Environmental Management Plan

North Carolina Department of Environmental Quality
Division of Waste Management
Brownfields Redevelopment Section

Version 4, July 2026

Date: Click or tap to enter a date. **Revision Date (if applicable)**: Click or tap to enter a date.

Brownfields Assigned Project Name: Click or tap here to enter text.

Brownfields Project Number: Click or tap here to enter text.

Brownfields Property Address: Click or tap here to enter text.

Brownfields Property Area (acres): Click or tap here to enter text.

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Introduction

This form is to be used to prepare an Environmental Management Plan (EMP) for projects in the North Carolina Brownfields Redevelopment Section for DEQ approval prior to physical redevelopment of a Brownfields Property.

The EMP is a standard requirement of a Brownfields Agreement (BFA) and currently provides a best management practice for handling environmental media, including soil disturbance, at any Brownfields Property. Its purpose is to clarify actions to be taken during demolition and construction activities at Brownfields properties to avoid delays in the event new contamination sources are discovered or other environmental conditions arise. The EMP provides a means to document redevelopment plans and environmental data for each applicable environmental medium to inform regulatory-compliant decision-making at the Brownfields Property. As much detail as possible should be included in the EMP, including contingency planning for unknowns. Consult your Brownfields Project Manager if you have questions.

This form and all pertinent attachments shall be completed in accordance with the checklist below. The completed EMP and their attachments should be uploaded to the appropriate Brownfields project file through AccessDEQ in order to provide ample time for the Brownfields Project Manager to review and approve the EMP prior to any earthmoving or other development-related activities that have the potential to disturb soil at the Brownfields Property, including demolition. For the EMP to be valid for use, it must be completed, reviewed by the Section, and signed by all parties working on the project. Failure to comply with the requirements of the EMP could jeopardize project eligibility, or in the event of a recorded agreement, be cause for a reopener.

NOTE: The EMP is valid only for the scope of work described herein and must be updated to be applicable for new phases of redevelopment or after significant changes in applicable regulatory guidance. Site assessment and risk characterization of a Brownfields Property to DEQ's satisfaction is required prior to EMP approval, which would be granted by DEQ's signature on the signature page.

As of November 1, 2025, the fee structure for the Brownfields Redevelopment Section was modified. This fee structure included an annual implementation fee (aka construction fee) during the period of active construction. The period of active construction is generally defined as the period beginning on the "Period of Active Construction" start date identified in a DEQ-approved EMP (or another date approved in advance in writing by DEQ) and ending on the date of final construction set forth in the final Redevelopment Summary Report. If there is more than one phase of construction, there may be more than one Period of Active Construction on the Brownfields Property.

This fee will be applicable to all sites, including those with existing Brownfields Agreements, for which the Prospective Developer or current property owner are conducting redevelopment activities that were not anticipated in the original Brownfields Agreement or are redeveloping the Brownfields Property from its initial redevelopment. This annual cost recovery fee will be invoiced

annually to the property owner of record unless otherwise specified in this EMP. The fee shall be $10,000 annually, which includes review of the EMP, a Vapor Intrusion Mitigation Plan (VIMP), a Vapor Intrusion Mitigation System Operation and Maintenance Plan (VIMS O&M Plan), two years of semi-annual post-occupancy monitoring, and review of the required Redevelopment Summary Report(s).

If the scope of work is limited or the site risks do not warrant vapor mitigation, then this fee can be negotiated to a lesser amount. The fee will be prorated for the number of months in construction if construction activities do not occur over a full year.

EMP Checklist

The preparer shall ensure that the following steps have been completed prior to submitting the EMP for review. **Any EMP prepared without completing all of the following is premature and may be returned without comment.**

☐ Site sampling and assessment that meets Brownfields' objectives is complete and has been reviewed and approved by the Brownfields Project Manager or Brownfields Project Initiator.

☐ Specific redevelopment plans, even if conceptual, have been developed for the project, and are included in this EMP.

Submit, along with the completed EMP form, the following attachments, as relevant and applicable to the proposed redevelopment:

<u>Figures</u>

☐ Figure(s) overlaying redevelopment footprint on a map of the sampling locations and extent of contamination for each media.

☐ Site grading plans that include a cut and fill analysis, color-coded heat maps preferred.

☐ Figure showing the location of cut soils, particularly those proposed for export and sampling locations from those areas.

<u>Tables</u>

☐ Tabulated data summaries for each media (i.e. soil, groundwater, soil gas, etc.) applicable to the proposed redevelopment.

<u>Redevelopment</u>

☐ A set of redevelopment plans that show ground level and/or sub-grade features, if available; if not, conceptual plans may suffice.

☐ A detailed construction schedule that includes timing and phases of construction.

☐ A final grade sampling and analysis scope of work.

☐ Documentation required for each proposed potential borrow soil source as outlined in this EMP, if known.

Note:

If a Vapor Intrusion Mitigation System (VIMS) is installed on a Brownfields Property, the VIMS Plan (VIMP) shall be signed and sealed by a NC Professional Engineer and submitted under separate cover for BRS review prior to installation. The VIMP will need to comply with the

most recent version of the *Vapor Intrusion Mitigation System Design Submittal Requirements*.

This EMP does not waive any applicable requirement to obtain a permit, license or certification, or to comply with any and all other applicable law, including the North Carolina Environmental Policy Act, NCGS § 113A-1, et seq.

SECTION 1: COMMUNICATIONS AND APPROVAL SIGNATURES

A copy of this EMP shall be distributed to all the parties below as well as any contractors or site workers that may be exposed to site vapors, soil, groundwater, and/or surface water. A copy of the EMP shall be maintained at the Brownfields Property during redevelopment activities in an area that is prominently accessible to site workers. NOTE, THE EMP DOES NOT TAKE THE PLACE OF A SITE-SPECIFIC HEALTH AND SAFETY PLAN.

Prospective Developer (PD): Click or tap here to enter text.
Contact Person: Click or tap here to enter text.
Phone Numbers: Office: Click or tap here to enter text. **Mobile:** Click or tap here to enter text.
Email: Click or tap here to enter text.

Property Owner (if different from PD above): Click or tap here to enter text.
Contact Person: Click or tap here to enter text.
Phone Numbers: Office: Click or tap here to enter text. **Mobile:** Click or tap here to enter text.
Email: Click or tap here to enter text.

Construction Contractor for PD: Click or tap here to enter text.
Contact Person: Click or tap here to enter text.
Phone Numbers: Office: Click or tap here to enter text. **Mobile:** Click or tap here to enter text.
Email: Click or tap here to enter text.

Environmental Consultant: Click or tap here to enter text.
Contact Person: Click or tap here to enter text.
Phone Numbers: Office: Click or tap here to enter text. **Mobile:** Click or tap here to enter text.
Email: Click or tap here to enter text.

Brownfields Redevelopment Section Project Manager: Click or tap here to enter text.
Phone Numbers: Office: Click or tap here to enter text. **Mobile:** Click or tap here to enter text.
Email: Click or tap here to enter text.

Other DEQ Program Contacts (if applicable, i.e., UST Section, Inactive Hazardous Site Branch, Hazardous Waste, Solid Waste):
Click or tap here to enter text.

APPROVAL SIGNATURES

Brownfields Project Number: Click or tap here to enter text.

Brownfields Project Name: Click or tap here to enter text.

Prospective Developer: Click or tap here to enter text. **Date:** Click or tap to enter a date.
Printed Name/Title/Company: Click or tap here to enter text.

Consultant: Click or tap here to enter text. **Date:** Click or tap to enter a date.
Printed Name/Title/Company: Click or tap here to enter text.
PE/PG Professional License #: Click or tap here to enter text.
Firm PE/PG License #: Click or tap here to enter text.

Insert PE/PG Seal Above

Brownfields Project Manager: Click or tap here to enter text. **Date:** Click or tap to enter a date.

SECTION 2: NOTIFICATIONS TO THE BROWNFIELDS REDEVELOPMENT SECTION

Written advance Notification Times to Brownfields Project Manager as noted below are required. Notifications should be made by calendar invite to BFPropertyManagement@deq.nc.gov with electronic copy to your Brownfields Project Manager. Check each box to accept minimum advance notice periods (in calendar days) for each type of onsite task:

On-site assessment or remedial activities:..... **10 days Prior** ☐

Period of Active Construction (includes grading) start:.....**10 days Prior** ☐

Discovery of stained soil, odors, USTs, buried drums or waste, landfill, or other signs of previously unknown contamination:..... **Within 48 hours** ☐

Implementation of emergency actions (e.g. dewatering, flood or soil erosion control measures in area of contamination, ventilation of work zones):..... **Within 48 hours** ☐

Additional Notification(s):
Vapor Intrusion Mitigation System (VIMS) installations have a separate notification process that is outlined in the site Vapor Intrusion Mitigation Plan (VIMP). Notifications should be made by calendar invite to BFPropertyManagement@deq.nc.gov with electronic copy to your Brownfields Project Manager.

Other notifications as required by local, state or federal agencies to implement redevelopment must be conducted as applicable by those entities.

SECTION 3: REDEVELOPMENT PLANS

1) **Type of Redevelopment (check all that apply):**

   ☐ **Residential** ☐ **Townhomes (Prior written DEQ approval REQUIRED regardless of ownership structure)** ☐ **Recreational** ☐ **Institutional** ☐ **Commercial** ☐ **Office** ☐ **Retail** ☐ **Industrial** ☐ **Other specify:**
   Click or tap here to enter text.

2) **Summary of Redevelopment Plans (MANDATORY: attach detailed plans or conceptual plans, if detailed plans are not available. EMP review without such information would be premature)**: **Provide brief summary of redevelopment plans, including demolition, removal of building slabs/pavement, grading plans and planned construction of new structures:**
   Click or tap here to enter text.

3) **Do plans include demolition of structure(s) or slab disturbance(s)?**
   ☐ **Yes** ☐ **No** ☐ **Unknown**
   ☐ **If yes**, check here to confirm that demolition will be conducted in accordance with applicable legal requirements, including without limitation those related to lead and asbestos abatement that are administered by the Health Hazards Control Unit within the Division of Public Health of the

North Carolina Department of Health and Human Services. If available, provide a copy of your demolition permit. If needed, include any additional details below.
Click or tap here to enter text.

4) **If Aboveground Storage Tanks (ASTs) for petroleum products will be temporarily located on the Brownfields Property during construction acknowledge that all applicable federal, state, and local regulations shall be followed and that the placement of such ASTs shall avoid areas of known petroleum impacts. Releases from ASTs will need to be remediated to the satisfaction of DEQ BRS in addition to any other regulating entity.**
☐ **Acknowledged**

☐ **Petroleum ASTs will not be used during construction.**
Additional details can be provided below, if needed.
Click or tap here to enter text.

5) **Which category of risk-based screening level is used or is anticipated to be specified in the Brownfields Agreement?** Note: If children frequent the property, residential screening levels shall be cited in the Brownfields Agreement for comparison purposes.
☐ **Residential** ☐ **Non-Residential or Industrial/Commercial**

6) **Schedule for Redevelopment (attach construction schedule):**
   a) **Period of Active Construction start date:** Click or tap to enter a date.

   b) **Anticipated duration of Period of Active Construction (specify activities during each period):**
   Click or tap here to enter text.

      i) **Provide the planned date of occupancy for new buildings (if occupancy will be phased over multiple buildings, provide anticipated dates for each building). Alternatively, reference an attached schedule.**
      Click or tap to enter a date.

      ii) **Additional Periods of Active Construction planned?** ☐ **Yes** ☐ **No**

      If yes, specify the additional Periods of Active Construction start date(s) and/or activities if known. Note that an updated EMP will be required with each new phase of redevelopment.

      Estimated Start Date: Click or tap to enter a date.

      Planned Activity: Click or tap here to enter text.

SECTION 4: CONTAMINATED MEDIA

Fill out the sections below, using detailed site plans, if available, or estimate using known areas of contaminated soil and a conceptual redevelopment plan.

☐ **Provide a figure overlaying new construction onto figure illustrating historic sample locations.**

1) **Contaminated Media on the Brownfields Property**

Part 1. Soil: ..... ☐ **Yes** ☐ **No** ☐ **Suspected** ☐ **Unknown**
Part 2. Groundwater: ..... ☐ **Yes** ☐ **No** ☐ **Suspected** ☐ **Unknown**
Part 3. Surface Water:..... ☐ **Yes** ☐ **No** ☐ **Suspected** ☐ **Unknown** ☐ **N/A**
Part 4. Sediment: ..... ☐ **Yes** ☐ **No** ☐ **Suspected** ☐ **Unknown** ☐ **N/A**
Part 5. Soil Vapor:..... ☐ **Yes** ☐ **No** ☐ **Suspected** ☐ **Unknown** ☐ **N/A**
Part 6. Sub-Slab Soil Vapor:..... ☐ **Yes** ☐ **No** ☐ **Suspected** ☐ **Unknown** ☐ **N/A**
Part 7. Indoor Air: ..... ☐ **Yes** ☐ **No** ☐ **Suspected** ☐ **Unknown** ☐ **N/A**

2) **For the Area of Proposed Redevelopment on the Brownfields Property, attach tabulated data summaries for each media and figure(s) with all available sample locations.**

3) **List all other Incident and/or Permit Numbers under which this property is regulated.**
Click or tap here to enter text.

SECTION 4.1: SOIL

1) **Known or suspected contaminants in soil (list general groups of contaminants)**:
Click or tap here to enter text.

2) **Depth of known or suspected contaminants (feet):**
Click or tap here to enter text.

3) **Area of soil disturbed by redevelopment (square feet):**
Click or tap here to enter text.

4) **Depths of soil to be excavated (feet) and description of how these soils are fully characterized by the data presented in the attached tables and figures.**
Click or tap here to enter text.

5) **Estimated volume of soil expected to be disposed of offsite, if applicable:**
Click or tap here to enter text.

SECTION 4.1.A: MANAGING ONSITE SOIL

If soil is anticipated to be excavated from the Brownfield Property, relocated on the Brownfields Property, or otherwise disturbed during site grading or other redevelopment activities, as noted above a grading plan that clearly illustrates areas and thicknesses/depths of cut and fill is required as an attachment to this EMP.

1) **HAZARDOUS WASTE DETERMINATION: Prior to site work, a hazardous waste determination must be performed. A summary of details on how this is completed under the Hazardous Waste Section requirements can be found in the NC DEQ Division of Waste Management *Guidelines for Beneficial Reuse of Excess Soils from Regulated Properties* (September 2025).**

   a) **Does site soil contain a LISTED WASTE as defined in the North Carolina Hazardous Waste Section under 40 CFR Part 261.31-261.35? ☐Yes ☐No**

      ☐ **If yes, explain why below, including the level of knowledge regarding processes generating the waste (include pertinent analytical results as needed).**
      Click or tap here to enter text.

      ☐ **If yes, do the soils exceed the "Contained-Out" levels in Attachment 1 of the North Carolina Contained-In Policy? ☐ Yes ☐ No**

   NOTE: IF SOIL MEETS THE DEFINITION OF A LISTED HAZARDOUS WASTE AND EXCEEDS THE CONTAINED-OUT LEVELS IN ATTACHMENT 1 TO THE NORTH CAROLINA CONTAINED-IN POLICY, THE SOIL MAY NOT BE RE-USED ONSITE AND MUST BE DISPOSED OF IN ACCORDANCE WITH DEQ HAZARDOUS WASTE SECTION RULES AND REGULATIONS.

   b) **Does the soil contain a CHARACTERISTIC WASTE (40 CFR Part 261 Subpart C)? ☐ Yes ☐ No**

      ☐ **If yes**, mark reason(s) why below (and include pertinent analytical results).
      - ☐ **Ignitability** Click or tap here to enter text.
      - ☐ **Corrosivity** Click or tap here to enter text.
      - ☐ **Reactivity** Click or tap here to enter text.
      - ☐ **Toxicity** Click or tap here to enter text.
      - ☐ **TCLP results** Click or tap here to enter text.
      - ☐ **Rule of 20 results** (20 times total analytical results for an individual hazardous constituent on TCLP list cannot, by test method, exceed regulatory TCLP standard)
        Click or tap here to enter text.

      ☐ **If no,** explain rationale:
      Click or tap here to enter text.

   NOTE: IF SOIL MEETS THE DEFINITION OF A CHARACTERISTIC HAZARDOUS WASTE, THE SOIL MAY NOT BE RE-USED ONSITE AND MUST BE DISPOSED OF IN ACCORDANCE WITH DEQ HAZARDOUS WASTE SECTION RULES AND REGULATIONS.

2) **Screening criteria by which soil disposition decisions will be made (e.g., left in place, capped in place with low permeability barrier, removed to onsite location and capped, removed offsite):**

   ☐ **Preliminary Health-Based Residential SRGs**

   ☐ **Preliminary Health-Based Industrial/Commercial SRGs**

   ☐ **Division of Waste Management Risk Calculator**

☐ **Site-Specific Background Metals and/or Background Metals in Soil and Sediment at North Carolina CERCLIS Sites dashboard[1] (Dashboard)**

Click or tap here to enter text.

☐ **Site-specific risk-based cleanup level (only if pre-approved by Brownfields). Include cleanup level below.**

Click or tap here to enter text.

Additional comments:

Click or tap here to enter text.

3) If known impacted soil is proposed to be reused within the Brownfields Property boundary, check the measures that will be utilized to ensure safe placement and documentation of same. Include the location of this soil placement in the provided figures.

☐ **Provide documentation of analytical report(s) to Brownfields Project Manager.**

☐ **Provide documentation of final location, thickness and depth of relocated soil onsite map to Brownfields Project Manager once known.**

☐ **Use of a geotextile or witness barrier to mark the interface between potentially contaminated soil and clean fill material.**

Provide description of material:

Click or tap here to enter text.

☐ **Manage soil under impervious cap** ☐ **or clean fill** ☐

☐ **Describe cap or fill:**

Click or tap here to enter text.

☐ **Confer with NC BF Project Manager if Brownfield Plat must be revised (or re-recorded if actions are Post-Recordation).**

☐ **GPS the location and provide site map with final location.**

☐ **Other. Provide a description of the measure**:

Click or tap here to enter text.

If impacted soils exceeding the criteria outlined in Number 2 above are proposed to be relocated onsite, prior to final placement onsite, the following shall be included in this EMP, or in the case of newly identified material, submitted for DEQ review/approval for prior approval:

- Analytical data that has been sampled in accordance with the above referenced frequency and following procedures outlined in the most recent methodologies outlined in the DEQ IHSB *Guidelines for Assessment and Cleanup of Contaminated Sites (Guidelines)*

Matthew C Ogwu, Frances M Nilsen, William F Hunneke, Landon Norris, Robert J Kelley, Paul P Goodwin, Matthew A Nichols, Alexis R VanVenrooy, James T Bateson, A statistical summary and visualization tool for 30 years of background soil and sediment metals data from North Carolina Superfund Sites, *Integrated Environmental Assessment and Management*, Volume 22, Issue 1, January 2026, Pages 260–268, https://doi.org/10.1093/inteam/vjaf120

- Figure outlining planned soil placement and any future site features including buildings/hardscape/open areas
- A North Carolina PE/PG recommendation of placement

Impacts	Options	
	Onsite Placement without conditions	Onsite placement under 2 ft of cap or clean fill[1, 2]
All Constituents below applicable PSRGs	X	
Constituents[3] below applicable PSRGs; Metals below background but above PSRGs	X	
Constituents[3] below applicable PSRGs; Metals above Background /PSRGs		X
Constituents above Applicable PSRGs		X

1: Requires Prior Written DEQ Approval
2: VOC impacted soils above applicable PSRGs shall not be placed directly beneath building footprints without prior written DEQ approval.
3: Constituents indicate any samples evaluated for other than metals.

Provide a description below of the proposed onsite soil reuse:
Click or tap here to enter text.

4) Describe the following action(s) to be taken during soil disturbance at the Brownfields Property:

Dust Control
At a minimum, visible dust should be prevented and if present, mitigated.

☐ Check to confirm that management of fugitive dust from site activities will be handled in accordance with applicable local, state, and federal requirements, not limited to but including 15A NCAC02D.0540. Generally describe dust control measures to be taken during soil disturbance.
Click or tap here to enter text.

Field Screening of Site Soil
At a minimum, contractors shall be made aware of protocols should suspected soils or other materials (e.g. staining, unusual odors, fill materials) be identified. Describe the field screening method, frequency of field screening, person conducting field screening:
Click or tap here to enter text.

Stockpiling of Site Soils
☐ **Check to confirm that stockpiling of known or suspected impacted soils will be conducted in accordance with Figure 1 of this EMP. Stockpile methodology should provide erosion control, prohibiting contact between surface water/precipitation and contaminated soil, and preventing contaminated runoff. Explain any variances or provide additional details as needed:**
Click or tap here to enter text.

Soil Sample Collection

☐ **Yes**

☐ **Not anticipated - In order to avoid delays in construction, a plan shall be in place for sampling of suspect soils should they be encountered during redevelopment. If soil sample collection is not anticipated but the need to do so is identified during redevelopment, notify the Brownfields Program of the anticipated sample and report dates for scheduling purposes of this new condition as required by Section 2.0 Notifications.**

Describe the proposed sampling ratios and method (e.g., in-situ grab, composite, stockpile, etc.) and confirm that all procedures outlined in applicable DEQ guidance for assessment shall be followed. Additional guidance is available in the DEQ DWM *Guidelines for Beneficial Reuse of Excess Soils From Regulated Properties* (Soil Management Guidelines):

Click or tap here to enter text.

Check applicable chemical analytes for soil samples:

☐ **Minimum Sample Requirements:** Volatile organic compounds (VOCs) by EPA Method 8260*;* Semi-volatile organic compounds (SVOCs) by EPA Method 8270; and Metals RCRA List; and Hexavalent Chromium by EPA Method 6020/7199

☐ **Pesticides:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **PCBs:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **Other Constituents & Respective Analytical Method(s)** (e.g. Herbicides, PFAS, etc.):
Click or tap here to enter text.

☐ **Check to confirm that by the owner's signature and the North Carolina Professional Engineer/Geologist sealing this EMP, the consultant understands that no work plan or scope of work for suspect soil sample collection will be submitted beyond this EMP, and that it is the responsibility of the sealing professional and property owner to ensure that all applicable guidelines and methodologies are followed and reported to DEQ for determination and approval of soil placement prior to final relocation.**

5) Final Grade Sampling

☐ **Final grade sampling** of exposed soil (i.e., soil that will not be under buildings or permanent hardscape) is required for all residential reuses and may be recommended for other site redevelopments or required in accordance with recorded land use restrictions. Most brownfields agreements allow for disturbance of the upper 24 inches of soil post redevelopment for landscaping purposes. This allowance is based on conducting final grade sampling. Select chemical analyses for final grade samples with check boxes below (Check all that apply):

☐ **Minimum Sample Requirements:** Volatile organic compounds (VOCs) by EPA Method 8260*;* Semi-volatile organic compounds (SVOCs) by EPA Method 8270; and Metals RCRA List; and Hexavalent Chromium by EPA Method 6020/7199

☐ **Pesticides:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **PCBs:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **Other Constituents & Respective Analytical Method(s)** (e.g. Herbicides, PFAS, etc.):
Click or tap here to enter text.

Attach a scope of work for final grade sampling, including a summary table and figure, and provide a brief sampling methodology below. Samples should be collected from 0-2 ft below ground surface, with the exception of VOCs which should be taken from 1-2 ft below ground surface based on field screening. Alternatively, indicate if a scope of work for final grade sampling will be submitted under separate cover.
Click or tap here to enter text.

☐ ***If final grade sampling was NOT selected, explain rationale:***
Click or tap here to enter text.

SECTION 4.1.B: IMPORTED FILL SOIL

NO SOIL MAY BE BROUGHT ONTO THE BROWNFIELDS PROPERTY WITHOUT PRIOR APPROVAL FROM THE BROWNFIELDS REDEVELOPMENT SECTION. According to the Brownfields IR 15, "Documenting imported soil (by sampling, analysis, and reporting in accordance with review and written approval in advance by the Brownfields Redevelopment Section), will safeguard the liability protections provided by the brownfields agreement and is in the best interest of the prospective developer/property owner." Soil import requirements are outlined in detail in the most recent version of the DEQ DWM *Guidelines for Beneficial Reuse of Excess Soils From Regulated Properties* (Soil Management Guidelines).

1) **Will fill soil be imported to the Brownfields Property? ☐ Yes ☐ No ☐ Unknown**

2) **If yes, what is the estimated volume of fill soil to be imported?**
Click or tap here to enter text.

3) **If yes, what is the anticipated depth that fill soil will be placed at the property? (*If a range of depths, list the range*.)**
Click or tap here to enter text.

4) **Soils (include both structural fill and topsoil) will be imported from the following location(s). Attach all relevant data (see list of import requirements below) from the source:**
Click or tap here to enter text.

If the sources for structural fill and topsoil are not known at the time of EMP preparation, a Soil Import Request via AccessDEQ must be submitted for DEQ BRS review and approval PRIOR TO SOIL PLACEMENT AT THE BROWNFIELDS PROPERTY, consistent with the requirements below.

If import is needed, the following analyses for soil import samples will be utilized (Check all that apply):

☐ **Minimum Sample Requirements:** Volatile organic compounds (VOCs) by EPA Method 8260; Semi-volatile organic compounds (SVOCs) by EPA Method 8270; and Metals RCRA List; and Hexavalent Chromium by EPA Method 6020/7199

☐ **Pesticides:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **PCBs:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **Other Constituents & Respective Analytical Method(s)** (e.g. Herbicides, PFAS, etc.):
Click or tap here to enter text.

Permitted Quarry - If the source is a permitted quarry as outlined in the Soil Management Guidelines, summarize the source, volume, sampling results, and analytical data.

Unpermitted Borrow Source- If the source is an unpermitted borrow source as outlined in the Soil Management Guidelines, the consultant will provide DEQ BRS with a scope of work for review and approval prior to data being collected. Upon execution of the work, a Soil Import Request prepared in accordance with the *Minimum Site Assessment and Reporting Requirements Checklist* will be submitted.

Topsoil or other Landscaping Amendments – commercially available topsoil, compost, or other amendments (in bag or in bulk) may be sourced without prior DEQ review and approval. The source of the material and volume used shall be documented in the Redevelopment Summary Report. However, note that unless these materials are sampled prior to import and are documented to be a minimum of 24 inches in thickness, the landscaped areas will be included in the final grade sampling scope of work.

If other special considerations apply, discuss:
Click or tap here to enter text.

SECTION 4.1.C: SOIL EXPORT

NO SOIL MAY LEAVE THE BROWNFIELDS PROPERTY WITHOUT APPROVAL FROM THE BROWNFIELDS REDEVELOPMENT SECTION. Failure to obtain approval may violate a brownfields agreement causing a reopener or jeopardizing eligibility in the Section, endangering liability protections and making said action possibly subject to enforcement. Justifications provided below must be approved by the Section in writing prior to completing transport activities. Soil export requirements, including sampling rates, are outlined in detail in the most recent version of the **DEQ DWM *Guidelines for Beneficial Reuse of Excess Soils From Regulated Properties*** (Soil Management Guidelines).

1) **Will soil be exported from the Brownfields Property? ☐ Yes ☐ No ☐ Unknown**

2) **If yes, what is the estimated volume of soil to be exported?**
Click or tap here to enter text.

3) **To which facility do you intend to export soils?**
Click or tap here to enter text.

4) **Provide a summary, referencing attached figures, and describing which of the tabulated data attached apply to soil that is planned for excavation. Include a general summary of the number and depth of samples collected from the proposed area of export, and whether the data fully represent the soil to be excavated.**
Click or tap here to enter text.

5) **In the event soil is generated that needs to be exported that was not anticipated during development of this EMP, describe the methodology and sampling to be conducted, and select the analytical suite from the list below.**
Click or tap here to enter text.

Select chemical analyses for soil export samples with check boxes below (Check all that apply):

☐ **Minimum Sample Requirements:** Volatile organic compounds (VOCs) by EPA Method 8260*;* Semi-volatile organic compounds (SVOCs) by EPA Method 8270; and Metals RCRA List; and Hexavalent Chromium by EPA Method 6020/7199

☐ **Pesticides:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **PCBs:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **Other Constituents & Respective Analytical Method(s)** (e.g. Herbicides, PFAS, etc.):
Click or tap here to enter text.

Unless pre-approved by incorporation in this EMP, a *Soil Export Request* must be submitted for DEQ Brownfields review and approval via AccessDEQ PRIOR TO EXPORT FROM THE BROWNFIELDS PROPERTY. For a municipal solid waste (MSW)/Subtitle D landfill, the Soil Export Request should include the applicable analytical data, volume of material to be exported, and the facility's profile/acceptance of the material.

For any other location, the request shall consist of a PE/PG signed and sealed letter report, prepared in accordance with the *Minimum Site Assessment and Reporting Requirements Checklist* (Checklist) that details:

- Proposed Receiving Facility
- Volume of material and figure noting where the material came from
- Analytical data that has been sampled in accordance with above-referenced Soil Management Guidelines
- A table comparing the concentrations of contaminants and metals in export soil to all PSRGs, to concentrations on the receiving site
- Include a risk comparison using the DEQ Risk Calculator between export and receiving site (Note that calculated risk cannot be increased on the receiving site)
- A North Carolina PE/PG recommendation of export
- Written approval from the facility or receiving site property owner representative
- All relevant attachments listed in the EMP Checklist

If any other special considerations apply, discuss: Click or tap here to enter text.

SECTION 4.1.D: MANAGEMENT OF UTILITY TRENCHES

☐ **Install liner between native impacted soils and base of utility trench before filling with clean fill.**

☐ **Last out, first in principle for impacted soils (if soil can safely be reused onsite and is not a hazardous waste), i.e., impacted soils are placed back at approximately the depths they were removed from such that impacted soil is not placed at a greater depth than the original depth from which it was excavated.**

☐ **Discuss use and location of trench dams along utility lines. If used, attach and reference a design detail of trench dam and include locations of trench dams on a figure. If not used, provide rational for why they are not needed.**
Click or tap here to enter text.

Will workers encounter contaminated exterior or sub-slab soil vapor during utility trench installation?
☐ **Yes** ☐ **No** ☐ **Unknown**

In the event that apparent contaminated soil vapor is encountered (based on elevated PID readings, unusual odors, etc.) during redevelopment activities (trenches, manways, basements or other subsurface work,) list activities for management of such contact, INCLUDING notification to DEQ within 48 hours of identification of the issue for determination of additional requirements:
Click or tap here to enter text.

Other comments regarding management of utility trenches: Click or tap here to enter text.

SECTION 4.2: GROUNDWATER

1) **What is the depth to groundwater at the Brownfields Property?**
Click or tap here to enter text.

2) **What is the maximum depth of soil disturbance onsite?**
Click or tap here to enter text.

3) **Will groundwater likely be encountered during planned redevelopment activities (e.g. footer/utility construction or helical pilings?)**
☐**Yes** ☐**No**

If yes, describe these activities:
Click or tap here to enter text.

4) **Is groundwater known to be contaminated by** ☐ **onsite** ☐ **offsite** ☐ **both or** ☐**unknown sources? Describe source(s) and** :
Click or tap here to enter text.

5) **What is the direction of groundwater flow at the Brownfields Property?**
Click or tap here to enter text.

6) **In the event that groundwater is encountered during redevelopment activities (even if not checked above), list activities for the contingent management of groundwater (e.g., dewatering of groundwater from excavations or foundations, containerizing, offsite disposal, discharge to sanitary sewer, NPDES permit, or sampling procedures).**

☐ **Accumulated water will be allowed to evaporate/infiltrate to the extent time for dissipation does not disrupt the construction schedule. Should the time needed for natural dissipation of accumulated water be deemed inadequate, the water will be tested and disposed of off-site (if impacted), or tested for the presence of VOCs, SVOCs and RCRA metals (and any other site contaminants of concern) and discharged to the stormwater system (if not impacted above DEQ surface water standards) in accordance with applicable municipal approvals and State regulations for erosion control and construction stormwater control.**

If additional water management details are needed, provide here:
Click or tap here to enter text.

7) **Are monitoring wells currently present on the Brownfields Property?**.....☐**Yes** ☐**No**
<u>If yes</u>, are any monitoring wells routinely monitored through DEQ or other agencies?.....☐**Yes** ☐**No**
<u>If yes, state agency:</u>
Click or tap here to enter text.

8) **Check methods to be utilized in the management of known and previously unidentified wells.**

☐ **Abandonment of site monitoring wells in accordance with all applicable regulations. It is the Brownfields Redevelopment Section's intent to allow proper abandonment of well(s) as specified in the Brownfields Agreement, except if required for active monitoring through another section of DEQ or the EPA.**

☐ **If not abandoned as outlined above, location of existing monitoring wells marked and protected from disturbance.**

☐ **Newly identified monitoring wells shall be marked and protected from further disturbance until notification to DEQ Brownfields can be made and approval for abandonment is given.**

Provide additional details as needed: Click or tap here to enter text.

<u>The disturbance of existing site monitoring wells without approval by DEQ is not permissible. If monitoring wells are damaged and/or destroyed, DEQ may require that the PD be responsible for replacement of the well(s).</u>

SECTION 4.3: SURFACE WATER

1) **Is surface water present at the property? ☐ Yes ☐ No**
2) **If yes, attach a map showing the location of surface water at the Brownfields Property**
3) **Is surface water at the property known to be contaminated? ☐ Yes ☐ No ☐ Unknown**
4) **Will workers or the public be in contact with surface water during planned redevelopment activities or as part of the final redevelopment? ☐ Yes ☐ No**
5) **In the event that contaminated surface water is encountered during redevelopment activities, or clean surface water enters open excavations, list activities for the management of such events (e.g. flooding, contaminated surface water run-off, stormwater impacts).**

Click or tap here to enter text.

SECTION 4.4: SEDIMENT

1) **Are sediment sources present on the property? ☐ Yes ☐ No**
2) **If yes, is sediment at the property known to be contaminated? ☐ Yes ☐ No ☐ Unknown**
3) **Will workers or the public be in contact with sediment during planned redevelopment activities? ☐ Yes ☐ No**
4) **Attach a map showing the location of known contaminated sediment at the property.**
5) **If a surface water feature is present and in the event that contaminated sediment is encountered during redevelopment activities, list activities for management of such events (stream bed disturbance):**

Click or tap here to enter text.

SECTION 4.5: SOIL VAPOR

1) Do concentrations of volatile organic compounds at the Brownfields property exceed the vapor intrusion screening levels (current version) in the following media:

	Groundwater	Exterior Soil Vapor	Sub-Slab Soil Vapor
Residential	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown
Commercial	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown	☐ Yes ☐ No ☐ Unknown

2) Attach a map showing the locations of all soil vapor samples including any soil vapor contaminants that exceeds screening levels and overlays planned site development features.

3) If applicable, at what depth(s) is exterior soil vapor known to be contaminated?

Click or tap here to enter text.

4) If applicable, at what depth(s) is sub-slab soil vapor known to be contaminated?

☐**0-6 inches** ☐**Other, describe**:
Click or tap here to enter text.

5) Will workers encounter contaminated exterior or sub-slab soil vapor during planned redevelopment activities? ☐ Yes ☐ No ☐ Unknown

In the event that apparent contaminated soil vapor is encountered (based on elevated PID readings, unusual odors, etc.) during redevelopment activities (trenches, manways, basements or other subsurface work,) list activities for management of such contact, INCLUDING notification to DEQ within 48 hours of identification of the issue for determination of additional requirements:
Click or tap here to enter text.

SECTION 4.6: INDOOR AIR

1) Are indoor air data available for the Brownfields Property? ☐ Yes ☐ No

2) If applicable, attach a map showing the location(s) where indoor air contaminants exceed site screening levels.

3) If the structures where indoor air has been documented to exceed risk-based screening levels will not be demolished as part of redevelopment activities, will workers encounter contaminated indoor air during planned redevelopment activities? ☐ Yes ☐ No ☐ Unknown ☐ N/A

☐ **If not, include rationale here**: Click or tap here to enter text.

4) In the event that contaminated indoor air is encountered during redevelopment activities, list activities for management of such contact:

Click or tap here to enter text.

SECTION 5: VAPOR INTRUSION MITIGATION SYSTEM

☐ **The PD/Owner acknowledges that approval of this EMP does not constitute compliance with any vapor intrusion mitigation land use restrictions or requirements of the recorded or draft Brownfields Agreement and that separate approval of mitigation measures will be required. DEQ BRS shall be consulted prior to occupancy of the site building.**

1) **Based on the most recent version of the *Minimum Mitigation and Sampling Requirements for Reuse,* is a vapor intrusion mitigation system (VIMS) proposed for this Period of Active Construction for the Brownfields Property?**
   ☐ **Yes** ☐ **No** ☐ **Unknown**

   If Yes, provide date the VIMS Plan was or will be submitted.
   Click or tap here to enter text.

   ☐ **If not or unknown**, include rationale here as well as plans for pre- and post-occupancy sampling, as necessary based on the *Minimum Mitigation and Sampling Requirements* for Reuse: Click or tap here to enter text.

   VIMS Plan shall be signed and sealed by a NC Professional Engineer and follow the DEQ Brownfields Redevelopment Section's most recent version of the *Vapor Intrusion Mitigation System Design Submittal Requirements*.
   https://www.deq.nc.gov/waste-management/dwm/bf/website/pdfs/bf-minimum-mitigation-and-sampling-requirements-reusemay2024pdf/download?attachment

SECTION 6: CONTINGENCY PLAN

In this section, provide actions that will be taken to identify or manage unknown potential new sources of contamination. During redevelopment activities, it is not uncommon that unknown tanks, drums, fuel lines, landfills, or other waste materials are encountered. Notification to DEQ Brownfields Project Manager, UST Section, Fire Department, and/or other officials, as necessary and appropriate, is required when new potential source(s) of contamination are discovered. These Notification Requirements were outlined on Page 1 of this EMP.

Should potentially impacted materials be identified that are inconsistent with known site impacts based on type and/or location, the DEQ Brownfields Project Manager will be notified, and a scope of work for sampling will be prepared based on the EMP requirements and site-specific factors. Samples will generally be collected to document the location of the potential impacts.

Check the following chemical analysis that are to be conducted on newly identified releases:

☐ **Minimum Sample Requirements:** Volatile organic compounds (VOCs) by EPA Method 8260; Semi-volatile organic compounds (SVOCs) by EPA Method 8270; and Metals RCRA List; and Hexavalent Chromium by EPA Method 6020/7199

☐ **Pesticides:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **PCBs:** Specify Analytical Method Number(s):
Click or tap here to enter text.

☐ **Other Constituents & Analytical Method(s)** (e.g. Herbicides)
If field observations indicate the need for additional analyses, they should be conducted, even if not listed here.
Click or tap here to enter text.

Provide details on the proposed methods of managing the following commonly encountered issues during redevelopment of Brownfields Properties.

Underground Storage Tanks – Note that UST Section guidelines must be followed for sample frequency during UST closure. Unless damage to onsite structures remaining as part of redevelopment would occur, USTs shall be removed from the Brownfields Property:
Click or tap here to enter text.

Sub-Grade Feature/Pit:
Click or tap here to enter text.

Buried Waste Material – Note that if buried waste, non-native fill, or any obviously filled materials is encountered, the DEQ Brownfields Redevelopment Section must be notified to determine if investigation of landfill gases is required:
Click or tap here to enter text.

Re-Use of Impacted Soils Onsite:
If previously unknown, impacted soil is identified onsite, management onsite can be considered after the project team provides the necessary information, outlined in Section 4.1.A above for Brownfields Project Manager approval prior to final placement onsite. Add any additional considerations below.
Click or tap here to enter text.

Other
If other potential contingency plans are pertinent, provide other details or scenarios as needed below:
Click or tap here to enter text.

SECTION 7: POST-REDEVELOPMENT REPORTING

☐ Check this box to acknowledge that a Redevelopment Summary Report will be required for the project. If the project duration is longer than one year, an annual update is required and will be due by January 31 of each year, or 30 days after each one-year anniversary of the effective date of this EMP (as agreed upon with the Project Manager), depending on what is specified in the site-specific Brownfields Agreement. These reports will be required for as long as physical redevelopment of the Brownfields Property continues, except that the final Redevelopment Summary Report will be submitted within 90 days after completion of redevelopment. Based on the estimated construction schedule, the first Redevelopment Summary Report is anticipated to be submitted on Click or tap to enter a date.

The Redevelopment Summary Report shall include environment-related activities since the last report, with a summary and drawings, consistent with the most recent version of the *BRS Redevelopment Summary Report Guidance*.

1) actions taken on the Brownfields Property;

2) soil grading and cut and fill actions;

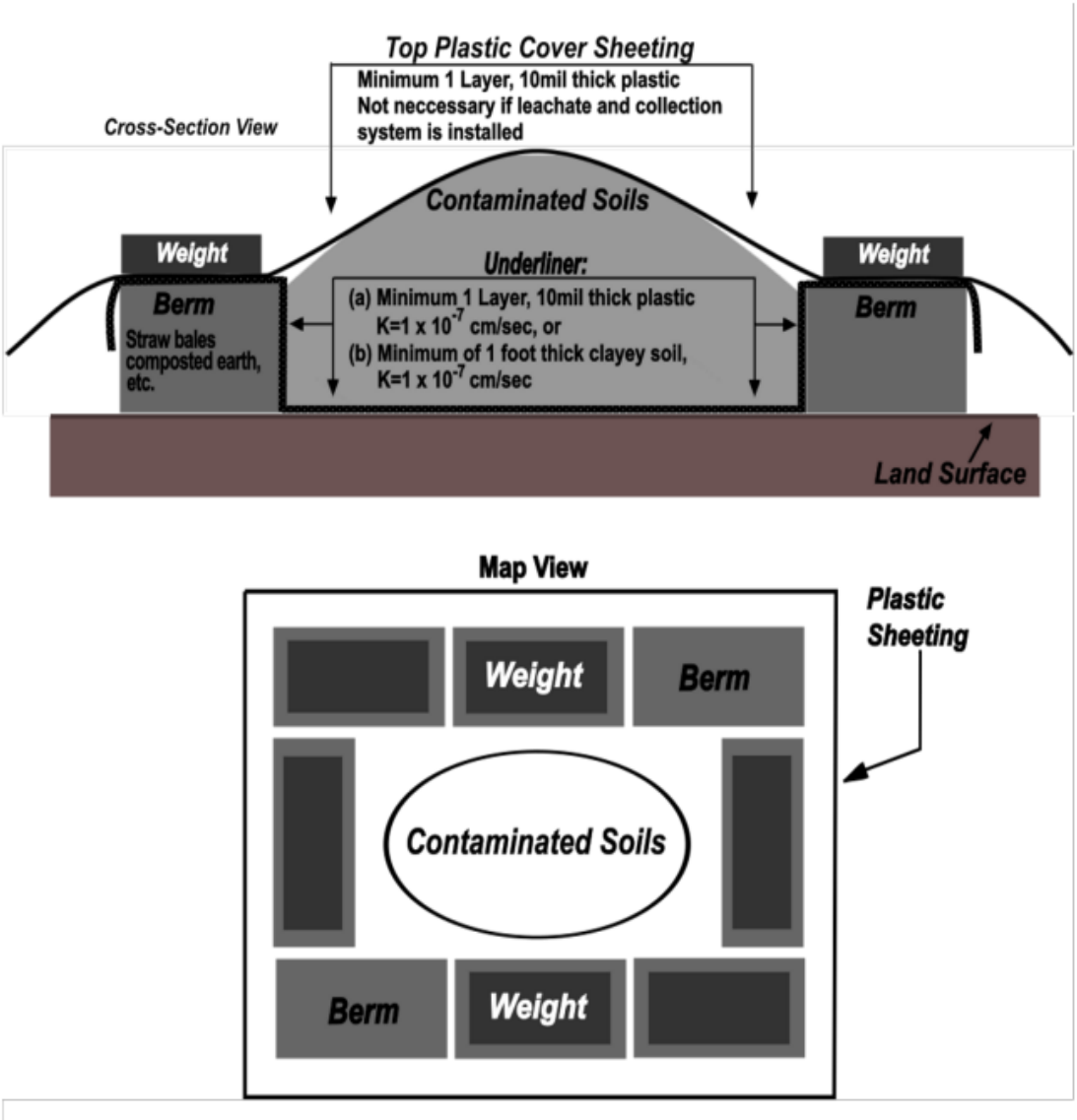
3) methodology(ies) employed for filed screening, sampling and laboratory analysis of environmental media;

4) stockpiling, containerizing, decontaminating, treating, handling, laboratory analysis and ultimate disposition of any soil, groundwater or other materials suspected or confirmed to be contaminated with regulated substances; and

5) removal of any contaminated soil, water or other contaminated materials (for example, concrete, demolition debris) from the Brownfields Property (copies of all legally required manifests shall be included).

☐ Check box to acknowledge consent to provide a NC licensed P.G. or P.E. sealed, Redevelopment Summary Report.

Figure 1
Diagram for Temporary Containment of Impacted or Potentially Impacted Soils



Notes:

1) **Figure from the UST Section *Guidelines for the Ex Situ Petroleum Contaminated Soil Remediation* (March 10, 2023)**
2) **If soil is, or is suspected to be listed or characteristically hazardous waste, it must be containerized as required by Hazardous Waste regulations. More specific guidance and regulatory references are available in the *Guidelines for Beneficial Reuse of Excess Soils from Regulated Properties* and on the Hazardous Waste Section Website.**