

1400.00 Introduction

- 1400.01 Summary of Requirements
- 1400.02 Abbreviations and Acronyms
- 1400.03 Glossary

1410.00 Applicable Statutes and Regulations

- 1410.01 Federal Regulations
- 1410.02 Idaho State Regulations

1420.00 Liability and Highway Project Development**1430.00 MOUs, MOAs, IAs****1440.00 Technical Guidance**

- 1440.01 General Guidance
- 1440.02 Terminology
- 1440.03 ITD Environmental GIS Workbench
- 1440.04 FHWA Guidance
- 1440.05 Hazardous Materials Reports
- 1440.06 Administrative Review

1450.00 Initial Site Assessment

- 1450.01 Initial Site Assessment (Phase I)
 - 1450.01.01 Initial Site Assessment Process
- 1450.02 Preliminary Site Investigation (Phase II)
- 1450.03 Detailed Site Investigation (Phase III)

1460.00 Specific Hazardous Materials Investigations

- Exhibit 1400-1 Process Flowchart

1400.00 INTRODUCTION

This section contains procedures for dealing with hazardous materials encountered or potentially present on property ITD owns, manages, plans to sell, or plans to purchase. Federal and state environmental laws and regulations expose ITD to the responsibility for cleanup and proper disposal of hazardous materials, whether the original source is from ITD activities, from a tenant, or inherited when property is acquired. ITD seeks to reduce exposure to liability and to limit costs associated with hazardous materials.

Identifying hazardous materials early in the project development process has many advantages:

- Safety is increased by minimizing potential dangers to ITD and other personnel.
- The environment is protected from exposure to and release or spread of hazardous materials.
- Project design, delay, or termination and associated costs are minimized.
- Costs to ITD during both design and construction are reduced.
- Adverse publicity associated with owners of contaminated property can be reduced.

ITD practice is to conduct appropriate inquiry early in the project development process, conduct thorough investigations for identifying hazardous materials, and develop and maintain good documentation files

1400.01 Summary of Requirements

[Exhibit 1400-1](#) illustrates the process of hazardous materials discovery, investigation, and reporting during each stage of the project – from planning to project definition, development, construction, maintenance, and property transfers.

Hazardous materials investigations are conducted for property transfers, management of contaminated sites and with hazardous material discovery during construction. ITD will evaluate the contamination, estimated clean-up costs and alternatives available when determining avoidance or use of contaminated sites. When the contaminated property is unavoidable or of manageable risk, site assessments, investigations, and remediation shall be conducted in a manner that creates the least potential liability for ITD. Investigations should be conducted to progressively greater levels of detail, as warranted. The first step would be an Administrative Review ([Form ITD-0652](#)), which is required on all projects. An Initial Site Assessment (Phase I), Preliminary Site Investigation (Phase II), and Detailed Site Investigation (Phase III) would be performed based on the findings of each successive step.

1400.02 Abbreviations and Acronyms

Abbreviations and acronyms used in this section are listed below.

AHERA	Air Hazard Emergency Response Act
ASTM	American Society for Testing and Materials
CAA	Clean Air Act, 42 USC Section 7901
CERCLA	Comprehensive Environmental Response, and Liability Act, 42 USC Section 9601.
CERCLIS	??? see 1460.60.01
CORRACTS	??? see 1460.60.01
CWA	Clean Water Act, 33 USC Section 1251
DSI	Detailed Site Investigation
ERNS	Emergency Response Notification System
HMTA	Hazardous Material Transport Act, 49 USC Sec. 1803
HSWA	Hazardous and Solid Waste Amendments, 42 USC Sections 268, 280, 3001
IDBS	Idaho Division of Building Safety
ISA	Initial Site Assessment
LUST	Leaking Underground Storage Tank
NESHAP	National Emission Standards for Hazardous Air Pollutants.
NPL	National Priority List
OSHA	Occupational Safety and Health Act, 29 USC Sections 651–678
PCS	Petroleum Contaminated Soil
PRP	Potentially Responsible Party (or Person)
POTW	Publicly Owned Treatment Works
PSI	Preliminary Site Investigation
RCRA	Resource Conservation and Recovery Act, 42 USC Section 6901, 40 CFR 260–281
RCRIS	??? see 1460.60.01
SARA	Superfund Amendments and Reauthorization Act, 42 USC Section 9601–9651
SDWA	Safe Drinking Water Act, 42 USC Section 30
SPCC	Spill Prevention, Control, and Countermeasures
TRI	Toxics Release Inventory
TSCA	Toxics Substances Control Act, 15 USC Sec.2601–2629
TSD	Hazardous Waste Treatment, Storage or Disposal
UST	Underground Storage Tank

1400.03 Glossary

Hazardous Material—Any material that poses harmful risks to human health and/or the environment. Includes any hazardous or toxic substance, waste, pollutant, or chemical regulated under the CAA, CWA, TSCA, and/or RCRA; a pollutant or contaminant as any substance likely to cause death, disease, abnormalities, etc. (CERCLA Sec. 101(33)); or those listed in 40 CFR 302. For ITD purposes, petroleum, lead paint, asbestos, and other substances will be considered hazardous materials, as identified in the scope of work.

1410.00 APPLICABLE STATUTES AND REGULATIONS

1410.01 Federal Regulations

a. National Environmental Policy Act

The National Environmental Policy Act (NEPA), 42 USC Section 4231, requires that all actions sponsored, funded, permitted, or approved by federal agencies undergo planning to ensure that environmental considerations such as impacts related to hazardous materials are given consideration in project decision-making. Federal implementing regulations are at 23 CFR 771 (FHWA) and 40 CFR 1500–1508 (CEQ).

b. Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 103, also known as “Superfund,” is a remedial statute that created the legal framework for identifying parties liable for hazardous waste contamination and requiring them to take responsibility for cleanup operations. Under this statute a person or agency is required to provide notification of releases or potential releases of hazardous materials. CERCLA also created the USEPA ranking system and the National Priorities List (NPL). CERCLA was amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA), which introduced more stringent and detailed guidelines for remediation, as well as more complex liability issues. It also defined and provided for the now common defenses against liability for potentially responsible parties. Superfund is the name of the account held by USEPA to provide funding for hazardous waste site cleanups where the potentially responsible party or person (PRP) cannot be identified or does not have the funds available to conduct the cleanup.

c. Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) is a preventive statute, which provides requirements for the treatment, storage, and disposal of hazardous waste. The provisions in RCRA are often referred to as the "cradle to grave" liability concept. Under RCRA, EPA provides the definitions and methods of identifying and classifying hazardous wastes. This legislation also defines who generates hazardous waste that requires USEPA identification numbers and manifests to transport hazardous waste. In 1984, RCRA was amended by the Hazardous and Solid Waste Amendments (HSWA), which greatly expanded its initial scope. In the amendments, Congress prohibited land disposal of certain wastes and created treatment standards for such wastes. RCRA Subtitle I (40 CFR 280, 281, 282) establishes requirements for ownership, operation, maintenance, and closure of underground storage tanks; disposal of lead paint; and Subpart M (40 CFR 61) defines national asbestos emissions standards.

d. Occupational Safety and Health Act

The Occupational Safety and Health Act (OSHA) established requirements for site safety procedures, worker training, and worker safety and health standards for

private sector employees engaged in work related to hazardous materials. Regulations adopted under this act include the Hazardous Waste Operations and Emergency Response, 29 CFR 1910. This regulation requires specific levels of annual training for everyone working with hazardous wastes and for certain levels of supervised on-site experience. 40 CFR 311 adopted 29 CFR 1910 by reference to include public sector employees.

e. Clean Water Act

The Clean Water Act (CWA), 33 USC Section 1251 et seq. (formally known as the Water Pollution Control Act), provides for comprehensive federal regulation of all sources of water pollution. It prohibits the discharge of pollutants from other than permitted sources, and authorizes cleanup, injunctive, and cost-recovery powers where an imminent hazard is caused by pollution. Provisions also prohibit the discharge of oil and other hazardous materials; impose criminal penalty for failure to notify the appropriate authorities of such discharges; and provide for citizen suits.

f. Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), 42 USC Section 300(f) et seq., provides broad administrative and legal authority to protect public drinking water systems. Primary enforcement authority is given to the states. It applies when any contaminant, defined broadly as “any physical, chemical, biological, or radiological substance or matter” is present in, or about to enter, a public drinking water system. See USC Title 42, Chapter 6A, Subchapter XII for provisions on safety of public water systems.

g. Clean Air Act

The Clean Air Act (CAA), 42 USC Section 7901 et seq., provides federal authority to regulate stationary and non-stationary (e.g., motor vehicle) sources of air pollution. Under Section 112 of the Act, USEPA is empowered to promulgate National Emission Standards for Hazardous Air Pollutants (NESHAP). Hazardous air pollutants are defined as those likely to cause an increase in mortality, serious irreversible illness, or incapacitating reversible illness. While non-hazardous air pollutants are regulated with some discretion, hazardous air pollutant standards are strictly enforced.

h. Toxic Substances Control Act

The Toxic Substances Control Act (TSCA), 15 USC Sections 2601–2629, regulates the manufacture, processing, and commercial distribution of chemical substances and mixtures capable of causing an adverse reaction to health or the environment. Certain hazardous materials, such as polychlorinated biphenols (PCBs), lead paint, and asbestos are regulated under TSCA.

i. Endangered Species Act

The Endangered Species Act (ESA) of 1973, 16 USC 1531–1543 aims to conserve species and ecosystems and allow recovery of threatened and endangered species. Section 7 of the ESA requires each federal agency to ensure

its actions that authorize, permit, or fund a project do not jeopardize the continued existence of any threatened or endangered species or their habitat. The ESA specifically prohibits discharge of hazardous materials to the environment in a way that affects threatened or endangered species or their habitat. Damage to habitat is considered a “taking” whether the habitat is currently in use, or may be in use in the future. For details, see [Section 1000.00](#).

1410.02 Idaho State Regulations

a. Water Quality Standards

Pollution of state waters is controlled by IDEQ administrative regulations.

b. General Safety and Health Standards

The Idaho Division of Building Safety (IDBS), EPA, and OSHA manage standards for occupational safety and health. These rules cover operations at known hazardous sites and initial investigations of sites identified by the government, which are conducted before the presence or absence of hazardous materials has been ascertained. These regulations contain rules on training, protective equipment, medical monitoring and emergency response.

c. Hazardous Waste Management Act

See Idaho Code 39-4411.

1420.00 LIABILITY AND HIGHWAY PROJECT DEVELOPMENT

Under hazardous waste laws, all former, current, and future property owners are liable for contaminated property. Under current federal hazardous waste cleanup statutes, liability is strict, joint, several, and retroactive. This means that if ITD acquires property, ITD can be held liable for cleanup regardless of the ITD’s previous degree of involvement.

ITD can also incur liability because of the acts or omissions of state employees. Generally, if a state employee’s actions are “in good faith” and “within the scope of that person’s official duties,” the Attorney General’s Office would represent that employee in any action against the employee, and the state would satisfy any judgment against the employee. However, criminal convictions, as well as civil fines, can and have been obtained against individuals whose actions were willful or grossly negligent. Sovereign immunity afforded the government does not attach to individual government employees to immunize them against prosecution for their criminal acts. An educated employee is the best defense against criminal liability.

Property owners, such as ITD, are afforded limited protection against liability, as described below:

- a. **Third party defense.** This defense applies if ITD can show that the contamination was solely the result of an act by someone other than an employee or agent of ITD or a person involved in a contractual relationship with ITD, and that ITD took due precautions against foreseeable acts by others and the foreseeable consequences of those acts. The due diligence concept applies when

ITD conducted reasonable inquiry and acted in good faith to prevent the release or spread of contamination.

- b. **Innocent landowner defense.** This defense applies when ITD acquires property after disposal of hazardous materials on the property and ITD did not know nor had no reason to know about the hazardous materials. To consider this defense against liability, ITD must clearly demonstrate that all reasonable inquiry had been undertaken to discover, investigate, and characterize the hazardous material and, once discovered, was actions were taken to prevent the release or spread of contamination. Under CERCLA, the acquisition of property under the state's eminent domain power to protect health and safety, by purchase or condemnation, creates an innocent landowner defense regardless of the state's knowledge of the contamination. However, the state must still show that any hazardous materials were handled with due care.

Defenses against liability involve demonstrating that all reasonable inquiry was accomplished. Reasonable inquiry is important throughout project development, and helps in establishing litigation defense. It is imperative, therefore, that the presence of hazardous materials be identified as early in project planning as possible.

1430.00 MOUS, MOAS, IAS

Space reserved for future use.

1440.00 TECHNICAL GUIDANCE

Hazardous materials investigations may be done for property acquisition or property management of contaminated sites, such as maintenance yards or right of way. Investigations may be done independently or in support of environmental documentation. Hazardous materials investigations may be done at a corridor level, a project level, or at a site-specific level. Investigations are typically conducted to progressively greater levels of detail starting with an Administrative Review. If warranted, Initial Site Assessments (Phase I), Preliminary Site Investigations (Phase II), and Detailed Site Investigations (Phase III) may follow.

1440.01 General Guidance

1440.02 Terminology

FHWA, ITD, and the real estate industry use different terminology to describe levels of Hazardous Materials Assessments. In addition, ITD requires an Administrative Review on all projects.

- Terminology for Screening/Evaluating Sites for Hazardous Materials
- Administrative Review
- Initial Site Assessment (ISA) Phase I
- Preliminary Site Investigation (PSI) Phase II

- Detailed Site Investigation Phase III

The guidelines in this section describe the procedures and requirements for the following hazardous materials management practices:

- Assessing the potential for discovering hazardous materials and the methods for identifying such hazardous materials in the planning and project development process and on properties owned and managed by ITD.
- Preparing complete and legally defensible site investigation documentation when required.
- Evaluating and managing the hazardous materials potential for asbestos and lead-based paint.

1440.03 ITD Environmental GIS Workbench

Reserved for future use.

1440.04 FHWA Guidance

[FHWA Technical Advisory T 6640.8A](#) (October 1987) ([Exhibit 300-4](#)) gives guidelines for preparing environmental documents, including hazardous waste sites in the vicinity of a proposed project. During early planning, the location of any permitted or non-regulated hazardous waste sites should be identified and locations shown on a map. If a known or potential hazardous waste site may be affected, information about the site, the potential involvement, impacts including worker exposure concerns, and the proposed measures to eliminate or minimize impacts should be discussed in the environmental document. For details, see FHWA's home page: <http://www.fhwa.dot.gov/>.

In addition, [FHWA's online Environmental Guidebook](#) contains documents on hazardous waste, including Supplemental Hazardous Waste Guidance (January 1997), Hazardous Wastes in Highway Rights-of-Way (March 1994), and Interim Guidance: Hazardous Waste Sites Affecting Highway Project Development (August 1988).

1440.05 Hazardous Materials Reports

The potential for hazardous materials impacts will be considered for every project. Right of Entry should be obtained through the district Right-of-Way Section. The Consultant Administration Unit copies the Environmental Section Manager on all scopes of work and reports related to the investigation or remediation of hazardous waste on ITD projects or at ITD facilities.

1440.06 Administrative Review

All projects require an Administrative Review. An administrative review ([Form ITD-0652](#)) is initiated by contacting EPA, DEQ, and the local health district and by reviewing published lists to determine if there are any documented hazardous waste sites, underground storage tanks, leaking underground storage tanks, or contaminated ground water in or near the project area. Additional Sources of information include windshield

surveys and interviews. Findings should be documented on the [Form ITD-0652](#). If the administrative review reveals a potential impact for the project, further documentation (Phase I or Phase 2) must be completed. Follow instructions on the form.

Information regarding the published lists can be found at the following sites.

NPLs:

<http://www.epa.gov/superfund/sites/npl/id.htm>

CERCLIS and CERCLIS/NFRAP sites:

<http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm>

RCRA (RCRA Corrective Actions, TSDs, and Generators):

http://www.epa.gov/enviro/index_java.html

ERNS:

<http://www.epa.gov/region4/r4data/erns/index.htm>

SWLF:

Contact DEQ Waste Management & Remediation Division

(208) 373-0416 for a list of landfills in the area

If hazardous material sites are in the project vicinity, contact the local district health department and regional DEQ office for more information.

LUSTs and USTs:

<http://www.idahopstf.org/reporting.htm>

When conducting windshield surveys, look for current and past high risk land uses, operations, and facilities, such as gas stations, lumber treatment facilities, drum storage, etc. Also note buildings that are suspect for lead paint or asbestos issues that may be impacted by the project. When feasible, walk the project and look for ground staining, vegetation damage, patches in pavement, pipe vents, etc.

1450.00 INITIAL SITE ASSESSMENT

1450.01 Initial Site Assessment (Phase I)

The purpose of a Phase I is to conduct all reasonable inquiry to assess impacts to ITD liability during design and construction. ITD follows the investigative procedures established by the American Society for Testing and Materials in *ASTM Standard E-1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, modified by project needs. If site conditions warrant, asbestos and lead-based paint surveys and/or intrusive field investigation(s) (Phase II) may be done concurrently with the Phase I.

1450.01.01 Initial Site Assessment Process

A Phase I is conducted on parcels identified in the Administrative Review as having the potential of encountering hazardous materials. Historic and current land uses are reviewed with the intent of identifying the potential for contamination. This level of

inquiry may be sufficient to assess the impacts to the project. It is not intended, however, to identify the extent of an identified problem. Other objectives of a Phase I include:

Protecting ITD from liability that may be incurred by unknowingly acquiring previously contaminated property (due diligence)

Assessing the need for sampling to confirm whether or not hazardous material is present.

Assisting in the selection of specific project alternatives.

Identifying potential worker exposure issues to include in contract documents

An environmental professional must complete assessments in order to satisfy one of the legal elements of reasonable inquiry. An environmental degree is not necessarily a prerequisite to be considered an environmental professional. Work experience and continuing education can provide the requisite background.

A Phase I consists of three major elements:

- Records review
- Site reconnaissance
- Interviews

Several conditions constrain the scope of a Phase I. The assessment does not include testing or sampling of any materials (exceptions can be made for lead paint and/or asbestos). Appropriate inquiry is not exhaustive; no site assessment can wholly eliminate uncertainty regarding the potential for hazardous environmental conditions. The level of detail of the assessment is determined by project needs.

a. Records Review

The purpose of a records review is to obtain information that will help identify hazardous environmental conditions. Because of the possible impact of hazardous materials migrating from surrounding properties, the records review should include a minimum search distance identified in ASTM 1527 or as modified by project needs. Documents reviewed should be reasonably available public or private records, obtainable at a reasonable cost and time.

Standard document sources may include some or all of those listed below. Federal information can be obtained from USEPA Region 10 Idaho Operations office, and Idaho data can be obtained from DEQ regional and Headquarters offices. Information can be obtained from commercial sources. All information must be verified in the field.

NPL

CERCLIS

TSD

CORRACTS

TRI

ERNS

RCRIS Notifiers

DEQ databases (LUST, UST, Solid waste list)

Local sources

Environmental health departments

Fire departments

Planning departments

Regional pollution/water quality agencies

Review physical setting documents, such as maps, which provide information about the geology, hydrogeology, hydrology, and topography of a site. This information is important when conditions are such that hazardous materials are likely to migrate onto or from a parcel.

Historical use information is a data source for assessing the potential for hazardous material contamination. All reasonable attempts should be made to identify historic uses back to 1940 or first developed use. Some sources for historic land use assessments are historic USGS topographic maps, aerial photography, Sanborn maps, and city directories.

The ITD Roadway Design section maintains aerial photography along interstate and some highway rights of way. Other sources of information include Metsker Atlases, property tax files, zoning records, land title records, and fire department records. District Right of Way offices should be contacted prior to conducting property title searches.

b. Site Reconnaissance

The purpose of a site reconnaissance is to inspect a parcel, and any structures on the project, for recognized hazardous environmental conditions. Right-of-entry may be required and should be coordinated through the District Right of Way Section. Every effort should be made to examine the site physically. However, if access cannot be reasonably obtained, or if a physical or health hazard may be present, observe the site from adjacent public properties and note the exception in the report. Assessing asbestos and lead paint is addressed in later section.

A photographic record, written description and maps should be provided. General site setting observations should include the following:

Current and past use—Identify any current use likely to involve the use, treatment, storage, or disposal of hazardous materials or petroleum product. Also note and describe structures, layouts, or equipment, which may indicate past uses of concern.

Current and past uses of adjoining property—Describe adjoining property uses to the extent that they present a possible migration impact. Also describe recognized past hazardous environmental conditions, which may indicate migration potential of contaminants.

Storage tanks—Note any evidence of aboveground or underground storage tanks, vents, or access ways. For example, patches in pavement can indicate former locations.

Odors and liquids—Identify strong, pungent, or noxious odors and their sources. Describe standing water, pools, or sumps containing known or unknown liquid.

Containers—Identify any containers that contain or might contain hazardous materials or petroleum products. Include the approximate quantities involved, types of containers, and storage conditions. Do NOT open or disturb any containers.

PCBs—Describe electrical or hydraulic equipment known to contain or likely to contain PCBs. Quantities of fluorescent light ballasts should not be noted unless disposal may be required.

Stains—Describe the visual characteristics and extent of stained soils or pavements.

Vegetation—Describe areas with absence of vegetation or areas of stressed vegetation (other than those due to insufficient water) unusual for the setting.

Wastewater, wells, and septic systems—Note anything related to wastewater or other liquid discharges (including storm water), or any drainage into a ditch, drain, or stream on or adjacent to the property. Describe all wells observed and indications of septic tanks or cesspools. Also indicate the location of dry wells.

c. Interviews

The objective of conducting interviews is to obtain information about possible hazardous environmental conditions that corroborates information obtained in a records review or site reconnaissance, or that identifies new information. A reasonable attempt to interview property owners (residential) or site managers (commercial and industrial) properties should be made. A list of property owners to be interviewed will be cleared with the District Environmental Planner. The District Environmental Planner will coordinate with the District Right of Way and Design section to establish a consistent project description to be utilized during all interviews. Interviews may be done with questionnaires.

In addition to asking for information on recognized environmental conditions connected with the project, ask whether any of the following documents exist, and whether copies can be obtained.

- Environmental site assessments reports
- Environmental audit reports
- Environmental permits
- Registrations for UST
- Material safety data sheets
- Safety and spill prevention and control plans

- Community Right-to-Know plans
- Reports regarding hydro-geologic conditions on the project or surrounding area
- Notices regarding past or current violations from any government agency
- Hazardous material generator notices or reports
- Previous geotechnical studies

If the site warrants, contact the local or volunteer fire department for additional information.

d. Recommendations

The final step in the process is to summarize the environmental risks that may be associated with the project and recommend what should be done.

e. Documentation Files

Since hazardous materials site information could be essential in future litigation, ITD should retain documentation files for 30 years past the date of contract completion. Project documentation files should contain all the information supporting the conclusions contained in the Phase I Report.

1450.02 Preliminary Site Investigation (Phase II)

A Phase II is an intrusive field investigation and is conducted when the Administrative Review or Phase I determines there is a potential hazardous materials risk. The primary purpose of a Phase II is to confirm whether or not hazardous materials are present and, if so, the extent of contamination. The Phase II should be conducted as early in the project as possible.

Right of Entry should be coordinated through the District Right of Way Office. Personnel conducting a Phase II require specialized training, and must comply with health and safety requirements.

a. Methodologies

Phase IIs involve some form of investigative sampling or analysis. Methods used could include electromagnetics, magnetometer studies, and ground-penetrating radar to locate buried wastes, pipe conduits, or underground storage tanks.

Samples taken for laboratory analysis are the primary means for identifying the presence and extent of contamination. A number of techniques are used to take soil and water samples, depending on local conditions and known subsurface geology. Soil samples may be taken from the surface or shallow pits. Deeper samples are obtained using a back hoe or augers, either hand operated or mobile drilling rigs.

Head space analysis is often performed during sampling. The technique is a method that screens for indicators of contamination. Direct reading instruments,

such as photoionization detectors and soil gas probes, are used to take readings. Methods are selected based on the specific objective of the Phase II.

Improper or incomplete sample or analysis planning may invalidate sampling results or make the results legally indefensible. Proper handling of samples is also crucial to obtaining usable and defensible data, and includes selection of correct sample containers, proper storage and transportation, consideration of holding times, and following chain-of-custody procedures. Laboratory selection is based on project goals. Typically an in-state laboratory will suffice. On a case by case basis, an EPA certified laboratory may be required.

b. Reports

Phase II reports should contain the following information:

1. A discussion of the physical environment and its relationship to the potential types of contamination, its influence on where contamination may be found, and how it impacts the extent of contamination migration.
2. Selection of sampling techniques, the rationale for the type of sampling, and a sampling plan, including maps, site plan, sample locations and boring logs, as applicable.
3. Discussion of the laboratory analysis performed, including results.
4. Health and Safety considerations
5. Conclusions and recommendations, including identification of any contamination found, its extent, impact on human health and the environment.
6. Remediation strategy and costs, if warranted
7. Identify potentially responsible parties

1450.03 Detailed Site Investigation (Phase III)

A Phase III is considered when the following conditions are present:

- The existence of hazardous materials on the project site has been confirmed.
- A decision has been made to proceed with a property transfer.
- ITD assumes the role of Responsible Party.

A Phase III includes the Site Investigation, Remedial Action Plan, and site clean-up. The time required to complete a Phase III can vary from 1 month to several years.

Authorization of a Phase III investigation will be coordinated through the Environmental Section Manager.

1460.00 SPECIFIC HAZARDOUS MATERIALS INVESTIGATIONS

a. Asbestos

Asbestos is a naturally occurring fibrous mineral that was used extensively in residential and commercial buildings. Asbestos is a known carcinogen and contributor to lung disease. Asbestos was widely used as a commercial product because it is noncombustible, resistant to corrosion, and has a high tensile strength and low electrical conductivity. In residential and commercial buildings constructed before 1981, asbestos is often contained in thermal system insulation, various decorative spray-on texturing and fireproofing, floor coverings, siding, adhesives, roofing materials, and other building materials. There are several forms of asbestos, such as actinolite, amphibole, amosite, tremolite, chrysotile, crocidolite, or anthrophyllite.

Building materials containing at least one percent asbestos as determined by polarized light microscopy are considered to be a regulated hazardous material. The *Method for Determination of Asbestos in Bulk Samples* is contained in Appendix A of Subpart F in 40 CFR Part 763. Management, removal, and disposal of asbestos require special training, handling, and regulatory compliance. Federal guidance about asbestos is found in 40 CFR 61 Subpart M, *National Emissions Standards for Asbestos*. EPA requires any facility to be renovated or demolished to be surveyed for asbestos and a proper notification process to be followed.

Presence of asbestos is suspected during the Administrative Review or Phase I or at any point during project design, a survey by an AHERA certified inspector shall be conducted. The abatement plan or management plan shall be completed by a certified AHERA certified project manager.

During demolition of asbestos containing structures, AHERA certified workers and an AHERA certified supervisor are required to perform abatement. An AHERA certified supervisor also fills the NESHAP certification requirement.

A NESHAP certified person is required to be on site during demolition of structures found not to contain asbestos. (Some exceptions are authorized under the regulations. Contact the Environmental Section Manager prior to approving an exception.)

b. Lead Paint

Lead-based paint poses risks to environmental health and worker safety when disturbed for maintenance, renovation, and demolition of structures including bridges and buildings. Environmental documentation should ascertain the existence of lead-based paint, determine if that paint will be disturbed, quantify the amount and determine if the waste stream will be considered hazardous.

Facilities and Bridges that are state owned should be tested early during the design phase. Structures that are not owned by ITD should be tested prior to demolition and as early as practicable, depending upon project needs.

Disposal options vary depending on the quantity, toxicity and leach ability of the waste. Paint from bridges should also be tested for other heavy metals such as cadmium, arsenic, selenium, zinc, etc. Regulatory disposal requirements for these other heavy metals found in paint may apply.

Exhibit 1400-1 Process Flowchart

