



PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

MICHAEL SCOTT

Director

July 21, 2016

Mr. Mathew F. Colone P.G.
CDM-Smith
5400 Glenwood Avenue, Suite 300
Raleigh, NC 27612

Re: Request for Work Plan and Cost Proposal
Task Order TO673DP-1&2
Bud Holding Company
10 & 12 Sharps Airpark Court
Greensboro, Guilford County
ID # NONCD0000673

Dear Mr. Colone:

Submit a task work plan and cost estimate to perform remedial investigation-contaminant delineation phase activities at the above referenced site. Conduct these activities in accordance with State Contract No. N13004S.

Investigation Goals: The goals of this investigation are to: assess the soil cover and characterize the waste across the site, investigate landfill gas, and groundwater, surface water and sediment, and delineate the edge of the waste disposal footprint.

Scope of work for Task Order 673DP-1:

Sub Task A: Work Plan and Cost Estimate Preparation:

- Prepare a work plan in accordance with CDM-Smith's approved standard operating procedures dated May 30, 2013, 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. Before task activities begin, photograph areas or objects that may be disturbed. If needed, photograph affected areas and objects, restoration efforts, and noteworthy items encountered during task activities. Submit these photographs upon completion of the activities, and a review will determine if any need to be included in the report.
- Collect GPS coordinates along the waste disposal boundary. Report coordinates in decimal degrees to the seventh order using the North American Datum of 1983 (NAD83) format and latitude and longitude using WGS 84 format. These coordinates will be tabulated and included as an appendix.



- The tabulated coordinates for the landfill perimeter should start at the northernmost point of the perimeter and be listed in a clockwise progression around the perimeter.
- Include background (light grey) topographic contour lines on figures detailing the Site and Site vicinity.
- For any invasive activities, provide a plan to properly manage investigation derived waste (IDW). If sampling results indicate non-hazardous IDW, spread within the waste disposal area. If sampling results indicate hazardous IDW, analyze containerized waste as required by waste hauler and include details of sampling and disposal of drums in the proposal. Remove all drummed waste and associated fencing from site within 90 days after field activities are concluded.
- For any field work, minimize the clearing of vegetative material to enable access to proposed sampling points. Using hand tools for clearing is the preferred method, otherwise an explanation must be provided for use of heavy equipment.
- Submit samples to a North Carolina-certified laboratory and analyze for 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 federal maximum contaminant limits (MCLs). Soil analysis methods must meet the IHSB Preliminary Soil Remediation Goals Table. Water samples also need 10 Tentatively Identified Compounds (TICs).
- Provide a 5-day turn-around time for the laboratory analysis.
- Upon completion of task activities, submit field notes, photographs, and validated analytical results for review.
- Provide daily updates via phone or email to the Unit Project Manager.

Sub Task B: Cover Soil Assessment and Waste Characterization:

- Advance seventeen soil borings (SB-1 through SB-17) at the site properties as indicated on the attached map to a minimum depth of ten feet below land surface.
- If no waste is encountered terminate the soil boring and collect no samples.
- If waste is encountered, where cover is greater than or equal to 6 inches, collect a sample at 6 inches below ground surface (bgs). Where cover is greater than or equal to 2 feet, collect one sample at 6 inches and one sample at 18 inches bgs. Include hexavalent chromium analysis for the cover soil samples. For cost estimating purposes assume all cover soil samples will be submitted for laboratory analysis.
- If waste is encountered, utilizing augers, extend the borings to a depth below the waste. Continuously log each boring and characterize the waste. Collect solid media samples from each boring at the top of waste, mid-boring based on PID readings and visual observations and at the base of the waste. Collect one additional solid media sample from native soil beneath waste. Include hexavalent chromium analysis for the waste characterization samples.
- Contact the Unit PM prior to submittal of the waste characterization samples for analysis to discuss which borings to submit to the laboratory. For cost estimating purposes, assume the waste characterization



samples collected from seven waste characterization borings will be submitted to the laboratory for analysis.

Sub Task C: Landfill Gas Probe Installation and Screening

- Install up to five temporary landfill gas probes (GP-1 through GP-5) in the same locations as soil borings SB-5, SB-6, SB-7, SB-14 and SB-15 as presented in the attached map to monitor subsurface landfill gas.
- If no waste was encountered during the advancement of the associated soil boring, do not install a landfill gas probe.
- If landfill gas probes cannot be constructed according to minimum requirements in the Guidelines, contact the Unit Project Manager and be prepared to conduct Flux Chamber installation and screening.
- Screen the landfill gas probes for volatile organic compounds (VOCs), methane, oxygen, carbon dioxide, barometric pressure, hydrogen sulfide, temperature and humidity.
- Screen new landfill gas probes at least 24 hours after installation.
- Compare landfill gas probe screening results with the IHSB Residential Vapor Intrusion Screening levels.
- Do not abandon the gas probes following screening. A review of the field testing results will determine subsequent sample collection.

Sub Task D: Groundwater Evaluation:

- Install and sample seven temporary Type II monitoring wells (TW-1 through TW-7), located as presented in the attached figure.
- The wells will be installed by a NC Certified Well Driller and upon completion the wells will be properly developed.
- The three temporary monitoring wells will be sampled at least 24 hours after installation and development. Prior to sampling the wells, collect depth to groundwater and depth of well measurements.
- Properly abandon the wells after they have been sampled.

Sub Task E: Surface Water/Sediment Investigation:

- Collect both a surface water and sediment sample from the Deep River at the three locations designated on the attached map (SW/SED-1, SW/SED-2 & SW/SED-3). Include hexavalent chromium analysis for the sediment samples.

Sub Task F: Waste Boundary Delineation:

- Based on observations made during advancement of soil borings SB-1 through SB-17, additional borings may be necessary to delineate the waste disposal boundary at the site.
- For cost estimating purposes, assume two additional days of boring advancement to determine the waste disposal boundary at the site.
- The additional waste boundary delineation borings will be advanced upon discussion and direction from the Unit PM.



Sub Task G: Background Soil Sampling:

- Based on observations made during advancement of soil borings SB-1 through SB-17, there may be sufficient space on the site properties to collect background soil samples.
- For cost estimating purposes, assume three back ground soil borings will be advanced and sampled (BG-1 through BG-3). Advance the borings to a depth of fifteen feet below land surface (bls). Collect samples at 6 inches, 18 inches, 5 feet, 10 feet and 15 feet bls. Submit soil samples to a North Carolina-certified laboratory and analyze for the 14 metals, mercury, ammonia, nitrate, sulfate and hexavalent chromium.
- The background soil sampling will be conducted upon discussion and direction from the Unit PM.

Scope of Work for Task Order 673DP-2: Report Compilation

Compilation of the report will be approved as a separate task order. The Report will be titled “Remedial Investigation – Waste Delineation and Media Sampling”.

The report is to contain the following items:

- Text, tables, and figures to adequately summarize task activities.
- A section concerning any variations from the work plan or your SOPs.

A task authorization to begin work will be issued based on the approved proposal. Do not proceed with tasks prior to receiving this authorization. If you have any questions or concerns, contact me at (919)707-8230.

Sincerely,



David P. Kwiatkowski, Hydrogeologist
Division of Waste Management – NCDEQ

