# NORTH CAROLINA BROWNFIELDS PROGRAM ENVIRONMENTAL MANAGEMENT PLAN

This form is to be used to prepare an Environmental Management Plan (EMP) for projects in the North Carolina Brownfields Program at the direction of a Brownfields project manager.

The EMP is a typical requirement of a Brownfields Agreement (BFA). Its purpose is to clarify actions to be taken during the demolition and construction at Brownfields properties in an effort to avoid delays in the event of the discovery of new contamination sources or other environmental conditions. 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 site. As much detail as possible should be included in the EMP, including contingency planning for unknowns. Consult your project manager if you have questions.

Prospective Developers and/or their consultants must complete and submit this form and all pertinent attachments, see checklist below, to their Brownfields project manager prior to any earthmoving or other development-related activities that have the potential to disturb soil at the Brownfields Property, including demolition. For the resultant EMP to be valid for use, it must be completed, reviewed by the program, signed by all parties working on the project, and approved by the Brownfields project manager. Failure to comply with the requirements of the EMP could jeopardize project eligibility, or in the event of a completed agreement, be cause for a reopener

So that the EMP provides value in protecting brownfields eligibility and public health, the preparer shall ensure that the following steps have been completed prior to submitting the EMP for review. Any EMP prepared without completing these steps is premature.

Site sampling and assessment that meets Brownfields’ objectives is complete and has been reviewed and approved by the Brownfields Project Manager.

Specific redevelopment plans, even if conceptual, have been developed for the project, submitted and reviewed by the Brownfields Project Manager.

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

A set of redevelopment plans, including architectural/engineering plans, if available; if not conceptual plans may suffice if updated when detailed plans are drafted.

A figure overlaying redevelopment plans on a map of the extent of contamination for each media.

Site grading plans that include a cut and fill analysis.

A figure showing the proposed location and depth of impacted soil that would remain on site after construction grading.

Any necessary permits for redevelopment (i.e. demolition, etc.).

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

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

Figures with the sampling locations and contamination extents for each impacted media applicable to the proposed redevelopment.

A full final grade sampling and analysis plan, if the redevelopment plan is final.

If known, information about each proposed potential borrow soil source, such as aerial photos, historic site maps, historic Sanborn maps, a site history, necessary for brownfields approval.

Information and, analytical data if required, for quarries, or other borrow sources, detailing the type of material proposed for importation to the Brownfields Property.

A work plan for the sampling and analysis of soil to be brought onto the Brownfields Property. Refer to Issue Resolution 15 in Brownfields Program Guidelines.

A map of the Brownfields Property showing the location of soils proposed for export and sampling data from those areas.

If a Vapor Mitigation System is required by the Brownfields Program, the Vapor Intrusion Mitigation System (VIMS) plan will be signed and sealed by a NC Professional Engineer. The VIMS Plan may also be submitted under separate cover.

## GENERAL INFORMATION

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| **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.

**Is Brownfields Property Subject to RCRA Permit?**....................... **Yes  No**

**If yes enter Permit No.:** Click or tap here to enter text.

**Is Brownfields Property Subject to a Solid Waste Permit**….…….. **Yes  No**

**If yes, enter Permit No.:** Click or tap here to enter text.

## COMMUNICATIONS

**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. Additionally, a copy of the EMP shall be maintained at the Brownfields Property during redevelopment activities. 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.

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| --- | --- |
| **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.

**Contractor for PD:** Click or tap here to enter text.

**Contact Person:** Click or tap here to enter text.

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| **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.

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| **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 Program Project Manager:** Click or tap here to enter text.

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| **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):**

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| Click or tap here to enter text. |

## NOTIFICATIONS TO THE BROWNFIELDS PROGRAM

Written advance Notification Times to 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

Construction or 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

Installation of mitigation systems:………………………….………………….……….. 10 days Prior

Other notifications as required by local, state or federal agencies to implement redevelopment activities: (as applicable): ……………………….…………………………………………..… Within 30 days

## REDEVELOPMENT PLANS

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

**Residential Recreational Institutional Commercial Office Retail Industrial**

**Other specify:**

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| Click or tap here to enter text. |

1. **Check the following activities that will be conducted prior to commencing earth‐moving activities at the site:**

**Review of historic maps (Sanborn Maps, facility maps)**

**Conducting geophysical surveys to evaluate the location of suspect UST, fuel lines, utility lines, etc.**

**Interviews with employees/former employees/facility managers/neighbors**

1. **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:**

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| Click or tap here to enter text. |

1. **Do plans include demolition of structure(s)?:**

**Yes  No  Unknown**

**If yes**, please 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, please provide a copy of your demolition permit.

1. **Are sediment and erosion control measures required by federal, state, or local regulations?**

**Yes  No  Unknown**

**If yes**, please check here to confirm that demolition will be conducted in accordance with applicable legal requirements. If soil disturbance is necessary to install sediment and erosion control measures, they may not begin until this EMP is approved.

1. **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

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

* 1. **Anticipated duration (specify activities during each phase):**

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| Click or tap here to enter text. |

* 1. **Additional phases planned?  Yes  No**

**If yes,** specify the start date and/or activities if known**:**

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

**Planned Activity:**

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| Click or tap here to enter text. |

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

**Planned Activity:**

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| Click or tap here to enter text. |

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

**Planned Activity:**

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| Click or tap here to enter text. |

* 1. **Provide the planned date of occupancy for new buildings:** Click or tap to enter a date.

## CONTAMINATED MEDIA

1. Contaminated Media on the Brownfields Property

Part 1. Soil:……………………………………….…………….  Yes  No  Suspected

Part 2. Groundwater:.……………………….……..…….  Yes  No  Suspected

Part 3. Surface Water:.……………...……..……………  Yes  No  Suspected

Part 4. Sediment:.……………...……..……………………  Yes  No  Suspected

Part 5. Soil Vapor:…..…………...……..………………….  Yes  No  Suspected

Part 6. Sub‐Slab Soil Vapor:……...……..……………..  Yes  No  Suspected

Part 7. Indoor Air:...……..………………………………….  Yes  No  Suspected

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

### PART 1. Soil – Please fill out the information 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 showing contaminated soil and groundwater locations.

1. **Known or suspected contaminants in soil (list general groups of contaminants)**:

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| --- |
| Click or tap here to enter text. |

1. **Depth of known or suspected contaminants (feet):**

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| --- |
| Click or tap here to enter text. |

1. **Area of soil disturbed by redevelopment (square feet):**

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| --- |
| Click or tap here to enter text. |

1. **Depths of soil to be excavated (feet):**

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| --- |
| Click or tap here to enter text. |

1. **Estimated volume of soil (cubic yards) to be excavated (attach grading plan):**

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| --- |
| Click or tap here to enter text. |

1. **Estimated volume of excavated soil (cubic yards) anticipated to be impacted by contaminants:**

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| Click or tap here to enter text. |

1. **Estimated volume of contaminated soil expected to be disposed of offsite, if applicable:**

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| Click or tap here to enter text. |

#### Part 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, please provide a grading plan that clearly illustrates areas of cut and fill (approximate areas & volumes are acceptable, if only preliminary data available).**

1. **HAZARDOUS WASTE DETERMINATION:**
2. **Does the 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)**.

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| 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**

1. 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 ON SITE AND MUST BE DISPOSED OF IN ACCORDANCE WITH DEQ HAZARDOUS WASTE SECTION RULES AND REGULATIONS.
2. **Does the soil contain a CHARACTERISTIC WASTE?**.................................... **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)

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| Click or tap here to enter text. |

**If no,** explain rationale:

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| Click or tap here to enter text. |

1. NOTE: IF SOIL MEETS THE DEFINITION OF A CHARACTERISTIC HAZARDOUS WASTE, THE SOIL MAY NOT BE RE‐USED ON SITE 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 (For Brownfields Properties Only)**

**Site‐specific risk‐based cleanup level. Please provide details of methods used for determination/explanation.**

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| Click or tap here to enter text. |

**Additional comments**:

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| Click or tap here to enter text. |

1. **If known impacted soil is proposed to be reused within the Brownfields Property Boundary, please check the measures that will be utilized to ensure safe placement and documentation of same. Please attach a proposed location diagram/site map.**

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

**Provide documentation of final location, thickness and depth of relocated soil on site map to Brownfields Project Manager once known**

**Geotextile to mark depth of fill material.**

**Provide description of material**:

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| Click or tap here to enter text. |

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

**Describe cap or fill:**

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| 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. Please provide a description of the measure**:

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| Click or tap here to enter text. |

1. **Please describe the following action(s) to be taken during and following excavation and management of site soils:**

**Management of fugitive dust from site**

**Yes, describe the method will include**:

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| Click or tap here to enter text. |

**No, explain rationale**:

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| Click or tap here to enter text. |

**Field Screening of site soil**

**Yes, describe the field screening method, frequency of field screening, person conducting field screening**:

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| Click or tap here to enter text. |

**No, explain rationale:**

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| Click or tap here to enter text. |

**Soil Sample Collection**

**Yes, describe the sampling method (e.g., in‐situ grab, composite, stockpile, etc.):**

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| Click or tap here to enter text. |

**No, explain rationale**:

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| Click or tap here to enter text. |

**If soil samples are collected for analysis, please check the applicable chemical analytes:**

**Volatile organic compounds (VOCs) by EPA Method 8260**

**Semi‐volatile organic compounds (SVOCs) by EPA Method 8270**

**Metals RCRA List (8)** (arsenic, barium, cadmium, chromium, mercury, lead, selenium and silver): Specify Analytical Method Number(s):

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| Click or tap here to enter text. |

**Pesticides:** Specify Analytical Method Number(s):

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| Click or tap here to enter text. |

**PCBs:** Specify Analytical Method Number(s):

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| Click or tap here to enter text. |

**Other Constituents & Respective Analytical Method(s)** (i.e. Hexavalent Chromium, Herbicides, etc.): Specify Analytical Method Number(s):

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| Click or tap here to enter text. |

**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:**

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| Click or tap here to enter text. |

**Final grade sampling of exposed native soil (i.e., soil that will not be under buildings or permanent hardscape).** Select chemical analyses for final grade samples with check boxes below (Check all that apply):

**Volatile organic compounds (VOCs) by EPA Method 8260**

**Semi‐volatile organic compounds (SVOCs) by EPA Method 8270**

**Metals RCRA List (8)** (arsenic, barium, cadmium, chromium, mercury, lead, selenium and silver): **Specify Analytical Method Number(s):**

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| Click or tap here to enter text. |

**Pesticides: Specify Analytical Method Number(s):**

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| Click or tap here to enter text. |

**PCBs: Specify Analytical Method Number(s):**

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| Click or tap here to enter text. |

**Other Constituents & Respective Analytical Method(s)** **(i.e. Hexavalent Chromium, Herbicides, etc.):**

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| Click or tap here to enter text. |

**Please provide a scope of work for final grade sampling, including a diagram of soil sampling locations, number of samples to be collected, and brief sampling methodology. 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. Alternatively, a work plan for final grade sampling may be submitted under separate cover.**

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| Click or tap here to enter text. |

***If final grade sampling was NOT selected please explain rationale:***

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| Click or tap here to enter text. |

#### Part 1.B. IMPORTED FILL SOIL

**NO SOIL MAY BE BROUGHT ONTO THE BROWNFIELDS PROPERTY WITHOUT PRIOR APPROVAL FROM THE BROWNFIELDS PROGRAM. 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 Program), will safeguard the liability protections provided by the brownfields agreement and is in the best interest of the prospective developer/property owner.”**

Requirements for importing fill:

1. **Will fill soil be imported to the site?**................................................ **Yes  No  Unknown**
2. **If yes, what is the estimated volume of fill soil to be imported?**

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| Click or tap here to enter text. |

1. **If yes, what is the anticipated depth that fill soil will be placed at the property? (*If a range of depths, please list the range*.)**

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| Click or tap here to enter text. |

1. **Provide the source of fill, including: location, site history, nearby environmental concerns, etc. Attach aerial photos, maps, historic Sanborn maps and a borrow source site history:**

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| Click or tap here to enter text. |

1. **PRIOR TO ITS PLACEMENT AT THE BROWNFIELDS PROPERTY, provide a plan to analyze fill soil to demonstrate that it meets acceptable standards applicable to the site and can be approved for use at the Brownfields property.**

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| Click or tap here to enter text. |

1. **Please check the applicable chemical analytes for fill soil samples. (Check all that apply):**

**Volatile organic compounds (VOCs) by EPA Method 8260**

**Semi‐volatile organic compounds (SVOCs) by EPA Method 8270**

**Metals RCRA List (8)** (arsenic, barium, cadmium, chromium, mercury, lead, selenium and silver): **Specify Analytical Method Number(s):**

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| Click or tap here to enter text. |

**Pesticides: Specify Analytical Method Number(s):**

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| Click or tap here to enter text. |

**PCBs: Specify Analytical Method Number(s):**

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| Click or tap here to enter text. |

**Other Constituents & Respective Analytical Method(s)** **(i.e. Hexavalent Chromium, Herbicides, etc.):**

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| Click or tap here to enter text. |

1. The scope of work for import fill sampling may be provided below or in a Work Plan submitted separately for DEQ review and approval. Attach specific location maps for in-situ borrow sites. If using a quarry, provide information on the type of material to be brought onto the Brownfields Property.

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| Click or tap here to enter text. |

#### Part 1.C. EXPORTED SOIL

NO SOIL MAY LEAVE THE BROWNFIELDS PROPERTY WITHOUT APPROVAL FROM THE BROWNFIELDS PROGRAM. FAILURE TO OBTAIN APPROVAL MAY VIOLATE A BROWNFIELDS AGREEMENT CAUSING A REOPENER OR JEOPARDIZING ELIGIBILITY IN THE PROGRAM, ENDANGERING LIABILITY PROTECTIONS AND MAKING SAID ACTION POSSIBLY SUBJECT TO ENFORCEMENT. JUSTIFICATIONS PROVIDED BELOW MUST BE APPROVED BY THE PROGRAM IN WRITING PRIOR TO COMPLETING TRANSPORT ACTIVITIES. Please refer to Brownfields IR 15 for additional details.

1. **If export from a Brownfields Property is anticipated, please provide details regarding the proposed export actions. Volume of exported soil, depths, location from which soil will be excavated on site, related sampling results, etc. Provide a site map with locations of export and sampling results included.**

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| Click or tap here to enter text. |

1. **To what type of facility will the export Brownfields soil be sent?**

**Subtitle D/Municipal Solid Waste Landfill** (analytical program to be determined by landfill)

**Permitted but Unlined Landfill** (i.e. LCID, C&D, etc.) Analytical program to be determined by the accepting Landfill;

**Landfarm or other treatment facility**

**Use as fill at another suitable Brownfields Property –** determination that a

site is suitable will require, at a minimum, that similar concentrations of the same or similar contaminants already exist at both sites, use of impacted soil will not increase the potential for risk to human health and the environment at the receiving Brownfields property, and that a record of the acceptance of such soil from the property owner of the receiving site is provided to Brownfields. Please provide additional details below.

**Use as Beneficial Fill off-site at a non-Brownfields Property -** Please provide documentation of approval from the property owner for receipt of fill material. This will also require approval by the DEQ Solid Waste Section. Additional information is provided in IR 15. Please provide additional details below.

1. Additional Details: (if transfer of soil to another property is requested above, please provide details related to the proposed plans).

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| Click or tap here to enter text. |

#### Part 1.D. MANAGEMENT OF UTILITY TRENCHES

**Install liner between native impacted soils and base of utility trench before filling with clean fill (Preferred)**

**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.**

**Evaluate whether necessary to install barriers in conduits to prevent soil vapor transport, and/or degradation of conduit materials due to direct impact with contaminants?**

If yes, provide specifications on barrier materials:

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| Click or tap here to enter text. |

If no, include rationale here:

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| Click or tap here to enter text. |

**Other comments regarding managing impacted soil in utility trenches:**

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| Click or tap here to enter text. |

### PART 2. GROUNDWATER – Please fill out the information below.

1. **What is the depth to groundwater at the Brownfields Property?**

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| Click or tap here to enter text. |

1. Is groundwater known to be contaminated by onsite offsite both or unknown sources? Describe source(s):

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| Click or tap here to enter text. |

1. **What is the direction of groundwater flow at the Brownfields Property?**

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| Click or tap here to enter text. |

1. Will groundwater likely be encountered during planned redevelopment activities?

Yes No

If yes, describe these activities:

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| Click or tap here to enter text. |

Regardless of the answer; in the event that contaminated groundwater is encountered during redevelopment activities (even if no is checked above), list activities for 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).

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| Click or tap here to enter text. |

1. Are monitoring wells currently present on the Brownfields Property?.................Yes No

If yes, are any monitoring wells routinely monitored through DEQ or other agencies?..................................................................................................................Yes No

1. Please 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 Program’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.

Location of existing monitoring wells marked

Existing monitoring wells protected from disturbance

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

1. Please provide additional details as needed:

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| Click or tap here to enter text. |

Please note, 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.

### PART 3. SURFACE WATER -Please fill out the information below.

1. Is surface water present at the property?  Yes  No
2. 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
4. Will workers or the public be in contact with surface water during planned redevelopment activities?  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 management of such events (e.g. flooding, contaminated surface water run‐off, stormwater impacts):

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| Click or tap here to enter text. |

### PART 4. SEDIMENT – Please fill out the information below.

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

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| Click or tap here to enter text. |

### PART 5. SOIL VAPOR – Please fill out the information below.

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

IHSB Residential Screening Levels:

Soil Vapor:……….. Yes  No  Unknown

Groundwater:.…. Yes  No  Unknown

IHSB Industrial/Commercial Screening Levels:

Soil Vapor:……….. Yes  No  Unknown

Groundwater:….. Yes  No  Unknown

1. Attach a map showing the locations of soil vapor contaminants that exceed site screening levels.
2. If applicable, at what depth(s) is soil vapor known to be contaminated?

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| Click or tap here to enter text. |

1. Will workers encounter contaminated soil vapor during planned redevelopment activities?

**Yes  No  Unknown**

1. In the event that contaminated soil vapor is encountered during redevelopment activities (trenches, manways, basements or other subsurface work,) list activities for management of such contact:

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| Click or tap here to enter text. |

### PART 6. SUB‐SLAB SOIL VAPOR – Please fill out the information below if existing buildings or foundations will be retained in the redevelopment.

1. Are sub‐slab soil vapor data available for the Brownfields Property?  Yes  No  Unknown
2. If data indicate that sub‐slab soil vapor concentrations exceed screening levels, attach a map showing the location of these exceedances.
3. At what depth(s) is sub‐slab soil vapor known to be contaminated? 0‐6 inches Other, please describe:

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| --- |
| Click or tap here to enter text. |

1. Will workers encounter contaminated sub‐slab soil vapor during planned redevelopment activities?  Yes  No  Unknown
2. In the event that contaminated soil vapor is encountered during redevelopment activities, list activities for management of such contact

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| Click or tap here to enter text. |

### PART 7. INDOOR AIR – Please fill out the information below.

1. Are indoor air data available for the Brownfields Property?  Yes  No  Unknown
2. 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
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. |

## VAPOR INTRUSION MITIGATION SYSTEM – Please fill out the information below.

Is a vapor intrusion mitigation system (VIMS) proposed for this Brownfields Property?

**Yes  No  Unknown**

**If yes,  VIMS Plan Attached or**  **VIMS Plan to be submitted separately**

**If submitted separately provide date:**

|  |
| --- |
| Click or tap here to enter text. |

VIMS Plan shall be signed and sealed by a NC Professional Engineer

If no, please provide a brief rationale as to why no vapor mitigation plan is warranted:

|  |
| --- |
| Click or tap here to enter text. |

## CONTINGENCY PLAN – encountering unknown tanks, drums, or other waste materials

In this section please 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, the DEQ Brownfields Project Manager will be notified and a sampling plan 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:

**Volatile organic compounds (VOCs) by EPA Method 8260**

**Semi‐volatile organic compounds (SVOCs) by EPA Method 8270**

**Metals RCRA List (8)** (arsenic, barium, cadmium, chromium, mercury, lead, selenium and silver)

|  |
| --- |
| Click or tap here to enter text. |

**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)** (i.e. Hexavalent Chromium, Herbicides, etc.)

**Please note, 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. |

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

|  |
| --- |
| Click or tap here to enter text. |

Underground Storage Tanks:

|  |
| --- |
| Click or tap here to enter text. |

**Sub-Grade Feature/Pit:**

|  |
| --- |
| Click or tap here to enter text. |

**Buried Waste Material:**

|  |
| --- |
| Click or tap here to enter text. |

**Re-Use of Impacted Soils On-Site:**

|  |
| --- |
| Click or tap here to enter text. |

**If unknown, impacted soil is identified on-site, management on-site can be considered after the project team provides the necessary information, outlined in Part 1.A. Item 11, for Brownfields Project Manager approval prior to final placement on-site.**

If other potential contingency plans are pertinent, please provide other details or scenarios as needed below:

|  |
| --- |
| Click or tap here to enter text. |

## 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). 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, that describes:

* 1. actions taken on the Brownfields Property;
  2. soil grading and cut and fill actions;
  3. methodology(ies) employed for field 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 in compliance with the site’s Brownfields Agreement.

## 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. |  |

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

