

DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA

Phase II Environmental Site Assessment Guidelines

A. Introduction

A Phase II Environmental Site Assessment (ESA) is an investigation of a parcel or property to evaluate the presence of hazardous materials and petroleum products at or within the subsurface of the investigated sites. The Georgia Department of Transportation's (GDOT) Office of Materials and Testing (OMAT) may conduct a Phase II ESA prior to acquisition of any property which has been identified as a Recognized Environmental Condition (REC) within the project limits from the Phase I ESA. A REC typically has the potential for contamination from Hazardous Waste (HW) or an operational or abandoned Underground Storage Tank (UST) within the existing or proposed right-of-way. A consultant who is prequalified in Area Class 6.05 – *Hazardous Waste Site Assessment Studies*, may also be contracted to perform the work. A Phase II ESA should be completed for all identified REC sites upon establishing the proposed right-of-way limits. Unless otherwise approved by OMAT, all Phase II ESA investigations shall follow the scope of the latest adopted version of the ASTM E1903 – *Standard Practice for Phase II Environmental Site Assessment Process*.

The Phase II ESA investigation by OMAT is generally a limited version of the ASTM standard that is completed by the consultants. Please refer to Policy 5525-1 *Environmental Site Assessments Procedure* for additional Phase II ESA information as well as the responsibilities of the various offices involved in the Phase II ESA process.

B. Field Investigation

1. A field investigation must be performed at REC sites which were identified during the Phase I ESA. These sites must be thoroughly investigated to identify all environmental impacts before any right-of-way is purchased or construction activities commence.
2. Property owners should be notified, and utilities located prior to start of field investigation. If applicable, property access letters must be sent out to property owners prior to any field investigation.
3. For proposed right-of-way acquisition at or adjacent to a REC site, including sites with a No Further Action (NFA) status from the Georgia Environmental Protection Division (GA EPD), drilling should be conducted in the proposed right-of-way as follows:
 - a. A maximum spacing of 100 feet between borings with a minimum of three (3) borings for right-of-way less than or equal to 500 feet.
 - b. A maximum spacing of 200 feet between borings with a minimum of four (4) borings for right-of-way greater than 500 feet but less than or equal to 1,000 feet.
 - c. A maximum spacing of 300 feet between borings with a minimum of five (5) borings for right-of-way greater than 1,000 feet.
4. If no proposed right-of-way acquisition is adjacent to a REC site, drilling should be conducted within the existing right-of-way as described in Section B (3) above.

5. All drilling should be conducted to a depth of 25 feet below ground surface or to refusal, whichever is less. If groundwater and/or surface water are encountered, samples should be taken and analyzed for environmental impacts. Please refer to Section B (11) below for additional information on soil and groundwater sampling.
6. For sites where no extensive excavations (greater than 5 feet) are proposed, shallow and/or hand auger borings may be conducted to ensure the safety of workers during construction. The depth and spacing of the borings should be coordinated with OMAT.
7. Soil samples should be screened at 5-foot intervals to a depth of 25 feet or refusal if above static groundwater level. All soil samples should be screened with a Photo-Ionization Detector (PID), Flame-Ionization Detector (FID) or other approved GAEPD method.
8. If impacts are visually detected or an odor is encountered, the soil sample should be collected and analyzed for further environmental impacts.
9. For all REC sites, the soil samples with the highest reading from the PID, FID, or other approved GAEPD method from a boring shall be analyzed.
10. In the case of a suspected non-volatile contaminant, the soil sample exhibiting discoloration, deleterious composition such as debris, slag, ash, etc. or other visual indicators shall be analyzed.
11. Soil and groundwater sample analytical protocol should be as follows:
 - a. For REC sites associated with gasoline and/or diesel sources only, samples should be analyzed for BTEX [Benzene, Toluene, Ethylbenzene and Xylene] and PAHs [Polynuclear Aromatic Hydrocarbons].
 - b. For all other REC and potential REC sites, samples should be analyzed for Volatile Organic Compounds (VOCs) and Semi Volatile Organic Compounds (SVOCs). Soil samples alone should also be tested for total Resource Conservation and Recovery Act (RCRA) 8 Metals. Each site should be individually considered and tested for other constituents such pesticides, herbicides, PCBs, etc. as necessary based on the findings of the Phase I ESA.
12. All sampling, written records and field notes shall be in general conformance with the guidelines in this document as well as the published field sampling procedures by the US Environmental Protection Agency (EPA), Region IV, for soil and groundwater which can be found at [EPA Field Sampling Procedures](#).
13. Samples should be transported to a certified environmental laboratory testing facility. The testing facility should be contacted for its requirements prior to sampling.

C. Report Preparation

1. Consultant reports should include a cover letter summarizing the investigation and the recommendations. Reports should be free of irrelevant information and each REC site or impacted property should not be grouped together, but rather discussed in separate sections. Additional recommendations by OMAT may be made based on the findings of the consultant's Phase II ESA report. Any recommendations made should be addressed during the final plan preparation.

2. Any UST system located on an investigated property or project limits must be documented in the report. Also, state whether the UST system is within or outside of the proposed right-of-way limits. Recommendations should be made for proper closure of any tanks within the proposed right-of-way by a qualified consultant. Recommendations should also be made for proper closure and disposal of UST systems that are believed to exist on site with unknown locations. Such systems are usually encountered during construction activities.
3. All reports should document the screening results and the extent of any releases. Releases that exceed the notification concentrations and requirements should be highlighted in the report.
4. The Federal Highway Administration (FHWA) has expressed its interests on the location of confirmed or suspected releases and monitoring wells. Therefore, the location of any monitoring wells should be identified and referenced in the report. Any proposed impacts to monitoring wells, remediation systems, or other items that are part of an ongoing Corrective Action Plan (CAP) must be coordinated with the GAEPD by OMAT, with the assistance of the Project Manager and the Office of Environmental Services (OES), if required.
5. If contamination is encountered, the following considerations should be taken when making recommendations.
 - a. Determine what effect the contaminants can have on construction of the roadway, including drainage pipes and structures.
 - b. If the contamination may require clean-up actions, determine what steps must be taken prior to construction and if roadway realignment may be necessary to avoid contaminated parcels.
 - c. Recommendations for GAEPD notifications and any corrective actions necessary for the compliance with the GAEPD rules and regulations should be included.
 - d. Recommendations should be included for the excavation and disposal of contaminated soils (if applicable) during construction at a permitted lined municipal solid waste landfill (Subtitle D) or HW landfill (Subtitle C), as appropriate.
 - e. In addition, note that the contractor shall implement the best possible engineering and management controls to ensure adequate protection of employee safety in accordance with Georgia's Rules for Hazardous Waste Management.
6. Additional guidance for Phase II ESA investigations can be found in the latest adopted version of the ASTM E1903.
7. Consultant reports should be promptly submitted upon completion to the GDOT Project Manager for transmittal to OMAT for review.
8. An acceptance letter is sent to the GDOT Project Manager for distribution – along with the accepted report – to the appropriate Offices. A copy of the acceptance letter is also transmitted to the District Engineer, Area Manager, Office of Right-Of-Way, Office of Environmental Services, the District Right-Of-Way Office, and the consultant who prepared the report.
9. Within 30 days of the acceptance of a consultant's Phase II ESA report, the consultant shall prepare the required notification documents and transmit to the GAEPD to inform them of the findings. This should be done for properties found to have contamination levels above the regulatory release notification as established by the GAEPD.