

Work Type Definition and Submittal Requirements

5.4 Contaminated Property Investigation

Work Type Definition

Pages 1- 3 detail the work type definition. In order to become *pre-qualified* for this work type, please see the “Work Type Submittal Requirements” on pages 4 through 6.

I. Description

Contaminated property investigation involves the investigation of current and proposed MnDOT right of way that is known or suspected to be impacted with pollutants, contaminants or hazardous wastes. The investigations are used to assist MnDOT in determining project alignments, design parameters, and reducing liability under Minn. Stat. 115B and 115C, and U.S.C. Title 42 Chapter 103, which will all help to avoid construction delays. This investigation work enables MnDOT to determine the magnitude and extent of contamination problems early in the project development process in order to avoid potential negative impacts to MnDOT employees, the public and the environment. In spite of the most comprehensive pre-project investigations, unexpected contaminated soil or waste or underground tanks may be encountered during construction. This work also provides support during emergency construction situations. This work type includes the following:

- A. Phase I Environmental Site Assessment.
- B. Phase II Drilling Investigation.
- C. Investigation Work Plans.
- D. Remedial/Corrective/Response Action Plans.
- E. Quality Assurance Project Plans (QAPP) and Sampling and Analysis Plans (SAP).
- F. Remedial/Corrective/Response Action Implementation Reports.
- G. Construction Monitoring Documentation Reports.
- H. Tank Removal Monitoring Reports/Excavation Report Worksheets.
- I. Limited Remedial/Response/Corrective Actions (such as contaminated drill cuttings disposal).
- J. Regulatory Assistance

II. Standards and Specifications

Standards and specifications required for a project under this work type must include the following:

- A. As directed by MnDOT, Phase I Environmental Site Assessments must be done either in general accordance, or in strict accordance, with *U. S. EPA All Appropriate Inquiries Final Rule, ASTM Practice E 1527-13* and/or the most recent Minnesota Pollution Control Agency (MPCA) and/or Minnesota Department of Agriculture (MDA) (regulatory agency) Program Guidance Document for Phase I work.
- B. All other reports must meet MnDOT requirements for content and layout and be in general accordance with MPCA, MDA, and Region V EPA requirements for content and layout.
- C. As directed by MnDOT the Phase II Investigation must be done either in general accordance, or in strict accordance with *Standard Practice for Environmental Site*

Work Type Definition and Submittal Requirements

5.4 Contaminated Property Investigation

Assessments: Phase II Environmental Site Assessment Process, ASTM E 1903-11 and/or the most recent regulatory guidance documents(s) for Phase II work.

III. Provided By MnDOT

Information to be supplied by MnDOT for a project may include the following:

- A. Project location, limits, geometric layouts and preliminary plans.
- B. Historic project information from previous MnDOT investigations.
- C. Right of Entry to private properties.

IV. Provided by Consultant

Deliverables to be supplied by the consultant for a project may include the following:

- A. Phase I Environmental Site Assessment Report
 - 1. Review state and federal regulatory agency records, local records, historic land use records, maps and air photos and current property condition.
 - 2. Identify and describe known and potential contamination problems on properties in the Phase I search area.
 - 3. Complete regulatory agency file reviews including spill, leak, MPCA Brownfield Programs, MDA AgVIC, Minnesota Environmental Response and Liability Act (MERLA), Resource Conservation and Recovery Act (RCRA) files and Region V EPA files.
 - 4. Determine the risk following MnDOT guidelines of low, medium and high, that a property is or could be contaminated based on the land use history of the property and surrounding area.
- B. Phase II/ Drilling/Remedial Investigation/Limited Site Investigation Report
 - 1. Prepare Investigation Work Plan.
 - 2. Complete and /or oversee environmental drilling and/or test pits and sampling (including, but not limited to: soil, groundwater, other media, and vapor.)
 - 3. Collect samples for environmental laboratory analysis (could have sediment samples from rivers, lakes, streams etc.).
 - 4. Determine magnitude and extent of soil, groundwater, vapor, and/or sediment contamination.
 - 5. Complete soil vapor risk assessment.
 - 6. Complete groundwater receptor survey.
 - 7. Evaluate natural attenuation.
 - 8. Complete groundwater modeling.
 - 9. Ensure that wells/borings are sealed in accordance with Minnesota Department of Health (MDH) standards.
 - 10. Photographs of relevant investigation details.
- C. Response/Corrective/Remedial Action Plan
 - 1. Analyze alternative response/corrective/remedial actions to mitigate contaminated soil, groundwater, other media and vapors.
 - 2. Recommend response/corrective/remedial actions.
 - 3. Design soil, groundwater, and soil vapor treatment systems.

Work Type Definition and Submittal Requirements

5.4 Contaminated Property Investigation

4. Implement Action Plan
- D. Quality Assurance Project Plans (QAPP) and Sampling and Analysis Plans (SAP)
 1. Complete analytical data validation in accordance with Region V EPA, MPCA, MDH, MDA guidelines.
- E. Response/Corrective/Remedial Action Implementation Report
 1. Document execution and completion of response/corrective/remedial actions.
- F. Tank Removal Monitoring Reports/Excavation Report Worksheets
 1. Monitor removal of above ground -and underground storage tanks to ensure the work is done in accordance with MnDOT requirements, regulatory agency and general industry standards.
 2. Collect soil and/or groundwater samples for laboratory analysis.
 3. Complete appropriate documentation as required.
- G. Waste Sampling Report
 1. Collect and analyze samples from various containers (such as tanks, drums, etc.), solid waste/debris piles, suspected contaminated soil and groundwater areas, and/or chemical spill areas.
 2. Complete waste characterization analysis and/or hazardous waste profiling for disposal purposes.
- H. Construction Monitoring Report
 1. Screen soil during excavation to separate contaminated from uncontaminated soil.
 2. Monitor soil handling, stockpiling, transport, and treatment/disposal procedures.
 3. Screen import soils for contamination and/or debris.
 4. Collect soil, groundwater, and/or sediment samples for laboratory analysis.
 5. Conduct on-site environmental monitoring.
- I. Limited Response/Corrective/Remedial Action
 1. Obtain all necessary permits and approvals for contaminated soil, groundwater, and/or sediment disposal and/or industrial waste treatment/disposal.
 2. Contract for and oversee the transport of contaminated soil to permitted sanitary or industrial landfill.
 3. Contract for and oversee the transport of contaminated groundwater to sanitary treatment facility.

The remainder of this page is intentionally left blank.

Work Type Definition and Submittal Requirements
5.4 Contaminated Property Investigation

Work Type Submittal Requirements

A consultant firm becomes pre-qualified based on the qualifications of the personnel that are employed by the firm.

Key Personnel Requirements	
Minimum Number of Staff:	At least three professional key personnel, with demonstrated experience in this work type. The three professional key personnel must be the key personnel that will be assigned to MnDOT projects. The main contact for the company that is assigned to MnDOT for delivery of this work type must be one of the approved key personnel. Clearly identify this main contact and include a contact phone number and email address. See below for additional information.
Professional Certification/ Licensure:	<p>All key personnel must have at minimum a four-year university of college degree in geology, hydrogeology, civil engineering, environmental engineering, environmental science, chemistry, or other related science AND a minimum of five (5) years of project experience.</p> <p>All work for this work type must be completed under the direct <u>supervision</u> of one of the approved key personnel with current registration as:</p> <ul style="list-style-type: none"> • Minnesota Board Licensed Professional Geologist or • Minnesota Board Licensed Professional Civil Engineer <p align="center"><u><i>The remainder of this page is intentionally left blank.</i></u></p>

Work Type Definition and Submittal Requirements
5.4 Contaminated Property Investigation

Work Type Submittal Requirements*	
<p>Resume and Relevant Project Experience Form (Form PQ1)</p> <p><i>Submit in Word format</i></p>	<p>A. Complete Parts 1, 1A, 2 and 3 of Form PQ1.</p> <p><u>Part 1:</u> Fill out general information and names of personnel.</p> <p><u>Part 1A:</u> For each personnel submitted:</p> <ul style="list-style-type: none"> • Demonstrate a minimum of five (5) years professional experience in the activities associated with this work type. • Provide a total of five (5) project examples that they have personally worked on: <ul style="list-style-type: none"> <input type="checkbox"/> 3 projects involving non-petroleum chemicals: brownfield redevelopment (non-petroleum), site investigation, site cleanup, etc; and <input type="checkbox"/> 2 projects involving petroleum chemicals: brownfield redevelopment (petroleum), tank removal/cleanup, site investigation, other site cleanup, etc; and <input type="checkbox"/> Chemicals of Concern must be listed for each project example; and <input type="checkbox"/> All projects listed must have been completed within the last 10 years; and <input type="checkbox"/> Due to state regulatory differences, it is preferred that all project examples are located in Minnesota; however, 1 example of each of the brownfield redevelopments (petroleum and non-petroleum) from out of state is permitted. Project examples should be different for each of the key personnel being submitted and can be from a previous employer. If submitting the same project example, the role of each person must be clearly defined for that project. <p>Submit 1 example of completing a soil vapor investigation, evaluation, and/or mitigation as a Company. Due to state regulatory differences, it is preferred that the example be located within Minnesota. Example must be within the last 6 years.</p> <p><u>Project Experience Description must include:</u> Responsibilities/ activities/ major contributions on the project and major actions completed by the person; the names of the regulatory agencies and department(s) within the agency interacted with for each project.</p> <p>Part 2: Not applicable for this work type. Part 3: Not applicable for this work type.</p>

Work Type Definition and Submittal Requirements
5.4 Contaminated Property Investigation

II. Proof of Professional Certification/Licensure	A. Provide current copies of applicable Professional Certification/Licensure.
*Work Type Submittal Instructions: Create a CD or flash drive that includes the following individual files or folders in this order: I. Resume and Relevant Project Experience Form (Form PQ1) II. Proof of Professional Certification/Licensure Each file should be saved in the format identified above. Submit 5 copies of the CD or flash drive.	

The remainder of this page is intentionally left blank.