



## Environmental Affairs Division

Pollution Prevention and Abatement Branch

June 2006 (Revised)

### Technical Guide: Response to the Discovery of Unanticipated Contamination (Hazardous Materials) During Construction

#### **What do I do when Contamination (Hazardous Materials) is Discovered on the Project?**

When unanticipated contamination is discovered in the right-of-way, especially if it is located in the path of construction, the appropriate preventive actions will need to be performed to address the contaminants. TxDOT is responsible for testing, removal and proper disposition of hazardous materials on sites owned or controlled by the State (Standard Specification Article 6.10).

The following are the major steps that should be taken when contamination (hazardous materials) is encountered within the right-of-way during construction:

- Recognize that the area may be contaminated with hazardous materials
- Secure the site to protect workers and the public. Do not allow the prime contractor, subcontractor, or TxDOT personnel to handle or disturb the contaminated material or the surrounding soil.
- Notify the proper authorities (including the Area Engineer, District Environmental Coordinator, District Environmental Quality Coordinator, Environmental Affairs Division) and responsible parties
- Determine the worker safety and public exposure concerns
- Characterize the contaminant(s)
- Acquire the use of a specialty contractor/consultant or the use of engineering environmental services contracts for assistance
- Develop and implement hazardous materials/waste management measures (preventive action plan - preventive actions refers to cleanup and related activities that are required to facilitate the construction of the highway project); and
- Document the event starting with the discovery.

#### **Who in TxDOT can I call for Assistance?**

For district assistance, you can contact your District Environmental Coordinator or Hazardous Materials Coordinator. For Division assistance, you can call the Pollution Prevention and Abatement Branch, Environmental Affairs Division (ENV-PPA) for assistance.

- Rodney Conciencie, Supervisor, ENV-PPA      Phone: (512) 416-3012 Fax: (512) 416-2319
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## **Identification and Recognition of Contamination (Hazardous Materials)**

Identification and recognition of the existing contamination is the first step in the response action. During construction, indicators of possible contamination include, but are not limited to:

- Rusted barrels and containers
- Stained or discolored earth in contrast with adjoining soil
- Fill material containing debris other than construction-related items
- Household trash covered by earth or industrial waste debris
- Gasoline smells or other odors which emanate when the earth is disturbed
- Oily residue intermixed with earth
- Sheen on groundwater
- Cinders and other combustion products like ash; and
- Structures such as asbestos cement (transite) pipe, abandoned oil & gas lines, and underground storage tanks also require special handling when disturbed.

## **Securing the Site**

When contamination (hazardous materials) is discovered, construction activities in that area should be suspended and secured for worker and public safety. If possible, the contractor should be re-deployed on the construction project to avoid or minimize construction downtime. Do not allow the prime contractor, subcontractor, or TxDOT personnel to handle or disturb the contaminated material or the surrounding soil.

## **Notifications and Coordination**

Usually the contractor will make the discovery of unanticipated contamination (hazardous materials). When the contractor (or TxDOT personnel) encounters materials suspected by visual observation or smell to contain hazardous materials, the contractor (or TxDOT personnel) shall immediately notify the Area Engineer and District Environmental Coordinator. The District Environmental Coordinator, Area Engineer or his/her designee shall take the following notification and coordination steps in dealing with contamination (hazardous materials) after discovery:

- Notify Environmental Affairs Division, Pollution Prevention and Abatement Branch (ENV-PPA) and the District Construction Office,
- To obtain assistance in assessing the contaminated areas, contact ENV-PPA for statewide environmental engineering consultant services; and Design Division (DES) for assistance as needed.

- To assist in the determination of applicable regulations, contact ENV-PPA for assistance.
- Notify the local office of the Texas Commission on Environmental Quality (TCEQ). ENV-PPA is available to assist with communication and coordination with the TCEQ.
- If possible or practical, identify and notify the party responsible for the contamination to arrange for them to perform preventive actions and/or reimburse expenses associated with preventive actions to be performed by a TxDOT hired contractor.

### **Characterize the Contaminant, Determine Exposure Concerns and Develop Preventive Action Plan**

A consultant may be employed to identify and characterize the contamination through sampling and analytical testing. The objectives of the consultant's investigation include:

- Determine characteristics of the soil, groundwater and vapor (e.g., groundwater recovery rates; vertical and horizontal extent of contamination; chemicals of concern; etc.)
- Assess worker safety and public exposure concerns
- Determine the handling and/or disposal requirements for any contaminated media unearthed as part of the construction process
- Recommend a preventive action plan to ensure the problem is not aggravated and to minimize department liability; and
- Determine requirements necessary such that the prime construction contractor can resume work.

Consultants may also be employed to develop special specifications to complete portions of the construction within contaminated areas. The data obtained from the investigation will enable the consultant to develop special specifications related to groundwater treatment or filtration systems; ventilation systems; ongoing site monitoring; contaminated material disposal or reuse options; and permitting.

### **Type of Environmental Services Available**

The following mechanisms are available for retaining specialty contractors and/or consultants to assist in managing unexpected encounters with hazardous materials (contamination):

- ❖ **Pre-arranged Purchase of Service Contract:** Some districts have pre-arranged blanket purchase order contracts. If your District has a contract in place, work with your District contact to arrange services. You may contact ENV-PPA to assist with project scoping and regulatory requirements.
- ❖ **Statewide Environmental Engineering Services Contracts:** ENV-PPA has multiple statewide environmental engineering consultants on contract to respond to environmental issues, including tank removals.
  - To utilize these services contact ENV-PPA to discuss the needs of the project.
  - Once assigned, you will need to contact the consultant and provide him with information regarding the site and contaminants of concern. ENV-PPA can assist in defining the statement of work to be prepared. The consultant will provide a proposal with a cost estimate

for review. After review by you and ENV-PPA, and when any necessary revisions are made to the proposal and cost estimate, the ENV-PPA will issue a work authorization to the consultant. The consultant may not perform any activities until the work authorization has been signed by ENV. Emergency procedures are available to expedite the work authorization process.

- For more information regarding the use of these contracts see ENV's Intranet Webpage at <http://crossroads/org/env/contractproc.html>
- **Construction Contract Change Order(s)**: If the hazardous material (contamination) is encountered by the construction contractor, provide the contractor with the option to perform work related to special waste handling and some preventive actions as "extra work" by a Change Order in accordance with *Article 4.2* of the *TxDOT Standard Specifications*.
- The contractor is not obligated to opt for "extra work" since the required work is outside the scope of their contract or the contractor's cost for the change order may be more expensive than the use of other contracting methods.
- If the contractor does agree to a change order, TxDOT should ensure that the contractor and/or subcontractor utilizes the appropriate personnel to perform the tasks, and complies with the notification and reporting requirements.

## Reporting and Documentation

The consultant will provide the Engineer with documentation and/or a report(s) as a deliverable (e.g. an assessment report, preventive action plan, waste disposal plan, etc.). As these activities are primarily regulated by the TCEQ, a copy of these report(s) must be submitted to the TCEQ to document that appropriate assessment and cleanup activities were performed.

Additionally, the District Construction Office and the Engineer have the primary responsibility to generate and maintain a thorough record of the hazardous materials (contamination) discovery and response actions. Appropriate reports close out the preventive action part of the work and a proper resumption order restarts the construction. The Engineer completes the records by carefully noting all the actions taken from the time the initial notification was received up to closure with regulatory agencies. Should contamination be allowed to remain in-place or contaminated soils were reused as fill material, then this should be noted on the final as-built plans.

## Underground Storage Tanks (USTs) and Leaking Petroleum/Product Storage Tanks (LPST)

For information regarding the response to the discovery of an underground storage tank (UST) system or contamination associated with a release from an UST please see ENV-PPA guidance document titles: *Technical Guide: Removal of Underground Storage Tanks (USTs) Encountered During Construction.*

## Reference Information

TCEQ Rules:

- Spill Prevention and Control: 30 TAC, Chapter 327

TCEQ Publications and Forms:

- *The Local Government Guide to The TNRCC (GI-145 Revised November 2000)*
- *TCEQ Regional Offices (GI-2)*
- *Investigating and Reporting Releases from Petroleum Storage Tanks (PSTs) RG-411*

TxDOT Guidance

Construction Manual (Construction Contract Administration Manual, Chapter 12, Environment, Section 1, Hazardous Materials or Waste)

Environmental Manual

Hazardous Materials in Project Development Guidance Document

*Technical Guide: Removal of Underground Storage Tanks (USTs) Encountered During Construction*