



Hazardous Materials in Project Development

Environmental Documentation

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Overview

Assessment Type and/or Scope

Environmental documentation should provide a concise description of the type and scope of the assessment conducted (for example, Initial Site Assessment, ASTM Transaction Screen (ASTM 1528) or Phase I Site Assessment (ASTM 1527)). The environmental document can provide an appendix to contain portions of the site assessment documentation such as maps, summary tables, USGS topography maps and aerial photographs. A brief listing of the regulatory databases searched/reviewed and a summary of findings can also be provided. However, **it is not appropriate to include the entire database list search report in the environmental document.** The environmental document can state that additional information and/or reports are maintained in the district project file.

Who Performed the Assessments?

To facilitate tracking and to reference reports, conclusions or assessments performed by other parties, the environmental document should state who performed the site assessments; for example, TxDOT district staff, a consultant contracted by the local entity or a consultant under a TxDOT statewide engineering and environmental consultant contract.

Limitations and Justification for Postponing Further Investigation

The environmental document should disclose any limitations with the site assessment or whether further investigation is needed. Limitations and issues that may warrant more investigation include structures not entered or right-of-entry access denied by property owners.

Justification for postponement of further assessment or investigation should be documented. For example, interviews for appropriate inquiry may be postponed until the right-of-way negotiation and acquisition stage of project development. Further investigation and coordination be postponed until later in project development depending upon available right- of-entry access, status of the design or cost feasibility.

Alternative Analysis

Alternative analyses should include hazardous material contamination involvement. The findings of the initial site assessment, list search review, coordination with regulatory agencies and subsequent investigations should be summarized for each alternative considered.

Summary tables or an alternative analysis that only compares the total number of regulated or registered sites for each alternative are not sufficient. A more qualitative analysis of similar contamination types, regulatory status and proposed involvement during construction is more appropriate.

Efforts to Avoid or Minimize Involvement during Construction

Decisions regarding avoidance and/or minimization of the economic, environmental and safety impacts of hazardous material involvement should be discussed in the environmental document. Any efforts to avoid or minimize involvement with known or suspected hazardous material contamination sites should be summarized. Justification for failure to avoid any known or suspected hazardous materials or sites should be briefly discussed.

The basis and rationale for any decision affecting the corridor or preferred alignment selection due to known or potential hazardous material contamination must be documented. Often, the decision-making and environmental clearance process will proceed with incomplete or unavailable information. The environmental document should identify unknown or incomplete information when it is not practical to obtain the information. The relevance of missing information in evaluating reasonably foreseeable significant effects should be provided.

Special Considerations, Contingencies or Provisions

Environmental documentation should provide full and open disclosure of the environmental consequences of the proposed project. The possibility of encountering known or suspected hazardous material contamination during excavation, utility adjustments, storm sewer installation and demolition should be disclosed in the document.

If known or suspected hazardous material contamination might be encountered during construction, the document can state that hazardous material contamination will be handled according to applicable federal and state regulations.

When hazardous material involvement is anticipated, the environmental document may summarize more specific information regarding the commitments to avoid aggravating further releases into the environment, avoid or minimize construction downtime and protect the health and safety of the construction workers and public. Specific details depend upon the amount of preliminary engineering complete on a project.

Early Coordination or Consultation

Early coordination or consultation with regulatory agencies should be documented and the results summarized.

Further Coordination, Approvals, Permits and Site Closure

If applicable, the document can provide statements indicating that coordination with regulatory agencies or property owners will occur concurrently with project development and that hazardous material contamination will be handled according to applicable federal and state regulations.

Any required environmental permits, clearances or coordination for the next stages of project development should be identified. Any required special considerations or provisions for preventive action and further investigation during right-of-way negotiation and acquisition, property management, design and construction should be outlined.

Re-evaluations

Because site conditions and regulatory actions are subject to change, re-evaluation documents should summarize the findings of any needed updates to the initial site assessment.

It is not necessary to provide significant detail about the status of every parcel. However, a summary of additional investigations or closures occurring since the original environmental clearance should be provided.

Example Language

Included in this section are general examples that environmental documentation may follow when summarizing the environmental site assessments, investigations and impacts for hazardous materials. Districts are not required to use this example language.

The examples should not be used as "standard paragraphs" or "filler." The proper use of example language should be supervised by experienced staff. The examples may not be appropriate documentation for every transportation project. This is not an exhaustive list of potential hazardous material concerns. Any concerns not addressed in the example language should be disclosed in the environmental document. Some projects will require a combination of the types of information presented in the following examples. Significant editing will be required to incorporate project specific information. For example, observation statements in the example language should be confirmed through site visits of the surrounding area. Examples of various options are included in brackets (see "[]").

Districts can contact the Environmental Affairs Division, Hazardous Materials Management Section (ENV-HMM) for assistance in developing appropriate language for the hazardous materials section of environmental documentation.

Minimal or Low Potential for Hazardous Material Involvement

The following examples apply to a transportation project expected to have a low potential for hazardous materials involvement during project development or where no involvement with hazardous materials is anticipated during construction:

Example 1: Undeveloped, Agricultural Cultivated Fields, Pasture and Residential

Hazardous Materials: An initial site assessment including a visual survey of the project limits and surrounding area and research of existing and previous land use was performed by [TxDOT district staff / Consulting Firm Name] to identify possible hazardous materials within the project limits. Documentation of the initial site assessment is maintained in the [district project files].

The existing and previous land use of the project limits and surrounding area is [undeveloped / agricultural cultivated fields / pasture / residential] [based on the site survey / USGS 7.5 minute topography map(s) / existing and historical aerial photographs / preliminary property owner interviews]. No surface evidence of contamination was observed within the project limits. No sources of contamination were identified from adjacent or surrounding properties. As stated earlier, no right-of-way or easements are required for the proposed project. The project does not require significant excavation, storm sewers or utility adjustments, building or structure demolition or modification. Therefore, no further investigation appears necessary.

Any unanticipated hazardous materials and/or petroleum contamination encountered during construction would be handled according to applicable federal and state regulations per TxDOT Standard Specifications.

Example 2: Light Commercial

Hazardous Materials: An initial site assessment including a visual survey of the project limits and surrounding area, research of existing and previous land use, and limited review of federal and state regulatory databases/lists was performed by [TxDOT district staff / Consulting Firm Name]. The purpose of the initial site assessment is to identify possible hazardous materials within the project limits. Documentation of the initial site assessment is maintained in the [district project files].

[Although mostly undeveloped, commercial businesses exist along the X portion of the project limits. / The adjacent commercial land use includes... / As previously discussed, the adjacent land uses consist of light commercial (office buildings and retail) properties and residences.]

No surface evidence of contamination or possible sources was observed within the project limits or from adjacent and surrounding properties. No regulated sites adjacent or within the proposed and existing right-of-way were identified. As stated earlier, [no additional right-of-way or easements, demolition or displacements would be required / is anticipated.] Additionally, no significant excavation, storm sewers or utility adjustments are required. Therefore, no further investigation appears necessary.

Any unanticipated hazardous materials encountered during construction would be handled according to applicable federal and state regulations per TxDOT Standard Specifications.

More Potential for Hazardous Material Involvement

Projects with more potential for hazardous material involvement require additional discussion. The following additional paragraphs can be incorporated into the examples presented above.

Example 3: Regulatory Database/List Search

A regulatory database search was performed by [by a commercial vendor / Company Name]. The regulatory database lists reviewed include the National Priorities List (NPL), Texas State Superfund, Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS), Resource Conservation and Recovery Act (RCRA) facilities, municipal solid waste landfills (MSWLF), registered petroleum storage tanks (RPST) and leaking petroleum storage tanks (LPST) facilities. The list search did not reveal the above-referenced registered or regulated sites within or adjacent to the project limits.

Example 4: Regulatory Database/List Search

A list of the regulatory databases reviewed, brief summary and a map identifying the regulated sites adjacent and within the proposed and existing right-of-way is [attached / provided in the appendix].

Involvement with Regulated Sites

Projects with possible involvement with regulated sites either adjacent or within existing and/or proposed right of way have a higher potential for encountering contamination during construction and require additional considerations during right-of-way acquisition. Therefore, these projects may require additional discussion in the environmental documentation.

Example 5: Summary Table

Summary of Regulatory Databases List Search and Site Visit Concerns		
Site Information	Database	Location Relative to Project
[Site Name or Map ID Number] [Address] [Station Number]	[NPL, CERCLIS, RCRA (TSDF), NRC, RCRA (G), Tx Superfund, LPST, MSWLF, RPST] * Site Visit Concerns:	[No listings within X feet, Existing ROW, Proposed ROW, Adjacent, 500 feet from proposed ROW]
<p>* NPL National Priorities List (Federal Superfund Sites)</p> <p> CERCLIS Comprehensive Environmental Response, Compensation and Liability Information System</p> <p> RCRA TSDF Resource Conservation and Recovery Act Treatment, Storage and/or Disposal Facilities</p> <p> NRC National Response Center</p> <p> RCRA G Resource Conservation and Recovery Act Generators</p> <p> Tx Superfund State Superfund Sites (state equivalent to NPL)</p> <p> LPST Leaking Petroleum Storage Tanks</p> <p> MSWLF Municipal Solid Waste Landfills (Authorized and Unauthorized)</p> <p> RPST Registered Petroleum Storage Tanks (Aboveground and Underground Tanks)</p>		

Example 6a: Petroleum Storage Tanks - No Concern

Within the project limits, there are [X] registered petroleum storage tanks (RPST) facilities. [None] of the registered facilities are listed as leaking petroleum storage tanks (LPST) sites. The site visit and research into the historical land use [revealed / did not reveal] any other abandoned and/or active gasoline service stations. [As previously stated, right-of-way acquisition or easements are not required for this project. / No significant excavation is anticipated.] A summary table and map showing the location of the sites is [attached to this documentation / provided in Appendix X].

Example 6b: Leaking Petroleum Storage Tanks - No Concern

A review of TCEQ's leaking petroleum storage tank (LPST) on-line database query indicated [X] LPST sites adjacent to the proposed project. According to the priority and status indicated in the list search, only minor soil contamination was indicated in [X] of the [X] adjacent LPST listings. TCEQ issued the final concurrence for [X] of these [X] listings and the cases are closed.

[As previously stated, right-of-way acquisition or easements are not required for this project.] [No significant excavation is anticipated. / In this area of the proposed project, only rehabilitation of the existing roadway with no significant lowering of the vertical alignment is required. / The vertical alignment would need to be raised.] Therefore, it is not anticipated that petroleum contamination would be encountered during construction. A summary table and map showing the location of the sites is [attached to this documentation / provided in Appendix X].

Example 7: LPST File Review or Interviews

Since [displacements / tank system removal would be required / excavation greater than three feet, storm sewers or utility adjustments would be required], the LPST and RPST files for facilities adjacent or within X feet to the project limits were reviewed by [TxDOT district staff / TxDOT division staff / Consultant Name / Environmental Consultant]. Additionally, the sites were discussed with the [TCEQ project case manager / staff of TCEQ's Region X office.]

LPST No. XXXXXX is located near the [X] of the project. The status and priority of the site indicates that groundwater is impacted and quarterly monitoring is in progress. [According to the file review, the static water level in the monitoring wells is approximately X meters (XX feet) below the ground surface. In this area, a stormwater drainage structure would be installed approximately X meters (X feet) below the ground surface. Although contaminated groundwater may exist within the project limits, it is not anticipated that contaminated groundwater or soil would be encountered during construction.]

Example 8: Tank Removal and/or Corrective Action

The LPST sites and tank systems would be addressed during the right-of-way negotiation and acquisition process. The LPST sites are currently in various stages of corrective action. It is anticipated that all sites would obtain closure prior to construction. Coordination with property owners, tank owners, operators and TCEQ on these sites [would be] an ongoing process up to and during construction. It is not anticipated that contaminated groundwater or soil would be encountered during construction.

Example 9: Utility Adjustments/Relocation

At this time, utility adjustment requirements have [have not been determined / would avoid contamination / are not anticipated]. There is a potential for contamination to be encountered during utility adjustments. Coordination with utility companies concerning this contamination would be addressed during the right-of-way stage of project development. It is anticipated that all utility adjustments or relocation would be completed prior to construction.

Example 10: Right-of-entry Denied

Access to the proposed [right-of-way / portions of the right-of-way] was denied by property owners. Documentation of requests for access is maintained in the project file. During the right-of-way negotiation and acquisition process, further inquiry into the existing and previous ownership and uses of the property would be performed. The limited regulatory database list search and land use research [did not reveal any hazardous material concerns / revealed potential sources of contamination]. Further assessment and investigations [if needed] would be postponed until

right-of-entry can be obtained in later stages of project development. If identified, any hazardous material issues would be addressed during the right-of-way negotiation, acquisition or eminent domain process prior to construction.

Possible or Anticipated Contamination during Construction

Example 11: Possible

Additional investigation would be required to confirm if contamination would be encountered during construction. If contamination were confirmed, then TxDOT would develop appropriate soils and/or groundwater management plans for activities within these areas.]

Example 12a: Known - Summarize Findings

[According to the file review, shallow groundwater contamination, approximately X feet below the ground surface, exists beneath the project limits. / Free product has been encountered underneath the pavement near the project limits. / Further investigations to confirm the presence of contamination, determine the extent of contamination within the proposed right of way and to determine proper handling requirements have been performed along the project limits. Summarize findings.]

Example 12b: Known - Contingencies and Provisions

It is anticipated that contaminated soil [and/or groundwater] will be encountered during construction. Special provisions or contingency language will be included in the project's plans, specifications and estimates (PS&E) to handle hazardous materials and/or petroleum contamination according to applicable federal and state regulations.

Example 13: Specialty Contractors

A [blanket purchase order / contracts] for removal and disposal would be in place prior to construction [in the event unknown underground storage tanks or contaminated soils are encountered during construction / to handle excavation and transportation of contaminated soils / to minimize downtime for the contractor].

Storm Water Drainage Structures in Contamination

Example 14: Entry and Monitoring

The proposed project requires the installation of storm sewers. Due to the possible contamination from adjacent properties, special considerations or provisions for entry and monitoring in the project's plans, specifications and estimates (PS&E) would be required.

Example 15: De-watering

The proposed project requires the installation of storm sewers. Due to the possible contamination from adjacent properties, special considerations or provisions for entry and monitoring in the project's plans, specifications and estimates (PS&E) would be required.

Example 15: De-watering

During the construction of the proposed storm sewer, de-watering of the excavation [would be required / is anticipated]. A hydrology study [would be / has been] contracted by an engineering and environmental consultant to provide specifications on handling procedures and permitting requirements if contamination is encountered.

[Discharge permits from the local publicly owned treatment works and/or TCEQ] [would be / may be] required. Groundwater filtration systems may need to be designed to remove contaminants to permitted levels prior to discharge. During early coordination with the local municipality and TCEQ, requirements for discharge permits have been obtained.

Possible Asbestos-Containing Materials

Example 16

The proposed project includes the [demolition and/or relocation] of building structures. The buildings may contain asbestos containing materials. Asbestos inspections, specification, notification, license, accreditation, abatement and disposal, as applicable, would comply with federal and state regulations. Asbestos issues would be addressed during the right-of-way process prior to construction.

Oil & Gas Contamination

Example 17

Surface crude oil contamination was observed within the project limits associated with oil & gas [wells / aboveground storage tank or batteries / pipelines]. [Early coordination with the Railroad Commission of Texas...]

Well Plugging (Water Quality)

Example 18: Monitoring Wells

Monitoring wells were observed within the project limits. Proper plugging of the wells would be addressed during the right-of-way negotiation and acquisition process. If not plugged prior to construction, the wells would be addressed per TxDOT Standard Specification Item 103 Disposal of Wells.

Example 19: Oil & Gas Wells

Oil & gas well(s) exist(s) within the proposed right-of-way. Applicable plugging and supervision requirements are provided in Texas Administrative Code, Title 16, Part I, Chapter 3, Section 3.14 under the jurisdiction of the Railroad Commission of Texas. Well plugging would need to be performed by cementing companies, service companies, or operators approved by the Railroad Commission of Texas. Arrangements with the responsible well operator for proper plugging according to applicable regulations would be addressed during the right-of-way acquisition and negotiation process. If not plugged prior to construction, the wells would be addressed per TxDOT standard specification Item 103 Disposal of Wells.

Enhancement Projects (Asbestos and Lead-Based Paint)

Example 20: No Involvement

Due to the age of the public building structure, there is the potential for asbestos- containing materials. However, the proposed project does not include utility work, renovation, dismantling, demolition or disposal of building materials. Therefore, no further coordination or compliance with applicable asbestos regulations is required.

Example 21: Asbestos

The project improvements include [partial] renovation of a public building. [At this time, no asbestos surveys are known to have been performed / Preliminary asbestos surveys have been performed].

Example 22: Asbestos Survey Results

An Asbestos Containing Materials (ACM) and Lead Based Paint (LBP) Survey was performed by [Consultant Name] for the City of [Name]. The document is also available for review through the [X] District of TxDOT.

On [date], an asbestos inspection of the existing building was performed by a Texas Department of Health licensed asbestos inspector. [Number (X)] bulk samples of suspected asbestos containing material (ACM) were collected from the building. Polarized Light Microscopy (PLM) analysis revealed that [none of the bulk samples contain greater than 1 % asbestos fibers. The suspected materials consisted of [painted plaster and floor tiles]. The asbestos survey did not include sampling of such materials as [concrete flooring, wooden or metal doors, concrete block walls, or hidden/inaccessible components].

[Further testing / no further testing for ACM] appears required. The proposed improvements would comply with applicable federal and state regulations, including the Texas Asbestos Health Protection Act (TAHPA), the National Emissions Standards for Hazardous Air Pollutants (NESHAP), and disposal regulations of the Texas Commission on Environmental Quality (TCEQ) and Environmental Protection Agency (EPA).

Example 23: Lead-Based Paint Survey Results

On [date], a Lead Based Paint (LBP) survey was also performed on the building. The survey was performed by [testing interior and exterior painted surfaces of the building using a Niton XRF Spectrum Analyzer]. The survey was performed by a Certified Inspector for Lead Hazards and LBP Risk Assessor. A limited number of painted surfaces exhibited XRF readings indicating that the painted surface contains lead. The positive LBP readings were found on the [exterior window headers, door arches, upper trim, windowsill and sash and porch ceiling]. Positive LBP readings were also found on the interior [window stools and stops, wall baseboard, support columns, ceiling, window sash, door and door jamb, cabinet door, door plinth and casing].

Applicable regulations do not require hiring a Certified Lead Abatement Contractor for component or paint removal during remodeling. However, the waste materials and construction debris containing LBP are required to be disposed according to current disposal regulations of the TCEQ and EPA.

Example 24: Commitment for Asbestos-Related Activities

Prior to [partial] renovation, the [work area and all immediately surrounding areas / building] would be surveyed by a licensed asbestos inspector. If asbestos is confirmed, then asbestos-related activities and the renovation would need to be performed in accordance with the Texas Asbestos Health Protection Act (TAHPA) and the National Emissions Standards for Hazardous Air Pollutants (NESHAP).

Example 25 PS&E Commitments

The project's plans, specifications and estimates (PS&E) would disclose areas of asbestos and lead-based paint which could be disturbed. Special provisions would be developed in the PS&E

for asbestos-related activities, notifications, required licenses, and monitoring in accordance with NESHAPS and TAHPA.

Re-evaluations

Example 26: Update Original Initial Site Assessment

To supplement the original initial site assessments, follow-up site visits and [an updated regulatory database list search / a limited on-line regulatory database query] were performed. [No land use changes have occurred since the original initial site assessment was conducted / Additional commercial properties have been constructed since the original environmental document was written.] No regulated or registered sites are indicated within or adjacent to the project limits. Therefore, no further investigation appears required.

Example 27: Further Investigation after Original Document Approval

Further investigations to confirm the presence of contamination, determine the extent of contamination within the proposed right-of-way and to determine proper handling requirements have been performed along the project limits. [Summarize Findings and Commitments.]

Appendix A

The following table shows the revision history for this guidance document.

Revision History	
Effective Date Month, Year	Reason for and Description of Change
March 2014	Version 1 release