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July 19, 2016

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

Subject: Work Plan for Task Order 601RA-3
Rolesville Dump
Rolesville, Wake County, North Carolina
Site Identification Number: NONCD0000601

Dear Mr. Aufman:

CDM Smith Inc. is pleased to submit this Work Plan and schedule for Task Order 601RA-3 dated July 13, 2016. Per Task Order 601RA-3, the following activities will be completed by CDM Smith:

- Three background soil samples will be collected from 0 to 6 inches below ground surface; and
- Five soil boings will be advanced to determine the soil thickness above bedrock within the waste disposal area.

A report summarizing the tasks identified above will be completed in accordance with the task order. 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 "Matthew F. Colone".

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

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



Section 1

Task Order 601RA-3 Background

1.1 General

CDM Smith Inc. (CDM Smith) is pleased to submit this Work Plan for Task Order 601RA-3 dated July 13, 2016. Per Task Order 601RA-3, the following will be completed by CDM Smith at the Rolesville Dump (Site) located in Rolesville, Wake County, North Carolina:

- Three background soil samples will be collected from 0 to 6 inches below ground surface (bgs); and
- Five soil boings will be advanced to determine the soil thickness above bedrock within the waste disposal area.

A report summarizing the tasks identified above will be completed in accordance with Task Order 601RA-3. All field activities will be performed in accordance with CDM Smith's Standard Operating Procedures and Quality Assurance (SOPQA) manual that was approved by the 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.

1.2 Personnel

CDM Smith personnel engaged in invasive field activities at the Site will comply with the Occupational Safety and Health Administration's required health and safety training for hazardous waste sites. Laboratory services will be performed by a certified North Carolina subcontractor. 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.

1.3 Daily Recordkeeping

Records will be kept in a 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 an 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 and the CDM Smith 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;
- Equipment calibration results;
- All field parameters collected; and
- Observations that may affect work scope or schedule.

Section 2

Task Order 601RA-3 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(s) prior to initiating investigation activities. Field activities and a schedule are summarized below.

2.1 Background Soil Sampling

Background soil samples B-1 through -3 will be collected outside of the waste disposal area as shown on **Figure 1**. The samples will be collected from 0 to 6 inches bgs at each location using a hand auger. The samples will be analyzed for volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method 8260B and total metals (i.e. antimony, arsenic, beryllium, cadmium, chromium, copper, iron, lead, manganese, nickel, selenium, silver, thallium, and zinc) by EPA Method 6020B.

2.2 Soil Thickness Borings

Confirmatory soil borings CSB-1 through -5 will be advanced within the waste disposal area as shown on Figure 1 to determine the soil thickness above bedrock. Each boring will be advanced using a hand auger until bedrock or refusal is encountered. Clearing will not be required to access the background soil sampling locations or confirmatory soil thickness borings.

2.3 Laboratory and Sampling Quality Control/Quality Assurance

One duplicate background soil sample will be analyzed for laboratory quality control. The duplicate sample will be analyzed for the same parameters as the primary sample. One trip blank will be analyzed for VOCs.

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. Laboratory analyses will be on a standard turnaround of 10 business days. Following receipt of the analytical data 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.

2.4 Survey

Northing and easting coordinates will be collected from each sample and confirmatory boring location using a Trimble GeoXH handheld Global Positioning System (GPS) unit. GPS coordinates will be reported in decimal degrees to the seventh order using the North American Datum of 1983 format with accuracy in the thousands of a meter following differential correction. Latitude and longitude will also be reported using the World Geodetic System 1984 format.

2.5 Investigative-Derived Waste

The hand auger will be rinsed with potable water between each background soil sampling location. Water generated from decontaminating the hand auger will be spread on the ground surface within the waste disposal area. Spent personal protective equipment will be placed in a trash bag for disposal in a dumpster at the CDM Smith office.

2.6 Schedule

Field activities will be initiated within 2-weeks of receiving Notice to Proceed from the Unit. The schedule may be adjusted to allow time for the Unit to negotiate access with the property owner(s). CDM Smith anticipates completing field activities in one day. A proposed schedule and personnel involved is provided below in **Table 1**.

Table 1 – Proposed Field Activities Schedule

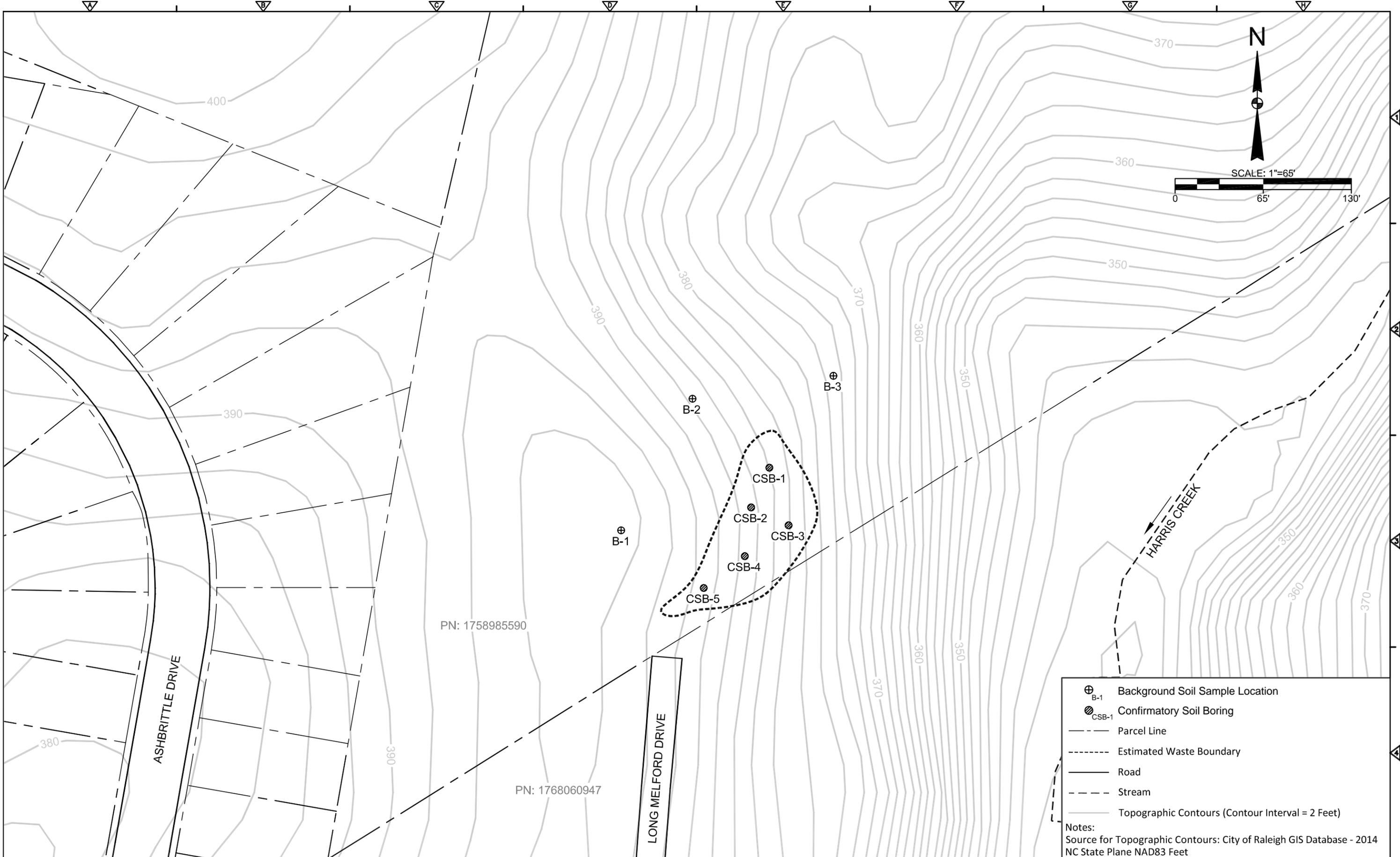
Task	Schedule	Project	Personnel		
			Staff	Technician	Subcontractor(s)
Background Soil Sampling	Day 1: Collect background soil samples.	0	1	1	No
Soil Thickness Borings	Day 1: Advance soil borings to determine soil thickness above bedrock.	0	1	1	No

Section 3

Task Order 601RA-3 Report Compilation

A draft report will be prepared following the Unit's approval of the field notes, figures, tables, and laboratory analytical data. The draft summary report will be titled *Remedial Action - Background Soil Sampling* and will include a discussion of field activities, Work Plan or SOPQA variances, tabulated analytical results with comparisons to the IHSB's Preliminary Soil Remediation Goals, a Site map with sampling and boring locations, an analytical results map, tabulated GPS coordinates, a copy of the field notes, and certification form.

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



	B-1 Background Soil Sample Location
	CSB-1 Confirmatory Soil Boring
	Parcel Line
	Estimated Waste Boundary
	Road
	Stream
	Topographic Contours (Contour Interval = 2 Feet)

Notes:
 Source for Topographic Contours: City of Raleigh GIS Database - 2014
 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: **M. COLONE**
 DATE: **JULY 2016**

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ROLESVILLE, WAKE COUNTY, NORTH CAROLINA
ROLESVILLE DUMP
 (SITE IDENTIFICATION NUMBER: NONCD0000601)

SAMPLING LOCATIONS

PROJECT NO. 127844-114534
 FILE NAME: FIG 1.DWG
 FIGURE
1