David Graham Project No.: WBS# 34871.1.1 G0309661 COC Group: c/o Hart and Hickman 03/24/09 Sample Matrix: Soil Time Collected: 10:49 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	82.2	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic Lead	11 78	mg/kg mg/kg		0.060 0.023	1	6010B 6010B	04/03/09 3:58 04/03/09 3:58	heasler heasler	Q40406 Q40406
Sample Prep.				2g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Laboratory Report

05/26/09

North Carolina Department of . Project Name: Winston Salem Client Sample ID: 10-5-5 Transportation Project ID: **ROW-204** Prism Sample ID: 241499 Attn: David Graham Project No.: WBS#34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 10:50 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	80.3	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic Lead	5.9 35	mg/kg mg/kg		0.060 0.024	1 1	6010B 6010B	04/03/09 4:18 04/03/09 4:18	heasler heasler	Q40406 Q40406
Sample Preparation:			2.	04g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied,

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Charlotte, NC 28203

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735 Laboratory Report

05/26/09

North Carolina Department of Client Sample ID: 10-6-1 Project Name: Winston Salem Transportation Project ID: **ROW-204** Prism Sample ID: 241500 Attn: David Graham WBS# 34871.1.1 Project No.: COC Group: G0309661 c/o Hart and Hickman 03/24/09 10:36 Sample Matrix: Soil Time Collected: 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	81.7	%			1	SM2540 G	03/30/09 15:1	() kpowers	
<u>Metals by ICP</u> Arsenic	11	mg/kg	0.60	0.059	1	6010B	04/03/09 4:24		Q40406
Lead Sample Preparation:	63	mg/kg	0.30 2	0.023 .05 g /	1 50 mL	6010B 3050B	04/03/09 4:24 04/01/09 10:0		Q40406 P24159
<u>pH Value, Electrometric Method</u> pH	4.81	pH units	;		1	9045C	03/25/09 13:0	3 kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state cartification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Charlotte, NC 28203

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-6-5 Transportation Project ID: **ROW-204** Prism Sample ID: 241501 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 10:38 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	87.7	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic	18	mg/kg	0.56	0.055	1	6010B	04/03/09 4:30	heasler	Q40406
Lead	26	mg/kg	0.28	0.022	1	6010B	04/03/09 4:30	heasler	Q40406
Sample Preparation:			2.	04g /	50 mL	305 <b>0</b> B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



Laboratory Report

05/26/09

Client Sample ID: 10-7-1 North Carolina Department of Project Name: Winston Salem Transportation Project ID: ROW-204 Prism Sample ID: 241502 Attn: David Graham Project No.: WBS#34871.1.1 COC Group: G0309661 c/o Hart and Hickman 10:23 Sample Matrix: Soil Time Collected: 03/24/09 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	86.2	%			1	SM2540 G	03/27/09 14:30	dsullivan	
Metals by ICP Arsenic	BRL	mg/kg	0.57	0.056 0.022	1	6010B 6010B	04/03/09 4:37 04/03/09 4:37	heasler	Q40406 Q40406
Lead Sample Preparation	7,5 n:	mg/kg	0.28 2.	0.022	տե	3050B	04/03/09 4:37		P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soil

Client Sample ID: 10-7-5 Prism Sample ID: 241503 COC Group: G0309661 Time Collected: 03/24/09 10:24 Time Submitted: 03/25/09 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination									
Percent Solids	89.8	%			1	SM2540 G	03/27/09 14:30	dsullivan	
Metals by ICP									
Arsenic	BRL	mg/kg	0.56	0,055	1	6010B	04/03/09 4:42	heasler	Q40406
Lead	6.7	mg/kg	0.28	0.022	1	6010B	04/03/09 4:42	heasler	Q40406
Sample Preparation:			1.	.99 g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-8-1	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241504	
Attn: David Graham	Project No.:	WBS#34871.1.1	COC Group:	G0309661	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/24/09	10:19
2923 South Tryon St. Ste 100	,		Time Submitted:	03/25/09	8:15
Charlotte, NC 28203					

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determinat Percent Solids	i <u>ion</u> 87.1	%			1	SM2540 G	03/27/09 14:30	dsullivan	
<u>Metals by ICP</u> Arsenic	0.70	mg/kg	0.57	0.056	1	6010B	04/03/09 4:58	heasler	Q40406
Lead	8.1	mg/kg	0.28	0.022	1	6010B	04/03/09 4:58	heasler	Q40406
Sample Pr	reparation:		2.	02g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



**Laboratory Report** 

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-8-5 Transportation Project ID: ROW-204 Prism Sample ID: 241505 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 10:20 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination								· · · · · · · · · · · · · · · · · · ·	
Percent Solids	83.1	%			1	SM2540 G	03/30/09 15:10	kpowers	
Metals by ICP									
Arsenic	BRL	mg/kg	0.60	0.059	1	6010B	04/03/09 5:05	heasler	Q40406
Lead	12	mg/kg	0.30	0.023	1	6010B	04/03/09 5:05	heasler	Q40406
Sample Preparation	1:		2.	02g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Charlotte, NC 28203

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert, No. 37735

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-9-1 Transportation Project ID: **ROW-204** Prism Sample ID: 241506 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 10:16 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	79.9	%			1	SM2540 G	03/30/09 15:10	kpowers	
Metals by ICP Arsenic	12	mg/kg	0.61	0.060	1	6010B	04/03/09 5:10	heasler	Q40406
Lead Sample Preparation:	48	mĝ/kg	0.31 2.	0.024 05g/	1 50 mL	6010B 3050B	04/03/09 5:10 04/01/09 10:00	heasler mbarber	Q40406 P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Page 43 of 52



## Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	10-9-5	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241507	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group;	G0309661	
c/o Hart and Hickman	Sample Matrix:		•		10:17
2923 South Tryon St. Ste 100			Time Submitted:		8:15
Charlotte, NC 28203				00120100	0.10

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	84.5	%			1	SM2540 G	03/30/09 15:10	kpowers	
Metals by ICP Arsenic	9.2	mg/kg	0.59	0.058	1	6010B	04/03/09 5:17	heasler	Q40406
Lead	43	mg/kg	0.29	0.023	1	6010B	04/03/09 5:17	heasler	Q40406
Sample Preparation:			2.	02g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than

NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID	: 10-18-1	
Transportation	Project ID:	ROW-204	Prism Sample ID	241508	
Attn: David Graham	,	WBS# 34871.1.1	COC Group:	G0309661	l
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/24/09	10:14
2923 South Tryon St. Ste 100	*		Time Submitted:		8:15
Charlotte, NC 28203					

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	82.1	%			1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by ICP</u> Arsenic	2.4	mg/kg	0.61	0.060	1	6010B	04/03/09 5:23	heasler	Q40406
Lead	17	mg/kg	0.30	0.024	1	6010B	04/03/09 5:23	heasler	Q40406
Sample Prepara	ation:			2g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543



05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 10-18-8 Transportation Project ID: ROW-204 Prism Sample ID: 241509 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 10:15 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	88.8	%	An anna haonn de An	4	1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by ICP</u> Arsenic	BRL	mg/kg	0.55	0.055	1	6010B	04/03/09 5:30	heasler	Q40406
Lead	6.7	mg/kg	0.28	0.021	1	6010B	04/03/09 5:30	heasler	Q40406
Sample Preparatio	on:		2.	.03g/	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-15-1	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241510	
Attn: David Graham	Project No.:	WBS# 34871.1.1	•		
c/o Hart and Hickman	,		COC Group:	G030966 <sup>.</sup>	-
	Sample Matrix:	501	Time Collected:	03/24/09	14:50
2923 South Tryon St. Ste 100			Time Submitted:	03/25/09	8:15
Charlotte, NC 28203	•				

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	80.6	%			1	SM2540 G	03/30/09 15:10	) kpowers	
<u>Metals by ICP</u> Arsenic Lead	BRL 13	mg/kg mg/kg	0.61 0.31	0.061 0.024	1 1	6010B 6010B	04/03/09 5:36 04/03/09 5:36	heasler heasler	Q40406 Q40406
Sample Preparation:			2,	02g /	50 mL	3050B	04/01/09 10:00	) mbarber	P24159
<u>pH Value, Electrometric Method</u> pH	5.67	pH units			1	9045C	03/25/09 13:04	kpowers	Q40174

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203 Project Name:Winston SalemProject ID:ROW-204Project No.:WBS# 34871.1.1Sample Matrix:Soll

Laboratory Report

05/26/09

Client Sample ID:	8-15-3		
Prism Sample ID:	241511		
COC Group:	G0309661		
Time Collected:	03/24/09	14:52	
Time Submitted:	03/25/09	8:15	

Parameter	Result	Units	Report Limit	MDL.	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	83.3	%			1	SM2540 G	03/30/09 15:10	kpowers	
Metals by ICP					_				
Arsenic	47	mg/kg	0.60	0.060	1	6010B	04/03/09 5:41	heasler	Q40406
Lead	970	mg/kg	30	0.23	10	6010B	04/03/09 18:58	heasler	Q40406
Sample Preparatio	n:			1.99 g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159
<u>pH Value, Electrometric Method</u> pH	6.82	pH units			1	9045C	03/25/09 13:05	kpowers	Q40174
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/14/09 14:40	mbarber	
TCLP Leachable Mercury by CVAA Mercury	BRL	mg/L	0.010	0.000014	1	7470A	05/19/09 16:27	dsullivan	Q41592
Sample Preparat	ion:			20 mL /	30 mL	7470A	05/19/09 10:00	dsullivan	P24594
TCLP Leachable Metals by ICP	00	m a l	0.050	0.0029	1	6010B	05/22/09 5:13	heasler	Q41637
Arsenic	BRL	mg/L	5,0	0.0029	1	6010B	05/22/09 5:13	heaster	Q41637
Barium	BRL	mg/L	0.025	0.00034	1	6010B	05/22/09 5:13	heasler	Q41637
Cadmium	BRL	mg/L		0.00034				heasler	
Chromium	BRL	mg/L	0.25		1	6010B	05/22/09 5:13		Q41637
Lead	0.26	mg/L	0.050	0.0021	1	6010B	05/22/09 5:13	heasler	Q41637
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/22/09 5:13	heasler	Q41637
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/22/09 5:13	heasler	Q41637
Sample Preparat	ion:			50 mL /	50 mL	3010A	05/15/09 9:50	mbarber	P24568

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



Laboratory Report

05/26/09

North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203		Projec Projec		ROW-2 WBS#	n Salem :04 34871.1.1	Prisi COC Time	nt Sample ID: m Sample ID: C Group: e Collected: e Submitted:		14:52 8:15	
Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analy	st Bat ID	

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-16-2	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241512	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309661	
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/24/09	15:05
2923 South Tryon St. Ste 100	•		Time Submitted:	03/25/09	8:15
Charlotte, NC 28203					

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	81.4	%			1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by ICP</u> Arsenic	7.6	mg/kg	0.61	0.061	1	6010B	04/03/09 5:49	heasler	Q40406
Lead	1500	mg/kg	31	0.24	10	6010B	04/03/09 19:05	heasler	Q40406
Sample Preparation:			2.	.01g /	50 mL	3050B	04/01/09 10:00	mbarber	P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



## Laboratory Report

05/26/09

North Carolina Department of	Project Name:	Winston Salem	Client Sample ID:	8-16-7	
Transportation	Project ID:	ROW-204	Prism Sample ID:	241513	
Attn: David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0309661	1
c/o Hart and Hickman	Sample Matrix:	Soil	Time Collected:	03/24/09	15:06
2923 South Tryon St. Ste 100			Time Submitted:	03/25/09	8:15
Charlotte, NC 28203					

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
Percent Solids Determination Percent Solids	84.3	%			1	SM2540 G	03/30/09 15:10	kpowers	
<u>Metals by iCP</u> Arsenic	8.6 1100	mg/kg mg/kg	0.60 30	0.059 0.23	1 10	6010B 6010B	04/03/09 5:55 04/03/09 19:12	heasler heasler	Q40406 Q40406
Lead Sample Preparation:	1100	Шулку		.99 g /	50 mL	3050B	04/01/09 10:00		P24159

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



Laboratory Report

05/26/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 11-9-1 Transportation Project ID: **ROW-204** Prism Sample ID: 241514 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309661 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/23/09 14:20 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 8:15 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analys	t Batch ID
Percent Solids Determination									
Percent Solids	84.5	%			1	SM2540 G	03/27/09 14:30	dsullivan	
Diesel Range Organics (DRO) by GC	-FID								
Diesel Range Organics (DRO)	BRL	mg/kg	8.3	1,3	1	8015B	03/27/09 15:28	jvogel	Q40268
Sample Preparatio	n:			25 g /	1 mL	3545	03/26/09 12:00	pban	P24125
					Surrogate	•	% Recovery	Coi	ntrol Limits
					o-Terphen	yl	71		49 - 124
Sample Weight Determination									
Weight 1	6.09	g			1	GRÓ	03/25/09 0:00	lbrown	
Weight 2	6.37	g			1	GRO	03/25/09 0:00	lbrown	
Gasoline Range Or <u>ganics</u> (GRO) by	GC-FID								
Gasoline Range Organics (GRO)	BRL	mg/kg	5.9	3.7	50	8015B	03/27/09 15:08	dliamm	Q40222

Surrogate	% Recovery	Control Limits
aaa-TFT	94	55 - 129

#### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied. The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



--- -- ---

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

### Level II QC Report

05/26/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309661
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/25/09 8:15
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

#### pH Value, Electrometric Method, method 9045C

Laboratory Control Sample	Resuit	Spike Amour	nt	Units	Recovery %	Recovery Ranges %			QC Batch ID
рH	6.84	6.86		pH units	100	99.21-100.7			Q40174
Duplicate Sample ID:	Sample Result	Duplicate Result		Units		<u>.</u>	ŘPD %	RPD Range %	QC Batch ID
241511 pH	6.82	6.90		pH units			1	0 - 20	Q40174
Gasoline Range Organics (GRO) by (	GC-FID, me	thod 8015	<u>B</u>						
Method Blank	Result	RL	Control Limit	Units		11		<u></u>	QC Batch ID
Gasoline Range Organics (GRO)	ND	5	<2.5	mg/kg					Q40222
Laboratory Control Sample	Resuit	Spike Amoun	t	Units	Recovery %	Recovery Ranges %			QC Batch ID
Gasoline Range Organics (GRO)	43.75	50		mg/kg	88	67-116			Q40222
Matrix Spike	······································				Recovery	Recovery Ranges		1	QC Batch
Sample ID:	Result	Spike Amouni	l 	Units	%	%			iD
241514 Gasoline Range Organics (GRO)	31.45	50		mg/kg	63	57-113			Q40222
Matrix Spike Duplicate Sample ID:	Result	Spike Amount	t	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC 8atch ID
241514 Gasoline Range Organics (GRO)	35.3	50		mg/kg	71	57-113	12	0 - 23	Q40222
Diesel Range Organics (DRO) by GC-	<u>FID, metho</u>	d 8015B							
Method Blank			·		• • • • • • •				QC Balch
	Result	RL	Control Limit	Units					ID
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg					Q40268
Laboratory Control Sample	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			QC Batch ID
Diesel Range Organics (DRO)	81.4	80	······	mg/kg	102	55-109			Q40268
Matrix Spike					Recovery	Recovery Ranges	-		QC Batch

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543 Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

Result

Result

. . . .

Sample ID:

Sample ID:

Matrix Spike Duplicate

241467 Diesel Range Organics (DRO) 71.5

241467 Diesel Range Organics (DRO) 56.6

Spike Amount

80

. .

80

Spike Amount

%

89

Recovery

%

71

Units

mg/kg

Units

mg/kg

%

50-117

Recovery

Ranges

%

50-117

QC Batch ID

Q40268

QC Batch

ID.

0-24 Q40268

RPD

Range

%

RPD

%

23



## Level II QC Report

05/26/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309661
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/25/09 8:15
c/o Hart and Hickman	Project No :	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

#### Metals by ICP, method 6010B

ResultSpike AmountUnitsRangesRangesUC BalchArsenic23.486625mg/kg9480-120Q40320Lead23.206125mg/kg9380-120Q40320Matrix SpikeSample ID:ResultSpike AmountUnitsRecovery %Recovery %Recovery %QC Batch ID241484Arsenic21.860624.390mg/kg72#75-125Q40320Lead79.769224.390mg/kg-29#75-125Q40320Matrix Spike Duplicate Sample ID:ResultSpike AmountUnits%%%%Matrix Spike Duplicate Sample ID:ResultSpike AmountUnits%%%%QC Batch IDMatrix Spike Duplicate Sample ID:ResultSpike AmountUnits%%%%%QC Batch ID	Method Blank	Result	RL	Centrol Limit	Units						QC Batch ID
Laboratory Control Sample         Result         Squke Amount         Units         Recovery %         Recovery Ranges         Recovery %	Arsenic	0.0105	0.5	<0.25	mg/kg						Q40290
Result         Spike Amount         Units         N         Reges         Utation         N           Arsenic         24.3801         25         mg/kg         98         80-120         Q40290           Lead         24.3562         25         mg/kg         97         80-120         Q40290           Matrix Spike         Result         Spike Amount         Units         N         Resovery         Resove	Lead	0.0182	0.25	<0.125	mg/kg						Q40290
Lead         24.3562         25         mg/kg         97         80-120         Q40290           Matrix Spike         Recovery	Laboratory Control Sample	Result	Spike Amour	nt	Units			Ranges			
Matrix Spike         Result         Spike Amount         Recovery Langles         Recovery Ranges         Recovery Ranges	Arsenic	24.3801	25		mg/kg	98		80-120			Q40290
Sample ID:         Result         Spike Amount         Units         Names         Column D           241470 Arsenic         24.8061         25         mg/kg         84         75-125         Q40230           Lead         39.2813         25         mg/kg         76         75-125         Q40230           Matrix Spike Duplicate         Result         Suike Amount         Units         %         %         Recovery manys         Q40320         Q40	Lead	24.3562	25		mg/kg	97		80-120			Q40290
Lead         39.2813         25         mg/kg         76         75-125         Q40290           Matrix Spike Duplicate sample ID:         Result         Spike Amount         Units         Recovery %	•	Result	Spike Amour	nt	Units	•		Ranges			
Matrix Spike Duplicate Sample ID:         Result         Spike Amount         Unite         Recovery %         Recovery Ranges %         Recovery %         Recovery %         RPD %	241470 Arsenic	24.8061	25		mg/kg	84		75-125			Q40290
Bandle ID:         Result         Spike Amount         Units         Network y         Ranges         RPD         Range         COC Batch           241470 Arsenic         24.9538         25         mg/kg         84         75-125         1         0 - 20         Q40290           Lead         40.9961         25         mg/kg         83         75-125         4         0 - 20         Q40290           Method Blank         Result         RL         Controi Limit         Units	Lead	39.2813	25	·	mg/kg	76		75-125			Q40290
Lead       40.9961       25       mg/kg       83       75.125       4       0 - 20       Q40290         Method Blank       Result       RL       Control Linit       Units       -       0.028       0.5       <0.25       mg/kg       83       75.125       4       0 - 20       Q40320         Method Blank       Result       RL       Control Linit       Units       -       0.028       0.5       <0.25       mg/kg       83       75.125       4       0 - 20       Q40320         Lead       0.0159       0.25       <0.25       mg/kg       mg/kg       Recovery       Renges       Q40320         Lead       0.0159       0.25       <0.125       mg/kg       94       80-120       Q40320         Lead       0.0159       0.25       mg/kg       93       80-120       Q40320         Lead       23.2061       25       mg/kg       93       80-120       Q40320         Matrix Spike       Result       Spike Amount       Units       %       Result       %       Result       %       Result       %       Q40320         241484 Arsenic       21.8066       24.390       mg/kg       72       #       75-125 <td>, ,</td> <td>Result</td> <td>Spike Amour</td> <td></td> <td>Units</td> <td>-</td> <td></td> <td>Ranges</td> <td></td> <td>Range</td> <td></td>	, ,	Result	Spike Amour		Units	-		Ranges		Range	
Metals by ICP, method 6010B         Result         RL         Control Linit         Units	241470 Arsenic	24,9538	25		mg/kg	84		75-125	1	0 - 20	Q40290
Method Blank         Result         RL         Control Limit         Units         OC Batch ID           Arsenic         -0.0028         0.5         <0.25	Lead	40.9961	25		mg/kg	83		75-125	4	0 - 20	Q40290
Result         Rt.         Control Limit         Units         Model         Q40320           Arsenic         -0.0028         0.5         <0.25         mg/kg         Q40320           Lead         0.0159         0.25         <0.125         mg/kg         Recovery         <	<u>Metals by ICP, method 6010B</u>										
Result         RL         Control Limit         Units         Model         D           Arsenic         -0.0028         0.5         <0.25	Method Blank			· · · · · · · · · · · · · · ·							OC Batch
Lead         0.0159         0.25         <0.125         mg/kg         Recovery         Recovery </td <td>·, ·</td> <td>Result</td> <td>RL.</td> <td>Control Limit</td> <td>Units</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	·, ·	Result	RL.	Control Limit	Units						
Laboratory Control Sample         Result         Spike Amount         Units         Recovery %         Ranges %         CC Batch ID         OC Batch ID           Arsenic         23.4866         25         mg/kg         94         80-120         Q40320           Lead         23.2061         25         mg/kg         93         80-120         Q40320           Matrix Spike Sample ID:         Result         Spike Amount         Units         Recovery %         Recovery %         Recovery %         Q40320           241484 Arsenic         21.8606         24.390         mg/kg         72         # 75-125         Q40320           Matrix Spike Duplicate         Result         Spike Amount         Units         Recovery %         Ranges %         Recovery %         Ranges %         QC Batch ID           241484 Arsenic         21.8606         24.390         mg/kg         -29         # 75-125         Q40320           Matrix Spike Duplicate         Result         Spike Amount         Units         Recovery %         Recovery %         Ranges %         RPD %         Range %         QC Batch ID           241484 Arsenic         22.7475         24.752         mg/kg         75         # 75-125         4         0 - 20         Q40320	Arsenic	-0.0028	0,5	<0.25	mg/kg						Q40320
Result         Spike Amount         Units         Ranges %         ID         ID           Arsenic         23.4866         25         mg/kg         94         80-120         Q40320           Lead         23.2061         25         mg/kg         93         80-120         Q40320           Matrix Spike         Spike Amount         Units         %         %         %         Q40320           Matrix Spike         Result         Spike Amount         Units         %         %         QC Batch           241484 Arsenic         21.8606         24.390         mg/kg         72         #         75-125         Q40320           Matrix Spike Duplicate         Result         Spike Amount         Units         %         %         %         Q40320           Lead         79.7692         24.390         mg/kg         72         #         75-125         Q40320           Matrix Spike Duplicate         Spike Amount         Units         %         %         %         %         %         %           Sample ID:         Result         Spike Amount         Units         %         %         %         %         %         %         %         %         %         %<	Lead	0.0159	0.25	<0.125	mg/kg						Q40320
Lead       23.2061       25       mg/kg       93       80-120       Q40320         Matrix Spike Sample ID:       Result       Spike Amount       Units       Recovery %	Laboratory Control Sample	Result	Spike Amoun		Units			Ranges			
Matrix Spike         Result         Spike Amount         Units         Recovery %         Recovery Ranges %         QC Batch ID           241484 Arsenic         21.8606         24.390         mg/kg         72 #         75-125         Q40320           Lead         79.7692         24.390         mg/kg         -29 #         75-125         Q40320           Matrix Spike Duplicate         Result         Spike Amount         Units         Recovery %         Recovery %         Report %         RPD %         QC Batch ID           241484 Arsenic         22.7475         24.752         mg/kg         75 #         75-125         Q40320	Arsenic	23.4866	25		mg/kg	94		80-120			Q40320
Sample ID:         Result         Spike Amount         Units         Ranges %         Ranges %         ID         ID           241484 Arsenic         21.8606         24.390         mg/kg         72         #         75-125         Q40320           Lead         79.7692         24.390         mg/kg         -29         #         75-125         Q40320           Matrix Spike Duplicate Sample ID:         Result         Spike Amount         Units         Recovery %         Recovery Ranges         RPD %         Range %         QC Batch ID           241484 Arsenic         22.7475         24.752         mg/kg         75         #         75-125         4         0 - 20         Q40320	Lead	23.2061	25		mg/kg	93		80-120			Q40320
241484 Arsenic       21.8606       24.390       mg/kg       72       #       75-125       Q40320         Lead       79.7692       24.390       mg/kg       -29       #       75-125       Q40320         Matrix Spike Duplicate       Result       Spike Amount       Units       Recovery %       Recovery %       Renge %       RPD %       QC Batch ID         241484 Arsenic       22.7475       24.752       mg/kg       75       #       75-125       4       0 - 20       Q40320		Result	Spike Amoun	t	Units			Ranges			
Matrix Spike DuplicateResoltSpike AmountRecoveryRecovery RangesRecovery RangesRPD Range %RPD Range %RPD Range %RPD Range %RPD Range %RPD Range %RPD Range %RPD Range %RPD Range %RPD Range %RPD %RPD Range %RPD Range %RPD %Recovery Range %RPD %Recovery Range %RPD %Recovery Range %RPD %Recovery Range %RPD Range %Recovery %RPD Range %RPD %Recovery Range %RPD Range %Recovery %RPD Range %Recovery %RPD Range %Recovery %Recovery Range %RPD Range %Recovery %RPD Range %Recovery %Recovery Range %RPD Range %Recovery %Recovery Range %RPD Range %Recovery %Recovery Range %RPD Range %Recovery %Recovery Range %Recovery %Recovery Range %Recovery %Recovery Range %Recovery %Recovery Range %Recovery %Recovery Range %Recovery %Recovery Range %Recovery %Recovery Range %Recovery Range %Recovery %Recovery Range %Recovery %Recovery Range %Recovery %Recovery Range %Recovery %Recovery %Recovery %Recovery %	241484 Arsenic	21.8606	24.390		mg/kg	72	#				Q40320
Sample (D:         Result         Splike Amount         Units         Ranges         RPD         Range         OC Ball           241484 Arsenic         22.7475         24.752         mg/kg         75 # 75-125         4         0 - 20         Q40320	Lead	79.7692	24.390		mg/kg	-29	#	75-125			Q40320
241484 Arsenic 22.7475 24.752 mg/kg 75 # 75-125 4 0 - 20 Q40320		Result	Spike Amoun	t .	Units			Ranges		Range	
Lead 84.9118 24.752 mg/kg -8 # 75-125 6 0-20 Q40320	241484 Arsenic	22.7475	24.752		mg/kg	75	#		4	0 - 20	Q40320
	Lead	84.9118	24.752		mg/kg	-8	#	75-125	6	0 - 20	Q40320

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543 Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



----

NC Certification No. 402 SC Certification No. 99012 NC Drinking Water Cert. No. 37735

# Level II QC Report

05/26/09

North Carolina Department of	Project	Winston Salem	COC Group Number:	G0309661
Transportation	Name:			
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/25/09 8:15
c/o Hart and Hickman	Project No.:	WBS#34871.1.1		
2923 South Tryon St. Ste 100				

#### Metals by ICP, method 6010B

Method Blank	Result	RL	Control Limit	Units					QC Baich ID
Arsenic	-0.0171	0.5	<0.25	mg/kg					Q40406
Lead	0.0334	0.25	<0.125	mg/kg					Q40406
Laboratory Control Sample	Result	Spike Amour	ł.	Unils	Recovery %	Recovery Ranges %			QC Batch ID
Arsenic	22.1941	25		mg/kg	89	80-120			Q40406
Lead	22.3897	25		mg/kg	90	80-120			Q40406
Matrix Spike Sample ID:	Result	Spike Amoun	t	Units	Recovery %	Recovery Ranges %			QC Baich ID
241498 Arsenic	29.0487	24.390		mg/kg	82	75-125			Q40406
Lead	97.8738	24.390		mg/kg	137 ‡	# 75-125			Q40406
Matrix Spike Duplicate Sample ID:	Result	Spike Amoun	t	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241498 Arsenic	30.443	24.509		mg/kg	88	75-125	5	0 - 20	Q40406
Lead	97.843	24.509		mg/kg	136 #	\$ 75-125	0	0 - 20	Q40406
TCLP Leachable Mercury by CVA	A, method 747	<u>0A</u>							
Method Blank	Result	RL.	Control Limit	Units					QC Batch ID
Mercury	-0.00004	0.01	<0.005	mg/L					Q41592
Laboratory Control Sample	Result	Spike Amount		Units	Recovery %	Recovery Ranges %			QC Batch ID
Mercury	0.00811	0.0093		mg/L	87	80-120			Q41592
Matrix Spike Sample ID:	Result	Spike Amount	:	Units	Recovery %	Recovery Ranges			QC Batch ID
246271 Mercury	0.00822	0.0093		mg/L	88	80-120			Q41592
Matrix Spike Duplicate Sample ID:	Result	Spike Amount		Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
246271 Mercury	0.00790	0.0093		mg/L	85	80-120	4	0 - 20	Q41592



# Level II QC Report

05/26/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309661
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/25/09 8:15
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100	-			

#### TCLP Leachable Metals by ICP, method 6010B

Method Blank	Result	RL	Control Limit	Units	6, 796				QC 8atch ID
Arsenic	0.0003	0.05	<0.025	mg/L			·····		Q41637
Barium	0.0013	5	<2.5	mg/L					Q41637
Cadmium	-0.0001	0.025	<0.0125	mg/L					Q41637
Chromium	0.0003	0.25	<0.125	mg/L					Q41637
Lead	0.0001	0.05	<0.025	mg/L					Q41637
Selenium	0.0006	0.05	<0.025	mg/L					Q41637
Silver	-0.0001	0.25	<0.125	mg/L					Q41637
Laboratory Control Sample	Result	Spike Amour	it	Units	Recovery %	Recovery Ranges %			QC Batch ID
Arsenic	0.2472	0.25		mg/L	99	80-120			Q41637
Barium	0.2217	0.25		mg/L	89	80-120			Q41637
Cadmium	0.229	0.25		mg/L	92	80-120			Q41637
Chromium	0.2161	0.25		mg/L	86	80-120			Q41637
Lead	0.2148	0.25		mg/L	86	80-120			Q41637
Selenium	0.2479	0.25		mg/L	99	80-120			Q41637
Silver	0.2368	0.25		mg/L	95	80-120			Q41637
Matrix Spike Sample ID;	Result	Spike Amaun	t	Units	Recovery %	Recovery Ranges %		· · · · ·	QC Batch ID
241364 Arsenic	0.2269	0.25		mg/L	91	75-125		• • • • • • • • • •	Q41637
Barium	0.4344	0.25		mg/L	80	75-125			Q41637
Cadmium	0.2126	0.25		mg/L	85	75-125			Q41637
Chromium	0.1907	0.25		mg/L	76	75-125			Q41637
Lead	0.2061	0.25		mg/L	79	75-125			Q41637
Selenium	0.2268	0.25		mg/L	91	75-125			Q41637
Silver	0.2276	0.25		mg/L	91	75-125			Q41637
Matrix Spike Duplicate Sample ID:	Result	Spike Amoun	 [	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch (D
241364 Arsenic	0.2385	0.25		mg/L	95	75-125	5	0 - 20	Q41637
Barium	0.4552	0.25		mg/L	88	75-125	5	0 - 20	Q41637
Cadmium	0.2219	0.25		mg/L	89	75-125	4	0 - 20	Q41637
Chromium	0.2079	0.25		mg/L	83	75-125	9	0 - 20	Q41637
Lead	0.2147	0.25		mg/L	83	75-125	4	0 - 20	Q41637
Selenium	0.238	0.25		mg/L	95	75-125	5	0 - 20	Q41637
Silver	0.2326	0.25		mg/L	93	75-125	2	0 - 20	Q41637



# Level II QC Report

05/26/09

North Carolina Department of	Project	Winston Salem	COC Group Number:	G0309661
Transportation	Name:			
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	03/25/09 8:15
c/o Hart and Hickman	Project No .:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

#### TCLP Leachable Mercury by CVAA, method 7470A

Method Blank	Deput	RL	Control Limit	Units					QC Baich ID
	Result	RL	Control Clinic	URALS					
Mercury	-0.00005	0.01	<0.005	mg/ኒ					Q41662
Laboratory Control Sample	Result	Spike Amoun		Units	Recovery %	Recovery Ranges			QC Balch ID
			•	Offics		%			
Mercury	0.00926	0.0093		mg/L	99	80-120			Q41662
Matrix Spike				<u>.</u>	Recovery	Recovery Ranges			QC Batch
Sample ID:	Result	Spike Amoun	t	Units	%	%			ID
246390 Mercury	0.01045	0.0093		mg/L	101	80-120			Q41662
Matrix Spike Duplicate		• • •			Recovery	Recovery Ranges	RPD	RPD Range	QC Baich
Sample ID:	Result	Spike Amoun	t	Units	%	Kanges	%	%	QI
246390 Mercury	0.00968	0.0093		mg/L	92	80-120	8	0 - 20	Q41662

#-See Case Narrative

449 Springbrook Road • Phone: 704/529-8364 • I Client Company Name Report To/Contact Na Reporting Address:	Analytical & P.O. Box 24 Fax: 704/525 :: Har- me: Day	10543 5-0409 1-51 1-51 1-51	en incental Solutions Charlotte, NG 2 HCK proc Graham	28224-0543	PAGE 2 OF Project Nam Short Hold A *Please ATT	5 qua e: <b>ROV</b> Inalysis: ACH any	U-7D4 (Yes) (N	STOD URE PROPER B WBSEK o) US ocific reportin ents VE 345	ILLING: . <b>IVI2 / I</b> T Project a (OC L	+348 ct: (Yes) EVEL 111	(No)	CUS	PER PF elved Wi STODY S ATILES	ACT up I WET IC IESERV THIN HO IEALS IN rec'd W	LAB USE In anivality E 24 femp: D ATIVES Indicat DLOING TIMES ITACT? GUT HEADSP IRS used?	5 ed? ?		
EDD Type: PDF E> Site Location Name: _	mail (Yes) (No) Email Address DD Type: PDF ExcelOther Site Location Name: Site Location Physical Address:						6-9 Days C S 5:00 will be pro t on business of TERMS & COND	rence ays	Pre-A Pre-A siness da veekend: ING SERV	Work Must approved ay. s and holida	Be ys.	Certific Water ( Sample	ation: Chlorina Iced U	NELA SC ated: \ pon C	CLIENT/S CUSA OTHER YESNO ollection:Y	CE	_FL _N/A	NC1
CLIENT SAMPLE DESCRIPTION	DATE		TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMF *TYPE SEE BELOW	PLE CONT	AINER	PRESERVA	· /			YSES REC	NESTE	> /	RI	EMARKS		PRISM LAB ID NO.
BFW-2-0-5	3174	Hra	12:39	SOIL	CG	1		NONE		۲ (								241480
BFW-2-2		1	1242		1				Х									241481
BFW-3-0.5			1248							C X						<b></b>		241452
BFW-3-2			1252						>	<u>د ا</u>								241433
BFW-4-0.5			1259						<u> </u>	くメ						u-FITTA-11		241484
BFW-4-2		•	1302					•	>	٤								241485
Or			1-2-7							X.		a	ded	TL	fp Met	~ls		241486
BFW-5-52	matt Be	amlett	1315			1.	<i>•</i>			X			1		: 			241437
BFW-10-0.5			13110						j	$\langle X \rangle$							<u> </u>	241488
PG-1-1-KI	Matt	i.xt	1318		V	V	•			C								241489
Sampler's Signature	bly	Br	minih		. Dulare to pre	and with	th the analys	NDIUKI es as request yses have bee	ad abov	ffiliation e. Any cha ized.	Har ngos m	나누나 ust be		na	1	F		- 3 COPIES
Reinquished By: (Signature) Reinquished By: (Signature)	- J-7	<u>-)</u> 72(	yes 0875	Reb	selved By: (Signati	Ma	ris				Zejsij	Military/H / <u>/</u> 5	ours ¥	Additio	nat Comment	SI	të Departu	Fime: ire:Time: ee:
Relinquished By: (Signature) Method of Shipment: NOTE: SAMPL	ALL SAMPLE			Rec	Celfed For Prism L	<b>∕∖</b>	$\triangleleft$	TO THE LABORA	OBY.	Date 37 COC	5(09 Aroup No.	315			4-	s Mi	ileage	
I.Fed Ex IUPS IHand	d-delivered	OUND	Field Service	AGAINST COC	ATER:   SO		TE: RCR		CLA	LAND		OTHER					SEE RE TERMS 8	VERSE FOR CONDITIONS
		ίC, Ο Δ = Am	· 16		l n		0			_   ם		<u>ت</u>			,		O	RIGINAL

Full Service Analytical & Environmental Solutions           449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543           Phone: 704/529-6384 • Fax: 704/525-0409           Client Company Name:           Part           Hitchmann           Report To/Contact Name:           Power Toylog           Reporting Address:	CHAIN OF CUSTODY RECORD PAGE 3 OF 5 QUOTE # TO ENSURE PROPER BILLING: Project Name: ROW-2DA WBSElement 34871.1.1. Short Hold Analysis: (res) (No) UST Project: (Yes) (No) *Ptease ATTACH any project specific reporting (QC LEVEL I II III IV) provisions and/or QC Requirements Invoice To: WBSELEMENT 34871.1.1 Address:
Phone: Fax (Yes) (No):	Purchase Order No./Billing Reference
Email (Yes) (No) Email Address EDD Type: PDF ExcelOther	Requested Due Date D 1 Day D 2 Days D 3 Days D 4 Days D 5 Days

<u>с</u>т., 2

Report To/Contact Na Reporting Address:	me: Pave	Graham	<u>}</u>	provisions and Invoice To: Address:		Requireme Elerr	rent 348	571.	1.1	· · · · · · · · · · · · · · · · · · ·	- Vo	STODY LATILES OPER C	SEALS II Frec d W ONTAIN	NTACT /OUT HEAL ERS used?	SPACE?		
Phone: Email (Yes) (No) Email EDD Type: PDF Ex Site Location Name: Site Location Physical	Address (celOthe	r	- 	Purchase Order No./Billing Reference Requested Due Date □ 1 Day □ 2 Days □ 3 Days □ 4 Days □ 5 Days "Working Days" □ 6-9 Days □ Standard 10 days □ Pre-Approved Samples received after 15:00 will be processed next business day. Turnaround time is based on business days, excluding weekends and holidays. (SEE REVERSE FOR TERMS & CONDITIONS REGARDING SERVICES RENDERED BY PRISM LABORATORIES, INC. TO CLIENT)							TO BE FILLED IN BY CLIENT/SAMPLING PERSONN Certification: NELACUSACEFLNO SCOTHERN/A Water Chlorinated: YESNO Sample Iced Upon Collection: YESNO						NC
CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)		E CONTA	NNER	PRESERVA- TIVES	A ST A	P.M P.M P.M	ANALY	SES RE	QUESTE	D		REMARKS		PRISM LAB ID NO.
10-1-1	3124/09	1107	SOIL	CG	l		NONE	X	•								241490
10-1-5		108						X									241491
10-2-1		104		· · · -				X	$\times$								241492
10-2-5		1105						×				ļ					241493
10-3-1		1058						+				<u> </u>	<u> </u>				241494
10 2 -		1050					[	1									241495

10-1-5	108		, , X			241491
10-2-1	104	À	X	. 🗶		241492-
10-2-5	105		4			241493
10-3-1	1058			4		241494
10-3-5	1959		6	4		241495
10-4-1	1051			4		241496
10-4-5	1052			c ·		241497
10-5-1	1049			c		241498
10-5-5 V	105D V	VV	V 7	<b>L</b>		241499
Sampler's Signature	Sampled By (F	rint Name)Holly Bu	rwilke Ar	filiation Hart	Hickman	ESS DOWN FIRMLY - 3 COPIES
Upon relinquishing, this Chain of Custo submitted in writing to the Prism Project	dy is your authorization for Pri of Manager. There will be char-	sm to proceed with the analys ges for any changes after ana	es as requested above yses have been initiali	e. Any changes must l zęd.	ре 	PRISM USE ONLY
Relinevished By: (Signatore)	Received	By: (Signature)	······································	3-2409	Additional Co	omments: Site Arrivel Time
Relinquished By Signature)	7 DX15	By: (Signature)	<u>j</u>	Date		Field Tech Fee:
Relinquished By: (Signature)	$\mathcal{H}$	For Prism Laboratories By:			15	• Mileage
Method of Shipment: NOTE: ALL SAMPLE COOLER SAMPLES ARE NOT ACCEPT	RS SHOULD BE TAPED SHUT WITH CO ED AND VERIFIED AGAINST COC UNT	TODY SEALS FOR TRANSPORTATION	TO THE LABORATORY.	COC Group No.		tiltinen abruennen kenter er stalsene verdig.
D Fed Ex D UPS D Hand-delivered D Fism	Field Service Other	·		<u> </u>		SEE REVERSE FOR
					HER: NC DISC	TERMS & CONDITIONS
	ber C = Clear G = Glass P =		•• •		lead Space)	ORIGINAL

.

LAB USE ONLY

17

Samples INTACT Upon arrival? Received ON WET ICE? Temp

PROPER PRESERVATIVES indicated?

Received WITHIN HOLDING TIMES? CUSTODY SEALS INTACT?

A CABORAIORIES INC.

Full Service Analytical & . . .

A49 Springbrook Road Phone: 704/529-6364 Client Company Nar	• P.O. Box 240543 • Fax: 704/625-0409 ne: Have \$1	h'ckm	1C 28224-1	054
Report To/Contact I	lame: Dave	Graha	m	
Reporting Address:	·	wni,	•	

Phone:	_Fax (Yes) (No):	· · · · · · · · · · · · · · · · · · ·
Email (Yes) (No) Email Add	ress	
EDD Type: PDFExcel_	Other	
Site Location Name:		
Site Location Physical Add	Iress:	

CLIENT

SAMPLE DESCRIPTION

10-5

- F

10-10-

Ð

O D

 $\mathbf{D}$ 

8

Sampler's Signature

Analytical & Enviro 0. Box 240543 ax: 704/525-0405 Hart	hiespinos minental Solution Charlotte, NC	28224-0543	PAGE Projec Short I *Pleas provisi	t Name Hold Ar e ATTA ions an	alysis: CH any d/or QC	FCU TE # TO ENS W-ZU (N Project spe Requirement	NRE PR	UST P	ing: CMC	1+34 (Yes)	<u>後]).</u> (No)		Ceived ROPERN Ceived JSTODY	ON WET PRESER WITHIN H USEALS	oon arrival ICE? Tiem VATIVES IQUDING INTACT?	p <u>() - 5 -</u> ndicated? [IMES?:		NO: FN/A
Fax (Yes)	(No):	•	Address: TO BE FILLED								CONTAI	IERS used	ġ.		SONNEL			
elOther_		· · · · · · · · · · · · · · · · · · ·	Requested Due Date       1 Day       2 Days       3 Days       4 Days       5 Days       Certification:       NE         "Working Days"       0 6-9 Days       Standard 10 days       Rush Work Must Be Pre-Approved       S       S         Samples received after 15:00 will be processed next business day.       S       S       S       Water Chlorinated         Turnaround time is based on business days, excluding weekends and holidays.       SEGREVICES       S       Water Chlorinated         RENDERED BY PRISM LABORATORIES, INC. TO CLIENT]       Sample Icced Upor       Sample Icced Upor							sc_	оті	HER	N/A					
DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)		SAMPL YPE SELOW	E CONTA	AINER		ESERVA- Tives	- 13 1	1.0 05 10105 10105		YSES RE	QUEST	ED /	. /	REMARK	ís	PRISM LAB ID NO.
3/24/09	1036	SOIL	C	G	ŀ		Ne	one	Х	X		······································						24(500
	1038	ļ	1		÷ [				X		<u> </u>							241501
	1023	<u> </u>							X				ļ	·				2411502
	1024			<u>.</u>					X									241503
	1019								x								•	241504
	1020						•		×									241505
	1016								×						ي. ماريد			241536
	1017	l l							×							·		241507
	1014					•			X									241508
$\checkmark$	1015	$\downarrow$		$\checkmark$	V				X									241509
ALL BUR	mute								Affiliat		art		ckn	nan	PRES	s down		- 3 COPIES

Upon relinguishing, this Chain of Custody is your authorization for Prism to proceed with the analyses as requested above. Any submitted in writing to the Prism Project Manager. There will be charges for any changes after analyses have been initialized. Slanature

Bell Date Military/Hours Additional Comments: 20 : (Signature) red By: (Signature) L Date 0815 5 123 Ч. Reinquished By: (Signature) Received For Prism Laboratories By: Date 3 25/09 BIG Method of Shipment: NOTE: ALL SAMPLE COOLERS SHOULD BE TAPED SHUT WITH CUSTODY SEALS FOR TRANSPORTATION TO THE LABORATORY. SAMPLES ARE NOT ACCEPTED AND VERIFIED AGAINST COC UNTIL RECEIVED AT THE LABORATORY. COC Group No. GØ3909661 G Fed Ex G UPS G Hand-delivered Of rism Field Service Other. NPDES: UST: GROUNDWATER: DRINKING WATER: SOLID WASTE: LANDFILL OTHER: **RCRA:** CERCLA anc asc anc asc DINC DISC DNC DSC ancasciancasci anc asc DNC DSC l 🗖 Ľ ū. Ο. Ξ. Ξ. 

Šite /	Irrival	Time:		و بر در می کرد. در این این م
Site	)epart	ure Ti	me	
Field	Tech	Feet		
Milea	de			e di di s

SEE REVERSE FOR TERMS & CONDITION

\*CONTAINER TYPE CODES: A = Amber C = Clear G = Glass P = Plastic; TL = Teflon-Lined Cap VOA = Volatile Organics Analysis (Zero Head Space)

				· ·	1			F CU				co	RD				Sold Transfer	USE OI		(NO SIN/A
Full Service Analytical & Environmental Solutions																				
449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-0543					Project Name: ROW-ZO4 10085 Flement 34871.1.1 * Received ON WET ICE? Temp 0.9															
Phone: 704/529-6364 • Fax: 704/525-0409 Client Company Name: <u>Hart Shickman</u>					*Please	ΔΤΤΔ	CH any r	project spe	ecific repu	ortina (C				15-0-56	with any other	CONTRACTOR OF	A State State State	TIMES2	$\sim$	
Client Company Name Report To/Contact Na	<u>r fru</u> mai D	<u>17 (1</u> 0\0 (	Simba m		*Please ATTACH any project specific reporting (QC LEVEL 1 II III IV) provisions and/or QC Requirements Invoice To: 10BS Element- 34871-1-1 VOLATILES recd WIOUT HEADSPACE?															
Reporting Address: 2	923	337	TVONSt.	$\Box R R R R$				tieme	n+ 2	481	1.1.1			-	4.5 A		VOULEE VERS use		$\sim$	
Charlotte. No	<u></u>				Addres	s:								-						
Phone: 704-580-00	207 Fa	ax (Yes)	(No):		Purchase Order No./Billing Reference TO BE FILLED IN BY CLIENT/SAMPLING PERSONNEL															
Email (Yes) (No) Email EDD Type: PDF_1_Ex	Addres	ssagi	anamen	<u>irrncr</u> r	Requested Due Date 1 Day 2 Days 3 Days 4 Days 5 Days Certification: NELAC USACE FL NC <sup>2</sup>															
Site Location Name: _		_Other	· · · · · · · · · · · · · · · · · · ·	•	"Working Days" D 6-9 Days D Standard 10 days D Flush Work Must Be Pre-Approved Samples received after 15:00 will be processed next business day.															
Site Location Physical		SS:			Turnarou	und time	is based o	on business o	days, exclu	ling weel	kends an							_ NO		
Winstor	<u>Sa</u>	lem,	Ne	•				RMS & CONE			SERVICES	3	:	Sample	lced l	Upon (	Collecti	on: YES	<u>1⁄</u> NO_	
	•		TIME	MATRIX		SAMPL	E CONTA	INER			>	1. <i>U</i> /1./	ANALY	SES REC	QUESTE	D	, ,		n	PRISM
CLIENT SAMPLE DESCRIPTION		ATE ECTED	COLLECTED MILITARY	(SOIL, WATER OR	*17	PE			_ PRES	ERVA- 'ES	60	£.S	$\mathcal{A}$					REMA	RKS	LAB
			HOURS	SLUDGE)	SEE B	ELOW.	NO.	SIZE			1	¥	<u>X</u>							ID NO.
8-1-0.5	312	409	0841	SOIL	CE	1	1		Nr	NE	X		<u> </u>							241470
8-2-0.5		- <u></u>	0923	1	1	- <b>-</b>	]			1	X		4	dded	TULF	Mer	A child	r Mad	t Branké	
8-3-0.5			0924		· ·						X	*			-					241472
8-4-0.5	• •		0925								$ \chi $									241473
9-1-1			1346				1				X	$ \star $								241474
9-1-5			1350					•			X	X	$ \alpha $	de	R	ip	Mit	ola		241475
9-Z-1	1	[	1329								X	X					1			241476
9-2-5			1336								X	X		<u> </u>	-	,				241477
BFW-1-0.5			1235								X	X		<u> </u>						241473
RF11-1-2	· \	1	1232			V	V		J	/	X									241479
	1.00	I.R	The.				الملا		الماد ما	10		. L	nel	+2hr	Lm		PRE	ss dow	'N FIRML	Y - 3 COPIES
Sampler's Signature	MOCU	Y O	mun	Sampled B				the analys		lested a	⊥ Attilia bove. A	tion		<u>a.1/∥∟</u> st be		an_	=			
submitted in writing to	the Pris	shi Proje	ect Manager. T	here will be ç	harges	tor any	changes	after anal	yses have	been in	itialized	-			<u></u>				ale tax out of the design	USEONLY
Relinquiside By: (Signerord)	$\sim$	rte	i		eived By: (	N		and					24-09	Military/H	10	Additio	onal Con	iments:	Site Arrive	hTime:
Retinquished BY: (Signature)	22	809	OSIT	Rec	elved By: (	(Signature		-	<b>.</b>			Date							Site Depa	
Relinquished By: (Signature)	2.00	<u> </u>	1010	FN	eived For I	Prism Lab	oratorias B	r				Date							Field Tech	Fee
· · · ·		<u> </u>		Q	-1	$\wedge$	<u>X</u>					312	5/09	815					Mileage:	
Method of Shipment: NOTE: / SAMPL	ALL SAMP ES ARE N	OT ACCEP	TED AND VERIFIEL	APED SHUT WITH AGAINST COC	UNTIL RE	CEIVED A	FOR TRAN	ORATORY.	TO THE LAB	ORATORY	•	COC G							<u>14</u>	
G Fed Ex G UPS G Hand			· · · · · · · · · · · · · · · · · · ·	0 Other								GW3109661							SFE	REVERSE FOR #
		irouind INC D		RINKING WA	TER:		WAST					LANDFILL OTHER: SEE REVERSE F DINC DISC DINC DISC					& CONDITIONS			
aa		ا	a					! a		<u> </u>		o		ם C						
	DDES:	A = An	nber C = Cleai	G = Glass	P = Pla	istic; Tl	. = Tefloi	n-Lined Ca	p VOA ≕	Volatiie	Organic	os Analy	sis (Zer	o Head	Space)				(	DRIGINAL



Full Service Analytical & Environmental Solutions
449 Springbrook Road • P.O. Box 240543 • Charlotte, NC 28224-054 Phone: 704/529-6364 • Fax: 704/525-0409
Phone: 704/529-6364 • Fax: 704/525-0409 Client Company Name: Hart 2th Kma
Report To/Contact Name: Dave Graham
Reporting Address:

Phone:	_ Fax (Yes) (No):
	dress
EDD Type: PDF Excel	Other
Site Location Name:	
Site Location Physical Add	dress:

	LABORA	TORIES		PAGE 5 OF	5 000	TE # TO ENS	URE PROPER BILLI	NG:						A NESSA MESS	NO N/A
Full Service	Analytical & Env	vironmental Solution	18				Ł WBSEler		2487	111			pon arrival? ICE? Temp <u>0.1</u>	; * * * <del>* /</del> *	
449 Springbrook Road • Phone: 704/529-6364 •	P.O. Box 24054	13 • Charlotte, NC	28224-0543	Short Hold Ar					(Yes) <				VATIVES indicate		
Client Company Name	Hart 1	Hickma		*Please ATTA	CH anv	project spe	cific reporting ((				41 S. Martin, 7 4417	100 C ( ) ( ) ( ) ( ) ( ) ( )	HOLDING TIMES	He for the second	
Report To/Contact Na	me: Dave	2 Grahan	o	provisions and/or QC Requirements								STATES OF STATES	INTAGT? : V/OUT HEADSPA	and shares in an an enter	- 4
Reporting Address:	. – 1			Address:	UD2E	TIETNEL	0-0-0-0	·1.1			and the state of the second	The state of a star	VIDUII HEADSFA	and in the second s	
			· · ·	Address:				,		B			a an		
Phone:				Purchase Ord	ler No./E	Billing Refe	rence			то	BE FILL	ED IN B	Y CLIENT/SA	MPLING PE	RSONNEL
Email (Yes) (No) Email	Address		·····		Date 🗅 1	Day 0 2 Da	ays 🗆 3 Days 🗆 4	Days 🖸	Ce			ACUSA		_	
EDD Type: PDFE				"Working Days	" "	-9 Days 🗅 Si	tandard 10 days 🗅	Rush Wo Pre-Appro				OTHER _			
Site Location Name: _ Site Location Physical	Address:						cessed next busine lays, excluding week		d holidavs.	Wa	ater Chio		YESNO_		<u> </u>
				(SEE REVE	RSE FOR T	ERMS & COND	ITIONS REGARDING			Sa	mple ice	d Upon (	Collection: YE	SINO	
		TIME	MATRIX	· · · ·	E CONTA			r	b. /		S REQUES		• • • • • • • • • •		
CLIENT SAMPLE DESCRIPTION		COLLECTED MILITARY	(SOIL,			T	PRESERVA-	Å	₩ \$20⁄~	b B	\$2	/ /	· · /		PRISM LAB
SAMPLE DESCRIPTION	COLLECTED	HOURS	WATER OR SLUDGE)	SEE BELOW	NO.	SIZE	TIVES 🔬	1550 JA		SP DY	V /		REI	MARKS	ID NO.
Q 1= 1	alation	<u></u>		00	1					<u> </u>	<del>~ (</del>				Dur.
8-15-1	3/24/0		SOIL	CG	<u> </u>		NONE	$\mathbf{x}$	<u>}</u>						241510
8-15-3		1452			<u> </u>		\\	1	ト		Adde	d RL	P Metals	·	241511
8-16-2		1505						×							241512
8-16-7	· V	1500			$\mathbf{V}$		$\nabla$	4							241513
11-9-1	3/23/09	1420			4					$\mathbf{\gamma}$					241514
		1.12	1							•					
		· / · · · ·					_								
		· · · · · ·		`				<u> </u>							······
		· · · · · · · · · · · · · · · · · · ·		<u>+</u>	<u></u>	·									
		<b>b</b>	· .												
	MIL	1		, ,	11 11		· . 1.60		1	12	11. 1.		PRESS DO	WN FIRML	r - 3 COPIES
Sampler's Signature				iy. (Print Name)				·	ion <u>F</u> D		Hick	mn	=		
Upon relinquishing, this submitted in writing to	s Chain of Cus the Prism Pro	stody is your aut ject Manager. T	horization for here will be c	r Prism to proc barges for any	eed with changes	the analyse after analy	s as requested al ses have been ini	bove, Ar tialized.	ny change	es must b	ie			PRISM	USE ONLY
Relinquished By: (Signature)	•	h		eived By: (Signature		<u> </u>			Date		tary/Hours	Additio	onal Comments:	Site Arrival	Time: Sec.
Retinguished By (Bignatury)	min	white _	Rec	eived By: (Signature	for	ei <del>n</del>			Date	71	540			Site Depart	ure Time:
	: 3-28-0	09 0815		1	Å	$\sim \rho$								- Field Took	Fee:
Relinguished By: (Signature)		· · · · ·	. Neec	elve#For Prism La#	oratories By		<u> </u>		Date 3 25	ha Q	14			<b>第二第一部第三部</b>	1 OO.
Method of Shipment: NOTE: A SAMPLE	LL SAMPLE COO	LERS SHOULD BE TA	PED SHUT MAN	CUSTODY SEALS	FOR TRAN	SPORTATION T	O THE LABORATORY.		COC Group		·/			ALC: NO.	
Gred Ex CUPS CHand-			Other						Gø3	3\$9966	(				
NPDES: UST:		1			WAST					1	HER:			SEE R TERMS	EVERSE FOR & CONDITIONS
					a sc				ים אנ ים אנ						
*CONTAINED TVDE OF					= Teflor						ead Space	<del>)</del> )		0	RIGINAI

•

CHAIN OF CUSTODY RECORD

LAB USE ONLY

.



### **Case Narrative**

Date:	04/03/09
Company:	North Carolina Department of Transportation
Contact:	David Graham
Address:	c/o Hart and Hickman
	2923 South Tryon St. Ste 100
	Charlotte, NC 28203

Client Project ID:ROW-204Prism COC Group No:G0309660Collection Date(s):03/24/09Lab Submittal Date(s):03/25/09

Client Project Name Or No: Winston Salem WBS# 34871.1.1

This data package contains the analytical results for the project identified above and includes a Case Narrative, Laboratory Report and Quality Control Data totaling 8 pages. A chain-of-custody is also attached for the samples submitted to Prism for this project.

Data qualifiers are flagged individually on each sample. A key reference for the data qualifiers appears at the end of this case narrative. Quality control statements and/or sample specific remarks are included in the sample comments section of the laboratory report for each sample affected.

#### Semi Volatile Analysis

No Anomalies Reported

#### Volatile Analysis

No Anomalies Reported

### Metais Analysis

No Anomalies Reported

#### Wet Lab and Micro Analysis

N/A

Please call if you have any questions relating to this analytical report. Data Reviewed by: Robbi A. Jones

Data Reviewed by:	Robbi
Signature:	Robbi
Review Date:	04/

# 04/03/09

Project Manager: Signature:

#### Approval Date:

#### Data Qualifiers Key Reference:

- B: Compound also detected in the method blank.
- #: Result outside of the QC limits.
- DO: Compound diluted out.

E: Estimated concentration, calibration range exceeded.

J: The analyte was positively identified but the value is estimated below the reporting limit.

H: Estimated concentration with a high bias.

L: Estimated concentration with a low blas.

M: A matrix effect is present.

**ercash** Andela 04/03/09

Notes: This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. The results in this report relate only to the samples submitted for analysis.



Laboratory Report

04/03/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 11-6-1 Transportation Project ID; **ROW-204** Prism Sample ID: 241466 Attn: David Graham Project No .: WBS#34871.1.1 COC Group: G0309660 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 16:20 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 9:05 Charlotte, NC 28203

		Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analysi	: Batch ID
Percent Solids Determination						01/05/0.0		. 1	
Percent Sollds	80.2	%			1	SM2540 G	03/30/09 15:10	kpowers	
Diesel Range Organics (DRO) by GC-	<u>FID</u>								
Diesel Range Organics (DRO)	BRL	mg/kg	8.7	1.4	1	8015B	03/28/09 1:30	jvogel	Q40268
Sample Preparation;			25.	03g /	1 mL	3545	03/26/09 12:00	) pbarr	P24125
					Surrogate		% Recover	y Cor	trol Limits
					o-Terphen	γI	84		49 - 124
Sample Weight Determination									
Weight 1	5.57	g			1	GRO	03/25/09 0:00	ibrown	
Weight 2	5,81	g			1	GRO	03/25/09 0:00	lbrown	
Gasoline Range Organics (GRO) by G	C-FID								
Gasoline Range Organics (GRO)	BRL	mg/kg	6.2	3.9	50	8015B	03/27/09 16:42	dliamm	Q40222

#### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet stale certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



North Carolina Department of Transportation Attn: David Graham c/o Hart and Hickman 2923 South Tryon St. Ste 100 Charlotte, NC 28203

Project Name:Winston SalemProject ID:ROW-204Project No.:WBS#34871.1.1Sample Matrix:Soil

 Client Sample ID: 11-7-1

 Prism Sample ID: 241467

 COC Group:
 G0309660

 Time Collected:
 03/24/09
 16:10

 Time Submitted:
 03/25/09
 9:05

102

Laboratory Report

04/03/09

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analys	t Batch ID
Percent Solids Determination	45.0	<b>D</b> /			1	SM2540 G	03/20/00 45:40	knauen	
Percent Solids	85.6	%			I	SIVI2040 G	03/30/09 15:10	Kpowers	
Diesel Range Organics (DRO) by G	C-FID								
Diesel Range Organics (DRO)	BRL	mg/kg	8,2	1.3	1	8015B	03/27/09 23:08	jvogel	Q40268
Sample Preparation:			25.	02 g	/ 1 mL	3545	03/26/09 12:00	pparr	P24125
					Surrogate	•	% Recovery	/ Co	ntrol Limits
					o-Terphen	ył	96		49 - 124
Sample Weight Determination									
Weight 1	5.96	g			1	GRO	03/25/09 0:00	lbrown	
Weight 2	5.90	9			1	GRO	03/25/09 0:00	lbrown	
Gasoline Range Organics (GRO) by	GC-FID								
Gasoline Range Organics (GRO)	BRL	mg/kg	5.8	3.7	50	8015B	03/27/09 17:13	diiamm	Q40222
					Surrogate		% Recovery	r Co	ntrol Limits

aaa-TFT

Sam	ole	Comm	ent	's`	i.

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc. 449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409

55 - 129



Laboratory Report

04/03/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: 11-8-1 Transportation Project ID: **ROW-204** Prism Sample ID: 241468 Attn: David Graham WBS# 34871.1.1 Project No.: COC Group: G0309660 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 17:06 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 9:05 Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analys	t Batch ID
Percent Solids Determination		0/			1	SM2540 G	03/30/09 15:1		
Percent Solids	77.2	%			1	3M2340 G	03/30/09 13:1	U NµOweia	
Diesel Range Organics (DRO) by GC	-FID								
Diesel Range Organics (DRO)	BRL	mg/kg	9.0	1.5	1	8015B	03/28/09 2:06	jvogel	Q40268
Sample Preparation:			25.	09g /	1 mL	3545	03/26/09 12:0	0 pbarr	P24125
					Surrogate	)	% Recover	y Co	ntrol Limits
					o-Terphen	yl	103		49 - 124
Sample Weight Determination									
Weight 1	6.14	g			1	GRO	03/25/09 0:00	lbrown	
Weight 2	6.20	g			1	GRO	03/25/09 0:00	lbrown	
Gasoline Range Organics (GRO) by	<u>GC-FID</u>								
Gasoline Range Organics (GRO)	BRL	mg/kg	6.5	4.1	50	8015B	03/27/09 19:1	9 dliamm	Q40222

Surrogate
aaa-TFT

#### Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than

NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a dry-weight basis

Angela D. Overcash, V.P. Laboratory Services



### Laboratory Report

04/03/09

North Carolina Department of Project Name: Winston Salem Client Sample ID: Comp Transportation Project ID: ROW-204 Prism Sample ID: 241469 Attn: David Graham Project No .: WBS# 34871.1.1 COC Group: G0309660 c/o Hart and Hickman Sample Matrix: Soil Time Collected: 03/24/09 17:15 2923 South Tryon St. Ste 100 Time Submitted: 03/25/09 9:05Charlotte, NC 28203

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	03/26/09 15:20	mbarber	
TCLP Leachable Mercury by CV Mercury	/AA BRL	mg/L	0.010	0.000014	1	7470A	03/30/09 17:55	i dsullivan	Q40335
Sample Prepa	aration:			20 mL /	30 mL	7470A	03/30/09 12:45	i mbarber	P24138
TCLP Leachable Metals by ICP						·			
Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	03/27/09 0:03	heasler	Q40263
Barium	BRL	mg/L	5.0	0.0019	1	6010B	03/27/09 0:03	heasler	Q40263
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	03/27/09 0:03	heasler	Q40263
Chromium	BRL	mg/L	0.25	0.0006	1	6010B	03/27/09 0:03	heasler	Q40263
Lead	0.10	mg/L	0.050	0.0021	1	6010B	03/27/09 0:03	heaster	Q40263
Selenium	BRL	mg/L	0.050	0,0035	1	6010B	03/27/09 0:03	heasler	Q40263
Silver	BRL	mg/L	0.25	0.00025	1	6010B	03/27/09 0:03	heasler	Q40263
Sample Prepa	aration;			50 mL /	50 mL	3010A	03/27/09 8:30	mbarber	P24122

Sample Comment(s):

BRL = Below Reporting Limit

Values are reported down to the reporting limits only. No J-flags applied.

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



# Level II QC Report

4/3/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309660
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	3/25/09 9:05
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

#### Gasoline Range Organics (GRO) by GC-FID, method 8015B

Method Blank									QC Batch
	Result	RL	Control Limit	Units		<u>.</u>			ID
Gasoline Range Organics (GRO)	ND	5	<2.5	mg/kg					Q40222
Laboratory Control Sample	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %			QC Satch ID
Gasoline Range Organics (GRO)	43.75	50		mg/kg	88	67-116			Q40222
Matrix Spike Sample ID:	Result	Spike Amou	h	Units	Recovery %	Recovery Ranges %			QC Batch ID
241514 Gasoline Range Organics (GRO)	31.45	50		mg/kg	63	57-113			Q40222
Matrix Spike Duplicate Sample ID:	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241514 Gasoline Range Organics (GRO)	35.3	50		mg/kg	71	57-113	12	0 - 23	Q40222



# Level II QC Report

4/3/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309660
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	3/25/09 9:05
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100	-			

#### TCLP Leachable Metals by ICP, method 6010B

Method Blank	Result		Cashel Limii						QC Batci
		RL	Centrol Limit	Units					aı
Arsenic	-0.0017	0.05	<0.025	mg/L					Q40263
Barlum	0.0015	5	<2.5	mġ/L					Q40263
Cadmium	-0.0006	0,025	<0.0125	mg/L					Q40263
Chromium	0.0002	0.25	<0.125	mg/L					Q40263
Lead	-0.0007	0.05	<0.025	mg/L					Q40263
Selenium	-0.0009	0,05	<0.025	mg/t,					Q40263
Silver	-0.0005	0.25	<0.125	mg/L					Q40263
aboratory Control Sample	Result	Spike Amou	nt	Units	Recovery %	Recovery Ranges %			QC Batch ID
Arsenic	0.245	0.25		mg/L	98	80-120			Q40263
Barium	0.211	0.25		mg/L	84	80-120			Q40263
Cadmium	0.210	0.25		mg/L	84	80-120			Q40263
Chromium	0.206	0.25		mg/L	82	80-120			Q40263
Lead	0.200	0.25		mg/L	80	80-120			Q40263
Selenium	0.263	0.25		mg/L	105	80-120			Q40263
Silver	0.240	0.25		mg/L	96	80-120			Q40263
Aatrix Spike					Recavery	Recovery			QC Batc
Sample ID:	Result	Spike Amour	nt	Units	%	Ranges %			ID
41037 Arsenic	0.259	0.25		mg/L	100	75-125			Q40263
Barium	1.16	0.25		mg/L	79	75-125			Q40263
Cadmium	0.222	0.25		mg/L	89	75-125			Q40263
Chromium	0.228	0.25		mg/L	89	75-125			Q40263
Lead	0.223	0.25		mg/L	87	75-125			Q40263
Selenium	0.262	0.25		mg/L	104	75-125			Q40263
Silver	0.240	0.25		mg/L	95	75-125			Q40263
fatrix Spike Duplicate ample ID:	Result	Spike Amoun	ıt	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batcl ID
41037 Arsenic	0,265	0.25		mg/L	103	75-125	2	0 - 20	Q40263
Barium	1.17	0.25		mg/L	83	75-125	1	0 - 20	Q40263
Cadmium	0.232	0.25		mg/L	93	75-125	4		Q40263
Chromium	0.234	0.25		mg/L	91	75-125	3		Q40263
Lead	0.232	0.25		тg/L	91	75-125	4		Q40263
		0.25							
Selenium	0.265	0.20		mg/L	105	75-125	1	0 - 20	Q40263

This report should not be reproduced, except in its entirety, without the written consent of Prism Laboratories, Inc.

449 Springbrook Road - P.O. Box 240543 - Charlotte, NC 28224-0543

Phone: 704/529-6364 - Toll Free Number: 1-800/529-6364 - Fax: 704/525-0409



# Level II QC Report

4/3/09

North Carolina Department of Transportation	Project Name:	Winston Salem	COC Group Number:	G0309660
Attn: David Graham	Project ID:	ROW-204	Date/Time Submitted:	3/25/09 9:05
c/o Hart and Hickman	Project No.:	WBS# 34871.1.1		
2923 South Tryon St. Ste 100				

#### Diesel Range Organics (DRO) by GC-FID, method 8015B

Method Blank									QC Batch
· · · · · · · · · · · · · · · · · · ·	Result	RL	Control Limit	Units					D
Diesel Range Organics (DRO)	ND	7	<3.5	mg/kg					Q40268
Laboratory Control Sample	Result	Spike Amour	મ	Units	Recovery %	Recovery Ranges %			QC Batch ID
Diesel Range Organics (DRO)	81.4	80		mg/kg	102	55-109			Q40268
Matrix Spike Sample ID:	Result	Spike Amour	nt	Units	Recovery %	Recovery Ranges %			QC Batch ID
241467 Diesel Range Organics (DRO)	71.5	80		mg/kg	89	50-117			Q40268
Matrix Spike Duplicate Sample ID:	Result	Spike Amour	nt	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241467 Diesel Range Organics (DRO)	56.6	80		mg/kg	71	50-117	23	0 - 24	Q40268

#### TCLP Leachable Mercury by CVAA, method 7470A

Method Blank									QC Batch
	Result	RL	Control Limit	Units					ID
Mercury	-0.00002	0.01	<0.005	mg/L					Q40335
Laboratory Control Sample	Result	Spike Amoun	t	Units	Recovery %	Recovery Ranges %			QC Batch ID
Mercury	0.00984	0.0093		mg/L	105	80-120.			Q40335
Matrix Spike					Recovery	Recovery Ranges			QC Balch
Sample ID:	Result	Spike Amoun	ll	Units	%	Kanges %	······		ID
241469 Mercury	0.00958	0.0093		mg/L	103	80-120			Q40335
Matrix Spike Duplicate Sample ID:	Result	Spike Amoun	ŧ	Units	Recovery %	Recovery Ranges %	RPD %	RPD Range %	QC Batch ID
241469 Mercury	0.00970	0.0093		mg/L	104	80-120	1	0 - 20	Q40335

#-See Case Narrative

			, ,		•		STODY		CO	RD	· 查到这些公式。	1. 44 M & 1. 1	100.400 00.00	LAB USE	ONLY	
		经济的利用					URE PROPER BILL				— San	iples INT	ACT up	oon arrival?	V.	NO N/A
Full Service • 449 Springbrook Road	Analytical & Envir			Project Name	: R0	W-20	4 WBSE	Elevn	211-34	871	Rec	eived Of	≀WET I	ICE? Temp	the second is the second second	38.69 ( A 19 ) ( A 19
Phone: 704/529-6364 +	Fax: 704/525-040	9		Short Hold A					(Yes)		<ol> <li>25 x 56 6.</li> </ol>	PROPER PRESERVATIVES indicated?				
lient Company Name	"Hart ?+	h <u>c Kman</u>	· ·	*Please ATTA provisions an	ACH any ad/or OC	project spe Requireme	cific reporting (	QC LEV	'el   11	IV)		2 - 3 y C			10000 1 4 4 5 1 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4	
leport To/Contact Na	me: <u>Dave</u>	Graha	7 1	Invoice To: K	JBST	lemen	34871	-1.1			1. Star 1. Star 1. Star	というと思われた。	120 4 9 6	//OUT HEADSP	'AGE?	$\overline{\mathbf{V}}$
harlotte N	C 282	<u>23</u>	SILIUU	Address:							- 10 PRC	OPER CO	DNTAIN	IERS used?	li i i A	
hone: 704-586-0	007Fax (Yes	) (No?		Developen Our	Jaw Mar //		· · · · · · · · · · · · · · · · · · ·			F			111 101			TROOMUEL
mail (es) (No) Email	Address	aham	harthic	Purchase Ord		Day D 2 Da	rence	Dave C	5 Dave							
DD Type: PDF E				"Working Days	··· 🗆 🖯	3-9 Days 🗅 Si	andard 10 days 🗆	Rush Wo	ork Must Be	÷	Gertifica	ition:			ACEFL_	
ite Location Name;				Samples receive	ed after 15	:00 will be pro	cessed next busine	ess dav.							N/A	
ite Location Physical	Address:	JC		(SEE REVE	RSE FOR T	ERMS & COND	lays, excluding wee ITIONS REGARDING IES, INC. TO CLIENT)	SERVICE:	id holidays s					YES NO collection: Y	ES NO	
·····		TIME	MATRIX								SES REQ		_			PRISM
CLIENT SAMPLE DESCRIPTION	DATE	MILITARY	(SOIL, WATER OR	*TYPE			PRESERVA- TIVES	4	243	ts/					EMARKS	LAB
		HOURS	SLUDGE)	SEE BELOW	NO.	SIZE	INCO	Rq	Q the s	9/		/	/		-10051030	ID NO.
11-10-1	3/24/09	1020	JOIL	CG	A			Ý		'						241466
11-7-1		1610	<u> </u>		4	·		14								241467
11-8-1		1700			4			1								241468
Drum		1715		11	1			1	X			•		· ····		<b>ઝેમામ</b> ઠવ
	<b></b>		<b>V</b>	¥	1				1-	· · · ·			······		<del>.</del>	
									ļ						····	
							•									
							<u> </u>									
·											<u> </u>		<u> </u>	- <u> </u>		
	$\frac{1}{1000}$	L		<u> </u>				+				<u> </u>		DDESS D	OWN FIRML	V - 2 000i
Sampler's Signature 🤿	July B	nmil	Sampled B	v (Print Name)	Holl	NBU	wwinkle	Affilia	tion	rt.	1412	Km	2n	Finessip	CTAR PIRA	
Upon relinguishing, this		ody is your aut	norization for	Prism to proc	eed with	the analyse	s as requested a	- bove. A			st be				DDIC	USE ONI
Relinquished an writing to	the Prisan Proje	ct Manager. Ti		larges for any lived By: (Signature		s after analy:	ses have been in	itialized	Date 🖊		Military/Hou	irs I A	dditio	] nal Comments	8. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4. 4.	e de la contente
ALLINK.	mi	w kl	1				•		3/25/	19	0905		GOULOI		Site Arrive	al Time: 😣 🔅
Rolinguished By. (Signature)			Rece	ived By: (Signature	i)				Bate /						Site Depa	rture Time:
<u> </u>				<u> </u>								_			Field Tech	n Fee:
Relinquished By: (Signature)			- Heee	ived For Frism Lab	oratories By	<i>n</i> -			Dete 3/25/	60	0905-				M M L L L L L L L L L L L L L L L L L L	
Method of Shipment: NOTE: A	LL SAMPLE COOLE	RS SHOULD BE TA	PED SHUT WITH	CUSTORY SEALS	FOR TRAN	SPORTATION T	O THE LABORATORY		COC Grou		\$ YY	_			Mileage:	
SAMPLE	S ARE NOT ACCEP	TED AND VERIFIED	AGAINSP COC U	INTIL RECEIVED A	T THE LAB	ORATORY.										
D Fed Ex DUFS D Hend-			Other	www.laat					<u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u></u>							REVERSE FOR
NPDES: UST:			RINKING WA	•	D WASTI							so			TERMS	REVERSE FOR

ORIGINAL	L	٨	V	ľ	IG	R	0	
----------	---	---	---	---	----	---	---	--



05/13/09

North Carolina Department of	Project Name:	Winston-Salem, NC	Client Sample ID	Comp-1	
Transportation	Project ID:	ROW-204 Winston-Saler	nPrism Sample ID	245420	
Attn David Graham	Project No.:	WBS# 34871.1.1	COC Group:	G0509103	ł
c/o Hart and Hickman	Sample Matrix:	Solid	Time Collected:	05/05/09	-
2923 South Tryon St. Ste 100			Time Submitted:		8:35
Charlotte, NC 28203			anio odbinitted.	00:00/08	0.00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis A Date/Time	nalyst	Batch ID
TCLP Extraction for Metals			er Boolander als indered						<b>_</b> _
TCLP Extraction	Complete				1	1311	05/07/09 14:00 mba	irber	
TCLP Leachable Mercury by CV/	M								
Mercury	BRL	mg/L	0,010	0.000014	1	7470A	05/12/09 16:50 dsul	livan	Q41407
Sample Preparation:			2	0 mL /	30 mL	7470A	05/12/09 11:45 ds	ullivan	P24530
TCLP Leachable Metals by ICP									
Arsenic	BRL.	mg/L	0.050	0.0029	1	6010B	05/08/09 22:34 heas	sler	Q41318
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/08/09 22:34 heas	sler	Q41318
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	05/08/09 22;34 heas	sler	Q41318
Chromium	BRL	mg/L	0.25	0,0006	1	6010B	05/08/09 22:34 heas	sler	Q41318
Lead	BRL	mg/L	0.050	0.0021	1	6010B	05/08/09 22:34 heas	sler	Q41318
Selenium	BRL	mg/L	0.050	0,0035	1	6010B	05/08/09 22:34 heas	sler	Q41318
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/08/09 22:34 hea	sler	Q41318
Sample Preparation:			5	0 mL /	50 mL	3010A	05/08/09 8:30 mi	barber	P24504

Sample Comment(s):

BRL = Below Reporting Limit

J = Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments. All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/13/09

North Carolina Department of	Project Name:	Winston-Salem, NC	Client Sample ID	Comp-2	
Transportation	Project ID:	ROW-204 Winston-Sale	mPrism Sample ID	245421	
Attn David Graham	•	WBS# 34871.1.1	COC Group:	G0509103	3
c/o Hart and Hickman	Sample Matrix:	Solid	Time Collected:	05/05/09	15:30
2923 South Tryon St. Ste 100			Time Submitted:	05/06/09	8:35
Charlotte, NC 28203					

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Date/Time	Analyst	Batch ID
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/11/09 14:30 (	nbarber	
TCLP Leachable Mercury by CVA Mercury	<u>A</u> BRL	mg/L	0.010	0.000014	1	7470A	05/12/09 17:08	lsullivan	Q41407
Sample Preparation:			2	:0 mL /	30 mL	7470A	05/12/09 11:45	dsullivan	P24530
TCLP Leachable Metals by ICP									
Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/12/09 21:50	teasler	Q41387
Barium	BRL	mg/L	5.0	0.0019	1	6010B	05/12/09 21:50	leasler	Q41387
Cadmium	BRL	mg/L	0,025	0.00034	1	6010B	05/12/09 21:50 #	reasler	Q41387
Chromium	BRL	mg/L	0.25	0.0006	1	6010B	05/12/09 21:50 F	easler	Q41387
Lead	BRL	mg/L	0.050	0.0021	1	6010B	05/12/09 21:50	leasler	Q41387
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/12/09 21:50 t	leasler	Q41387
Silver	BRL	mg/L	0.25	0.00025	1	6010B	05/12/09 21:50 t	ieasler	Q41387
Sample Preparation:			5	0 mL /	50 mL	3010A	05/12/09 8:40	mbarber	P24532

Sample Comment(s):

BRL = Below Reporting Limit

J = Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments, All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



05/13/09

North Carolina Department of	Project Name:	Winston-Salem, NC	Client Sample ID	Drum	
Transportation	Project ID:	ROW-204 Winston-Salen	n Prism Samole ID	245422	
Attn David Graham		WBS# 34871.1.1	COC Group;	G0509103	
c/o Hart and Hickman	Sample Matrix:		Time Collected:	05/05/09	16:00
2923 South Tryon St. Ste 100		0.000	Time Submitted:		8:35
Charlotte, NC 28203			rime oublinited.	00100108	0.00

Parameter	Result	Units	Report Limit	MDL	Dilution Factor	Method	Analysis Analys Date/Time	t Batch ID
TCLP Extraction for Metals TCLP Extraction	Complete				1	1311	05/11/09 14:30 mbarber	
TCLP Leachable Mercury by CV/	AA BRL	mail	0.010	0.000014	1	7470A	05/12/09 17:12 dsuilivan	0.44.407
Mercury Sample Preparation:	DKL	mg/L		20 mL /	, 30 mL	7470A	05/12/09 11:45 dsullivar	Q41407 P24530
<u>TCLP Leachable Metals by ICP</u> Arsenic	BRL	mg/L	0.050	0.0029	1	6010B	05/12/09 22:09 heasier	Q41387
Barium	BRL	mg/L	5.0	0,0019	1	6010B	05/12/09 22:09 heasier	Q41387
Cadmium	BRL	mg/L	0.025	0.00034	1	6010B	05/12/09 22:09 heasler	Q41387
Chromium	BRL	mg/L	0.25	0.0006	1	60 <b>10B</b>	05/12/09 22:09 heasler	Q41387
Lead	BRL	mg/L	0.050	0.0021	1	6010B	05/12/09 22:09 heasler	Q41387
Selenium	BRL	mg/L	0.050	0.0035	1	6010B	05/12/09 22:09 heasler	Q41387
Silver	BRL	mg/L	0,25	0.00025	1	6010 <b>B</b>	05/12/09 22:09 heasler	Q41387
Sample Preparation:			5	i0 mL /	50 mL	3010A	05/12/09 8:40 mbarber	P24532

Sample Comment(s):

BRL = Below Reporting Limit

J = Estimated value between the Reporting Limit and the MDL

The results in this report relate only to the samples submitted for analysis and meet state certification requirements other than NELAC certification except for those instances indicated in the case narrative and/or test comments.

All results are reported on a wet-weight basis

Angela D. Overcash, V.P. Laboratory Services



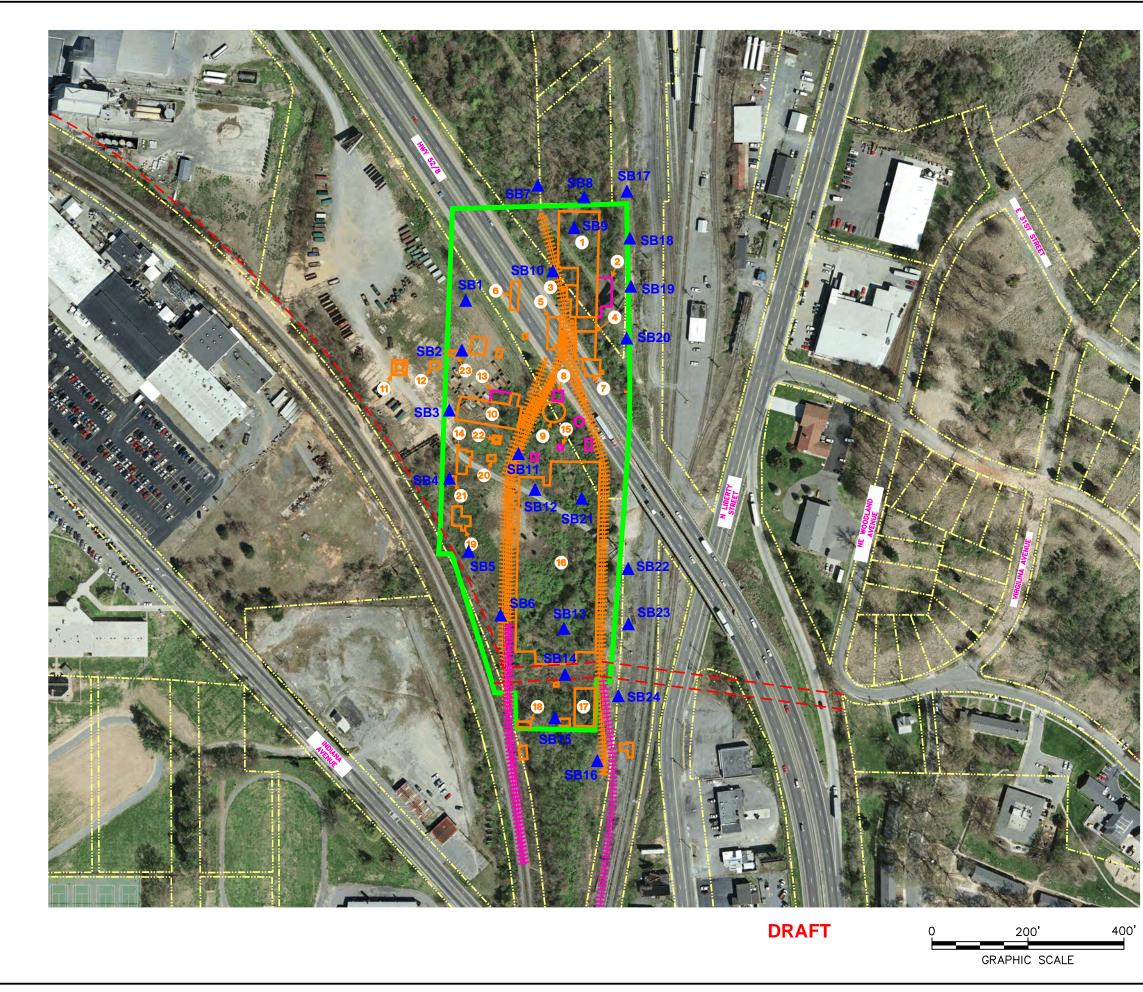
					L .		STODY		COF	<b>ND</b>	Sam	tes INTAG	LAB Tupèn arriva	USE ON	LY	NONVA
449 Springbrook Road • Phone: 704/529-6364 • Client Company Name Report To/Contact Na Reporting Address:	Fax: 704/525-040 3: <u>Hors 3</u> ime: <u>Dave</u> <i>J933</i> 5 2 <i>J84</i> 0	• Charlotte, NC 9 <u>Ufick man</u> Graham Jozon 30 23	s 28224-0543 	Project Name Short Hold Ar	alysis: CH any j d/or QC	<u>کری -</u> (Yes) (No project spec Requireme	<u>よっ イ</u> ) UST F cific reporting ( nts	Project:	(Yes) ( /ELIII/III		- PROI PROI Rece CUST VOL	ved ON W PER PRES ved WITH FODY SEA VTILES red	ET. ICE? Tem ERVATIVES IN HOLDING LS INTACT? d W/OUT HE FAINERS use	ip <u>0.9</u> indicated? TIMES? ADSPACE	$\mathbf{Z}$	
Phone: 7.576 ( Email (fee) (No) Email EDD Type: PDF E Site Location Name: Site Location Physical	Address <u>∽6</u> kcelOther て <u>∠</u> の√	AP4		"Working Days" Samples receive Turnaround time (SEE REVER	Date D 1 'D 6 Id after 15: Is based o RSE FOR TE	Day D 2 Day 9 Days D Sta 00 will be prod on business da 28MS & COND)	ence /s 3 Days 4 andard 10 days 3 cessed next busine ays, excluding wee TIONS REGARDING ES, INC. TO CLIENT	Rush Wo Pre-Appi ess day. konds ar service	ork Must Be roved nd holidays. s	י איני	Certificat Water Cl Sample I	tion: N S nlorinate ced Upo	I BY CLIEI ELAC GC OT d: YES n Collectio	USACE	FL N/A _	
CLIENT SAMPLE DESCRIPTION	DATE COLLECTED	TIME COLLECTED MILITARY HOURS	MATRIX (SOIL, WATER OR SLUDGE)	SAMPL *TYPE SEE BELOW	E CONTA	INER SIZE	PRESERVA- TIVES	R	A LAN	NALY	SES REQU	ESTED	/ /	REMA	RKS	PRISM LAB ID NO.
Comp-1 Comp-2	5/5/09	1140 1530 1600	5011	· · · · · · · · · · · · · · · · · · ·	······	~					· · · · · · · · · · · · · · · · · · ·	·				245420
	, <u></u>															
	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			·····											
	Z .	2			R		 			11.	3 11		PRES	s dow	N FIRML	Y • 3 COPIES
Sampler's Signature Upon relinquishing, this submitted in writing to	S Chain of Cust the Prism Proje	ody is your auti act Manager. Ti	horization for here will be c	narges for any	eed with changes	the analyses after analys	as requested a ses have been in	Affilia bove. A itialized	ny change	es mus					PRISM	I USE ONLY
Relinquished By: (Signature) Relinquished By: (Signature)		. ·		elved By: (Signature elved By: (Signature					Date Date		Military/Hour	s Ado	litional Com	iments:	Site Arriva	l Time: ture Time:
Relinguished By: (Signature)	ALL SAMPLE COOLE ES ARENOT ACCEP		PED SHUT WITH	Ived For Point of CUSTODY SEALS UNTIL RECEIVED A	-		D THE LABORATORY	·	Daje 5 4/0 COC Group G (\$1)	p NO.					Field Tech	Fee:
NPDES: UST: NC USC UNC U		WATER: DI	RINKING WA					⊐ sc							SEE I TERMS	REVERSE FOR & CONDITIONS
*CONTAINER TYPE CO	ODES: A = Ar	nber C = Clear	G = Glass	P = Plastic; Tl	. = Teflor	n-Lined Cap	VOA = Volatile	Organio	s Anaiysis	s (Zero	Head Sp	ace)			C	RIGINAL

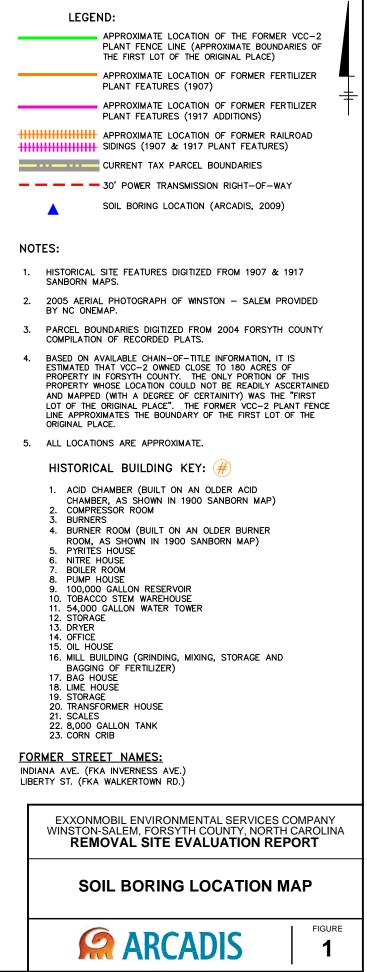
.

Appendix C

.

ARCADIS - Summary of Arsenic and Lead Concentrations in Soil Samples





### Table 3-1

### Summary of Arsenic and Lead Concentrations in Soil Samples Removal Site Evaluation Report VCC Winston-Salem Site - Winston-Salem, North Carolina

#### Preliminary Draft

Data Pending Validation

	Depth			
Sample ID	(ft bgs)	рН	As (mg/kg)	Pb (mg/kg)
WS-SB-1	0 - 0.5	5.6	6.50	61.1
	0.5 - 2	5.3	5.65	86.5
	2 - 4	4.8	6.15	15.5
WS-SB-2	0 - 0.5	5.2	4.34	31.6
	0.5 - 2	4.4	3.98	24.2
	2 - 4	4.8	3.66	16.8
WS-SB-3	0 - 0.5	5.9	6.30	38.0
	0.5 - 2	7.3 [5.8]	3.68 [2.77]	29.2 [25.8]
	2 - 4	4.7	2.74	35.3 M1
WS-SB-4	0 - 0.5	5.3	7.35	32.9
	0.5 - 2	4.9	4.74	26.9
	2 - 4	5.3	2.53	19.6
WS-SB-5	0 - 0.5	5.3	5.74	40.5
	0.5 - 2	5.6	5.69	26.9
	2 - 4	4.9	3.72	27.3
WS-SB-6	0 - 0.5	5.3	8.44	53.3
	0.5 - 2	5.3	6.20	21.6
	2 - 4	4.4	3.94	19.9
WS-SB-7	0 - 0.5	5.0	1.21	21.3
	0.5 - 2	4.3	7.10	51.9
	2 - 4	5.1	3.72	22.0
WS-SB-8	0 - 0.5	4.1	38.3	1,740
	0.5 - 2	5.5	5.07	211
	2 - 4	5.6	3.06	25.1
WS-SB-9	0 - 0.5	4.4	0.731 U	40.2
	0.5 - 2	4.6	9.50	253
	2 - 4	4.2 [4.1]	8.81 [25.2]	635 [3,540]
WS-SB-10	0 - 0.5	6.0	6.18	203
	0.5 - 2	6.6	9.82	3,650
	2 - 4	5.0	6.80	1,570
WS-SB-11	0 - 0.5	4.4	7.91	30.7
	0.5 - 2	5.8	7.09	21.5
	2 - 4	5.4	26.9	102
WS-SB-12	0 - 0.5	5.1	8.83	49.8
	0.5 - 2	5.6	6.59	64.8
	2 - 4	6.2	8.01	73.3
WS-SB-13	0 - 0.5	5.1	33.0	40.9
	0.5 - 2	5.4	9.39	23.0
	2 - 4	5.2	7.30	23.6
WS-SB-14	0 - 0.5	7.2	16.1	146
	0.5 - 2	5.1	3.30	18.3
	2 - 4	5.3	2.84	11.0
WS-SB-15	0 - 0.5	5.6	6.19	79.8
WU-UD-10	0 - 0.5 0.5 - 2	5.0	6.75	30.6
We ed 46				
WS-SB-16	0-0.5	5.3 [6.7]	7.56 [6.12]	18.5 [15.5]
	0.5 - 2	5.3	8.25	21.3
	2 - 4	5.6	4.29	16.7

#### Table 3-1

### Summary of Arsenic and Lead Concentrations in Soil Samples Removal Site Evaluation Report VCC Winston-Salem Site - Winston-Salem, North Carolina

	Depth			
Sample ID	(ft bgs)	pН	As (mg/kg)	Pb (mg/kg)
WS-SB-17	0 - 0.5	4.9	38.0 M1	1,360 MHA
	0.5 - 2	4.0	148	238
	2 - 4	4.0	2.78	22.4
WS-SB-18	0 - 0.5	6.1	62.8	946
	0.5 - 2	3.1	35.1	2,030
	2 - 4	5.3	5.94	287
WS-SB-19	0 - 0.5	4.8	55.1	188
	0.5 - 2	4.3	14.8	24.5
	2 - 4	4.0	6.59	35.1
WS-SB-20	0 - 0.5	7.0	0.924 J	23.9
	0.5 - 2	6.1	1.92	28.0
	2 - 4	5.0	3.56	56.5
WS-SB-21	0 - 0.5	5.5	9.22	123
	0.5 - 2	5.3	8.66	40.3
	2 - 4	5.9	74.8	87.0
WS-SB-22	0 - 0.5	7.2	15.7	214
	0.5 - 2	6.3 [7.0]	238 [221]	3,640 [4,380]
	2 - 4	5.0	29.7	380
WS-SB-23	0 - 0.5	7.0	12.4	122
	0.5 - 2	7.2	1.50	13.1
	2 - 4	5.4	1.86	19.3
WS-SB-24	0 - 0.5	6.0	60.1	657
	0.5 - 2	5.1	6.73	47.9
	2 - 4	5.3	2.95	14.4

#### Notes:

mg/kg - milligrams per kilogram

ft bgs - feet below ground surface

J - estimated value

U - not detected

M1 - The MS and/or MSD were above the acceptance limits due to sample matrix interference.

MHA - Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information.

Duplicate sample concentrations are in brackets

Arsenic screening value of 27 mg/kg is based on USEPA Region 4 screening levels. Lead screening value of 895 mg/kg is based on USEPA Region 4 screening

levels for lead with industrial site use.

Shaded values exceed screening levels.

### Table 3-2

### Summary of Arsenic and Lead TCLP Concentrations in Soil Samples Removal Site Evaluation Report VCC Winston-Salem Site - Winston-Salem, North Carolina

### Preliminary Draft

Data Pending Validation

			Concentration in Sample:		
	TCLP		WS-SB-8 (0-0.5')	WS-SB-9 (2-4')	
Analyte	Criteria	Units	5/20/09	5/20/09	
Arsenic	5.0	mg/L	0.04 U	0.04 U	
Lead	5.0	mg/L	16.2	20.6	

### Notes:

mg/L - milligrams per liter

NA - not analyzed

U - not detected

Shaded values exceed USEPA maximum concentration for toxicity characteristic based on TCLP testing.