



February 5, 2016

**North Carolina Department of Environmental Quality
Division of Waste Management – Inactive Hazardous Sites Branch**

Pre-Regulatory Landfill Unit
1646 Mail Service Center
Raleigh, NC 27699-1646

Attention: **Mr. David Kwiatkowski** email: david.kwiatkowski@ncdenr.gov

Reference: **Remedial Investigation – Media Sampling
Task Orders 7607DP-24 and 25**

E. H. Glass County Landfill
Greensboro, Guilford County, North Carolina
ID No. NCD980557607
S&ME Proposal No. P1002T-10V

Dear Mr. Kwiatkowski:

S&ME, Inc. (S&ME) appreciates the opportunity to present this proposal to the North Carolina Department of Environmental Quality (NCDEQ), Pre-Regulatory Landfill Unit (Unit) to conduct remedial investigation-contaminant delineation phase services at the E. H. Glass County Landfill in Greensboro, Guilford County, North Carolina as requested in a letter from the Unit dated January 26, 2016. This proposal outlines our understanding of the project, a scope of services, an estimated fee, and a schedule for completing the proposed scope of services. These services will be performed according to the terms of Contract Number N10003S dated October 26, 2009 between NCDEQ and S&ME.

❖ SCOPE OF SERVICES

As requested by the Unit, S&ME proposes to offer the following Scope of Services to further assess groundwater to the east and south of the waste disposal area, resample the existing monitoring wells at the site, collect surface water and sediment samples, and screen the existing landfill gas probes. These services will be performed in general accordance with NCDEQ Inactive Hazardous Sites Program guidance documents: Guidelines for Assessment and Cleanup (October 2015), Guidelines for Addressing Old Landfills & Dumps (November 2015), and S&ME's approved Standard Operating Procedures and Quality Assurance (SOP/QA) Manual (July 2010).

Task 7607DP-24 Delineation Phase Activities

Subtask A Work Plan/Proposal Preparation

The following services were performed:

- ◆ Obtained competitive bids from drillers;
- ◆ Developed the Work Plan and Cost Estimate Spreadsheets.

Field Services

The following activities and tasks will be completed for the installation and sampling of soil borings:

- ◆ Prior to conducting field work, S&ME will notify the North Carolina One-Call Center (811) to locate underground utilities.
- ◆ Hand-tools will be used for land clearing where necessary. Land clearing will be kept to a minimum.
- ◆ S&ME will take photographs of areas or objects that may be disturbed before site services begin. If needed, photographs of affected areas and objects, restoration efforts, and noteworthy items encountered during task activities will also be taken. Photographs will be submitted to the Unit to determine whether photographs will be included in the subsequent report.
- ◆ Soil samples will be logged and classified to identify soil types according to the Unified Soil Classification System (USCS).
- ◆ Soil borings will be closed by filling the bore holes with drill cuttings. If there are voids after placing cuttings in a boring, the remainder of the bore hole will be filled with bentonite.
- ◆ GPS coordinates will be collected at all final boring locations. Coordinates will be reported in decimal degrees to the seventh order using the North American Datum of 1983 (NAD83) and in latitude and longitude using WGS 84. GPS coordinates will be differentially corrected and provided in an appendix with brief location descriptions/designations (e.g. MW-15, etc.).
- ◆ One duplicate sample per media will be collected per day of sampling.
- ◆ The samples will be sent to a North Carolina-certified laboratory and analyzed for laboratory analysis of 1,4-Dioxane by Method 8260SIM.

Subtask B Surface Water/Sediment/Seep Investigation

S&ME will collect one surface water sample and one sediment sample from each of the six locations (SW-1, SW-4, SW-7, SW-11, SW-14 and SW-15) identified on the accompanying **Figure 1**. Surface water and sediment samples will be submitted for laboratory analysis of 1,4-Dioxane by Method 8260SIM. **Samples will be collected in a downstream to upstream order.**

Subtask C Groundwater Investigation

S&ME will advance five soil borings (MW-15 through MW-19) outside of the waste at the locations indicated on **Figure 1** and install a permanent two-inch diameter groundwater monitor well in each boring. The depth to groundwater is estimated between ten and fifteen feet below land surface and hollow stem augers will be used to advance the borings. Wells will be constructed with ten-foot screens that intersect the water table. Wells will be constructed with flush mount or stick up covers as appropriate.

Each boring will be logged in the field. Boring log information will include but is not limited to; top of ground elevation, detailed soil description and lithology at depths, depth of groundwater observed during drilling, notable reaction of the drill rig during advancement, depth of competent rock encountered, detailed notes/remarks, and a well construction diagram.

S&ME will gauge depth to water and collect groundwater samples from the 19 monitor wells (MW-1 through MW-19). Groundwater samples will be submitted for laboratory analysis of 1,4-Dioxane by Method 8260SIM.

Subtask D Landfill Gas Probe Screening

Landfill gas probes GP-1 through GP-8, GP-4A, and GP-11 through GP-16 (**Figure 2**), will be screened using hand meters for volatile organic compounds (VOCs), methane, oxygen, carbon dioxide, barometric pressure and hydrogen sulfide. Screening results will be compared with the IHSB Residential Vapor Intrusion Screening levels.

The gas probes will not be abandoned. S&ME understands a review of the field testing results by the Unit will determine subsequent sample collection.

Task 7607DP-25 Report Compilation

S&ME will compile a report titled "Remedial Investigation – Media Sampling" that includes the findings detailed in the items listed above for the scope of services. The following sections and information will be included in the report:

- ◆ Explanation of services performed and the findings.
- ◆ A section concerning any variations from the work plan or the SOPs.
- ◆ Tables summarizing field data, laboratory results compared to NCDEQ standards and goals, GPS coordinates of all sample locations.
- ◆ Figures presenting the sample locations and selected data results.
- ◆ Photograph log (digital photographs will be submitted to the Unit and a photograph log will only be included in the report if requested by the Unit).
- ◆ Copies of original field notes.

We will submit a digital copy of the report as required.

❖ SCHEDULE

The proposed Scope of Services is anticipated to be completed within eight weeks following receipt of a Task Authorization from the Unit.

Task 7607DP-24 – Proposed Field Schedule and Level of Effort					
Schedule	Subtask	S&ME On-Site Staff			Others On-Site
		Project/PM	Staff	Tech	
Days 1-2	C – Well Installations		1		Drilling Crew
Days 3-4	C – Groundwater Sampling		1	1	
Day 5	B – Surface Water/Sediment Sampling		1	1	
Day 6	D – LFG Screening		1	1	

❖ PROJECT BUDGET

S&ME proposes to provide the Scope of Services presented above on a time and materials basis for an estimated fee of **\$29,041.00**. The breakdown of the budget for each phase is:

- **Work Plan/Proposal - Task Order 7607DP-24, Subtask A:** **\$1,523.00**
- **Field Services - Task Order 7607DP-24, Subtasks B-E:** **\$24,758.00**
- **Compile Report - Task Order 7607DP-25:** **\$2,760.00**

See the attached spreadsheet for details of the proposed budget. Proposals received from contractors are attached.



❖ AUTHORIZATION

This proposal is solely intended for the Basic Services as described in the Scope of Services. The Scope of Services may not be modified or amended, unless the changes are first agreed to by the client and S&ME. Use of this proposal and resulting documents, including the final report is limited to the above referenced project and client.

S&ME appreciates the opportunity to submit this proposal and we look forward to continue working with you on this project. We will follow-up with you to review this proposal and to answer any questions that you may have.

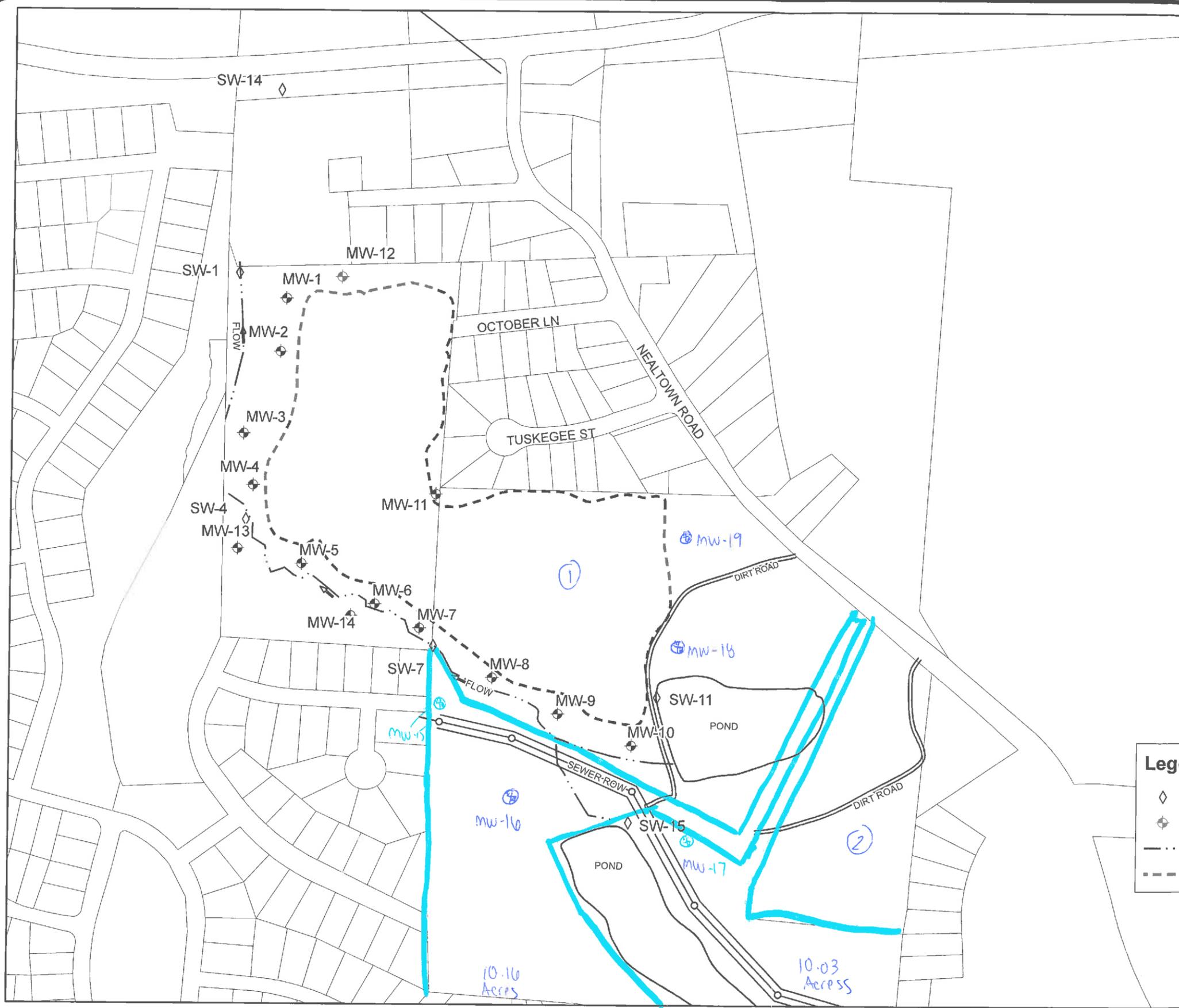
Sincerely,

S&ME, Inc.

Jason Volker
Project Scientist
jvolker@smeinc.com

Thomas Raymond, PE, PMP
Program Manager
traymond@smeinc.com

Attachments: Figures 1 and 2: Proposed Sampling Location Maps
Proposed Budget Spreadsheets
Subcontractor Bids



Legend

- ◇ SURFACE WATER SAMPLING LOCATION
- ⊕ GROUNDWATER MONITOR WELL
- · - · - APPROXIMATE STREAM LOCATION
- - - APPROXIMATE WASTE BOUNDARY

PARCEL SOURCE:
GUILFORD COUNTY GIS, DATED 1/2010

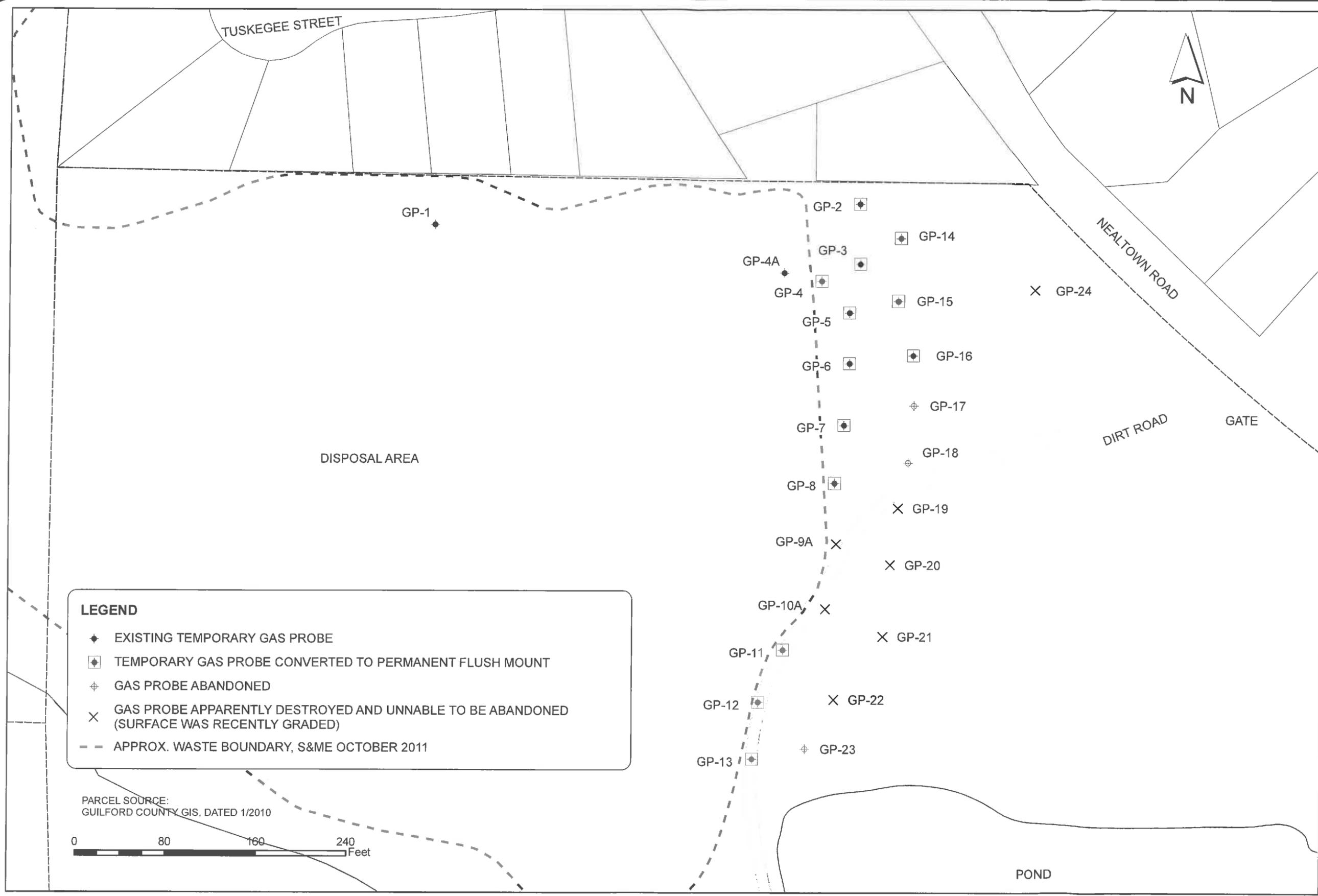
DATE:	JUNE 2015
SCALE:	1" = 300'
PROJECT NO.:	1054-10-1002
DRAWN BY:	JLV
CHECKED BY:	

S&ME
WWW.SMEINC.COM
NC ENG. LICENSE #F-0176
3201 SPRING FOREST RD., RALEIGH, NC 27616

SITE MAP

E.H. GLASS COUNTY LANDFILL - TASK ORDER 7607DP-23
GREENSBORO, NORTH CAROLINA

FIGURE NO.
1



LEGEND

- ◆ EXISTING TEMPORARY GAS PROBE
- ◆ TEMPORARY GAS PROBE CONVERTED TO PERMANENT FLUSH MOUNT
- ⊕ GAS PROBE ABANDONED
- × GAS PROBE APPARENTLY DESTROYED AND UNABLE TO BE ABANDONED (SURFACE WAS RECENTLY GRADED)
- - - APPROX. WASTE BOUNDARY, S&ME OCTOBER 2011

PARCEL SOURCE:
GUILFORD COUNTY GIS, DATED 1/2010



 www.smeinc.com	<p>DATE: APRIL 2013</p> <p>SCALE: 1" = 80'</p> <p>PROJECT NO: 1054-11-1007</p> <p>DRAWN BY: JLV</p> <p>CHECKED BY:</p>
<p>LANDFILL GAS PROBE MAP</p>	<p>E.H. GLASS COUNTY LANDFILL - TASK ORDER 607DP-14 GREENSBORO, NORTH CAROLINA</p>
<p>FIGURE NO.</p> <p style="font-size: 2em; font-weight: bold;">2</p>	

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