

CHAPTER 22

CONTAMINATION IMPACTS

TABLE OF CONTENTS

| | |
|---|-------|
| 22-1 OVERVIEW..... | 22-1 |
| 22-1.1 Purpose | 22-1 |
| 22-1.2 Process..... | 22-1 |
| 22-1.3 Definitions..... | 22-2 |
| 22-2 PROCEDURE | 22-4 |
| 22-2.1 Advance Notification | 22-4 |
| 22-2.2 Contamination Screening Evaluation..... | 22-5 |
| 22-2.2.1 Site Assessment | 22-6 |
| 22-2.2.2 Data Collection..... | 22-6 |
| 22-2.2.3 Determination of Potential..... | 22-9 |
| 22-2.2.4 Contamination Screening Evaluation Report..... | 22-10 |
| 22-2.3 Class of Action Determination..... | 22-14 |
| 22-2.4 Categorical Exclusion..... | 22-14 |
| 22-2.5 EA / DEIS / SEIR..... | 22-14 |
| 22-2.6 FONSI / FEIS | 22-15 |
| 22-2.7 Contamination Impact Assessments | 22-15 |
| 22-2.8 Contamination Impact Remedial Action Plan..... | 22-17 |
| 22-2.9 Underground Storage Tanks (UST)..... | 22-17 |
| 22-2.10 Reevaluations | 22-17 |
| 22-2.10.1 Right-of-Way Acquisition Reevaluation | 22-18 |
| 22-2.10.2 Construction Advertisement Reevaluation | 22-18 |
| 22-3 REFERENCES..... | 22-18 |

LIST OF FIGURES

| | |
|---|-------|
| FIGURE 22.1 Site Evaluation Check List | 22-19 |
| FIGURE 22.2 Table of Contents for Contamination Screening Evaluation Report... | 22-21 |
| FIGURE 22.3 Guidelines for issuing a General Use Permit to allow dewatering discharges into Department of Transportation drainage..... | 22-22 |

22. CONTAMINATION IMPACTS

22-1 OVERVIEW

22-1.1 Purpose

The purpose of this chapter is to provide guidelines for the identification, evaluation, and recommendations concerning potential project contamination problems within and/or adjacent to existing or proposed right-of-way. The requirements of this Chapter must be accomplished with appropriate coordination between these procedures and the provisions of **Chapter 7, Section 14 of the Right-of-Way Manual, Topic No. 575-000-000**.

Discovery of contamination **will** have an impact. The desired approach is to discover all contamination problems as early in the project development process as possible. If the discovery is early enough, we may have the luxury of avoiding the problem entirely. If avoidance is not possible, early discovery will allow proper handling in a logical, timely manner.

Many new transportation projects are improvements to existing facilities, rather than construction on new corridors; therefore, the likelihood of encountering petroleum contamination from adjacent properties has increased. Contamination from non-petroleum sources is historically an extremely small percentage of all contamination problems encountered on highway projects.

Partial property acquisition has also become the norm, rather than the exception. When the department acquires a strip of land from a petroleum contaminated property, we generally will not acquire the source of contamination, but will still have the potential for encountering petroleum contaminated soil or groundwater during construction activities near the contaminated property.

22-1.2 Process

Contamination problems are a serious concern throughout the State. All projects must consider the potential for encountering contamination within the project limits. We must strive to discover potential contamination early in the process and try to design around or mitigate the potential risk to FDOT contractors. Coordination efforts with State, County, and Local agencies can become considerably more difficult when compounded by potential production delays and the additional costs of remedial actions when contamination is discovered during construction.

We must provide the best available information as early as possible in the project, to assist management with making the best possible decisions. There will probably never be a time or project where absolutely everything, related to contamination, is a "known". Our quest must be to know as much as is practical.

The evaluation effort is dependent upon the project phase, the type of project, who owns the land, how much time and money are available, and the type of potential contamination. Ideally, an evaluation for contamination will begin during the earliest phases of the planning process and continue throughout the project in ever-increasing degrees of detail.

As stated in the *FHWA Technical Advisory T 6640.8A, dated October 30, 1987*:

"Hazardous waste sites are regulated by the **Resource Conservation and Recovery Act (RCRA)** and the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**. During early planning, the location of permitted and nonregulated hazardous waste sites should be identified. Early coordination with the appropriate Regional Office of the Environmental Protection Agency (EPA) and the appropriate State agency will aid in identifying known or potential hazardous waste sites. If known or potential waste sites are identified, the locations should be clearly marked on a map showing their relationship to the alternatives under consideration. If a known or potential hazardous waste site is affected by an alternative, information about the site, the potential involvement, impacts and public health concerns of the affected alternative(s) and the proposed mitigation measures to eliminate or minimize impacts or public health concerns should be discussed in the Draft Environmental Document.

If the preferred alternative impacts a known or potential hazardous waste site, the Final Environmental Document should address and resolve the issues raised by the public and government agencies."

22-1.3 Definitions

HAZARDOUS and TOXIC SUBSTANCE: Those chemicals present in the workplace which are capable of causing harm. In this definition, the term chemicals includes dusts, mixtures, and common materials such as paints, fuels, and solvents. The Occupational Safety and Health Administration (OSHA) currently regulates exposure to approximately 400 substances.

(OSHA - <http://www.osha.gov/SLTC/hazardoustoxicsubstances/index.html>)

40 CFR 280 Subtitle I established a program to regulate and prevent leaking of the three to five million underground storage tanks (USTs) in the United States. Under **Subtitle I, RCRA** regulates the storage of a product (e.g., petroleum products, hazardous substances) rather than hazardous waste. Hazardous substances regulated under **Subtitle I** include hazardous substances (except those regulated as a hazardous waste under Subtitle C of **RCRA**) defined under the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**. Hazardous substances under **CERCLA Section 101(14)** include a variety of pollutants regulated under other federal statutes including the **Clean Water Act, Clean Air Act, and Toxic Substances Control Act**.

HAZARDOUS MATERIAL: Is any material that has, or, when combined with other materials, will have, a deleterious effect on people or the environment. As further discussed and defined in **42 USC, Section 9601, et seq.**

SOLID WASTE: RCRA defines a solid waste as: “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial or mining and agricultural operations, and from community activities . . . [excluding] . . . solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows, or industrial discharges which are point sources subject to permits under **Section 402 of the Federal Water Pollution Control Act**”.

HAZARDOUS WASTE: Under **RCRA** no material can be a hazardous waste unless it is a solid waste. In **RCRA**, the statutory definition of a hazardous waste is:

.” . . a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may - (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. [**Section 1004(5)**]

Furthermore, a solid waste is a hazardous waste if it is not excluded by regulation (**40 CFR 261.4**) and if it is listed (**261.30**) as a hazardous waste, is a waste mixture containing one or more listed hazardous wastes, or exhibits one or more characteristics of hazardous waste (i.e., ignitability, corrosivity, reactivity, or toxicity) (**40 CFR 261.21 to 261.24**). Listed wastes meet the definition of hazardous waste regardless of the concentration level of hazardous constituents in them. With few exceptions [e.g., spent solvents listed solely because they are ignitable (**40 CFR 261.31**)], the only way to have a listed waste relieved from hazardous waste management requirements is to petition EPA or a state to delist the waste (**40 CFR 260.22**).

When listed wastes are mixed with nonhazardous wastes or materials, the mixture must be managed as hazardous waste. Two exceptions to this approach are hazardous debris meeting **Land Disposal Restriction (LDR)** standards [**40 CFR 261.3(f)**] and residues from processing certain wastes using high temperature metals recovery processing [**40 CFR 261.3(c)(2)(ii)(C)**]. In contrast to listed waste, a characteristic waste remains hazardous **only** as long as it exhibits a hazardous characteristic. Therefore, a mixture of a waste exhibiting a hazardous waste characteristic and a nonhazardous solid waste is not considered hazardous waste unless the mixture exhibits a hazardous waste characteristic.”

DERIVED FROM RULE: Solid waste that is generated from the treatment, storage or disposal (TSD) of a hazardous waste is itself classified as a hazardous waste. Therefore, residues resulting from TSD activities including materials such as sludges, ash emission control dusts, leachate, or spill residues are considered hazardous waste. (with certain exceptions discussed below). This provision is based on the premise that any residues

from treatment, storage or disposal of hazardous waste will contain hazardous constituents [**40 CFR 261.3 (2)(i)**]. Beyond “derived from” considerations, treated hazardous waste also may be subject to prescribed waste determination procedures (e.g. **RCRA Subpart CC**) upon exiting the treatment process.

CONTAMINATION: The presence of any regulated material / chemical contained within the soil, surface water or groundwater on or adjacent to Department property, or proposed property, that may require assessment, remediation, or special handling, or that has a potential for liability. These materials would include, but not be limited to, those substances normally referred to as petroleum or petroleum products, solvents, organic and inorganic substances, metals, hazardous materials or substances, etc..

SIGNIFICANT CONTAMINATION: The presence of any contamination that would meet the definition of "hazardous substance", "hazardous material" or "hazardous waste" and be regulated under **CERCLA** or **RCRA**. Petroleum contamination from underground storage tanks is not regulated by **CERCLA** or **RCRA**. Petroleum contamination from underground storage tanks may be a significant contamination issue, but is not considered “significant contamination”.

LEVEL OF INVESTIGATION: To standardize contamination evaluations within the Department, use the following definitions:

Level 1. A Level 1 investigation will be the Contamination Screening Evaluation.

Level 2. A Level 2 investigation will be the complete Contamination Assessment.

Level 3. A Level 3 investigation will be the development of a Remedial Action Plan (RAP).

22-2 PROCEDURE

22-.2.1 Advance Notification

During plan development, the proposed project is entered into the Environmental Screening Tool (EST) Planning Screen by the Efficient Transportation Decision making (ETDM) Coordinator (See the **ETDM Planning and Programming Manual**). The Purpose and Need for the project is identified, and logical termini are located on a GIS based map. The Advance Notification (AN) package is distributed electronically as part of the programming screening event on the EST (see **Part 1, Chapter 3 Advanced Notification**).

Contamination information is included in the Contaminated Sites section of the **AN Fact Sheet** and includes the results of GIS analysis for the Contaminated Sites using GIS data and applicable maps. One of the data layers available in the EST on the GIS map is the location of known contamination sites and the approximate area affected by the source (a Department of Environmental Protection (DEP) maintained data layer). If the project

went through a Planning Screen the Contaminated Sites section will also include a summary of agency comments, and if available, a list of permits that may be required and a list of technical studies needed. The AN should identify, by industry type, any known Hazardous Material Generators, Storers, or Disposers within the vicinity of the project. Buffer distances of ¼ mile for contamination sites and 1 mile for solid waste facilities, **CERCLA** and super-fund sites should be used. Additional known information on contamination sites may be added to the “Other Project Documents” section of the **AN Fact Sheet**.

22-2.2 Contamination Screening Evaluation

FDOT will determine the project’s involvement with contamination issues from information included in the **Final Programming Screen Summary Report**. A good starting point is to review Environmental Technical Advisory Team (ETAT) comments and degree of effect determinations for the “Contamination Sites” issue in the **Programming Screen Summary Report**. Comments by DEP and EPA are especially important. The **Final Programming Screen Summary Report** may state specifically that a **Contamination Screening Evaluation Report (CSER)** is needed in the “List of Technical Studies” section of the report. Other sections of the report may be useful such as the “General Project Commitments” and “Permits” sections.

The DEP may respond to the AN in the “AN Feedback Summary” section of the **Final Programming Screen Summary Report** that includes specifics on contamination issues. It is **important** to contact the applicable agency to confirm their recommendations made during the EST screening events and to ensure that all issues are addressed.

Some projects are considered non-major projects, and are not required to go through the ETDM Planning and Programming process. However, these projects may have contamination issues and should follow process in this Chapter.

Perform a Level 1 Contamination Assessment. Evaluate each property within the project corridor for the presence of potential contamination within proposed right-of-way limits and from properties adjacent to the right of way that might have migrated onto or under the existing or proposed right-of-way. Follow the procedures in **Sections 22-2.2.1, Site Assessment** and **Section 22-2.2.2, Data Collection** in order to obtain as much data as possible for the properties on and adjacent to the proposed project corridor and possible alternative corridors.

Base the type and amount of data collected for each property on the likelihood of the potential for involvement with contamination. A partial / strip taking along a line / row of private residences has much less potential for encountering contamination than a total take of residential units where home businesses for auto repair, auto maintenance, pest control, etc. operations are, or were, conducted. A bridge renovation or demolition (full or partial) has a potential for asbestos containing materials (ACM) in exposed or hidden locations.

The required level of detail necessary to reasonably ensure that the evaluation would discover contamination on the site must be decided on a project-by-project (and site by site) basis (see **Section 22-2.2.3** below for clarification)

22-2.2.1 Site Assessment

A site assessment (or on site evaluation) should be performed to evaluate the potential to encounter contamination within or adjacent to the project. It is advisable to perform a preliminary site reconnaissance to identify obvious potentially contaminated sites in advance of data collection; with a subsequent detailed reconnaissance to verify information obtained during the records search. The EST contamination data layer, and comparisons of old and new aerial photos, may assist in locating businesses that have or had a potential to contaminate.

Walk/view the entire site to verify or refute the potential sources identified by the collected data, and to identify any new potential sources. It is as important to look inside of buildings (if possible), as it is to look outside. Be aware of: apparent changes to the ground surface, landscaping, ground staining, standing liquids, odors, sink holes, distressed vegetation, ventilation pipes, drums, containers, or other signs of possible contamination that may indicate more assessment is needed.

If inadequate reliable information is available to make an assessment, and there is reasonable suspicion that contamination may exist, the property should be rated a "Medium" (see **Section 22-2.2.3**).

For projects involving existing bridge structures and existing or abandoned utilities (which will be moved or destroyed), acquire physical samples to determine the existence, condition and quantities of Asbestos Containing Materials (ACM), Lead Based Paint (LBP) or Paint containing cadmium, chromium, or other hazardous substances. These activities should be coordinated through the District Contamination Impact Coordinator. If possible, obtain the original facility or structure construction documents or 'as-builts' to aid in the identification of possible contamination. All bridge and bridge structures must be surveyed for ACM prior to construction. Currently the Department is in the process of surveying bridges on State roadways. Check with the District Structures and Facilities Engineer for more information.

Photograph each site warranting assessment as well as specific areas of concern at these sites (i.e. area of concrete patching, obvious soil staining, monitor well, etc.). Each photograph should have a caption indicating where the photographer was standing and in what direction the camera is facing.

22-2.2.2 Data Collection

The following items are considered to comprise the "minimum effort required" to properly evaluate a project. To assist in data collection, documentation and a uniform presentation of a **CSER**, a suggested checklist is included as **Figure 22.1**. Internet searches can be very informative, but the validity of the source is crucial. Websites owned and maintained by Federal, State, or Local Governments or agencies are usually reliable;

however, verify the accuracy of the data, do not “assume” it is correct. For contamination and water quality issues the DEP has a good initial website (see References). The District Structures and Facilities Engineer may have information acquired through surveys or previous maintenance activities about lead based paints and ACM on structures/bridges within the corridor. Maintenance and Construction may have information about existing contamination from previous projects. Additionally explore the following areas:

Step 1, OWNERSHIP AND LAND USE: Identify the current legal owner and previous owners of every property on each alignment (this is not intended to be a "Title Search"). This information should be available from the District R/W Survey and Mapping Office. Identify the current and previous users of each property and the type of business conducted. This information should be available through County records (most are now online), City Directories and in the local public library.

Remember, the purpose is to evaluate the potential for encountering contamination from current and previous land uses, where that information is **reasonably ascertainable**. Reasonably ascertainable means the information is publicly available, is obtainable within a reasonable time and cost constraints, and the information is practically reviewable.

If not already complete, have all existing bridge structures and existing or abandoned utilities structures surveyed for ACM and LBP.

Step 2, CONTAMINANTS: Identify all types of potential contaminants and sources normally associated with the type of business that is, or has been, conducted on the property. For example: expect gasoline, oil, solvents, and underground storage tanks (UST's) at a gasoline service station, cleaning fluids and solvents at a dry cleaning operation. Bearing pads and scuppers on bridges, Class V finish on concrete structures, insulation in buildings, and some old utility pipe or conduit may contain ACM. Any painted surface may contain hazardous substances. This is not a complete list; many other sources and types of contamination are possible. Additionally look for possible conditions that may conceal certain contaminants and may therefore, be difficult to impossible to sample prior to construction or demolition. As-built plans may identify these hidden sources.

Step 3, ENFORCEMENT AGENCY RECORDS REVIEW: Obtain from state and local enforcement agencies information concerning past, present, and future enforcement actions that could impact the proposed project. These agencies generally do not have adequate staff to do the research for you, but will allow you access to their records/data bases. Useful records in regulatory agency files include compliance inspection reports, enforcement notices, contamination assessment reports, remedial action plans, initial remedial action reports, etc. The purpose of the records review is to determine, through a review of reasonably ascertainable public records, the potential for contamination impacts to the transportation project and /or the Department.

Reasonably ascertainable Federal and State Environmental should be reviewed during the Contamination Screening Evaluation Process to support the evaluation process. The DEP owns and maintains a website with information on all programs maintained or funded by DEP both in Florida and under Federal jurisdiction. Much of the data for an initial contamination search is available on their website. DEP maintains an interactive map with multiple data layers and information pertaining to each marked site. Some of these data layers are available by using the EST available through FDOT Environmental Management Office website.

Most County environmental agencies have similar information available. Since each County is slightly different, the evaluator must determine what information is available, obtain that information, and use it in the appropriate evaluation.

Step 4, REVIEW AERIAL PHOTOS: Obtain aerial photos of the land being evaluated. Comparison of photos taken from different time periods (1950, 1980, 2000 etc) provides valuable information about changes in land use and may identify previous uses which may have contaminated the site. The comparison and review of aerials may be the only way to find some preexisting businesses. There is no substitute for a good magnifying glass and patience. Aerial photos are available on the EST and at the DEP website. The evaluation of aerial photos can identify potential problem areas (because of scale-large depressions- or overgrowth) which are easily overlooked on the ground. Stereoscopic evaluation of reasonable quality photos can identify sources of potential contamination, such as landfills, lagoons, storage areas, drums, tanks, landscaping, and even ground staining from spills. Someone familiar with both the technology and the “signs” indicating potential for contamination should perform stereoscopic evaluations.

Step 5, INTERVIEW: Interview local officials, historians, current tenants and long time residents to determine known present or past situations or problems that could indicate contamination. Officials that could be interviewed are City / County engineers, Water Management District personnel, utility, telephone, cable, and waste management company personnel, etc. Remember the ETAT members give information they know about, but individuals at the local level are often more familiar with the area and its history.

The City / County engineer should be able to provide current or historical permit information. The local Water Management District (WMD) personnel, can provide information on water wells in the area, any problems associated with water quality, and discharge requests they have approved, disapproved, or are considering. Utility companies should be able to provide information concerning the types of service provided to the property (is there a sewer connection or septic system; how much electrical capacity provided, e.g., large electrical capacity could mean large equipment for manufacturing or prior polychlorinated biphenyl (PCB) use, etc.). Utility companies may also have information on their utilities abandoned or currently in use made with hazardous materials (such as transite pipe).

22-2.2.3 Determination of Potential

A conscious determination must be made of the contamination potential for each property within and/or adjacent to the proposed right-of-way limits for each alignment within a corridor. Remember, we are looking at the possible impacts of any contamination to the project cost and schedule. For facilities or structures that have asbestos-containing materials, determine the scope of any abatement actions that may be required, including potential schedule impacts.

This rating system expresses the degree of concern for potential contamination problems. Known problems may not necessarily present a high cause for concern if the regulatory agencies are aware of the situation and corrective actions are either complete or are underway. These actions may not have an adverse impact on the proposed project.

For each property, assign a contamination rating of:

1. **No**
2. **Low**
3. **Medium**
4. **High**

Below is an explanation of the ratings:

1. **No:** A review of all available information finds there is nothing to indicate contamination would be a problem. It is possible that contaminants were handled on the property; however, all information (DEP reports, monitoring wells, water and soil samples, etc.) indicate that contamination problems should not be expected. An example of an operation that may receive this rating is a wholesale or retail outlet that handles hazardous materials in sealed containers that are never opened while at the facility, such as cans of spray paint at a "drug store".
2. **Low:** The former or current operation has a hazardous waste generator identification (ID) number, or deals with hazardous materials; however, based on all available information, there is no reason to believe there would be any involvement with contamination in relation to this project. This is the lowest possible rating a gasoline station operating within current regulations can receive. This rating could also apply to a retail store that blends paint. Some Low sites, such as gas stations in compliance, should be reevaluated during the design phase.
3. **Medium:** After a review of all available information, indications are found (reports, **Notice of Violations**, consent orders, etc.) that identify known soil and/or water contamination and that the problem does not need remediation, is being remediated (i.e., air stripping of the groundwater, etc.), or that continued monitoring is required. The complete details of remediation requirements are important to determine what the Department must do if the property were to be acquired. A recommendation should be made on each property falling into this

category to its acceptability for use within the proposed project, what actions might be required if the property is acquired, and the possible alternatives if there is a need to avoid the property.

This rating expresses the degree of concern for potential contamination problems. Known problems may not necessarily present a high cause for concern if the regulatory agencies are aware of the situation and corrective actions are either underway or complete. The actions may not have an adverse impact on the proposed project.

4. **High:** After a review of all available information, there is a potential for contamination problems. Further assessment will be required after alignment selection to determine the actual presence and/or levels of contamination and the need for remedial action. A recommendation must be included for what further assessment is required. Conducting the actual Contamination Assessment is not expected to begin until alignment is defined; however, circumstances may require additional screening assessments (i.e., collecting soil or water samples for laboratory analysis necessary to determine the presence and/or levels of contaminants) to begin earlier. Properties previously used as gasoline stations and which have not been evaluated or assessed would probably receive this rating.

22-2.2.4 Contamination Screening Evaluation Report – Level 1 Assessment

Assemble all information collected into a concise **Contamination Screening Evaluation Report (CSER)**. The cover/cover page should include the 11 digit Financial Project Number (FPN). **Figure 22.2** presents a suggested Table of Contents for the report. The outline below discusses what should be included in each section of the **CSER**:

1. Introduction: The introduction is a brief overview statement explaining the purpose of the report and the "who, what, where and why" of the project. If the project has gone through an ETDM Programming Screen, include the Purpose and Need Statement used in the EST in this section. An example of an introduction would be:

"The purpose of this report is to present the findings of a contamination screening evaluation for the proposed improvements. This report identifies and evaluates known or potential contamination problems, presents recommendations concerning these problems, and discusses possible impacts to the proposed project."

As stated in the ETDM **Programming Screen Summary Report**, the purpose and need for the project is

2. Project Description: Briefly describe the proposed improvement location and the project termini. Project descriptions for improvements that have gone through the Programming Screen of the EST are included in the **Programming Screen Summary Report**. An example of a project description would be:

"The Florida Department of Transportation is proposing improvements to _____ miles of _____ Road to accommodate present and future traffic demands. These improvements include widening the existing two-lane road to five lanes configured as four traffic lanes and a center two-way continuous left-turn lane. The project begins at _____ Street and terminates at _____ highway. Beyond the traffic lanes, improvements include shallow swales for surface drainage, grass side strips, and sidewalks."

3. Land Uses: Contain a brief description of the existing land use within the project area, comments about any anticipated or planned future land use and the approximate schedule of growth. Some of this information is in the *Programming Screen Summary Report*. An example of a land use description would be:

"The land use within the proposed project limits is primarily commercial with the exception of the intersection of _____ Street, development has been in strip form fronting on _____ Road. The depth of commercial development is very shallow with residential apartments and single-family homes immediately behind the commercial property. A 23-acre shopping mall is located at the intersection of _____ Street. The area is fully developed with no open spaces remaining."

4. Hydrologic Features: Include a **brief** description of the area hydrologic features. An example of a hydrologic features description would be:

"This County is generally underlain by the _____ aquifer, which is characterized by high porosity sands and limestone which typically allows rapid infiltration of rain-fall and surface runoff. The groundwater surface generally follows the ground surface with a North to South gradient at a depth of _____ feet below ground surface. Flow rates are estimated to be _____ feet per day. There are no surface water features (lakes, canals, etc.) or wells within the immediate project area. The _____ is located _____ from the project area and is considered outside any possible zone of influence. Existing surface drainage is flat, relying primarily on infiltration for removal."

5. Methodology: Include a description of the evaluation processes. An example would be:
"A preliminary evaluation of _____ Road was conducted to determine potential contamination problems within the proposed project limits from properties or operations located within the vicinity of the project. This evaluation consisted of the following tasks:

- a. Coordinate with (list those contacted) _____
- b. Obtain lists from _____ of hazardous class information (generators, transporters, etc.), stationary tanks, and known leaks and spills;
- c. Obtain and evaluated aerial photographs to determine potential contamination problem areas;

- d. Conduct site visits to verify information provided and to identify other potential sources within the vicinity of the project.
- e. Determine the contamination potential risk level (no, low, medium, high) for each property within the proposed project limits.
- f. State the number of sites evaluated within the proposed project limits.

6. Alternative Corridors or Alignments: Include a brief description of each viable project corridor, or alignment within a selected corridor.

7. Project Impacts: A narrative presentation of the potential contamination on each proposed alignment, followed by a tabular presentation including detail for of each property on the project. This table should include the following items:

- a. Property description, include name, address, etc.
- b. Permit or ID numbers, if any
- c. Contamination concern (list the material)
- d. Storage tanks (yes or no)
- e. Distance from right-of-way (existing and/or proposed)
- f. List the contamination evaluation rating (**N, L, M, H**) for each alternate (see **Section 22-2.2.3** for definitions)

8. Regulatory Status of Sites: Describe all activities where a regulatory agency is, has, or may take action on any property where potential contamination could have an impact on the proposed project. Refer to any pertinent comments from the ETDM ETAT regulatory review here, as well as any coordination with the agencies.

9. Recommendations: Discuss the various alternatives and the potential contamination problems associated with each. This should include further assessments required for each property in question on the proposed project corridor and each alternative.

Included in this section, should be a statement about the potential for the DEPARTMENT's need for specialized construction dewatering permits from the various state or local regulatory agencies, depending on proximity to contaminated sites. For example, the South Florida Water Management District has a no-notice dewatering permit, for projects that meet specific conditions. If the construction project proposes to dewater within one-mile of a landfill or known contamination site, then the "no-notice" dewatering permit is not applicable.

This section should end with a final recommendation of which proposed project corridor and which alternative alignment will minimize the contamination concern.

10. Figures

- a. *Project Location Map*: An area map (region, County, State, etc.) showing the general location of the proposed project followed by, or show by inset, a detailed map of the immediate project area
- b. *Land Use Map*: A detailed map of the proposed project area showing land uses (commercial, multi and single-family residential, schools, malls, parks, etc.)
- c. *Potential Contamination Site Location Map*: A detailed map of the proposed project showing the locations of all potential contamination sites with a rating of medium or high

11. Tables

- a. *Potential Contamination Sites*: A tabular presentation of the properties evaluated (see **7. Project Impacts**, above, for information to include).
- b. *Contamination Potential Alternate Comparison*: A tabular presentation of the number of properties in a risk category against the alternates being considered, such as:

| Risk | Alternate | | |
|---------------|------------------|----------|----------|
| | A | B | C |
| High | x | x | x |
| Medium | x | x | x |
| Low | x | x | x |
| No | x | x | x |

12. Appendices Use an appendix to present or list information needed to support the report that does not logically fit elsewhere. Examples would be:

- a. Potential Hazardous Waste Generator;
- b. Codes for waste types;
- c. Tank registration data;
- d. Field notes, and;

- e. Site diagrams / maps, etc.
- f. ETDM **Programming Screen Summary Report**

22-2.3 Class of Action Determination

A project's Class of Action (**Part 1, Chapter 2**) was determined during the final stages of the Programming Screen. The District and FHWA (or other Lead Federal Agency) determine if there is known **significant** contamination involvement on the project.

Upon completion of the Class of Action Determination and approval by FHWA (or other Lead Federal Agency), the document selected will be a CE, an EA, or an EIS depending on the level and anticipated significance of the total project involvement.

22-2.4 Categorical Exclusion

To be eligible for a CE, (**Part 1, Chapter 2**) there must be no **significant** contamination. The determination of significance should be agreed upon by the District Environmental Administrator following the guidance in **Part 1, Chapter 2** of this manual.

Projects which are categorically excluded may have an involvement with contamination so long as the involvement is determined not to be **significant**. If the project is determined to be a Type 2 CE, the contamination screening evaluation and report (**Section 22-2.2** above) must be completed. The following statement should be provided in the **Summary of Environmental Impacts Checklist** included in the **Project Development Summary Report (PDSR) (Part 1, Chapter 5)**:

"This proposed project contains no known significant contamination."

Where there is a potential for significant contamination involvement, a CE determination is not appropriate.

22-2.5 EA / DEIS / SEIR

The discussion of contamination in the Affected Environment and Environmental Consequences sections (DEIS) and the Impacts section (EA) for Federally-funded projects, or the State Environmental Impact Report (SEIR) for State-funded projects is generally limited to an overall description summary of the **CSER**, which should be readily available whenever additional detail is needed.

Where applicable, the following statement should be provided:

"The State of Florida has evaluated the proposed right-of-way and has identified potentially contaminated sites for the various proposed alternatives. Results of this evaluation will be utilized in the selection of a preferred alternative. When a specific alternative is selected for implementation, a site assessment will be performed to the

degree necessary to determine levels of contamination and, if necessary, evaluate the options to remediate along with the associated costs. Resolution of problems associated with contamination will be coordinated with appropriate regulatory agencies and, prior to right-of-way acquisition, appropriate action will be taken, where applicable."

22-2.6 FONSI / FEIS

If there are known or potential significant contamination sites within the preferred alternative, the final documentation should address and resolve the issues raised by the public and governmental agencies. The concluding statement for contamination should be similar to the following:

"Based upon the above considerations, it is determined that there is no practical alternative to the proposed action and that all practical measures have been included to eliminate or minimize all possible impacts from contamination involvements."

22-2.7 Contamination Impact Assessments – Level 2 Assessment

After location design concept acceptance (LDCA), all properties identified as having contamination potential, as listed in the **CSER**, must be further assessed (Level 2 Assessment) to verify or refute the contamination concerns.

A Level 2 investigation should proceed only on projects identified for property acquisition or construction in the Department's 5-year work program. Level 2 assessments should be completed prior to the project right-of-way phase, and continue as necessary based on impacts during design. Coordination with appropriate offices is required to insure that where contamination is verified to exist, and is likely to affect construction, appropriate steps are taken to 1) avoid the contamination by design or alternative changes or 2) to minimize potential for worker exposure through various controls, or 3) have the contamination remediated prior to any construction activity at that location,.

If construction activities will not encounter contamination, the contamination has been avoided; if avoidance is not possible, steps must be taken to remove or render safe the contamination prior to any construction activity. Special provisions must be included within the construction contract to handle any unknown contamination encountered during construction. Consider both contaminated soils and groundwater, as well as contaminated liquids, sludges and solids that may be discovered during construction. Survey all bridge structures and existing or abandoned utilities for asbestos containing materials (ACM) and, if possible, the ACM abated prior to construction.

It may be necessary to collect and analyze soil and/or water samples to determine what recommendation(s) to make. The authority to enter the property of others to conduct a survey, drill a test well, and collect samples is contained in **Florida Statute 337.274**. The District Manager over the Environmental Management Office, as recommended by the District Counsel should approve each use of this authority prior to scheduling the activity on a case-by-case basis.

It is Department policy that all known or previously identified contamination issues will be resolved prior to any actual construction activity at the contaminated area.

Presently, the only contamination issues the DEP has agreed can be handled during DOT construction activities are on those sites where our construction activity will encounter petroleum contamination with the source of contamination outside of the project's right-of-way limits and remediation prior to construction is not possible. In those limited cases, adequate assessment to delineate soil and groundwater contamination plumes within our right-of-way limits and methodology coordinated with DEP prior to any construction activity. It is important that construction activities do not exacerbate any known or previously identified contamination.

Complete a Contamination Assessment prior to the right-of-way phase, on all properties to be acquired that are suspected of contamination. The first step must be the verification of the presence of contamination (level 2 assessments). At a minimum all Medium and High rated sites should be included in a Level 2 assessment, additionally all sites with previously documented contamination, whether or not the sites have received closure documentation defining "no existing" contamination on site should be tested.

If studies indicate that properties demonstrating a potential for contamination (**Section 22-2.2** above) do not have contamination present, no further assessment would be required. If studies prove that the properties have contamination present, further studies may be necessary to identify the type, amount, source and area of contamination. This phase of the contamination assessment should properly be the responsibility of the owner, rather than the Department.

Close coordination between the Department, the property owner and the appropriate regulatory agency is necessary to insure that the assessment and potential remediation is completed in a timely manner, relative to the production schedule. It is possible that our production schedule will progress faster than the required assessment and remediation schedule. Where the assessment and remediation schedule would jeopardize our production schedule, it may be necessary for the Department to assume the responsibility for conducting the assessment and remediation activities to preserve the production schedule.

A conscious decision must be made at this time by the District (Environmental Management Office, Right-of-Way, and Construction) for early property acquisition to allow for timely remediation of the contamination in order to preserve the production schedule. Although the Department has certain protections from liability for pre-existing contamination under both State and Federal Laws (Paragraph **337.27(5), Florida Statutes** and **42 USC, Sections 9601(35) and 9607(b)**), limitations do exist should the Department exacerbate pre-existing contamination. The existence of contaminants in the ground or water within or near the right of way may require the adjustment of the project schedule to allow time for remediation activities.

22-2.8 Contamination Impact Remedial Action Plan-Level 3 Assessment

Where contamination would affect the project, or the project could adversely impact the contamination, a **Remedial Action Plan (RAP)** must be developed to insure the Department's activities will not exacerbate the existing contamination conditions. This would be a Level 3 assessment.

Each contamination site within or adjacent to the project should have a plan, which conforms to the requirements of the appropriate regulatory agency. Generally, the provisions published by the DEP for assessment and remediation of contaminated sites will be adequate for all regulatory agencies. If a superfund site area of influence is within the project limit, or has the potential to be influenced by project activities, the EPA must be involved with the decisions.

Since review and approval of this plan by the regulatory agency prior to the Construction Advertisement Phase is necessary, and monies to assist with cleanup activities may be available, close coordination with the appropriate regulatory agency throughout this process is required.

22-2.9 Underground Storage Tanks (UST)

Leaking UST's from petroleum distributors are a leading source of contamination on and near the Departments right of way. Per DEP rule, all UST's must have the proper double wall containment system by December 2009. Many of these existing UST's are located along our right of way and may currently be leaking petroleum products into the ground and groundwater. Where water tables are high, dewatering might be necessary to remove old and correctly install new tanks. Many of these sites are in urban areas where there is no retaining area large enough to hold the water during this operation, or even to place a tank or tanker trucks to hold or haul away the possibly contaminated groundwater. Under these circumstances, the dewatering operation must obtain a National Pollutant Discharge Elimination System (NPDES) generic permit for petroleum-contaminated sites and, if necessary, treat the produced groundwater to limits set by the NPDES permit. Furthermore, the contractor may need to expel the effluent into the Departments MS-4 system.

When a UST removal/replacement site receives a NPDES permit from DEP, they are responsible for enforcement of the quality of the discharged water (effluent), and the Department is not liable should the effluent levels permitted by them, exceed regulated levels. Because it is in the interest for the safety of the public, and this process may eliminate or greatly reduce existing petroleum contamination along our right of way and prevent some future contamination. FDOT has issued the Guidance (**Figure 22-3**) on the use of the MS-4 system for this purpose.

22-2.10 Reevaluations

22-2.10.1 Right-of-Way Acquisition Reevaluation

The right-of-way reevaluation entails reviewing all previously generated contamination information to determine if changes have occurred that would affect the project. This reevaluation should also include a field verification of land use changes that have occurred since generation of all previous contamination screening data. This is also another point for deciding to accelerate land acquisition for those properties where existing contamination could impact the production schedule. Process the reevaluation in accordance with **Part 1, Chapter 13** of this manual.

22-2.10.2 Construction Advertisement Reevaluation

The construction advertisement reevaluation is the same review as was done for the right-of-way reevaluation phase. This review should include appropriate coordination with construction and the contamination assessment and remediation (CAR) contractor to complete the remediation either prior to or during (**Section 22-2.7** above) construction. This should include a discussion of any Level 2 testing that was conducted, notes that were put in the plans, remediation that took place and any commitments that were made. Record the results of this reevaluation as detailed in **Part 1, Chapter 13**, of this Manual.

22-3 REFERENCES

1. U.S. Department of Transportation, Federal Highway Administration, October 30, 1987. Guidance for Preparing and Processing Environmental and Section 4(f) Documents, FHWA Technical Advisory T6640.8A
2. Chapter 337, State of Florida Statutes
3. Florida DEP information available from Tallahassee most DEP Districts and on the DEP website <http://www.dep.state.fl.us/>
4. 42 USC, Section 6901, et seq., Resource Conservation and Recovery Act
5. 42 USC, Section 9601, et seq., Comprehensive Environmental Response, Compensation and Liability Act
6. Title 40, Code of Federal Regulations (CFR), Part 261, et seq.
7. Title 42, Code of Federal Regulations (CFR), Section 300 et seq.

The following check list is intended to be a suggested format for compilation of data collected during contamination potential assessment. There is no intent to limit the amount of investigation the evaluator should pursue. If this checklist does not meet the needs of the District, a locally generated checklist should be used on all projects.

SITE EVALUATION CHECKLIST

Property Name: _____
Address: _____

Owner: _____
Current User: _____
Past Uses: _____

Enforcement Agencies (DEP, DERM, Environmental Quality Control Boards, etc.)

Past, present or future actions pending: _____
Hazardous classification: _____
EPA / State Permit No. : _____
Stationary Tanks: _____
 Size: _____
 Contents: _____
 Year installed: _____
Sites Summary List (DEP) known leaks / spills: _____
 Details: _____

Aerial Photo Interpretation

No. of years available: _____
No. of years used: _____
Apparent land use changes: _____
 From: _____
 To: _____
Landfills: _____
Lagoons: _____
Storage areas: _____
 For what: _____
Drums: _____
Tanks: _____
Landscaping: _____
Ground staining: _____

FIGURE 22.1 Site Evaluation Checklist (continued)

Local Officials

City / County Engineer: _____
Water management district: _____
Utility company: _____
Telephone Company: _____
Cable Company: _____
Waste Management Company: _____

Site Assessment

Who was met at the site: _____
Type of business activities: _____
Was entire site viewed: _____
 Lands: _____
 Buildings: _____
Landscaping? Why?: _____
Ground staining: _____
Standing liquids: _____
Odors: _____
Sink holes: _____
Drums? Labeled?: _____
Containers? Labeled?: _____
Ventilation pipes? To what?: _____
Does building look like an old gasoline station?: _____
Transformers: _____
Monitoring wells: _____
Water wells: _____
Septic tanks: _____
Underground (buried) lines, etc.: _____
Anything unusual: _____

Contamination Screening Evaluation

1. **No.** No problems are expected.
2. **Low.** Contamination may be present; however, there is no reason to believe there would be any involvement with the project.
3. **Medium.** Contamination exists; however, required remediation is complete, is in progress, or is not necessary.
4. **High.** There is a potential for contamination problems on this parcel. Further assessment will be required.(FIGURE 22.1) Check List (concluded)

FIGURE 22.1 Site Evaluation Checklist (continued)

Below is a suggested Table of Contents for the Contamination Screening Evaluation Report. There is no intent to limit the amount of information to be included in the report.

Table of Contents

| | Page No. |
|--|----------|
| I. Introduction | __ |
| II. Project Description | __ |
| III. Land Uses | __ |
| IV. Hydrologic Features | __ |
| V. Methodology | __ |
| VI. Alternative Alignments | __ |
| VII. Project Impacts | __ |
| VIII. Regulatory Status of Sites | __ |
| IX. Recommendations | __ |

List of Figures

| | |
|--|----|
| 1. Project Location Map | __ |
| 2. Land Use Map | __ |
| 3. Potential Contamination Site Location Map | __ |

List of Tables

| | |
|---|----|
| 1. Potential Contamination Sites | __ |
| 2. Contamination Potential Alternate Comparison | __ |

List of Appendices

NOTE : Use an appendix to present or list information needed to support this report that does not logically fit elsewhere.

FIGURE 22.2 Table of Contents for Contamination Screening Evaluation Report

GUIDELINES FOR ISSUING A GENERAL USE PERMIT TO ALLOW DEWATERING DISCHARGES INTO DEPARTMENT OF TRANSPORTATION DRAINAGE SYSTEMS

Issue: The Florida Legislature enacted measures requiring that all single-wall underground petroleum storage tanks be replaced with double wall tanks by the end of 2009. This impacts thousands of underground tanks at gasoline service stations throughout the state, many of which are located adjacent to state highways. The removal and replacement of these tanks may require dewatering at the tank site with an associated discharge into adjacent drainage systems.

Background: There have been concerns raised regarding the Department of Transportation (DOT) responsibility and liability in allowing these dewatering discharges into its drainage systems, with some Districts prohibiting the issuance of any permit to allow this activity because of these concerns. DOT operates Municipal Separate Storm Sewer Systems (MS4's) throughout the state that are subject to regulation by the Florida Department of Environmental Protection (DEP) under the federally authorized National Pollutant Discharge Elimination System (NPDES) regulatory program. Pursuant to State and Federal law, a requirement of this program is that operators of regulated MS4's must effectively prohibit illicit discharges into their MS4. The definition of illicit discharge is contained in Rule 62-624.200(2), Florida Administrative Code.

To address these concerns DOT has had several discussions and meeting with internal drainage, environmental and legal staff as well as with DEP staff and industry representatives. DOT has received written clarification from DEP on DOT's allowing discharge of treated effluent into a DOT maintained MS4 system by an entity holding a valid Generic NPDES permit. DEP has stated that "discharges into a DOT MS4 that are authorized by an NPDES permit, including, but not limited to, the Generic Permit for Discharges from Petroleum Contaminated Sites and the Generic Permit for Discharge of Produced Ground Water from Any Non-Contaminated Site Activity, do not constitute an illicit discharge, and thus are not considered a violation of the DOT NPDES MS4 permit".

DEP and industry representatives have assured the DOT that site specific investigations and appropriate environmental engineering is performed to develop remediation systems to treat dewatering discharges as necessary to meet state water quality standards. The dewatering associated with the tank replacements does not typically present a water quantity issue, and the operations are usually completed within a few work days. Furthermore, there are testing and reporting requirements in place to assure a reasonable level of compliance. DEP has established rules and guidance, and has the responsibility for reviewing application and issuing permits for discharges from petroleum contaminated sites that are in compliance with state water quality standards. In an effort to improve communication and better protect state water quality from un-permitted actions, DEP will notify DOT via e-mail when a permit is issued for an underground storage tank replacement.

Guidance: No discharge into a DOT drainage system will be prohibited as an illicit discharge if the discharge has been issued a permit from DEP. DOT District Offices may

FIGURE 22.3 Guidelines for issuing a General Use Permit to allow dewatering discharges into Department of Transportation drainage

GUIDELINES FOR ISSUING A GENERAL USE PERMIT TO ALLOW DEWATERING DISCHARGES INTO DEPARTMENT OF TRANSPORTATION DRAINAGE SYSTEMS

require a copy of the Generic Permit for Discharges from Petroleum Contaminated Sites issued by DEP and may include other restrictions or requirements in any general use permit issued for dewatering discharges into DOT drainage systems. These other restrictions or requirements should relate to water quantity issues, timing of discharges, or other impacts to the State Highway System resulting from the proposed action. All water quality issues are addressed in the permit issued by DEP. The notifications received from DEP when a Generic Permit for Discharges from Petroleum Contaminated Sites will be provided to the District Office to assist in coordinating any requests or monitoring any impacts to the State Highway System.

The possession of a valid permit from DEP however does not preclude the DOT from suspending any dewatering operations, whether due to concerns in meeting DOT permit requirements or for an obvious and flagrant violation of DEP permit requirements that is resulting in an immediate negative impact to the highway system. If dewatering operations are suspended due to DEP permit violations, the DEP District Office issuing the permit should be contacted immediately and informed of the violation. The operation may resume after the DEP office notifies the DOT that the operation is in compliance with the permit requirements. If there is a suspicion that the permitted water quality requirements are being violated, the DOT District staff can initiate an investigation by contacting the Division of Law Enforcement using the toll free statewide number 1-800-320-0519. Through a memorandum of understanding with DEP, DLE will investigate possible violations based on the information provided to them. The person making this report should be prepared to provide as much information about the possible violation as possible, including the type of pollutant, location, and name of the contractor performing the work.

FIGURE 22.3 Guidelines for issuing a General Use Permit to allow dewatering discharges into Department of Transportation drainage