Waste Management
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

MICHAEL SCOTT
Acting Director

March 9, 2016

Carlin Slusher

URS Corporation – North Carolina
1600 Perimeter Parks Drive, Suite 400
Morrisville, North Carolina 27560

Re: Request for Potable Well Sampling – Task Order 155MON
Long Beach Refuse Disposal
Airport Rd.
Oak Island, Brunswick County NC
ID # NONCD0000155

Dear Ms. Slusher:

Submit a task work plan and cost estimate to perform groundwater sampling activities at the above referenced site. Conduct these activities in accordance with State Contract No. N10001S.

Investigation Goals: Collect water samples from a potable well located at the following address:
4019 Long Beach Rd
Oak Island, NC 28465

Scope of work for Task Order 155MON:

- Prepare a work plan in accordance with *FIRM's* approved standard operating procedures dated *DATE*, and include a schedule of daily activities.
- Submit an itemized cost estimate that identifies personnel and materials involved.
- Reference the most recent Guidelines for Addressing Pre-Regulatory Landfills and Dumps for details regarding procedures.
- Ensure personnel in the field are qualified to identify contaminated material and landfill waste and comply with OSHA-required health and safety training.
- Ensure that all samples are collected as close to the well head as possible.
- On site, check potable well for filtration system. If the well has a filtration system, then two samples will need to be collected. One sample will need to be collected pre-filtration and the second sample to be collected post-filtration.
- Submit samples to a North Carolina – certified laboratory and analyze the following parameters by the most current U.S. EPA Contract Laboratory Program Target Compound List: volatile organic compounds by SW-846 method 8260, 1,4-dioxane by Method 8260SIM, semi-volatile organic compounds by SW-846 method 8270, 14 metals by SW-846 method 6020, mercury by method 7471, ammonia by SM 4500, and nitrate and sulfate by EPA Method 300. Please note that any alternate method should be the U.S. EPA Method having the lowest detection limit and that at least achieves the detections equivalent to the 15A NCAC 2L standards or where these are not available, then the federal maximum contaminant levels (MCLs).
- A brief report, including laboratory sampling analysis results, QA/QC, and field notes.

Provide the cost estimate and proposed schedule by March 16, 2016. If you have any questions please call me at (919) 707-8155 or Cheryl Marks at (919) 707-8333. We look forward to working with you on this project.

Sincerely,

Katie Tatum

Katie Tatum, Environmental Specialist
Division of Waste management, NCDEQ

URS

March 16, 2016

North Carolina Department of Environmental Quality
Division of Waste Management, Pre-Regulatory Landfill Unit
1646 Mail Service Center
Raleigh, North Carolina 27699

Attn: Ms. Katie Tatum
Project Manager

Re: **Cost Proposal – Potable Well Sampling**
Long Beach Refuse Disposal
Airport Road
Oak Island, Brunswick County, NC
ID # NONCD0000155
Task Order 155MON

Dear Ms. Tatum:

URS Corporation – North Carolina (URS) is providing the attached cost proposal for potable well sampling as part of Task Order 155MON for the Long Beach Refuse Disposal (site) located in Oak Island, North Carolina. This proposal was developed in accordance with the scope of work requested by the North Carolina Department of Environmental Quality (NCDEQ) Pre-Regulatory Landfill Unit (the Unit) on March 9, 2016.

Objective of Work Proposed Herein

The objectives of the activities proposed herein include sampling of one potable well located at 4019 Long Beach Road in Oak Island, NC. A more detailed description of the proposed activities is provided below.

Subtask A: Work Plan and Cost Estimate

This proposal was developed in accordance with the scope of work requested by the Unit via correspondence, dated March 9, 2016. Services will be performed under the terms and conditions of the Pre-Regulatory Landfill State Contract N10001S.

This proposal describes investigation activities associated with known potable wells at/near the site. Investigation activities will be performed in accordance with the URS *Standard Operating Procedures/Quality Assurance Manual* (SOP/QAM), dated June 21, 2010. Cost estimates for the individual tasks covered by this Work Plan are attached. A cost estimate for the solicited analytical services is provided as **Table 1**. Field days are estimated to be 10 hour days

URS Corporation – North Carolina
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(919) 461-1100 Phone
(919) 461-1415 Fax

(including travel time). Office hours include populating sampling data tables, report section detail, figure preparation, and analytical completeness review.

In addition to performing the scope of work described under each subtask heading, the following items will be addressed as part of the Field Services scope of work:

- Well Inventory and Documentation

  Well locations will be photographed prior to and/or upon the completion of sampling activities. Only photographs where property was damaged and/or not restored to its' original condition will be provided in the report. Unnamed sampling points will be given unique identifiers (e.g. Well 1, etc.) and well construction information, where provided, will be documented.

- Decontamination

  Full decontamination of equipment will be performed prior to use at sampling location or following the exposure of any equipment to groundwater or other media. Sampling equipment will be decontaminated in accordance with the URS SOP/QAM.

- Investigation Derived Waste (IDW)

  IDW will not be generated as part of this task order.

- Sample Management and Laboratory Analysis

  Water samples will be collected into laboratory-supplied containers and submitted to a NC-certified laboratory for the following analyses:

  a. Volatile organic compounds (VOCs) by Method SW-846 8260B;
  b. 1,4-Dioxane by Method SW-846 8260SIM;
  c. Semi-volatile organic compounds (SVOCs) by Method SW-846 8270;
  d. Metals (antimony, arsenic, beryllium, cadmium, chromium, copper, iron, lead, manganese, nickel, selenium, silver, thallium, and zinc) by Method 200.8;
  e. Mercury by Method 245.1;
  f. Ammonia by Method 350.1; and
  g. Nitrate/sulfate by Method 300.

The analytical methods utilized will have the lowest detection limits possible that are equivalent to or less than the groundwater standards described in 15A NCAC 2L (2L Standards) and applicable federal maximum contaminant limits (MCLs). A copy of Appendix B from the *Guidelines for Addressing Old Landfills & Dumps* (the Guidelines) has been provided to the laboratories during bid solicitation as a reference for required analytical parameters. The laboratory will retain all samples until the Unit approves the final 155MON report and URS authorizes disposal of the samples, or until holding time is exceeded.

Additionally,

(a) one set of VOC trip blanks will be included per sample shipment; and
(b) one duplicate sample will be collected per day and analyzed for all analytes.

Samples collected in the field will be transported to the laboratory as expeditiously as possible with an accompanying chain-of-custody record. Samples will be requested to be analyzed on a standard (10-day) turnaround time. Analytical packages will be submitted to NCDEQ upon URS' review of laboratory report completeness (e.g., holding times were met, identification of blank contamination, and other quality issues identified in the case narrative of the laboratory report). **Table 1** summarizes the estimated quantity of samples and sample methodology for performing the proposed scope of work.

Subtask B: Potable Well Sampling

As part of this subtask, one potable well located at 4019 Long Beach Road in Oak Island, NC will be sampled. The approximate location of the potable well is shown on the attached **Figure 1**. The potable well, when possible, will be gauged for depth to water with an electronic water level meter. Parameters such as pH, temperature, conductivity, and turbidity, will be recorded once parameters have stabilized at the sampling location. One to two samples will be collected from each potable well and analyzed for VOCs, 1,4-dioxane, SVOCs, metals, and general chemistry parameters, as previously discussed. If the potable well has a filtration system, then two samples will be collected. One sample will be collected pre-filtration and the second sample will be collected post-filtration and labeled accordingly. Samples will be collected from as close to the well head as possible.

Subtask C: Project Management

Correspondence, technical support during field activities, invoicing, subcontracting, accounting activities, and the development of site-specific field sampling forms will be performed as part of the Project Management subtask.

Subtask D: Report Compilation

Upon receipt of analytical data from the laboratory, a completeness check of the data will be performed. One chain of custody will be used per day to consolidate and condense quality assurance and quality control data. The laboratory data and completeness check will then be submitted to the Unit.

A report documenting the sampling event will be prepared by URS. The report will include a summary of the sampling methodology and procedures, well construction information (where provided), field data, analytical data summary tables, and copy of the laboratory report. A Site map showing the sample/well locations and any exceedances to applicable standards will also be provided.

ASSUMPTIONS

It is assumed that the Unit has obtained permission to sample any/all of the proposed well locations, except where noted, included in Subtask B. Prior to mobilization to the site, it is assumed that the Unit will provide URS with a copy of the permission forms. Once on-site, the sampling team will identify themselves to the property owners and commence sampling activities. If the property owner is not onsite, then URS will document the absence of the property owner and proceed with the sampling activities.

SCHEDULE

URS anticipates mobilizing the staff to the field within three weeks of authorization to proceed. **Table 2** is a proposed schedule for field activities. It is anticipated that laboratory reports will be available within three to four weeks following the completion of field activities. Laboratory results will be submitted to the Unit Project Manager following the completeness check by the URS chemist. Following Unit Project Manager approval, a draft report summarizing field activities and results will be submitted to NCDEQ. The schedule is dependent on the mobilization date, specific weather conditions, receipt of the laboratory data, and the data reduction effort.

TERMS AND CONDITIONS

Our services will be provided under the terms and conditions of the Pre-Regulatory Landfill Contract N10001S in accordance with the scope and estimates provided in the attached worksheet form.

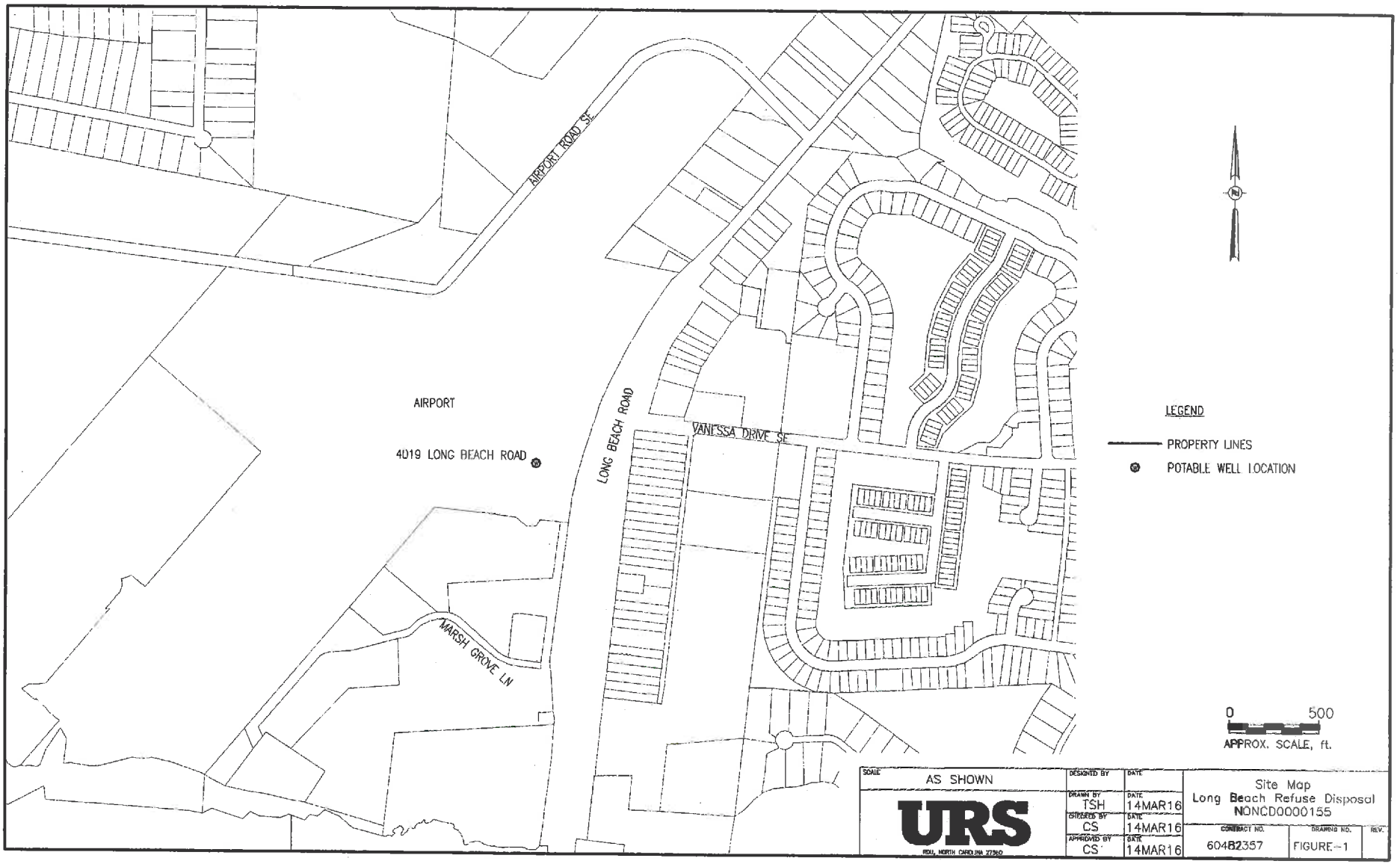
If this proposal meets your needs, please acknowledge with a written notice to proceed. If you have any questions or require additional information, please do not hesitate to contact Carlin Slusher at 919-461-1341 or Margaret Ness at 919-461-1423.

Sincerely,
URS CORPORATION - NORTH CAROLINA

Carlin Slusher
Project Manager

Brett Berra, PE
Vice President

Attachments: URS Breakdown of Cost
Figure 1 – Site Map
Table 1 – Analytical Cost Summary and Assumptions
Table 2 – Field Activities Schedule and Proposed Equipment List


AIRPORT ROAD SE
AIRPORT
4019 LONG BEACH ROAD
LONG BEACH ROAD
VANESSA DRIVE SE
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RDU, NORTH CAROLINA 27560
DESIGNED BY
DATE
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APPROVED BY
CS
DATE
14MAR16
Site Map
Long Beach Refuse Disposal
NONCD0000155
CONTRACT NO.
60482357
DRAWING NO.
FIGURE-1
REV.

Table 2
Field Activities Schedule and Proposed Equipment List
Long Beach Refuse Disposal

Field Activities Schedule				
Schedule		Associated Subtask	Staff	Tech
Week	Day			
Week 1	1	sample potable well	1	1

Proposed Equipment List		
Equipment/Meter	Description of Recordings	Make/Model
Water		
Water quality meter	pH, Conductivity, ORP, DO, Temp	YSI-556
Turbidity meter	turbidity	Lamotte 2020, Hach 2100
Water level meter	water depth	Solinist 101, Heron Water Tape

Waste Management
ENVIRONMENTAL QUALITY

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MICHAEL SCOTT
Acting Director

March 22, 2016

Carlin Slusher
URS Corporation
1600 Perimeter Park Drive, Suite 400
Morrisville, NC 27560

Re: Approval of Work Plan and Cost Proposal
Long Beach Refuse Disposal
Oak Island, Brunswick County NC
NONCD0000155
Task Order: 155MON

Dear Ms. Slusher:

The work plan and cost proposal submitted on March 16, 2016 for the landfill referenced above has been approved. Therefore, URS is authorized to proceed with the scope of work, schedule, and cost estimate not to exceed the amount of $5,913.25 as described for Task Order 155MON.

Please contact me at 919-707-8155 or katie.tatum@ncdenr.gov if you have any questions.

Best Regards,
Katie Tatum
Katie Tatum
Environmental Specialist
Division of Waste Management