



PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

LINDA CULPEPPER

Director

February 15, 2016

Ms. Genna Olson
ATC Associates Inc.
2725 East Millbrook Road, Suite 121
Raleigh, NC 27604

Re: Request for Task Order and Cost Proposal
Elon College LDFL – Amick Rd.
Elon, Alamance County
ID# NONCD000730
Task Order 730DP-5&6

Dear Ms. Olson:

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. N13003S.

Investigation Goals: The goals of this phase of work are to: delineate wetlands/floodways on the site property(s) relative to the waste disposal area, survey site features such as waste disposal area, topography, property lines, structures and wetlands/floodway, and prepare a topographic map showing site features and a notification plat showing the footprint of the waste disposal area, collect confirmatory soil samples for hexavalent chromium analysis, collect composite waste characterization samples for TCLP analysis, collect waste characterization samples for asbestos analysis and determine estimate volumes of surface and subsurface waste at the site.

Scope of work for Task Order 730DP-5:

Sub Task A: Work Plan and Cost Estimate Preparation

- Prepare a work plan in accordance with ATC'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.

Subtask B: Wetlands and Floodway Determination

- Perform the necessary activities to identify and locate potential wetlands and floodway located in the vicinity of the waste disposal area at the referenced site.

Subtask C: Surveying

- Complete a survey of the site by a North Carolina Licensed Professional Land Surveyor to include site boundaries (waste disposal area and areas of contamination), topographic contours, property lines within the site boundaries, unique site features, wetlands and floodway, and on-site structures.
- For Plat notice, refer to the instructions for preparing a notice of an Inactive Hazardous Substance or Waste Disposal Site for Recordation.
- Upon completion of task activities, submit field notes, photographs, and validated analytical results for review.

Subtask D: Chromium VI Cover Soil/Waste Sampling

- Resample soil borings SB-2, SB-3, SB-4, SB-5, SB-6 and SB-14 located within the waste disposal unit as shown on the attached figure to confirm total chromium concentration previously identified and determine presence of hexavalent chromium.
- Collect soil samples for laboratory analysis from 0.5' and 1.5' from SB-2, SB-4, SB-5 and SB-14. In addition: collect samples from SB-3 at 0 feet, 5 feet and 7 feet; from SB-4 at 7 feet and 12 feet; and from SB-6 at 0 feet, 5 feet and 8 feet.
- Submit soil samples to a North Carolina-certified laboratory and analyze for analysis of total chromium by SW-846 method 6010, and for hexavalent chromium by SW-846 Method 3060.
- 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 IHSB Preliminary Soil Remediation Goals Table for solids media.

Subtask E: Composite Waste Sampling - TCLP Analysis

- Resample soil borings SB-2, SB-3, SB-4, SB-5 and SB-6 located in the waste disposal unit as shown on the attached figure. Collect composite samples of the waste from top of the waste through the bottom of the waste of each borehole. In addition, collect a soil sample from the native soil below the waste.
- Submit soil samples to a North Carolina certified laboratory and using TCLP analyze for the following parameters by the most current U.S. EPA Contract Laboratory Program Target Compound List for VOCs by method 8260B, 1,4 dioxane by method 8260 SIM, SVOCs by 8270D, total metals (14 inorganics) by EPA Methods 6020, mercury by EPA Method 7470, and asbestos by EPA Method 600.
- 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 IHSB Preliminary Soil Remediation Goals Table for solids media

Sub Task F: Asbestos Sampling

- Complete five test pits throughout the area of waste disposal at the site. Log each pit with depth to waste, trench depth, and characterize the nature of the waste.
- Personnel trained for asbestos determination will collect test pit waste samples at various depths and a sufficient number of locations within the vertical and horizontal extent of the waste. Two separate soil or bulk samples will be collected from each sampling point. The first sample will be analyzed for asbestos using method EPA/600/R-93116. If, based upon review of the analytical results of the first sample, it is determined additional evaluation is necessary, the second sample will be analyzed for asbestos using method CARB 435 PLM Level A. The second sample will not be run for analysis unless prior authorization is provided by the PRLF project manager.
- At each sample location, waste samples are to be collected from the top portion of the waste and from the bottom of the waste in addition to samples collected at two foot intervals within the waste. If suspected asbestos containing materials are observed between sample depths, samples should be collected from those materials.
- Personnel trained for asbestos determination will survey the surface waste located across the site and collect samples representative of observed suspected asbestos containing materials for laboratory analysis. Two bulk samples will be collected from each sampling point. The first sample will be analyzed for asbestos using method EPA/600/R-93116. If, based upon review of the analytical results of the first sample, it is determined additional evaluation is necessary, the second sample will be analyzed for asbestos using method CARB 435 PLM Level A. The second sample will not be run for analysis unless prior authorization is provided by the PRLF project manager.
- Provide an estimate of the volume of suspected asbestos containing materials identified within the surface waste from which the samples were collected.

Sub Task G: Waste Volumes

- Provide estimated volumes of surface waste and subsurface waste at the site.

Scope of Work for Task Order 730DP-6: Report Compilation

Compilation of the report will be approved as a separate task order. The Report will be titled “Remedial Investigation – *Wetland Determination and Media Sampling*. The survey topographic map and plat map will be prepared separate from the report.

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.

Provide the work plan and cost estimate by February 29, 2016. 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, I may be reached at (919)707-8230.

Sincerely,



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