Environmental Site Assessment Work Plan
Minimum Requirements Checklist

NCDEQ Brownfields Program – November 2018

Title Page

The title page should include the following information. Letter style reports are acceptable, as long as this information is somewhere on the first page.

_____ Title of Work Plan
_____ Brownfields Project Name (not the development name)
_____ Brownfields Project Number
_____ Date (updated with each revision)
_____ Revision Number
_____ Firm PE/PG License Number
_____ Individual PE/PG seal & signature

Section 1 – Introduction

_____ Provide the site location, address, and acreage.
_____ Provide a BRIEF summary of the history of the property and its history in the program. For example: reiterating RECs from a Phase I ESA, indicate if the scope of work negotiated during a Data Gap Meeting, etc.
_____ Briefly list and describe the data gaps the assessment is attempting to fill
_____ Indicate if the assessment data is intended for use by any other DEQ programs in addition to the Brownfields Program (i.e. UST, IHSB, etc.)

Section 2 – Scope of Work

_____ Provide a general description of proposed scope of work covered in this plan (i.e. 2 new monitoring wells, six groundwater samples, 5 soil gas sampling points and 6 soil borings)
_____ Discuss samples to be collected by media and source area/location. Generally, the reasoning for the sample locations selected.
_____ Describe depths of samples to be collected (Reference Table 1) or how that decision will be made in the field, if needed.
_____ State for what each sample will be analyzed (briefly). Reference Table 1.

Section 3 – Sampling Methodology

_____ Reference the guidance documents you intend to use. ISHB, EPA SESD, VI Guidance, Well Construction Rules (NCAC 2C). Note deviations or methodology planned that is not covered by such guidance (e.g., multi-increment sampling, passive air samplers).
_____ Describe what will be installed (soil boring, temporary well, permanent well, sub slab, soil gas, etc.). Include construction details.
_____ Discuss installation methodology (Hand Auger, DPT, etc.)
_____ Discuss sample collection procedures. Include the following, at a minimum:

- Equipment to be used
- Purging methods and volumes
- Stabilization parameters for groundwater sampling
- Field screening methods

- Leak check procedures for sub-slab and soil gas samples
- Discuss how and when vacuum readings will be collected (for summa cans)

_____ Discuss sample point abandonment

Section 4 – Laboratory Analyses

_____ Discuss the proposed analyses (include method number, preparation method, if there are concerns with short hold times, etc).
_____ Discuss any proposed limitations on the contaminants of concern, if any, and the reason for such limitation (sufficient previous data, indoor air interferences, etc).
_____ Discuss laboratory certifications. Please note, NC does not certify labs for air samples. Please specify what certification the proposed air lab holds.
_____ Indicate the Reporting Limits/Method Detection Limits will meet applicable screening criteria (to the extent feasible). Include Reporting of J-Flags to meet criteria.
_____ Indicate what Level QA/QC will be reported by the laboratory. Level II QA/QC is typically acceptable.

Section 5 – QA/QC

_____ Specify the duplicate sample frequency. Minimum requirement: 1 duplicate per 20 samples, per media, per method.
_____ Discuss Trip Blank. 1 Trip Blank per cooler/shipment of groundwater VOC analyses.
_____ Discuss how the lab will have sufficient sample volume for MS/MSD analyses.
_____ Discuss chain of custody and shipping.

Section 6 – Investigation Derived Waste (IDW) Management

_____ Discuss what IDW will be generated and how it is proposed to be managed. Management recommendations should be in accordance with 15A NCAC 02T.1503 and 15A NCAC 02H. 0106. Generally, if the Brownfields Property has not previously been assessed, then all IDW must be containerized and characterized prior to management. Previous assessment data that indicate no Hazardous Waste (listed or characteristic) is likely to be encountered in the area of proposed assessment will be required before thin spreading of IDW on-site is permitted.

Section 7 – Reporting

This section should discuss the components of the assessment report which will be prepared as a result of the above sample collection. At a minimum, the report shall include:

_____ Reporting/summary of site work conducted for all sections outlined above in this checklist;
_____ Summary of findings and possible recommendations;
_____ All applicable tables and figures outlined below with the addition of:
__ Tables for tabulated analytical data per media sampled and analyzed, compared against applicable screening levels;
__ Figure depicting actual sample locations collected, with each media depicted in the legend, graphic scale and north arrow; and
__ Groundwater potentiometric map, with graphic scale and north arrow,
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Attachments

_____ Table 1 – Proposed Sample Locations and Analyses on a Summary Table that includes:

__ Sample ID
__ Sample Objective
__ Proposed Depth(s)
__ Analytical Method(s)
__ QA/QC Samples
__ Background Samples

_____ Figure 1 – Site Location Map

__ Site location on a topographic map base.
__ Graphic scale and north arrow

_____ Figure 2 – Site Map should include the following

__ Buildings
__ Historical sample locations
__ RECs or other areas of concern
__ Proposed sample locations
__ Sample Identification labels
__ Background Samples
__ QA/QC Samples
__ Graphic scale and north arrow
__ High quality aerial suggested as the base map

_____ Figure 3 – Proposed Development (if available)

__ Overlay of historical and proposed sample locations,
__ Graphic scale and north arrow.

_____ Appendix – Summary of Historical Analytical Data (if needed)