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September 2, 2016

Mr. David Kwiatkowski
North Carolina Department of
Environmental Quality
Pre-Regulatory Landfill Unit
1646 Mail Service Center
Raleigh, North Carolina 27699-1646

Subject: Work Plan for Task Orders 673FP and FP-1
Bud Holding Company
10 & 12 Sharps Airpark Court
Greensboro, Guilford County, North Carolina
Site Identification Number: NONCD0000673

Dear Mr. Kwiatkowski:

CDM Smith Inc. (CDM Smith) is pleased to submit this Work Plan and schedule for Task Orders 673FP and FP-1 dated August 18, 2016. Per Task Order 673FP, the following activities will be completed by CDM Smith:

- Water supply wells, springs, and surface water intakes will be identified within 1,000 feet of the waste disposal boundary;
- Zoning classifications and easements will be identified for properties located within 500 feet of the waste disposal boundary;
- Environmentally Sensitive Areas within 500 feet of the waste disposal boundary will be researched;
- The horizontal extent of the waste disposal area will be delineated using single frequency geophysical survey methods. Global Positioning System coordinates will be collected along the waste disposal boundary identified by the geophysical survey;
- The local geologic and hydrogeologic conditions will be researched;
- A Site walkthrough will be conducted to evaluate and locate select features;
- Maps summarizing the first phase research and geophysical survey results will be compiled;
- Landfill gas (LFG) measurements will be collected within the waste disposal area to evaluate aboveground vapors;
- LFG probes GP-1 through -5 will be screened for volatile organic compounds (VOCs), methane, oxygen, carbon dioxide, and hydrogen sulfide. Water levels will also be measured at each LFG probe;





Bud Holding Company
Task Order 673FP and FP-1
Site Identification Number: NCD980844732

- One surface water and sediment sample will be collected from SW/SED-1, -2, and -3 located along the East Fork Deep River;
- Potential wetlands and regulated floodways located within the vicinity of the waste disposal area will be identified and delineated;
- A topographic survey of the waste disposal area will be completed; and
- Notification plats will be prepared for parcels containing waste in accordance with the *Instructions for Preparing a Notice of an Inactive Hazardous Substance or Waste Disposal Site for Recordation*.

A report summarizing the tasks identified above will be completed in accordance with Task Order 673FP-1. We look forward to working with you on this project and others. If you have any questions or comments, please do not hesitate to contact me by phone at (919) 325-3569 or by email to colonemf@cdmsmith.com.

Sincerely,

A handwritten signature in blue ink that reads "Mathew F. Colone".

Mathew F. Colone, P.G.
CDM Smith Inc.

cc: Daniel Forbes, CDM Smith
Aaron Weispfenning, CDM Smith

Section 1

Task Order 673FP - Background

1.0 General

CDM Smith Inc. (CDM Smith) is pleased to submit this Work Plan for Task Order 673FP dated August 18, 2016. Per Task Order 673FP, the following will be completed by CDM Smith for the Bud Holding Company (Site) located in Greensboro, Guilford County, North Carolina:

- Water supply wells, springs, and surface water intakes will be identified within 1,000 feet of the waste disposal boundary;
- Zoning classifications and easements will be identified for properties located within 500 feet of the waste disposal boundary;
- Environmentally Sensitive Areas (ESA) within 500 feet of the waste disposal boundary will be researched;
- The horizontal extent of the waste disposal area will be delineated using single frequency geophysical survey methods. Global Positioning System (GPS) coordinates will be collected along the waste disposal boundary identified by the geophysical survey;
- The local geologic and hydrogeologic conditions will be researched;
- A Site walkthrough will be conducted to evaluate and locate select features;
- Maps summarizing the first phase research and geophysical survey results will be compiled;
- Landfill gas (LFG) measurements will be collected within the waste disposal area to evaluate aboveground vapors;
- LFG probes GP-1 through -5 will be screened for volatile organic compounds (VOCs), methane, oxygen, carbon dioxide, and hydrogen sulfide. Water levels will also be measured at each LFG probe;
- One surface water and sediment sample will be collected from SW/SED-1, -2, and -3 located along the East Fork Deep River;
- Potential wetlands and regulated floodways located within the vicinity of the waste disposal area will be identified and delineated;
- A topographic survey of the waste disposal area will be completed; and
- Notification plats will be prepared for parcels containing waste in accordance with the *Instructions for Preparing a Notice of an Inactive Hazardous Substance or Waste Disposal Site for Recordation*.

A report summarizing the tasks identified above will be completed in accordance with Task Order 673FP-1. All field activities will be performed in per the Work Plan and CDM Smith's Standard Operating Procedures and Quality Assurance (SOPQA) manual that was approved by the North Carolina Department of Environmental Quality's Division of Waste Management - Superfund Section - Inactive Hazardous Sites Branch (IHSB) - Pre-Regulatory Landfill Unit (Unit). The Work Plan details and schedule are provided in Section 2 and Section 3 summarizes the reporting.

1.1 Personnel

CDM Smith and subcontractor personnel engaged in field activities at the Site will comply with Occupational Safety and Health Administration required health and safety training for hazardous waste sites. The geophysical, topographic, and notification plat surveys will be performed by licensed North Carolina subcontractors. Laboratory services will be performed by a certified North Carolina laboratory. Appendix B of the *Guidelines for Addressing Pre-Regulatory Landfills and Dumps (November 2015)* was provided to the laboratory to ensure that all analyses are performed within the Unit's guidelines.

1.2 Daily Recordkeeping

Records will be kept in a site dedicated logbook to track the progress of field activities. CDM Smith's Project Task Manager and the Unit's Project Manager (PM) will be notified if field conditions or findings require a deviation from the Work Plan. If there are delays due to weather or other unforeseen events, the Unit's PM will be contacted and a written request for extension will be submitted.

CDM Smith will provide a daily email to the Unit's PM summarizing field activities. Conditions or findings that may cause cost overruns will be communicated immediately to the Unit's PM and work will cease until approval is granted. Unit approved cost overruns will be followed by written correspondence from CDM Smith within 24-hours of verbal approval. The daily field notes and updates along with other means may be used by CDM Smith for invoicing, subcontractor invoice verification, cost overrun justification and billing to the Unit. As such, the logbook will include among other things:

- Travel time between the Site, hotel, or CDM Smith's office located in Raleigh, North Carolina;
- Date and time spent on-site along with a summary of work performed each day;
- General weather conditions;
- Site visitors;
- All field parameters collected; and
- Observations that may affect work scope or schedule.

Section 2

Task Order 673FP - Work Plan

Work performed by CDM Smith during this project will be under the direction of a North Carolina licensed Geologist or Professional Engineer. This Work Plan was prepared under the assumption that the Unit will coordinate access with the property owner prior to initiating on-site investigation and survey activities. Investigation and first phase research activities along with a schedule are summarized below.

2.0 First Phase

2.1 Site Walkthrough

CDM Smith will conduct a Site walkthrough during the geophysical survey. CDM Smith personnel will use a Trimble GeoXH handheld GPS unit to collect northing and easting coordinates for Site features like paved or landscaped areas, drainage channels, structures, stormwater outfalls and conduits, utilities, fencing, and unique features. The GPS coordinates will be reported in decimal degrees to the seventh order using the North American Datum of 1983 format with accuracy in the thousandths of a meter following differential correction. Latitude and longitude will also be provided using the World Geodetic System 1984 format.

2.2 Geophysical Survey

A single-frequency electromagnetic survey will be conducted to delineate the horizontal extent of the waste disposal areas located on Parcel Identification Numbers (PIN) 7815-60-3774, 7815-61-4072, and 7815-61-7048. The waste disposal areas consist of approximately 1.66 acres as shown on **Figure 1** and will be surveyed using north-south and east-west transects spaced approximately 50 feet apart. Transect spacing may vary based on Site conditions. Each transect will extend approximately 25 feet beyond the perimeter of the estimated waste disposal areas. The geophysical survey will be performed using a CMD-4 Electromagnetic Conductivity Meter and GPS unit. GPS coordinates will be collected every 25 to 50 feet along the estimated waste disposal boundary as identified by the geophysical survey. The waste disposal boundary coordinates will be tabulated in the report starting with the northernmost point and proceeding in a clockwise direction.

Each transect will be marked prior to initiating the geophysical survey. Hand clearing will be kept to a minimum, where possible. Areas disturbed during the survey will be documented and restored.

2.3 Environmentally Sensitive Area Search

An ESA search will be performed to identify areas located within 500 feet of the waste disposal boundary. Agency specific contacts and search results will be tabulated and presented in the report. All identified ESAs will be provided on a map. The following agencies will be contacted during the search:

- National Park Service;
- Natural Heritage Program (by email only);
- North Carolina Department of Cultural Resources;
- North Carolina Division of Coastal Management;

- North Carolina Division of Conservation, Planning, and Community Affairs;
- North Carolina Division of Forest Resources;
- North Carolina Division of Parks and Recreation;
- North Carolina Division of Water Resources;
- North Carolina Wildlife Resource Commission;
- United States Army Corps of Engineers;
- United States Fish and Wildlife Service; and
- United States Forest Service.

2.4 Utility Survey and Mapping

CDM Smith will research available databases to determine if underground utilities are located at the Site. The research will include contacting Guilford County and the City of Greensboro to obtain or verify the most current utility information. A Site map illustrating the location of underground utilities and the features identified in Section 2.1 will be provided in the report.

Additional research will be conducted to prepare United States Geological Survey (USGS) topographic, water supply, and vicinity maps. The USGS Topographic map will show topography within a 1,000-foot radius from the waste disposal boundaries. Available databases will be researched to identify water supply wells, springs, and surface water intakes within 1,000 feet of the waste disposal boundaries. A windshield survey will be conducted to verify the location of these features identified during research activities. The water supply map will include the type, name, and flow direction for each surface water identified. The vicinity map will include property lines and zoning classifications for the Site and properties located within 500 feet of the waste disposal boundaries.

3.0 Aboveground Vapor

The potential for aboveground vapors will be evaluated by collecting landfill gas measurements across the waste disposal areas using a 50-foot grid as shown on **Figure 2**. The grid may be expanded to include additional areas based on the results of the geophysical survey. Measurements of methane, oxygen, carbon dioxide, and hydrogen sulfide will be collected within each grid using a Landtec GEM 2000 Plus (GEM). Total VOCs will also be measured using a photoionization detector (PID). All measurements will be collected no more than six inches above land surface and each instrument will run for at least 30 seconds prior to recording the measurements.

Barometric pressure, ambient temperature, and humidity will be recorded hourly throughout the screening. A hygrometer will be used to measure humidity and ambient temperature and the GEM will be used to measure barometric pressure. The screening will not be performed on days where it is rainy or windy.

The GEM and PID will be field calibrated prior to initiating the screening in accordance with the manufacturer's instructions. The GEM will be calibrated using 35 percent carbon dioxide gas and 50 percent methane gas. A summary of the field calibration procedures and bump tests to verify calibration and instrument accuracy before, during, and after the screening along with the types of calibration gas and expiration dates will be recorded.

4.0 Landfill Gas Probe Screening

LFG probes GP-1 through -5 as shown on Figure 1 will be screened for methane, hydrogen sulfide, oxygen, carbon dioxide, and VOCs using a GEM and a PID. Water levels will also be measured in each LFG probe using an electronic water level indicator with an accuracy of 0.01 feet.

Barometric pressure, ambient temperature, and humidity will be recorded at the beginning and at the conclusion of screening activities. The GEM and PID will be field calibrated prior to initiating the screening in accordance with the manufacturer's instructions. A summary of the field calibration procedures and bump tests to verify calibration and instrument accuracy before and after the screening along with types of calibration gas and expiration dates will be recorded.

5.0 Surface Water/Sediment Investigation

Surface water and sediment samples will be collected from SW/SED-1 through -3 located along the East Fork Deep River as shown on Figure 1. Samples will be collected in a downstream-to-upstream order starting with sample location SW/SED-3. Sediment samples will be collected from the same locations as the surface water samples.

Each surface water sample location will be measured for pH, conductivity, temperature, and turbidity using a multi-parameter water quality meter and a turbidity meter. Each water quality meter will be calibrated in accordance with the manufacturer's instructions prior to initiating surface water sampling activities.

The surface water and sediment samples will be analyzed for VOCs by U.S. Environmental Protection Agency (EPA) Method 8260B, 1,4-dioxane by EPA Method 8260B selective ion monitoring, semi-VOCs by EPA Method 8270D, total metals (i.e. antimony, arsenic, beryllium, cadmium, chromium, copper, iron, lead, manganese, nickel, selenium, silver, thallium, and zinc) by EPA Method 6020A, mercury by EPA Methods 7470A (surface water) and 7471B (sediment), ammonia by EPA Method 350.1, and nitrate and sulfate by EPA Method 300.0. Additionally, all sediment samples will be analyzed for hexavalent chromium by EPA Method 7196A. Surface water samples analyzed for metals will be collected in a separate container and allowed to settle prior to decanting into the sample container if turbidity measurements are above 10 Nephelometric Turbidity Units.

6.0 Wetlands and Floodway Determination

A Site walkthrough will be conducted to identify potential wetlands in the vicinity of the waste disposal areas. Prior to the wetland evaluation, CDM Smith will conduct a brief review of available background information including National Wetlands Inventory mapping, Natural Resource Conservation Service soil mapping, and aerial photography. Potential wetland areas will be delineated with sequentially numbered flagging and surveyed. The delineation will include an evaluation of hydrology, soils, and vegetation within the potential wetlands. The *U.S. Army Corps of Engineer's Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0) Data Form* will be completed for each delineated wetland area and for one representative upland area.

Northing and easting coordinates for the wetland flags will be collected using a Trimble GeoXH handheld GPS unit and by the surveyor during the topographic and notification plat surveys. The GPS coordinates

will be provided to the surveyor as a reference in case the flags are missing when the delineated wetlands are surveyed.

CDM Smith will research the North Carolina Floodplain Mapping Program Flood Risk Information System and the Federal Emergency Management Agency's National Flood Insurance Program database to determine if a regulatory floodway exists for the East Fork Deep River. The location of the floodway, if identified, will be provided on a Site map.

7.0 Surveying

A topographic survey of the waste disposal areas as shown on Figure 1 will be completed. The topographic survey will extend approximately 25 to 50 feet beyond the edge of the waste boundaries and will include select site features. The survey will include property lines within the Site boundaries, wetlands, and the Site features detailed in Section 2.1. In addition to the topographic survey, notification plats showing the waste disposal areas on PINS 7815-60-3774, 7815-61-4072, and 7815-61-7048 will be prepared in accordance with the *Instructions for preparing a Notice of an Inactive Hazardous Substance or Waste Disposal Site for Recordation*.

Prior to the topographic survey, CDM Smith will provide the surveyor with a CAD file containing site features (i.e. waste disposal area and flagging for wetlands). All survey work will be completed using the North Carolina State Plane Coordinate System (North American Datum of 1983) for horizontal control. The North American Vertical Datum of 1988 will be used for vertical control. The topographic map and notification plats will be prepared in accordance with North Carolina General Statute 47-30. Hand clearing to complete survey transects located in wooded or densely vegetated areas will be kept to a minimum.

8.0 Laboratory and Sampling Quality Control/Quality Assurance

One surface water and sediment duplicate sample will be collected for laboratory quality control. The duplicate samples will be analyzed for the same parameters as the primary samples.

An equipment rinsate blank will be collected from the stainless steel scoop and bowl used to collect sediment samples to verify that decontamination of the sampling equipment is achieved. Distilled water will be used to collect the rinsate blank and the samples will be analyzed for the same parameters as the surface water samples. Trip blanks will also be analyzed for VOCs only.

Upon collection, all samples will be labeled and placed in a chilled cooler. Standard chain-of-custody procedures will be followed to document the handling of the samples. Sample coolers will be shipped via overnight shipping to the lab on a daily basis. Laboratory analyses will be on a turnaround of 5 business days. Following receipt of the analytical report from the laboratory, CDM Smith will perform a completeness check. Once all data is verified and the report is satisfactory, CDM Smith will forward the data to the Unit PM along with a completeness letter stating that the data is useable.

9.0 Schedule

CDM Smith will schedule the geophysical, topographic, and notification plat surveys within 3-weeks of receiving Notice to Proceed from the Unit. The schedule will be based on subcontractor availability and

may be adjusted to allow time for the Unit to notify and obtain access from the Site property owner. CDM Smith will confirm the survey date(s) with the Unit PM prior to mobilizing.

The geophysical survey is estimated to be completed in one day. The Site walkthrough and windshield survey will be completed during the geophysical survey. Sampling and screening activities are estimated to be completed in one day. The wetland evaluation will be completed the day after completing sampling and screening activities. The topographic and notification plat surveys are estimated to be completed in four days and will be scheduled the week following the wetland evaluation. A proposed schedule and personnel involved with each task is provided below in **Table 1**.

Table 1 – Proposed Task Schedule

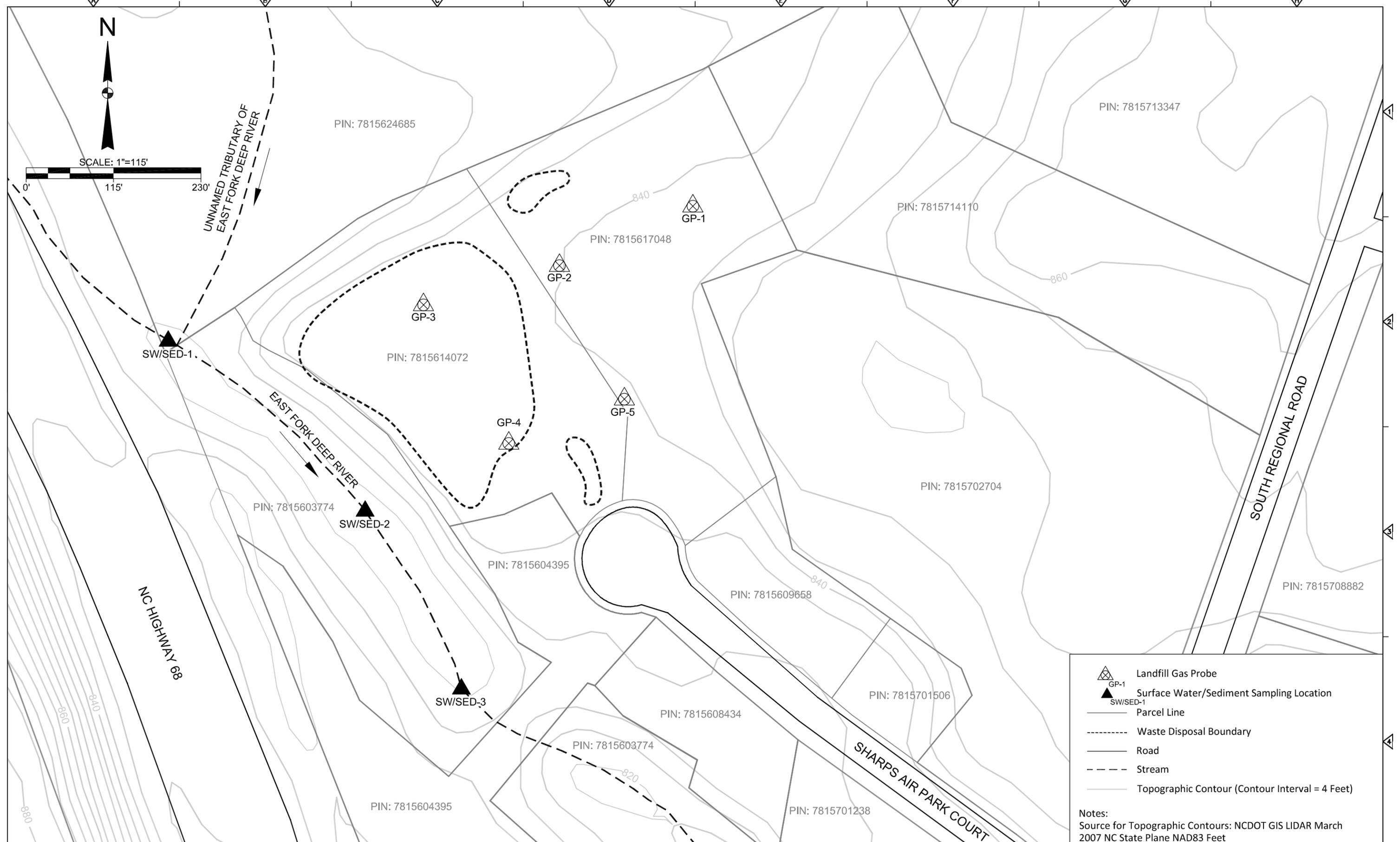
Task	Schedule	Personnel On-site			
		Project	Staff	Technician	Subcontractor(s)
Site Walkthrough and Geophysical/Windshield Surveys	Day 1 - Complete the Site walkthrough and geophysical/windshield surveys.	0	1	1	Yes
Aboveground Vapor and LFG Probe Screening/Surface Water and Sediment Investigation	Day 2 - Complete the aboveground vapor and LFG probe screening. Complete surface water and sediment sampling.	0	1	1	Yes
Wetlands and Floodway Determination	Day 3 - Complete the wetland evaluation.	1	1	0	No
Surveying	Day 1 - Begin the topographic and notification plat surveys.	0	1	0	Yes
	Day 2 - Complete the topographic survey and continue the notification plat surveys.	0	1	0	Yes
	Day 3 - Continue the notification plat surveys.	0	1	0	Yes
	Day 4 (if needed) - Complete the notification plat surveys.	0	1	0	Yes

Section 3

Task Order 673FP-1 - Report Compilation

A draft report will be prepared in accordance with Task Order 673FP-1 following the Unit's approval of the preliminary field notes, survey results, figures, and tables. The draft report will be titled *Remedial Investigation - First Phase and Media Sampling* and will include a discussion of the first phase research and field activities, first phase and analytical exceedance maps, geophysical, topographic, and notification plat surveys, tabulated survey coordinates, analytical data with comparison to applicable standards, aboveground vapor and LFG probe screening results, wetland and floodway determination results, Work Plan or SOPQA manual variances, a copy of the field notes, and certification form.

The draft report will be submitted electronically to the Unit for approval within 10 days of receiving comments about the preliminary documentation. A final copy of the report will be submitted electronically once any comments from the Unit on the draft report have been addressed, assumed to be within 3 days of receiving comments.



REV. NO.	DATE	DRWN	CHKD	REMARKS

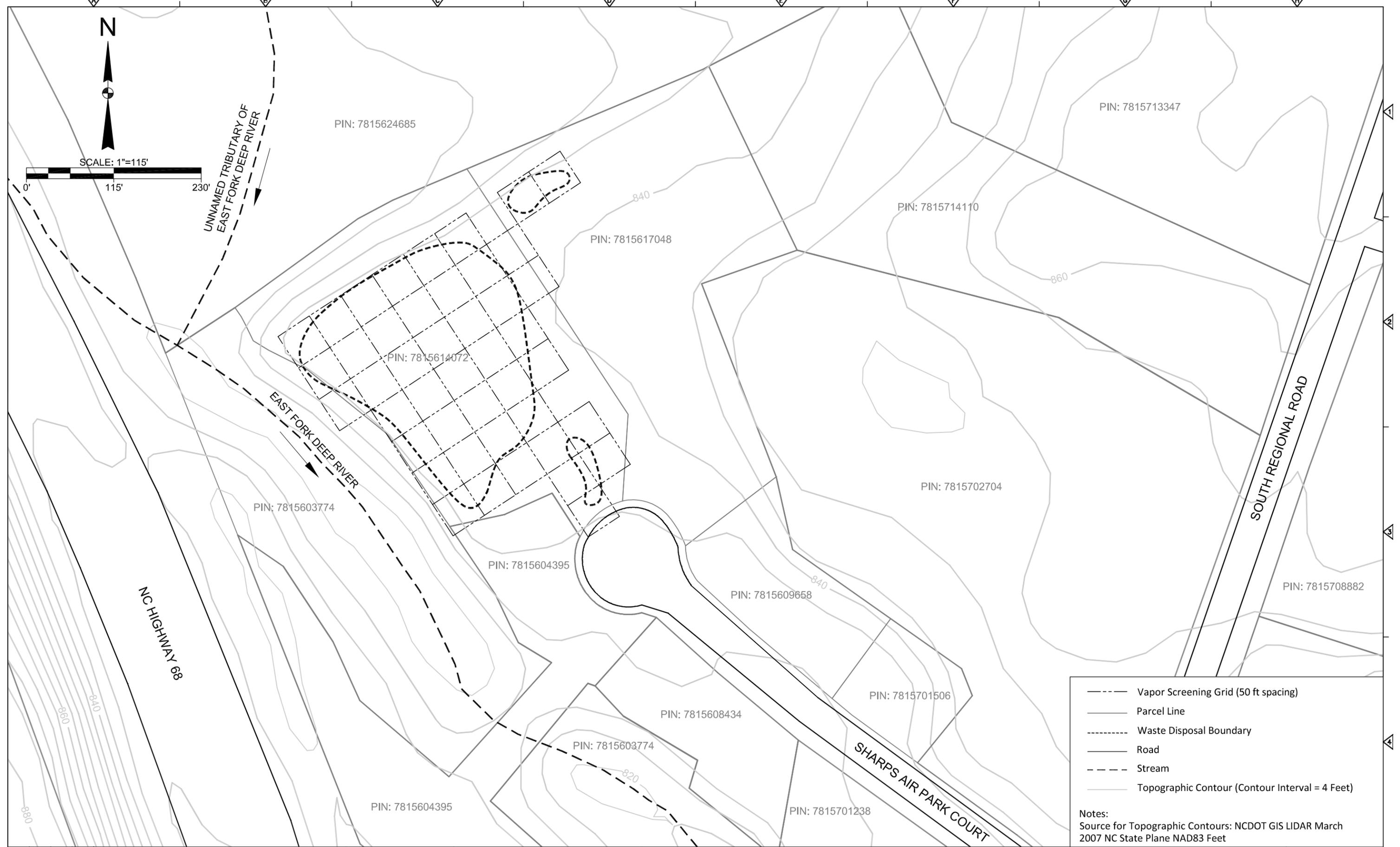
DESIGNED BY: A. WEISPFENNING
 DRAWN BY: A. WEISPFENNING
 SHEET CHK'D BY: D. FORBES
 CROSS CHK'D BY: M. COLONE
 APPROVED BY: D. FORBES
 DATE: AUGUST 2016

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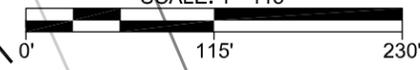
GREENSBORO, GUILFORD COUNTY, NORTH CAROLINA
BUD HOLDING COMPANY
 (NONCD0000673)

SITE MAP

PROJECT NO. 127844-10000
 FILE NAME: FIGURE 1.DWG
 FIGURE
1



SCALE: 1"=115'



UNNAMED TRIBUTARY OF EAST FORK DEEP RIVER

EAST FORK DEEP RIVER

NC HIGHWAY 68

SOUTH REGIONAL ROAD

SHARPS AIR PARK COURT

- - - - - Vapor Screening Grid (50 ft spacing)
 _____ Parcel Line
 - - - - - Waste Disposal Boundary
 _____ Road
 - - - - - Stream
 _____ Topographic Contour (Contour Interval = 4 Feet)

Notes:
 Source for Topographic Contours: NCDOT GIS LIDAR March 2007 NC State Plane NAD83 Feet

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. WEISPFENNING
 DRAWN BY: A. WEISPFENNING
 SHEET CHK'D BY: D. FORBES
 CROSS CHK'D BY: M. COLONE
 APPROVED BY: D. FORBES
 DATE: AUGUST 2016

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GREENSBORO, GUILFORD COUNTY, NORTH CAROLINA
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 (NONCD0000673)

ABOVEGROUND VAPOR SCREENING LOCATIONS

PROJECT NO. 127844-100000
 FILE NAME: FIGURE 2.DWG
 FIGURE
2